Project: | Type: | Date: | Notes:

LHS-LED
Linear Highbay

The LHS-LED series delivers versatile, high-efficiency linear highbay luminaires with selectable features and a compact design. Durable and contractor-friendly, it's perfect for industrial and commercial applications, replacing HID and fluorescent systems. With ControlLED capability, it integrates plug-and-play motion and daylight sensors wirelessly and with bluetooth mesh network, providing advanced lighting control without hubs or gateways.

IDEAL APPLICATIONS

- Warehouses
- Factories
- Gymnasiums
- Service Bays
- Retail stores
- Workshops

SPECIFICATIONS

	LH1S-LED110A60	LH2S-LED165A100	LH3S-LED320A220
PERFORMANCE			
Light Output	15900/ 12400/ 9300 lm	23500/ 19900/ 15300 lm	46900/41000/ 33400 lm
	Lumen Selectable		
Efficacy	155 lm/W	153 lm/W	152 lm/W
CCT	3500/4000/5000K (CCT Selectable)		
Beam Distribution	Wide (90°x90°), Narrow (45°x90°) - Field Changeable		
Replaces Up to	250 MH	400 MH	1000 MH
LED Lifetime (L80)	>100,000 Hrs		
CRI	84	85	84
ELECTRICAL			
Wattage	105/80/60W	160/130/100W	320/270/220W
Voltage	120-347V		
Surge Protection	6kV (Built-in Driver) as per IEC/EN61000-4-5		
Power Factor	>0.99		
THD	<4%		
Cord	Pre-installed 10' Power Cable (3x18 AWG)		
Battery Backup	9W (Option Available)		

Note: Electrical and light performance data is based on LM79 test reports, measured at maximum wattage, 4000K, and 120V.

		LH1S-LED110A60	LH2S-LED165A100	LH3S-LED320A220
CONSTRUCTION				
Housing		Die-cast Aluminum		
Lens		Glare-free Polycarbonate		
Weight	Fixture & Cable	5.40 lbs	7.16 lbs	9.58 lbs
	2x2' T-Grid Mounting Plate	6.49 lbs	5.71 lbs	-
	2x4' T-Grid Mounting Plate	14.58 lbs	13.90 lbs	12.78

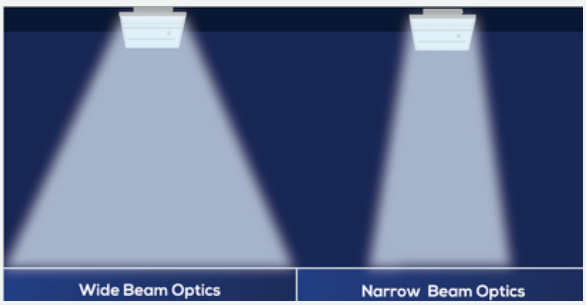
AMBIENT OPERATING TEMPERATURE
-40°C to 55°C (-40°F to 131°F)
MOUNTING
Suspension Mount - V-Hooks & Chain (Included), Aircraft Cable, Surface Mount, Pendant Mount & T-Grid Drop Ceiling Mount
CERTIFICATIONS
cULus Listed for Canada and USA, per UL 1598, CSA C22.2 No. 250.0
DLC Premium
CONTROLS
0-10V Dimming (Dim to Off)
PIR/Microwave Motion Sensor/Dimmer with Remote Control
Bluetooth PIR Motion & Daylight Harvest Sensor

FIELD CHANGEABLE OPTICS

TOOL-LESS SWAP IN LESS THAN 1 MIN

Take out 90°x90° wide beam optics (pre-installed)

Swap with 45°x90° narrow beam optics (included in the box)



CONTROLLED | UL CERTIFIED SAFETY US-CA E361278 | DLC LISTED PREMIUM | Lumen Adjustable | CCT 3.5K/4K/5K | 120-347V | IP20 RATED | 5 YEAR WARRANTY | Bluetooth

LUMEN MAINTENANCE		
L90	**L80**	**L70**
51,000 Hrs	105,000 Hrs	165,000 Hrs

Life hours are derived from IESNA LM-80 testing report and projected per IESNA TM-21 calculations.

MAX AMPERAGE DRAW (A)					
	120V	**208V**	**240V**	**277V**	**347V**
LH1S-LED110A60	0.962	0.555	0.481	0.417	0.333
LH2S-LED165A100	1.467	0.846	0.733	0.635	0.507
LH3S-LED320A220	2.933	1.692	1.467	1.271	1.014

ORDERING GUIDE

		H	VK	CD	WHT	DIM		

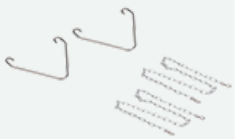
Fixture	Wattage	Voltage	Colour Temp.	Beam Distribution	Finish	Dimming	Battery Backup	T-Grid Mounting
LH1S	LED110A60	H - 120-347V	VK - Colour Selectable (3500K/4000K /5000K)	CD - Field Changeable Distribution	WHT - White	DIM - 0-10V Dimming	BLANK - No Battery Backup BBK9 - 9W Battery Backup[1]	BLANK - Not for T-Grid Mounting 2x2TGrid - T-Grid Mounting for 2x2' Drop Ceiling[2] 2x4TGrid - T-Grid Mounting for 2x4' Drop Ceiling
LH2S	LED165A100							
LH3S	LED320A220							

[1] Battery Backup is for suspension mount and surface mount only.
[2] Offered with LH1S and LH2S only.

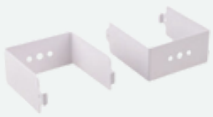
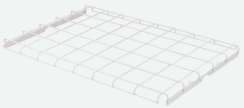
Default Setting: 4000K, Maximum Wattage & Wide Optics (90°x90°).

STOCK CODES	
081943	LH1S-LED110A60-H-VK-CD-WHT-DIM
081944	LH2S-LED165A100-H-VK-CD-WHT-DIM
081945	LH3S-LED320A220-H-VK-CD-WHT-DIM

INCLUDED IN THE BOX

	PRE-INSTALLED 10 FT POWER CORD		V HOOKS & 6 FT SUSPENSION CHAIN		SPARE 45°x90° NARROW BEAM OPTICS (TOOL-LESS CHANGE IN FIELD)

ACCESSORIES SOLD SEPARATELY

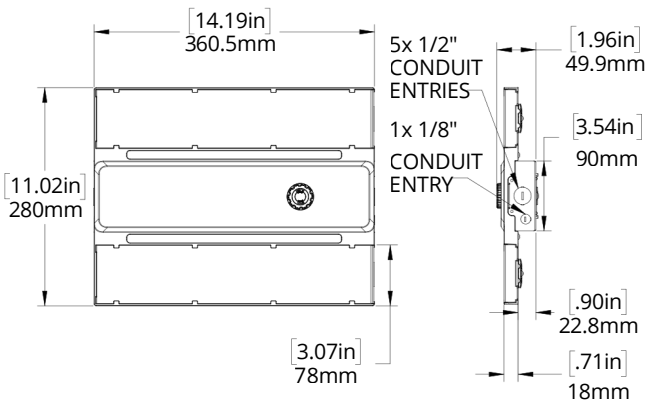
	080909 - MICROWAVE SENSOR (50 ft max height) 081300 - PIR SENSOR 1 (20ft max height) 081837 - PIR SENSOR 2 (40ft max height) *Occupancy sensing can be disabled to use it as a dimmer only.*		081960 - AIRCRAFT CABLE - 10 ft Length
	080970 - MOTION SENSOR REMOTE CONTROL		081958 - SURFACE MOUNT KIT
	084210 - HIGHBAY BLUETOOTH PIR MOTION/DLH SENSOR & ADAPTER		081959 - PENDANT MOUNT KIT
	084215 - BLUETOOTH 3-KEY AC LINE VOLTAGE WALL SWITCH 120-277VAC, 3-KEYS (ON/OFF, DIM+, DIM-)		081961 - LH1S WIRE GUARD 081962 - LH2S WIRE GUARD 081963 - LH3S WIRE GUARD
	084633 - BLUETOOTH 5-KEY BATTERY POWERED WIRELESS WALL SWITCH & PLATE[1]		

[1] Wireless Bluetooth module can also be used as portable remote control.

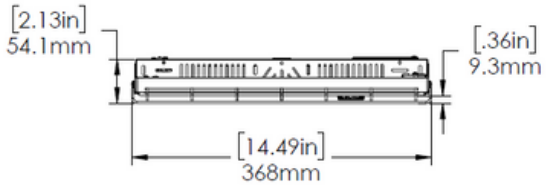
DIMENSIONS

LH1S-LED

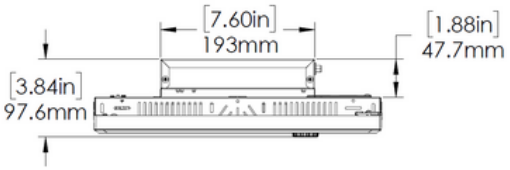
LH1S Fixture



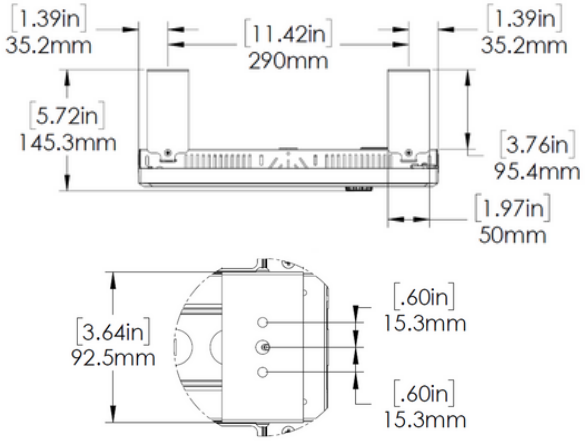
LH1S Wire Guard



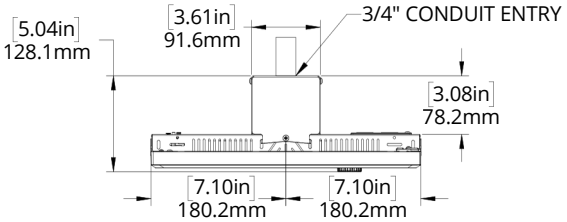
LH1S Battery Backup



LH1S Surface Mount Kit

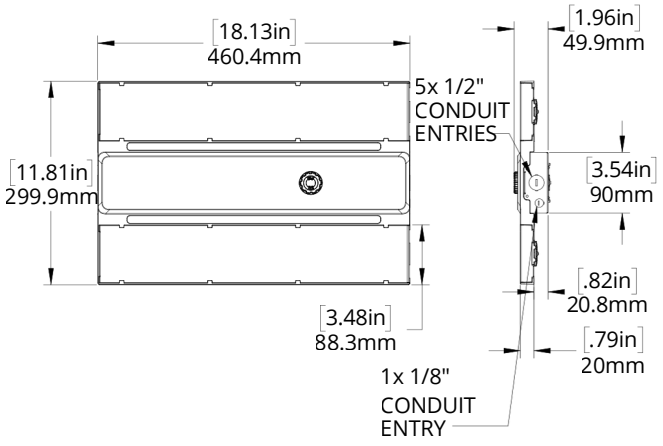


LH1S Pendant Mount Kit

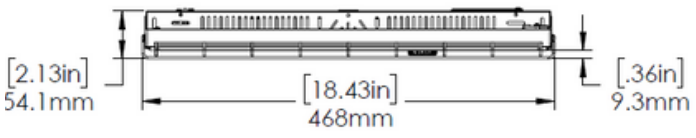


LH2S-LED

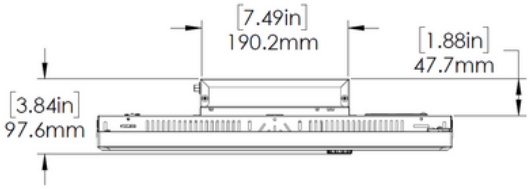
LH2S Fixture



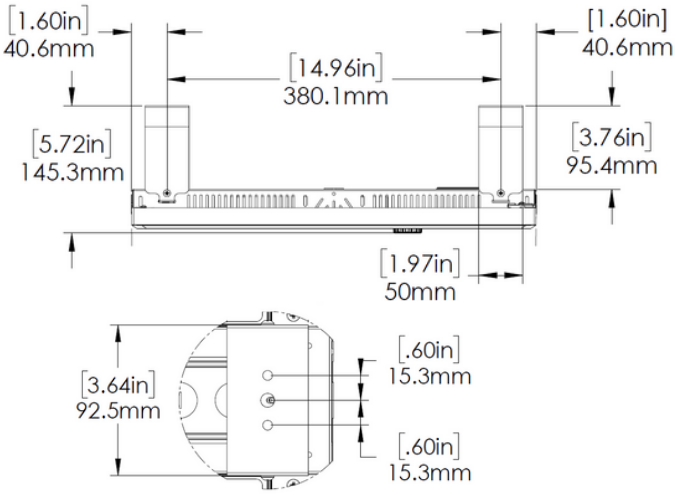
LH2S Wire Guard



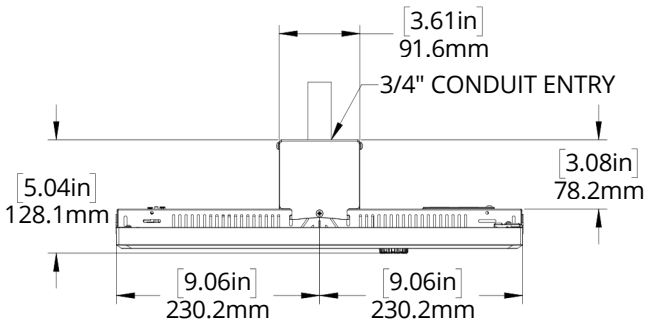
LH2S Battery Backup



LH2S Surface Mount Kit

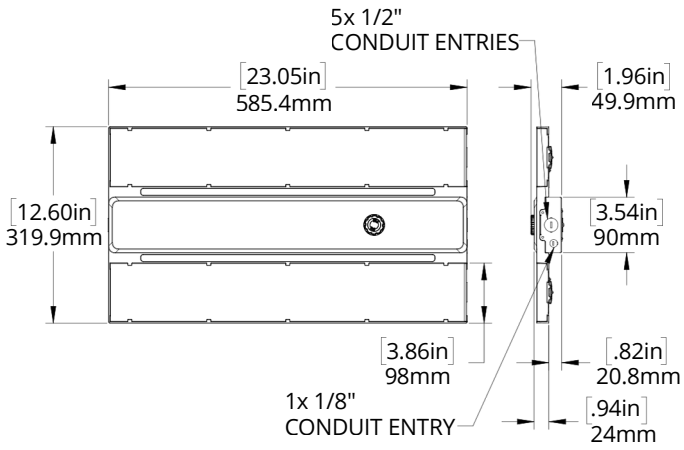


LH2S Pendant Mount Kit

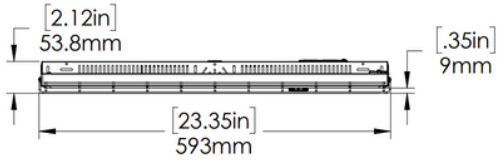


LH3S-LED

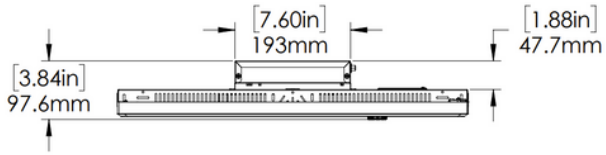
LH3S Fixture



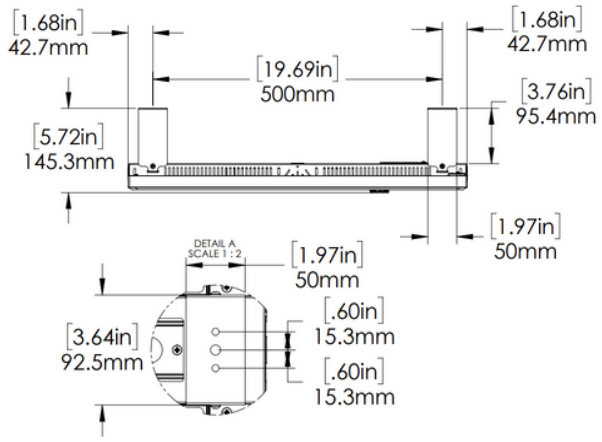
LH3S Wire Guard



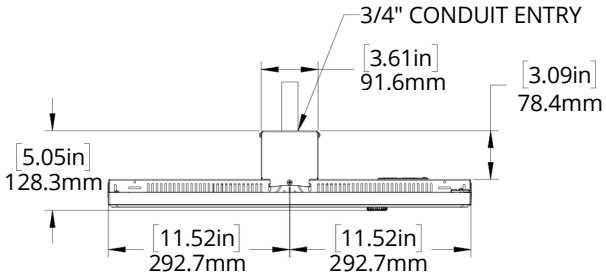
LH3S Battery Backup



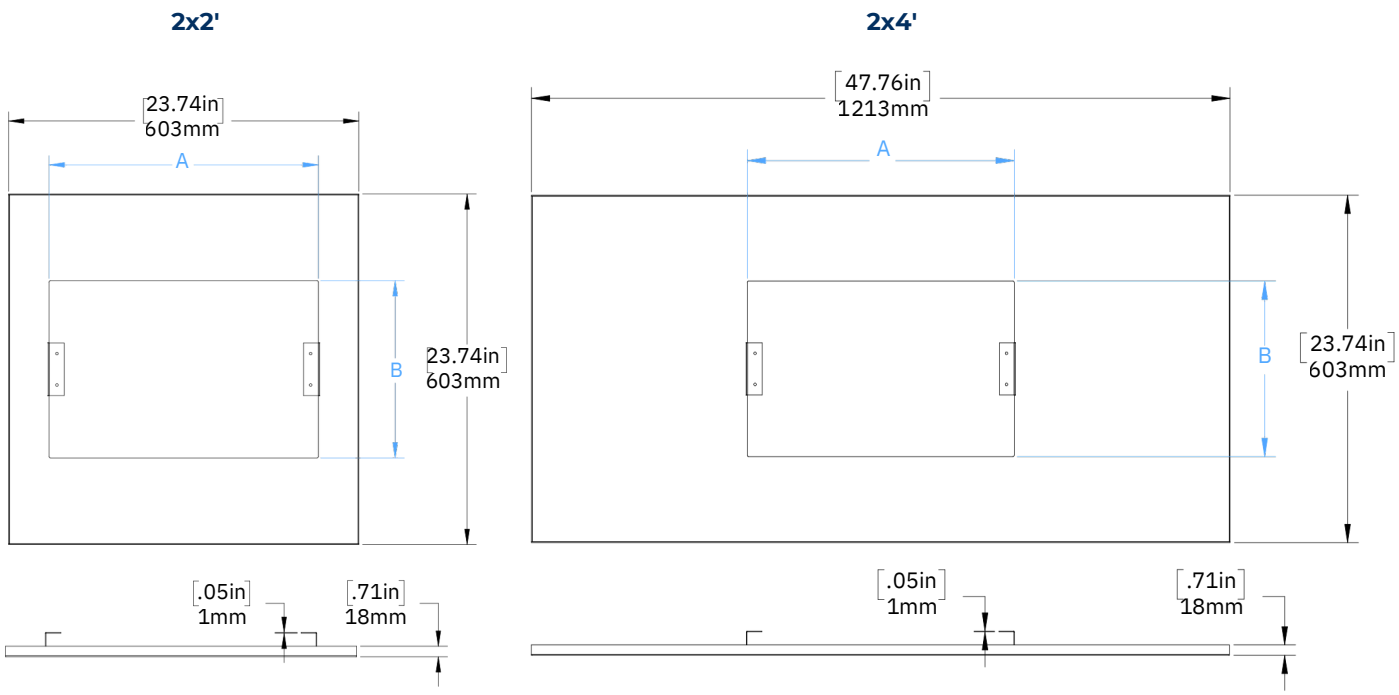
LH3S Surface Mount Kit



LH3S Pendant Mount Kit

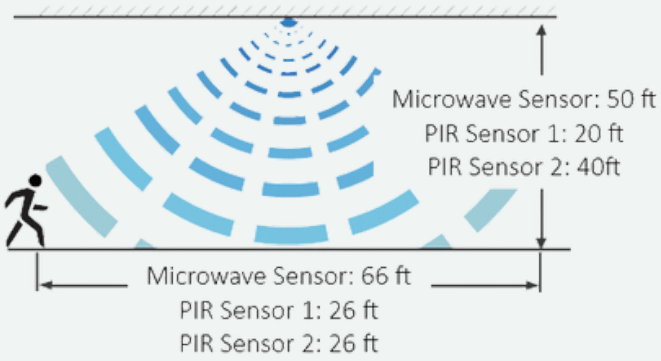


FILLER PLATE FOR T-GRID DROP CEILING



Model	2'x2'		2'x4'	
	A	B	A	B
LH1S	363.00mm [14.29in]	283.00mm [11.14in]	363.00mm [14.29in]	283.00mm [11.14in]
LH2S	463.55mm [18.25in]	303.80mm [11.96in]	463.55mm [18.25in]	303.80mm [11.96in]
LH3S	-	-	588.00mm [23.15in]	323.50mm [12.74in]

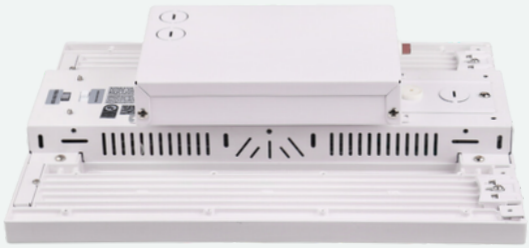
Note: Fixture and T-Grid mounting plate assembly must be supported by suspension mounting directly on the ceiling surface.

MOTION SENSOR SPECIFICATIONS - PROGRAM USING REMOTE CONTROL	
Sensor Type	Microwave & PIR
Microwave Frequency	5.8GHz +/- 75MHz
Operating Voltage	12VDC
Operating Current	30mA
Output Voltage	0-10V
Stand-by Power	<0.5W
Detection Range	
Maximum Detection Angle	360°
Ambient Operating Temperature[1]	-30℃ to 60℃ (-22F to 140F)
Indoor/Outdoor Use	Both Indoor & Outdoor
IP Rating	IP65
Installation	Field installed - Wireless Plug & Play

MOTION SENSOR PROGRAMMING	
Programming Tool	Highbay Motion Sensor Remote Control
Brightness	70%/80%/90%/100%*
Sensitivity	20%/50%/75%/100%*
Hold Time	10s/1min*/10min/30min
Daylight Sensor	10Lux/30Lux/50Lux/100Lux/Disabled*
Standby Dim	10%/20%*/30%/50%
Standby Time	1min*/30min/60min/+∞

- Default settings marked with *
- Default Setting: After no motion for 1min (hold time), the fixture will dim from 100% (brightness) to 20% (stand-by dim level). After no motion for another 1 min (stand-by time), the fixture will turn off.
- For instructions on programming the motion sensor remote control, please see the Installation Instructions.
- [1]When installed in the fixture, the system's ambient operating temperature is limited by the component with the lowest allowable range.

BATTERY BACKUP SPECIFICATIONS	
Input Power	8W
Input Voltage	120-347V
Output Power (Emergency Mode)	9W
Recharge Current	0-500mA
Recharge Time	24 to 48 Hrs
Discharge Time	90 min
Ambient Operating Temperature[1]	0℃ to 60℃ (32F to 140F)
Service Life	50,000 Hrs
IP Rating	IP20
Installation	Factory installed in a junction box that comes mounted on the fixture
Light Output[2]	1400 lm



- [1]When installed in the fixture, the system's ambient operating temperature is limited by the component with the lowest allowable range.
- [2]Lumen output with emergency battery backup can be calculated by multiplying the battery output power with the efficacy of fixture.

CONTROLLED

BLUETOOTH PIR MOTION & DAYLIGHT HARVEST SENSOR

FEATURES

- PIR motion and daylight harvest sensor
- Easy wireless plug-and-play installation
- Bluetooth mesh network
- DLC - Networked Lighting Control (NLC) & Luminaire Level Lighting Control (LLLC)

SPECIFICATIONS	
Input Voltage	12VDC
Input Current	50mA Max.
Input Power	0.6W
Output Current	10mA Max. Sinking Current
Output Power	0.1W
Dimming	Class 2, 0-10VDC
Bluetooth Transmit	328ft Max.
Radio Frequency	2.4GHz ±75MHz
Bluetooth Version	5.0
Housing Material	Polycarbonate (UL 94-5VA)
Housing Finish	White
Detection Range	40-80ft
Mounting Height	20-40ft
Indoor/Outdoor Use	Both Indoor & Outdoor Use
Operating Temperature[1]	-30°C to 55°C (-22°F to 131°F)
Storage Temperature	-30°C to 85°C (-22°F to 185°F)
IP Rating	IP66 (Wet Location)
Installation	The audio jack to 3-PIN adaptor is pre-installed on the sensor for quick twist-lock installation[1]

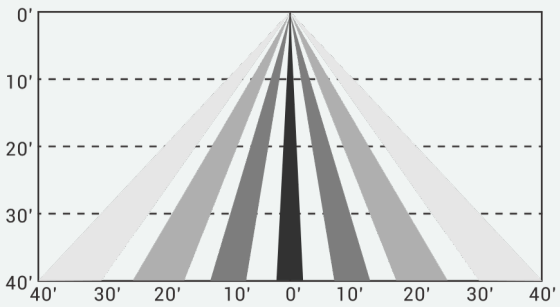
[1]When installed in the fixture, the system's ambient operating temperature is limited by the component with the lowest allowable range.

DEFAULT SETTINGS	
Motion Sensor	ON
Mode	Occupancy
High End Trim	100%
Sensitivity	High
Hold Time (T1)	20 min
Standby Dim	50%
Standby Time (T2)	1 min
Photocell	Off
Linkage	Off
Linkage Level	100%

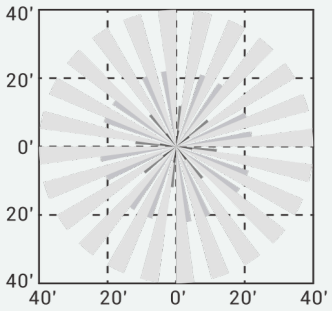
Note: Program the sensor with the desired settings using the ControlLED Mobile App (please refer to the ControlLED App manual for instructions).

DETECTION COVERAGE

Side View (at 40ft Height)



Top View (at 40ft Height)

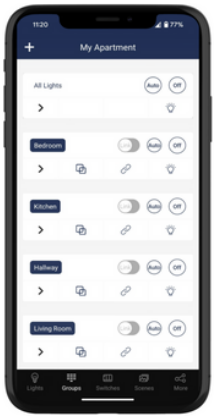


Bluetooth DLC LISTED 5 YEAR WARRANTY

SPECIFICATIONS & COMMISSIONING

CONTROLLED

ControlLED Network Lighting Controls (NLC) delivers secure, wireless lighting management with Bluetooth Mesh and the ControlLED App. Integrated sensors enable automatic adjustments for comfort, safety, and efficiency.



Organized Workspaces: Create Zones, Groups and Group linkages.

Dimming Lights: Set dim level for groups or individual lights.

Motion and Daylight Harvest Sensors: Custom sensor settings for groups or individual lights.

Scenes: Create custom scenes for different scenarios.

Schedules: Create custom schedules for recurring events.

Share Access: Share access using QR codes.

Get the App!

GET IT ON Google Play

Download on the App Store

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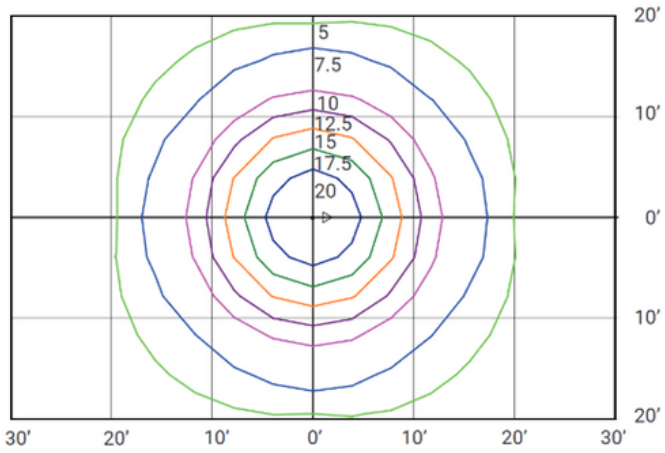
For more information, visit rabdesign.ca.

PHOTOMETRIC PLOTS

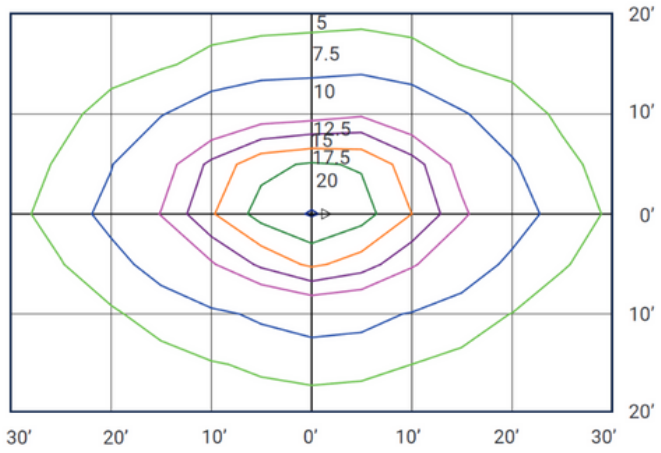
LH1S-LED110A60 (90°x90°) MOUNTED AT 18 FT

LUMENS: 15867.6 LM MAX CALCULATED VALUE: 22.88 FC



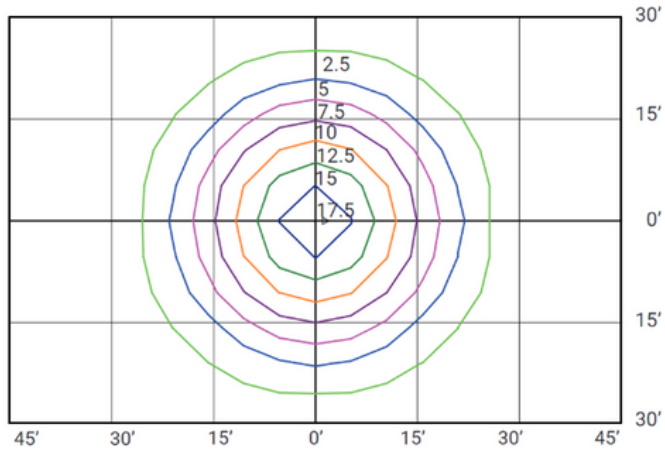
LH1S-LED110A60 (45°x90°) MOUNTED AT 24 FT

LUMENS: 15867.6 LM MAX CALCULATED VALUE: 22.88 FC



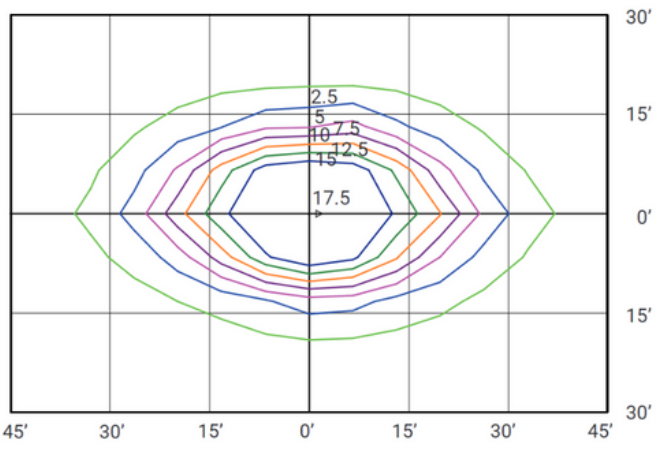
LH2S-LED165A100 (90°x90°) MOUNTED AT 24 FT

LUMENS: 23532.9 LM MAX CALCULATED VALUE: 19.13 FC



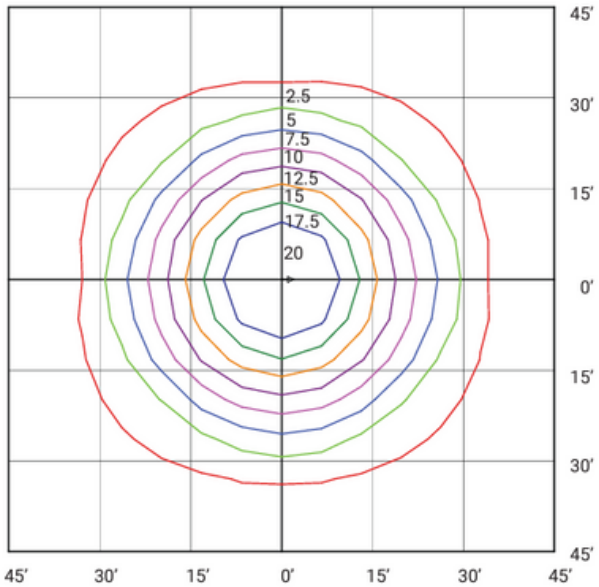
LH2S-LED165A100 (45°x90°) MOUNTED AT 30 FT

LUMENS: 23532.9 LM MAX CALCULATED VALUE: 21.90 FC



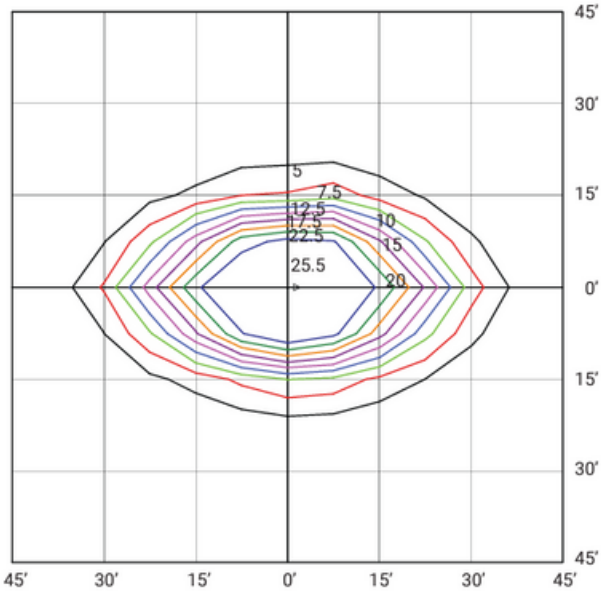
LH3S-LED320A220 (90°x90°) MOUNTED AT 30 FEET

LUMENS: 46880.3 LM MAX CALCULATED VALUE: 31.99 FC



LH3S-LED320A220 (45°x90°) MOUNTED AT 36 FEET

LUMENS: 46880.3 LM MAX CALCULATED VALUE: 31.99 FC



NOTE: Photometric plots are shown at the maximum lumen setting, 120V and 4000K.