



Linear Highbay

LHA-LED



The LHA-LED series delivers versatile, high-efficiency linear highbay luminaires with adjustable wattage, selectable CCT, and electronically adjustable beam pattern, all in 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
- ✔ Gymsnasiums
- ✔ Service Bays
- ✔ Retail stores
- ✔ Workshops

SPECIFICATIONS

	LHA1-LED110A60	LHA1-LED165A100	LHA2-LED320A220		LHA1-LED110A60	LHA1-LED165A100	LHA2-LED320A220
PERFORMANCE				CONSTRUCTION			
Light Output	16100/12700/9500lm	24500/20700/15900lm	49800/43700/35600lm	Housing	Die-cast Aluminum		
	Lumen Selectable			Paint	Glossy White, Polyester Powder Coat		
Efficacy	159 lm/W	159 lm/W	162 lm/W	Lens	Low Glare Frosted Polycarbonate		
CCT	3500/4000/5000K (CCT Selectable)			Weight	Fixture & Cable	5.29 lb	5.51 lb
Beam Distribution	45x100/65x95/90°x90° (Beam Selectable)				2x2' T-Grid Mounting Plate	6.35 lb	
Replaces Up to	150 MH	400 MH	1000 MH		2x4' T-Grid Mounting Plate	14.45 lb	13.09 lb
CRI	>83			AMBIENT OPERATING TEMPERATURE			
ELECTRICAL				-40°C to 50°C (-40°F to 122°F)			
Wattage	105/80/60W	160/130/100W	320/270/220W	MOUNTING			
Voltage	120-347V			Suspension Mount - V-Hooks & Chain (Included), Aircraft Cable, Surface Mount, Pendant Mount, T-Grid Drop Ceiling Mount			
Surge Protection	6kV (Built-in Driver) as per IEC/EN61000-4-5			CERTIFICATIONS			
Power Factor	>0.99			cULus Listed for Canada and USA, per UL 1598, CSA C22.2 No. 250.0, DLC 6.0 Premium			
THD	<4%			CONTROLS			
Cord	Pre-installed 10' Power Cable (3x18 AWG)			Dimming	0-10V Dimming (Dim to Off)		
Battery Backup	9W (Option Available)			Sensor	PIR/Microwave Motion Sensor/Dimmer with Remote Control, Bluetooth PIR Motion & Daylight Harvest Sensor		
LUMEN MAINTENANCE				Switch	All ControlLED Switches Compatible		
L90	L80	L70		MAX AMPERAGE DRAW (A)			
60,000 Hrs	95,000 Hrs	>100,000 hrs		120V	208V	240V	277V
				LHA1-LED110A60	0.97	0.56	0.49
				LHA1-LED165A100	1.48	0.86	0.74
				LHA2-LED320A220	2.96	1.71	1.48
					1.28	1.28	1.03

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

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



ORDERING GUIDE



Fixture	Wattage	Voltage	Colour Temp.	Beam Distribution	Finish	Dimming	Controls	Battery Backup	T-Grid Mounting
LHA1	LED110A60 LED165A100	H - 120-347V	VK - Colour Selectable (3500K/4000K/5000K)	VD - Beam Selectable (45°x100°/65°x95°/90°x90°)	WHT - White	DIM - 0-10V Dimming	SR - Sensor Receptacle	BLANK - No Battery Backup	BLANK - Not for T-Grid Mounting
LHA2	LED320A220						AWNR - Lutron Athena Wireless Node ³	BBK9 - 9W Battery Backup ¹	2x2TGrid - T-Grid Mounting for 2x2' Drop Ceiling ²

¹ Battery Backup is for suspension and surface mount only.
² Offered with LHA1 only.
³ Lutron Athena Wireless Node with RF only (A-WN-D01-RF-BL) is installed in the fixture. Gateway and controller not included.

Default Setting: Maximum Wattage, 4000K, and 90°x90° Beam Distribution

STOCK CODES	
084745	LHA1-LED110A60-H-VK-VD-WHT-DIM-SR
084746	LHA1-LED165A100-H-VK-VD-WHT-DIM-SR
084747	LHA2-LED320A220-H-VK-VD-WHT-DIM-SR

INCLUDED IN THE BOX

	PRE-INSTALLED 10 FT POWER CORD		V HOOKS & 6 FT SUSPENSION CHAIN
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ACCESSORIES SOLD SEPARATELY

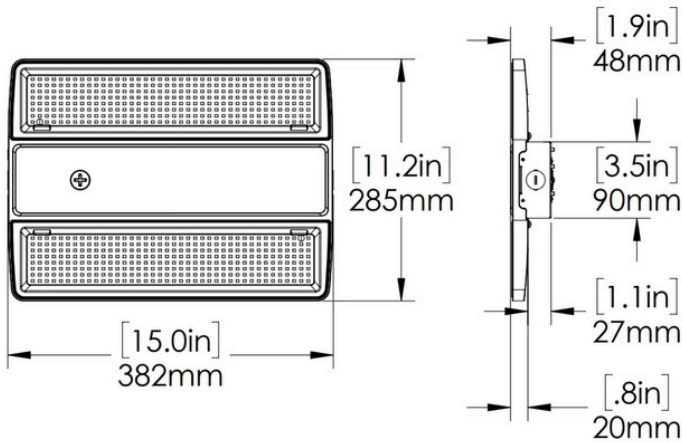
	081958	LHA SURFACE MOUNT KIT		084783	PIR40P-RCA-W1
	081959	LHA PENDANT MOUNT KIT		083845	PIR40P-BTA-W1
	081960	10FT AIRCRAFT CABLE SET W/ SNAP HOOK & THIMBLE		087016	RC-100 MOTION SENSOR REMOTE CONTROL
	084751 084781	LHA1 BEAM SELECT WIRE GUARD ¹ LHA2 BEAM SELECT WIRE GUARD ¹		084215	BLUETOOTH 3-KEY AC LINE VOLTAGE WALL SWITCH 120-277VAC, 3-KEYS (ON/OFF, DIM+, DIM-)
	084782	MW40P-RCA-W1		084633	BLUETOOTH 5-KEY BATTERY POWERED WIRELESS WALL SWITCH & PLATE ²

¹ Wire guards compatible with all sensors offered.
² Wireless Bluetooth module can also be used as portable remote control.

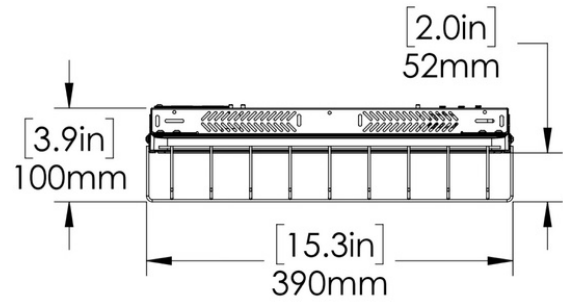
DIMENSIONS

LHA1-LED

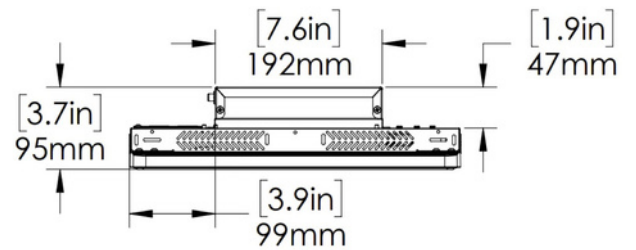
LHA1 Fixture



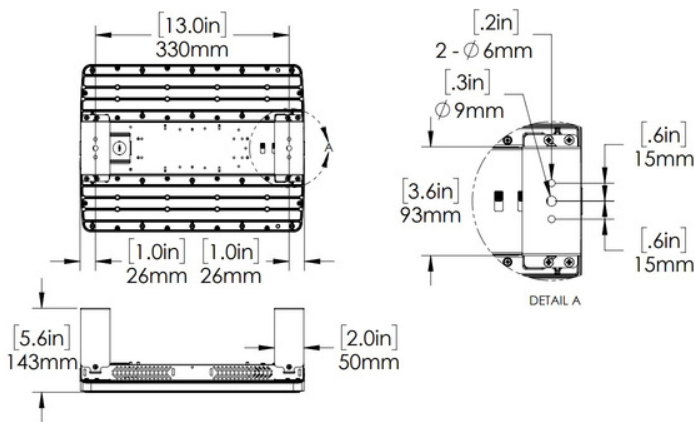
LHA1 Wire Guard



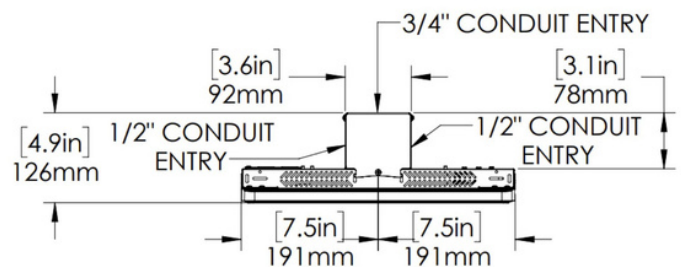
LHA1 Battery Backup



LHA1 Surface Mount Kit

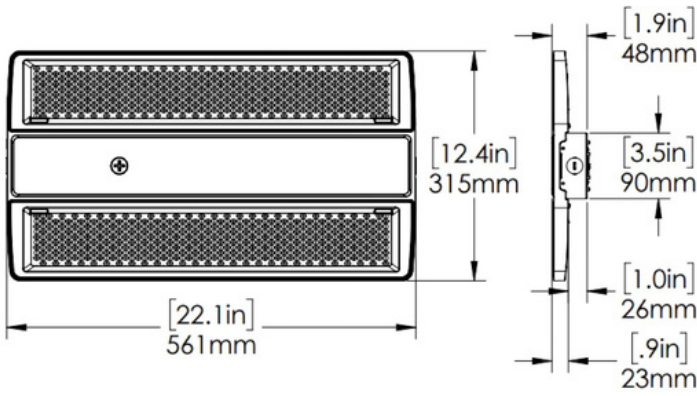


LHA1 Pendant Mount Kit

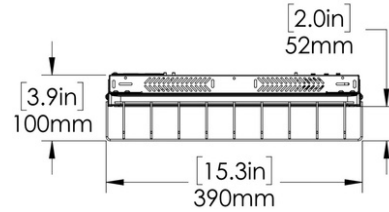


LHA2-LED

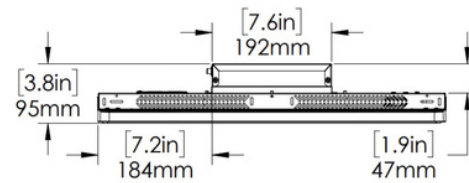
LHA2 Fixture



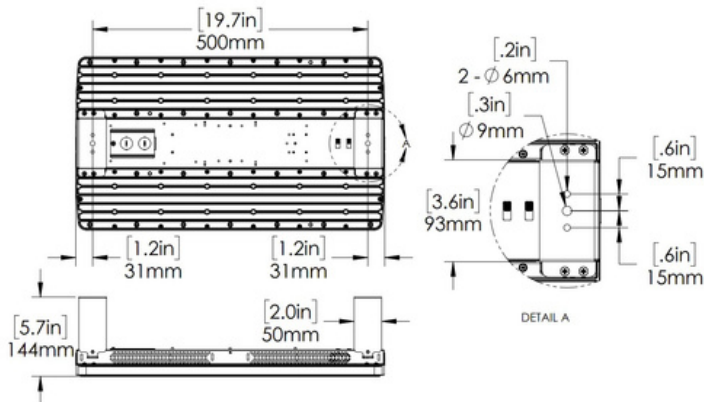
LHA2 Wire Guard



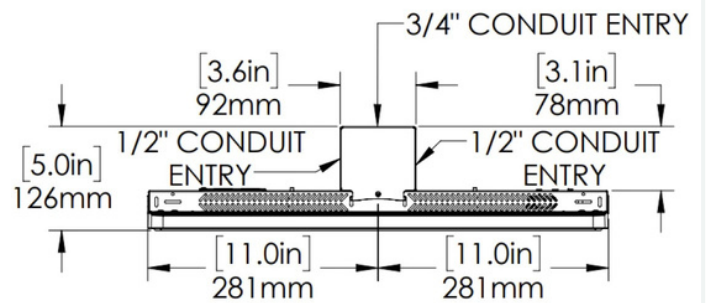
LHA2 Battery Backup



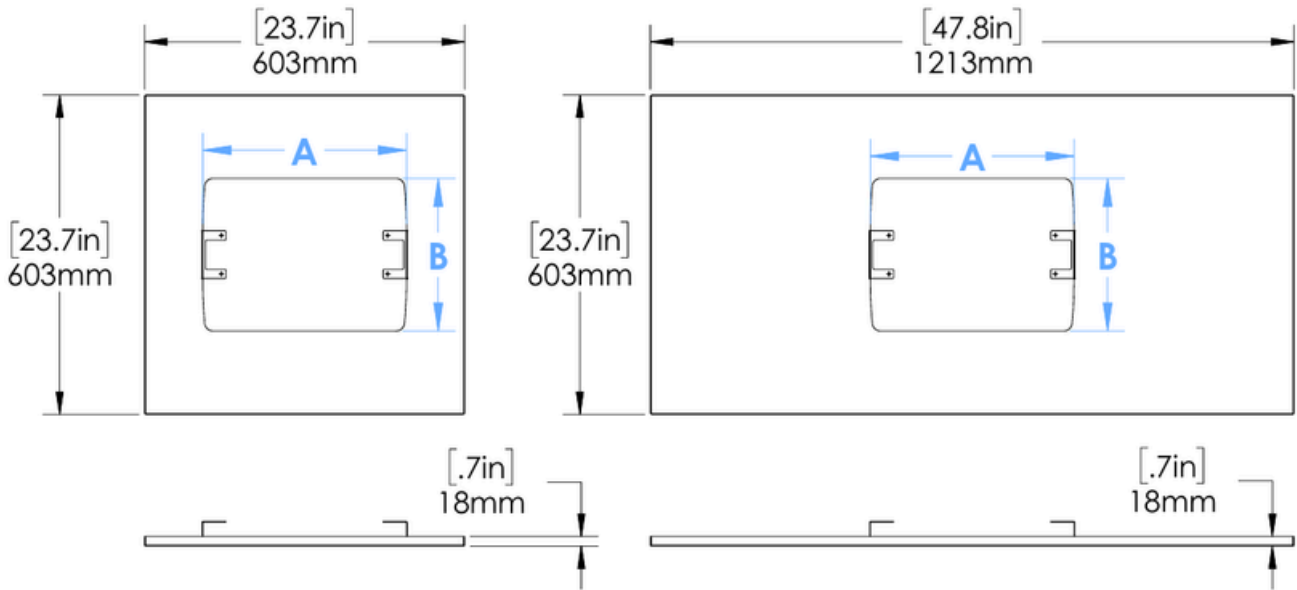
LHA2 Surface Mount Kit



LHA2 Pendant Mount Kit



FILLER PLATE FOR T-GRID DROP CEILING



Model	2'x2'		2'x4'	
	A	B	A	B
LHA1	384 mm [15.1 in]	288 mm [11.3 in]	384 mm [15.1 in]	288 mm [11.3 in]
LHA2	-	-	563 mm [22.2 in]	318 mm [12.5 in]



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


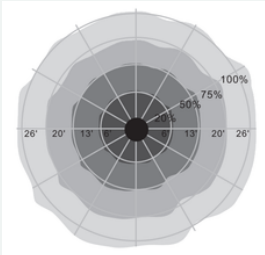
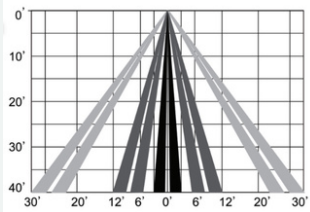
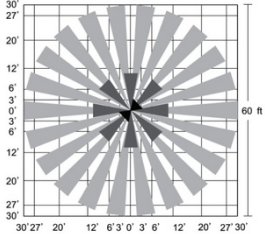
BATTERY BACKUP SPECIFICATIONS

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°C to 60°C (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

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

²Lumen output with emergency battery backup can be calculated by multiplying the battery output power with the efficacy of fixture.

HIGHBAY PLUG-IN SENSORS

MOTION SENSOR SPECIFICATIONS - PROGRAM USING REMOTE CONTROL	
Sensor Type	Highbay Microwave Plug-In Sensor MW40P-RCA-W1
Image	
Input Voltage	12-24 VDC
Input Current	50mA Max.
Output Current	25mA Max. Sinking Current
Dimming	Class 2, 0-10VDC
Radio Frequency	5.8GHz ±75MHz
Detection Range	52 ft Max.
Mounting Height	40ft Max.
Detection Range	 <p>Top View</p>
Detection Range	 <p>Side View</p>
Detection Range	 <p>Top View</p>
Ambient Operating Temperature¹	-20°C to 60°C (-4°F to 140°F)
Indoor/Outdoor Use	Indoor & Outdoor Use
IP Rating	IP65
Installation	Field installed - Wireless Plug & Play
MOTION SENSOR PROGRAMMING	
Programming Tool	RC-100 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/+∞
<ul style="list-style-type: none"> • Default settings are marked with * • Default Setting: Brightness: 100%, Sensitivity: 100%, Hold time: 20 min, Standby dim: 50%, Standby time: 1 min, Daylight sensor: Disabled (Sun icon) • 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.	

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	Field Installed Quick Plug-and-Play

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

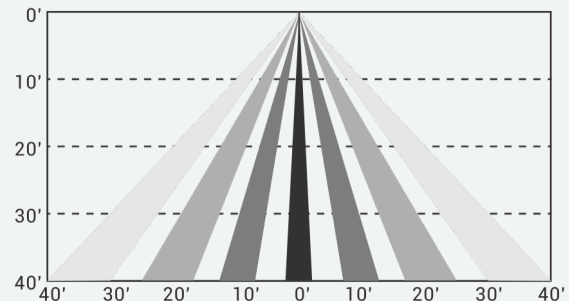
DEFAULT SETTINGS	
Motion Sensor	ON
Mode	Occupancy
High End Trim	100%
Sensitivity	High
Hold Time (T1)	20 min
Standby Dim	50%
Standby Time (T2)	1 min
Photocell	Off
Linkage	Off
Linkage Level	100%

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

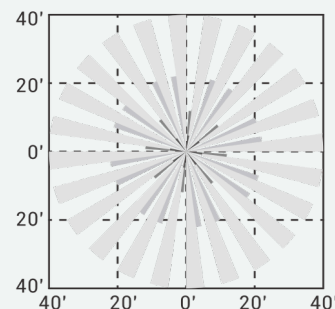


DETECTION COVERAGE

Side View (at 40ft Height)



Top View (at 40ft Height)

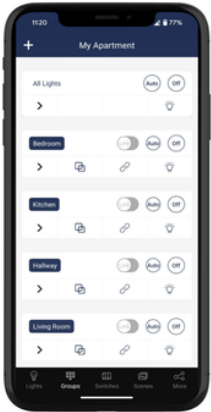


SPECIFICATIONS & COMMISSIONING

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.

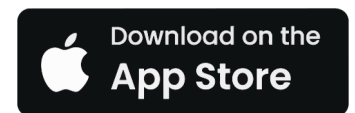


Schedules:
Create custom schedules for recurring events.



Share Access:
Share access using QR codes.

Get the App!



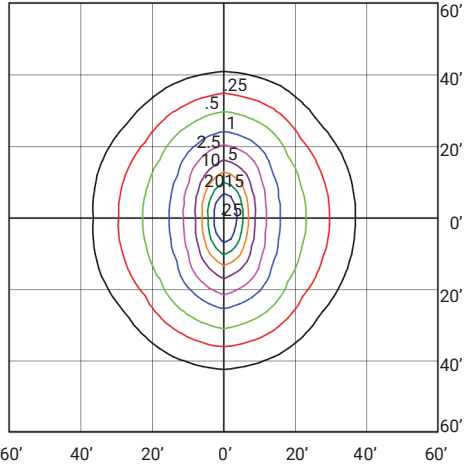
**Engineered by skilled hands,
for skilled hands.**

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PHOTOMETRIC PLOTS

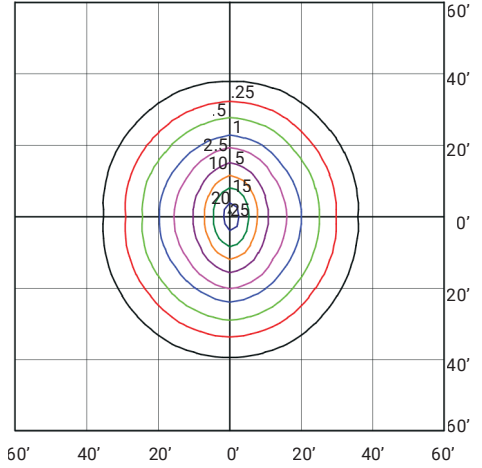
**LHA1-LED110A60-H-VK-VD-WHT-DIM (105W 5000K 45X100)
MOUNTED AT 20 FEET**

LUMENS 15933.8 MAX CALCULATED VALUE 29.88



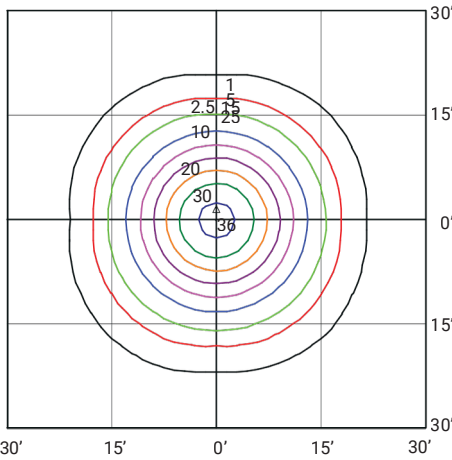
**LHA1-LED110A60-H-VK-VD-WHT-DIM (105W 5000K 65X95)
MOUNTED AT 20 FEET**

LUMENS 16603.7 MAX CALCULATED VALUE 26.57



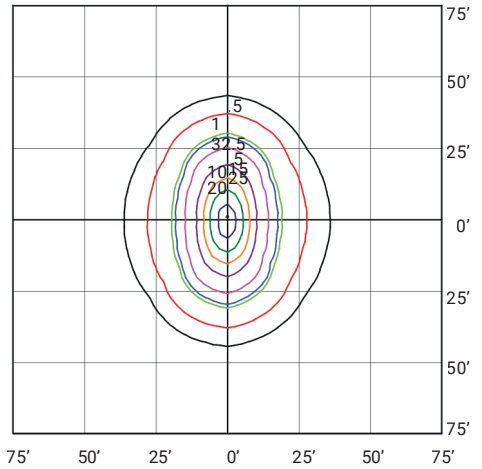
**LHA1-LED110A60-H-VK-VD-WHT-DIM (105W 5000K 90X90)
MOUNTED AT 15 FEET**

LUMENS 16246.14 MAX CALCULATED VALUE 38.20



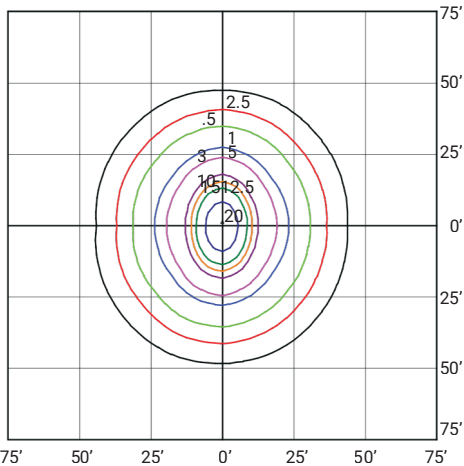
**LHA1-LED165A100-H-VK-VD-WHT-DIM (160W 5000K 45X100)
MOUNTED AT 25 FEET**

LUMENS 23573.7 MAX CALCULATED VALUE 27.49



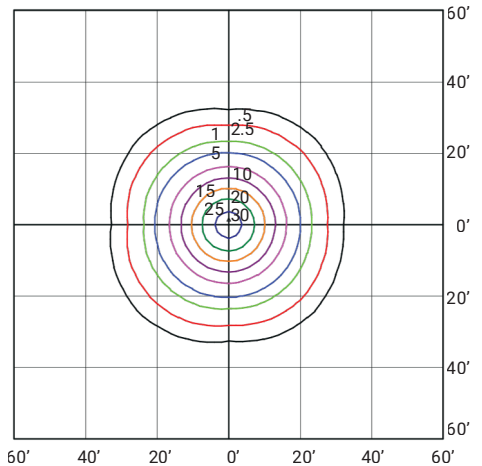
**LHA1-LED165A100-H-VK-VD-WHT-DIM (160W 5000K 65X95)
MOUNTED AT 25 FEET**

LUMENS 24754.24 MAX CALCULATED VALUE 24.78



**LHA1-LED165A100-H-VK-VD-WHT-DIM (160W 5000K 90X90)
MOUNTED AT 20 FEET**

LUMENS 24754.47 MAX CALCULATED VALUE 32.14



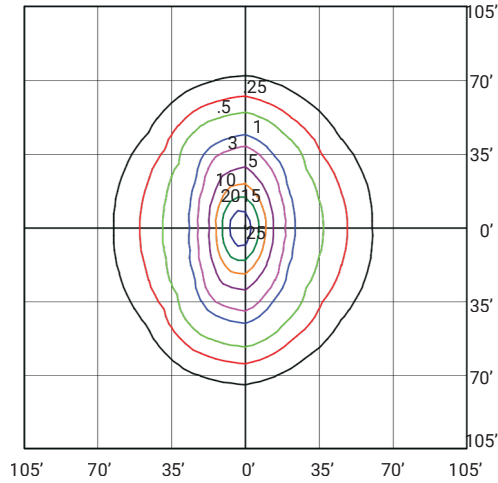
NOTE: Photometric plots are shown at the maximum lumen setting, 120V and 5000K.

PHOTOMETRIC PLOTS

**LHA2-LED320A220-H-VK-VD-WHT-DIM (320W 5000K 45X100)
MOUNTED AT 35 FEET**

LUMENS 48570.3

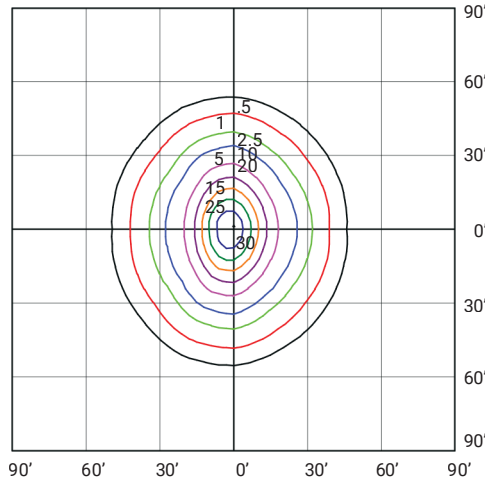
MAX CALCULATED VALUE 27.74



**LHA2-LED320A220-H-VK-VD-WHT-DIM (320W 5000K 65X90)
MOUNTED AT 30 FEET**

LUMENS 51208.01

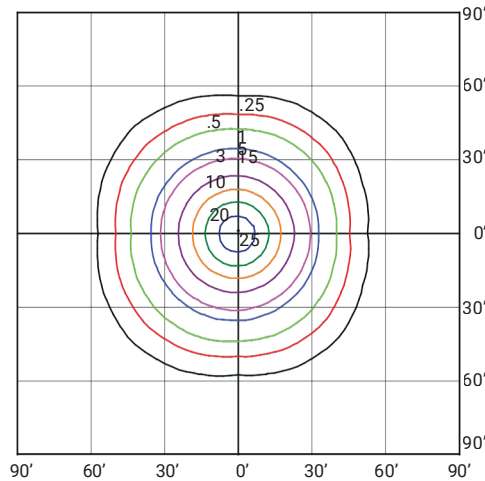
MAX CALCULATED VALUE 33.75



**LHA2-LED320A220-H-VK-VD-WHT-DIM (320W 5000K 90X90)
MOUNTED AT 30 FEET**

LUMENS 50865.66

MAX CALCULATED VALUE 28.03



NOTE: Photometric plots are shown at the maximum lumen setting, 120V and 5000K.