RAB® DESIGN

RH1S-LED
LED Round Highbay

Lumen Adjustable

Colour Selectable
3.5K 4K 5K

Voltage Range
120-347V

IDEAL APPLICATIONS

- ✓ Warehouses
- ✓ Factories
- ✓ Gyms
- ✓ Industrial Applications
- ✓ Food and Beverage Processing
- ✓ Commercial Kitchens

DESCRIPTION:

The RHS-LED Series of highbay luminaires are ruggedly designed, easy to install, and deliver a high lumen output ideal for illuminating warehouses, manufacturing facilities, recreational facilities, gyms, food and beverage processing and commercial kitchens. This fixture series offers the most current, easy to use, affordable control options adding greater functionality to your installation. NEMA4X and NSF certified.
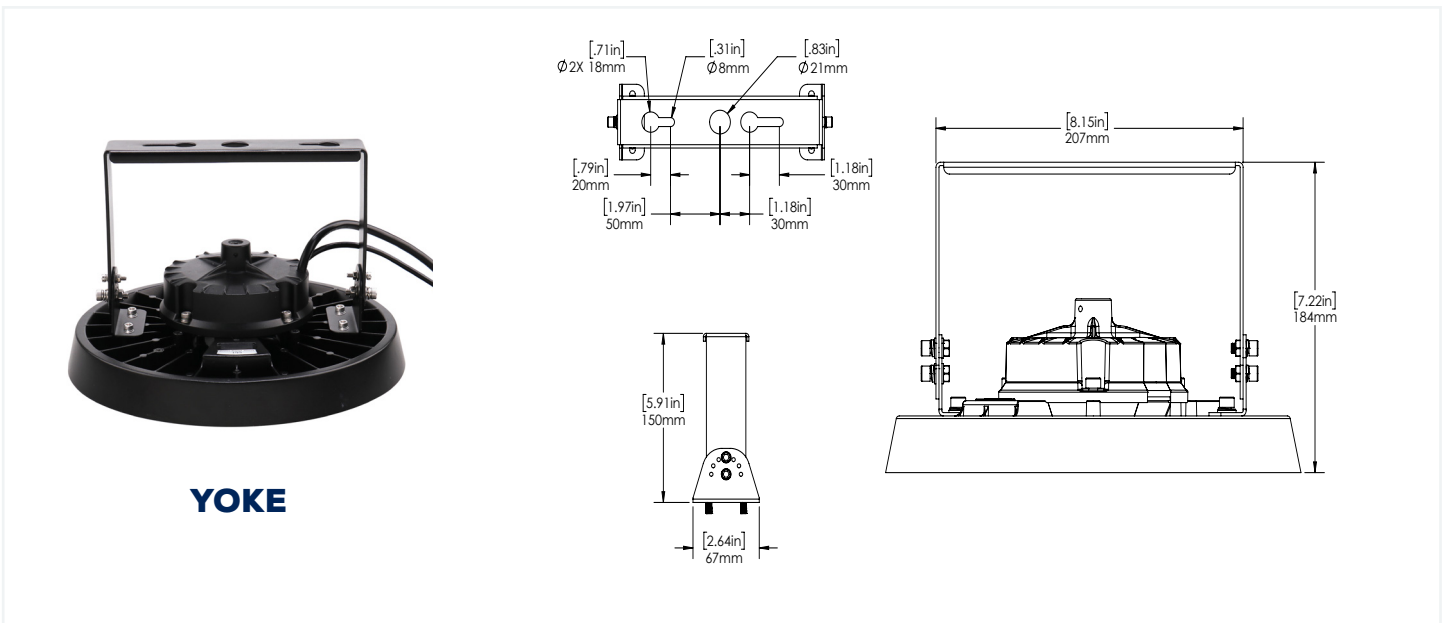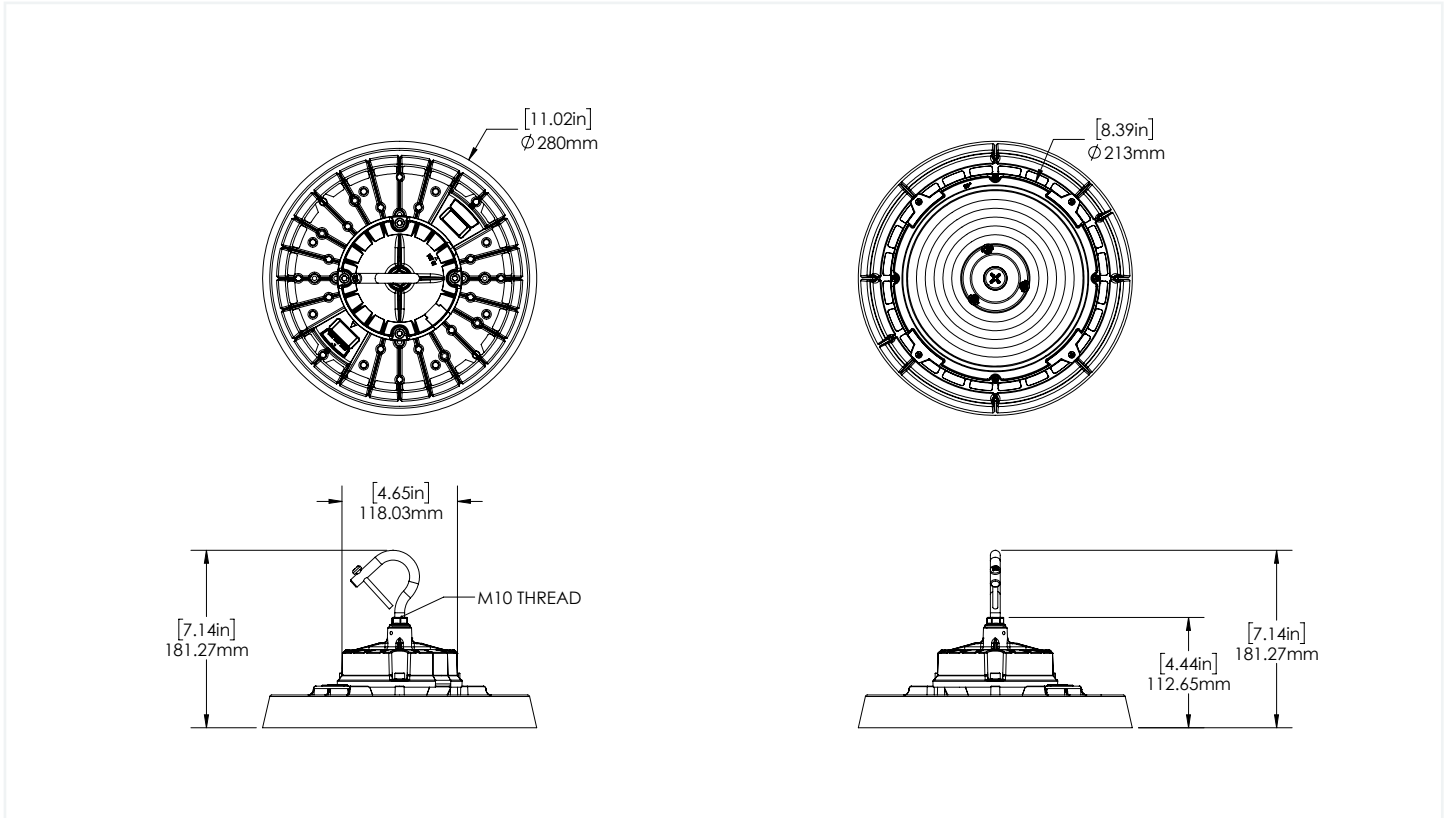
FEATURES:

- Ruggedly designed with die cast aluminum body and polycarbonate lens. NEMA4X and NSF certified.

- Colour Selectable fixture allows Installer to choose between 3500K/4000K/5000K at the time of installation.

- The Lumen adjustable fixture allows Installer to select between 3 wattage settings:

  RH1S-LED100A60 - 100W/80W/60W
  RH1S-LED150A100 - 150W/120W/100W

- Easy to install with mounting hook and 2 meter cord for line voltage and 0.5 meter cord for 0 -10V dimming.

- At each wattage setting, the brightness can be adjusted using the DC dimmer and remote control (sold separately).

- 12VDC Auxiliary available from fixture for lighting controls.

- Fixture can be suspended, pendant or yoke mounted. (Yoke sold as a separate accessory)

- Optional dual-functionality motion sensor/dimmer with easy plug-and-play install with no wiring needed. (More details on page 10)

SPECIFICATIONS	RH1S-LED100A60	RH1S-LED150A100
Watts (Maximum)	100.2 W	142.0 W
Lumens (Maximum)	14802 Lm	21045 Lm
Efficacy	147.8 Lm/W	148.2 Lm/W
Replaces Up To	250MH	400MH
Colour Temp	VK - Colour Selectable (3500K/4000K/5000K)	
Voltage	120-347V	
CRI	83	
Dimming	0-10V Dim to Off	
THD	3.32%	3.62%
PF	0.998	
Beam Distribution	90 Degrees	
LED Life (L78)	100,000 Hours	
Housing Finish	Matte Black	
Housing Details	Die Cast Aluminum	
Lens Details	Clear Polycarbonate Lens	
Mounting	Suspended*, Pendant, Yoke	
Cable Length	Input Power: 2m Cab Tire Cable (SJTW 3x18 AWG) Dimming and 12VDC AUX- 0.5m Cab Tire Cable (3x22 AWG)	
Operating Temp.	Without Motion Sensor: -40ºCto 50ºC With Motion Sensor: -30ºC to 50ºC With Battery Backup: 0ºC to 50ºC	
Options Sold Separately	Yoke, Wire Guard, Polycarbonate/Aluminum Reflectors and Cover, Twistlock Motion Sensor/Wireless Dimmer and Remote Control, Emergency Battery Back-up, Junction Box Pendant Mount Kit, Adaptors for 1/2" NPT and 3/4" NPT Thread.	
Certifications	cULus Listed for Canada and USA, per UL1598, CSA C22.2 NO. 250.0-18, 4th Ed, Wet Location, IP65, DLC Premium, NEMA 4X per UL 50E, CSA C22.2 No. 94.2:20, 3G vibration rated per ANSI/IEEEC136.31-2010, NSF (Splash Zone and Non Food Zone), 5 Year Warranty	

Note: Specs shown are for 120V/4000K
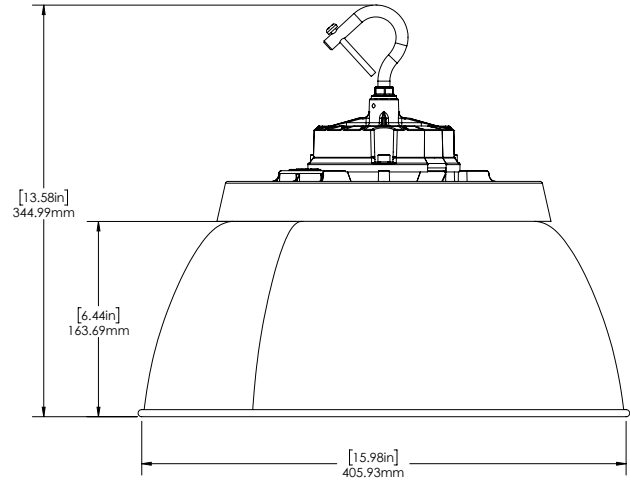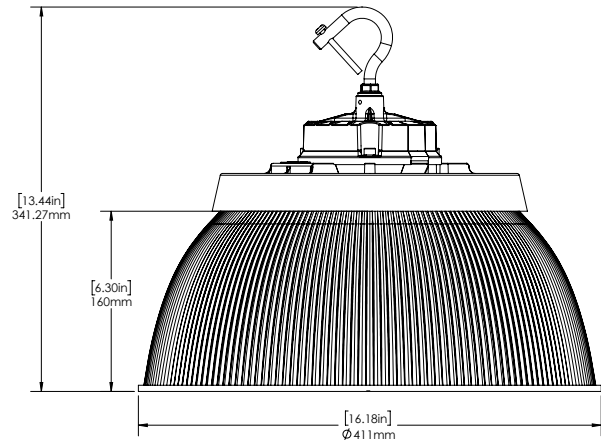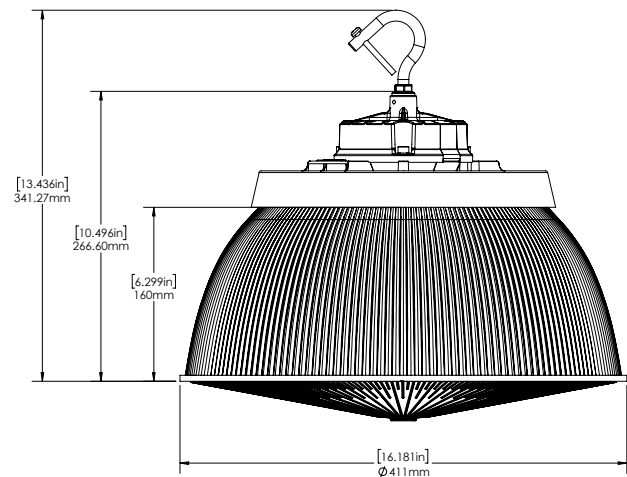*Standard Configuration

UL CERTIFIED SAFETY US CA E361278 · IP65 RATED · APPROVED FOR WET LOCATION · 5 YEAR WARRANTY · NEMA 4X CERTIFIED · NSF · 3G VIBRATION TESTED · DLC LISTED PREMIUM

DIMENSIONS:

[11.02in]
⌀ 280mm

[8.39in]
⌀ 213mm

[4.65in]
118.03mm

M10 THREAD

[7.14in]
181.27mm

[7.14in]
181.27mm

[4.44in]
112.65mm

YOKE

[.71in]
⌀ 2X 18mm

[.31in]
⌀ 8mm

[.83in]
⌀ 21mm

[.79in]
20mm

[1.18in]
30mm

[1.97in]
50mm

[1.18in]
30mm

[8.15in]
207mm

[7.22in]
184mm

[5.91in]
150mm

[2.64in]
67mm

DIMENSIONS:

ALUMINUM REFLECTOR

[13.58in]
344.99mm

[6.44in]
163.69mm

[15.98in]
405.93mm

PC REFLECTOR
(CLEAR PRISMATIC)

[13.44in]
341.27mm

[6.30in]
160mm

[16.18in]
Ø 411mm

PC REFLECTOR
COVER

[13.436in]
341.27mm

[10.496in]
266.60mm

[6.299in]
160mm

[16.181in]
Ø 411mm

DIMENSIONS:

WIRE GUARD

[9.02in]
229.13mm

[6.01in]
152.61mm

[1.89in]
48.13mm

[10.27in]
260.80mm
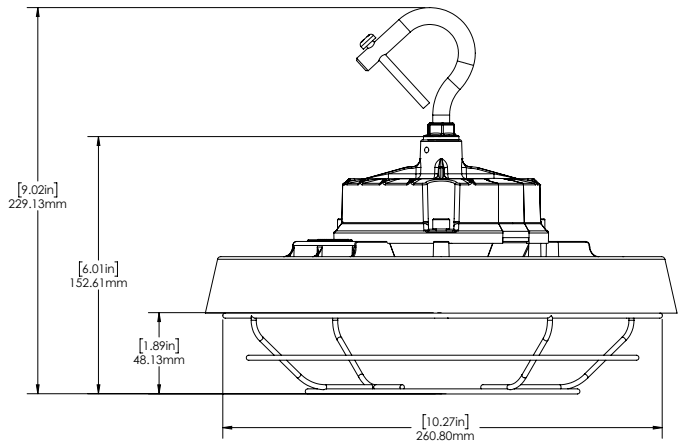
**JUNCTION BOX
WITH 1/2" OR 3/4"
NPT ADAPTER**

[5.91in]
150mm

1/2" or
3/4" NPT

TOP VIEW

[8.67in]
220mm

FRONT VIEW

[4.74in]
120mm

[.83in]
8X Ø 21mm KNOCKOUT

BOTTOM VIEW

[1.26in]
Ø 32mm

[.59in]
15mm

[3.15in]
80mm

[1.51in]
38mm

M10 THREAD
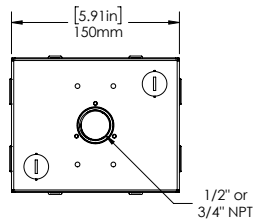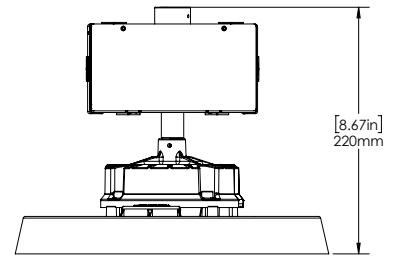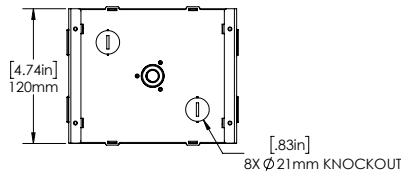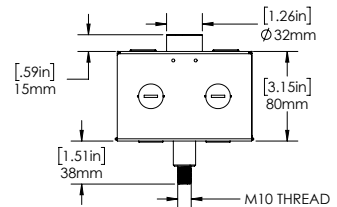
SIDE VIEW

DIMENSIONS:

**FIXTURE DIMENSIONS
WITH BATTERY
BACK UP KIT**

[8.12in]
206.30mm

[4.33in]
110mm

[15.90in]
403.92mm

[3.96in]
100.46mm
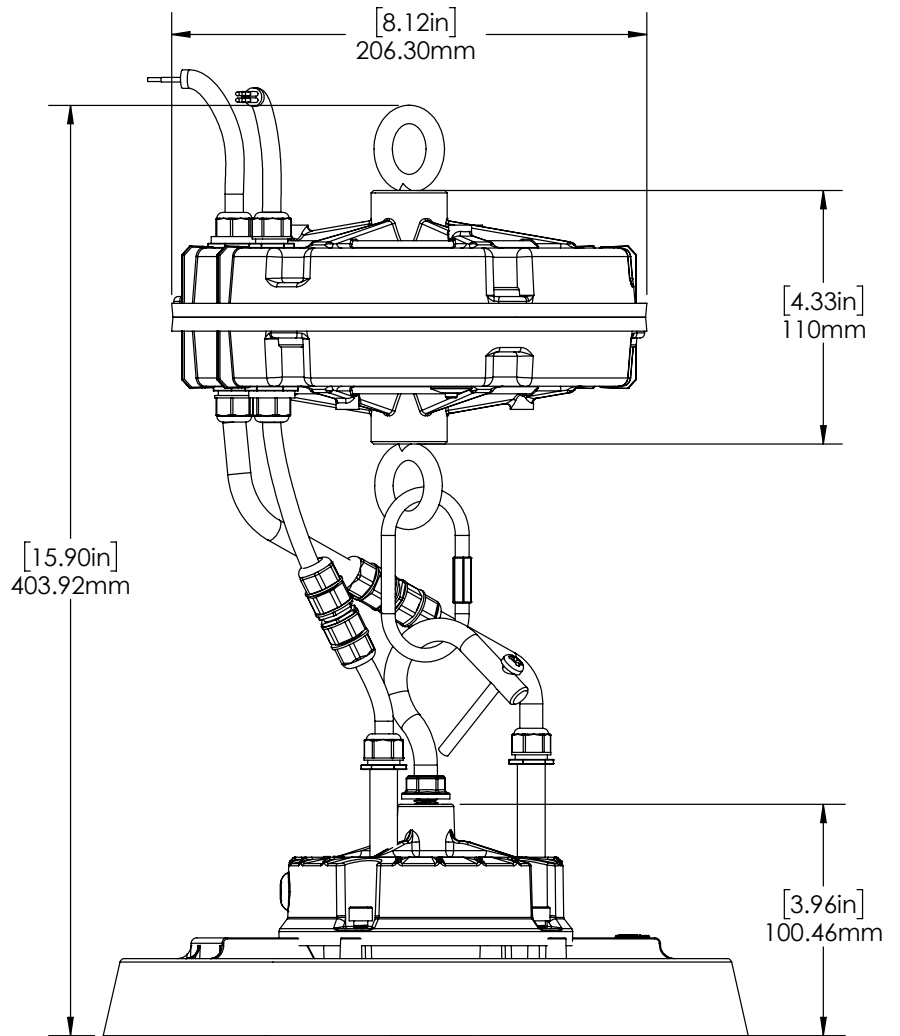
SPECIFICATIONS

Model Number	Voltage (V)	Power (W)	Light Output (lm)	Efficacy (lm/W)	THD (%)	PF	CCT (K)	CRI
RH1S-LED100A60-H-VK-BLK-DIM-PCL-FS-N4X (3500K)	120-347	103.37	13751.1	133.03	3.40	0.998	3508	82
RH1S-LED100A60-H-VK-BLK-DIM-PCL-FS-N4X (4000K)	120-347	100.17	14802.1	147.77	3.32	0.998	4164	83
RH1S-LED100A60-H-VK-BLK-DIM-PCL-FS-N4X (5000K)	120-347	102.17	13720.4	134.29	3.42	0.998	5109	83
RH1S-LED150A100-H-VK-BLK-DIM-PCL-FS-N4X (3500K)	120-347	147.09	19549.3	132.91	3.83	0.998	3504	82
RH1S-LED150A100-H-VK-BLK-DIM-PCL-FS-N4X (4000K)	120-347	142.00	21045.3	148.21	3.62	0.998	4192	83

AMPERAGE DRAW & SURGE PROTECTION

	MAX. CURRENT (A)					SURGE PROTECTION (kV)
	120V	208V	240V	277V	347V	120-347V
RH1S-LED100A60	0.88A	0.51A	0.44A	0.38A	0.31A	6kV
RH1S-LED150A100	1.25A	0.72A	0.63A	0.54A	0.43A	

LUMEN ADJUSTABLE SETTINGS

RH1S-LED100A60			
WATTS (W)	100	80	60
LUMENS (Lm)	14802	11824	8868
RH1S-LED150A100			
WATTS (W)	150	120	100
LUMENS (Lm)	21045	17784	14780

Max power lumens are as per DLC reported listings. Other lumen values are calculated using the DLC max power reported efficacy.

WEIGHT (LBS)

RH1S-LED100A60	5.07
RH1S-LED150A100	

LUMEN MAINTENANCE

	50,000 Hours	75,000 Hours	100,000 Hours
RHB1S-LED100A60	88.6%	83.5%	78.7%
RHB1S-LED150A100			

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

COLOUR TEMPERATURE SWITCH:

Choose between 3500K/4000K/5000K using a switch that is located behind a rubber plug on the back.
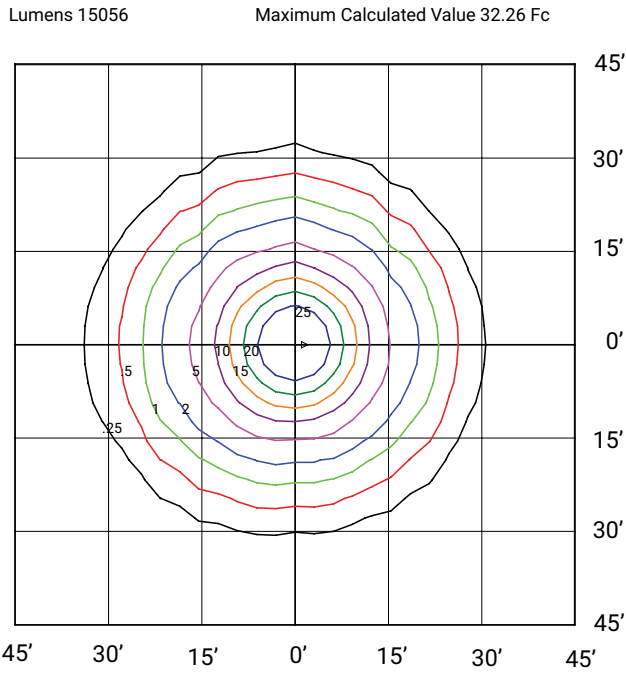

LUMEN ADJUSTABLE SWITCH:

Example: RH1S-LED100A60, choose between 100W/120W/150W using a switch that is located behind a rubber plug on the back.
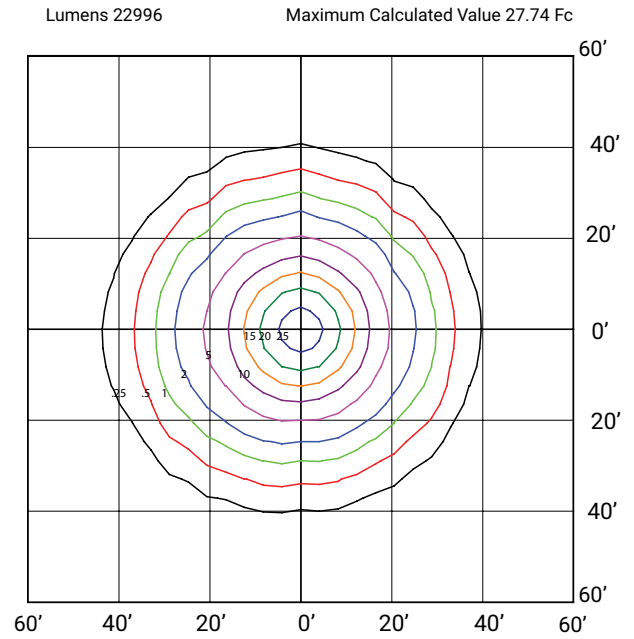


DIMMING WIRE & 12VDC AUXILIARY WIRE ACCESSIBILITY:

2 meter power cord

Easy access to dimming wires and 12VDC AUX power

RH1S-LED100A60-H-VK-DIM-PCL-FS-N4X- (100W 4000K)
MOUNTED AT 15 FEET

Lumens 15056   Maximum Calculated Value 32.26 Fc

RH1S-LED150A100-H-VK-DIM-PCL-FS-N4X- (150W 4000K)
MOUNTED AT 20 FEET

Lumens 22996   Maximum Calculated Value 27.74 Fc

RH1S-LED100A60-H-VK-DIM-PCL-FS-N4X-ALUMINUM REFLECTOR
(100W 4000K)

MOUNTED AT 15 FEET

Lumens 13696   Maximum Calculated Value 34.08 Fc

RH1S-LED150A100-H-VK-DIM-PCL-FS-N4X- ALUMINUM REFLECTOR
(150W 4000K)
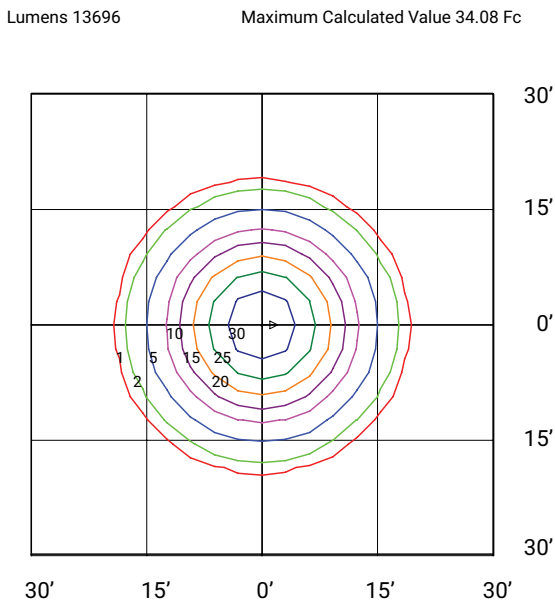
MOUNTED AT 20 FEET

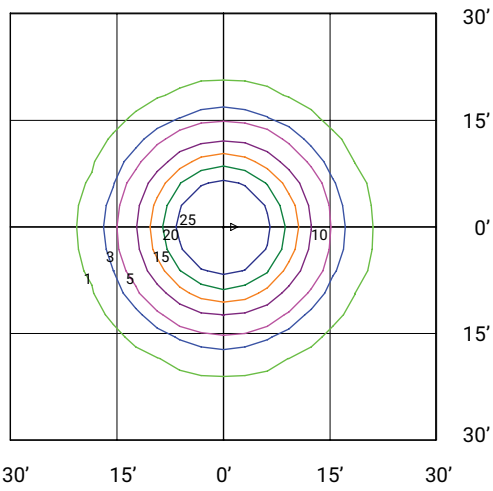Lumens 21292   Maximum Calculated Value 29.93 Fc
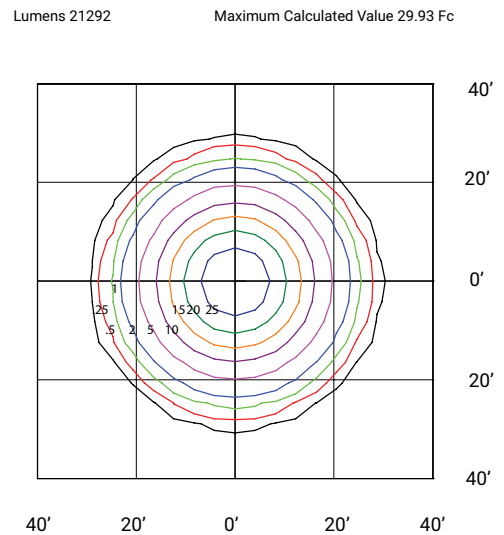
RH1S-LED100A60-H-VK-DIM-PCL-FS-N4X-POLYCARBONATE REFLECTOR
(100W 4000K)

MOUNTED AT 15 FEET

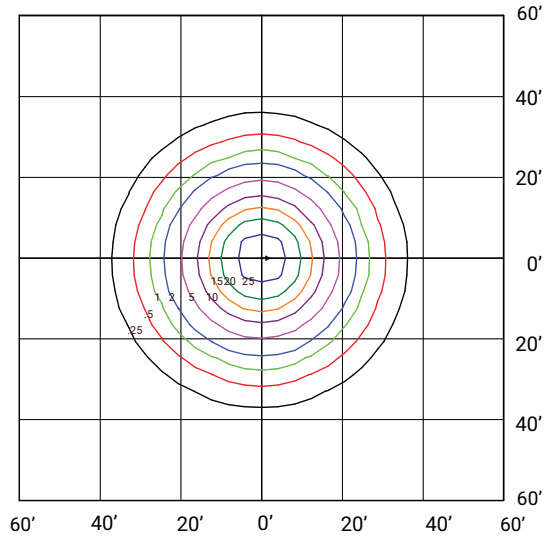Lumens 14218   Maximum Calculated Value 30.97 Fc

RH1S-LED150A100-H-VK-DIM-PCL-FS-N4X-POLYCARBONATE REFLECTOR
(150W 4000K)

MOUNTED AT 20 FEET

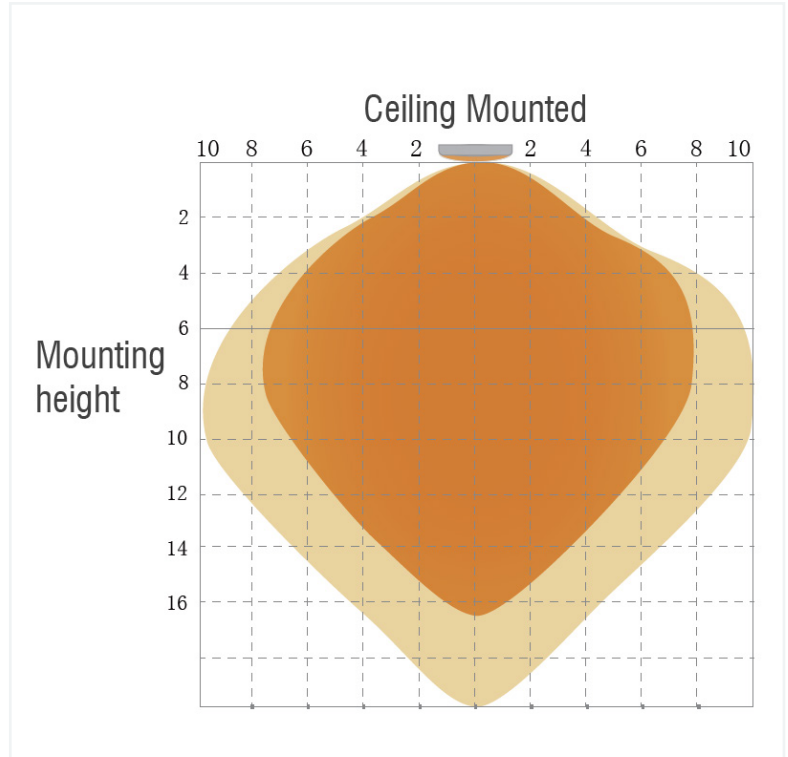Lumens 22169   Maximum Calculated Value 27.30 Fc

DC MICROWAVE MOTION SENSOR/ DIMMER SPECIFICATIONS

SENSOR SPECIFICATIONS

SPECIFICATIONS	
Operating Voltage	12V DC
Operating Current	30mA
Output	0-10V DC
Stand-by Power	0.5W
Frequency	5.8GHz +/-75MHz
IP Rating	IP65
Detection Angle	30° - 150°
Mounting Height	Max 15m (50ft)
Brightness	70%/80%/90%/100%
Sensitivity	20%/50%/75%/100%
Hold time	10s/1min/10min/30min
Daylight threshold	10Lux/30Lux/50Lux/100Lux/ Disabled
Stand-by time	1min/30min/60min/+∞
Stand-by Dimming Level	10%/20%/30%/50%

DEFAULT SETTINGS	
Brightness	70%
Sensitivity	20%
Hold time	10s
Daylight threshold	Disabled
Stand-by time	+ ∞
Stand-by Dimming Level	10%

SENSOR DETECTION RANGE (METRE)

Ceiling Mounted

Mounting height

Field Installed wireless Motion Sensor/ Dimmer

DC MOTION SENSOR/DIMMER REMOTE CONTROL SETTINGS

SPECIFICATIONS	
ON/OFF	Long press until the brightness indicator light is on. Then press to permanently turn on and off the fixture.
BRIGHTNESS	Sets the highest light fixture brightness when motion is detected.
HOLD TIME	The time the light fixture will remain at the brightness setting after it detects motion.
STAND-BY DIM	The dim level that the light fixture will dim down after the Hold Time has expired.
STAND-BY TIME	The time the light fixture will remain in the Stand-by dim state before it shuts off. To disable the light from shutting off, select the INFINITY icon.
SENSITIVITY	Sets the sensitivity to which the sensor will detect motion.
DAYLIGHT	The lux setting that the light fixture will turn on/off. If the ambient lux is more than the defined lux setting, the fixture & sensor function will turn off and remain off until the ambient lux is below the setting. Long press until the daylight indicator light is on. Then press to select the desired lux setting.
SEND	Uploads the selected remote-control parameters to the light fixture sensor.
RESET	Resets the light fixture sensor parameters to the default settings.
- / +	Press to increase or decrease brightness from 0% to 100% at increments of 2%.
TEST	Press to test the sensor (hold time is 3s).

Top Section: Settings Display Area

Bottom Section: Button Setting Area

Note: To switch from motion sensor mode to dimmer mode, long press the ON/OFF button until only the BRIGHTNESS option lights up. If all options light up, long press again. Then use the -/+ buttons to adjust the brightness.

PROGRAMMING INSTRUCTIONS

1. Press the ON/OFF button
2. Select the desired settings
   - Select the brightness level by pressing the BRIGHTNESS button.
   - Select the hold time by pressing the HOLD TIME button.
   - Select the stand-by dim level by pressing the STANDBY DIM button.
   - Select the stand-by time by pressing the STANDBY TIME button.
   - Select the sensor sensitivity by pressing the SENSITVITY button.
   - Optional: If daylight sensor is desired, long press the DAYLIGHT button and then choose the lux setting.
3. Press SEND- the fixture responds by strobing.

ROUND HIGHBAY EMERGENCY DRIVER

TECHNICAL DATA

ITEM	DATA
Rated Input Voltage	100-347 VAC, 50-60Hz
Input Current	20-100mA
Input Power (Charging)	8W max
Power Factor	0.6 at 100VAC, 0.5 at 347VAC
Output Power (Discharging)	40W
Battery Pack Voltage/Capacity	LiFePO4 12.8V 6600mAh, 84.48 Wh
Recharge Current	0-500mA
Recharge Time	24 Hours
Discharge Time	90 Minutes
Max. Casing Temperature tc.	70°C
Ambient Temperature Range	0°C to 50°C
Remote Control Range	15 metres
Certification	cULus, IP65

Note: Lumen output with emergency battery backup can be calculated by multiplying battery power output (40W) with efficacy of fixture.

SAFETY FEATURES

- Input over current protection.
- Output over voltage protection.
- Output under current protection.
- Output short circuit protection (Emergency Mode).

REMOTE CONTROL

- Remote control provided to test the emergency battery back-up.

TEST SWITCH

- Test the emergency battery back-up.

LED INDICATOR LIGHT

- Red stable indicating charging mode or charging full
- Red off indicating main power off or discharging mode

ORDERING GUIDE:

RH1S		H	VK	BLK	DIM	PCL	FS	N4X
Fixture	**Wattage**	**Voltage**	**Colour Temp.**	**Finish**	**Dimming**	**Lens**	**NSF Certification**	**NEMA 4X Certification**
	LED100A60 LED150A100	H - 120-347V	VK-Colour Selectable (3500K/ 4000K/ 5000K)	BLK - Matte Black	DIM - 0-10V Dimming	PCL - Polycarbonate Lens	FS - NSF	N4X - NEMA 4X

STOCK CODES	
081610	RH1S-LED100A60-H-VK-BLK-DIM-PCL-FS-N4X
081611	RH1S-LED150A100-H-VK-BLK-DIM-PCL-FS-N4X

Ordering Guide For Accessories
Check the items that you wish to order:

- ☐ 080564 RHB1/RHB1S/RH1S YOKE BLK
- ☐ 140750 M10-3/4" NPT ADAPTER NICKEL PLATED IRON
- ☐ 140748 M10-1/2" NPT ADAPTER NICKEL PLATED IRON
- ☐ 081618 RH1S ALUMINUM REFLECTOR
- ☐ 081620 RH1S POLYCARBONATE REFLECTOR
- ☐ 081622 RH1S/RH2S POLYCARBONATE REFLECTOR COVER
- ☐ 002374 RH1S STEEL WIRE GUARD
- ☐ 080909 DC MOTION SENSOR/DIMMER
- ☐ 080970 DC MOTION SENSOR REMOTE CONTROL
- ☐ 002327 RHB1S/RHB2S/RH1S/RH2S JUNCTION BOX PENDANT KIT BLK
- ☐ 002318 ROUND HIGHBAY 40W 120-347V LED EMERGENCY BBK

Note: All accessories complete with hardware for installation

RATINGS TABLE:

NEMA 4X CERTIFIED	NEMA 4X fixtures are for Indoor or outdoor use, including offshore applications. Offers protection against windblown dust and rain. Offers protection from splashing water and hose-directed water. Corrosion-resistant.
NSF	NSF-approved lighting products must deliver light output (footcandle) levels that are adequate for food preparation and food storage areas. These products must be shatterproof to ensure that no broken glass splinters over food or other equipment. Fixtures must be easily accessible, resistant to the intrusion of dust, water and other hazards, and designed for easy cleaning to minimize the breeding of bacteria or mold.