



Parks, Recreation, & Culture

Invitation to Tender No. 2023-PRC-06

Arts and Heritage Hub

ADDENDUM #6

For further information:
Contact: Chris Barfoot
cbarfoot@ladysmith.ca
250.245.6421

Tender Issue Date:	Thursday, June 29, 2023
Addendum #1:	Thursday, July 6, 2023
Addendum #2	Thursday, July 31, 2023
Addendum #3	Thursday, August 10, 2023
Addendum #4	Monday, August 14, 2023
Addendum #5	Wednesday, August 16, 2023
Addendum #6	Tuesday, August 22, 2023
Site Visit:	10:00 a.m., Friday, August 11, 2023
Tender Closing:	2:00 p.m., Thursday, September 7, 2023
Tender Opening:	2:15 p.m., Thursday, September 7, 2023 Ladysmith City Hall



Addendum #6: Invitation to Tender (ITT) No. 2023-PRC-06

Arts and Heritage Hub

This Addendum includes an amended bid closing/opening date, answers to general questions, and an electrical addendum.

Issued: August 22, 2023

This Addendum shall be read in conjunction with and considered as an integral part of the Invitation to Tender (ITT). Revisions supersede the information contained in the original ITT or previously issued Addendum. No consideration will be allowed for any extras due to any Proponents not being familiar with the contents of this Addendum. All other terms and conditions remain the same.

ADDENDUM

1. Please note the new closing date and time for this ITT.

Closing date & Time: 2:00 p.m. Pacific Time on September 7, 2023.

Opening date & Time: 2:15 p.m. Pacific Time on September 7, 2023.

INCLUDE attached 'General Questions – TA0006' and 'Electrical Addendum – TA007' to the ITT document.

End of Addendum #6



Tender Addendum TA006

Contractor Reference: None

Date 2023.08.21

Project 2032 LAHH

Client Town of Ladysmith

The following addendum supersedes information contained in drawings, specifications and any previous addenda for the project to the extent referenced. This Addendum forms part of the tender documents and is subject to all of the conditions set out in the contract conditions.

General Questions

1. Please refer to attached document.

Reason for Change: Clarification

Distribution List

Chris Barfoot, Town of Ladysmith, cbarfoot@ladysmith.ca

Ben Checkwitch, Checkwitch Poiron Architects Inc., ben@cparch.ca

Pelle Björnert, AES Engineering, pelle.bjornert@aesengr.com

Gurhasanpreet Singh, AES Engineering, Gurhasanpreet.Singh@aesengr.com

Per Hector Alcala, Architect AIBC



TA006 - General Questions – Arts & Heritage Hub

1. Please publish an approved fastening detail for exterior wood cladding to applicable door types (Kinetic RFI #4)

The fasteners should be concealed when possible. Please use stainless steel fasteners at the cladding and in any other instance that the fastener is in contact with cedar wood.

2. Is NMD-90 cable an acceptable wiring method through-out? (Status Electrical RFI#1)

NMD-90 cable is an acceptable wiring method.

3. Is AC-90 cable an acceptable wiring method through-out? (Status Electrical RFI#1)

AC-90 cable is an acceptable wiring method.

4. Are details available for the size, design, specifications, and design for the sanitary pump chamber outside the building? (Makon 23204)

See attached PDF with sanitary pump information.

5. A101 and A111 shows the road scope being not in contract please confirm if the civil scope is to include the roadworks and site services. (Makon 23204)

The Town of Ladysmith is responsible to grading and paving the road. The contractor is responsible of the Northeast Curb and Landscape provided in the drawings, plus the utilities connections with the building described on the civil drawings (electrical, sewer and water).

6. The 50mm sanitary forcemain and 50mm watermain have no profile and no invert depths are provided, are we to assume they are both at minimum cover. (Makon 23204)

They will both be at minimum cover. The sanitary service will need 1.5m cover in travelled areas and 1.0m in untravelled areas. The water service will need 1.2m min. cover.

7. The civil, mechanical, electrical, and structural drawings are not to scale, could properly scaled copies be provided? (Makon 23204)

See Tender Addendum 005

8. The electrical drawings show that the secondary conduits are to be routed under the train tracks and through the existing property on the west side of Oyster Bay Drive. What will be required for restoration in this area?(Makon 23204)

Please tunnel under the tracks. The train tracks condition and restoration will be addressed in future project phases.

9. Are there any specifications for working around the train tracks? (Makon 23204)

There are no specifications. The train tracks condition and restoration will be addressed in future project phases.

10. Page A021, Room Finish Schedule states CT-8. Legend says CT-8 is a 6x6 square tile. (Dawn RFI #1)

CT-8 should be replaced with TIL-01

11. Elevations A504 show TIL-01 which appears to be drawn in as a wall tile panel? (Dawn RFI #1)

Is a 12x24 ceramic tile finished wall. Please see Tender Addendum 003

12. Can you please provide clarification as to what the tile finish is on the bathroom walls? (Dawn RFI #1)

TIL-01, please see Tender Addendum 003.

13. Drawing E2.0 has 5 type "H" fixtures crossed out in red, are these to be excluded from quotation? (Kinetic RFI#5)

They are excluded from quotation. The "H" fixture is a single fixture above the door, as per elevation 7/A402

14. Drawing E2.0 has the 3 type "D" kitchen fixtures illustrated as 2'x2' drop in fixtures but drawing E1.1 fixture schedule lists them as 2'x4' drop in fixtures, please clarify. (Kinetic RFI#5)

24x24 as per architectural drawings.

15. Drawing E2.0 has the washroom wall switches illustrated with a symbol not listed on symbol schedule, are these switches line of low voltage? (Kinetic RFI#5)

The switches specified in the washrooms are Low voltage switches as shown on the symbol legend.

16. Drawing E2.0 has the ceiling fans in the studio spaces in direct conflict with type "A" linear fixtures, where are these fans to be mounted? (Kinetic RFI#5)

The linear fixture will stop to provide room for the electrical boxes to install the ceiling fans.

17. What is the expectation for electrical pathways on solid wood ceilings? There will be linear lighting, track lighting, exit lights, lighting sensors, security sensors, ceiling fans, and wireless access points to be ceiling mounted. (Kinetic RFI#5)

The objective is to run all the devices in conduits between the CLT roof panels as per details A5701 and A5702. Electrical is to be concealed where possible; in EMT conduit where not possible.

18. The drawings do not show the locations of the DMX controls, Daylight Harvesting sensors, cubicle sensors and interfaces and gateway locations. (Kinetic RFI#5)

These are not required as per the drawings. It's the part of wireless lighting control spec.

19. Please clarify the occupancy sensors. The drawings have low voltage and line voltage occupancy sensors but the notes specify they need to be wireless as well. (Kinetic RFI#5)

Low voltage occupancy sensors are to be used and they need to be wireless as per the specs

20. XW 94 Wood Louvres - Please specify type of 1" stabilization rod. (Kinetic RFI#5)

Provide a cash allowance for a 1/2" stainless steel stiffener rod and plate based on detail A3604 and exterior elevations. The final design will be provided on the final construction documents.

21. Addendum #3 states that the Bid Bond requirement will be established by the town of Ladysmith, however this information has still not been provided. In order to acquire a Bid Bond prior to Tender closing, we must provide the Surety company with this information. Please confirm what percentage of the tender price the Bid Bond is to be.

The bid bond would be 50% of the overall cost of construction.

22. Addendum #3 stated that survey information would be provided as an attachment file, however we were unable to locate this information. Please provide any survey data available.

Please use the following links to download the information:

<https://www.dropbox.com/scl/fo/zoil9gtpgwls6j9sj6gw/h?rlkey=9naqyhphnrbvsfa8wsi3k6bop&dl=0>

23. Re-alignment and grading of the road footprint (by owner) is a key milestone in the construction schedule as building construction is contingent upon its completion. Please confirm when the Town of Ladysmith anticipates completing this work.

The full Oyster Bay Road re-alignment doesn't have a timeline. The road will be temporary graded by the Town of Ladysmith with gravel during construction as per civil drawings.

24. As discussed during the Site Visit (August 11, 2023) please confirm whether a section of Oyster Bay Drive adjacent to the work site can be temporarily closed throughout construction.

The Town of Ladysmith would accept short term temporary road closures but not for the duration of construction. It is an emergency alternate route and delivery corridor for local business so long-term closures would not be acceptable. Please follow the procedures from the Town of Ladysmith for temporary road closures. Emergency vehicles need to be able to use Oyster Bay Road at any given time.

25. Please confirm if there is any preferred contractor laydown area.

See the two proposed locations in the image below.



26. As per drawing E1.0, the civil contractor is responsible for stubbing utility conduits to the property line, however city owned train tracks must stay in place throughout installation. Please confirm if tracks can be temporarily removed to excavate and subsequently backfill a trench per the provided trench detail, or if directional drilling should be used.

Directional drilling is the preferred method to be used under the tracks.

27. Please confirm if alternate suppliers would be considered for D.Fir G1S Clear-Face Plywood.

Alternates can be reviewed but must have the same specifications, include being free of patches.

28. Piles Depth (clarification)

The bidder should provide cost per meter for additional pile depth (unit rate) beyond the estimated depth from the geotechnical design (Appendix G from original tender document).

Total Head Loss Calculations Using Hazen-Williams Formula

Project Name or Location:	Arts and Heritage Hub
Quote Number:	1540
Pump Station Type (Simplex or Duplex):	Duplex
Fluid Type (Sewage or Storm):	Sewage
Engineer:	JE Anderson and Associates
Date:	2023-02-06
Name:	Neal Thomson

Legend:	
Input	
Calculated	
Table Look-up	
Duty Point	

DESIGN FLOW RATE		(L/s)
Flow Rate (GPM)	30	1.89

STATIC HEAD	Feet	Meters
High Point in FM Elevation	70.19	21.4
Bottom of Station Elevation	49.60	15.12
Minimum Pump Submergence	0.98	0.3
Static Head	19.6	5.98

Top of Tank Elevation (m)	17.56
Inlet Elevation (m)	16.56

PUMP STATION LOSS			
Material	SCH 80 PVC		
Nominal Pipe Size	2 inches		
Length of Internal Pipe	10 feet		
Internal Diameter	1.939 inches		
Hazen-Williams C-factor	140		
Head Loss using C-factor (Hf) per 100'	2.41 feet/100'		
Head Loss using C-factor (Hf) per 1'	0.0241 feet/1'		
Velocity (Min. 3ft/s for Scouring)	3.2 ft/s		
Fittings & Valves	Quantity	Equivalent Length (ft)	Total Equivalent Legth (ft)
90 Degree Elbow	2	6	12
Tee	1	12	12
Plug Valve	1	9	9
Check (Swing)	1	13	13
45 Degree Elbow		2.5	0
Misc			0
Total Equivalent Length in Station			56.0
Total Friction Loss in Station			1.3

FORCEMAIN LOSS			
Material	HDPE DR11		
Nominal Pipe Size	2 inches		
Length of Forcemain	344.4 feet		
Internal Diameter	1.943 inches		
Hazen-Williams C-factor	140		
Head Loss using C-factor (Hf) per 100'	2.38 feet/100'		
Head Loss using C-factor (Hf) per 1'	0.0238 feet/1'		
Velocity (Min. 3ft/s for Scouring)	3.2 ft/s		
Fittings & Valves	Quantity	Equivalent Length (ft)	Total Equivalent Legth (ft)
90 Degree Elbow	8	6	48
Tee		12	0
Plug Valve		9	0
Check (Swing)		13	0
45 Degree Elbow		2.5	0
Misc			0
Total Equivalent Length in Forcemain			392.4
Total Friction Loss in Forcemain			9.4

PUMP DUTY POINT CONDITION	
Pump Flow (GPM)	30
Total Dynamic Head (feet)	30.3
Pump Selection	JX6292

Note:

Project engineer to confirm all data and calculation results with their own calculations. The above data is composed of information provided for use in determining a suitable pump selection for this application and does not in any way constitute engineering.

Trusted. Tested. Tough.®

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.



SECTION: Z3.20.120

ZM3385

1021

Supersedes

New

MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

Visit our website:
zoellerengineered.com

X6290 HAZARDOUS LOCATION SERIES

Class I, Division 1, Groups C & D Rated and Class I, Zone 1, Groups IIA & IIB Gas Areas

or

Class II, Division 1, Groups E, F & G and Zone 20 Dust Areas



TECHNICAL DATA

Commercial Duty Sewage

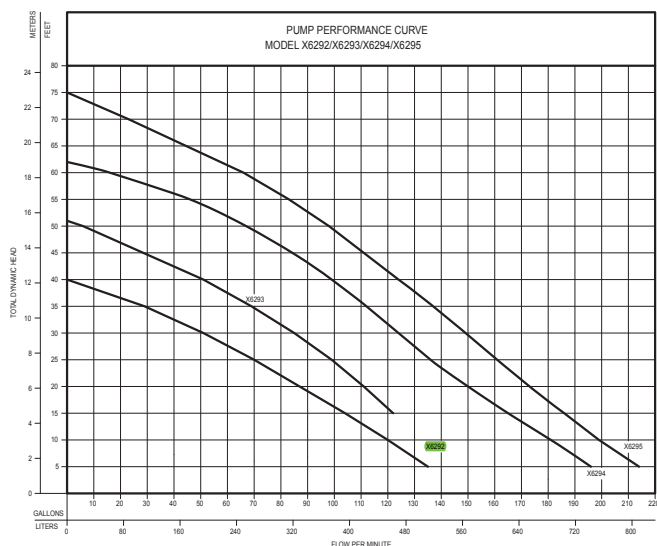
MODEL NUMBER:	<input checked="" type="checkbox"/> X6292	<input type="checkbox"/> X6293	<input type="checkbox"/> X6294	<input type="checkbox"/> X6295
PUMP NAME PLATE HORSEPOWER: HP	1/2	1	1-1/2	2
MOTOR RPM:	3450	3450	3450	3450
IMPELLER:	CAST IRON VORTEX			
	OPTIONAL <input type="checkbox"/> BRONZE VORTEX			
DISCHARGE SIZE:	<input checked="" type="checkbox"/> 2" NPT VERTICAL DISCHARGE <input type="checkbox"/> 3" NPT VERTICAL DISCHARGE			

PUMP NET WEIGHT: lbs. (kg)	129 lbs. (58.5kg)	SERVICE FACTOR:	1.0
SOLID SIZE: in (mm)	2" (50 mm)	TANDEM SEALS:	STANDARD
MOTOR DESIGN LETTER:	NEMA B	SQUARE RING SEALS:	VITON
CORD LENGTH: ft (m)	25' (7.6 m) <input type="checkbox"/> _____'	MOTOR SHAFT:	416 SS
SENSOR CORD LENGTH:	INCLUDED W/POWER CORD	STATOR AND LEAD WIRES INSULATION:	X6292-X6293 CLASS B
MOTOR TYPE CSA APPROVED:	Class I, Division 1, Groups C & D Class I, Zone 1, Groups IIA & IIB		X6294-X6295 CLASS F
	SUBMERSIBLE	MAXIMUM STATOR TEMPERATURE:	CLASS B 266 °F (130 °C)
SURFACE TEMPERATURE CODE:	T5 (1PH) T6 (3PH)		

SHAFT SEAL CONSTRUCTION:	STANDARD	UPPER - CARBON/CERAMIC, LOWER - SILICON CARBIDE/CARBON
	OPTIONAL UPPER	<input type="checkbox"/> CARBON/SILICON CARBIDE <input type="checkbox"/> SILICON CARBIDE/SILICON CARBIDE
	OPTIONAL LOWER	<input checked="" type="checkbox"/> SILICON CARBIDE/SILICON CARBIDE
STANDARD SENSING DEVICES *	MOTOR THERMAL SHUTOFF	INTEGRAL OVERLOAD WITH AUTOMATIC RESET - 1 PHASE
		THERMAL SENSOR WITH LEAD WIRES - 3 PHASE
	MOISTURE DETECTION	MOISTURE SENSING PROBES WITH LEAD WIRES
MINIMUM FLUID LEVEL FOR CONTINUOUS OPERATIONS: in (m)		24" (0.6 m)
MAXIMUM WATER TEMPERATURE:		104 °F (40 °C)

*Requires a circuit in control panel to function.

MODEL	HP	<input type="checkbox"/> 115V/1PHASE	<input type="checkbox"/> 200V/1PHASE	<input type="checkbox"/> 230V/1PHASE	<input checked="" type="checkbox"/> 200V/3PHASE	<input type="checkbox"/> 230V/3PHASE	<input type="checkbox"/> 460V/3PHASE	<input type="checkbox"/> 575V/3PHASE
		FLA	FLA	FLA	FLA	FLA	FLA	FLA
X6292	1/2	15.0	8.8	7.5	6.4	5.2	2.9	2.4
X6293	1	N/A	12.0	10.2	8.2	7.6	4.0	3.3
X6294	1-1/2	N/A	17.8	13.7	10.8	9.5	4.8	3.8
X6295	2	N/A	20.5	17.1	14.3	12.2	6.1	4.9



MODEL		X6292		X6293		X6294		X6295	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	135	511	--	--	196	742	214	810
10	3.0	120	454	--	--	181	685	199	753
15	4.6	104	394	122	462	165	625	186	704
20	6.1	87	329	111	420	150	568	173	655
25	7.6	70	265	99	375	136	515	161	609
30	9.1	51	193	85	322	124	469	149	564
35	10.7	29	110	69	261	112	424	137	519
40	12.2	--	--	51	193	99	375	124	469
50	15.2	--	--	6	23	67	254	98	371
55	16.8	--	--	--	--	46	174	83	314
60	18.3	--	--	--	--	16	61	66	250
70	21.3	--	--	--	--	--	--	23	87
Shut-off Head:		40 ft.(12.2m)		51 ft.(15.5m)		62 ft.(18.9m)		75 ft.(22.9m)	

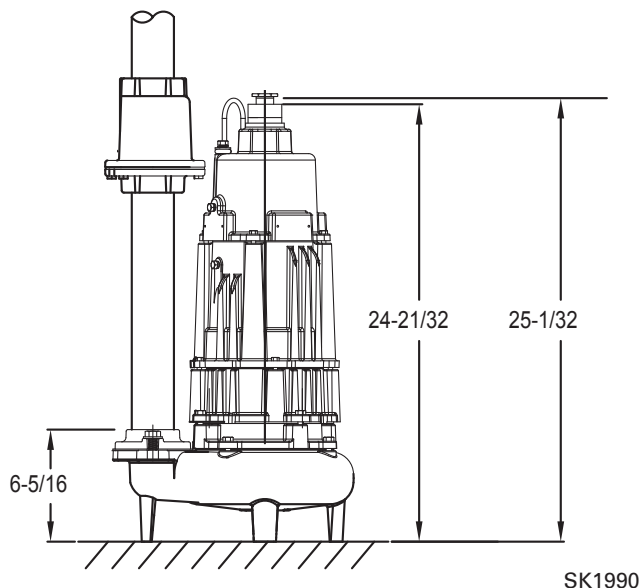
009919

Standard all models - 25 ft. (7.6 m) cord - 1/2 HP					
X6292 MODELS	Control Selection			Listings	
	Volts	PH	Amps	c CSA us	
NX6292	115	1	15.0	No ⁽¹⁾	
EX6292	230	1	7.5	Yes	
IX6292	200	1	8.8	Yes	
JX6292	200	3	6.4	Yes	
FX6292	230	3	5.2	Yes	
GX6292	460	3	2.9	Yes	
BAX6292	575	3	2.4	No	

Standard all models - 25 ft. (7.6 m) cord - 1 HP					
X6293 MODELS	Control Selection			Listings	
	Volts	PH	Amps	c CSA us	
EX6293	230	1	10.2	Yes	
IX6293	200	1	12.0	Yes	
JX6293	200	3	8.2	Yes	
FX6293	230	3	7.6	Yes	
GX6293	460	3	4.0	Yes	
BAX6293	575	3	3.3	Yes	

Standard all models - 25 ft. (7.6 m) cord - 1-1/2 HP					
X6294 MODELS	Control Selection			Listings	
	Volts	PH	Amps	c CSA us	
*EX6294	230	1	13.7	Yes	
IX6294	200	1	17.8	Yes	
JX6294	200	3	10.8	Yes	
FX6294	230	3	9.5	Yes	
GX6294	460	3	4.8	Yes	
BAX6294	575	3	3.8	Yes	

Standard all models - 25 ft. (7.6 m) cord - 2 HP					
X6295 MODELS	Control Selection			Listings	
	Volts	PH	Amps	c CSA us	
*EX6295	230	1	17.1	No ⁽¹⁾	
IX6295	200	1	20.5	Yes	
JX6295	200	3	14.3	Yes	
FX6295	230	3	12.2	Yes	
GX6295	460	3	6.1	Yes	
BAX6295	575	3	4.9	Yes	



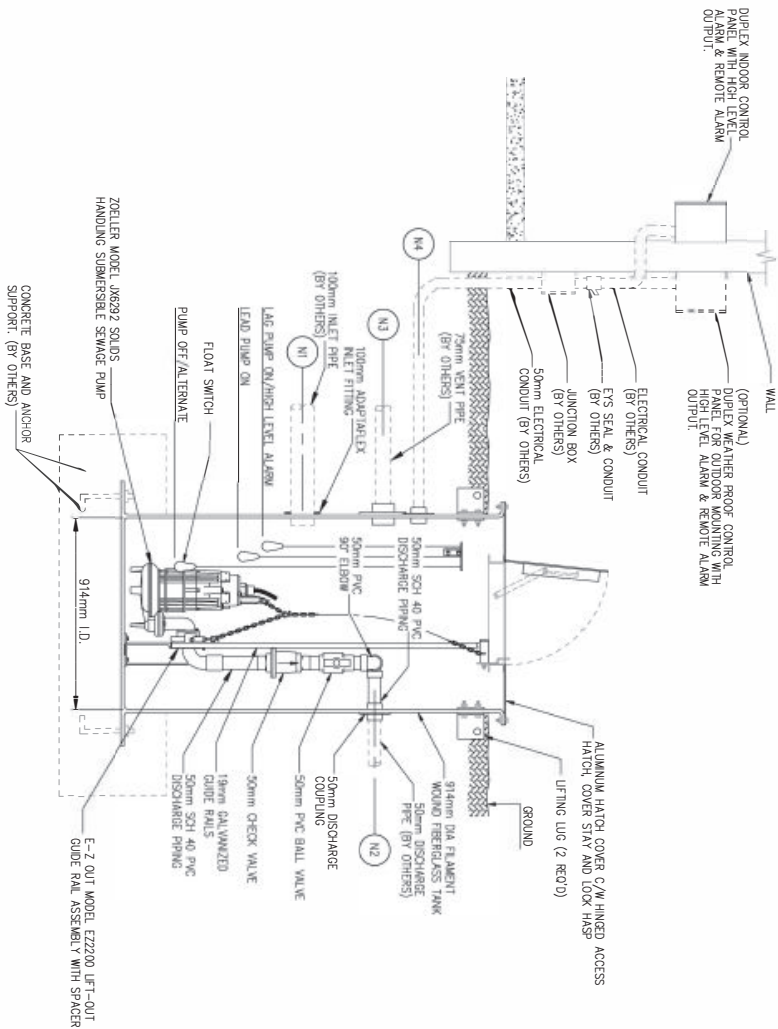
SK1990

FEATURES

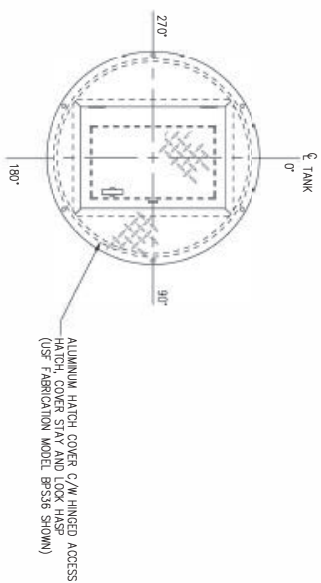
- Durable epoxy coated cast iron construction.
- Motor - 1/2 hp or 1 hp, 60 hz, 1750 rpm, 1 ph or 3 ph, oil filled, hermetically sealed
- Thermal sensor with lead wire (3PH), integral overload with automatic reset (1 PH)
- Bearings - upper and lower ball bearings
- Stainless steel motor shaft.
- Dual mechanical shaft seals - upper carbon/ceramic, lower silicon carbide/carbon. Optional seal materials available
- Viton o-ring seals and cover gasket
- Impeller - non-clogging cast iron vortex design passes 2" spherical solids.
- 25 Foot ul listed 3 wire neoprene cord and plug. Longer cords available in lengths of 35-50 feet.
- No screens to clog.
- Stainless steel screws, bolts and handle.
- 2" Npt discharge with 3" lange available.
- Corrosion resistant powder coated epoxy inish.
- Moisture sensors available for early warning of seal failure.
- 100% Computerized tested.

CAUTION

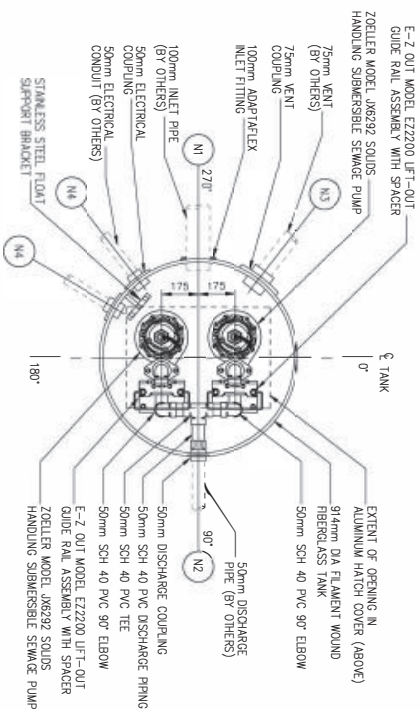
All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electric Code (NEC) and the Occupational Safety and Health Act (OSHA).



SECTIONAL ELEVATION



PLAN VIEW



ORIENTATION PLAN VIEW

COVER REMOVED FOR CLARITY

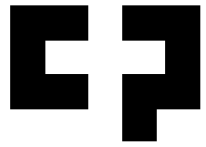
NOZZLE SCHEDULE		
No.	DIA.	DESC.
N1	100	1 INLET
N2	50	1 DISCHARGE
N3	75	1 VENT
N4	50	2 ELECTRICAL

SCALE: 1:25	APPROVED BY:	DRAWN BY: JB
DATE: JAN/96		PROJECT:

TYPICAL DUPLEX PUMP STATION
IN 914mm (36") DIA. FIBERGLASS BASIN
SOLIDS HANDLING TYPE PUMPS C/W LIFT-OUT ASSEMBLY - 3 FLOAT

engineered pump systems ltd. DRAWING NUMBER: T36FD21C

ISSUE No	D/M/Y	DESCRIPTION	DR	CH	APP



Tender Addendum TA007

Contractor Reference: None

Date 2023.08.21

Project 2032 LAHH

Client Town of Ladysmith

The following addendum supersedes information contained in drawings, specifications and any previous addenda for the project to the extent referenced. This Addendum forms part of the tender documents and is subject to all of the conditions set out in the contract conditions.

Electrical Addendum 01

1. Please refer to attached Electrical Addendum 01

Reason for Change: Clarifications, BC Hydro connection design, alternative light fixtures

Distribution List

Per Hector Alcala, Architect AIBC

THE FOLLOWING ADDENDUM SUPERCEDES INFORMATION CONTAINED IN DRAWINGS AND SPECIFICATIONS ISSUED FOR THE PROJECT TO THE EXTENT REFERENCED. THIS ADDENDUM FORMS PART OF THE TENDER DOCUMENTS AND IS SUBJECT TO ALL OF THE CONDITIONS SET OUT IN CONTRACT CONDITIONS.

This electrical addendum contains two (2) pages.

PART 1 REFER TO ELECTRICAL DRAWING E1.0

1.1 1/E1.0 – SITE PLAN ELECTRICAL LAYOUT

- .1 Provide and install BC Hydro approved pull box Type 332 sidewalk duty as per BC Hydro ES54 B7-01 R2 standard as shown below.

PART 2 ALTERNATE SUBMITTALS

2.1 LIGHTING ALTERNATES BY SLS

- .1 Please see the attachment for review comments.
- .2 The attachment contains 31 pages.

2.2 LIGHTING ALTERNATES BY MACSII

- .1 Please see the attachment for review comments.
- .2 The attachment contains 46 pages.

PART 3 BIDDER QUESTIONS

3.1 BIDDER QUESTIONS AND ANSWERS

- .1 Q: Is NMD-90 cable an acceptable wiring method throughout?
A: Yes, NMD-90 is an acceptable wiring method.
- .2 Q: Is AC-90 cable an acceptable wiring method throughout?
A: Yes, AC-90 is an acceptable wiring method.
- .3 Q: Drawing E2.0 has 5 type "H" fixtures crossed out in red, are these to be excluded from quotation?
A: Please highlight which Type 'H;' fixtures are being highlighted here.
- .4 Q: Drawing E2.0 has the 3 type "D" kitchen fixtures illustrated as 2'x2' drop in fixtures but drawing E1.1 fixture schedule lists them as 2'x4' drop in fixtures, please clarify?
A: 2' x 2' fixtures are required as shown on drawing E2.0.
- .5 Q: Drawing E2.0 has the washroom wall switches illustrated with a symbol not listed on the symbol schedule, are these switches line of low voltage?
A: The switches specified in the washrooms are Low voltage switches as shown on the symbol legend.
- .6 Q: Drawing E2.0 has the ceiling fans in the studio spaces in direct conflict with

type "A" linear fixtures, where are these fans to be mounted?

A: Mechanical to provide response.

- .7 Q: What is the expectation for electrical pathways on solid wood ceilings? There will be linear lighting, track lighting, exit lights, lighting sensors, security sensors, ceiling fans, and wireless access points to be ceiling mounted?

A: Electrical is to be concealed where possible; in EMT conduit where not possible.

- .8 Q: The drawings do not show the locations of the DMX controls, Daylight Harvesting sensors, cubicle sensors and interfaces and gateway locations?

A: These are not required as per the drawings. It's the part of wireless lighting control spec.

- .9 Q: Please clarify the occupancy sensors. The drawings have low voltage and line voltage occupancy sensors but the notes specify they need to be wireless as well?

A: Low voltage occupancy sensors are to be used and they need to be wireless as per the specs.

END OF ELECTRICAL ADDENDUM NO. 01

[illegible]

NOTE: CLEARANCES DETAIL AND SCHEDULE SHOWN ARE BASED ON ACHRYDOL STANDARD ESSA H-401 OF PAPER. REFER TO ACHRYDOL PULP, WEBSITE FOR CURRENT VERSION. DOGS SHOWN ON THE DETAIL AND SCHEDULE ARE FOR INFORMATION ONLY. TO DETERMINE CLEARANCE REQUIREMENT ON THE QUANTITY OF SERVICE DOGS AND/OR OTHER UTILITY DEVELOPERS DO NOT REPRESENT ACTUAL PRODUCTION. DOGS AND OTHER UTILITY DEVELOPERS DO NOT REPRESENT ACTUAL PRODUCTION. QUANTITY AND/OR DESIGN, REFER TO PLANS AND DETAILS FOR QUANTITY AND SIZE OF INCOMING BE. APPROVE DOGS AND OTHER UTILITY DEVELOPERS DO NOT REPRESENT ACTUAL PRODUCTION.

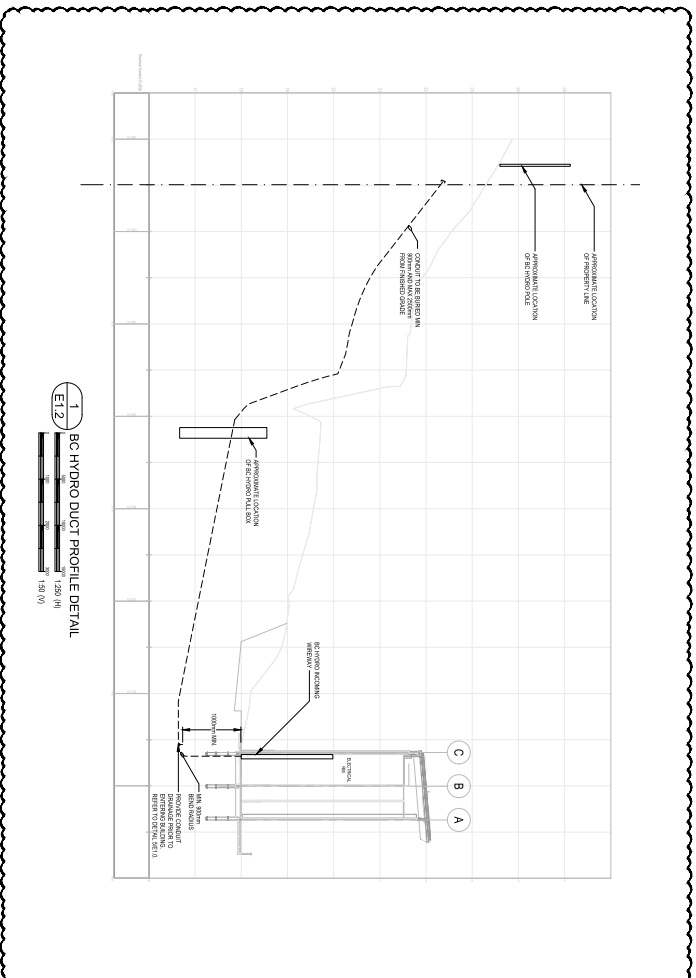
[illegible]

LAH		AUTHOR		Byron Black	
ELECTRICAL LOAD CALCULATION		LAST ACCESSSED		2022-03-31	
[Unsaved] page:page(1)20211324081 page(page): 24 of 2481 - 20221134 LAHm - 422234-8-11 LAST SAVED				2022-09-15	
BASIC LOAD					
INDUSTRIAL AND COMMERCIAL		280 m ²	x	25 W/m ²	=
TOTAL BASIC LOAD					7000 W
					7000 W
EQUIPMENT					
SPECIALTY LIGHTING					2000 W
MECHANICAL EQUIPMENT					3100 W
KITCHEN EQUIPMENT					500 W
					=
TOTAL EQUIPMENT LOAD					3500 W
					4500 W
TOTAL LOAD					4500 W
SERVICE MINIMUM AMPACITY		4500 W	@	208V	=
				3PH	=
MM OVERCURRENT PROTECTION		125 A	@	125%	=
					157 A
SERVICE MAINSWITCH					200 A
SUPPLY BACKGROUND					BACKGROUND



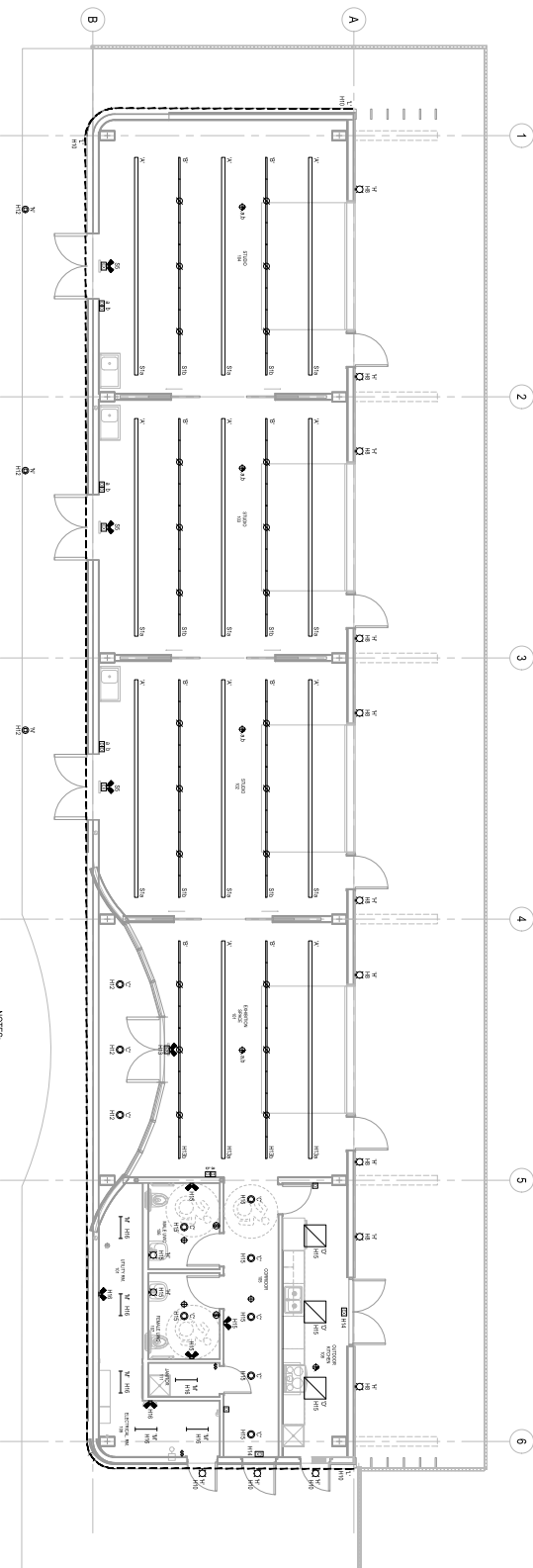
PLES
Designing A Better Tomorrow
600 1195 East Point Avenue, St. Louis
200.363.6323
CHADWYK | BELTON | HANCOCK | WICKHAM

Arts and Heritage Hub
Ladysmith, BC



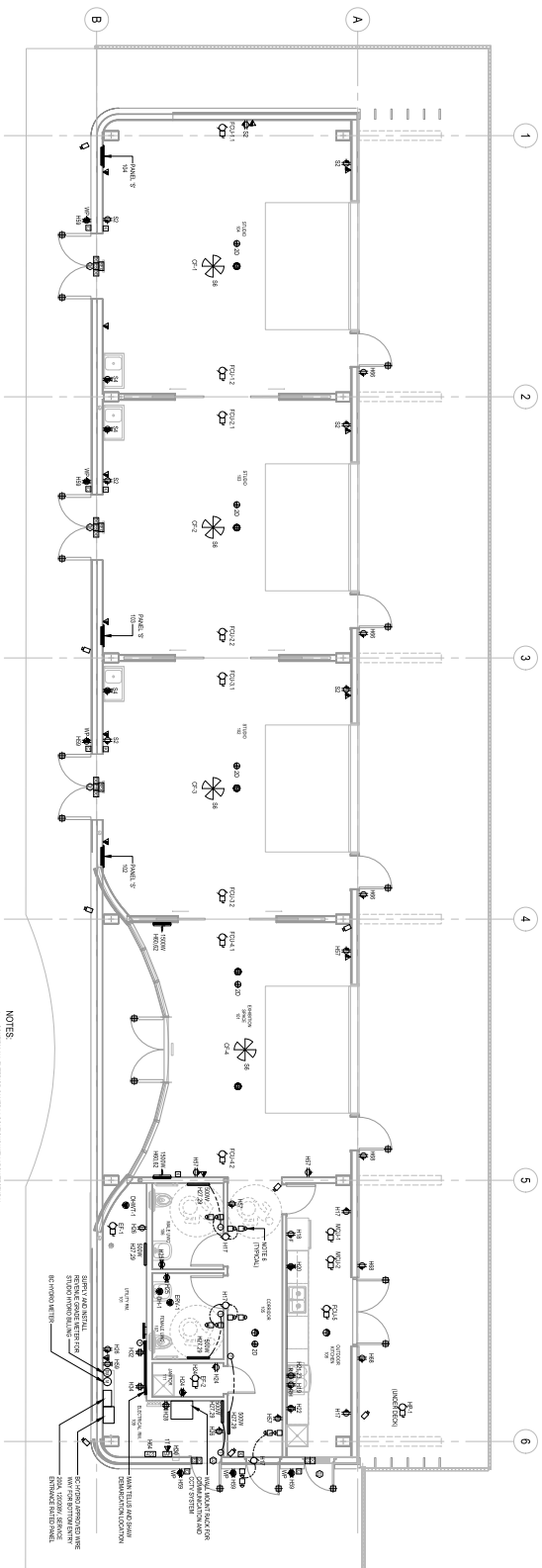
NOT FOR CONSTRUCTION – FOR REVIEW ONLY

Client	Project Name	Drawings To	Reference To	Drawal Number
Town of Lanesmith	01/21/0081	BAVTS	P8	E1.2
BC HYDRO DUCT PROFILE DETAIL				
Drawal Name	Drawal No.	Issued To	Issued By	Revision
AS NOTED	0031/023	1	BUILDING PERMIT	2
Draw	0031/023	2	TENDER	



1 FLOOR PLAN LIGHTING LAYOUT
E2.0 1/8"=1'-0"

- NOTES:
1. REFER TO THE LIGHTING SCHEDULE FOR LIGHTING FIXTURES AND LUMENS.
 2. REFER TO THE ELECTRICAL SCHEDULE FOR ELECTRICAL SYMBOLS AND WIRING.



2 FLOOR PLAN POWER AND SYSTEMS
E2.0 1/8"=1'-0"

- NOTES:
1. REFER TO THE ELECTRICAL SCHEDULE FOR ELECTRICAL SYMBOLS AND WIRING.
 2. REFER TO THE LIGHTING SCHEDULE FOR LIGHTING FIXTURES AND LUMENS.

JOB NAME	CATALOG NUMBER
NOTES	TYPE

ELECTRICAL DATA

LED Light Engine	System Wattage *	CCT / CRI	Nominal Delivered Lumens **
L0 L1	11W 16W	3000K / 82 CRI 3000K / 82 CRI	980lm 1300 lm

*System Wattage includes driver and LED module consumption

**Delivered lumens output will vary depending on, lumen packages, CCT/CRI and optic selection. See IES files for exact values.

FEATURES

- High performance LED with 2 SDCM binning
- Spot optic with 14,500 CBCP
- Choice of multiple CCT/CRI options

LED LIGHT ENGINE

- Color consistency of 2 MacAdam Elipses
- 82 or 92 CRI in 2700, 3000, 3500 & 4000K
- 50,000 hours L70 (rated life at 70% output)

OPTICS

- 12° spot, 24° narrow flood, 36° flood, and 50° wide flood
- Field changeable optics

ELECTRICAL SYSTEM

- 120/277V 50/60Hz input
- Class 2 power supply
- Over voltage/current and short circuit protection
- Auto Recovery

DIMMING

- Forward/ Reverse phase dimming
- Phase dimming in 120V only
- 0-10V dimming available with Pulse Control Track

TRACK COMPATIBILITY

Track luminaire is designed for use with the following track systems:

- Single Circuit / Single Neutral 120V
- Two Circuit / Single Neutral 120V (No Dimming)
- Pro-Series Two Circuit / Two Neutral 120V
- Pro-Series Two Circuit / Two Neutral 277V
- Pulse Control Track 0-10V Dimming 120V**
- J-Type Single / Two Circuit 120V
- L-Type Single / Two Circuit 120V

ACCESSORIES

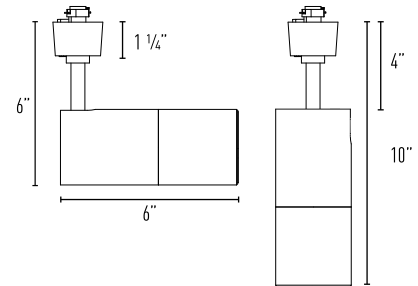
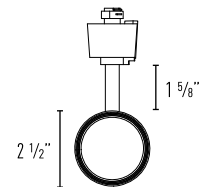
- Accessories include: Hex louver, prismatic spread lens, linear spread lens, and solite lens.
- Luminaire will accommodate (1) accessory. Holder required.

LISTING/WARRANTY

- ETL Listed to US and Canadian standards for damp locations
- 5-Year Intense LED Limited Warranty



iQ



Horizontal Adjustability: 358°

Vertical Adjustability: 180°

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ACCEPTABLE	ACCEPTABLE AS NOTED	NOT ACCEPTABLE
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Project Number: 0121.0081
Per: GS Date: 2023-08-18
Reviewed only as to general conformity with the design concept.

AES: CONFIRM FIXTURE FINISH
WITH ARCHITECT PRIOR TO
ORDERING.

IQ	-L1	359	-D101	W	-FL	-CT
Luminaire	Wattage	CCT / CRI	Driver	Finish	Beam Spread	Adapter
IQ	<input type="checkbox"/> -L0 (11 Watts) <input checked="" type="checkbox"/> -L1 (16 Watts)	<input type="checkbox"/> 27 (2700K/82 CRI) <input type="checkbox"/> 279 (2700K/92 CRI) <input type="checkbox"/> 30 (3000K/82 CRI) <input type="checkbox"/> 309 (3000K/92 CRI) <input type="checkbox"/> 35 (3500K/82 CRI) <input checked="" type="checkbox"/> 359 (3500K/92 CRI) <input type="checkbox"/> 40 (4000K/82 CRI) <input type="checkbox"/> 409 (4000K/92 CRI)	<input type="checkbox"/> blank (Non-Dimming) <input type="checkbox"/> -DIM^{1,2} (Phase Dimming) <input type="checkbox"/> -D101³ (0-10V Dimming)	<input checked="" type="checkbox"/> W (White) <input type="checkbox"/> B (Black) <input type="checkbox"/> SV (Silver)	<input type="checkbox"/> -SP (12° Spot) <input type="checkbox"/> -NF (24° Narrow Flood) <input type="checkbox"/> -FL (36° Flood) <input type="checkbox"/> -WF (50° Wide Flood)	<input type="checkbox"/> blank (Intense Single / Two Circuit 120V) <input type="checkbox"/> -PS (Pro-Series 120V) <input type="checkbox"/> -PS-27¹ (Pro-Series 277V) <input checked="" type="checkbox"/> -CT³ (Pulse Control Track 120V) <input type="checkbox"/> -J (J-Type Adapter 120V) <input type="checkbox"/> -L (L-Type Adapter 120V)

Accessories:

- ☐ LH56 (Accessory Holder)
- ☐ PFLMB-56 (Hex Louver)
- ☐ PFL56-1 (Prismatic Spread Lens)
- ☐ PFL56-2 (Linear Spread Lens)
- ☐ PFL56-4 (Solite Lens)

Field Changeable Optic:

- ☐ IP-B047SP (12° Spot)
- ☐ IP-B047NF (24° Narrow Flood)
- ☐ IP-B047FL (36° Flood)
- ☐ IP-B047WF (50° Wide Flood)

Notes:

- Phase dimming available in 120V only.
- Phase dimming not available with Pulse Control Track
- 0-10V dimming requires Pulse Control Track

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	

IQL130

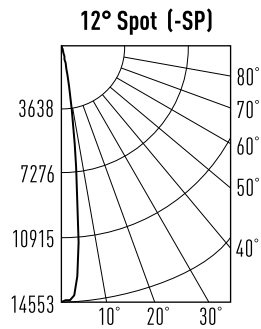
Report #:
ILL-20170505-01
ILL-20170505-02
ILL-20170505-03
ILL-20170505-04

CCT / CRI Multipliers:

2700K / 82 CRI (x 0.94)
2700K / 92 CRI (x 0.75)
3000K / 82 CRI (x 1.00)
3000K / 92 CRI (x 0.81)
3500K / 82 CRI (x 1.00)
3500K / 92 CRI (x 0.87)
4100K / 82 CRI (x 1.00)
4100K / 92 CRI (x 0.87)

LED Engine Multiplier:

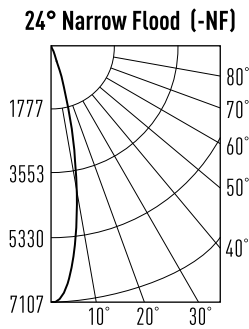
IQ-L0 (x 0.75)
IQ-L1 (x 1.00)



Watts: 16
Lumens: 1115
LPW: 70
CCT: 3000K

Candelas at Nadir

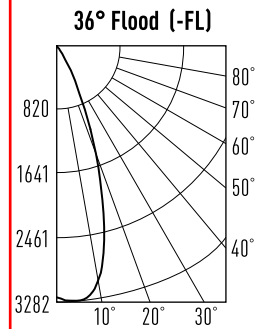
Degree	Candela
0°	14553
5°	9019
15°	883
25°	155
35°	69
45°	25



Watts: 16
Lumens: 1277
LPW: 80
CCT: 3000K

Candelas at Nadir

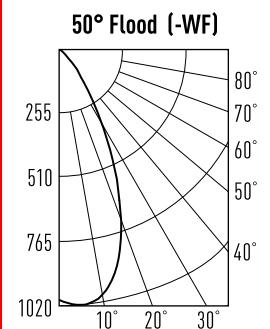
Degree	Candela
0°	7107
5°	6270
15°	1986
25°	266
35°	38
45°	11



Watts: 16
Lumens: 1311
LPW: 82
CCT: 3000K

Candelas at Nadir

Degree	Candela
0°	3282
5°	3310
15°	2191
25°	739
35°	158
45°	17



Watts: 16
Lumens: 1020
LPW: 64
CCT: 3000K

Candelas at Nadir

Degree	Candela
0°	981
5°	1008
15°	1021
25°	712
35°	325
45°	91

Pulse Control 0-10V Dimming (120V) Track

ICT4 / ICT8 / ICT12

ARTS AND HERITAGE HUB, LADYSMITH
TYPE : B

DESCRIPTION

Pulse Control Track provides a specification grade track platform for mounting high quality fixtures. The heavy duty extruded aluminum profile is ideal for demanding applications where numerous and/or heavy fixtures are needed. This phase track gives you your standard 120V connection for 3 circuit/ 1 neutral. Maximum control and reduced energy costs make Pulse Track an excellent choice.

Pulse Control Track is engineered to be durable, dependable, and simple-to-install lighting solution. The track's extruded aluminum construction and continuously crimped conductor ensure mechanical strength and electrical reliability. The integral suspension rail and predrilled mounting holes of the track simplify installations.

FEATURES

- High quality, Low profile, easy and flexible installation
- For use with specified Intense track luminaires
- Dimming feature available, see track luminaire for compatibility

ELECTRICAL

- Voltage: 120V 60Hz
- Amperage: 20A Max. / 2400W each.
- Dimming: dimming must be specified by track luminaire

CONSTRUCTION

- Architectural grade extruded aluminum
- Polarity ridge is located on face of track to indicate position of track adapters
- Available in white, black or silver
- Field cuttable to desired lengths

MOUNTING OPTIONS

Track can be surface or mounted to T-bar grid

LISTING/WARRANTY

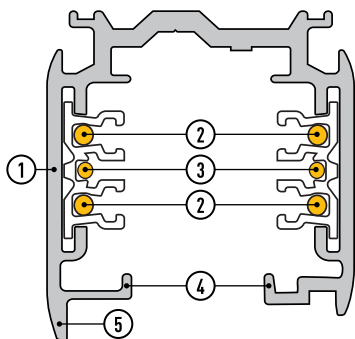
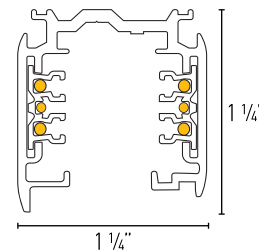
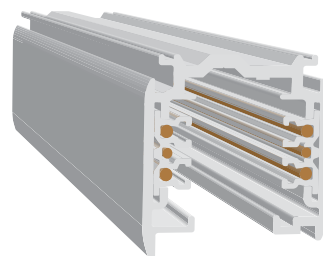
- NRTL Listed to UL 1574 / CSA C22.2 No. 9.0-96
- One (1) Year Limited Warranty



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ACCEPTABLE ✓	ACCEPTABLE AS NOTED	NOT ACCEPTABLE
Project Number: 0121.0081		
Per: GS Date: 2023-08-18		
Reviewed only as to general conformity with the design concept.		

AES: CONFIRM THE FINISH WITH
ARCHITECT PRIOR TO ORDERING.

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	



1. Quality Construction

- ISO 9001
- Rigid aluminum profile
- High quality powder coat finish
- Curved Track Available

2. Oversized Conductors

- For higher operating safety and reduced overload potential
- 3 Circuit Control Allows energy savings: Certain lights can be dimmed or shut off while others illuminate products
- Enhanced merchandising: Attention can be focused on select products

3. 0-10V Conductors

- Used for 0-10V connection

4. Separate Mechanical Suspension Points

- Superior weight bearing capacity
- Integrity of electrical contacts is maintained, preventing arcing and extending the life of fixtures and lamps

5. Raised Ridge

- This track is polarized and therefore direction sensitive, so care must be taken when selecting the connecting pieces
- The raised ridge on one side of the track ensures proper polarity connection

Part Number (Example: ICT4W)

Track Length	Finish
<input type="checkbox"/> ICT4 (4-Foot Track)	<input type="checkbox"/> W (White)
<input type="checkbox"/> ICT8 (8-Foot Track)	<input type="checkbox"/> B (Black)
<input type="checkbox"/> ICT12 (12-Foot Track)	<input type="checkbox"/> SV (Silver)

SPECIFICATION SHEET L/M-06518 P-1

INTENSE LIGHTING | 3340 E La Palma Ave, Anaheim, CA 92806 | tel 714 630-9877 | fax 714 630-9883

For Intense Lighting's limited product warranty, go to www.intenselightning.com. For a printed copy of the warranty, you may call 800 961-5321.

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intense[®] | a LEVITON[®] company

Pulse Control 0-10V Dimming (120V) Track

Accessories & Mounting Options

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	



Live End Feed Connector

Power feed added to end of track run.
Adds 3 1/4" to the start of a run.

Part Number		Finish
<input type="checkbox"/> ICT301	(Live End Feed)	<input type="checkbox"/> W (White)
<input type="checkbox"/> ICT301R	(Reversed Polarity Live End Feed)	<input type="checkbox"/> B (Black)
		<input type="checkbox"/> SV (Silver)



Straight Feed Connector

To connect two track sections end-to-end. Can be used as a power feed.

Part Number		Finish
ICT303	(Straight Feed)	<input type="checkbox"/> W (White)
		<input type="checkbox"/> B (Black)
		<input type="checkbox"/> SV (Silver)

"L" Connector

To connect two track sections in a 90° "L" shape. Can be used as a power feed.

Part Number		Finish
<input type="checkbox"/> ICT306A	(Inside Polarity)	<input type="checkbox"/> W (White)
<input type="checkbox"/> ICT306B	(Outside Polarity)	<input type="checkbox"/> B (Black)
		<input type="checkbox"/> SV (Silver)



"T" Connector

To connect three track sections in a "T" shape. Can be used as a power feed.

Part Number		Finish
<input type="checkbox"/> ICT304A	(Inside Left Polarity)	<input type="checkbox"/> W (White)
<input type="checkbox"/> ICT304B	(Outside Left Polarity)	<input type="checkbox"/> B (Black)
<input type="checkbox"/> ICT305A	(Inside Right Polarity)	<input type="checkbox"/> SV (Silver)
<input type="checkbox"/> ICT305B	(Outside Right Polarity)	



"X" Connector

To connect four track sections in a "X" shape. Can be used as a power feed.

Part Number		Finish
ICT307	("X" Connector)	<input type="checkbox"/> W (White)
		<input type="checkbox"/> B (Black)
		<input type="checkbox"/> SV (Silver)



Linear Coupler Connector

To join two track sections end-to-end.
Adds no length to track run.

Part Number		Finish
ICT308	(Linear Coupler)	<input type="checkbox"/> W (White)
		<input type="checkbox"/> B (Black)
		<input type="checkbox"/> SV (Silver)



Dead End

Mounts to the end of track section.

Part Number		Finish
ICT313	(Dead End)	<input type="checkbox"/> W (White)
		<input type="checkbox"/> B (Black)
		<input type="checkbox"/> SV (Silver)

GD2DR

2" Gravity LED Downlight

ARTS AND HERITAGE HUB, LADYSMITH
TYPE : C

JOB NAME	AES ENGINEERING LTD. FOR BIDDING PURPOSES ONLY		
	ACCEPTABLE ✓	ACCEPTABLE AS NOTED	NOT ACCEPTABLE
NOTES	Project Number: 0121.0081 Per: GS Date: 2023-08-18 Reviewed only as to general conformity with the design concept.		

ELECTRICAL DATA

LED Light Engine	Nominal Delivered Lumens*	System Wattage**
GRAVITY LED 1021-21 P-1 Intense Lighting 3340 E La Palma Ave, Anaheim, CA 92806 1507166-3000K/82CRI 630-9883	850lm @ 3000K / 82CRI 1200lm @ 3000K / 82CRI 1507166-3000K/82CRI 630-9883	10 Watts 15 Watts 20 Watts

* Delivered Lumens will vary depending on CCT, CRI, optic and reflector finish. Subject to change without notice.
** System Wattage includes driver and LED Module consumption.

FEATURES

- Dedicated High performance 7° Narrow Spot
- Field changeable 16° to 60° Optics
- Integral field changeable accessory holder
- In-field adjustable module height accommodates 1/2" to 1-1/4" ceiling thickness

LED LIGHT ENGINE

- 10W, 15W & 20W
- 7° Optic: 3 SDCM, 92CRI in 2700K, 3000K & 3500K
- 16° to 60° Optics: 2 SDCM, 82/92CRI in 2700K, 3000K, 3500K & 4000K
- Rated life of >50,000 hours L70 based on LED testing per LM-80-08 and projected values using IESNA TM21-11

OPTICS

- Dedicated 7° Narrow Spot
- Field changeable 16° Spot, 24° Narrow Flood, 36° Flood, 48° Wide Flood and 60° Very Wide Flood
- Accepts (2) field changeable filter media

ELECTRICAL SYSTEM

- 120V/277V input; Power factor >.9, 50/60Hz
- This product complies with IEEE C62.41 for surge endurance up to 2.5KV. Additional surge protection recommended. Damage from power surge is not covered by warranty.

HOUSING

- Heavy duty black powder coated 18 gauge steel frame
- Accommodates 1/2" to 1-1/4" Ceilings
- Integral driver compartment with below ceiling access

EMERGENCY BACKUP

- Remote test switch included. External Battery operates LED load @ 7-25 nominal delivered Lumens. Servicing requires above ceiling access.
- Available with IC and AIC housings only.

INSTALLATION

- IC and Non-IC Rated housing types, must specify. (Remodel housings are Non-IC only) Non-IC rated housings must be kept at a minimum of 3" away from insulation
- Remodel housings requires 5-1/2" of plenum space for installtion and servicing.
- Adjustable (10-3/4" to 25") joist/grid ceiling bar hangers included (Hanger bars does not allow for height adjustments)

REFLECTOR

- Specification grade 1.0mm spun aluminum reflector
- Deep cone option for maximum visual comfort and 15° of adjustability
- Reflector available in black, white, haze and wheat finishes (Consult factory for other finishes)
- Architectural, discrete polished self flange (**Note:** Not available with trimless trims)

DIMMING

- Phase dimming, Forward 1% & Reversed 5% (120V only)
- 0-10V 1% Dimming 1%
- EldoLED SOLOdrive 0-10V 0.1%
- EldoLED ECOdrive 0-10V 1%
- Lutron® LDE1 Hi-Lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology
- Lutron® LTEA2W Hi-Lume 1% 2-Wire LED driver (120V forward phase only)

REMOTE BOX

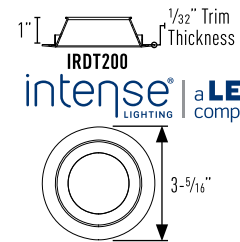
- Remote box included when required by specification (eldoLED or Lutron dimming option). Available with IC and AIC housings only.
- Above ceiling access required for servicing
- Galvanized steel construction with separate line voltage and low voltage wiring compartments
- 50ft remote distance maximum

LISTING / WARRANTY

- 5-Year Intense LED Limited Warranty
- ETL Listed to US and Canadian standards for damp locations
- (-IC / -AIC Only) ETL listed for direct contact w/insulation
- (-AIC Only) Air-Tight Certified ASTM E283.
- (-AIC Only) Can be used to comply with Title 24, Part 6, JA8 high efficacy LED light source requirements

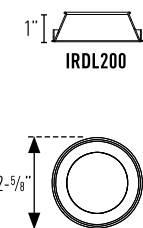


Trimmed Reflectors

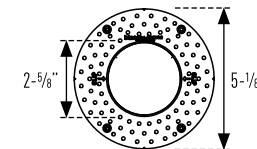


Ceiling Cutout: 2-7/8"

Trimless Reflectors



Ceiling Cutout: 2-7/8"



Trimless Mud Flanged:

Perforated collar for seamless and trimless mounting. Must be ordered separately and can only be used in conjunction with trimless trims.

Available Trim Finishes



GD2DR NC		L2	359	D101	WF		
Housing	Installation Type	Wattage	CCT / CRI	Dimming	Voltage	Optic	Options
<input type="checkbox"/> GD2DR	<input type="checkbox"/> NC (New Cons Non-IC) <input type="checkbox"/> NIC ¹ (New Cons IC-Rated) <input type="checkbox"/> NAIC ¹ (New Cons Air-Tight IC) <input type="checkbox"/> RC (Remodel Non-IC)	<input type="checkbox"/> L1 (10W) <input type="checkbox"/> L2 (15W) <input type="checkbox"/> L3 (20W)	<input type="checkbox"/> 27 (2700K / 82CRI) <input type="checkbox"/> 279 (2700K / 92CRI) <input type="checkbox"/> 30 (3000K / 82CRI) <input type="checkbox"/> 309 (3000K / 92CRI) <input type="checkbox"/> 35 (3500K / 82CRI) <input type="checkbox"/> 359 (3500K / 92CRI) <input type="checkbox"/> 40 (4000K / 82CRI) <input type="checkbox"/> 409 (4000K / 92CRI)	<input type="checkbox"/> DIM ² (Phase Dimming) <input type="checkbox"/> D101 (0-10V Dimming 1%) <input type="checkbox"/> ED10V1 ^{1,3} (eldoLED 0-10V 1%) <input type="checkbox"/> ED10V01 ^{1,3} (eldoLED 0-10V 0.1%) <input type="checkbox"/> LUT ^{1,3} (Lutron® LDE1 EcoSystem 1%) <input type="checkbox"/> LUT2 ^{1,2,3} (Lutron® LTEA2W 2-Wire 1%)	<input type="checkbox"/> blank (120V) <input type="checkbox"/> 27 (277V)	<input type="checkbox"/> NS ⁴ (7° NSP) <input type="checkbox"/> SP (16° SP) <input type="checkbox"/> NF (24° NFL) <input type="checkbox"/> FL (36° FL) <input type="checkbox"/> WF (48° WFL) <input type="checkbox"/> VF (60° VFL)	<input type="checkbox"/> EM7 ^{1,3,5} (7W Emergency Backup IOTA part #ILB-CP07-A)

IRDT200

HZ

-SF

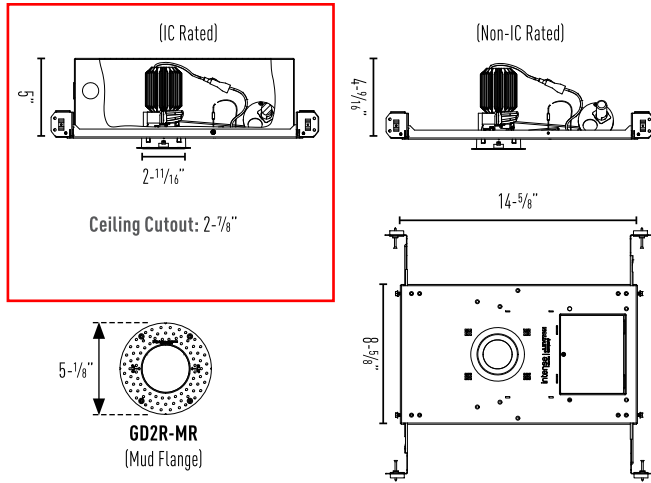
Reflector	Reflector Finish	Trim	Optional Accessory	Notes:
<input type="checkbox"/> IRDT200 (1" Regress Trim) <input type="checkbox"/> IRDL200 (1" Regress Trimless)	<input type="checkbox"/> W (White) <input type="checkbox"/> B ⁷ (Black) <input type="checkbox"/> HZ (Haze) <input type="checkbox"/> WHT ⁷ (Wheat)	<input type="checkbox"/> -SF (Self Flanged) <input type="checkbox"/> blank ⁶ (Trimless)	<input type="checkbox"/> GD2R-MR ⁶ Round Trimless Mud Ring Filter Media <input type="checkbox"/> PFL2-45 Hex Louver <input type="checkbox"/> PFL4-45 Soft Focus Film <input type="checkbox"/> PFL-LS-45 Linear Spread	1. Not available with L3 2. Available in 120V only 3. Remote driver box required for eldoLED, Lutron and EM back up. Compatible with IC and AIC rated housings only. 4. 7° Narrow spot not available in L3, 4000K or 82CRI. 5. Emergency backup available with IC and AIC housings only 6. Trimless options are for use with mud ring accessory only 7. Consult factory for lead times

GD2DR

2" Gravity LED Downlight

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	

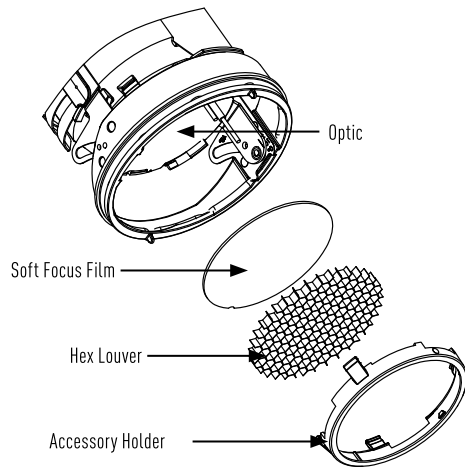
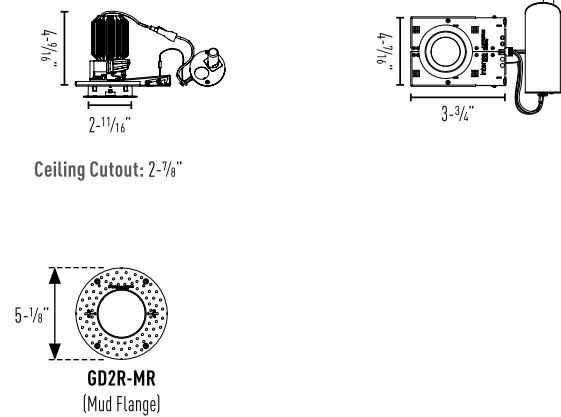
New Construction Dimension (IC & Non-IC):



Remodel Dimension (Non-IC):

Remodel housings requires 5-1/2" of plenum space for installation and servicing.

(Non-IC Rated)



Optics

Dedicated 7° Narrow Spot with Field changeable 16° to 60° Optics

- ☐ IP-OP45NS (7° Narrow Spot)
- ☐ IP-OP45SP (16° Spot)
- ☐ IP-OP45NF (24° Narrow Flood)
- ☐ IP-OP45FL (36° Flood)
- ☐ IP-OP45WF (48° Wide Flood)
- ☐ IP-OP45VF (60° Very Wide Flood)

Accessories

- ☐ PFL2-45 Hex Louver
- ☐ PFL4-45 Soft Focus Film
- ☐ PFL-LS-45 Linear Spread

Remote Mounted Driver

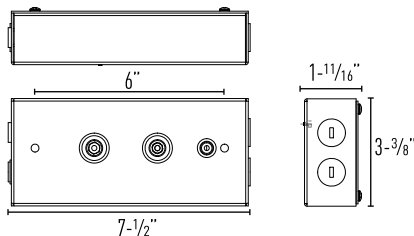
(For use with IC/AIC housings with eldoLED or Lutron dimming option)

- Remote box included when required by specification (eldoLED or Lutron dimming option). Available with IC and AIC housings only.
- Above ceiling access required for servicing
- Galvanized steel construction with separate line voltage and low voltage wiring compartments
- 50ft remote distance maximum

Remote Driver Box For Dimming Options

eldoLED 0-10V 1%
eldoLED 0-10V 0.1%
Lutron® LDE1 EcoSystem 1%
Lutron® LTEA2W 2-Wire 1%

Note: Wires for class 2 LED driver require a minimum of 18 awg wire at a maximum of 50 feet length per local and national electrical regulations.



GD2DR

2" Gravity LED Downlight

JOB NAME		CATALOG NUMBER	
NOTES		TYPE	

IRDT200WL2

Report #: ILL-20190114-1 (7)

LED PACKAGE MULTIPLIERS:
IRDT200WL1 (x 0.84)

IRRT200 (% REGRESS)
Trim Multiplier (x 0.99)

CCT MULTIPLIERS:
82CRI
2700K (x 0.93)
3000K (x 1.00)
3500K (x 1.00)

7° Narrow Spot

Throw Distance	Beam Diameter	Foot-candles at Nadir
6'	0.7'	751fc
8'	1.0'	423fc
10'	1.2'	270.5fc
12'	1.5'	187.8fc

Watts: 16 **LPW:** 43.2
Lumens: 691 **CCT:** 3000K

GRAVITY L/M-1021.21 P-3

Intense Lighting
3340 E La Palma Ave, Anaheim, CA 92806 | tel 714 630-9877 | fax 714 630-9883
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Intensity	
Degree	CBCP
0°	27046
5°	6552
15°	380
25°	69
35°	17
45°	7

IRDT200WL3

Report #: ILL-20190114-1 (16)
ILL-20190114-1 (24)
ILL-20190114-1 (36)
ILL-20190114-1 (48)
ILL-20190114-1 (60)

LED PACKAGE MULTIPLIERS:
IRDT200WL1 (x 0.58)
IRDT200WL2 (x 0.82)

IRRT200 (% REGRESS)
Trim Multiplier (x 0.99)

CCT MULTIPLIERS:
82CRI **92CRI**
2700K (x 0.93) (x 0.76)
3000K (x 1.00) (x 0.87)
3500K (x 1.00) (x 0.87)
4000K (x 1.00) (x 0.87)

16° Spot

Throw Distance	Beam Diameter	Foot-candles at Nadir
6'	1.7'	442fc
8'	2.2'	248fc
10'	2.8'	159fc
12'	3.3'	110fc

Watts: 20 **LPW:** 79.4
Lumens: 1589 **CCT:** 3000K

Intensity	
Degree	CBCP
0°	15914
5°	13019
15°	1498
25°	276
35°	44
45°	13

24° Narrow Flood

Throw Distance	Beam Diameter	Foot-candles at Nadir
6'	2.6'	175fc
8'	3.5'	98fc
10'	4.4'	63fc
12'	5.3'	49fc

Watts: 20 **LPW:** 76
Lumens: 1527 **CCT:** 3000K

Intensity	
Degree	CBCP
0°	6324
5°	5589
15°	2374
25°	607
35°	148
45°	25

36° Flood

Throw Distance	Beam Diameter	Foot-candles at Nadir
6'	3.4'	116fc
8'	4.6'	65fc
10'	5.7'	41fc
12'	6.9'	29fc

Watts: 20 **LPW:** 74
Lumens: 1497 **CCT:** 3000K

Intensity	
Degree	CBCP
0°	4199
5°	3903
15°	2274
25°	789
35°	233
45°	44

48° Wide Flood

Throw Distance	Beam Diameter	Foot-candles at Nadir
6'	4.9'	62fc
8'	6.6'	35fc
10'	8.2'	22fc
12'	9.9'	15fc

Watts: 20 **LPW:** 69
Lumens: 1390 **CCT:** 3000K

Intensity	
Degree	CBCP
0°	2246
5°	2166
15°	1676
25°	924
35°	385
45°	103

60° Very Wide Flood

Throw Distance	Beam Diameter	Foot-candles at Nadir
6'	6.9'	39fc
8'	9.2'	22fc
10'	11.5'	14fc
12'	13.8'	10fc

Watts: 20 **LPW:** 66
Lumens: 1333 **CCT:** 3000K

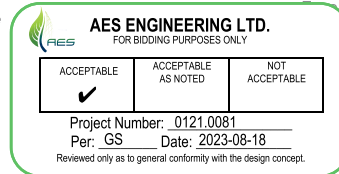
Intensity	
Degree	CBCP
0°	1435
5°	1393
15°	1242
25°	921
35°	504
45°	170

ARTS AND HERITAGE HUB, LADYSMITH TYPE : D

SilkSpace definition combines the minimalist, modern good looks of our SilkSpace performance luminaire, in a value version that's perfect for your tight budget projects.

SilkSpace definition now includes AccuRender technology for the highest color quality at the highest efficacy.

Project: _____
Location: _____
Cat.No: _____
Qty: _____



42		22		D1		ST		L		935		30	
Family		Size ⁴		Version		Configuration		Source		CRI/CCT ¹		Lumens ¹	
42						ST		L					
42	SilkSpace definition	24 2'x4' ² 54 20'x4' ^{4,5} M4 600x1200mm ^{2,6}	D1 Standard T-Grid C1 Standard T-Grid+ Chicago Plenum A1 Standard T-Grid+ Air Return ⁵	ST Standalone	L LED	950 CRI 90, 5000K 940 CRI 90, 4000K 935 CRI 90, 3500K 930 CRI 90, 3000K 927 CRI 90, 2700K	80 8000lm 75 7500lm 70 7000lm 65 6500lm 60 6000lm 55 5500lm 50 5000lm 45 4500lm 40 4000lm						
		30 30"x30" ⁹ M7 750x740mm ⁹					60 6000lm 55 5500lm 50 5000lm 45 4500lm 40 4000lm 35 3500lm 30 3000lm						
		14 1'x4' ⁵ 22 2'x2' ^{5,9} 52 20"x2' ^{5,9} M2 600x600mm ⁹ M5 300x1200mm ⁹					50 5000lm 45 4500lm 40 4000lm 35 3500lm 30 3000lm						
		12 1'x2' ^{5,9} M5 300x600mm ^{5,9}					25 2500lm 30 3000lm 25 2500lm 20 2000lm 10 1000lm						
		11 1'x1' ^{5,7,9}					15 1500lm						

A	1	D	E	D	
Optics	Wiring ³	Voltage ³	Driver ^{3,8}	Option ^{4,5}	System/Controls
A					
A Acrylic Silk Lens	1 Single Circuit B Single Circuit+ Battery Pack ^{6,7}	D UNV 120-277V 3 347V ⁹ D UNV 120-277V	E Advance Xitanium 0-10V (1% Dim) D Advance Xitanium DALI (5% Dim) ⁶ H Lutron EcoSystem LDE1 (<1% Dim, Fade-to-Black) ^{6,9}	N No option D Drywall trim kit P Flex whip (6') S Solid filler panel (set of 2) A Air return filler panel (set of 2)	Leave blank if none CS Interact Pro scalable wireless sensor with integral daylight & occupancy sensing, advanced grouping with dwell time ^{8,10} SB Interact Pro wireless sensor with occupancy, daylight, and environmental sensing capabilities
	1 Single Circuit B Single Circuit+ Battery Pack ^{6,7} R UL924 Sensor Bypass Relay ¹¹	D UNV 120-277V	S Advance Xitanium Sensor Ready (1% Dim) ^{6,9}		

Footnotes 1-6 (hover here to view or see last page of spec sheet)

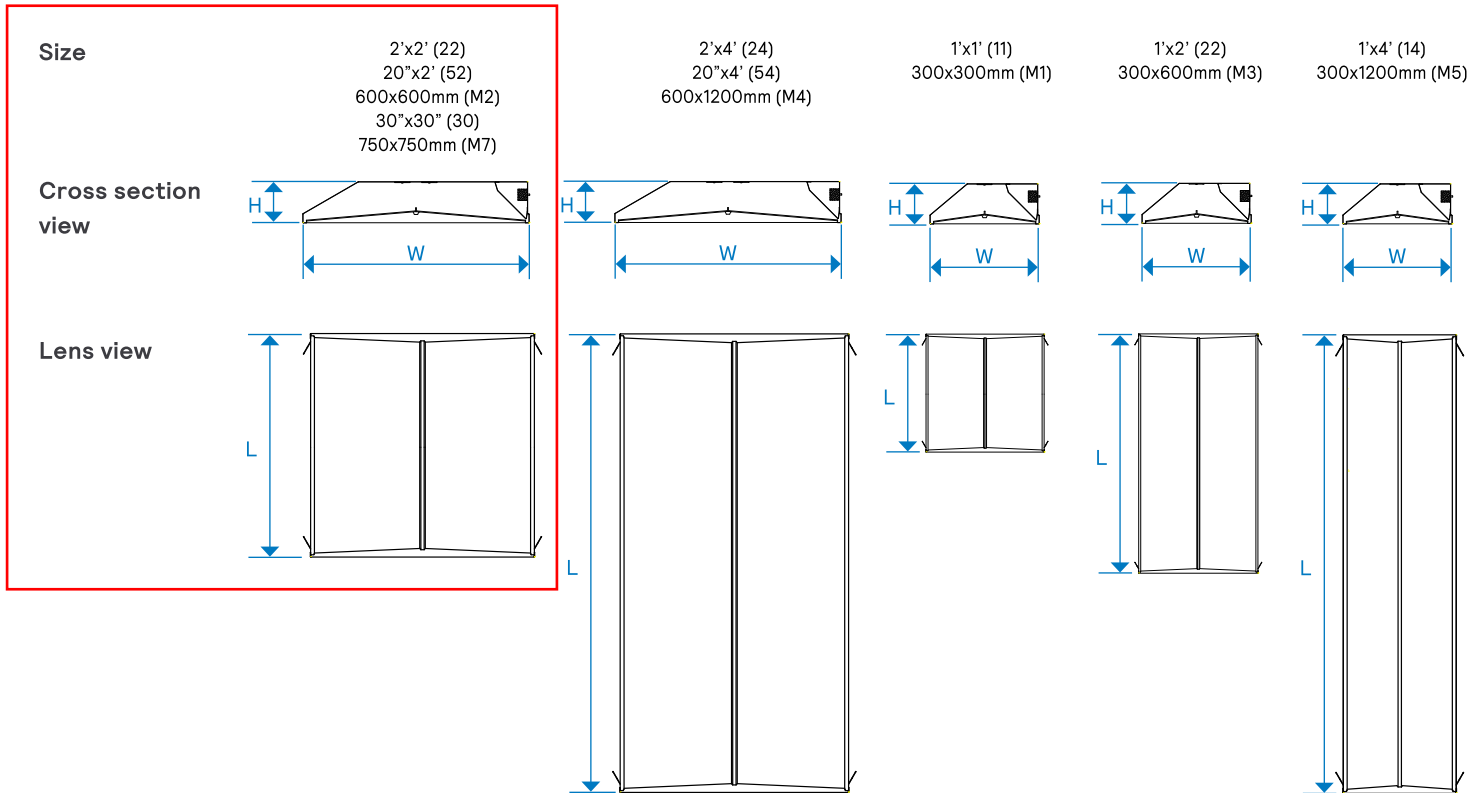
Footnotes 7-11 (hover here to view or see last page of spec sheet)

DLC Note: Not all product variations listed on this page are DLC qualified. To ensure that a specific model is qualified, visit www.designlights.org/search

SilkSpace definition recessed

Imperial & metric sizes

Dimensions



Size	W	L	H
2'x2' (22)	23.75" [603mm]	23.66" [602mm]	4.375" [110mm]
20"x2' (52)	19.78" [502mm]	23.66" [602mm]	4.375" [110mm]
600x600mm (M2)	23.41" [595mm]	23.31" [592mm]	4.375" [110mm]
30"x30" (30)	Consult Factory		
750x750mm (M7)	Consult Factory		
2'x4' (24)	23.75" [603mm]	47.38" [1210mm]	4.375" [110mm]
20"x4' (54)	19.78" [502mm]	47.66" [1211mm]	4.375" [110mm]
600x1200mm (M4)	23.41" [595mm]	46.92" [1192mm]	4.375" [110mm]
1'x1' (11)	11.75" [298mm]	11.75" [298mm]	4.375" [110mm]
300x300mm (M1)	Consult Factory		
1'x2' (22)	11.75" [298mm]	23.66" [602mm]	4.375" [110mm]
300x600mm (M3)	Consult Factory		
1'x4' (14)	11.75" [298mm]	47.38" [1210mm]	4.375" [110mm]
300x1200mm (M5)	Consult Factory		

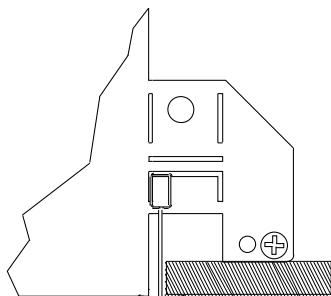
SilkSpace definition recessed

Imperial & metric sizes

Mounting details

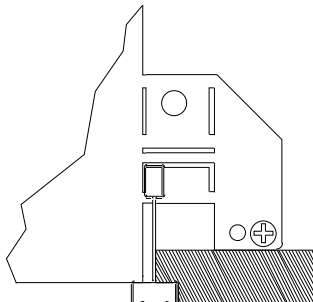
Flat T-Grid

Integrates with most common T-Grid types. Works with 9/16" & 15/16" flat T-Grid ceilings



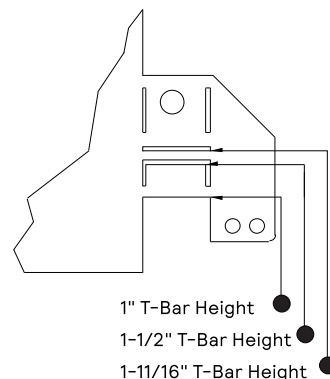
Slot T-Grid

Can be used with slot T-Grid ceilings. For 9/16" slot T-Grid ceilings, fixture will sit 5/16" above bottom of T-Bar.



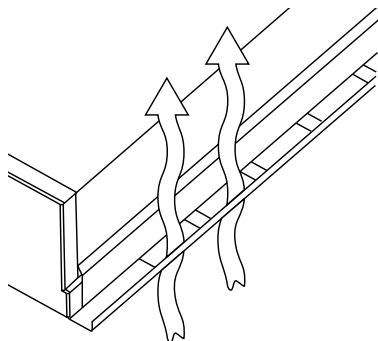
Ceiling Types

Integrated mounting tabs can be field-adjusted to various T-Grid ceiling heights for fastening directly to the T-Bar and/or tied off to the building structure.



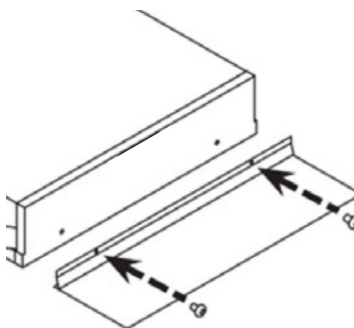
Air Return Vents

The air return version features slotted vents along the sides of the fixture. As a result, the installation method of the air return version may be different to the standard version, please consult the installation instruction sheet.



Filler Panel (20"x4' only)

Attach filler panels to ends of housing using two supplied screws shown below.



Drywall Trim Kit

The drywall trim kit mounting frame assembly is designed to permit use of grid (NEMA G) fixtures in drywall or ceilings requiring flanges.

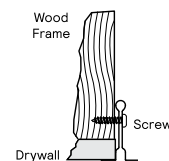
Extruded aluminum construction with mitered corners. Includes screws for complete assembly. Available in 2'x2', 2'x4' & 1'x4' sizes.



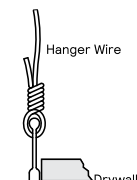
More information available at:

http://docs.ledalite.com/download/pdf/ID-Recessed_Drywall_Kits.pdf

Wood Frame Hanger Wire



Wood frame and screws supplied by others.



Hanger wires supplied by others.

SilkSpace definition recessed

Imperial & metric sizes

Specifications

Optical System

Optical system consists of highly reflective powder coated interior reflectors and three flat acrylic lenses.

Finish

Housing and Frame: Post-painted, high quality powder coat. Available in white.

Housing

Die-formed, post-painted, 22 & 24 gauge cold-rolled steel. Wire entrance is positioned on the side and/or top of housing to allow easy wiring access for installation. Access to boards and drivers from below via side lens cavity. T-bar clips built into the luminaire ends for quick and easy installation. Optional perforated or solid filler panels for 20"x48" fixtures to accommodate 60" ceiling grid.

Weight

Maximum 40lbs (2'x4' with Battery Pack).

Electrical

LED boards are easily field replaceable, if required. Fixtures are factory pre-wired and tested for all circuits and backup battery packs; all leads pulled to a side access with cover plate.

Standard Drivers

Advance Xitanium 0-10V, 1% Dimming

Advance Sensor Ready, 5% Dimming

Lutron EcoSystem LDE1, 1% Dimming with Soft-On and Fade-to-Black

Class 2 rated output.

Consult Ledalite for other available drivers.

Standard Battery Pack

Bodine, 90 min, 10W, Class 2 rated output, Emergency lumen output = 10W x luminaire efficacy x 1.1. Typical output: 1300lm.

Lumen Maintenance

LEDs have been tested by the manufacturer in accordance with IESNA LM-80-08. At an ambient temperature of 25°C, the LED lumen maintenance expectation according to IES TM-21-11 is: L80 (10k) >60,000 hrs (Reported methodology).

Source Color

LEDs rated for color rendering of:

CRI >90 & R9>50

Fixture to fixture color accuracy within 2 SDCM.

Mounting

Compatible with 15/16" lay-in acoustical ceilings using exposed grid suspension (NEMA type G). For 9/16" slot T-grid ceilings, fixture will sit 5/16" above bottom of Tee. Integrated tabs are provided for different T-grid heights. Optional drywall kit trim mount can be fastened to a wood frame or with hangar wire.

Wiring

Optional armored cable flex whips are supplied in 6' lengths.

Approvals

Certified to UL & CSA Standards. City of Chicago Approved CCEA (housing option C).

Certain product configurations are DesignLights Consortium qualified. Please see the DLC QPL list for exact catalog numbers under DLC Family Code RRRXLU

www.designlights.org/QPL

Select SilkSpace definition configurations contribute toward satisfying features L06, L07 and L08 under the WELL v2 Building Standard®.

Warranty

Five-year luminaire limited warranty including LED boards and driver.

www.signify.com/warranties

Environment

Type IC, rated for dry & damp locations in ambient operating temperatures of 25°C. Many luminaire components, such as reflectors, refractors, lenses, and LEDs are made from various types of plastics which can be adversely affected by airborne contaminants. If sulfur based chemicals, petroleum based products, cleaning solutions, or other contaminants are expected in the intended area of use, consult factory for compatibility. Damage caused by sulfur, chlorine, petroleum based solution or other contaminants are not covered under warranty.

QuickShip

10-day QuickShip available for most configurations upon request. More information available at:

www.signify.com/en-us/brands/ledalite/about-us/quickship

SilkSpace definition recessed

Imperial & metric sizes

Wireless Controls Options

Interact Pro scalable sensor for Foundation, Advanced & Enterprise tiers (CS an evolution of SpaceWise):

- CS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the Foundation mode (similar to SpaceWise) when configured without a gateway or in an Interact Pro Advanced or Enterprise mode if a compatible gateway is used.
- Interact Pro includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & Bluetooth connectivity. The App provides flexibility to choose between a gateway or non gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely and use IRT9015 remote onsite to identify and group devices together.
- Compatible with SWS200 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1).
- For more information on Interact Pro visit:
www.interact-lighting.com/interactproscalablesystem

Emergency Options (R):

- Power Sensing (Factory default) – Recommended
- UL924 option requires unswitched power sense line, absence of voltage on the normal circuit triggers luminaire to 100% output.
- Power Interruption Detection (Field option)
- Detects AC power interruption >30ms triggers 90 minute emergency mode with luminaire at 100% output.

Interact Pro scalable sensor bundles for Enterprise tier (SB):

- SB option, in addition to occupancy and daylight sensing, supports advanced IoT capabilities such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Compatible with SWS200 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1).
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Requires compatible Gateway and internet connectivity for commissioning. For more information, visit:
www.interact-lighting.com/office

Wired Controls Options

Interact Office Wired PoE (IO & SB):

- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Integral sensor option for occupancy sensing (PIR) and/or daylight harvesting available for additional energy savings.
- SB option, in addition to occupancy and daylight sensing, supports advanced IoT capabilities such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Optional integral emergency controller and battery pack provides backup lighting in the case of a power outage. Test switch and indicator light mounted on the chassis.
- Emergency battery has a 3 month pre-installed shelf life, and must be stored and installed in environments of -20°C to 30°C (-4F to 86F) ambient, and 45-85% relative humidity.
- For more information on Interact Office Wired visit:
www.interact-lighting.com/office

Note: Signify Interact Office Luminaires are not sold individually and are only compatible with Signify's Interact Office control system & software. The system requires a compatible back-end IT infrastructure for normal operations, please consult your Signify representative for additional information.

Tunable White:

- Tunable White is available in Interact Office Wired PoE luminaires. Other control options for Tunable White with DALI (DT6 or DT8), 0-10V, Lutron T Series or DMX control are available via an Engineered-to-Order (ETO) request.
- Signify tunable white solutions are designed to help maximize the influence of lighting on your daily life.
- Dynamic behaviors via scheduled lighting recipes mimicking daylight patterns or supporting biorhythms.
- Scene setting via lighting pre-sets based on various combinations of lighting color temperature and intensity.

Interact Pro scalable sensor option codes across Genlyte product lines

	Evokit	Day-Brite	Ledalite	Lightolier
ZeeBee + Bluetooth + Sensing	SWZCS	SWZCS	CS	SBA accessory (external)
ZeeBee + Bluetooth	RADIO	RADIO	RA	RA
ZeeBee + Bluetooth + Sensing + Environmental data	IAOSB	IAOSB	SB	SB
ZeeBee + Highbay + Sensing	-	SWZCSH	-	-

SilkSpace definition recessed

Imperial & metric sizes

Colorimetry

SilkSpace Definition (42xx) AccuRender Static White

Nominal CRI & CCT		CRI 90, 2700K	CRI 90, 3000K	CRI 90, 3500K	CRI 90, 4000K	CRI 90, 5000K
CIE 013.3-1995 ¹	CRI R _a	94	93	93	93	93
	R _y	55	57	59	64	68
	G _a	99	99	99	99	99
	C _s	93	93	93	93	94
IES TM-30-18 ²	R _f	92	91	91	91	90
	R _f , h ₁	90	90	90	91	89
	R _g	100	100	99	100	100
	R _{cs} , h ₁	-6%	-5%	-6%	-5%	-5%
MDER ³		0.45	0.51	0.58	0.65	0.81

1. Color Rendering Index (CRI Ra) and Strong Red (R9) are calculated in accordance with CIE 013.3-1995. Color Gamut index (Ga) and red chroma Index (C9) are CIE based properties using the Global Lighting Association's calculation tool.

2. Fidelity Index (Rf), Red Fidelity Index (Rf,h1), Gamut Index (Rg), and Red Local Chroma Shift (Rcs,h1) are calculated in accordance with IES TM-30-18.-18.

3. Melanopic Daylight Efficacy Ratio (MDER) is the measure for "spectral melanopic efficiency" as defined in CIE S 026-2018.

SilkSpace definition recessed

Imperial & metric sizes

Photometry

2'x2' (22)

Click "PDF" or "IES" text to download

Nominal CRI & CCT		CRI 90, 2700K					CRI 90, 3000K					CRI 90, 3500K					CRI 90, 4000K					CRI 90, 5000K				
Nominal Lumen Package	Watts	Flux	Efficacy (LPW)	UGR*	Photometry Report	IES File	Flux	Efficacy (LPW)	UGR*	Photometry Report	IES File	Flux	Efficacy (LPW)	UGR*	Photometry Report	IES File	Flux	Efficacy (LPW)	UGR*	Photometry Report	IES File	Flux	Efficacy (LPW)	UGR*	Photometry Report	IES File
5000	43.4	4,617	106.4	20.4	PDF	IES	4,749	109.4	20.5	PDF	IES	4,995	115.1	20.7	PDF	IES	4,981	114.8	20.7	PDF	IES	5,107	117.7	20.8	PDF	IES
4500	39.1	4,164	106.5	20.1	PDF	IES	4,284	109.6	20.2	PDF	IES	4,501	115.1	20.3	PDF	IES	4,493	114.9	20.3	PDF	IES	4,605	117.8	20.4	PDF	IES
4000	34.0	3,698	108.8	19.6	PDF	IES	3,806	111.9	19.7	PDF	IES	3,994	117.5	19.9	PDF	IES	3,992	117.4	19.9	PDF	IES	4,090	120.3	20.0	PDF	IES
3500	29.5	3,240	109.8	19.2	PDF	IES	3,335	113.1	19.3	PDF	IES	3,498	118.6	19.5	PDF	IES	3,499	118.6	19.5	PDF	IES	3,584	121.5	19.5	PDF	IES
3000	25.2	2,771	110.0	18.6	PDF	IES	2,854	113.3	18.7	PDF	IES	2,991	118.7	18.9	PDF	IES	2,994	118.8	18.9	PDF	IES	3,065	121.6	19.0	PDF	IES
2500	20.2	2,313	114.5	18.0	PDF	IES	2,383	118.0	18.1	PDF	IES	2,496	123.6	18.3	PDF	IES	2,499	123.7	18.3	PDF	IES	2,557	126.6	18.4	PDF	IES

* UGR given at 3500K, based on 4Hx8Hx0.25H. UGR can be calculated at other CCTs by importing the ies file into lighting design software.

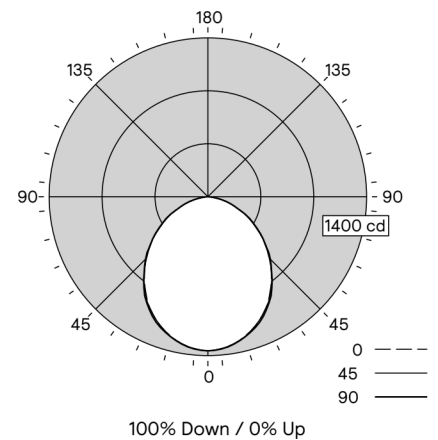
CANDELA DISTRIBUTION						Flux
	0	22.5	45	67.5	90	Lumens
0	1358	1358	1358	1358	1358	
5	1344	1350	1346	1350	1347	128
15	1271	1281	1274	1284	1277	360
25	1145	1157	1145	1162	1160	531
35	968	985	972	997	983	614
45	768	787	765	795	778	602
55	563	578	556	587	566	510
65	360	371	357	373	360	361
75	171	183	168	182	174	188
85	30	36	29	33	29	42
90	0	0	0	0	0	
95	0	0	0	0	0	0
105	0	0	0	0	0	0
115	0	0	0	0	0	0
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	

COEFFICIENTS OF UTILIZATION (%)												
Pc---	80				70				50			
Pw---	70	50	30	10	70	50	30	10	50	30	10	0
RCR												
0	119	119	119	119	116	116	116	111	111	111	100	
1	109	105	101	97	107	103	99	98	95	93	85	
2	100	92	86	80	97	90	84	87	82	77	72	
3	91	81	74	67	89	80	73	77	71	65	61	
4	84	72	64	57	82	71	63	69	62	56	53	
5	77	66	56	50	75	64	56	62	55	49	46	
6	72	59	50	44	70	58	50	56	49	43	40	
7	67	53	45	39	65	53	44	51	44	38	36	
8	62	49	40	35	60	48	40	47	40	34	32	
9	58	45	37	31	57	44	37	43	36	31	29	
10	54	41	34	29	53	41	34	40	33	28	26	

* Based on a floor reflectance of 0.2

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Fixture	%Lamp
0-30	1019	30.6%	30.6%
0-40	1633	49.0%	49.0%
0-60	2744	82.3%	82.3%
0-90	3335	100.0%	100.0%
90-130	0	0.0%	0.0%
90-150	0	0.0%	0.0%
90-180	0	0.0%	0.0%
0-180	3335	100.0%	100.0%

AVG LUMINANCE (cd/m ²)			
	0	45	90
0	4028	4028	4028
5	4000	4005	4009
15	3901	3910	3919
25	3746	3745	3796
35	3504	3519	3558
45	3220	3207	3263
55	2908	2874	2924
65	2526	2501	2528
75	1958	1928	1996
85	1027	980	993



*Photometric data shown is for 3000lm, 3500K, 90 CRI configuration.

SilkSpace definition recessed

Imperial & metric sizes

Footnotes from page 1 ordering guide

1. Nominal values within a range. Not all lumen packages are available with all configurations. Consult photometry data for CRI, color temp, lumens & distribution of chosen configuration.
2. Not all wiring types are available with all configurations. Consult Ledalite for a complete list of available options.
3. Flex whips are installed, drywall trim kits ship separately.
4. Filler Panels available for 20"x4' size to accommodate a 20"x60" grid system.
5. Air Return version is not available in 1'x, 300mmx or 20"x sizes. Note for 20"x4' size, Air Return Filler Panels are available.
6. 347V not available with Battery Pack, DALI, Lutron EcoSystem or Sensor Ready drivers or Interact Pro options.
7. 1'x1' & 300x300mm sizes not available with Battery Pack, DALI, Lutron EcoSystem or Sensor Ready drivers or Interact Pro options.
8. Interact options require separate controls hardware by Signify.
9. This option is qualified as Engineered-to-Order (ETO) ready. Other options not shown here may be possible via an ETO request. Lead times and minimum order quantities may vary, please consult factory.
10. Must order IRT9015 Interact commissioning remote with each system order.
11. UL924 listed sensor bypass relay is factory installed between driver & sensor. Must be ordered in same module as integral sensing option. Must be installed in conjunction with a UL1008 device.

Note: Due to continuing product improvements, Ledalite reserves the right to change the specifications without notice.



SL3 – Outdoor

Diffusion LED Strip

50,000 HRS

24 V DC

10 W/M (3W/FT)

IP67

91+

LAMP LIFE

POWER INPUT

LED WATTS

IP RATING

CRI

Description

Diffusion SL-3 is a flexible 10 mm wide linear LED strip. It is available in 16 ft and 32 ft rolls that can be cut every 6 LEDs (50 mm or 2 in).

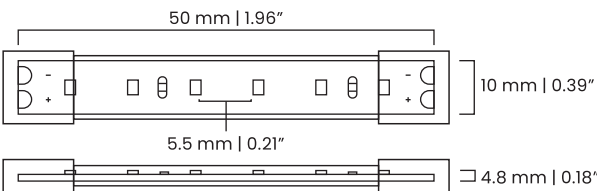
*Custom lengths available upon request**

AES: FLEXIBLE TRACK IS REQUIRED FOR MOUTNING THE LED STRIP

Specifications

WATTAGE	10 W/m (3W/ft)	ENVIRONMENT	Sauna Approved
VOLTAGE	24 Volts DC	OPERATING TEMP	-40°C to -120°C
ROLL LENGTH	16 ft, 32 ft, Custom Cut	CUTTING POINT	2 in
DIMMABLE	Yes	IP RATING	IP67
LAMP LIFE	50,000 hrs LM-80	CERTIFICATE	cUL Listed E486690
CRI	91 + CRI	WARRANTY	5 Year Warranty

Diagram



SL3-OUT	xx	24V	3000K
---------	----	-----	-------

ORDERING CODE	LENGTH	VOLTAGE	KELVIN
SL3 - OUT	XX 16 ft 32 ft Custom Cut	24V	XX 2700K 3000K 3400K 4100K

Lumens

2700K 788 lm/m (236 lm/ft)	3000K 820 lm/m (252 lm/ft)	3400K 876 lm/m (263 lm/ft)	4100K 908 lm/m (279 lm/ft)
----------------------------------	----------------------------------	----------------------------------	----------------------------------

Note Custom Kelvins available upon request*



ARTS AND HERITAGE HUB, LADYSMITH TYPE : N

CUSTOM ARCHITECTURAL LIGHTING • 120 WALKER DRIVE, BRAMPTON, ONTARIO, L6T 4G9

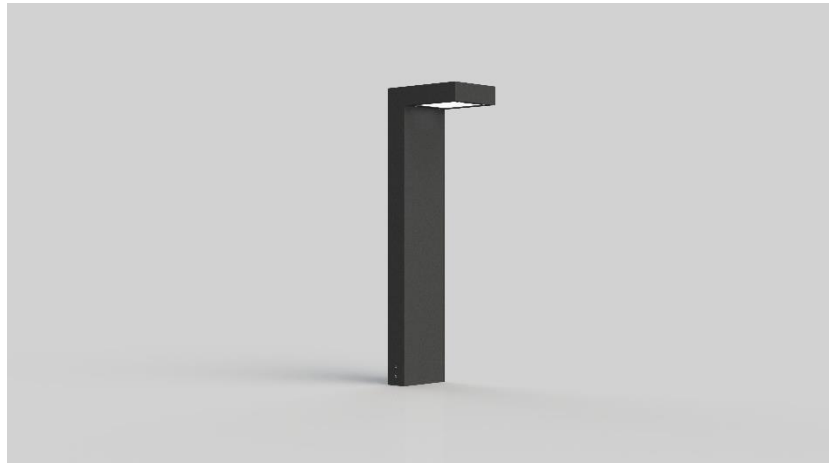
Date:

Type:

Project:

SOX-BLD BOLLARD

The bollard version of the SOX Light Column. Made from extruded aluminum that looks like an inverted "L" giving a very simple & sleek look. The head assembly has clear lens with light emitting directly downwards. Standard bollard height is 40" high. Double head assembly is a customizable option. Check the Pole Version under Exterior Light Column.



SOX-BLD	XX	2000	3000K	UNV	ABT		
Name	Lamping*	Lumens*	Color Temp	Electrical	Mounting		
SOX-BLD	29 W LED (max)	3386	5000K	UNV	120-277V	ABT	Anchors, bolts, & template
			4000K	HLV	347-480V		
			3500K				
			3000K				
Contact for custom options		Contact for other wattages		Contact for other mounting types			
CL	TY2			SG			
Lens	Light Pattern		Options		Finishes		
CL	Clear lens (Std)	TY2	Type II distribution (Std)	TP	Tamperproof Hardware	BL	Black
		TY3	Type III distribution	TS	Tamperproof Screws	WH	White
		TY4	Type IV distribution	BC	Base cover	SG	Silver Grey
				GFR	Ground fault receptacle	BZ	Bronze
				PC	Button photocell, Voltage specific		
				2XSOX	Double head assembly, contact Solera	CC	Custom Color

See finishes info on website

[See finishes info on website](#)

*Lumens are based on Max Wattage and 5000K CCT

*Specific IES Files available upon request

Std – Standard Offering

AES ENGINEERING LTD.
FOR BIDDING PURPOSES ONLY

ACCEPTABLE	ACCEPTABLE AS NOTED	NOT ACCEPTABLE
------------	------------------------	-------------------

Project Number: 0121.0081
Per: GS Date: 2023-08-18
Reviewed only as to general conformity with the design concept.

AES: CONFIRM FIXTURE FINISH WITH ARCHITECT
PRIOR TO ORDERING.

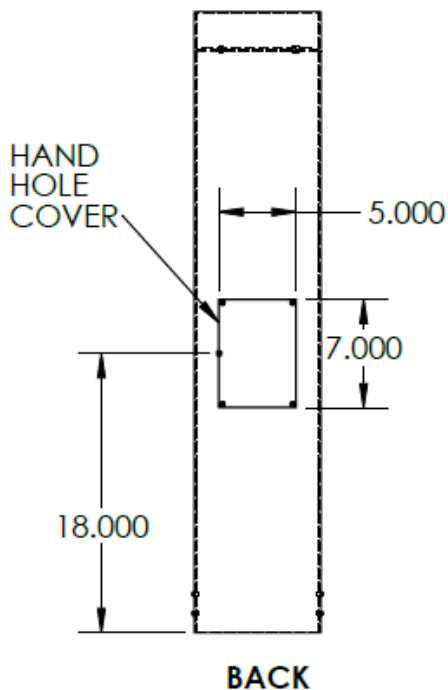
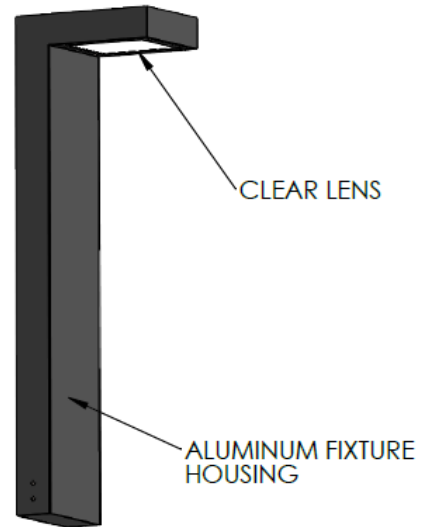
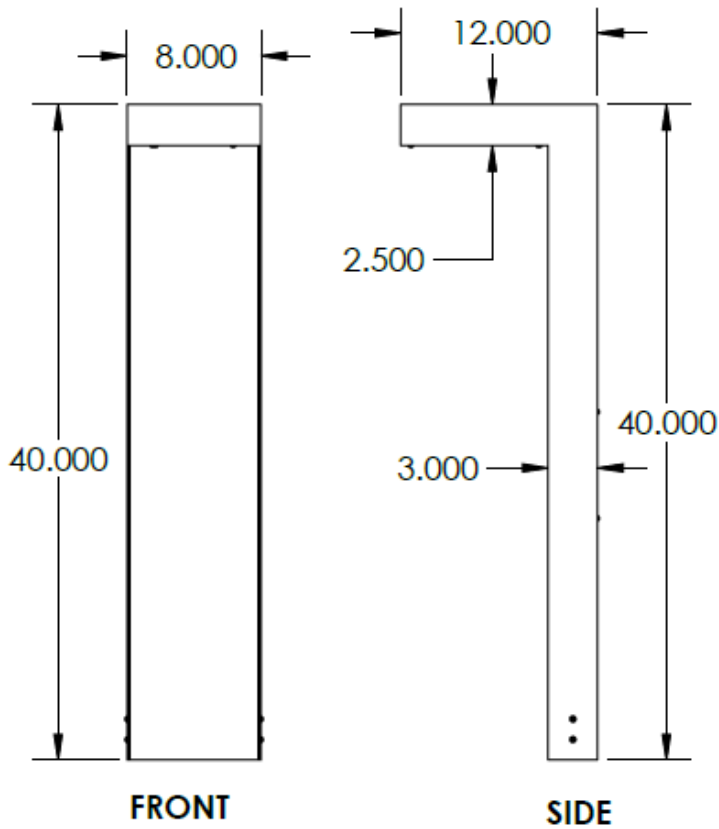
SOX-BLD- - - - -

Customization Notes:

►►► Info on this spec sheet will change without notice as product development is an ongoing process.

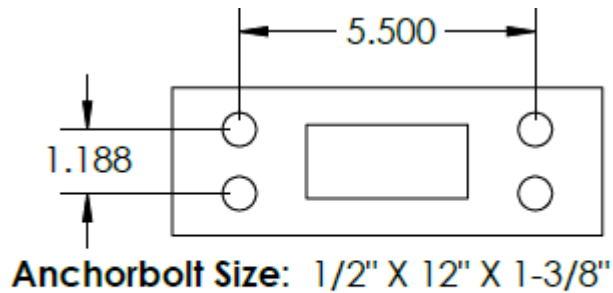
TOLL FREE: 1.877.765.3722 • FAX: 905.457.4777 • soleracorp.com

Dimensions & Mounting (measurements in inches; drawings are not to scale)

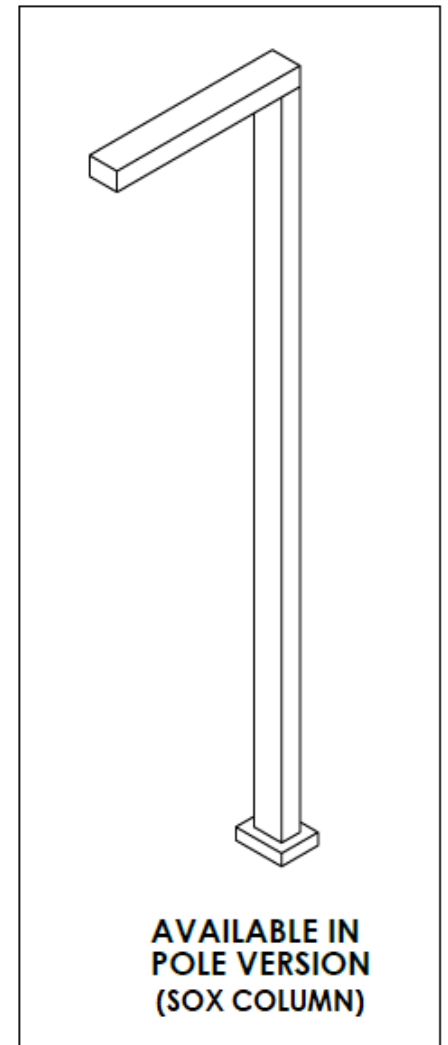


Anchoring Details

(measurements in inches; drawings are not to scale)




- Hot dipped Galvanized anchor bolts
- Galvanized steel hex nuts
- Galvanized steel flat washers



SLS Lighting
Ladysmith, BC

Arts and Heritage Hub
AES Engineering

SLS Lighting
August 2023



AES ENGINEERING LTD.

FOR BIDDING PURPOSES ONLY

ACCEPTABLE	ACCEPTABLE AS NOTED	NOT ACCEPTABLE
✓		

Project Number: 0121.0081

Per: GS Date: 2023-08-21

Reviewed only as to general conformity with the design concept.



Zūm® Mesh Wireless J-Box Load Controllers



**Zūm J-Box Load Controller (Right)
Shown with Optional Zūm Network Bridge (Left)**

- *Zūm® wireless junction box-mounted lighting load controllers*
- *Pair and play wireless integration with Zūm keypads, occupancy sensors, vacancy sensors, and daylight sensors*
- *Zūm Mesh peer-to-peer RF communications for integration into a complete standalone or networked Zūm wireless lighting control solution*
- *Dimming control of 0-10V dimmable LED or fluorescent loads*
- *Dimmers rated 5 or 16A at 100-277VAC*
- *Zero cross switch control of 20A, 100-277V high inrush lighting loads*
- *Zero cross switch control of 20A, 100-250V plug loads*
- *Emergency lighting control meets UL® 924 standards*
- *Accommodation for a Zūm Network Bridge or Zūm Contact Closure Output device*
- *Flying lead wiring connections*
- *Knockout mount to a standard 4 in. square junction box*
- *UL 2043 listed for installation in an environmental air handling space*
- *Meets UL 916 standard for energy management equipment*
- *Meets CEC Title 24 and ASHRAE® 90.1 energy efficiency standards*
- *ICC® International Energy Conservation Code® compliant*

Crestron® Zūm® Mesh Wireless J-Box Load Controllers (ZUMMESH-JBOX Series) can provide 20A switching, 5A or 16A 0-10V dimming, and 20A plug load control. J-Box load controllers mount directly to a 4 in. square junction box. Zūm Mesh wireless technology affords easy pair and play integration as part of a complete Zūm commercial lighting system. Energy-saving options are available to enable daylighting, occupancy or vacancy sensing, HVAC system integration, and centralized monitoring and management.

Energy Efficiency

Occupancy sensor, vacancy sensor, and daylight sensor connectivity allow for significant energy savings. To reduce energy usage, lights will turn off automatically when the room is vacant and dim gradually according to the amount of natural daylight in the room.

Pair and Play Setup

Pair and play functionality in Zūm load controllers allows for installation in a room along with Zūm keypads, occupancy or vacancy sensors, and/or a daylight sensor. Set up the room with a few button taps and instantly control the room lights without any additional programming. Room setup can be accomplished via the Zūm app if the room is equipped with a Zūm Network Bridge (sold separately).

Optional Zūm Network Bridge

Snap a Zūm Network Bridge (ZUMMESH-NETBRIDGE, sold separately) onto a Zūm Wireless J-Box Load Controller for centralized lighting management via a Zūm Floor Hub and Zūm Net Wireless Gateway. The Zūm Network Bridge enables enhanced room setup using the Zūm app.

Optional Contact Closure Output

Snap a Zūm Contact Closure Output (ZUMMESH-CCO, sold separately) onto the Zūm Wireless J-Box Load Controller for integration with an HVAC system or other relay-controlled equipment.

Zūm Mesh Wireless Technology

Zūm Mesh wireless technology provides peer-to-peer RF communications within a commercial space without the need for physical control wiring, hubs, or gateways. Nearly every Zūm Mesh device acts as a routing node to relay wireless commands between Zūm Mesh devices without disruption.

Adding Zūm Mesh devices to a space increases the range and stability of the peer-to-peer mesh network by providing multiple redundant signal paths. Each Zūm Mesh device auto-negotiates its RF channel to provide robust communication and is protected through AES 128-bit encryption.

Emergency Load Control

The ZUMMESH-JBOX-16A-LV-EM provides load control to meet UL 924 standards. The device functions like a standard J-box dimmer in normal conditions, where it can bind to keypads, make scene modifications, follow sensor control states, and perform other standard ZUMMESH-JBOX actions.

If power to a lighting system is lost, the device enters Emergency Mode for ninety minutes or until system power is restored, whichever comes first. In Emergency Mode, all connected loads are fully illuminated to allow for safe exit from the space.

Zūm® Mesh Wireless J-Box Load Controllers

Specifications

Load Control - Switch (-SW) and Plug (-PLUG) Models

Switched Load Types	LED, fluorescent ballast, incandescent, magnetic low-voltage, electronic low-voltage, neon/cold cathode, high-intensity discharge
Load Rating	ZUMMESH-JBOX-20A-SW: 20A, high inrush, zero cross switching ZUMMESH-JBOX-20A-PLUG: 20A (or 16A derated by 80%), high inrush, zero cross switching for receptacles

Load Control - Dimming (-LV) Models

Dimmable Load Types	0-10V LED drivers or fluorescent ballasts (4-wire), 60mA maximum current sink
Load Rating	ZUMMESH-JBOX-5A-LV: 5A ZUMMESH-JBOX-16A-LV: 16A

Load Control - Emergency (-EM) Model

Dimmable Load Types	0-10V LED drivers or fluorescent ballasts (4-wire), 60mA maximum current sink
Load Rating	16A
Emergency Mode	All loads in the zone fully illuminate for ninety minutes or until normal power is restored (whichever comes first); Keypads are disabled; Sensors are disabled; The TEST button toggles the connected load on and off when pressed; Exits emergency mode when normal power is restored or after ninety minutes have passed; System communications return when normal power is restored
Emergency Sequence	After normal power is lost, 200 ms (120V) or 750 ms (277V) must pass before the ZUMMESH-JBOX-16A-LV-EM is powered by an emergency power source.

Power Requirements

Line/Load Voltage	100-277VAC, 50/60 Hz
Line/Load Voltage (-PLUG model only)	125/250VAC, 50/60 Hz, UL rating per UL 498; 100-250VAC, 50/60 Hz, operating range only)
Dim Control Output (-LV models only)	0-10VDC, 60mA maximum sink or source

Idle Power Consumption 1 W

Wireless Communications

RF Transceiver	Zūm Mesh & Zūm Net 2-way RF, 2.4 GHz ISM Channels 15, 20, 25, or 26 (channel auto-selected), IEEE 802.15.4 compliant, AES-128 encryption
Zūm Mesh Range	50 ft (15 m) to nearest peer-to-peer mesh network device(s), subject to site-specific conditions and individual device capabilities ¹
Zūm Net Range	50 ft (15 m) to a Zūm Net wireless gateway or nearest Zūm Net mesh network device(s), requires the Zūm Network Bridge (model ZUMMESH-NETBRIDGE, sold separately), range between floors or ceilings is limited to one level, subject to site-specific conditions and individual device capabilities ¹

NOTE: A maximum of 32 Zūm Mesh wireless devices is permitted per room. Only one Network Bridge is permitted per room.

Controls and Indicators

SETUP	(1) Pushbutton and (1) red LED, used for room setup and factory reset
TEST	(1) Pushbutton and (1) green LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED indicates that the load is turned on; LED lights and flashes during room setup and factory reset

Connections

Hot	(1) 14 AWG Class 1 flying lead; Black, line power input
Neutral	(1) 14 AWG Class 1 flying lead; White, neutral
0-10 V Dim +, 0-10 V Dim -, (-LV models only)	(2) 18 AWG Class 1 flying leads; Purple, 0-10VDC dimming control output, positive; Gray, 0-10VDC dimming control output, negative
Switched Load	(1) 14 AWG Class 1 flying lead; Red, switched load output
Expansion Port	Accessory port for expansion accessory: ZUMMESH-NETBRIDGE: Provides Zūm Net wireless communications (sold separately); ZUMMESH-CCO: Provides contact closure input (sold separately)

Züm® Mesh Wireless J-Box Load Controllers

Environmental

Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (noncondensing)

Construction

Housing	Plastic, white, UL 94 5VA flame rated
Mounting	Mounts to the side of a 4 in. square junction box via a 1/2 in. conduit knockout; Meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space; To meet Chicago plenum requirements, install the J-box in a ZUMMESH-JBOX-FMKT-CP enclosure

Dimensions

Height	3.25 in. (83 mm)
Width	4.17 in. (106 mm); Projects 3.66 in. (93 mm) from the junction box when installed
Depth	1.32 in. (34 mm)

Weight

7 oz (199 g)

Compliance

UL® Listed for US & Canada, IC, FCC Part 15 Class A digital device, UL 916, UL 924 (-EM model only), UL 2043, UL 94 5VA

Model

ZUMMESH-JBOX-5A-LV

Züm® Mesh Wireless J-Box Load Controller, 0-10 V Dimmer, 5 A, 100-277 V

ZUMMESH-JBOX-16A-LV

Züm® Mesh Wireless J-Box Load Controller, 0-10 V Dimmer, 16 A, 100-277 V

ZUMMESH-JBOX-16A-LV-EM

Züm® Mesh Wireless J-Box Emergency Load Controller, 0-10 V Dimmer, 16 A, 100-277 V

ZUMMESH-JBOX-20A-SW

Züm® Mesh Wireless J-Box Load Controller, High Inrush Switch, 20 A, 100-277 V

ZUMMESH-JBOX-20A-PLUG

Züm® Mesh Wireless J-Box Load Controller, Plug Load Switch, 20 A, 100-250 V

Available Accessories

For a list of available accessories, visit the [ZUMMESH-JBOX-5A-LV](#), [ZUMMESH-JBOX-16A-LV](#), [ZUMMESH-JBOX-16A-LV-EM](#), [ZUMMESH-JBOX-20A-SW](#), and [ZUMMESH-JBOX-20A-PLUG](#) product pages.

Notes:

1. "Züm Mesh" refers to the peer-to-peer wireless mesh network within a room composed of dimmers, switches, load controllers, keypads, and sensors. "Züm Net" refers to the wireless mesh network that connects one or more rooms with a Züm Floor Hub, and consists of a Züm Net Wireless Gateway and one or more Züm Network Bridges. AC-powered Züm Mesh or Züm Net devices function as routing nodes, which effectively extend the range of a Züm Mesh or Züm Net wireless network. Battery-powered devices only function as leaf nodes and do not extend range. A Züm Mesh network composed predominantly of battery-powered devices may require additional AC-powered devices, such as the ZUMMESH-JBOX-PSU, to serve as supplemental routing nodes to fill any gaps in coverage. Refer to the "Installation and Setup of Crestron RF Products, Best Practices" guide (Doc #6689) for additional guidelines.
2. Not for use with ZUMMESH-JBOX-20A-PLUG.
3. For use with ZUMMESH-JBOX-5A-LV and ZUMMESH-JBOX-16A-LV only.

This product may be purchased from select authorized Crestron dealers and distributors. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/How-To-Buy/Find-a-Representative or by calling 855-263-8754.

This product is covered under the Crestron standard limited warranty. Refer to www.crestron.com/warranty for full details.

The specific patents that cover Crestron products are listed online at patents.crestron.com.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

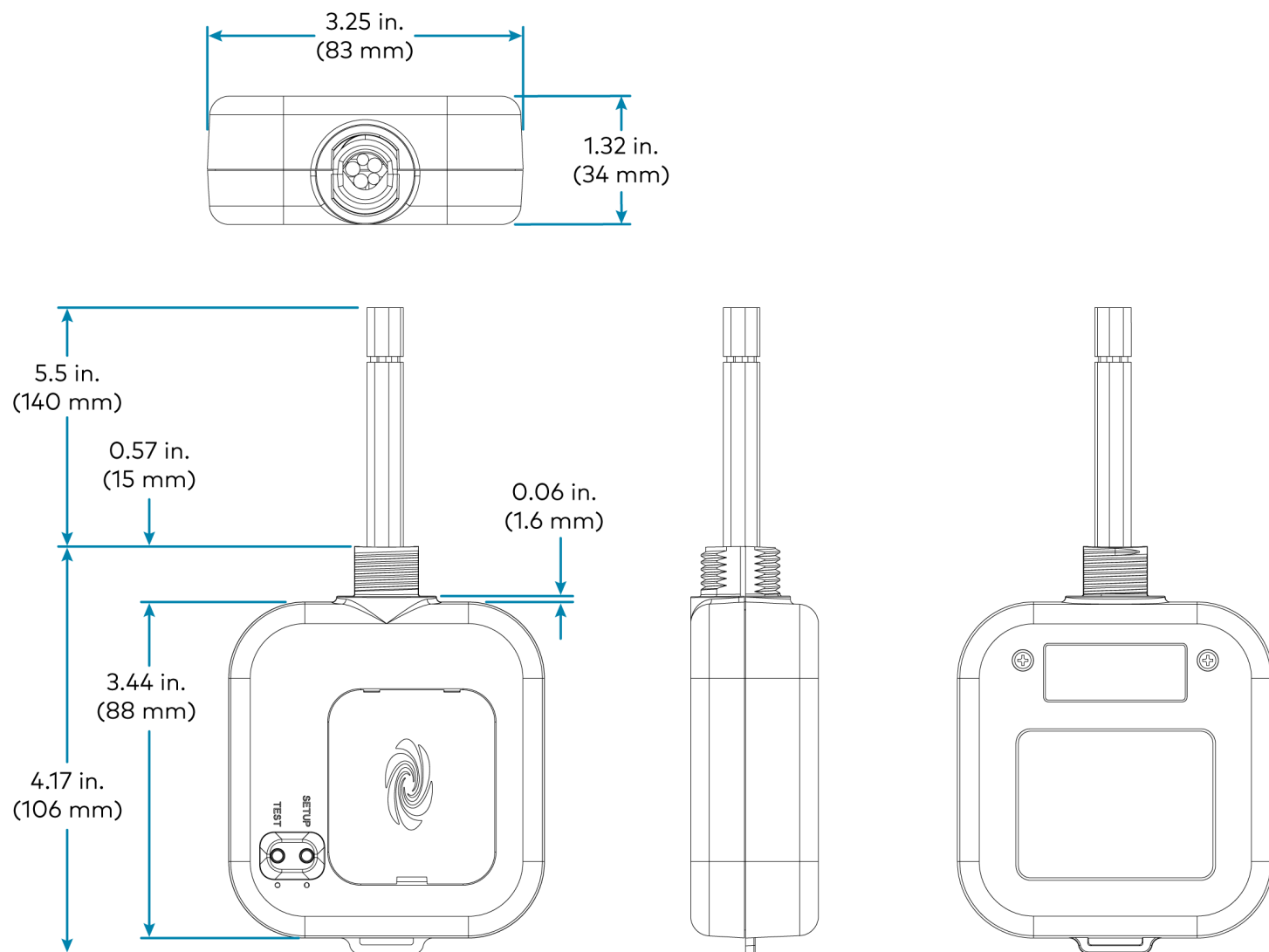
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Rev 09/21/21

**5A OR 16A TO BE
DETERMINED
BASED ON LOADS
IN EACH SPACE.**

Zūm® Mesh Wireless J-Box Load Controllers



Zūm™ Network Bridge

- > Converts a standalone, single-room Zūm™ lighting control system into a centrally managed networked system
- > Zūm Net wireless mesh network technology affords robust, building-wide communications without running wires^[2]
- > Provides Bluetooth® connectivity for easy room configuration using the Zūm mobile app
- > Attaches to a Zūm J-Box Load Controller or Zūm J-Box Accessory Power Supply^[1]
- > UL® 2043 listed for installation in an environmental air handling space
- > Meets UL 916 standard for energy management equipment
- > Meets CEC Title 24 energy efficiency standards^[3]
- > Meets ASHRAE® 90.1 energy efficiency standards^[4]
- > ICC® International Energy Conservation Code® compliant^[5]

The Zūm™ Network Bridge (ZUMMESH-NETBRIDGE) adds enhanced integration and setup capabilities to a Zūm lighting control system. It simply snaps onto a Zūm J-Box Load Controller or Zūm J-Box Accessory Power Supply (ZUMMESH-JBOX or ZUMMESH-JBOX-PSU^[1]) to enable Zūm Net wireless communication with a Zūm Floor Hub via a Zūm Net Wireless Gateway (ZUM-FLOOR-HUB and ZUMNET-GATEWAY^[1]). Integration with the Zūm Floor Hub enables every room in the building to be centrally monitored, managed, and controlled as part of a complete Zūm enterprise lighting solution. The Zūm Network Bridge also adds Bluetooth® connectivity within each room to allow simplified setup using a mobile device running the Zūm app. Just one network bridge is required per room.^[2]

Zūm Across the Enterprise

Zūm delivers cutting-edge wireless lighting control and heightened energy efficiency for the intelligent enterprise. With each room wirelessly networked to a Zūm Floor Hub, Zūm synergizes lighting control across the enterprise by providing centralized monitoring, management, and reporting capabilities. Zūm Net wireless communication is enabled by simply adding a Zūm Network Bridge to each room and pairing it with a Zūm Net Wireless Gateway, which connects to the Zūm Floor Hub via Ethernet. The Zūm Network Bridge simply snaps onto a Zūm J-Box Load Controller or Zūm J-Box Accessory Power Supply in each room.^[1,2]

Smart Lighting Control

The Zūm Network Bridge takes single-room Zūm lighting control to the next level. The Network Bridge comes with a corresponding setup app that enables installers to configure and customize the room's lighting controls. With the app, installers can set scenes, create scheduled events, and set up occupancy, vacancy, and daylight sensors. No programming is required when the controls are literally in hand!

Zūm Net Wireless Technology

Ultra-reliable Zūm Net wireless technology provides steadfast 2-way RF communications throughout a commercial structure without the need for physical control wiring. Employing a Wi-Fi® friendly 2.4 GHz mesh network topology, every Zūm Net device acts as a "routing node," relaying wireless commands between the Zūm Net gateway and all the other Zūm Net devices to ensure that every command reaches its intended destination



without disruption. Each Zūm Net device that is added to the network effectively increases the range and stability of the entire network by providing multiple redundant signal paths. The wireless range between any two Zūm Net devices is typically 50 ft (15 m).^[2]

Please refer to the [Zūm Lighting Control System Setup Guide \(Doc # 7957\)](#) for additional information.

SPECIFICATIONS

Wireless Communications

Bluetooth: Bluetooth low energy, Version 4.0, pairs with a mobile device running the Zūm app

Zūm Net: (Refer to the host J-Box device)^[2]

Note: Only one Network Bridge is permitted per room.

Controls & Indicators

SET: (1) Pushbutton and (1) red LED, used to connect to a Zūm Net Wireless Gateway^[1]

Power

Draws 60 mA average, 250 mA peak at 3.3 Volts DC, provided by a Zūm J-Box Load Controller or Zūm J-Box Accessory Power Supply^[1]

Environmental

Temperature: 32° to 104° F (0° to 40° C)

Humidity: 10% to 90% RH (non-condensing)

Construction

Housing: Plastic, white, UL 94 5VA flame rated

Mounting: Attaches to a Zūm J-Box Load Controller or Zūm J-Box

ZUMMESH-NETBRIDGE Zūm Network Bridge

Accessory Power Supply^[1], meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space

Dimensions

Height: 1.66 in (42 mm)

Width: 1.94 in (49 mm)

Depth: 1.01 in (26 mm)

Note: Projects ~0.75 inches (~18 mm) when attached to the J-Box unit.

Weight

3 oz (85 g)

Compliance

UL Listed for US & Canada, IC, FCC Part 15 Class A digital device, UL 916, UL 2043, UL 94 5VA, CEC Title 24^[3], ASHRAE 90.1^[4], IECC^[5]

MODELS & ACCESSORIES

Available Models

ZUMMESH-NETBRIDGE: Zūm Network Bridge

Available Accessories

ZUMMESH-JBOX: Zūm J-Box Load Controller

ZUMMESH-JBOX-PSU: Zūm Accessory Power Supply

ZUMNET-GATEWAY: Zūm Net Wireless Gateway

ZUM-FLOOR-HUB: Zūm Floor Hub

Notes:

1. Item(s) sold separately. Refer to each product's spec sheet for more information.
2. "Zūm Net" refers to the wireless mesh network that connects one or more Zūm equipped rooms with a Zūm Floor Hub, and consists of a Zūm Net Wireless Gateway and one or more

Zūm Network Bridges. Zūm Net devices function as routing nodes, which effectively extend the range of a Zūm Net wireless network. Refer to the "Installation and Setup of Crestron RF Products, Best Practices" guide (Doc #6689) for additional guidelines.

3. This product is part of a California Energy Commission Title 24 compliant solution. Refer to <http://www.energy.ca.gov/title24/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.
4. This product is part of an ASHRAE 90.1 compliant solution. Refer to <https://www.ashrae.org/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.
5. This product is part of an International Energy Conservation Code compliant solution. Refer to <https://www.iccsafe.org/iecc/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.

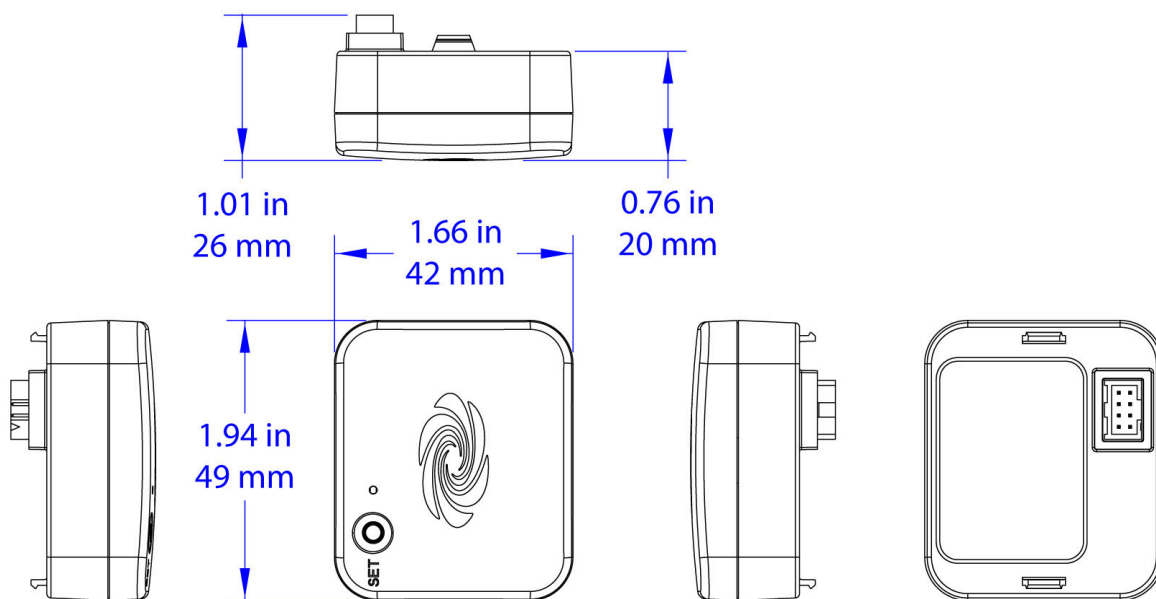
This product may be purchased from an authorized Crestron dealer or distributor. To find a dealer or distributor, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>. For assistance with incorporating this product into a design or specification, please contact the Commercial Lighting Consultant Hotline via email at clcdesign@crestron.com or by calling 888-330-1502.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

Certain Crestron products contain open source software. For specific information, visit www.crestron.com/opensource.

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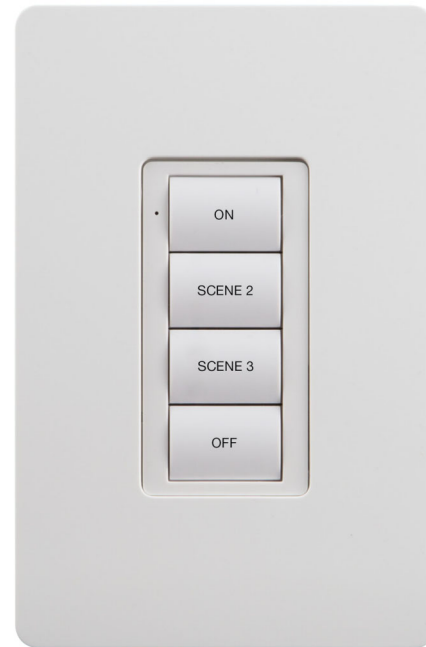


Zūm™ Battery-Powered Wireless Keypad

- > Battery-powered Zūm™ wireless keypads
- > Pair and play control of one or more Zūm J-Box Load Controllers^[1]
- > Zūm Mesh peer-to-peer RF communications for easy integration into a complete standalone or networked Zūm wireless lighting control solution^[3]
- > Choice of single rocker switch or up to six pushbuttons
- > Up to three scene presets with pushbutton versions
- > Pushbutton versions available with custom button engraving^[2]
- > Optional sensor disable feature
- > Operates for five years or more on a single lithium battery (included)
- > Mounts directly to any flat wall surface with no holes or box required
- > Allows for mounting to a single-gang or multi-gang electrical box
- > Available in smooth black, white, almond, gray, or red finish
- > Matching decorator-style faceplate available separately
- > Meets UL® 916 standard for energy management equipment
- > Meets CEC Title 24 energy efficiency standards^[4]
- > Meets ASHRAE® 90.1 energy efficiency standards^[5]
- > ICC® International Energy Conservation Code® compliant^[6]

The Zūm™ Battery-Powered Wireless Keypad ([ZUMMESH-KPBATT](#)) provides control of one or more Zūm J-Box Load Controllers ([ZUMMESH-JBOX](#)^[1]). It is available with a rocker switch or various combinations of pushbuttons. The rocker switch version offers simple on/off switching and dimming adjustment, with the ability to save one scene preset. The pushbutton versions support the same capabilities with two or three scene presets. Pushbutton versions may be ordered with standard button labeling or custom button engraving.^[2]

Slim profile,
wireless operation,
and long-life
battery power
enables mounting
to any flat wall
surface without
requiring any holes,
wires, or back box



Model
ZUMMESH-
KP10BBATT-W-S
shown, faceplate
sold separately.

All versions of the ZUMMESH-KPBATT allow for mounting to a standard electrical box, or they can be attached directly to the wall using screws or two-sided adhesive tape. A finished installation requires a decorator-style [faceplate](#) (sold separately).

ZUMMESH-KPBATT keypads are battery powered and completely wireless. They can operate for five years or more on a single lithium battery (included). Zūm Mesh wireless technology affords easy “pair and play” setup and integration as part of a complete [Zūm](#) commercial room lighting system.

Pair and Play

Designed with flexibility and ease-of-use in mind, Zūm keypads are pre-programmed with “pair and play” functionality. An installer can simply install the keypad in a room along with Zūm [load controllers](#), [occupancy](#) or [vacancy sensors](#), and a [daylight sensor](#), set up the room with a few quick button taps, and then use the keypad to control the lights in the room – no programming required! Room setup can also be accomplished using the Zūm app if the room is equipped with a [Zūm Network Bridge](#). The Zūm Network Bridge also enables centralized monitoring and management via a [Zūm Floor Hub](#) and [Zūm Net Wireless Gateway](#).^[1]

Zūm Mesh Wireless Technology

Ultra-reliable Zūm Mesh wireless technology provides steadfast peer-to-peer RF communications within a commercial space without the need for physical control wiring, hubs, or gateways. Employing a Wi-Fi® friendly 2.4 GHz peer-to-peer mesh network topology, nearly every Zūm Mesh device acts as a “routing node,” relaying wireless commands directly between Zūm Mesh devices to ensure that every command reaches its intended destination without disruption.

ZUMMESH-KPBATT Züm Battery-Powered Wireless Keypad

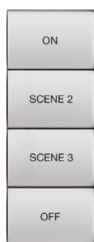
Züm Mesh is smart! Every Züm Mesh device knows its purpose and just the right messages to communicate to other Züm Mesh devices within the space. Each Züm Mesh device that is added to the space effectively increases the range and stability of the peer-to-peer mesh network by providing multiple redundant signal paths. Each Züm Mesh device auto-negotiates its RF channel to provide robust communication and is protected through AES 128-bit encryption. The wireless range between any two Züm Mesh devices is typically 50 feet (15 meters).^[3]

Switch and Button Options

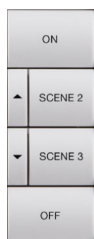
There are six versions of the ZUMMESH-KPBATT as follows:



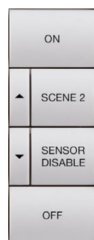
ZUMMESH-KP10ABATT – Provides a single rocker switch for on/off switch control, with the ability to adjust the dim level up or down by pressing and holding the switch. A single custom scene preset can be created, which is recalled when turning the lights on by pressing the up position on the rocker switch.



ZUMMESH-KP10BBATT – Provides four pushbuttons labeled ON, SCENE 2, SCENE 3, and OFF. Three scene presets can be created and recalled, with Scene 1 assigned to the ON button. Manual dimming adjustment is achieved by pressing and holding the ON (up) and OFF (down) buttons.



ZUMMESH-KP10CBATT – Provides six pushbuttons similar to the -KP10BBATT version, but with separate up and down buttons for dimming level adjustment.



ZUMMESH-KP10DBATT – Provides six pushbuttons similar to the -KP10CBATT version, but with a SENSOR DISABLE button in place of SCENE 3. Pressing the SENSOR DISABLE button tells the lighting system to temporarily ignore the room's daylight sensor and occupancy or vacancy sensors for a period of one hour. The sensors can be re-enabled manually by pressing and holding the SENSOR DISABLE button.

ZUMMESH-KP10FBATT ENGRAVED – Provides four buttons with custom engraving. Functionality is identical to the -KP10BBATT version.^[2]

ZUMMESH-KP10GBATT ENGRAVED – Provides six buttons with custom engraving. Functionality is identical to the -KP10CBATT version.^[2]

Please refer to the [Züm Lighting Control System Setup Guide \(Doc # 7957A\)](#) for additional information.

SPECIFICATIONS

Wireless Communications

RF Transceiver: Züm Mesh 2-way RF, 2.4 GHz ISM Channels 15, 20, 25, or 26 (channel auto-selected), IEEE 802.15.4 compliant

Range: 50 ft (15 m) to nearest peer-to-peer mesh network device(s), subject to site-specific conditions and individual device capabilities^[3]

Note: A maximum of 32 Züm Mesh wireless devices, inclusive of a maximum of 8 battery-powered keypads, is permitted per room.

Controls & Indicators

Switch (-KP10ABATT models): (1) 3-Position rocker switch (spring return to center); press up to recall the Scene 1 preset (switched loads on and dimmed loads at their saved preset dim levels [default=90%]), press down to turn all lighting loads off, press and hold up or down to raise or lower the dimming level for all dimmable lighting loads; also used for creating a preset, room setup, and factory reset

Buttons (-KP10BBATT models): (4) Pushbuttons as follows:

ON: Press to recall the Scene 1 preset (switched loads on and dimmed loads at their saved preset dim levels [default=90%]), press and hold to raise the dimming level for all dimmable lighting loads

SCENE 2: Press to recall the Scene 2 preset (switched loads on and dimmed loads at their saved preset dim levels [default=50%]), press and hold to save a new Scene 2 preset

SCENE 3: Press to recall the Scene 3 preset (switched loads on and dimmed loads at their saved preset dim levels [default=50%]), press and hold to save a new Scene 3 preset

OFF: Press to turn all loads off, press and hold to lower the dimming level for all dimmable lighting loads

Buttons are also used for creating presets, room setup, and factory reset

Buttons (-KP10CBATT models): (6) Pushbuttons as follows:

ON: Press to recall the Scene 1 preset (switched loads on and dimmed loads at their saved preset dim levels [default=90%])

▲: Press to raise the dimming level for all dimmable lighting loads

▼: Press to lower the dimming level for all dimmable lighting loads

SCENE 2: Press to recall the Scene 2 preset (switched loads on and dimmed loads at their saved preset dim levels [default=50%]), press and hold to save a new Scene 2 preset

SCENE 3: Press to recall the Scene 3 preset (switched loads on and dimmed loads at their saved preset dim levels [default=50%]), press and hold to save a new Scene 3 preset

OFF: Press to turn all loads off, press and hold to lower the dimming level for all dimmable lighting loads

Buttons are also used for creating presets, room setup, and factory reset

Buttons (-KP10DBATT models): (6) Pushbuttons as follows:

ON: Press to recall the Scene 1 preset (switched loads on and dimmed loads at their saved preset dim levels [default=90%])

▲: Press to raise the dimming level for all dimmable lighting loads

▼: Press to lower the dimming level for all dimmable lighting loads

SCENE 2: Press to recall the Scene 2 preset (switched loads on and dimmed loads at their saved preset dim levels [default=50%]), press and hold to save a new Scene 2 preset

ZUMMESH-KPBATT Züm Battery-Powered Wireless Keypad

SENSOR DISABLE: Press to disable all room occupancy/vacancy and daylight sensors for one hour, press and hold to re-enable the sensors

OFF: Press to turn all loads off, press and hold to lower the dimming level for all dimmable lighting loads

Buttons are also used for creating presets, room setup, and factory reset

Buttons (-KP10FBATT ENGRAVED models): (4) Pushbuttons with custom engraving. Functionality is identical to the -KP10BBATT version.^[2]

Buttons (-KP10GBATT ENGRAVED models): (6) Pushbuttons with custom engraving. Functionality is identical to the -KP10CBATT version.^[2]

Feedback: (1) Bi-color LED, green indicates a button press, red indicates a low battery condition when a button is pressed; also used for creating presets, room setup, and factory reset

Power

Battery: (1) CR2032 3 Volt lithium coin cell disposable battery (included)

Battery Life: ≥5 years

Environmental

Temperature: 32° to 104° F (0° to 40° C)

Humidity: 10% to 90% RH (non-condensing)

Construction

Composition: Plastic; almond, black, white, gray, or red smooth finish

Surface Mounting: Adheres to a smooth, flat wall surface using double-sided tape (included) or screws (not included)

Wall Box Mounting: Mounts to a 1-gang (or larger) electrical box

Faceplate: Requires a decorator-style faceplate (sold separately)

Dimensions

Height: 4.26 in (109 mm)

Width: 1.76 in (45 mm)

Depth: 0.42 in (11 mm)

Weight

2.3 oz (65 g)

Compliance

UL Listed for US & Canada, IC, FCC Part 15 Class A digital device, UL 916, CEC Title 24^[4], ASHRAE 90.1^[5], IECC^[6]

MODELS & ACCESSORIES

Available Models

ZUMMESH-KP10ABATT-A-S: Züm Battery-Powered Wireless Keypad, Rocker Switch, Almond Smooth

ZUMMESH-KP10ABATT-B-S: Züm Battery-Powered Wireless Keypad, Rocker Switch, Black Smooth

ZUMMESH-KP10ABATT-GRY-S: Züm Battery-Powered Wireless Keypad, Rocker Switch, Gray Smooth

ZUMMESH-KP10ABATT-RED-S: Züm Battery-Powered Wireless Keypad, Rocker Switch, Red Smooth

ZUMMESH-KP10ABATT-W-S: Züm Battery-Powered Wireless Keypad, Rocker Switch, White Smooth

ZUMMESH-KP10BBATT-A-S: Züm Battery-Powered Wireless Keypad, 4-Button, Almond Smooth

ZUMMESH-KP10BBATT-B-S: Züm Battery-Powered Wireless Keypad, 4-Button, Black Smooth

ZUMMESH-KP10BBATT-GRY-S: Züm Battery-Powered Wireless Keypad, 4-Button, Gray Smooth

ZUMMESH-KP10BBATT-RED-S: Züm Battery-Powered Wireless Keypad, 4-Button, Red Smooth

ZUMMESH-KP10BBATT-W-S: Züm Battery-Powered Wireless Keypad, 4-Button, White Smooth

ZUMMESH-KP10CBATT-A-S: Züm Battery-Powered Wireless Keypad, 6-Button, Almond Smooth

ZUMMESH-KP10CBATT-B-S: Züm Battery-Powered Wireless Keypad, 6-Button, Black Smooth

ZUMMESH-KP10CBATT-GRY-S: Züm Battery-Powered Wireless Keypad, 6-Button, Gray Smooth

ZUMMESH-KP10CBATT-RED-S: Züm Battery-Powered Wireless Keypad, 6-Button, Red Smooth

ZUMMESH-KP10CBATT-W-S: Züm Battery-Powered Wireless Keypad, 6-Button, White Smooth

ZUMMESH-KP10DBATT-A-S: Züm Battery-Powered Wireless Keypad, 6-Button w/Sensor Control, Almond Smooth

ZUMMESH-KP10DBATT-B-S: Züm Battery-Powered Wireless Keypad, 6-Button w/Sensor Control, Black Smooth

ZUMMESH-KP10DBATT-GRY-S: Züm Battery-Powered Wireless Keypad, 6-Button w/Sensor Control, Gray Smooth

ZUMMESH-KP10DBATT-RED-S: Züm Battery-Powered Wireless Keypad, 6-Button w/Sensor Control, Red Smooth

ZUMMESH-KP10DBATT-W-S: Züm Battery-Powered Wireless Keypad, 6-Button w/Sensor Control, White Smooth

ZUMMESH-KP10FBATT-A-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 4-Button w/Custom Engraving, Almond Smooth

ZUMMESH-KP10FBATT-B-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 4-Button w/Custom Engraving, Black Smooth

ZUMMESH-KP10FBATT-GRY-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 4-Button w/Custom Engraving, Gray Smooth

ZUMMESH-KP10FBATT-RED-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 4-Button w/Custom Engraving, Red Smooth

ZUMMESH-KP10FBATT-W-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 4-Button w/Custom Engraving, White Smooth

ZUMMESH-KP10GBATT-A-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 6-Button w/Custom Engraving, Almond Smooth

ZUMMESH-KP10GBATT-B-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 6-Button w/Custom Engraving, Black Smooth

ZUMMESH-KP10GBATT-GRY-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 6-Button w/Custom Engraving, Gray Smooth

ZUMMESH-KP10GBATT-RED-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 6-Button w/Custom Engraving, Red Smooth

ZUMMESH-KP10GBATT-W-S ENGRAVED: Züm Battery-Powered Wireless Keypad, 6-Button w/Custom Engraving, White Smooth

ZUMMESH-KPBATT Züm Battery-Powered Wireless Keypad

Available Accessories

FP-G Series: Decorator-Style Faceplate

ZUMMESH-JBOX-5A-LV: Züm J-Box Load Controller, 0-10V Dimmer, 5A, 100-277V

ZUMMESH-JBOX-16A-LV: Züm J-Box Load Controller, 0-10V Dimmer, 16A, 100-277V

ZUMMESH-JBOX-20A-SW: Züm J-Box Load Controller, High Inrush Switch, 16A, 100-277V

ZUMMESH-JBOX-20A-PLUG: Züm J-Box Load Controller, Plug Load Switch, 20A, 100-277V

Notes:

1. Item(s) sold separately. Refer to each product's spec sheet for more information.
2. Custom engraving must be specified at the time of order. Buttons cannot be changed or replaced in the field.
3. "Züm Mesh" refers to the peer-to-peer wireless mesh network within a room composed of dimmers, switches, load controllers, keypads, and sensors. AC-powered Züm Mesh devices function as routing nodes, which effectively extend the range of the wireless network within the room. The ZUMMESH-KPBATT and other battery-powered devices only function as leaf nodes and do not extend range. Networks composed predominantly of battery-powered devices may require additional AC-powered devices, such as the [ZUMMESH-JBOX-PSU](#), to serve as supplemental routing nodes to fill any gaps in coverage. Refer to the "[Installation and Setup of Crestron RF Products, Best Practices](#)" guide (Doc #6689) for additional guidelines.
4. This product is part of a California Energy Commission Title 24 compliant solution. Refer to <http://www.energy.ca.gov/title24/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.
5. This product is part of an ASHRAE 90.1 compliant solution. Refer to <https://www.ashrae.org/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.

6. This product is part of an International Energy Conservation Code compliant solution. Refer to <https://www.iccsafe.org/iecc/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <http://www.crestron.com/about/partner-info/commercial-lighting-consultants>.

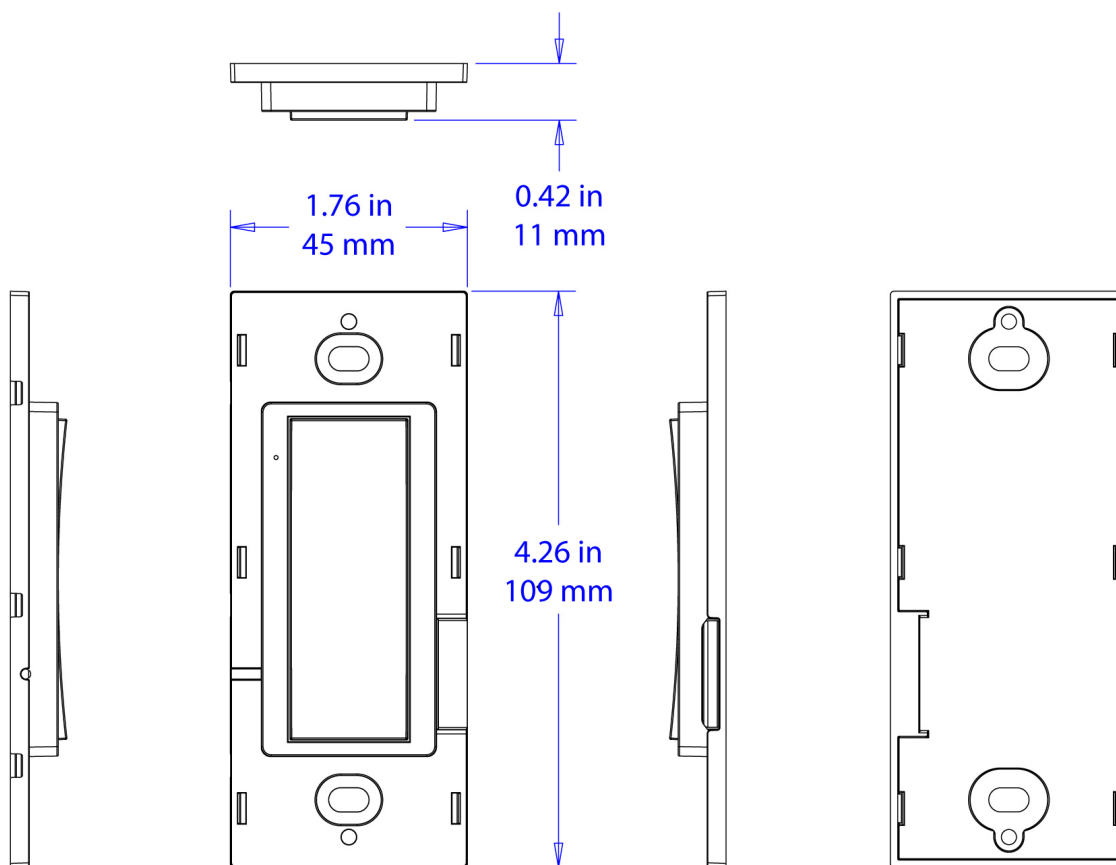
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Zūm™ Wireless Battery-Powered Occupancy Sensor

- > Zūm™ wireless ceiling-mount occupancy sensor
- > Passive infrared motion detection
- > 360 degrees, 500 sq ft (46.5 m²) coverage
- > Half mask and perforated mask included
- > Detects room occupancy and vacancy
- > Automates control of Zūm dimmers, switches, and load controllers to reduce energy usage^[1]
- > Turns lights on when the room is occupied and off when the room is vacant
- > 10-year battery life using included 9 Volt lithium battery
- > Zūm Mesh peer-to-peer RF communications for easy integration into a complete standalone or networked Zūm wireless lighting control solution^[2]
- > Discreet, low-profile appearance
- > Meets UL® 916 standard for energy management equipment
- > Meets CEC Title 24 energy efficiency standards^[3]
- > Meets ASHRAE® 90.1 energy efficiency standards^[4]
- > ICC® International Energy Conservation Code® compliant^[5]

A Zūm™ occupancy sensor offers a cost-saving solution for reducing energy usage in rooms equipped with a Zūm commercial room lighting system. The ZUMMESH-PIR-OCCUPANCY-BATT is a passive infrared occupancy sensor designed for ceiling mount installation in areas up to 500 square feet or 46.5 square meters. It communicates wirelessly with a Zūm dimmer, switch, or load controller to turn lights on and off automatically based on room occupancy and vacancy.^[1] Up to eight occupancy sensors may be employed for increased coverage.

The ZUMMESH-PIR-OCCUPANCY-BATT is battery powered and completely wireless. It operates for up to ten years or more on a single 9 Volt lithium battery (included). Zūm Mesh wireless technology affords easy “pair and play” setup and integration as part of a complete Zūm commercial room lighting system.^[2]

Featuring passive infrared (PIR) technology, the ZUMMESH-PIR-OCCUPANCY-BATT employs a highly sensitive specialized lens that divides the field-of-view into sensor zones. The sensor detects motion when a warm body passes between zones, achieving dependable motion detection with superior immunity to false triggering from vibrations, inanimate objects, or movement in an adjacent corridor. The detection sensitivity is adjustable for optimum performance. Timeout can be set anywhere from 30 seconds to 30 minutes to maintain occupied status during short periods of inactivity. A half mask and perforated mask are included to customize the coverage area.

Please refer to the Zūm Lighting Control System Setup Guide (Doc # 7957) for additional information.



SPECIFICATIONS

Sensing

Sensor Technology: Passive infrared

Coverage Area: 500 square feet (46.5 square meters)

Coverage Pattern: 360 degrees (half mask and perforated mask included)

Major Motion Area: 150 to 500 square feet (13.9 to 46.4 square meters)

Minor Motion Area: 0 to 150 square feet (0 to 13.9 square meters)

Note: A maximum of eight occupancy sensors is permitted per room; do not combine occupancy sensors with vacancy sensors in the same room.

Wireless Communications

RF Transceiver: Zūm Mesh 2-way RF, 2.4 GHz ISM Channels 15, 20, 25, or 26 (channel auto-selected), IEEE 802.15.4 compliant

Range: 50 ft (15 m) to nearest peer-to-peer mesh network device(s), subject to site-specific conditions and individual device capabilities^[2]

Note: A maximum of 32 Zūm Mesh wireless devices is permitted per room.

Controls & Indicators

Sensitivity: (1) Knob (behind cover), adjusts PIR sensitivity from low to high

Timeout: (1) Knob (behind cover), adjusts timeout from 30 seconds to 30 minutes

Test: (1) Pushbutton (behind cover) for test mode, room setup, factory reset, and battery condition

Status: (1) Red and (1) green LEDs for test mode, room setup, factory reset, and battery condition

Power

Battery: (1) Ultralife® U9VL-J-P 9 Volt 1200 mAh lithium disposable battery (included)

Battery Life: 10 years under normal operating conditions

ZUMMESH-PIR-OCCUPANCY-BATT Züm Wireless Battery-Powered Occupancy Sensor

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 0% to 95% RH (non-condensing)

Construction

Housing: Plastic, removable cover, white finish
Mounting: Ceiling surface mount, 3 inch (76 mm) screw spacing

Dimensions

Height: 1.19 in (31 mm)
Diameter: 4.38 in (112 mm)

Weight

Without Battery: 3.5 oz (98 g)
With Included Battery: 4.8 oz (135 g)

Compliance

UL Listed for US & Canada, CE, IC, FCC Part 15 Class A digital device,
UL 60730-1, UL 916, CEC Title 24^[3], ASHRAE 90.1^[4], IECC^[5]

MODELS & ACCESSORIES

Available Models

ZUMMESH-PIR-OCCUPANCY-BATT: Züm Wireless Battery-Powered Occupancy Sensor

Available Accessories

ZUMMESH-JBOX-5A-LV: Züm J-Box Load Controller, 0-10V Dimmer, 5A, 100-277V

ZUMMESH-JBOX-16A-LV: Züm J-Box Load Controller, 0-10V Dimmer, 16A, 100-277V

ZUMMESH-JBOX-20A-SW: Züm J-Box Load Controller, High Inrush Switch, 16A, 100-277V

ZUMMESH-JBOX-20A-PLUG: Züm J-Box Load Controller, Plug Load Switch, 20A, 100-240V

ZUMMESH-5A-LV: Züm Wireless 0-10V Wall-Box Dimmer, 5A, 100-277V

ZUMMESH-5A-SW: Züm Wireless Wall-Box Switch, 5A, 100-277V

Notes:

1. Item(s) sold separately. Refer to each product's spec sheet for more information.
2. "Züm Mesh" refers to the peer-to-peer wireless mesh network within a room composed of dimmers, switches, load controllers, keypads, and sensors. AC-powered Züm Mesh devices function as routing nodes, which effectively extend the range of the wireless network within the room. The ZUMMESH-PIR-OCCUPANCY-BATT and other battery-powered devices only function as leaf nodes and do not extend range. Networks composed predominantly of battery-powered devices may require additional AC-powered devices, such as the [ZUMMESH-JBOX-PSU](#), to serve as supplemental routing nodes to fill any gaps in coverage. Refer to the "Installation and Setup of Crestron RF Products, Best Practices" guide ([Doc #6689](#)) for additional guidelines.
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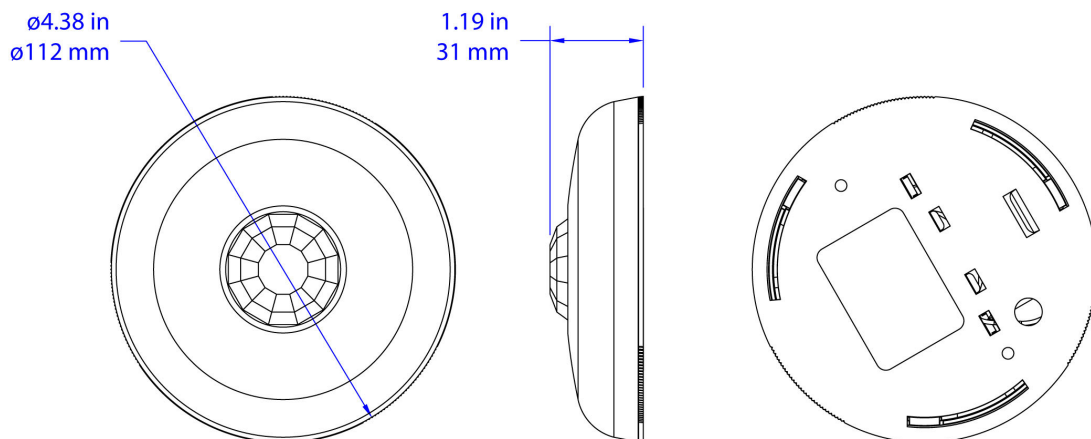
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Transmittal

MAC'S II AGENCIES
100-1851 BRIGANTINE DR
COQUITLAM BC V3K 7B4
Phone: (604) 540-6646
From: AIDA KHAGHANI

Project ARTS AND HERITAGE HUB - LADYSMITH
Quote# MACS-LTG-23-64162
Location LADYSMITH BC
To AES Engineering Ltd. (Victoria)
500 - 3795 Carey Rd.
Victoria BC V8Z 6T8
Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- | | | |
|-----------------------------------|--|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints | <input type="checkbox"/> Information | |
| <input type="checkbox"/> Plans | <input checked="" type="checkbox"/> Submittals | |

THESE ARE TRANSMITTED FOR:

- | | | |
|--|---|---------------------------------|
| <input checked="" type="checkbox"/> Prior Approval | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval | <input type="checkbox"/> Corrections | Bids due on: |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use | Other: |
| <input type="checkbox"/> Approval as Noted | <input type="checkbox"/> Review and Comment | |

Type	MFG	Part
A	NEORAY Item Note: Specify Details	S122DS-C10005D935XX-XX-1-UDD-F-XX
B	(CONTECH) LEVITON Item Note: Specify Details	OTL941FL35XC12D2-XX/O2CDXX-XX-XX
C	PORTFOLIO	LD2B10D010/EU2B0510FL40835/2LBD1LI
D	METALUX	24EN-LD2-30-UNV-L835-CD1
L	BL Message Signs & Innovative Light Item Note: Specify Details	BL NEONVIEW SIDE SISC 24V 30-XX-XX
G	NEORAY Item Note: Specify Details	S122DW-C1005D835-XX-XX-1-UDD-F-XX
H	FC Lighting	FCC420W-UNV-935-1010L-BKE-D25U25-LD
M	ABOVE ALL Lighting Inc.	SSTR12D32358

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

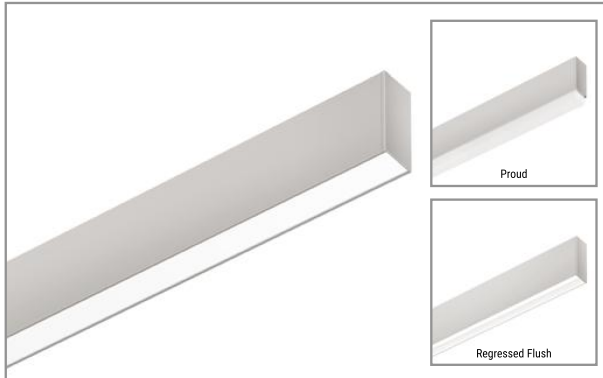
S122DS-C10005D935XX-XX-1-
UDD-F-XX

Notes: Specify Details

Type:**A**

MACS-LTG-23-64162

Project		Catalog #		Type	
Prepared by		Notes		Date	



Neo-Ray

Define 2

2" LED
Surface
Direct

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

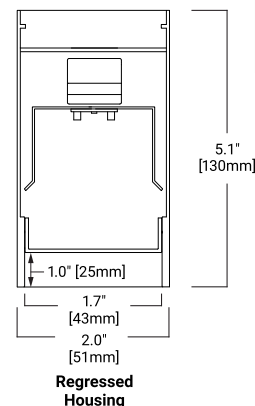
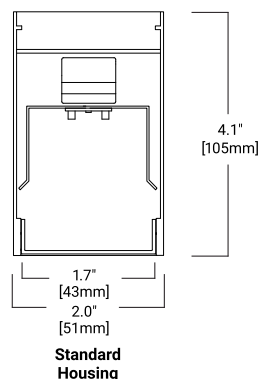
Interactive Menu

- Order Information page 2
- Product Specification page 3
- Photometric Data page 4
- Performance Data page 5
- VividTune page 6

Product Certification**Product Features****Top Product Features**

- Surface Mount Slot family in 2", 3", 4" and 5" housing sizes
- Specifiable to the nearest foot
- Satin, Asymmetric and Drop Direct Lensing available
- Independently specifiable Direct / Indirect lumen packages
- 0-10V dimming standard; DALI dimming available
- 2700K, 3000K, 3500K, 4000K, and 5000K correlated color temperatures available
- Options to meet Buy American Act requirements

AES ENGINEERING LTD. FOR BIDDING PURPOSES ONLY		
ACCEPTABLE	ACCEPTABLE AS NOTED ✓	NOT ACCEPTABLE
Project Number: 0121.0081		
Per: GS Date: 2023-08-17		
Reviewed only as to general conformity with the design concept.		

Dimensional and Mounting Details

AES: REFER TO DRAWINGS FOR
FIXTURE LENGTH AND CONFIRM
THE FIXTURE FINISH WITH
ARCHITECT.

 additional
product diagrams

**Job Name:**

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

S122DS-C10005D935XX-XX-1-
UDD-F-XX

Notes: Specify Details

Type:**A**

MACS-LTG-23-64162

Neo-Ray**2" LED Surface Direct****Order Information**

SAMPLE ORDER NUMBER: S122DS-C290D835JB-4F0-1-UDD-A-W

Icon Key: Grey bar denotes available with 10-Day Quick Ship
Ø Consult factory for availability

S122DS-C10005D935XX-XX-1-UDD-F-XX

Domestic Preference	Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Ceiling Type	Luminaire Length (Ft)	Max section length
Domestic Preference	Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Ceiling Type	Luminaire Length (Ft)	Max section length
[Blank]-Standard BAA-Buy American Act	OS-S122DS-Define 2 Direct Surface Quick Ship S122DS-Define 2 Direct Surface S122RDS-Define 2 Regressed Direct Surface	-C=Core -H=High Performance -V=VividTune Ø	290D=290 Lms/ft (2.9W/ft) 485D=485 Lms/ft (4.8W/ft) 675D=675 Lms/ft (6.7W/ft) 865D=865 Lms/ft (8.6W/ft) 1005D=1005 Lms/ft (10.6W) ____D=Custom Lms/ft Ø	8=80 9=90	27=2700K 30=3000K 35=3500K 40=4000K 50=5000K 2765=2700K-6500K 3050=3000K-5000K	JB=Gypsum Board, Junction Box, Structure T1=15/16" T-Grid (ETG) T9=9/16" T-Grid (FTG) TS=9/16" Slot (STG), Tegular (FTT), Interlude (ITG)	____F0=Nominal length 4F0= 4' Nominal Length 8F0= 8' Nominal Length ____F0=4' Incremental Run (e.g. 40F0 = 40' 0")	(blank)=12ft (std) /8=8ft
Notes Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	Notes RDS regress of 1" will add an additional 1" to fixture depth.	Notes See performance table for add'l details. Light engine must be consistent across run length. V option requires lumen package of 675 Lms/ft or greater.	Notes 3500K/80CRI/DIP/F Lens. Please refer to scaling data or other variables. For custom lumen output, please refer to additional information on page 3. 290 Lms/ft not available on 2ft fixture length	Notes Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2765/3050 VividTune configurations require V light engine and W2A driver.	Notes	Notes	Notes Minimum fixture length is 2ft. Specify to nearest foot in length.	Notes Individual fixtures configured as 12ft max by default. Continuous runs configured as 8ft max (12ft not available).

Circuiting	Additional Section Wiring	Voltage	Driver Type	Shielding Down
-1=Single Circuit -S=Secondary Circuit	E=Emergency Circuit B3=Bodine 6W UNV Integral T=UL924 EPC Emergency Bypass Relay	-U=Universal (120V-277V) -1=120V -2=277V -3=347V	DD=Standard 0-10V Dimming (1%-100%) 5L=Fifth Light DALI (5%-100%) LH=Lutron HiLume (LDE1 series) 1%-100% EcoSys W2A=White Tuning, 0-10V Dimming (VividTune only)	-F=Satin White Diffuser -D=Satin Drop diffuser -A=Asymmetric Diffuser
Notes Secondary circuit similar to A/B switching. Price adder applies for "S" configuration.	Notes Battery available on fixture ≥ 4ft in length. B3 and T options not compatible with 347V. Standard battery 4ft battery section located in the beginning of the fixture, but can be relocated using the linear product configurator. When configured with secondary circuit, battery test switch will be located in a plate on the direct side of the fixture.	Notes 347V only available with DD driver option.	Notes DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	Notes All lensing options are snap-in lenses.

Options	Finish	Integrated Sensor
-R=GLR Fuse (Fast) -F=GMF Fuse (Slow)	-W=White -S=Silver -B=Black -C=Custom Match -R=RAL Custom	-WAA=WaveLinX Pro Wireless -WAB=WaveLinX Lite Wireless Ø -LWIPD1=Enlighted Wireless -SVPD1=Standalone (Blank)=None
Notes Additional lead-time may apply. Not available with 347V option.	Notes Contact factory for C and R options. W/S/B are standard.	Notes DD driver must be selected. Please refer to page 5 for additional detail required to specify integrated sensors. Integral option not available with regressed or drop lensing.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

S122DS-C10005D935XX-XX-1-
UDD-F-XX

Notes: Specify Details

Type:

A

MACS-LTG-23-64162

Neo-Ray

2" LED Surface Direct

Product Specifications

Construction

- Available in Flush and Regressed Housing
- Precision cut housing extruded from 6063 aluminum
- Precision cut & welded end-caps ensure a robust and clean construction
- Nominal 2' -12' illuminated sections used in individual fixtures and 2'-8' illuminated sections used in continuous runs

Finish

- Electrostatically applied polyester powder coat paint

LED Module

- Modular LED tray assembly comprising reflector and light engine with quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine

- Offered with two next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or 5000K
- CRI options of either ≥ 80 CRI or ≥ 90 CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers

- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications

Controls and Integrated Sensors

- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI & Lutron) at an additional cost
- WaveLinx and Enlighted wireless sensors as well as stand-alone sensors available

Mounting

- Surface

Lengths

- Available in any length (2ft min) with a resolution of 1 foot. Max section length of 12ft (8ft max used on continuous runs and available for individual fixtures)
- Additional fixture lengths are available please consult factory. All lengths are nominal and do not include end caps.

Corners and Transition Pieces

- Corners and other transition pieces are fully luminous
- Constructed using precision mitered housing and lens components
- Extrusions are welded to ensure a precise and robust assembly
- Standard 90° horizontal corners as well as custom corners are available
- Consult online linear configurator or the factory for precise corner locations and for ordering
- Alternative transition pieces such as T's, Y's, X's, etc. are also available Ø

Direct Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Reflectors

- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance

- 90% (L90) of initial light output at 61,000+ hrs
- 70% (L70) of initial light output at 237,000+ hrs
- Derived from TM-21 standard @25°C for worst case operating conditions

Custom Lumen Output

- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors

- Please reference page 5 for details

Weight

- 3.0 lbs per foot

Approvals

- cULus - listed for damp locations
- Meets NYC requirements
- Meets CEC requirements
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire
- DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details and listed configurations.

Warranty

- Five year warranty standard.

Shielding Options



Standard Flush Lens



Regressed Flush Lens



Standard Proud Lens



Asymmetric Lens

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

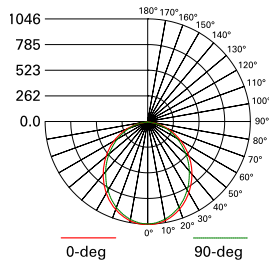
Catalog Number:

S122DS-C10005D935XX-XX-1-
UDD-F-XX

Notes: Specify Details

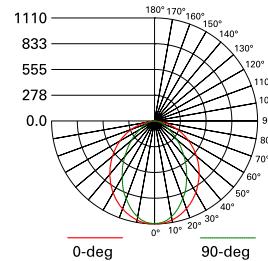
Type:**A**

MACS-LTG-23-64162

Neo-Ray**2" LED Surface Direct****Photometric Data**
 View IES files


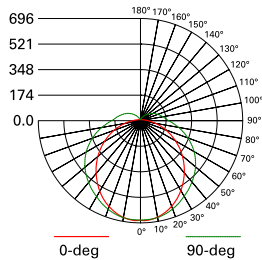
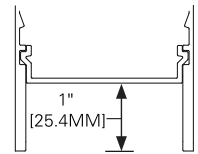
SATIN FLUSH LENS

FILE NAME:
S122DR-S675D835-GYP4F0-1-UDD-
F-W
LUMENS: 2646 Lms
LPW: 100.6 LPW
CCT: 3500K
WATTS: 26.3 W
TEST NUMBER: G3-1802-639-10



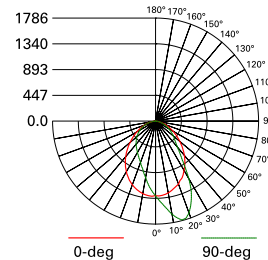
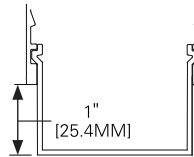
SATIN REGRESSED DIFFUSER

FILE NAME:
S122RDR-S675D835-GYP4F0-1-
UDD-F-W
LUMENS: 2273 Lms
LPW: 86.4 LPW
CCT: 3500K
WATTS: 26.3 W
TEST NUMBER: G3-1802-639-24



SATIN DROP LENS

FILE NAME:
S122DR-S675D835-GYP4F0-1-UDD-
D-W
LUMENS: 2633 Lms
LPW: 99.7 LPW
CCT: 3500K
WATTS: 26.4 W
TEST NUMBER: G3-1802-639-14



ASYMMETRIC FLUSH LENS

FILE NAME:
S122DR-S675D835-GYP4F0-1-UDD-
A-W
LUMENS: 2870 Lms
LPW: 108.7 LPW
CCT: 3500K
WATTS: 26.4 W
TEST NUMBER: G3-1802-639-19

**Photometric Overview and Performance Data****Direct Performance Per Linear Foot at 3500K/80CRI**

Nominal Output	Standard		High Performance		VividTune	
lms/ft	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
290	2.9	105	2.9	108	3	102
485	4.8	106	4.4	111	4.9	103
675	6.7	104	6.1	111	6.7	102
865	8.8	102	8.1	109	8.9	99
1005	10.6	98	9.7	105	10.7	96

LUMEN ADJUSTMENT CALCULATIONS**Example 1 - Adjusted Lumen Output**

Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot

Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K = 2800 lms / 4 ft = 700 lms/ft
Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 LPW (find nearest value using table above)
Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output**Total Light Output Range (lms/ft)**

CCT	Lumen Adj Factors		Direct Output Range	
	80CRI	90CRI	80CRI	90CRI
2700K	N/A	0.792	N/A	230-796
3000K	0.943	0.815	273-948	236-819
3500K	1.000	0.861	290-1005	250-865
4000K	1.010	0.892	293-1015	259-896
5000K	1.010	0.892	293-1015	259-896

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification. Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

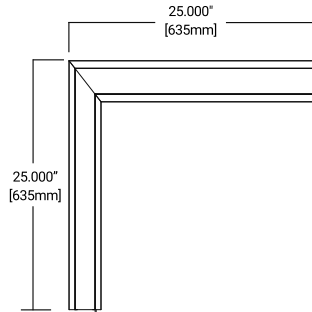
Catalog Number:

S122DS-C10005D935XX-XX-1-
UDD-F-XX

Notes: Specify Details

Type:**A**

MACS-LTG-23-64162

Neo-Ray**2" LED Surface Direct****Corner Transitions****Integrated Sensor Details and Placement**

Sensor Type	Wireless	Sensor Integration	Sensor Mounting	Ordering Code
WaveLinx Pro	Yes	Integral to Fixture	Mounted in solid cover	WAA
WaveLinx Lite	Yes	Integral to Fixture	Mounted in solid cover	WAB
Enlighted	Yes	Integral to Fixture	Mounted in illuminated lens	LWIPD1
Stand-Alone SVPD1	No	Integral to Fixture	Mounted in solid cover	SVPD1

Optional standalone and wireless connected integrated sensors require use of the DD (0-10V) driver. WaveLinx and Enlighted sensors require additional system hardware (not provided) for full functionality.

Standard sensor layout is shown below. Please refer to sensor coverage pattern diagrams to ensure proper coverage for the application. Standard configurations are available in both individual fixtures and in continuous runs. Default spacing is based on the maximum fixture length of 12ft and can be changed to 8ft sensor spacing for additional coverage by selecting the 8ft max fixture length option when ordering.

For additional information integrated sensors and connected lighting, please visit [Cooper Lighting Solutions's Connected Lighting Website](#).

- ☐ Standard Sensor with Luminaire Control
☒ Auxiliary Sensor used for Sensor Coverage (wireless systems only)

INTEGRAL SENSOR

≤8ft Individual ☐

>8ft Individual ☐ ☒

Note: When 8ft max section length is used on individual fixtures > 8ft, sensor placement follows logic for continuous run.

Beginning of Run (BOR) ☐

Intermediate Section (INT) ☐

End of Run (EOR) > 4ft ☐ ☒

End of Run (EOR) ≤ 4ft ☐

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

S122DS-C10005D935XX-XX-1-
UDD-F-XX

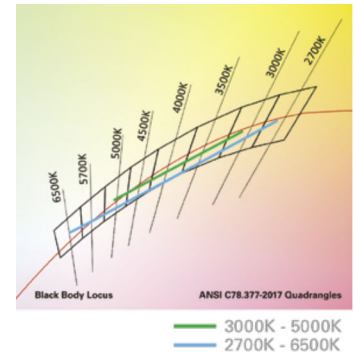
Notes: Specify Details

Type:**A**

MACS-LTG-23-64162

Neo-Ray**2" LED Surface Direct****Define 2 Pendant LED with VividTune Tunable White**

VividTune tunable white luminaires deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.

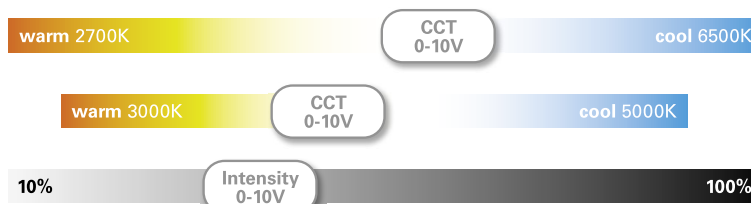
**Performance Data***

Tunable White - Lumen Adjustment Factors				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.868	0.741
3000K	0.894	0.736	0.893	0.771
3500K	0.946	0.804	0.924	0.809
4000K	0.993	0.868	0.944	0.835
4500K	1.002	0.883	0.961	0.857
5000K	1.002	0.883	0.974	0.874
6500K	-	-	0.988	0.897

Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	S122DS-C865D835-X-UDD-F-W	S122DS-V865D83050-X-UW2A-F-W	S122DS-V865D93050-X-UW2A-F-W
3000K	-	3093	2547
3500K	3460	3273	2782
4000K	-	3436	3003
4500K	-	3467	3055
5000K	-	3467	3055

Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, go to www.cooperlightingsolutions.com for tunable white application guides.

**Example of Lumen Adjustment Calculation**

S122DS-V865D83050-X-UW2A-F-W
at 80 CRI tuned to 3500K

Adjusted Lumen =
published lm x adjusted lm factor

Adjusted Lumen = 3460 x 0.946

Adjusted Lumen = 3273 lm

* Lumen adjustment factors are for reference
and may be different for each product selected.
Refer to IES files for actual performance data on each.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

OTL941FL35XC12D2-XX/
O2CDXX-XX-XX

Notes: Specify Details

Type:**B**

MACS-LTG-23-64162



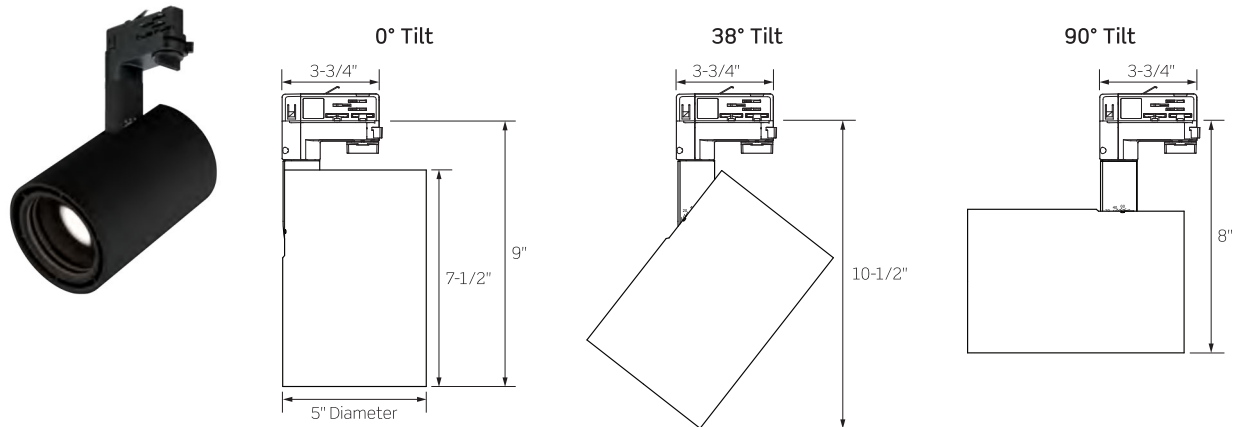
CATALOG NO.

DATE

PROJECT

TYPE

OTL94 SERIES | Gallery XL Xicato LED Track Luminaire with 0-10V Dimming Track System Adapter



	OTL940	OTL941	OTL942	OTL943	OTL944
WATTAGE	13W	19W	27W	35W	41W
LUMEN OUTPUT ¹ BY BEAM SPREAD <i>Beam Range: 10° to 51°</i>					
Very Narrow Spot Optic	610Lm	N/A	N/A	N/A	N/A
Narrow Spot Optic	540Lm	790Lm	1043Lm	1370Lm	1491Lm
Medium Reflector	976Lm	1384Lm	1898Lm	2375Lm	2698Lm
Flood Reflector	1017Lm	1440Lm	1977Lm	2485Lm	2824Lm
Wide Flood Reflector	984Lm	1393Lm	1912Lm	2404Lm	2732Lm
COLOR TEMPERATURE	2700K / 3000K / 3500K / 4000K				
CRI	95				
FINISHES	Matte Black / Matte White / Matte Silver				
DRIVER INPUT VOLTAGE	120V or 277V, 50/60Hz				
DIMMING TYPE	0-10V Dimming				
LISTINGS	cSAus Certified for use in the U.S. and Canada; Suitable for Dry Locations ENERGY STAR® Certified for all models using Medium, Flood, and Wide Flood Reflectors				
WARRANTY	Five (5) year replacement after date of purchase				
SYSTEM RATING	50,000 Hours @ 70% Lumen Maintenance				

1. Approximate lumen output based on 3000K performance; see photometric test results for additional information

AES ENGINEERING LTD.
FOR BIDDING PURPOSES ONLY

ACCEPTABLE	ACCEPTABLE AS NOTED	NOT ACCEPTABLE X
------------	------------------------	-------------------------------

Project Number: 0121.0081
Per: GS Date: 2023-08-18
Reviewed only as to general conformity with the design concept.

AES: FIXTURE WITH ABOUT 33 DEGREE BEAM
 ANGLE IS REQUIRED.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

OTL941FL35XC12D2-XX/
O2CDXX-XX-XX

Notes: Specify Details

Type:**B**

MACS-LTG-23-64162



CATALOG NO.

DATE

PROJECT

TYPE

OTL94 SERIES | Gallery XL Xicato LED Track Luminaire with 0-10V Dimming Track System Adapter

ORDERING INFORMATION

Example Order:

OTL942NS3XC12D2

-

P

OTL941FL35XC12D2-XX/O2CDXX-XX-XX

Luminaire	Beam: Optic or Reflector	Color Temp/CRI	Driver ²	Finish
OTL940 - 13W	PC Optics:	95 CRI	12D2 - 120V	B - Matte Black
OTL941 - 19W	Intensity at Nadir, Narrow Field	27XC - 2700K	0-10V Dimming	P - Matte White
OTL942 - 27W		3XC - 3000K	27D2 - 277V	S - Matte Silver
OTL943 - 35W	VN¹ - Very Narrow Spot: 10° Beam, 18° Field	35XC - 3500K	0-10V Dimming	
OTL944 - 41W	NS - Narrow Spot: 13° Beam, 22° Field	4XC - 4000K	2. Selected Driver Voltage MUST match Track System Voltage	
	1. Very Narrow Spot (VN) only available for Series 0 (13W)	<i>Vibrant Series,</i> 95 CRI		
		3XV - 3000K		
	Reflectors:			
	Well Defined Beams, Smooth Field			
	ME - Medium: 24° Beam, 54° Field			
	FL - Flood: 42° Beam, 64° Field			
	WF - Wide Flood: 51° Beam, 83° Field			

ACCESSORY & REPLACEMENT OPTIC ORDERING INFORMATION

Each Gallery XL Luminaire comes ready to hold up to two (2) Accessories; Snoot or Barn Door count as one (1) piece



FA-94-(B,P,S) - Snoot with optional
Cross Blades
Exterior painted per
finish [Black (B), White (P)
or Silver (S)], interior and
blades are always Black



LA-45 - 3-3/4-Inch Diameter
Black Honeycomb Louver



BD94-B - Black Barn Doors

LF20-* - 3-3/4-Inch Diameter Tempered Glass Lenses
and Filters; 1/8-Inch Thick, typ.

***Color/Pattern Legend**

-73 (Spread Lens), -LS (Linear Spread Lens), -SL (Soft Light), -SOL (Solite),
-UV (Optivex UV Filter), -A (Amber), -B (Blue), -CL (Clear), -DPE (Dichroic Peach),
-G (Green), -LB (Light Blue), -R (Red), -RO (Rose), -Y (Yellow)

Replacement Optics

Very Narrow Spot Optic not available as a replacement optic

CTL94NS - 13° Narrow Spot Optic

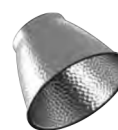
CTL94ME - 24° Medium Reflector

CTL94FL - 42° Flood Reflector

CTL94WF - 51° Wide Flood Reflector



CTL94NS
13° Narrow Spot



CTL94ME
24° Medium



CTL94FL
42° Flood



CTL94WF
51° Wide Flood

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

OTL941FL35XC12D2-XX/
O2CDXX-XX-XX

Notes: Specify Details

Type:**B**

MACS-LTG-23-64162



CATALOG NO.

DATE

PROJECT

TYPE

OTL94 SERIES | Gallery XL Xicato LED Track Luminaire with 0-10V Dimming Track System Adapter

PRODUCT DETAILS

Construction

- A revolutionary track head with superior optics designed to bring theatre grade beam control to traditional gallery and commercial track heads and mono-point luminaires
- Constructed of die-cast aluminum, the cylindrical body provides thermal management
- Adjustable, lockable aiming arm with 0° to 100° tilt for precision aiming; 365° horizontal rotation
- Precision engineered Dual Lens Optic used for Very Narrow Spot (VN) and Narrow Spot (NS) beam distributions. Design provides a tight beam angle and field to highlight target objects with minimal stray illumination.
- Specular Aluminum Reflectors used for 24° Medium, 42° Flood, and 51° Wide Flood beam distributions. Optically engineered for even illumination and glare control.
- Can accept up to two (2) LF20 Lenses/Filters, LA-45 Honeycomb Louver, FA-94 Snoot or BD94-B Black Barn Doors, ordered separately. Snoot or Barn Door count as one (1) piece.
- Integral ON/OFF switch and track polarity indicator are standard
- Fixture weight: 5 LBS

Performance Summary

- 2700K, 3000K, 3500K and 4000K color temperatures; 80 CRI minimum, 83 typical; high CRI of 90+ available
- Excellent fixture-to-fixture color consistency within a 3-step MacAdam Ellipse tolerance
- Precise beam control ensures that even at lower aiming angles, the luminaire is glare free and quiet in the ceiling
- Full collection of accessories to produce a myriad of filtering and framing effects

Fixture Compatibility

- ConTech OTL Track Luminaires are compatible with the ConTech Lighting O2CD 0-10V Dimming Track System

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

OTL941FL35XC12D2-XX/
O2CDXX-XX-XX

Notes: Specify Details

Type:**B**

MACS-LTG-23-64162



CATALOG NO.

DATE

PROJECT

TYPE

CTL94 SERIES | Gallery XL Luminaire Xicato LED Photometrics

PC OPTIC | VERY NARROW SPOT

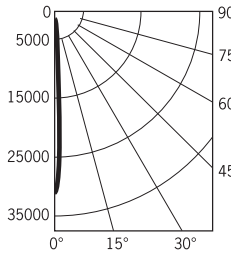
CTL940VN3XCD

Fixture Delivered Lumens: 614.3
Total Watts@120V: 13.1
Lumens Per Watt: 44.5
Center Beam Candle Power: 31786
Beam Distribution: 7.0°
Field Distribution: 11.4°
Spacing Criterion: 0.12
Color Rendering Index (CRI)¹: 97.9
Color Temperature (CCT)²: 3072K
Designed for 50,000 Hour Lamp Life³
LM-63 Test No. G22042502
LM-79 Test No. S22032901

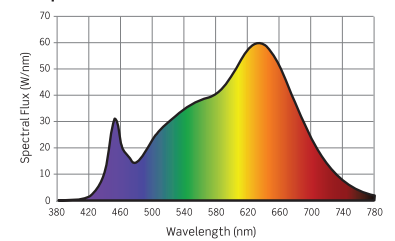
Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	882.9	0.7
8 FT	496.7	1.0
10 FT	317.9	1.2
12 FT	220.7	1.5
14 FT	162.2	1.7
16 FT	124.2	2.0

Candela Curve



Spectral Power Distribution Chart⁴



PC OPTIC | NARROW SPOT

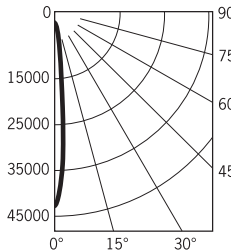
CTL944NS3XCD

Fixture Delivered Lumens: 1491.0
Total Watts@120V: 40.9
Lumens Per Watt: 36.5
Center Beam Candle Power: 42680
Beam Distribution: 10.8°
Field Distribution: 16°
Spacing Criterion: 0.17
Color Rendering Index (CRI)¹: 97.9
Color Temperature (CCT)²: 3072K
Designed for 50,000 Hour Lamp Life³
LM-63 Test No. G22033001
LM-79 Test No. S22032901

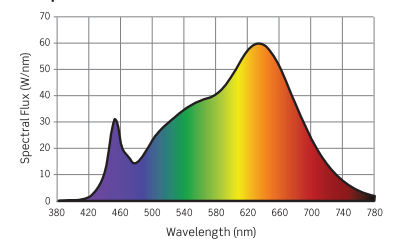
Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	1185.6	1.1
8 FT	666.9	1.5
10 FT	426.8	1.9
12 FT	296.4	2.3
14 FT	217.8	2.6
16 FT	116.7	3.0

Candela Curve



Spectral Power Distribution Chart⁴



1. Accuracy of Rendering Colors 2. Color Appearance of Light Source 3. Dependent on Surrounding Temperatures 4. Colors Present within the Light Source

PHOTOMETRIC MULTIPLICATION FACTORS

Lumen output values fluctuate based on Color Temperature, Luminaire Wattage/Output and Trim Selection. To estimate lumen output of these various options, multiply 3000K results by the following:

CCT MULTIPLIERS						OUTPUT MULTIPLIERS			
CCT	95 CRI	VIBRANT	CCT	95 CRI	VIBRANT	13W SERIES 0	19W SERIES 1	27W SERIES 2	35W SERIES 3
2700K	0.92	N/A	3500K	1.05	N/A	0.36	0.51	0.70	0.88
3000K	1.00	1.00	4000K	1.10	N/A				

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

OTL941FL35XC12D2-XX/
O2CDXX-XX-XX

Notes: Specify Details

Type:**B**

MACS-LTG-23-64162



CATALOG NO.

DATE

PROJECT

TYPE

CTL94 SERIES | Gallery XL Luminaire Xicato LED Photometrics

ALUMINUM REFLECTOR | MEDIUM

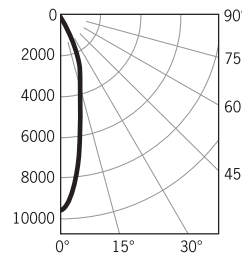
CTL944ME3XCD

Fixture Delivered Lumens: 2698.1
Total Watts@120V: 40.9
Lumens Per Watt: 66.0
Center Beam Candle Power: 9575
Beam Distribution: 24.2°
Field Distribution: 53.7°
Spacing Criterion: 0.50
Color Rendering Index (CRI)¹: 91.6
Color Temperature (CCT)²: 3074K
Designed for 50,000 Hour Lamp Life³
LM-63 Test No. G22032905
LM-79 Test No. S22031701

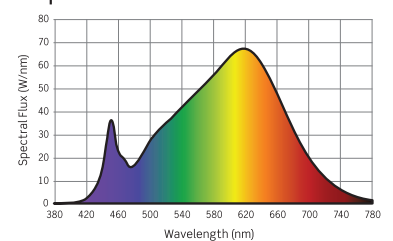
Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	266.0	2.6
8 FT	149.6	3.4
10 FT	95.7	4.3
12 FT	66.5	5.2
14 FT	48.9	6.0
16 FT	37.4	6.9

Candela Curve



Spectral Power Distribution Chart⁴



ALUMINUM REFLECTOR | FLOOD

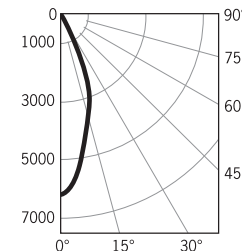
CTL944FL3XCD

Fixture Delivered Lumens: 2824.4
Total Watts@120V: 40.9
Lumens Per Watt: 69.1
Center Beam Candle Power: 6203
Beam Distribution: 39.3°
Field Distribution: 64.5°
Spacing Criterion: 0.65
Color Rendering Index (CRI)¹: 91.6
Color Temperature (CCT)²: 3074K
Designed for 50,000 Hour Lamp Life³
LM-63 Test No. G22033003
LM-79 Test No. S22031701

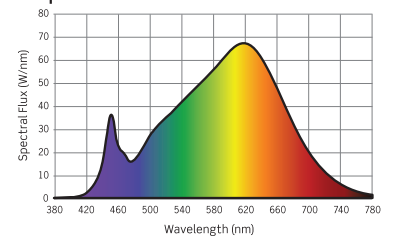
Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	172.3	4.3
8 FT	96.9	5.7
10 FT	62.0	7.1
12 FT	43.1	8.6
14 FT	31.6	10.0
16 FT	24.2	11.4

Candela Curve



Spectral Power Distribution Chart⁴



ALUMINUM REFLECTOR | WIDE FLOOD

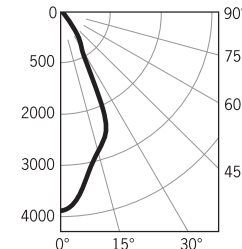
CTL944WF3XCD

Fixture Delivered Lumens: 2731.9
Total Watts@120V: 40.9
Lumens Per Watt: 66.8
Center Beam Candle Power: 3888
Beam Distribution: 49.3°
Field Distribution: 83.7°
Spacing Criterion: 0.72
Color Rendering Index (CRI)¹: 91.6
Color Temperature (CCT)²: 3074K
Designed for 50,000 Hour Lamp Life³
LM-63 Test No. G22033004
LM-79 Test No. S22031701

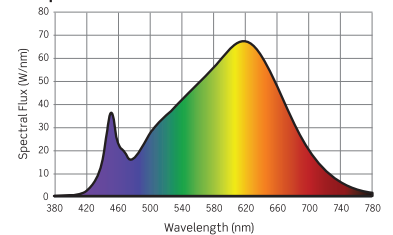
Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
6 FT	108.0	5.5
8 FT	60.8	7.3
10 FT	38.9	9.2
12 FT	27.0	11.0
14 FT	19.8	12.9
16 FT	15.2	14.7

Candela Curve



Spectral Power Distribution Chart⁴



1. Accuracy of Rendering Colors 2. Color Appearance of Light Source 3. Dependent on Surrounding Temperatures 4. Colors Present within the Light Source

PHOTOMETRIC MULTIPLICATION FACTORS FOR ALUMINUM REFLECTORS ONLY

Lumen output values fluctuate based on Color Temperature, Luminaire Wattage/Output and Trim Selection. To estimate lumen output of these various options, multiply 3000K results by the following:

CCT MULTIPLIERS						OUTPUT MULTIPLIERS			
CCT	95 CRI	VIBRANT	CCT	95 CRI	VIBRANT	13W SERIES 0	19W SERIES 1	27W SERIES 2	35W SERIES 3
2700K	0.92	N/A	3500K	1.05	N/A	0.36	0.51	0.70	0.88
3000K	N/A	1.00	4000K	1.10	N/A				

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

OTL941FL35XC12D2-XX/
O2CDXX-XX-XX

Notes: Specify Details

Type:**B**

MACS-LTG-23-64162



CATALOG NO.

DATE

PROJECT

TYPE

CTL94 SERIES | Gallery XL Luminaire Xicato LED Photometrics

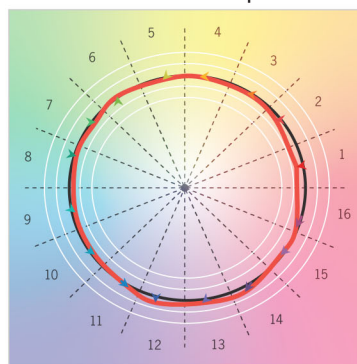
TM-30 DATA: CTL944ME3XCD

ANSI/IES TM-30-18 Color Rendition Report Test No. S22031701

Colors are for visual orientation purposes only

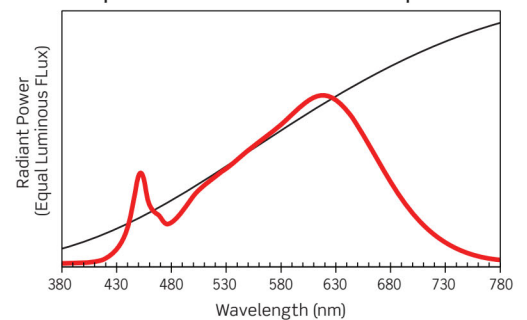
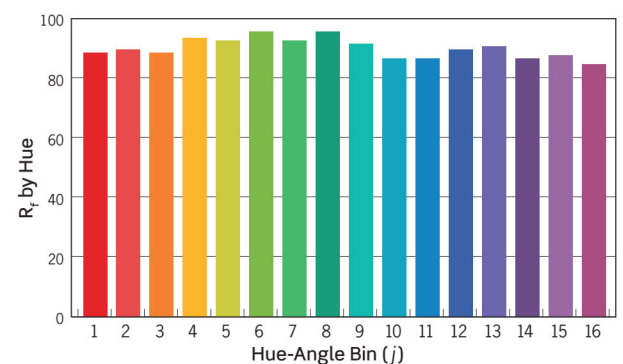
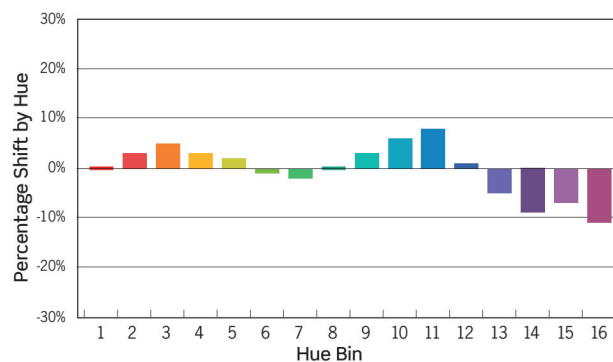
R_f	91
R_g	98
CCT(K)	3074K
D_{uv}	0.0008
u'	0.2477
v'	0.5210

Color Vector Graphic



— Reference Illuminance — Test Source

Spectral Power Distribution Comparison

— Reference Illuminance
— Test Source

HUE BIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
HUE SHIFT	0%	3%	5%	3%	2%	-1%	-2%	0%	3%	6%	8%	1%	-5%	-9%	-7%	-11%
R _f VALUE	90	91	90	95	94	97	94	97	93	88	88	91	92	88	89	86

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

LD2B10D010/
EU2B0510FL40835/2LBD1LI

Notes:

Type:**C**

MACS-LTG-23-64162

Project		Catalog #		Type	
Prepared by		Notes		Date	



Portfolio

LD2B EU2B 2LB

2-Inch Spun or Die Cast Aluminum, Downlight or Wall Wash, New Construction or Retrofit 2x4 and 2x6

500, 1000, 1500, 2000 Lumens

Typical Applications

Healthcare • Hospitality • Retail • Institutional • Indoor Display & Signage

Interactive Menu

- Order Information [page 2](#)
- Product Specifications [page 3](#)
- Energy & Performance Data [page 4](#)
- Photometric Data [page 4](#)
- Connected Systems [page 6](#)
- Product Warranty

Product Certification



Control Compatibility



Product Features



Top Product Features

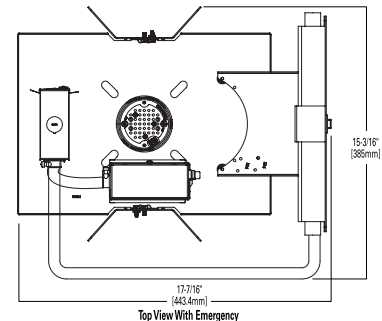
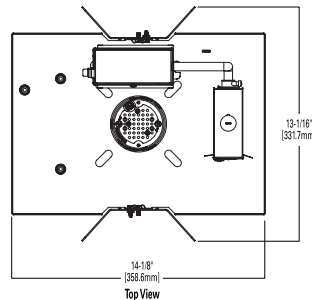
- New construction or retrofit from below, Downlight or lensed wall wash
- Excellent light control and low aperture brightness
- Installs in shallow or standard plenums, ENERGY STAR® qualified
- Round or square die-cast or spun aluminum reflectors
- 6 color temperatures: 2400K, 2700K, 3000K, 3500K, 4000K and 5000K CCT
- CRI: 80, 90 or 97, D2W™ option from 3000K to 1850K
- W2N Tunable White 2700K-6500K or 2000K-5000K
- Lumens: 500-2,000, Distributions: 15°, 25°, 40° or 55°
- Options to meet Trade Agreements Act requirements

AES ENGINEERING LTD.
FOR BIDDING PURPOSES ONLY

ACCEPTABLE ✓	ACCEPTABLE AS NOTED	NOT ACCEPTABLE
-----------------	------------------------	-------------------

Project Number: 0121.0081
Per: GS Date: 2023-08-18
Reviewed only as to general conformity with the design concept.

Dimensional and Mounting Details



Portfolio

LDA2B | 2LB

Order Information

SAMPLE ORDER NUMBER: LD2B15D010

LD2B10D010					
Domestic Preferences ⁽¹⁵⁾	Housing	Lumens ⁽¹⁾	Voltage	Driver	Options ^{(2) (16)}
[Blank]=Standard TAA=Trade Agreements Act	LD2B=2" New Construction Downlight LDRT2B=2" Remodel Downlight limit to 1500 lumen ⁽¹³⁾ LD2BCP=2" LED Downlight Nominal Aperture, Chicago Plenum ⁽¹²⁾	05=500 lumens ⁽¹⁴⁾ 10=1000 lumens 15=1500 lumens 20=2000 lumens	[Blank]=120-277V 3=347V 0-10V only 1000-2000 lumens	500 - 2000 Lumens. D010=0-10V Dimming, 1% to 100%, 120V-277V DLV=Low voltage dimming driver (1-100%) for use with DLVP system ⁽⁴⁾ 1000 - 2000 Lumens. D010TR=0-10V or Line Voltage Dimming, 1% to 100%, 120V-277V DE010=0-10V Linear Dimming, 0% to 100%, 120V-277V ⁽⁴⁾ D5LT=FiFth Light® (DALI) Logarithmic Dimming, 0% to 100%, 120V-277V ⁽⁴⁾ DMX=DMX/RDM Logarithmic Dimming, 0% to 100%, 120V-277V ⁽⁴⁾⁽⁹⁾ DMXC5=DMX/RDM Logarithmic Dimming, 0% to 100%, 120V-277V, with RJ45 connection ⁽⁴⁾⁽⁹⁾ DL2=Lutron® Hi-Lume Forward Phase Dimming, 1% to 100%, 120V Only ⁽⁴⁾ DLE=Lutron Ecosystem dimming 1% to 100%, 120V-277V ⁽⁴⁾ Tunable White D5LTW2N2050 = Fifth Light (DALI) 0-100%, 120-277V, 2000K-5000K D5LTW2N2765 = Fifth Light (DALI) 0-100%, 120-277V, 2000K-5000K DE010W2N2050 =0-10V dimming, 0-100%, 120-277V, 2000K-5000K DE010W2N2765 = 0-10V dimming, 0-100%, 120-277V, 2700K-6500K	EMB0D=Bodine® Emergency Module with Remote Test Switch ⁽⁶⁾ EMB0D7ST=Bodine® Emergency Module with Self Test Remote Test Switch ⁽⁶⁾ EM7=7W Emergency Module with Remote Test Switch ⁽⁶⁾ EM14=14W Emergency Module with Remote Test Switch ⁽⁶⁾ EMV7=7W Low Voltage Emergency Module with Remote Test Switch ⁽⁶⁾ EMV14=14W Low Voltage Emergency Module with Remote Test Switch ⁽⁶⁾ WTA = Factory installed WaveLinX sensor Kit ^{(10) (14)} WTK = Factory installed WaveLinX Lite Sensor Kit ^{(10) (15)} WPN = WaveLinX PRO Wireless Node without sensor ⁽²⁰⁾

SAMPLE ORDER NUMBER: EU2B158035

EU2B0510FL40835					
Domestic Preferences ⁽¹⁵⁾	Power Module	Lumen Levels / Distribution ⁽¹⁾ / Optic	CRI	Color	
[Blank]=Standard TAA=Trade Agreements Act	EU2B=2" Universal LED Module	05SP15=500 lumen 15" IC Rated 05WW=500 lumen wall wash IC Rated ⁸ 10SP15=1000 lumen 15" IC Rated 10WW=1000 lumen wall wash Non-IC Rated ⁸ 0510NFL25=500 and 1000 lumen 25" IC Rated 0510FL40=500 and 1000 lumen 40" IC Rated 0510WFL55=500 and 1000 lumen 55" IC Rated 15NFL25=1500 lumen 25" Non IC Rated 15FL40=1500 lumen 40" Non IC Rated 15WFL55=1500 lumen 55" Non IC Rated 15WW=1500 lumen wall wash Non IC Rated ⁸ 20NFL25=2000 lumen 25" Non IC Rated 20FL40=2000 lumen 40" Non IC Rated 20WFL55=2000 lumen 55" Non IC Rated	80=80 CRI minimum 90=90 CRI minimum 97=97 CRI minimum	80 CRI 27=2700K 30=3000K 35=3500K 40=4000K 50=5000K	90 CRI 24=2400K 27=2700K 30=3000K 35=3500K 40=4000K 50=5000K
			Dim to Warm (1500 lumens and below) 10NFL259030D2W=1000 lumen 25" IC Rated 15NFL259030D2W=1500 lumen 25" Non-IC 10FL409030D2W=1000 lumen 40" IC Rated 15FL409030D2W=1500 lumen 40" Non-IC 10WFL559030D2W=1000 lumen 55" IC Rated 15WFL559030D2W=1500 lumen 55" Non-IC		
				W2N902050 = 1000 lumen 40" 2000K-5000K W2N902765 = 1000 lumen 40" 2700K-6500K	

SAMPLE ORDER NUMBER: 2LBD1LI

2LBD1LI					
Trim ⁽¹⁷⁾	Reflector		Flange	Finish	
2LB=2" LED	D=Round downlight spun reflector SW=Round lensed Wall Wash, Spun Aluminum, Splay black occlus SWW=Round lensed Wall Wash, Spun Aluminum, Splay white occlus DL=Round Downlight lensed spun reflector	DC=Round Cast Downlight ⁽²⁾ DLC=Round Lensed cast downlight ⁽²⁾ PIN=Round Pinhole downlight black occlus ⁽³⁾ PINW=Round Pinhole downlight white occlus ⁽²⁾ DSQC=Square Cast Downlight ⁽²⁾ DSQLC=Square Lensed cast shallow downlight ⁽²⁾	1=Self-flanged ⁽⁷⁾ 2=White Painted Self-flanged ⁽¹¹⁾ 3=rimless ^{(3) (19)} [Blank]=Pinhole	LI=Specular Clear ⁽⁴⁾ H=Semi-Specular Clear Haze ⁽⁴⁾ WMH=Warm Haze ⁽⁴⁾ WH=Wheat ⁽⁴⁾ GPH=Graphite Haze ⁽⁴⁾	B=Specular Black ⁽⁴⁾ MW=Matte White MB=Matte Black ⁽³⁾ MMS=Matte Metallic Silver ⁽²⁾

Accessories ⁽¹⁸⁾	
RPR2=Round plaster lathing ring (order with rimless option) Bar Hangers HB26=Pair C-channel bar hanger, 26" long BAA-HB26=Pair C-channel bar hanger, 26" long ¹⁷ TAA-HB26=Pair C-channel bar hanger, 26" long ¹⁷ RMB22=Pair wood joist bar hanger 22" long Connected Lighting Systems ⁽¹⁰⁾ WTA = Field installed WaveLinX sensor Kit ¹⁴ WTK = Field installed WaveLinX Lite Sensor Kit ¹⁵	L100 lenses - optical lenses L110N=Diffuse Sandblasted Lens: Provides an even beam spread - especially useful in wall washing. L111=Soft Focus Lens: Smooths irregular beam pattern while maintaining high controlled illumination levels and beam angles. L113=Prismatic Spread Lens: Provides a symmetrical broadening of lamp beam. Suitable when a wide, uniform light distribution is required. L115=Linear Spread Lens: Fans out the beam 55° (27-1/2° to each side) to produce a wide rectangular pattern. L100MB=Black finished metal hexagonal-cell louver - controls light spill while retaining lamp optics.

Notes:

- Nominal Lumens will vary depending on selected distribution, color, driver and reflector finish.
- Only available with Matte White, Matte metallic silver and Matte Black Finishes.
- Available on DC, DLC and PIN.
- Not available on DC or PIN.
- DMX, D5LT, DE010, DLC, Lutron, connected and emergency module drivers require accessible ceiling.
- Flange is the same finish as reflector.
- Order with 2LBSW Wall Wash trim.
- DMX fixtures default to full on upon loss of DMX signal.
- Refer to system specifications for additional information, features, and benefits. Order either factory installed option or accessory. Use with 0-10V driver.

11. Not available with Wall Wash.

12. Limited to 1000 lumens.

13. Available with D010 and D010TR driver only.

14. WTA = WaveLinX wireless sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with 0-10V only.

15. WTK = WaveLinX Lite tile mount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinX Lite system specifications)

16. Limited to D010 and D010A drivers.

17. Only product configurations with this designated prefix are built to be compliant with the Trade Agreements Act of 1979 (TAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. Accessories sold separately will be separately analyzed under

domestic preference requirements. Consult factory for further information.

Trim must be ordered with power module for TAA compliance.
Example: TAA-EU2B158035-2LB

18. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

19. For use with plaster lathing ring RPR2 (required).

20. WPN = WaveLinX PRO wireless node provides luminaire-level control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

LD2B10D010/
EU2B0510FL40835/2LBD1LI

Notes:**Type:****C**

MACS-LTG-23-64162

Portfolio**LD2B | EU2B | 2LB****Product Specifications****Lower Reflector**

- Round or square painted die cast aluminum or round anodized aluminum lower reflector with a lensed upper optical chamber providing superior lumen output with minimal source brightness.
- Anodized reflectors are offered in all Portfolio Alzak® finishes.
- Plaster lathing ring accessory offered for flush reflector transition.

Trim Retention

- Reflector is retained with three or four pressure springs holding the flange tight to the finished ceiling surface.

Optic

- TIR optic in 15°, 25°, 40, 55° or wall wash provides smooth beam without color separation.
- Media holder fits onto upper reflector and holds up one lens media.
- For non-lens trims only.

Plaster Frame / Collar

- New Construction
- Galvanized steel plaster frame designed for ceiling thickness from 1/2 to 1-1/4-inch.
- Retrofit
- Installs from below.

Universal Mounting Bracket

- Accepts 1/2" EMT, C channel and bar hangers.

Junction Box

- (4) 1/2" trade size pry outs positioned to allow straight conduit runs.
- Listed for (4) #12AWG (two in, two out) 90°C conductors and feed thru branch wiring.
- Lever connectors for simple push in wiring.

Thermal

- Forged aluminum heat sink conducts heat away from the LED COB for optimal performance and long life.

LED

- Chip on board with a multitude of highly efficient white LED's, combined with TIR optic produces an even distribution with no pixilation.

- Lumen output shall not decrease by more than 10% over the minimum life of 55,000 hours (L90 > 55,000 hours).
- Auto resetting, thermally protected, LED's are turned off when safe operating temperatures are exceeded.
- Color variation within 2-step MacAdam ellipses.
- Flexible disconnect allows for replacement of LED engine from below ceiling. Available in 80, 90 or 97 CRI.
- D2W™ – dim-to-warm shifts CCT from 3000K to 1850K as fixture dims mimicking halogen sources.
- W2N - Tunable white CCT range 2700K to 6500K or 2000K to 5000K, 90 CRI.

Driver

- Standard 120-277V 0-10V dimming driver provides flicker free dimming from 100% to 1%.
- Optional 120V leading edge, <1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem.
- Driver can be serviced from above or through the aperture with standard D010 driver. Other drivers require above ceiling access.
- Distributed low voltage power system combines power, lighting, and controls with ease of installation.

Connected Lighting System

Two WaveLinX connected solutions to choose from. Refer to WaveLinX system specifications and application guides for details.

WaveLinX PRO Tilemount Sensor Kit

- WaveLinX WPST tilemount sensor kit offers daylight dimming, PIR motion sensing, scene and zone configuration, automatic commissioning; and optional RLTS - Real Time Location Services available.

WaveLinX PRO Wireless Node

- WaveLinX PRO wireless node provides luminaire-level control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only

WaveLinX LITE Tilemount Sensor Kit

- WaveLinX LITE WLST tilemount sensor kit offers daylight dimming and PIR motion sensing, scene and grouping configuration.

WaveLinX Tilemount Kits Application

- The WPST and WLST tilemount kits include a control module mounted on the luminaire junction box via 1/2" knock-out, and a tilemount sensor on 54-inch whip; for ceiling installation by direct-mount spring clips or via mounting bracket in octagon ceiling boxes.
- The WPST and WLST tilemount kits may be ordered as factory installed on the luminaire, or ordered separately as a field installed accessory kit.

Code Compliance

- Thermally protected
- cULus Certified to UL 1598 / C22.2 No. 250.0 suitable for wet locations with downlight; damp location with wall wash and hyperbolic with covered ceiling
- EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits.
- Optional City of Chicago environmental air (CCEA) marking for plenum applications.
- 1500 lumen and above are Non-IC rated - Insulation must be kept 3" from top and sides of housing. IC-rated up to 1000 lumens (except wall wash).
- RoHS Compliant. Photometric testing completed in accordance with IES LM 79 and TM-30 standards. Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11.
- Can be used to comply with California Energy Commission (CEC) Title 24 2016 & 2019 JA8 High Efficacy Lighting Requirements, reference Modernized Appliance Efficiency Database System (MAEDBS) for 2016 & 2019 JA8 High Efficacy Lighting.
- ENERGY STAR® certified, reference certified light fixtures database
- Options to meet Trade Agreements Act requirements

Warranty

- Five year warranty www.cooperlighting.com/legal

Energy Data

ENERGY DATA	
Sound Rating: Class A standards	
(Values at non-dimming line voltage)	
Minimum Starting Temperature: -30°C (-22°F)	
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)	
Input Voltage: UNV (120V - 277V)	
Power Factor: >0.90	
(at nominal input 120-277 VAC & 100% of Rated Output Power)	
Input Frequency: 50/60Hz	

500 Lumen D010		1000 Lumen D010	
Input Power: 7.38W	THD: <14.4%	Input Power: 11W	THD: <13.8%
120V Input Current: 0.06A	277V Input Current: 0.03A	120V Input Current: 0.086A	277V Input Current: 0.042A

1500 Lumen D010		3000 Lumen D010	
Input Power: 15.05W	THD: <13.0%	Input Power: 21.2W	THD: <8.6%
120V Input Current: 0.13A	277V Input Current: 0.06A	120V Input Current: 0.18A	277V Input Current: 0.081A

Lumens	120V		277V	
	Inrush (A)	Duration (ms)	Inrush (A)	Duration (ms)
500 Lumen D010	0.64	0.05	1.4	0.04
1000 Lumen D010	1.02	0.041	2.18	0.021
1500 Lumen D010	1.02	1.02	2.24	0.064
2000 Lumen D010	1.02	0.077	2.43	0.027

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

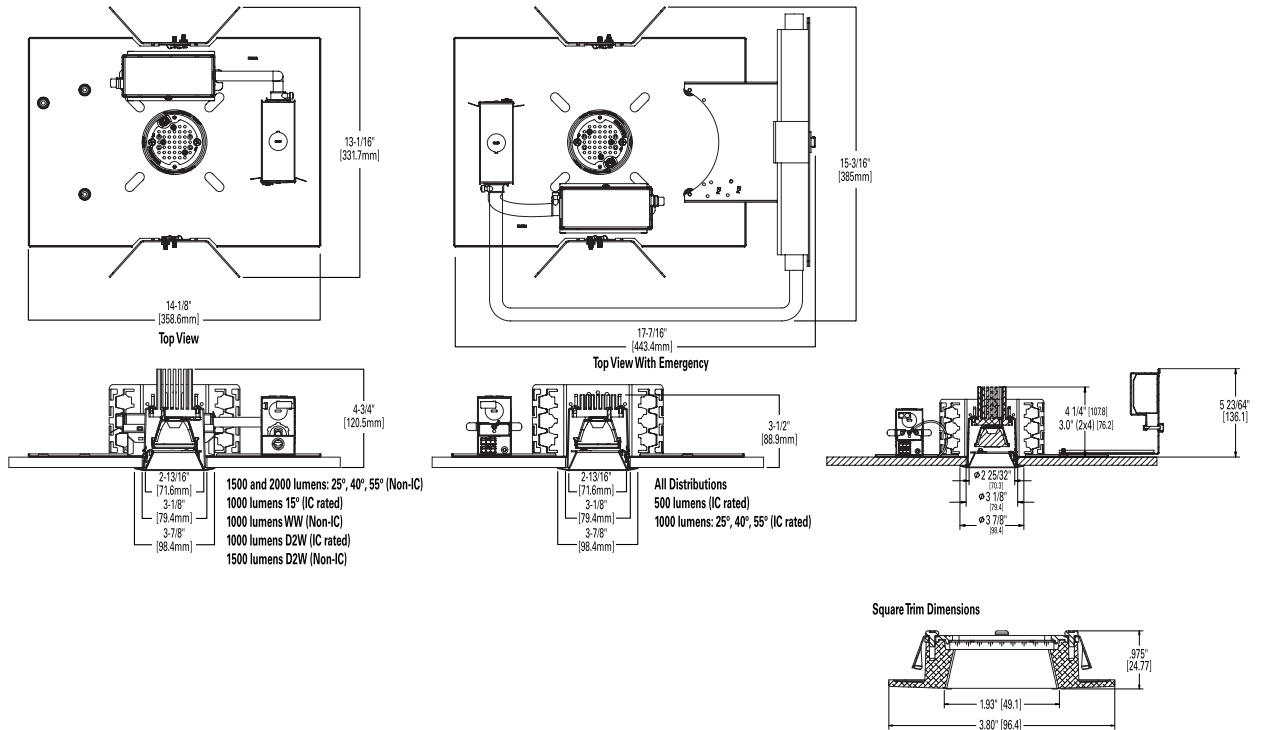
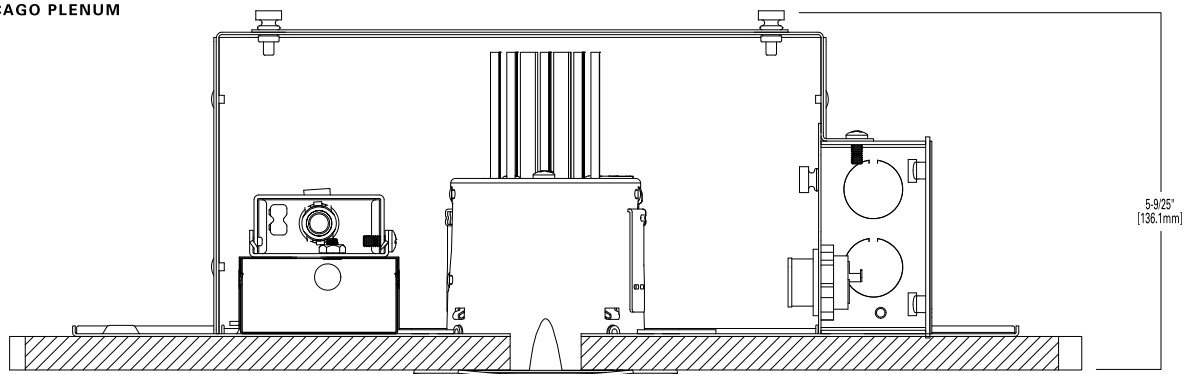
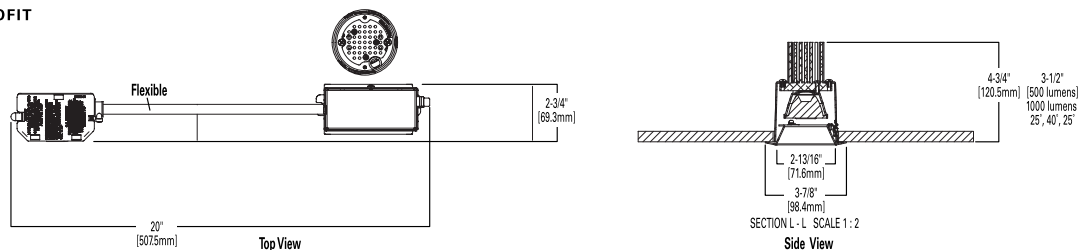
Catalog Number:

LD2B10D010/
EU2B0510FL40835/2LBD1LI

Notes:

Type:**C**

MACS-LTG-23-64162

Portfolio**LD2B | EU2B | 2LB****Dimensional and Mounting Details****NEW CONSTRUCTION****CHICAGO PLENUM****RETROFIT**

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

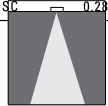
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EU2B0510FL40835/2LBD1LI

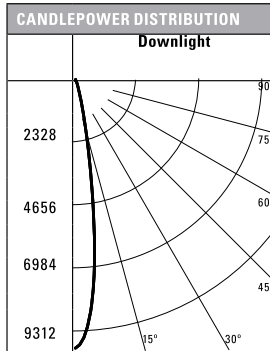
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Type:**C**

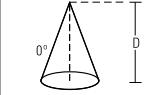
MACS-LTG-23-64162

Portfolio**LD2B | EU2B | 2LB****Photometric Data** [View IES files](#)

SPOT (15° BEAM)	
Test Number	P264029
Housing	LD2B10D010
Module	EU2B1010SP158035
Trim	2LBD*LI
Lumens	974
Efficacy	94.6 Lm/W
	



CONE OF LIGHT



D	FC	L	W
4'	582.2	1	1
7'	190.1	1.8	1.8
9'	115	2.4	2.4
13'	55.1	3.6	3.6
16'	36.4	4.4	4.4

CANDELA TABLE


Degrees Vertical	Candela
0	9316
5	7438
15	976
25	141
35	30
45	7
55	2
65	1
75	0
85	0
90	0

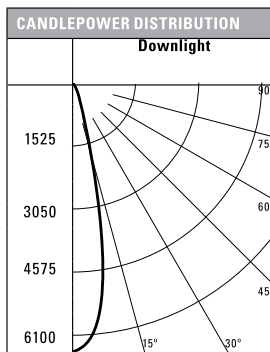
ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	945	97
0-40	965	99.1
0-60	973	99.9
0-90	974	100
90-180	0	0
0-180	974	100

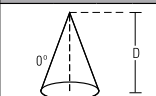
LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	4884
55	1720
65	1167
75	0
85	0

FLOOD (25° BEAM)	
Test Number	P218711
Housing	LD2B10D010
Module	EU2B0510N-FL258035
Trim	2LBD*LI
Lumens	1026
Efficacy	99.6 Lm/W
	



CONE OF LIGHT



D	FC	L	W
4'	382	1.4	1.4
7'	125	2.6	2.6
9'	75	3.4	3.4
13'	36	5	5
16'	24	6	6

CANDELA TABLE

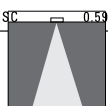
Degrees Vertical	Candela
0	6104
5	5611
15	1236
25	229
35	51
45	7
55	1
65	0
75	0
85	0
90	0

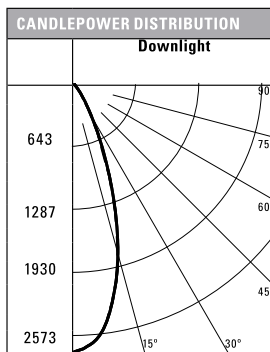
ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	987	96.2
0-40	1019	99.3
0-60	1026	100
0-90	1026	100
90-180	0	0
0-180	1026	100

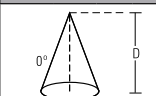
LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	3836
55	676
65	0
75	0
85	0

FLOOD (40° BEAM)	
Test Number	P218754
Housing	LD2B10D010
Module	EU2B0510FL408035
Trim	2LBD*LI
Lumens	1041
Efficacy	101 Lm/W
	



CONE OF LIGHT



D	FC	L	W
4'	161	2.2	2.2
7'	53	4	4
9'	32	5.2	5.2
13'	15	7.6	7.6
16'	10	9.4	9.4

CANDELA TABLE

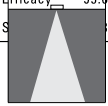
Degrees Vertical	Candela
0	2577
5	2467
15	1626
25	581
35	120
45	19
55	4
65	0
75	0
85	0
90	0

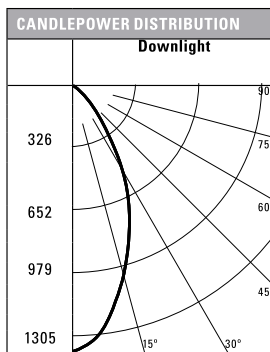
ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	938	90.2
0-40	1020	98.0
0-60	1040	99.9
0-90	1041	100
90-180	0	0
0-180	1041	100

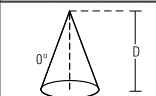
LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	10412
55	2702
65	0
75	0
85	0

WIDE FLOOD (55° BEAM)	
Test Number	P218801
Housing	LD2B10D010
Module	EU2B0510W-FL558035
Trim	2LBD*LI
Lumens	985
Efficacy	95.6 Lm/W
	



CONE OF LIGHT



D	FC	L	W
4'	82	2.8	2.8
7'	27	5	5
9'	16	6.6	6.6
13'	8	9.4	9.4
16'	5	11.6	11.6

CANDELA TABLE

Degrees Vertical	Candela
0	1309
5	1250
15	959
25	644
35	313
45	105
55	28
65	0
75	0
85	0
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	674	68.5
0-40	873	88.7
0-60	984	99.9
0-90	985	100
90-180	0	0
0-180	985	100

LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	57541
55	18916
65	0
75	0
85	0

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

LD2B10D010/
EU2B0510FL40835/2LBD1LI

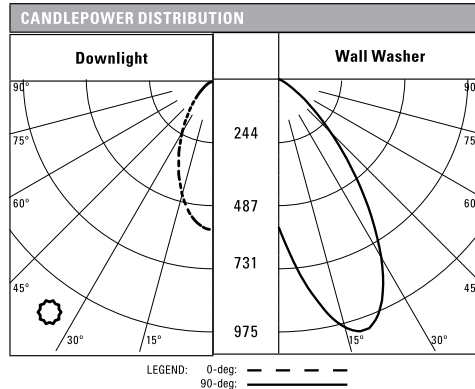
Notes:

Type:**C**

MACS-LTG-23-64162

Portfolio**LD2B | EU2B | 2LB****Photometric Data**
 View IES files

WALL WASH	
Test Number	P14828
Housing	LD2B10D010
Module	EU2B1010WW8035
Trim	2LBSW*XX
Lumens	742
Efficacy	72 Lm/W



SINGLE UNIT FOOTCANDLES					MULTIPLE UNIT FOOTCANDLES											
3' FROM WALL (Distance From Fixture Along Wall)					2.5' FROM WALL (Spacing Between Fixtures)						3' FROM WALL (Spacing Between Fixtures)					
DD	●	1'	2'	3'	●	3'	●	●	4'	●	●	3'	●	●	4'	●
1'	0.5	0.5	0.3	0.2	1.3	1.1	1.3	1.2	0.7	1.2	0.7	0.8	0.7	0.6	0.6	0.6
2'	4.3	3.3	1.4	0.5	10.7	8.7	10.7	10.2	4.9	10.2	4.8	4.6	4.8	4.5	2.9	4.5
3'	10.1	8.1	4.2	1.6	19.2	18	19.2	17.8	11.5	17.8	11.8	12.1	11.8	10.7	8.3	10.7
4'	12.2	10.2	5.9	2.8	19.3	19.9	19.3	17.5	14	17.5	15.1	16.1	15.1	13.4	11.9	13.4
5'	10.9	9.4	6.1	3.3	15.6	16.9	15.6	13.8	12.8	13.8	14.2	15.7	14.2	12.5	12.3	12.5
6'	8.6	7.6	5.4	3.2	11.7	12.9	11.7	10.2	10.4	10.2	11.8	13.2	11.8	10.3	10.7	10.3
7'	6.4	5.8	4.4	2.9	8.5	9.5	8.5	7.5	8	7.5	9.2	10.4	9.2	8.1	8.8	8.1
8'	4.7	4.4	3.5	2.4	6.3	7	6.3	5.5	6	5.5	7.1	7.9	7.1	6.3	6.9	6.3
9'	3.4	3.3	2.7	2	4.6	5.1	4.6	4.1	4.6	4.1	5.4	6	5.4	4.8	5.4	4.8
10'	2.6	2.4	2.1	1.6	3.5	3.8	3.5	3.1	3.5	3.1	4.2	4.6	4.2	3.7	4.2	3.7

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

LD2B10D010/
EU2B0510FL40835/2LBD1LI

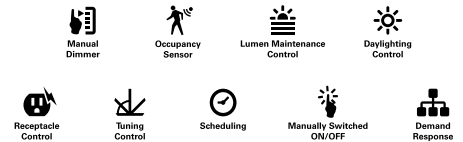
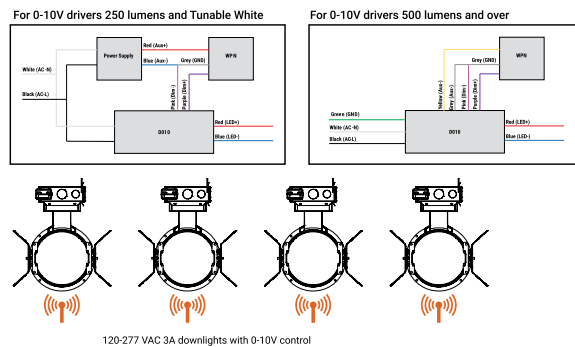
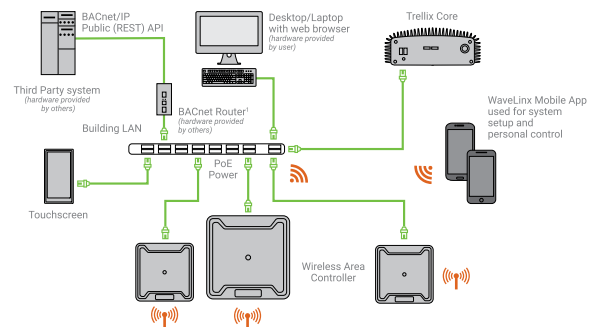
Notes:

Type:**C**

MACS-LTG-23-64162

Portfolio**LD2B | EU2B | 2LB****Connected Solutions****WaveLinX PRO Wireless Node - WPN**

- WaveLinX Wireless functionality configures zones and customizes settings from one secure mobile app
- Automatic code commissioning that meets the strictest codes
- Fixtures and sensors integrate with WaveLinX Area Controller, Wall Stations, and Control Devices
- Stand-Alone Offices or Entire Building Network Installations

**WaveLinX mobile app settings****WaveLinX PRO Wireless Node (WPN) Wiring Diagram****WaveLinX CORE Building Management Integration**

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

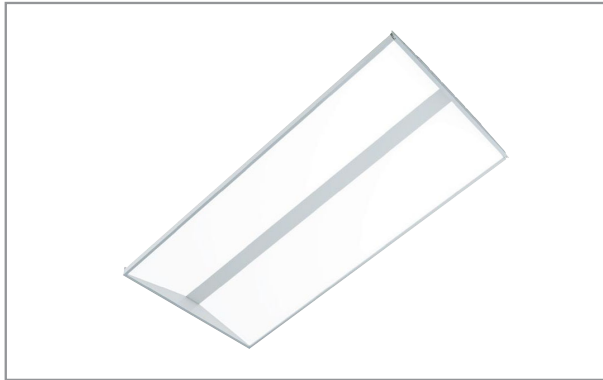
24EN-LD2-30-UNV-L835-CD1

Type:**D**

Notes:

MACS-LTG-23-64162

Project		Catalog #		 <div> <div>ACCEPTABLE</div> <div>APPROPRIATE FOR BIDDING PURPOSES ONLY</div> <div>GD2DRX NC</div> </div>	Type	
Prepared by		Notes		Project Number: 0121.0081 Per: GS Date: 2023-08-18 Reviewed only as to general conformity with the design concept.	Date	



Metalux

Encounter 24EN LED

2' x 4' Troffer LED Module
Specification Grade Troffer

Typical Applications

- Commercial Office Spaces • Schools • Hospitals • Retail
- Other Indoor Ambient Applications

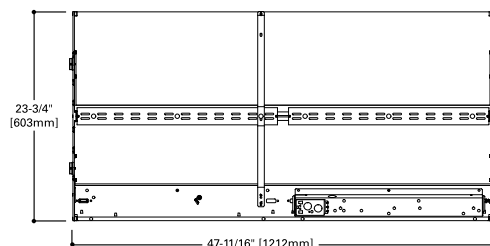
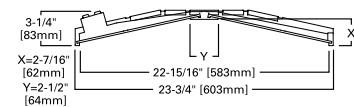
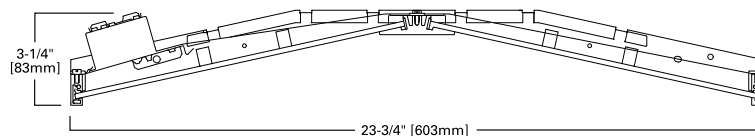
Interactive Menu

- Order Information [page 2](#)
- Photometric Data [page 3](#)
- Control Solutions [page 4](#)
- Connected Systems [page 4](#)
- Product Warranty

Product Certification**Product Features****Top Product Features**

- Available in 1' x 2', 1' x 4', 2' x 2' and 2' x 4' recessed versions
- Leverages our patented WaveStream Technology with AccuAim™ optics
- Four CCT options: 3000K, 3500K, 4000K, and 5000K at 80CRI or 90 CRI
- White tuning solutions available, either 3000K - 5000K or 2700K - 6500K
- Efficacy up to 143 lumens per watt
- Options to meet Buy American and other domestic preference requirements

AES: 2'X2' FIXTURE IS REQUIRED.

Dimensional and Mounting Details**Ceiling Compatibility**

G
Grid/Lay-in
Standard

G or T
9/16" or 15/16"
Slot Grid

F
Drywall Frame
Kit

Ceiling Type
Exposed Grid
Concealed T
Slot Grid
Flange

Trim Type
G
G or T
G or T
*

Notes:

*See Drywall Frame Kit Accessory in Ordering Information section.

**Fixture construction is suitable for use in Air-handling and plenum rated spaces in accordance with Section 300.22 (C) of the National Electrical Code, Section 4.3.11.2.6.5 of NFPA 90A and Section 602.2.1.4 of ICC.

Metalux

24EN LED

Order Information

SAMPLE ORDER NUMBER: 24EN-LD2-67-UNV-L835-CD1-WPN-U

24EN-LD2-30-UNV-L835-CD1

Domestic Preferences	Rating	Series	Air	Lamp Type	Lumen Outputs	Voltage
Domestic Preferences ⁽²⁰⁾	Rating	Series ⁽²⁾	Air	Lamp Type	Lumen Outputs	Voltage ⁽⁶⁾
[Blank]=Standard BAA=Buy American Act TAA=Trade Agreements Act	[Blank]=Standard ATW-SW4=Chicago Rated ⁽¹⁾	24EN=2' x 4' Encounter Series	[Blank]=Standard A-Air (Vented) ⁽³⁾	LD2=LED 2.0	Stock 45=4500 Lumens 54=5400 Lumens 67=6700 Lumens MTO 30=3000 Lumens ^{(4),(5)} 34=3400 Lumens ^{(4),(5)} 40=4000 Lumens 49=4900 Lumens 58=5800 Lumens 70=7000 Lumens ⁽⁵⁾ 74=7400 Lumens ⁽⁵⁾	UNV=Universal Voltage 120-277 347V=347 Volt ⁽⁷⁾ 48V=48 Volt Low-voltage (Class 2) ⁽⁵⁾ 120V=120 Volt ⁽⁸⁾ 277V=277 Volt ⁽⁸⁾
Notes (1) Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	Notes (1) Chicago rated version does not allow for row mounting.	Notes (2) DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.	Notes (3) Air version is vented but does not meet air handling requirements.		Notes (4) Step-dim driver not available with 3000, 3400, 7000 and 7400 lumen options. (5) SLTD DALI option not available with 3000 and 3400 lumen packages.	Notes (6) Products also available in non-US voltages and frequencies for international markets. (7) 347V emergency option not available. (8) Must specify voltage as 120V or 277V when ordering GTR2 option. (C) Consult WaveLinx Low-Voltage or DLPV system pages for additional details and compatibility.

Emergency Options	CCT	Flex	Driver Type
Emergency Optionsx	CCT	Flex	Driver Type
EL7W=7-watt 120V-277V emergency battery pack ⁽⁹⁾ EL10W=10-watt 120V-277V emergency battery pack ⁽⁹⁾ EL14W=14-watt 120V-277V emergency battery pack ⁽⁹⁾ EL10WSD=10W emergency battery pack with self-diagnostic installed ^{(9),(22)} EL14WSD=14W emergency battery pack with self-diagnostic installed ^{(9),(22)} ELV7W=Low-voltage system, 7-watt emergency battery pack ⁽⁵⁾ ELV14W=Low-voltage system, 14-watt emergency battery pack ⁽⁵⁾ GTR2=Bodine Generator Transfer Relay ^{(18),(11)} ETRD=Emergency Transfer Relay with dimming control ⁽¹⁹⁾	L830=3000K L835=3500K L840=4000K L850=5000K L930=3000K L935=3500K L940=4000K L950=5000K L83050=80CRI 3000K-5000K White Tuning ⁽¹²⁾ L93050=90CRI 3000K-5000K White Tuning ⁽¹²⁾ L82765=80CRI 2700K-6500K White Tuning ⁽¹²⁾ L92765=90CRI 2700K-6500K White Tuning ⁽¹²⁾	A3/8-4/18GDIM=3/8" Flex with 0-10V Dimming Leads Multiple other configurations available. See below for details. A3/8-5/18GDIM=Flex with 0-10V Dimming leads and Blue for alternate wiring. See below for details.	CD=0-10V Driver (1%-100% Dimming) ⁽¹³⁾ SLTD=DALI Driver (5%-100% Dimming) ⁽¹³⁾ SLTHD=DALI Driver (1%-100% Dimming) ⁽¹⁴⁾ LV=Low-voltage System Driver (0%-100% Dimming) ⁽⁵⁾ SD=Step Dimming Driver (50% or 100% Dimming) ⁽¹³⁾ LH=Lutron HiLume (LDE1 series) 1%-100% EcoSystem Driver with Soft-on Fade to Black dimming ⁽⁷⁾ W2A=White Tuning, 2ch, Intensity and CCT Control ⁽¹⁴⁾ SR=Sensor-ready Driver (1%-100% Dimming)
Notes (9) Factory installed with integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. Battery option increases total height by 1 inch. (10) Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). GTR2 option includes 2 relays on fixtures with dimming drivers. ETRD option only requires one relay when used on a dimming fixture. (11) Must specify voltage as 120V or 277V when ordering GTR2 option. (22) EL10WSD and EL14WSD not available with 347V. (C) Consult WaveLinx Low-Voltage or DLPV system pages for additional details and compatibility.	Notes (12) White tuning provides correlated color temperatures (CCT) between 3000K (warm) to 5000K (cool) or 2700K (warm) to 6500K (cool). Must be used in conjunction with W2A driver only. Must be used with two (2) 10V dimming control channels, 1 color, 1 intensity.	Flexible Metal Conduit Options Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC connector. Not all options may be combined and installation ratings vary by type. A3/8-4/18GDIM series notes: Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556. NEC® 250.118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72, Federal Specification A-A-99544 (formerly J-C-309); all applicable OSHA and HUD Requirements. UL Classified 1-, 2-, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).	Notes (13) Step-dim (SD) driver not available with 3000, 3400, 7000 and 7400 lumen options. (14) Two drivers required for DALI (SLTHD) option for 6700 lumens and up. (15) DALI (SLTD) option not available with 3000 and 3400 lumen packages. (16) White tuning provides correlated color temperatures (CCT) between 3000K (warm) to 5000K (cool) or 2700K (warm) to 6500K (cool). Must be used in conjunction with W2A driver only. Must be used with two (2) 10V dimming control channels, 1 color, 1 intensity. Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: (C) Consult WaveLinx Low-Voltage or DLPV system pages for additional details and compatibility. (F) Consult Marketplace Options - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com .

Number of Drivers	Integrated Sensing Systems	Packaging	Accessories
Number of Drivers	Integrated Sensing Systems	Packaging	Accessories (order separately) ⁽²¹⁾
1=1 Driver 2=2 Drivers	[Blank]=No Sensor WAA=WaveLinx PRO Wireless Integrated Sensor ^{(17),(4)} WPN=WaveLinx PRO Wireless Node without Sensor ^{(17),(4)} WAB=WaveLinx LITE Wireless Integrated Sensor ^{(18),(8)} WLA=Low-voltage Integrated Sensor ^{(19),(5)}	U=Unit Pack PALC=Job Pack, in carton	T3A END E.Q. BRACKET PARTS BAG (Standard with fixture) DF-24W-U=2' x 4' Drywall Frame Kit SK-24-WS=2' x 4' Shallow Surface Mount Kit SK-24-WT=2' x 4' Tall Surface Mount Kit
	Notes (17) WAA sensor and WPN node to be used with CD or W2A driver. Consult factory for WPN with tunable white W2A driver. (18) WAB sensor to be used with CD driver. (19) WLA sensor to be used with LV driver. Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following: (A) Consult WaveLinx PRO system pages for additional details and compatibility. (B) WaveLinx LITE devices are not currently compatible with the WaveLinx Wireless Area Controller. Consult WaveLinx LITE system pages for additional details and compatibility. (C) Consult WaveLinx Low-Voltage or DLPV system pages for additional details and compatibility.		Notes (21) Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

24EN-LD2-30-UNV-L835-CD1

Notes:

Type:**D**

MACS-LTG-23-64162

Metalux**24EN LED****Product Specifications****Construction**

- Shallow 3-1/16" deep housing extruded aluminum frame
- Injected molded composite end plates
- End plates screws for strength, rigidity and gap eliminations
- End plates accessory grid-lock feature adds safety
- Four auxiliary fixture end suspension points
- Large access plate for supply connection

Controls

- 0-10V dimming to 1% standard
- WaveLinx wireless sensor compatible for standalone, controlled, connected, and IoT capability
- Low-voltage sensor and driver compatible for WaveLinx Low-Voltage and DLVP applications
- DALI 2.0, Lutron, and step-dimming available

Electrical

- LED's available in 3000K, 3500K, or 4000K at 80 CRI or 90 CRI minimum
- Color accuracy ≤ 3 -Step MacAdam ellipse (SDCM)
- TM21 life at 60,000 hours up to L92 and calculated L70 exceeds 288,000 hrs
- Drivers available in 120-277V and 347V
- Tunable white options available with Cooper Lighting's VividTune

Emergency Battery Pack Options

- 120V-277V integral emergency battery pack comes in 7-watts, 10-watt, or 14-watts
- Self-diagnostic emergency battery available in 10 or 14-watts (NFPA 101® Life Safety Code®)
- Constant power to the LED system for controlled, predictable discharge
- Integrated test switch/indicator light visible from floor
- Min. 90-minute backup period for code compliance
- Integral emergency transfer relay available for generator equipped power systems

Finish

- High reflectance baked matte white enamel finish

Optics

- Precision formed optical assembly
- Positively retained high optical grade acrylic lenses
- WaveStream technology provides a visually comfortable fully luminous surface

Compliance

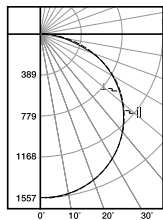
- Components are UL recognized
- cULus Damp Location listed for 25C ambient indoor environments
- Complies with IESNA LM-79 and LM-80 standards
- DesignLights Consortium® Qualified and classified for DLC Standard and DLC Premium (refer to www.designlights.org)

Warranty

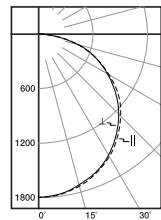
- Five year warranty standard. Optional ten year warranty available

Driver Access

- Drivers can be accessed via plenum

Photometric Data
 View IES files
**24EN-LD2-45-UNV-L835-CD1-U**

Electronic Driver
Linear LED 3500K
Spacing criterion: (H) 1.29 x mounting height,
(L) 1.29 x mounting height
Lumens: 4656
Input Watts: 38W
Efficacy: 122.5 lm/W
Test Report: 24EN-LD2-45-UNV-L835-CD1-U.IES

**24EN-LD2-54-UNV-L835-CD1-U**

Electronic Driver
Linear LED 3500K
Spacing criterion: (H) 1.3 x mounting height,
(L) 1.3 x mounting height
Lumens: 5410
Input Watts: 43.0W
Efficacy: 125.8 lm/W
Test Report: 24EN-LD2-54-UNV-L835-CD1-U.IES

Energy and Performance Data

Stock or MTO	Catalog Logic	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24EN-LD2-30-UNV-L835-CD1-U	3117	24.6	127
MTO	24EN-LD2-34-UNV-L835-CD1-U	3610	28.7	126
MTO	24EN-LD2-40-UNV-L835-CD1-U	4204	33.9	124
STOCK	24EN-LD2-45-UNV-L835-CD1-U	4656	38.0	123
STOCK	24EN-LD2-45-UNV-L840-CD1-U	4748	38.0	125
MTO	24EN-LD2-49-UNV-L835-CD1-U	5099	42.2	121
STOCK	24EN-LD2-54-UNV-L835-CD1-U	5410	43.0	126
STOCK	24EN-LD2-54-UNV-L840-CD1-U	5518	43.0	128
MTO	24EN-LD2-58-UNV-L835-CD1-U	5838	47.0	124
STOCK	24EN-LD2-67-UNV-L835-CD1-U	6731	56.1	120
STOCK	24EN-LD2-67-UNV-L840-CD1-U	6866	56.1	122
MTO	24EN-LD2-70-UNV-L835-CD1-U	7023	60.2	117
MTO	24EN-LD2-74-UNV-L835-CD1-U	7484	63.6	118

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours) ⁽¹⁾	Theoretical L70 (Hours) ⁽²⁾
25°C	> 92%	> 288,000

Notes: (1) Supported by IES TM-21 standards. (2) Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, that explains proper use of IES TM-21 and LM-80.

Lumen Calculator

CCT Multiplier	80 CRI	90 CRI
3000K	0.970	0.835
3500K	1.000	0.864
4000K	1.020	0.901
5000K	1.110	0.955

Example of Lumen Adjustment Calculation

24EN-LD2-45-UNV-L835-CD1-U
at 90CRI at 3500K

Lumen Adjustment Factor = 0.864

Total Light Output = 4,651 lm x 0.864 = 4,022 lm

Efficacy = $\frac{4,022 \text{ lm}}{38 \text{ W}}$ = 105.8 lm/W

Shipping Data

Catalog No.	Weight (lbs)	Units per Pallet 49"L x 52"W x 55"H
24EN-LD2	28	18

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

24EN-LD2-30-UNV-L835-CD1

Type:**D**

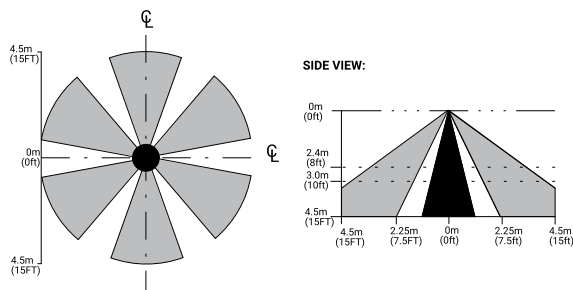
Notes:

MACS-LTG-23-64162

Metalux**24EN LED****Control Systems**

- WaveLinX PRO Wireless
- WaveLinX LITE Wireless
- WaveLinX Wired

TOP VIEW:

Integrated Sensor Coverage Pattern

Note: Installation of integrated sensors within 3-ft (1m) of HVAC air vents is not recommended. The pattern shown is intended solely as a general guide and is not to scale.

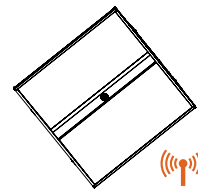
The Encounter with WaveLinX offers no-hassle lighting control with multiple luminaire level control solutions.

WaveLinX PRO is used for applications where spaces need to be connected to a lighting or building management system and to help building owners improve their operations, building environment, and tenants' experience by leveraging the data generated by the sensors. The WaveLinX PRO devices communicate with each other via the WaveLinX Area Controller which coordinates the data traffic between the devices, lighting apps and CORE platform. The WaveLinX Area Controller also hosts the time clock required if spaces need to be turned on/off at a specific time.

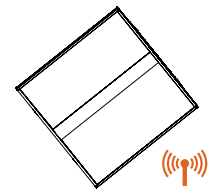
The WaveLinX PRO Sensor offers built-in occupancy and daylighting controls as well as luminaire level control including white tuning while the WaveLinX PRO Node offers luminaire level control and white tuning. If opting for the WaveLinX PRO Node option, a PRO Ceiling Sensor will most likely be needed within the space to control the lights based on occupancy and daylight levels.

WaveLinX LITE is used for single spaces where there is no need to manage the spaces remotely or exchange the sensor data with other sub-systems within the building or smart applications.

The WaveLinX LITE Sensor offers built-in occupancy and daylighting controls as well as luminaire level control.



With Integrated WaveLinX Sensor



With Integrated WaveLinX Node

Systems comparison chart

Cooper Lighting Solutions provides many lighting system solutions designed to satisfy code requirements and meet the unique needs of any project.



**Luminaire with
standalone sensor**



**Standalone Spaces
WaveLinX LITE**



**Networked Spaces
WaveLinX PRO**



**Enterprise
WaveLinX CORE**

	Luminaire with standalone sensor	Standalone Spaces WaveLinX LITE	Networked Spaces WaveLinX PRO	Enterprise WaveLinX CORE
Occupancy	Yes	Yes	Yes	Yes
Daylighting	Yes	Yes	Yes	Yes
Wallstations	–	Yes	Yes	Yes
Gateways	–	–	1 WAC	300 WACs
Devices (MAX)	–	50 per Area (1400 per site)	200 per WAC2	32,500 per CORE Enterprise
Software	–	WaveLinX LITE Mobile App	WaveLinX Mobile App	CORE
Areas	–	28 per Site	50 per WAC2	up to 3,000
Zones	–	16 per Area	16 per Area	up to 9,000
Scheduling	–	–	Local	Global
VividTune™	–	–	Yes	Yes
Plug-Load Control	–	–	Yes	Yes
Low-Voltage Power	–	–	Yes	Yes
Integration	–	–	–	BACnet, API
Dashboards	–	–	–	Energy, Occupancy
Configuration	–	Installer	Technician	Technician / IT

SCALABILITY

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

24EN-LD2-30-UNV-L835-CD1

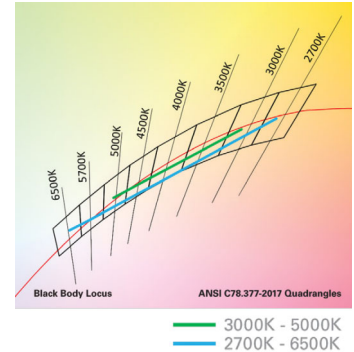
Notes:

Type:**D**

MACS-LTG-23-64162

Metalux**24EN LED****24EN LED with VividTune Tunable White**

VividTune tunable white luminaires from Cooper Lighting Solutions deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.

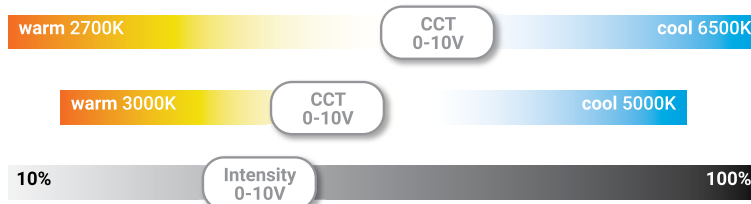
**Performance Data***

Tunable White - Lumen Adjustment Factors (example only)				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.894	0.738
3000K	0.968	0.809	0.903	0.762
3500K	0.984	0.827	0.932	0.779
4000K	0.988	0.860	0.919	0.814
4500K	1.002	0.864	0.946	0.808
5000K	1.003	0.868	0.945	0.829
6500K	-	-	0.949	0.850

2' x 4' Encounter LED - Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	24EN-LD2-45-UNV-L835-CD1-U	24EN-LD2-45-UNV-L83050-W2A1-U	24EN-LD2-45-UNV-L93050-W2A1-U
3000K	-	4508	3765
3500K	4656	4582	3853
4000K	-	4601	4002
4500K	-	4663	4023
5000K	-	4668	4042

Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, [click here](#) for tunable white application guides.

**Example of Lumen Adjustment Calculation**

24EN-LD2-45-UNV-L83050-W2A1-U
at 80 CRI tuned to 3500K

Adjusted Lumen =
published lm x adjusted lm factor

Adjusted Lumen = 4656 * 0.984

Adjusted Lumen = 4582 lm

* Lumen adjustment factors are for reference and may be different for each product selected. Refer to IES files for actual performance data on each.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

BL NEONVIEW SIDE SISC 24V
30-XX-XX

Notes: Specify Details

Type:

L

MACS-LTG-23-64162

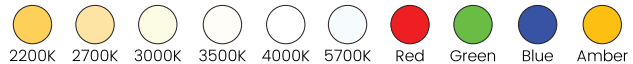
**SPECIFICATIONS - A01 -****BL neonVIEW**

Diffused, Flexible, Linear LED Lighting,
Side Emitting, 24VDC, Constant Voltage

SIDE SI SC

Side Light, Silicone, Single color

Printed

**Certification****Lighting**

Lamp	LED, SMD 5050
LED's Per Foot	32 LEDs/ft (108 LEDs/m)
Power	* 2.44-3.66 W/FT
Beam Angle	120°
Average Life	50,000 Hours
Lumens	* 42-201 lm/FT
Efficacy	* 12-55 lm/W

Electrical

Control	0-10V, MLV, DMX, Bluetooth
Input Voltage	24VDC
Max Input Current	4.12A (White)
Connections	18AWG, Copper Conductors
Operating Temperature	-40°F to 131°F (-40°C to 55°C)
Circuit	Class 2

Mechanical

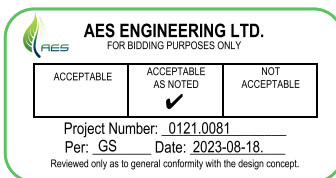
Housing Construction	Injection Moulded White Silicone
Cutting Increments	2-3/16" (55.6mm) : White CCTs/Green/Blue 3-9/32" (83.3mm) : Red/Amber
Maximum Run Length	* 25FT (7.9m) to 39FT (12m)
Medial Bend Radius	150mm (5-7/8")
Environmental	IP68 (Seamless Injection Molded)
Mounting	Clip, Track

Accessories

NVSTK	** Factory installed termination kit
NVSJC	Factory installed jumper cable
NVSCP	Surface Mounting Clip
NVSMCH	Surface Mounting Channel
NVSRMC	Recessed Mounting Clip
NVSRMCH	Recessed Mounting Channel

* Please refer to the performance table on the following page

**Multiple Lead Orientation options available



PROJECT

CLIENT

TYPE

Solid State Lighting is sensitive to power fluctuations
Surge protection is highly recommended for all LED lighting products and should be on a designated circuit to protect against premature failure
Lack of surge protection may void your warranty

For more information, please download the
BL LIGHTING catalogue

BL LIGHTING. ILLUMINATE EVERYTHING

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Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

BL NEONVIEW SIDE SISC 24V
30-XX-XX

Notes: Specify Details

Type:

L

MACS-LTG-23-64162

**SPECIFICATIONS - A02 -****BL neonVIEW**

Diffused, Flexible, Linear LED Lighting,
Side Emitting, 24VDC, Constant Voltage

SIDE SI SC

Side Light, Silicone, Single color

Printed

Performance

CCT/Color	Load	Lumens	Efficacy	Max. Length	Cutting Increments
2200K	3.66 W/FT	156 lm/FT	43 lm/W	25 ft 11 in	2-3/16 in (55.6mm)
2700K	3.66 W/FT	185 lm/FT	50 lm/W	25 ft 11 in	2-3/16 in (55.6mm)
3000K	3.66 W/FT	191 lm/FT	52 lm/W	25 ft 11 in	2-3/16 in (55.6mm)
3500K	3.66 W/FT	199 lm/FT	54 lm/W	25 ft 11 in	2-3/16 in (55.6mm)
4000K	3.66 W/FT	201 lm/FT	55 lm/W	25 ft 11 in	2-3/16 in (55.6mm)
5700K	3.66 W/FT	192 lm/FT	52 lm/W	25 ft 11 in	2-3/16 in (55.6mm)
Red	2.44 W/FT	66 lm/FT	27 lm/W	38 ft 12 in	3-9/32 in (83.3mm)
Green	3.66 W/FT	185 lm/FT	51 lm/W	25 ft 11 in	2-3/16 in (55.6mm)
Blue	3.66 W/FT	42 lm/FT	12 lm/W	25 ft 11 in	2-3/16 in (55.6mm)
Amber	2.44 W/FT	67 lm/FT	27 lm/W	38 ft 12 in	3-9/32 in (83.3mm)

BL NEONVIEW SIDE SISC 24V 30-XX-XX**Ordering**

Product Name

CCT/Color

Lead Orientation

Mounting Accessories

BL neonVIEW SIDE SI SC 24V

2200K
2700K
3000K
3500K
4000K
5700K
Red
Green
Blue
Amber

NVSTKBC = Back Lead
NVSTKEC = End Lead
NVSTKRSC = Right Side Lead
NVSTKLSC = Left Side Lead

NVSCP = Mounting Clip
NVSMCH = Mounting Channel
NVSRMC = Recessed Mounting Clip
NVSRMCH = Recessed Mounting Channel

PROJECT

CLIENT

TYPE

Solid State Lighting is sensitive to power fluctuations
Surge protection is highly recommended for all LED lighting products and should be on a designated circuit to protect against premature failure
Lack of surge protection may void your warranty

For more information, please download the
BL LIGHTING catalogue

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Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

BL NEONVIEW SIDE SISC 24V
30-XX-XX

Notes: Specify Details

Type:

L

MACS-LTG-23-64162

**SPECIFICATIONS - A03 -****BL neonVIEW**

Diffused, Flexible, Linear LED Lighting,
Side Emitting, 24VDC, Constant Voltage

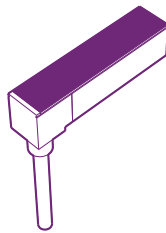
SIDE SI SC

Side Light, Silicone, Single color

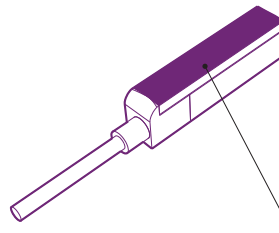
Printed

Lead Orientation**Back Lead**

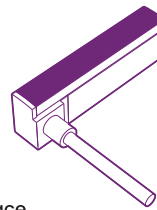
Part# NVSTK68SMBC

**End Lead**

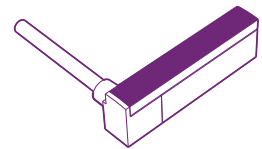
Part# NVSTK68SMEC

**Right Side Lead**

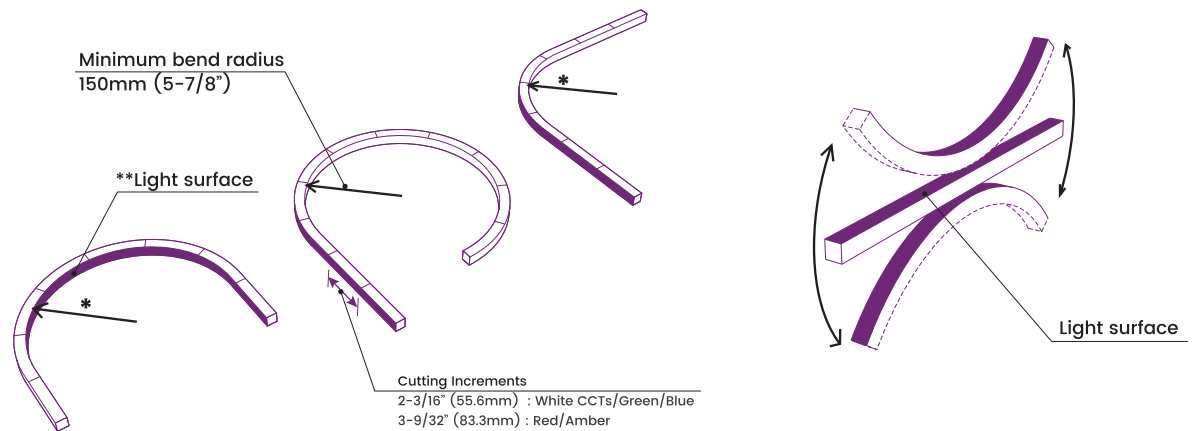
Part# NVSTK68SMRSC

**Left Side Lead**

Part# NVSTK68SMLSC



Light surface

Minimum Bend Radius and Bend Orientations

**Light surface could be inside or outside.

BL neonVIEW SIDE Series bends vertically

*Horizontally bend option available on
BL neonVIEW DOME and FLAT Series

PROJECT

CLIENT

TYPE

Solid State Lighting is sensitive to power fluctuations
Surge protection is highly recommended for all LED lighting products and should be on a designated circuit to protect against premature failure
Lack of surge protection may void your warranty

For more information, please download the
BL LIGHTING catalogue

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Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

BL NEONVIEW SIDE SISC 24V
30-XX-XX

Notes: Specify Details

Type:

L

MACS-LTG-23-64162



BL LIGHTING
SINCE 1986

SPECIFICATIONS - A04 -**BL neonVIEW**

Diffused, Flexible, Linear LED Lighting,
Side Emitting, 24VDC, Constant Voltage

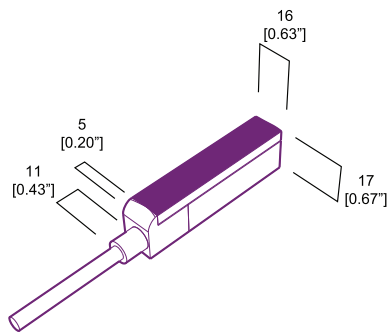
SIDE SI SC

Side Light, Silicone, Single color

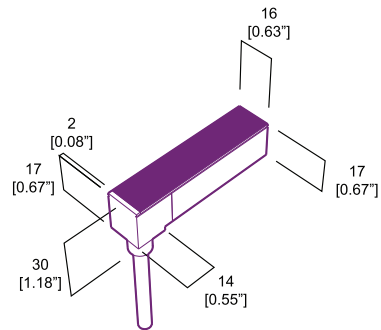
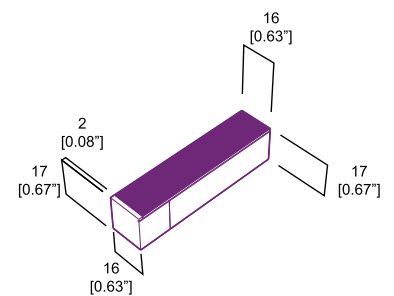
Printed

Dimensions**End Lead**

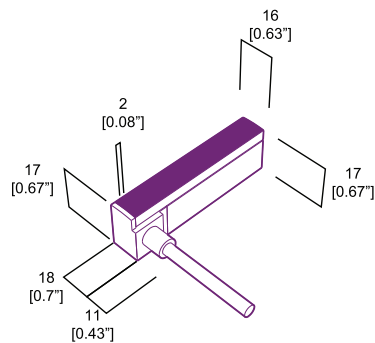
Part# NVSTK68SMEC

**Back Lead**

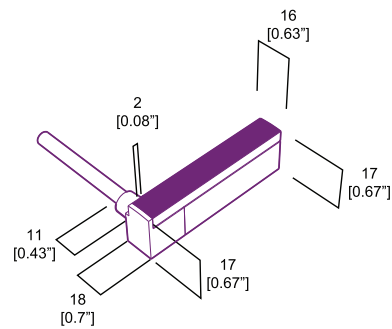
Part# NVSTK68SMBC

**End Cap****Right Side Lead**

Part# NVSTK68SMRSC

**Left Side Lead**

Part# NVSTK68SMLSC

The tolerance of the Lead is $\pm 0.5\text{mm}$

For more detail, please download the CAD Drawing

PROJECT

CLIENT

TYPE

Solid State Lighting is sensitive to power fluctuations
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Job Name:

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Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

BL NEONVIEW SIDE SISC 24V
30-XX-XX

Notes: Specify Details

Type:

L

MACS-LTG-23-64162

**SPECIFICATIONS - A05 -****BL neonVIEW**

Diffused, Flexible, Linear LED Lighting,
Side Emitting, 24VDC, Constant Voltage

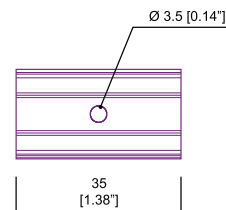
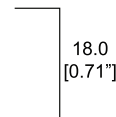
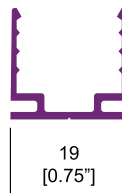
SIDE SI SC

Side Light, Silicone, Single color

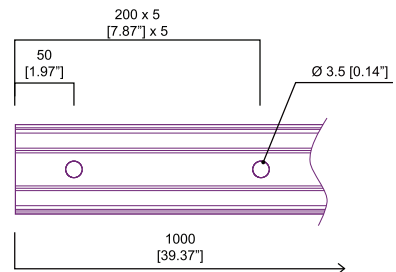
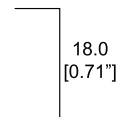
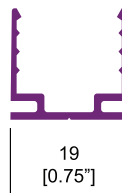
Printed

Accessories (Surface Mounting Clip and Channel)**Surface Mounting Clip**

Part# NVSCP

**Surface Mounting Channel**

Part# NVSMCH



For more detail, please download the CAD Drawing

PROJECT

CLIENT

TYPE

Solid State Lighting is sensitive to power fluctuations
Surge protection is highly recommended for all LED lighting products and should be on a designated circuit to protect against premature failure
Lack of surge protection may void your warranty

For more information, please download the
BL LIGHTING catalogue

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Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

BL NEONVIEW SIDE SISC 24V
30-XX-XX

Notes: Specify Details

Type:

L

MACS-LTG-23-64162

**SPECIFICATIONS - A06 -****BL neonVIEW**

Diffused, Flexible, Linear LED Lighting,
Side Emitting, 24VDC, Constant Voltage

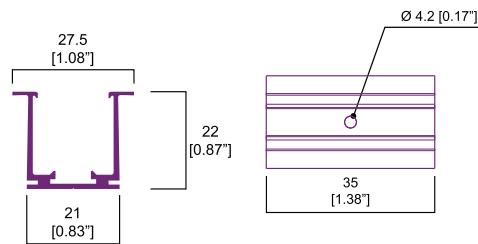
SIDE SI SC

Side Light, Silicone, Single color

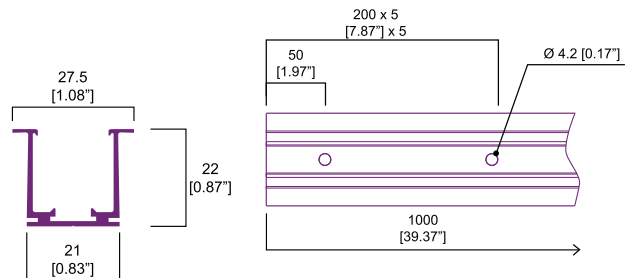
Printed

Accessories (Recessed Mounting Clip and Channel)**Recessed Mounting Clip**

Part# NVSRMC

**Recessed Mounting Channel**

Part# NVSRMCH



For more detail, please download the CAD Drawing

PROJECT

CLIENT

TYPE

Solid State Lighting is sensitive to power fluctuations
Surge protection is highly recommended for all LED lighting products and should be on a designated circuit to protect against premature failure
Lack of surge protection may void your warranty

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Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

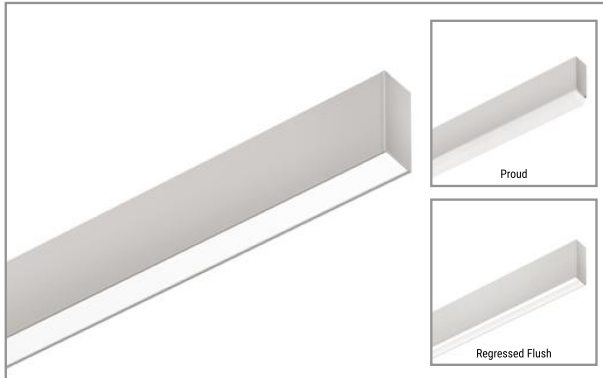
S122DW-C1005D835-XX-XX-1-
UDD-F-XX

Notes: Specify Details

Type:**G**

MACS-LTG-23-64162

Project		Catalog #		Type	
Prepared by		Notes		Date	



Neo-Ray

Define 2

2" LED
Wall Mount
Direct

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

- Order Information page 2
- Product Specification page 3
- Photometric Data page 4
- Performance Data page 5
- VividTune page 6

Product Certification

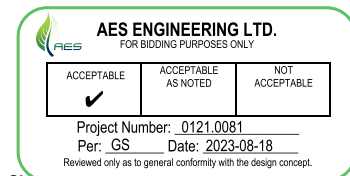


Product Features

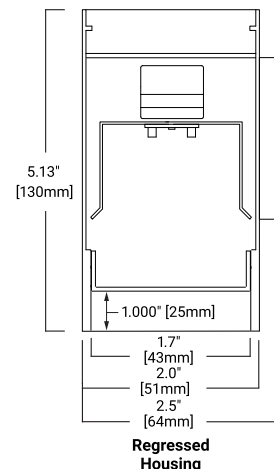
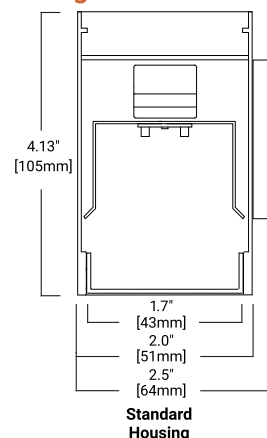


Top Product Features

- Wall Mount Slot family in 2", 3", 4" and 5" housing sizes
- Specifiable to the nearest foot
- Satin, Asymmetric and Drop Direct Lensing available
- Independently specifiable Direct / Indirect lumen packages
- 0-10V dimming standard; DALI dimming available
- 2700K, 3000K, 3500K, 4000K, and 5000K correlated color temperatures available
- Options to meet Buy American Act requirements



Dimensional and Mounting Details



 additional product diagrams

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

S122DW-C1005D835-XX-XX-1-
UDD-F-XX

Notes: Specify Details

Type:**G**

MACS-LTG-23-64162

Neo-Ray**2" LED Wall Direct****Order Information**

SAMPLE ORDER NUMBER: S122DW-C675D835-4F0-1E-UDD-D-W

Icon Key: Grey bar denotes available with 10-Day Quick Ship
Ø Consult factory for availability

S122DW-C1005D835-XX-XX-1-UDD-F-XX

Domestic Preference	Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Luminaire Length (Ft)	Max section length	Circuiting
Domestic Preference	Series	Light Engine	Lumen Package Down (Lms/ft)	CRI	LED CCT	Luminaire Length (Ft)	Max section length	Circuiting
[Blank]=Standard BAA=Buy American Act	QS-S122DW= Define 2 Direct Wall Quick Ship S122DW=Define 2 Direct Wall S122RDW=Define 2 Regressed Direct Wall	-C=Core -H=High Performance -V=VividTune ø	290D=290 Lms/ft (2.9W/ft) 485D=485 Lms/ft (4.8W/ft) 675D=675 Lms/ft (6.7W/ft) 865D=865 Lms/ft (8.8W/ft) 1005D=1005 Lms/ft (10.6W) D=Custom Lms/ft ø	8=80 9=90	27=2700K 30=3000K 35=3500K 40=4000K 50=5000K 2765=2700K-6500K 3050=3000K-5000K	F0=Nominal length 4F0= 4' Nominal Length 8F0=8' Nominal Length F0=4' Incremental Run (e.g. 40F0 = 40' 0")	(blank)=12ft (std) /8=8ft	-1=Single Circuit -S=Secondary Circuit
Notes	Notes	Notes	Notes	Notes		Notes	Notes	Notes
Only product configurations with this designated prefix are built to be compliant with the Buy American Act of 1933 (BAA). Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.	RDW regress of 1" will add an additional 1" to fixture depth.	See performance table for add'l details. Light engine must be consistent across run length. V option requires lumen package of 675 lms/ft or greater.	3500K/80CRI/DIP/F Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 3. 290 Lms/ft not available on 2ft fixture length.	Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2765/3050 VividTune configurations require V light engine and W2A driver.		Minimum fixture length is 2ft. Specify to nearest foot in length.	Individual fixtures configured as 12ft max by default. Continuous runs configured as 8ft max (12ft not available).	Secondary circuit similar to A/B switching. Price adder applies for "S" configuration.

Additional Section Wiring	Voltage	Driver Type	Shielding Down
E=Emergency Circuit B3=Bodine 6W UNV Integral T=UL924 EPC Emergency Bypass Relay	U=Universal (120V-277V) 1=120V 2=277V 3=347V	DD=Standard 0-10V Dimming (1%-100%) 5L=Fifth Light DALI (5%-100%) LH=Lutron HiLume (LDE1 series) 1%-100% EcoSys W2A=White Tuning, 0-10V Dimming (VividTune only)	F=Satin White Diffuser D=Satin Drop diffuser A=Asymmetric Diffuser C=Corridor Diffuser
Notes Battery available on fixture > 4ft in length. B3 and T options not compatible with 347V. Standard battery 4ft battery section located in the beginning of the fixture, but can be relocated using the linear product configurator. When configured with secondary circuit, battery test switch will be located in a plate on the direct side of the fixture.	Notes 347V only available with DD driver option.	Notes DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	Notes All lensing options are snap-in lenses. "A" option is asymmetric toward the wall, "C" option is asymmetric away from the wall.

Options	Finish	Integrated Sensor
R=GLR Fuse (Fast) F=GMF Fuse (Slow)	W=White S=Silver B=Black C=Custom Match R=RAL Custom	-WAA=WaveLinX Pro Wireless -WAB=WaveLinX Lite Wireless Ø -LWIPD1=Enlightened Wireless -SVPD1=Standalone (Blank)=None
Notes Not available with 347V option	Notes	Notes DD driver must be selected. Please refer to page 5 for additional detail required to specify integrated sensors. Integral option not available with regressed or drop lensing.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

S122DW-C1005D835-XX-XX-1-
UDD-F-XX

Notes: Specify Details

Type:

G

MACS-LTG-23-64162

Neo-Ray

2" LED Wall Direct

Product Specifications

Construction

- Available in Flush and Regressed Housing
- Precision cut housing extruded from 6063 aluminum
- Precision cut & welded end-caps ensure a robust and clean construction
- Nominal 2' -12' illuminated sections used in individual fixtures and 2'-8' illuminated sections used in continuous runs

Finish

- Electrostatically applied polyester powder coat paint

LED Module

- Modular LED tray assembly comprising reflector and light engine with quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine

- Offered with two next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or 5000K
- CRI options of either ≥ 80 CRI or ≥ 90 CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers

- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications

Controls and Integrated Sensors

- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI & Lutron) at an additional cost
- WaveLinx and Enlighted wireless sensors as well as stand-alone sensors available

Mounting

- Wall

Lengths

- Available in any length (2ft min) with a resolution of 1 foot. Max section length of 12ft (8ft max used on continuous runs and available for individual fixtures)
- Additional fixture lengths are available please consult factory. All lengths are nominal and do not include end caps.

Corners and Transition Pieces

- Corners and other transition pieces are fully luminous
- Constructed using precision mitered housing and lens components
- Extrusions are welded to ensure a precise and robust assembly
- Standard 90° horizontal corners as well as custom corners are available
- Consult online linear configurator or the factory for precise corner locations and for ordering
- Alternative transition pieces such as T's, Y's, X's, etc. are also available Ø

Direct Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Reflectors

- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance

- 90% (L90) of initial light output at 61,000+ hrs
- 70% (L70) of initial light output at 237,000+ hrs
- Derived from TM-21 standard @25°C for worst case operating conditions

Custom Lumen Output

- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors

- Please reference page 5 for details

Weight

- 3.0 lbs per foot

Approvals

- cULus - listed for damp locations
- Meets NYC requirements
- Meets CCEC requirements
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire

Warranty

- Five year warranty standard.

Shielding Options



Standard Flush Lens



Regressed Flush Lens



Standard Proud Lens



Asymmetric Lens

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

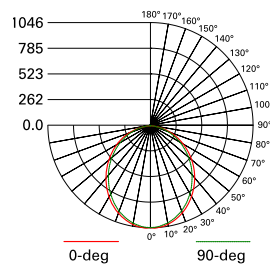
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UDD-F-XX

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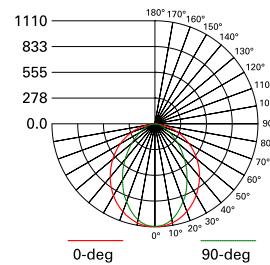
Type:**G**

MACS-LTG-23-64162

Neo-Ray**2" LED Wall Direct****Photometric Data**
 View IES files


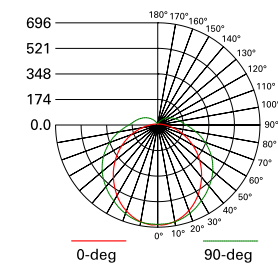
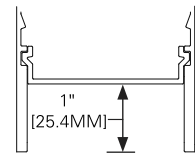
SATIN FLUSH LENS

FILE NAME:
S122DR-S675D835-GYP4F0-1-UDD-
F-W
LUMENS: 2646 Lms
LPW: 100.6 LPW
CCT: 3500K
WATTS: 26.3 W
TEST NUMBER: G3-1802-639-10



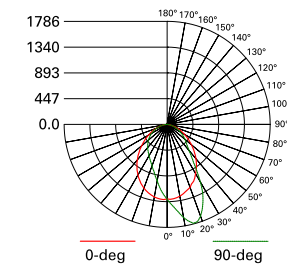
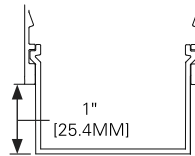
SATIN REGRESSED DIFFUSER

FILE NAME:
S122RDR-S675D835-GYP4F0-1-
UDD-F-W
LUMENS: 2273 Lms
LPW: 86.4 LPW
CCT: 3500K
WATTS: 26.3 W
TEST NUMBER: G3-1802-639-24



SATIN DROP LENS

FILE NAME:
S122DR-S675D835-GYP4F0-1-UDD-
D-W
LUMENS: 2633 Lms
LPW: 99.7 LPW
CCT: 3500K
WATTS: 26.4 W
TEST NUMBER: G3-1802-639-14



ASYMMETRIC FLUSH LENS

FILE NAME:
S122DR-S675D835-GYP4F0-1-UDD-
A-W
LUMENS: 2870 Lms
LPW: 108.7 LPW
CCT: 3500K
WATTS: 26.4 W
TEST NUMBER: G3-1802-639-19

**Photometric Overview and Performance Data****Direct Performance Per Linear Foot at 3500K/80CRI**

Nominal Output	Standard		High Performance		VividTune	
lms/ft	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
290	2.9	105	2.9	108	3	102
485	4.8	106	4.4	111	4.9	103
675	6.7	104	6.1	111	6.7	102
865	8.8	102	8.1	109	8.9	99
1005	10.6	98	9.7	105	10.7	96

LUMEN ADJUSTMENT CALCULATIONS**Example 1 - Adjusted Lumen Output**

Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot

Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K = 2800 lms / 4 ft = 700 lms/ft
Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 LPW (find nearest value using table above)
Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output**Total Light Output Range (lms/ft)**

CCT	Lumen Adj Factors		Direct Output Range	
	80CRI	90CRI	80CRI	90CRI
2700K	N/A	0.792	N/A	230-796
3000K	0.943	0.815	273-948	236-819
3500K	1.000	0.861	290-1005	250-865
4000K	1.010	0.892	293-1015	259-896
5000K	1.010	0.892	293-1015	259-896

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification. Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
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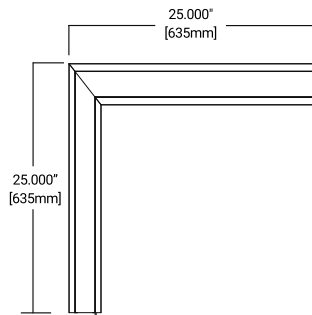
Catalog Number:

S122DW-C1005D835-XX-XX-1-
UDD-F-XX

Notes: Specify Details

Type:**G**

MACS-LTG-23-64162

Neo-Ray**2" LED Wall Direct****Corner Transitions****Integrated Sensor Details and Placement**

Sensor Type	Wireless	Sensor Integration	Sensor Mounting	Ordering Code
WaveLinx Pro	Yes	Integral to Fixture	Mounted in solid cover	WAA
WaveLinx Lite	Yes	Integral to Fixture	Mounted in solid cover	WAB
Enlighted	Yes	Integral to Fixture	Mounted in illuminated lens	LWIPD1
Stand-Alone SVPD1	No	Integral to Fixture	Mounted in solid cover	SVPD1

Optional standalone and wireless connected integrated sensors require use of the DD (0-10V) driver. WaveLinx and Enlighted sensors require additional system hardware (not provided) for full functionality.

Standard sensor layout is shown below. Please refer to sensor coverage pattern diagrams to ensure proper coverage for the application. Standard configurations are available in both individual fixtures and in continuous runs. Default spacing is based on the maximum fixture length of 12ft and can be changed to 8ft sensor spacing for additional coverage by selecting the 8ft max fixture length option when ordering.

For additional information integrated sensors and connected lighting, please visit [Cooper Lighting Solutions's Connected Lighting Website](#).

- ☐ Standard Sensor with Luminaire Control
☒ Auxiliary Sensor used for Sensor Coverage (wireless systems only)

INTEGRAL SENSOR

≤8ft Individual ☐

>8ft Individual ☐ ☒

Note: When 8ft max section length is used on individual fixtures > 8ft, sensor placement follows logic for continuous run.

Beginning of Run (BOR) ☐

Intermediate Section (INT) ☐

End of Run (EOR) > 4ft ☐ ☒

End of Run (EOR) ≤ 4ft ☐

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

S122DW-C1005D835-XX-XX-1-
UDD-F-XX

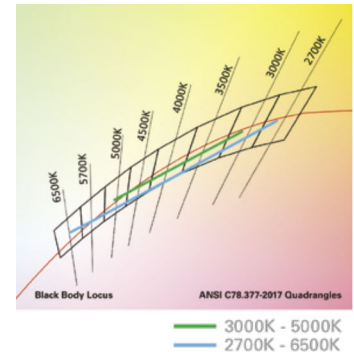
Notes: Specify Details

Type:**G**

MACS-LTG-23-64162

Neo-Ray**2" LED Wall Direct****Define 2 Pendant LED with VividTune Tunable White**

VividTune tunable white luminaires deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.

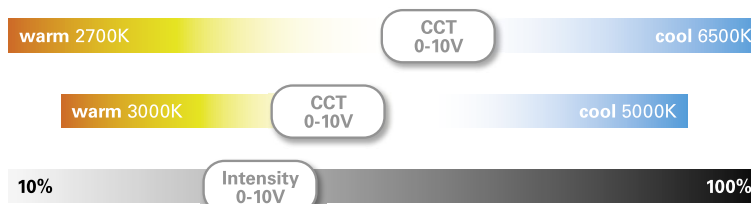
**Performance Data***

Tunable White - Lumen Adjustment Factors				
CCT	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.868	0.741
3000K	0.894	0.736	0.893	0.771
3500K	0.946	0.804	0.924	0.809
4000K	0.993	0.868	0.944	0.835
4500K	1.002	0.883	0.961	0.857
5000K	1.002	0.883	0.974	0.874
6500K	-	-	0.988	0.897

Example of Approximate Lumen Calculation			
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
CCT Setting	S122DW-C865D835-UDD-F-W	S122DW-V865D83050-UW2A-F-W	S122DW-V865D93050-UW2A-F-W
3000K	-	3093	2547
3500K	3460	3273	2782
4000K	-	3436	3003
4500K	-	3467	3055
5000K	-	3467	3055

Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, go to www.cooperlightingsolutions.com for tunable white application guides.

**Example of Lumen Adjustment Calculation**

S122DW-V865D83050-UW2A-F-W
at 80 CRI tuned to 3500K

Adjusted Lumen =
published lm x adjusted lm factor

Adjusted Lumen = 3460 x 0.946

Adjusted Lumen = 3273 lm

* Lumen adjustment factors are for reference
and may be different for each product selected.
Refer to IES files for actual performance data on each.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

FCC420W-UNV-935-1010L-BKE-D25U25-LD

Notes:**Type:****H**

MACS-LTG-23-64162



Date:

Approved:

Type:

Fixture:

Project:

FCC400 Up/Down or Up, Standard Drivers without Battery Backup

4" Round wall mount up/down or up only cylinder outdoor

**FEATURES**

- Up to 3000 lm, Up to 100 LPW
- Operating Environment -22°F to 122°F (-30°C to 50°C)
- Clear anti-glare tempered glass lens (IK08)
- Multiple color finishes
- 0-10V 1% Dimming (Standard)
- 1.5G Vibration Tested
- 93 CRI with 2 SDCM

PERFORMANCE**Beam Spread:** 15° | 25° | 50° | 72° | 90°**CCT Options:** 2700K | 3000K | 3500K | 4000K**CRI:** 93 CRI**Consistency:** 2 SDCM (Fixture to Fixture)**Lumens:** 500-3000 lm**Lifetime:** > 70,000 hours / L70 or better**PHYSICAL**

Mounting: Mounts directly to standard recessed junction box with wall mount or twist-lock canopy. Additional holes allow unit to be attached directly to mounting surface.

Ingress Protection: Continuous silicone gasket to seal out contaminants, IP65 rated for dry, damp or wet locations.

Finish: Six stage chemical iron phosphate conversion pre-treatment. Polyester powder coat finish, 18 µm Min., 5000hr salt spray test (ASTM B117) compliant with Florida / AAMA 2604 specification.

Warranty: 5-Year limited warranty (refer to website for details)

Housing: Heavy-walled, extruded aluminum housing with high pressure die-cast lens ring and cap with stainless steel hardware.

Lens: IK08 impact compliant, clear anti-glare tempered glass

Vibration Resistance: Compliant with 1.5G ANSI C136.31, Seismic rated AC-156

Weight: 8-12 lbs (Depending on Length)

Operating Temperature: -22°F to 122°F (-30°C to 50°C)

ELECTRICAL

Voltage: Universal 120-277V AC standard, 347V optional

Power Supply: Integral Class II, electronic high-power factor >.90, THD < 20%, FCC Title 47 Part 15 Class A.

Power Consumption: Up to 3000 lm @ 35W

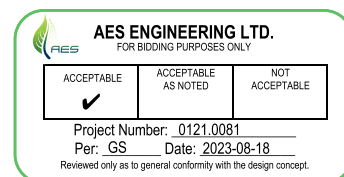
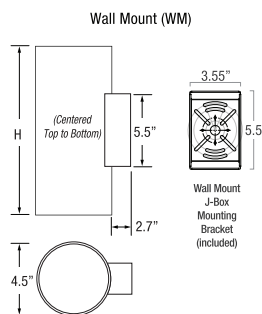
Dimming: Standard: 0-10V, 1% Dimming. Optional: ELV, TRIAC, dim to off, DMX, DALI. Also, Optional 2 Separate Circuits: Individual Control of Power and Dimming for Up/Down Lighting.

Certification: CEC Title 24 - JA8 Compliant (93 CRI Only)

Standards: cETLus Listed, CE, NOM, and RoHS Compliant. Wet location listed for wall or ceiling mount IP65 Ingress protection. 1.5G (ANSI C136.31) Vibration resistance rated. IK08 (IEC6226) Impact resistance rated. IESNA LM79 Photometric testing by NVLAP accredited test lab. IESNA LM80 LED testing by NVLAP accredited test lab. IESNA TM21 Luminaire lumen depreciation projection to >70,000hrs.

PHYSICAL DIMENSIONS

Fixture	Height (H)
FCC410W	10.95" Height (1 Integral Driver Only)
FCC412W	12.95" Height (1 Integral Driver Only)
FCC414W	14.95" Height
FCC416W	16.95" Height
FCC418W	18.95" Height
FCC420W	20.95" Height
	(All above are Wall Mount Standard)



Due to continuous development and improvements, specifications are subject to change without notice. FC Lighting, Inc. reserves the right to change lab test details or specifications without notice. Product use certifies agreement to FC Lighting, Inc. terms and conditions. All stated specifications have a tolerance of +/- 7%.

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US Commercial Lighting Manufacturer Since 1982

TG-DM-022723

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

FCC420W-UNV-935-1010L-BKE-D25U25-LD

Notes:

Type:**H**

MACS-LTG-23-64162



Date:

Approved:

Type:

Fixture:

Project:

FCC400 Up/Down or Up, Standard Drivers without Battery Backup**PRODUCT CODE****FCC420W-UNV-935-1010L-BKE-D25U25-LD**

MODEL	LENGTH	MOUNTING	VOLTAGE	COLOR	LUMENS	FINISH	DOWNLIGHT OPTICS	UPLIGHT OPTICS	DIMMING	OPTIONS	BATTERY																				
MODEL			DOWN LUMENS (nominal) UP LUMENS <table><tr><td>NO</td><td colspan="2">No Light Option</td></tr><tr><td>5</td><td>500 lm</td><td>05L</td></tr><tr><td>10</td><td>1000 lm</td><td>10L</td></tr><tr><td>15</td><td>1500 lm</td><td>15L</td></tr><tr><td>20</td><td>2000 lm</td><td>20L</td></tr><tr><td>25</td><td>2500 lm</td><td>25L</td></tr><tr><td>30</td><td>3000 lm</td><td>30L</td></tr></table>				NO	No Light Option		5	500 lm	05L	10	1000 lm	10L	15	1500 lm	15L	20	2000 lm	20L	25	2500 lm	25L	30	3000 lm	30L	DOWN LIGHT OPTICS (nominal)		UPLIGHT OPTICS	
NO	No Light Option																														
5	500 lm	05L																													
10	1000 lm	10L																													
15	1500 lm	15L																													
20	2000 lm	20L																													
25	2500 lm	25L																													
30	3000 lm	30L																													
FCC410W	10.95" Height (1 Integral Driver Only)		D15	Spot (15°) (20L Max)	U15																										
FCC412W	12.95" Height (1 Integral Driver Only)		D25	Narrow Flood (25°)	U25																										
FCC414W	14.95" Height		D50	Flood (50°)	U50																										
FCC416W	16.95" Height		D72	Wide Flood (72°)	U72																										
FCC418W	18.95" Height		D90	Flat (90°)	U90																										
FCC420W	20.95" Height		WITH SOFT FIELD LENS (Below)																												
	(All above are Wall Mount Standard)																														
VOLTAGE UNV Universal 120-277 Volt AC 347V 347 Volt AC			DIMMING ET ELV or TRIAC Driver (120V Phase Dimming w/ UNV Driver) (20L-30L Only) LD 0-10V Dimming, 1% (Standard) ET2 ELV or TRIAC Drivers (Qty. 2) (120V Phase Dimming w/ UNV Drivers) (20L-30L Only) LD2 0-10V Dimming, 1% (Qty. 2)																												
COLOR 927 (93CRI) 2700K 930 (93CRI) 3000K 935 (93CRI) 3500K 940 (93CRI) 4000K			OPTIONS CV Cut-Off Visor (Down Only)																												
FINISH BKE Black (AAMA 2604) BRE Bronze (AAMA 2604) SLE Silver (AAMA 2604) WHE White (AAMA 2604) CCE Custom Color (AAMA 2604)			BATTERY N/A (Leave Blank)																												

(30L Max Total output) (Standard Lumen Output Split 50% Up / 50% Down) (Additional driver needed for unequal output selections)



Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

FCC420W-UNV-935-1010L-BKE-D25U25-LD

Notes:

Type:**H**

MACS-LTG-23-64162



FCC400 Up/Down or Up, Standard Drivers without Battery Backup

LUMENS nominal

Model	Watts	940
FCC4	5 W (Min)	500 lm (Min)
	35 W (Max)	3000 lm (Max)

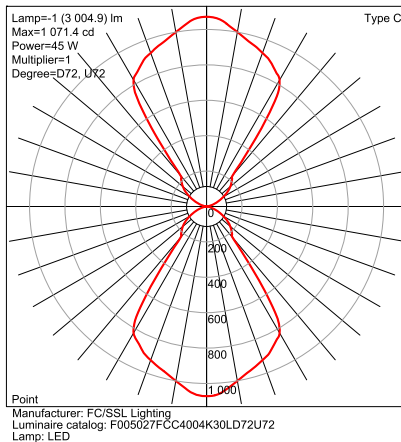
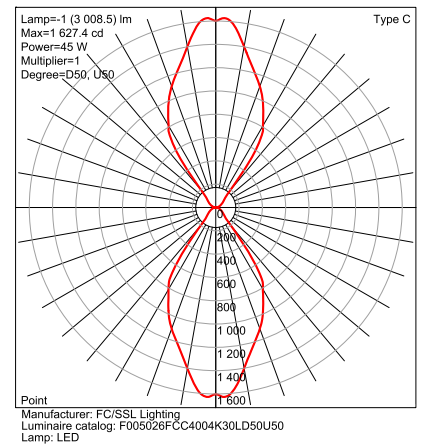
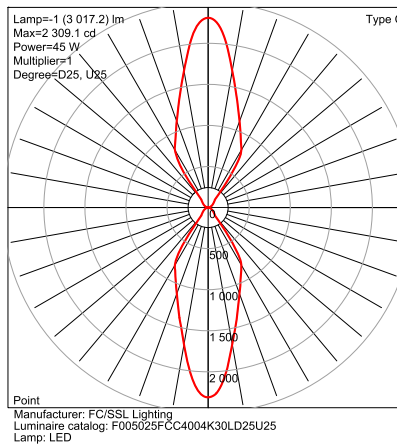
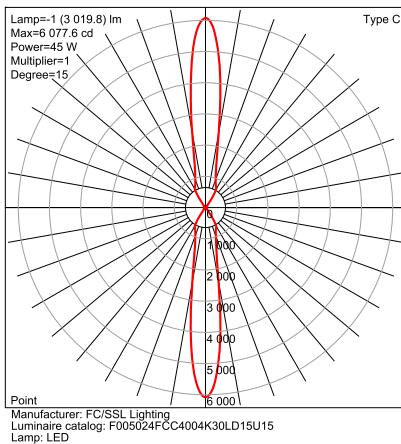
IES Multiplier	
Color	Multiplier
927	0.93
930	0.97
935	0.99
940	1.00

*83CRI±1.15 Consult factory.

TRIAC & ELV Approved Dimmer List	
Manufacturer	Manufacturer Part Number
Lutron	Glyder GLV-600
	Diva DVLV-600P
	Diva DV-600P
	Diva DVELV-600P(303)
	Maestro MALV-600
	Nova T NT-1000
	Nova T NTELV-600
Leviton	Skylark SLV-600P
	RadioRA2-10ND
	SureSlide 6633
	Illumatech IPE04

0-10V Approved Dimmer List	
Manufacturer	Manufacturer Part Number
Lutron	Diva DVSTV-XX
	Diva DVSTV-453PH-WH1
Leviton	Illumatech 010-IP710-DLZ

PHOTOMETRICS



Due to continuous development and improvements, specifications are subject to change without notice. FC Lighting, Inc. reserves the right to change lab test details or specifications without notice. Product use certifies agreement to FC Lighting, Inc. terms and conditions. All stated specifications have a tolerance of +/- 7%.

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US Commercial Lighting Manufacturer Since 1982

TG-DM-022723

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:

FCC420W-UNV-935-1010L-BKE-
D25U25-LD

Notes:

Type:**H**

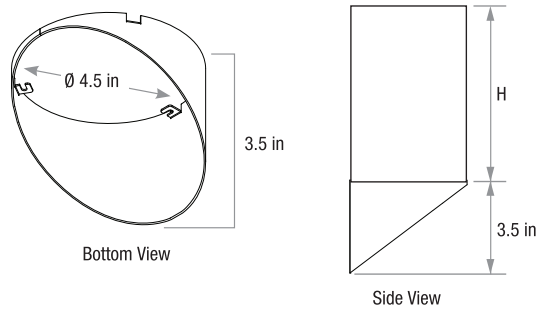
MACS-LTG-23-64162



FCC400 Up/Down or Up, Standard Drivers without Battery Backup

MORE DIMENSIONS

Cutt-Off Visor (CV) (Down Only)



Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:
SSTR12D32358

Notes:

Type:**M**

MACS-LTG-23-64162



Project Name _____
Product Code _____
SKU No. _____
Memo _____
Data _____

GEN2 SLIM LED STRIP LIGHT



PRODUCT DESCRIPTION

ABOVE ALL lighting's LED Slim Strip features a slim, low-profile and traditional design with diffused lens. Comes in 2ft, 4ft and 8ft. 130LPW is standard. Microwave motion sensor and up-light reflector are available. It can be widely used in warehouse, office, garage, display shop and other commercial applications.

FEATURE

- Wide voltage 120-347V
- Length comes in 2ft, 4ft and 8ft.
- 8% up-light and no glare
- Microwave motion sensor available
- Apertured reflector optional

ELECTRICAL SYSTEM

- Input Voltage: 120-347V 50/60Hz
- Minimum Ambient -20°C, Maximum Ambient is 35°C
- Power Factor: > 0.88 at full load
- Total Harmonic Distortion: < 20% at full load

SPECIFICATION

2FT

Length: 23.97"

Width: 2.95"

Height: 3.26"

4FT

Length: 48.03"

Width: 2.95"

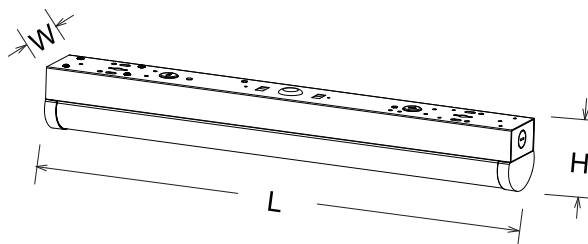
Height: 3.26"

8FT

Length: 95.98"

Width: 2.95"

Height: 3.26"



PERFORMANCE

CRI

80

CCT

3000K- 3500K- 4000K

Dimming

0-10V Dimming Standard

Projected Lifetime

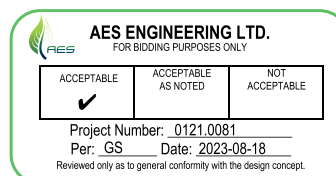
L70 - 100,000 Hours

Working Temperature

-4-95°F (-20-35°C)

Certifications

- cULus conforms to UL Std. 1598Cert. to CSA Std. C22.2 No.250.0
- Suitable for damp locations
- RoHs compliant



Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:
SSTR12D32358

Notes:

Type:**M**

MACS-LTG-23-64162



Ordering Information

SSTR12D32358

Slim Strip	Dimension	Dimmable	Watts	CCT	Voltage	-Lighting Effect	-Control
SSTR	06 - 2FT	D - 0-10V Dimmable	20 - 20 Watts	30 - 3000K	8 - 120 - 347V	-Blank- 130LPW P - 150LPW¹	MSW -Microwave Motion Sensor²
	12 - 4FT		24 - 24 Watts	35 - 3500K			
			32 - 32 Watts	40 - 4000K			
			40 - 40 Watts				
	24 - 8FT		40 - 40 Watts 65 - 62 Watts				

- 130LPW is standard. It may take long time for the version of 150LPW please contact Customer Service in advance.
- Microwave dimming sensor, for mounting height 20ft (6m) max. Dimming default setting is Bi-Level dim, 50% on vacancy and 100% on Occupancy. Besides, daylight sensor default setting is disable. Other dimming levels such as 20% or 30%, ON/OFF function and daylight sensor can be set by the remote controller MH10.

* White finish is standard. Custom color is available for a premium setup fee. Consult customer service for additional information

Accessories (Ordered separately)

90330

SSTR06-URF

Uplight Reflector
for 2ft strip (a piece)

90331

SSTR12-URF1

Uplight Reflector
for 4ft and 8ft strip

91167

SSTRP06-WG

Wire guard for 2ft slim strip

90576

MH10

Remote control for MSW

**90759**

STR-PMK

Pendant Mount Kits
for strip (a pair)

1. If this reflector will be installed at one side, then one piece for 4ft and two pieces for 8ft. If this reflector will be installed at both two sides, then two pieces for 4ft and four pieces for 8ft

91168

SSTRP12-WG

Wire guard for 4ft and 8ft slim strip²

2. If for 8ft please order two pieces.

PERFORMANCE DATA

LUMEN OUTPUT

Lumen values are estimated with LED data sheet.

Frosted Lens

Watts	Lumen Output	Size	CRI	AC Input 120V	CCT	LPW
20	2600	2FT	80	0.17A	4000K	130
24	3120	4FT	80	0.20A	4000K	130
32	4160	4FT	80	0.27A	4000K	130
40	5200	4FT	80	0.33A	4000K	130
62	8060	8FT	80	0.52A	4000K	130

Frosted Lens

Watts	Lumen Output	Size	CRI	AC Input 120V	CCT	LPW
20	3000	2FT	80	0.17A	4000K	150
24	3600	4FT	80	0.20A	4000K	150
32	4800	4FT	80	0.27A	4000K	150
40	6000	4FT	80	0.33A	4000K	150
62	9300	8FT	80	0.52A	4000K	150

Notes: 0.96 multiplier is for 3500K; 0.93 multiplier is for 3000K;

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:
SSTR12D32358

Notes:

Type:**M**

MACS-LTG-23-64162

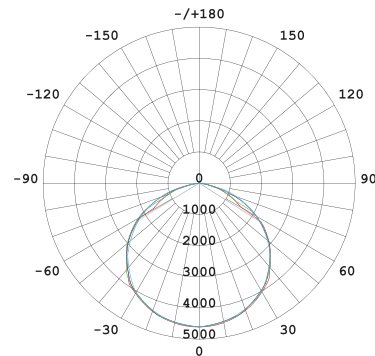
**Lumen Ambient Temperature (LAT) Multipliers**

Use these factors to determine relative lumen output for average ambient temperature from -4-95°F (-20-35°C)

Ambient		Multiplier
Celsius	Fahrenheit	
0	32	1.06
10	50	1.03
20	68	1.01
25	77	1.00
30	86	0.99
40	104	0.97

PHOTOMETRY

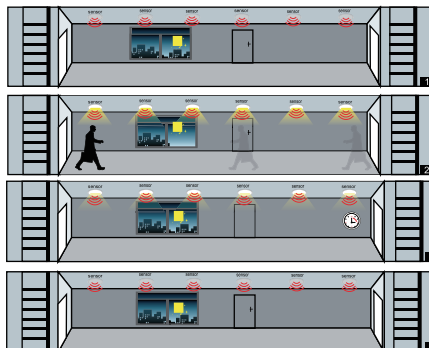
All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP certified laboratory.



- **Apertured** reflector available

MICROWAVE DIMMING SENSOR

The sensor is an innovative motion sensor, switch on the light on detection of movement, and switch off after a hold time when there is no motion detected.



1. No motion detected, all lamps switch off.
2. Any movement is detected from any direction, all lamps synchronously switch on.
3. No motion is detected in detection area, all lamps synchronously dim to a low light level after hold time.
4. After stand-by period, the lamps switch off if no movement is detected in the detection zone.

Job Name:

ARTS AND HERITAGE HUB - LADYSMITH
Contractor: THOMIS ELECTRIC LTD. (VICTORIA)
Engineer: AES Engineering Ltd. (Victoria) (Victoria)

Catalog Number:
SSTR12D32358

Notes:

Type:**M**

MACS-LTG-23-64162



MICROWAVE DIMMING SENSOR SETTING

Sensor data can be precisely set for each specific application by a remote controller which need to be bought separately.

Detection area

Detection area can be reduced by selecting the combination on the remote controller to fit precisely each application.

Optional Setting: 100%/75%/50%/25%

Default Setting: 100%

Hold time

Refers to the time period the lamp remains at 100% illumination after no motion detected.

Optional Setting: 5S/30S/1min/3min/5min/10min/20min/30min

Default Setting: 20min

Stand-by period

Refers to the time period the lamp remains at a low light level before it completely switches off in the long absence of people. When set to " +∞" mode, the low light is maintained until motion is detected.

Optional Setting: 0S/10S/1min/3min/5min/10min/30min/+∞

Default Setting: +∞

Notes: If just need ON/OFF function, please set the stand-by period in "0S" mode by the remote controller.

Daylight sensor

The sensor can be set to only allow the lamp to illuminate below a defined ambient brightness threshold. When set to Disable mode, the daylight sensor will switch on the lamp when motion is detected regardless of ambient light level. 50lux, 30lux: twilight operation, 10lux, 5lux: darkness operation only. Note that daylight sensor is active only when lamp totally switches off.

Optional Setting: 5lux/15lux/30lux/50lux/100lux/150lux/Disable

Default Setting: Disable

Stand-by dimming level

The low light level you would like to have after the hold time in the long absence of people.

Optional Setting: 10%/20%/30%/50%

Default Setting: 50%

Ref#: 20230208

Warranty

Five year limited warranty. Full warranty terms located at www.abovealllighting.com/warrantystatements

Note:

Please refers to the instruction manual for motion sensor default setting.