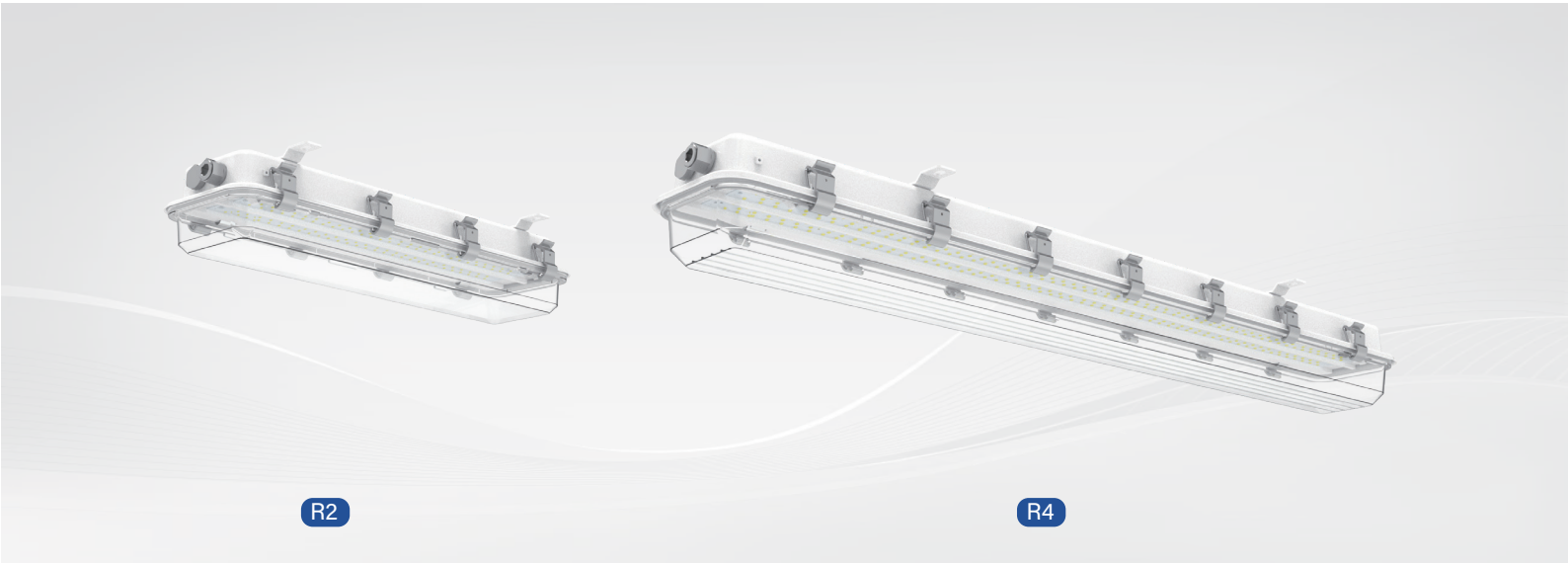
HAZARDOUS LOCATIONS LED LUMINAIRE
EX-R Spec Sheet

Pan American
Professional Lighting Manufacturer



EX-R Spec Sheet

The R Series explosion-proof LED light is designed for hazardous areas where flammable gases, vapors, or liquids may be present during normal facility operations. Combining the style and design of advanced LED technology with the robustness and durability of a hazard-ous-location luminaire, it is ideal for retrofitting existing HPS/MH (High-Pres-sure Sodium/Metal Halide) fixtures. This product delivers higher efficiency for energy savings, lower maintenance costs, and a shorter return on investment. The optional backup battery system provides a minimum of 90 minutes of operation after AC power failure in an emergency. (Contact sales for EM options)

Compliance

- UL 844 Hazardous Locations
  Class I Division 2, Groups A, B, C and D
  Class II Division 1, Groups E, F and G
  Class II Division 2, Groups F and G
  Class III
- UL1598 Luminaires
- UL1598A Marine Outside Type
- UL 8750 LED Safety
- UL 924 Emergency Lighting
- DNV
- ABS
- Vibration 3G
- NEMA Type 4X
- IP66
- IK10

Application

- Areas requiring continuous and consistent light levels
- Marine applications (e.g engine rooms, decks, walkways)
- Pulp and paper production facilities
- Water and wastewater treatment facilities
- Petrochemical facilities
- Offshore environments

HAZARDOUS LOCATIONS LED LUMINAIRE
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Benefits & Features

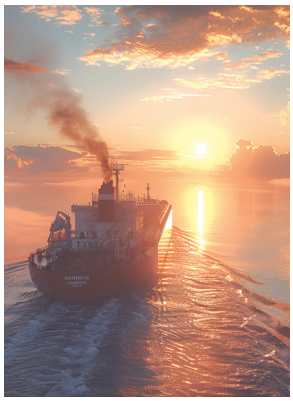


- Adopting the new snap-fit structure design, the luminaire enables easy opening and closing, reduces product weight, and achieves superior performance during vibration testing
- Standard Fixed mounting bracket for surface mount and rope for pendant mount, optional Pole mount (purchased separately)
- Equipped Latches not only for waterproof, but for quick release and easy to maintain
- SUS 304 stainless steel standard housing (SUS316 optional), great corrosion and heat resistance, outstanding durability, suitable for harsh environments
- Excellent quality optics, longer installation distance between luminaires for lower costs
- LED light strip replaceable, customer can buy new one to replace if it fails to work
- UV stabilized, impact-resistant fiberglass reinforced polycarbonate lens (clear for standard, frosted for optional)
- Built-in low voltage Microwave Sensor (optional)

Key Features and Information

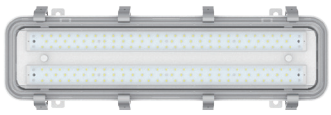
• Electrical

Model	EX-xxxW R2	EX-xxxW R4
Selectable Power	20W/30W/40W	40W/50W/60W
Power Model	R2: SS-55EP-M54BH for 120-347VAC or VA-40V-054B for 277-480VAC R4: SS-75EP-M54BH for 120-347VAC or HVG-100-48AB for 277-480VAC	
Input Voltage	120-347VAC or 277-480VAC	
Input Frequency	50/60Hz	
Power Factor @120V	> 0.95	
Optional Emergency Function	Min. 90 mins (Contact sales for EM options)	
Service Life	Up to 50,000 hours	
Salt Spray	500Hours	
Surge Protection	SS-55EP-M54BH: L/N-PE: 6KV, L-N: 6KV VA-40V-054B: L/N-PE: 6KV, L-N: 6KV SS-75EP-M54BH: L/N-PE: 6KV, L-N: 6KV HVG-100-48AB: L/N-PE: 4KV, L-N: 2KV	
Dimming	Driver includes dimming control wiring for 1-10V dimming systems. Requires separate 1-10V DC dimming circuit.	



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• Optical

Model	EX-xxxW R2	EX-xxxW R4
Selectable Power	20W/30W/40W	40W/50W/60W
Lumens Per Watt	180lm/W	180lm/W
Lumen Output	3600-7200lm	7200-10800lm
Selectable CCT	4000K/5000K/6500K	
CRI	＞70	
Beam Angle	120°	
LED	Long-life, high-efficacy, discrete, surface-mount 2835 LEDs 100,000-Hour LED lifespan based on IES LM-80 results and TM-21	

(Note: Refer to the table of testing data on page 4.)

• Mechanical

Model	EX-xxxW R2/R4
Housing Material	Stainless steel housing with baked-on White RAL9016 epoxy finish
Lens Material	Clear Polycarbonate (Standard); Frosted Polycarbonate (Optional)
Gasket Material	Silicone Rubber
Latches/Clips Material	Stainless steel hardware
Protection Rating	Ingress protection: IP66 Impact protection: IK10
Mounting Options	Surface Mount (Standard) ; Pendant/Rope Mount (Standard) ; Pole Mount (Purchase separately)
Cable Entries	2*M20, 2*3/4"NPT
Warranty	5-year limited warranty for fixture ; 3-year limited warranty for battery backup

• Ambient Temperature

Model	Input Voltage	Power Model	Temperature Class
R2	120-347VAC	SS-55EP-M54BH	T5:-40°C to +60°C (CIDII) ; T5:-40°C to +50°C (CIIDI/CIIDII/CIII)
	277-480VAC	VA-40V-054B	
R4	120-347VAC	SS-75EP-M54BH	T5:-40°C to +60°C (CIDII) ; T5:-40°C to +50°C (CIIDI/CIIDII/CIII)
	277-480VAC	HVG-100-48AB	

HAZARDOUS LOCATIONS LED LUMINAIRE
EX-R Spec Sheet

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- Electrical specification (actual measurement)

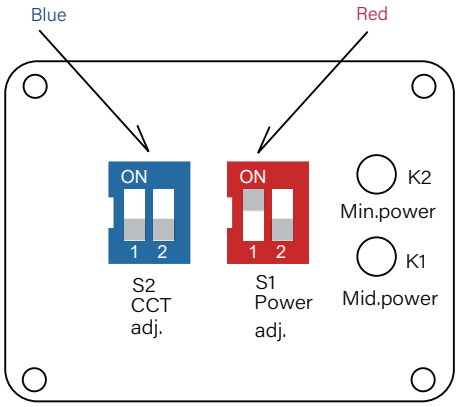
Model	EX-40WR2D50D120AME55T								
Test Power	40W			30W			20W		
Test CCT (K)	6500	5000	4000	6500	5000	4000	6500	5000	4000
Lumens Per Watt (lm/W)	175.22	179.62	175.67	173.52	177.32	175.91	170.48	172.37	174.8
Lumen Output (lm)	7210.1	7254.9	7261.2	5505.4	5529.8	5564.9	3525	3526.4	3580.2
Beam Angle	117.6	117.4	117	117.2	117.1	116.8	117.3	117.1	116.9
CCT (K)	6280	4983	4048	6268	4979	4048	6250	4891	4046
CRI	73.9	74.8	74.3	74	74.7	74.4	74	74.8	74.4
Power Factor	0.9994	0.9994	0.9994	0.9989	0.9989	0.9989	0.9977	0.9976	0.9979
Test Voltage	120VAC								
Test Power Model	SS-55EP-M54BH								

Model	EX-60WR4D50D120AME75T								
Test Power	60W			50W			40W		
Test CCT (K)	6500	5000	4000	6500	5000	4000	6500	5000	4000
Lumens Per Watt (lm/W)	177.86	182.30	180.67	178.61	182.2	181.44	178.05	180.91	181.28
Lumen Output (lm)	10842	10931	11071	9192.2	9206	9310.7	7300.9	7312.5	7433.9
Beam Angle	117.7	117.4	117.2	117.8	117.6	117.1	118	117.7	117.3
CCT (K)	6361	5023	4062	6358	5021	4062	6344	5023	4062
CRI	74.5	75.1	74.7	74.5	75.1	74.8	74.5	75	74.8
Power Factor	0.9994	0.9993	0.9994	0.999	0.9991	0.999	0.9983	0.9983	0.9983
Test Voltage	120VAC								
Test Power Model	SS-75EP-M54BH								

HAZARDOUS LOCATIONS LED LUMINAIRE
EX-R Spec Sheet

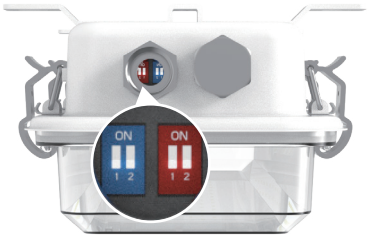
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Power and CCT Selectable





Power and CCT Selectable



DIP switch

Operating Instructions

- **S1 DIP switch - Red (S1 Power adj.)**

The luminaire incorporates a dual-dial power configuration switch enabling three selectable output ratings. Factory default settings and power levels can be customized based on project requirements.

1. Maximum Output (100% nominal power)
Switch configuration: Dial 1 = OFF, Dial 2 = OFF;



R2: 40W

2. Medium Output (70%-90% of nominal power, depending on specification)Switch configuration: Dial 1 = ON, Dial 2 = OFF



R2: 30W

3. Minimum Output (50%-70% of nominal power, depending on specification)Switch configuration: Dial 1 = OFF, Dial 2 = ON



R2:20W

- **S2 DIP switch - Blue (S2 CCT adj.)**

The luminaire incorporates a dual-dial power configuration switch enabling three preset color temperature options. The factory default setting can be customized according to order requirements.

1. Cool white, e.g. 6500K
Switch configuration: Dial 1 = OFF, Dial 2 = OFF



6500K

2. Neutral white, e.g. 5000K
Switch configuration: Dial 1 = ON, Dial 2 = OFF



5000K

3. Warm white, e.g. 4000K
Switch configuration: Dial 1 = ON, Dial 2 = ON



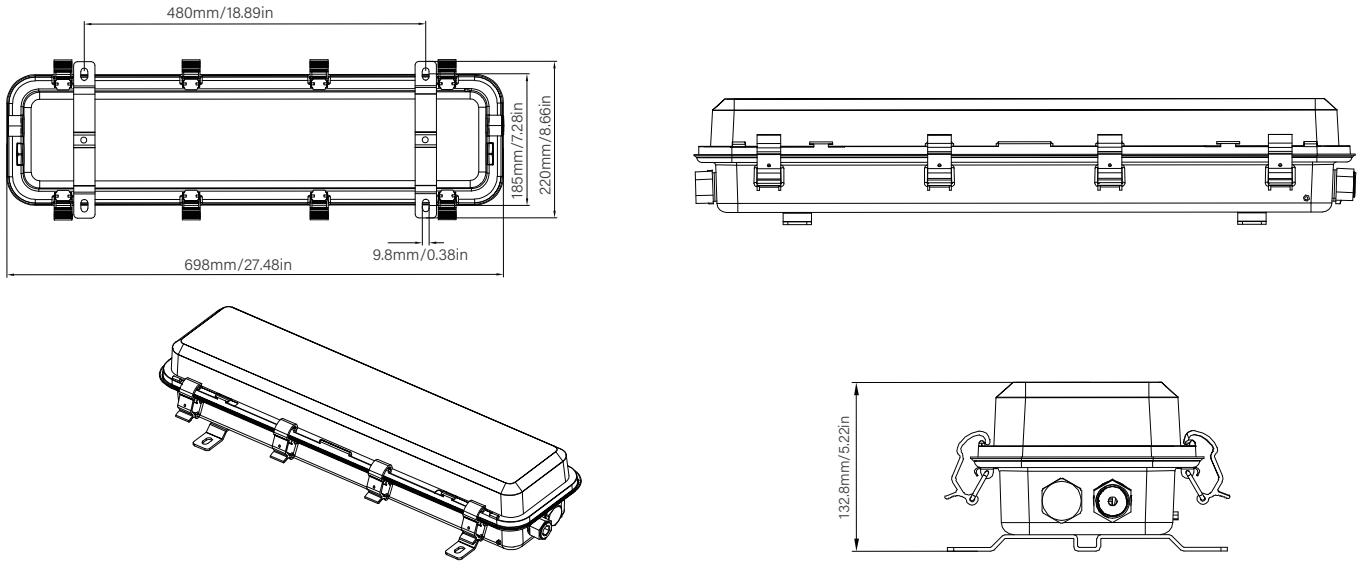
4000K

HAZARDOUS LOCATIONS LED LUMINAIRE
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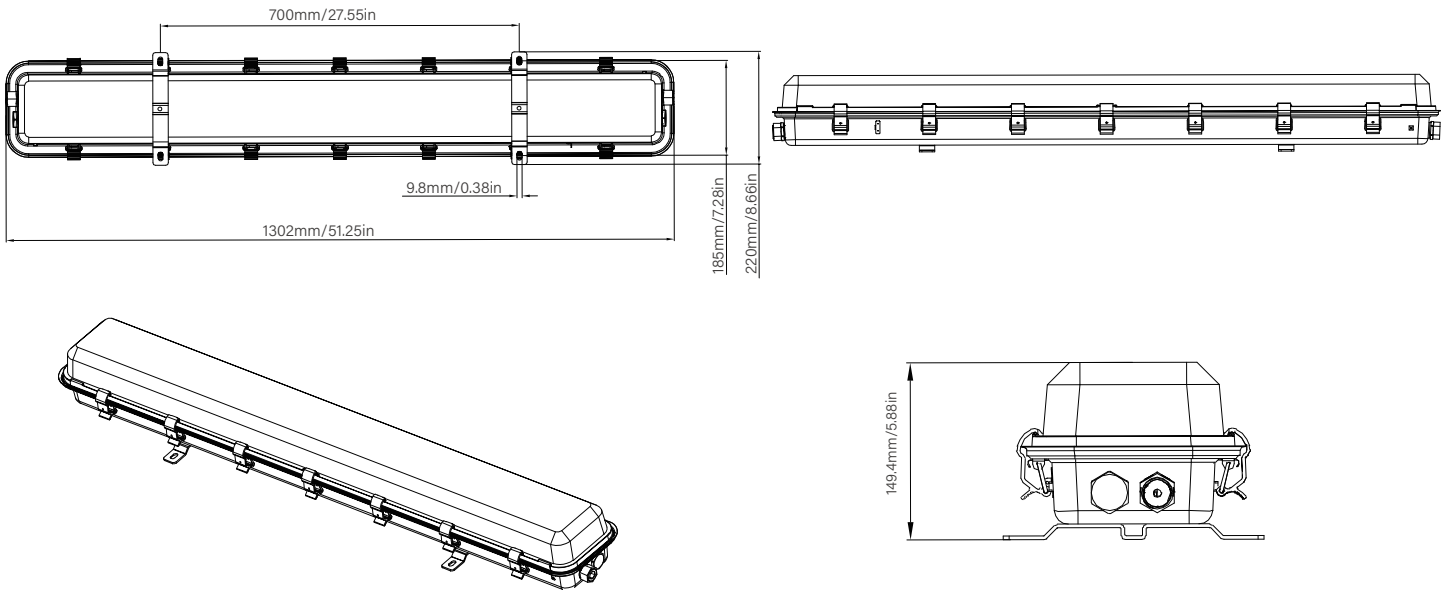
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Product Dimensions Unit: mm[inch]

- R2



- R4



Packing Information

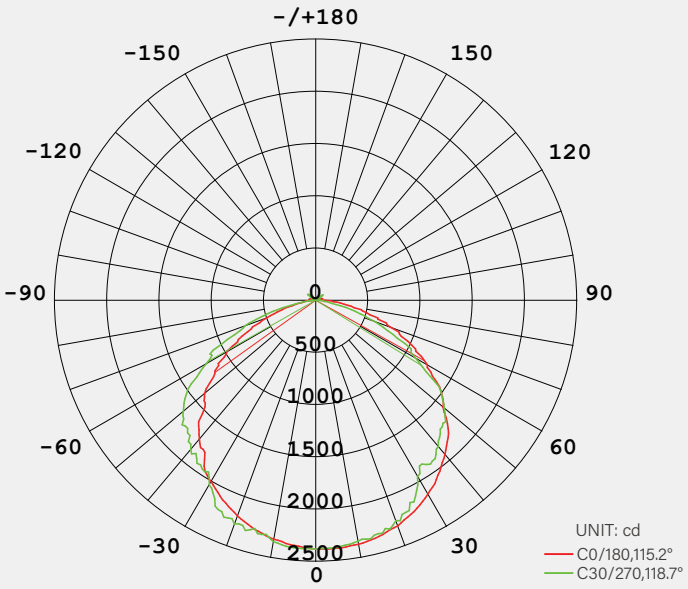
Model	Package Dimensions	Net Weight	Gross Weight	Quantity/Carton
R2	800x250x175mm/31.50x9.84x6.89inch	5.27 kg/11.62 lb	6.55kg/14.44 lb	1 pc
R4	1400x250x175mm/55.12x9.84x6.89inch	8.92 kg/19.66 lb	11.2 kg/24.69 lb	1 pc

HAZARDOUS LOCATIONS LED LUMINAIRE
EX-R Spec Sheet

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Photometric

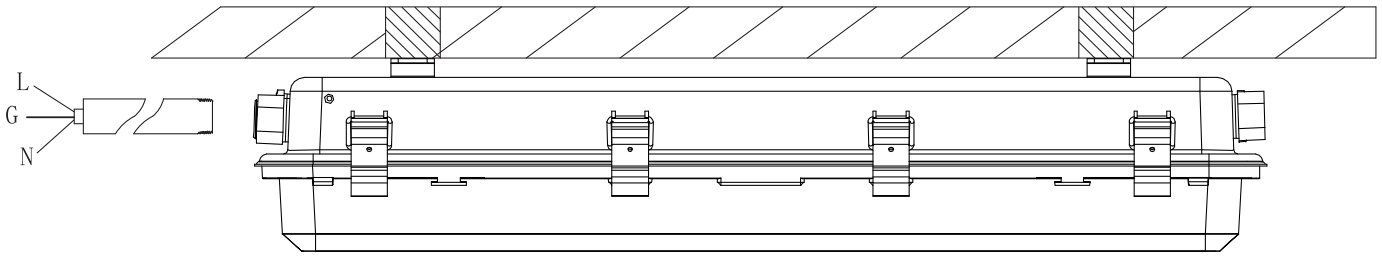
- 120 Degree



AVERAGE BEAMANGLE(50%): 117.0 DEG

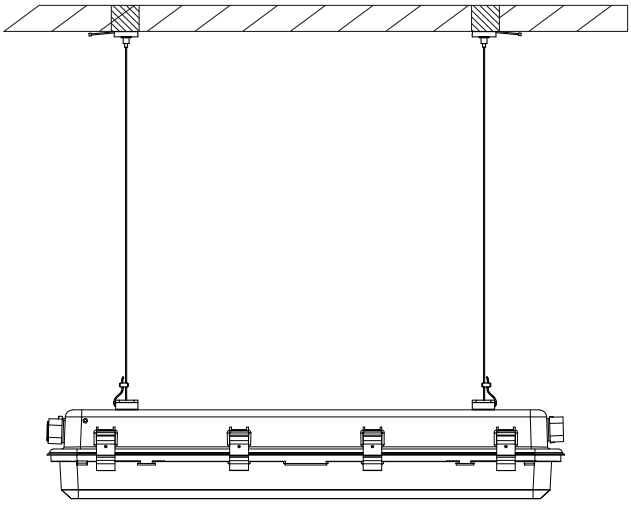
Mounting Methods

- Option 1: Surface Mounting

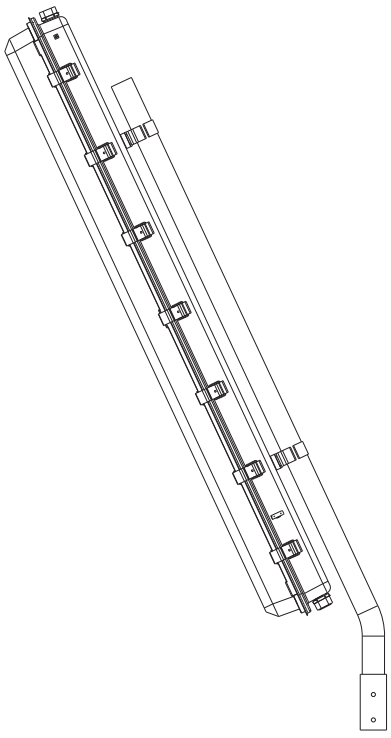


Mounting Methods

- Option 2: Pendant/Rope Mounting



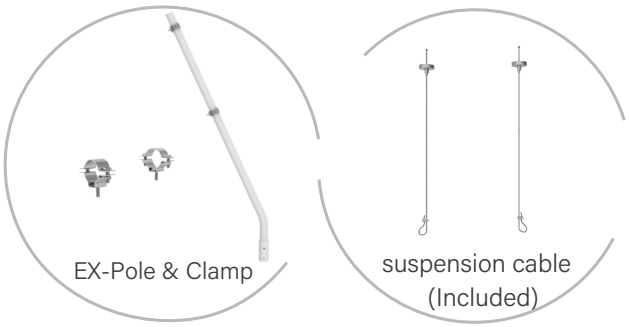
- Option 3: Pole Mounting



HAZARDOUS LOCATIONS LED LUMINAIRE
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Accessories



Ordering Guide

EX - xxW R2/R4 D 50 D120 P M EP75 T -S -E

Basic Model Series
EX-for all luminaires

Input wattage rating
Selectable:
40W: 20W/30W/40W
60W: 40W/50W/60W

Housing length
R2 = 2FT
R4 = 4FT

Dimming
Blank = No Dimming function
D = Dimmable

LED color temperature
Selectable:
50 = 4000K/5000K 6500K

Beam angle
D120 = 120°

Mounting Methods
Blank = Ceiling or Surface mount
R = Rope mount or Pendant Mount
P = Pole mount

Input Voltage
H – High Voltage (200-480 V or 277-480 V)
M – Middle Voltage (120-347 V)
Blank – Low Voltage (120-277 V)

LED Driver
E55 = SS-55EP-M54BH
A40 = VA-40V-054B
EP75 = SS-75EP-M54BH
H10 = HVG-100-48AB

Dual Tunable or not
Blank = Without Tunable
T = With Tunable

Sensor
-S=with Low Voltage motion sensor
Blank = Without Sensor

Backup Power
Blank = without Backup Power
-E = with Backup Power