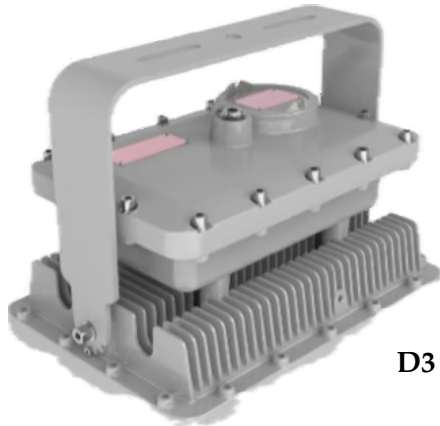




BPO LIGHTING
Hazardous Area Lighting

HLL D TUNABLE



D3



D4



Class 1 Division 1

Key Features

FEATURES: Tunable Wattage
Adjustable CCT

Rugged Low-Bay/High-Bay Flood
Impact Resistant

OPTIONS: 2 Body Sizes
5 Mounting Styles

T2, T3, T5, 40°, 60°, 90° or 120°

Lens: Flat or Convex / Clear or Frosted / Glass or PC

High Voltage

Emergency Back-Up

Compliance

UL 844 Hazardous Locations
Class I Division 1 Groups C, D
Class I Division 2 Groups A, B, C, D
Class I Zone 1 Group IIB
Class II Division 1 Groups E, F, G
Class II Division 2 Groups F, G
Class II Zone 21 Group IIIC
Class III
UL 1598 Suitable for Wet Locations
UL 1598A Marine Saltwater
UL 924 Emergency Lighting
CSA C22.2 No. 250.0:2021 Ed.5
CSA C22.2 No. 137: 2018 Ed.2

IP66
IP67
IK08 (Glass Cover)
IK10 (With Wire Guard)
1000 Hours Salt Spray
ETL (ATM for Report 105342415DAL-001/003)
ABS
CB (Ref. Certif. No.: DE 2-028898)
EN/IEC 60079 - 7, EN/IEC 60079 - 31
EN/IEC 60079 - 7, EN/IEC 60079 - 31
DLC qualification varies for product versions.

Applications

Oil and Gas

Petroleum production and refining
Petroleum loading, storage, transportation and retail
Confined spaces with vapor accumulation
LNG and LPG handling
Oil tankers and shipping vessels
Fuel system testing facilities

Power Plants

Coal-fired power plants, including coal handling and storage areas
Gas-fired power plants with fuel storage
Nuclear power facilities in hazardous auxiliary areas
Biomass or waste-to-energy plants with combustible dust risks

Industrial

Industrial storage facilities
Paper mills, sawmills and lumber yards
Loading dock platforms
Manufacturing plants for heavy industrial goods
Warehouses handling flammable materials

Waste Treatment

Wastewater treatment plants
Pumping stations
Solid waste processing and incineration facilities
Sewage treatment with methane gas risks
Hazardous waste recycling centers

Mining

Operations and service areas
Underground mining tunnels with gas accumulation

Chemical Industry

Chemical production, processing and storage facilities
Solvent handling and mixing areas
Chemical research labs with flammable substances

Ocean, Marine and Aerospace

Offshore platform operation facilities and structures
Marine and saltwater environments
Aerospace clean rooms and production areas
Ocean vessel operations
Shipyards and dry docks
Aircraft hangars with fuel vapors

Metal Treatment

Paint facilities
Steel and aluminum factories
Metal smelting, foundry and fabrication
Welding and cutting areas with gas risks

Military and Defense

Ammunition storage and handling
Fuel depots and refueling stations
Explosives manufacturing
Vehicle maintenance bays in hazardous zones

Food, Alcohol and Agriculture Industry

Flour and fine particle production and storage
Food and distilling production
Grain storage elevators and silos
Breweries and fermentation tanks
Feed mills with dust risks
Fertilizer production and storage

Pharmaceutical Industry

Drug manufacturing and solvent handling
Clean rooms with volatile compounds
Pill coating and drying areas
Research and development labs

Other high humidity, high dust, high temperature and vapor locations

Specifications

Wattage	60 W	80 W	90 W	100 W	120 W	150 W	180 W	200 W	220 W	240 W	280 W	20 W	25 W	30 W	40 W	50 W	60 W	80 W	100 W
Body	D3											D4							

OPTICAL

Lumen Output	9600 lm	12800 lm	14400 lm	16000 lm	19200 lm	24000 lm	28800 lm	32000 lm	35200 lm	38400 lm	44800 lm	2800 lm	3500 lm	4200 lm	5600 lm	7000 lm	8400 lm	11200 lm	14000 lm
Lumens Per Watt	160 lm/W											140 lm/W							
Color Temperature: CCT	SELECTABLE: Standard 5000K Options: 2000K/3000K/4000K/5000K/5700K/6500K/7500K																		
CRI (Color Rendering Index)	>70																		
Beam Angle	Standard: 120° Options: 40°/60°/90°/T2/T3/T5																		
Dimming	0-10V dimming																		

ENVIRONMENTAL

Ambient Operating Temperature	T5: -40°C to 55°C (-40°F to 131°F).																		
Temperature Code	T5 +55°C																		
Power Model (120-277VAC/347VAC)	SS-200VA-56BHL											XLG-100-H-AB							
Power Model (277-480 VAC)	VA-240V-056B											VA-100V-054B (Single Power)							
Power Model (120-347 VAC)	FD-240T-054D											FD-100T-054D							

MECHANICAL

Housing Material	Die-cast aluminum																		
Lens Diffuser	Standard: Clear Flat Glass Options: Clear Flat Glass, Frosted Flat Glass,											Standard: Clear Flat Glass Options: Clear Flat Glass, Frosted Flat Glass, Clear Convex PC (C1D2 only), Frosted Convex PC (C1D2 only)							
Hardware	Stainless steel																		
Mounting	Ceiling, Wall, Pole, Pendant																		
LED Chip	2835																		
Warranty	5-Year Standard Warranty																		

ELECTRICAL		
Lifespan	L70> 150,000 Operational Hours @ 55°C	
Input Voltage	120-277VAC, 120-347VAC, 277-480VAC	
Input Frequency	50/60Hz	
Power Factor	> 0.95	
LED Driver	Sosen/Fahold	
EMERGENCY		
Emergency Time	1.5 Hour, 3 Hour	No Battery Back up
Rated Power in Emergency Mode	8W	

Ordering Logic

ORDER EXAMPLE: HLL D EX 80W D2 D 5K 120 T

(1) Product	(2) Product Category	(3) Wattage	(4) Shape Series	(5) Dimming
HLL D	EX - Explosion Proof	Inquire About Additional Wattage Combinations: D3: 60W, 80W, 90W, 100W, 120W, 150W, 180W, 200W, 220W, 240W, 280W D4: 20W, 25W, 30W, 40W, 50W, 60W, 80W, 100W	D3 D4	Blank - Non-Dimmable D - Dimmable (S)
(6) Kelvin	(7) Beam Angle	(8) Lens	(9) Dual Tunable	(10) Backup Power Source
20 - 2000 K	D40 - 40°	CFG or Blank - Clear Flat Glass (S)	T - With Tunable	Blank - Without Emergency Battery
30 - 3000 K	D60 - 60°	CCP - Clear Convex PC [D4-C1D2]		EM - Emergency Battery (D3)
40 - 4000 K	D90 - 90°	FFG - Frosted Flat Glass		
50 - 5000 K (S)	D120 - 120° (S)	FCP - Frosted Convex PC [D4-C1D2]		
57 - 5700 K	T2 - 60°			
65 - 6500 K	T3 - 90°			
75 - 7500 K	T5 - 120°			

(S) Standard

Accessories



Bracket



Threaded Pipe



EX Junction Box



90° Stanchion Pole Mount



25° Stanchion Pole Mount

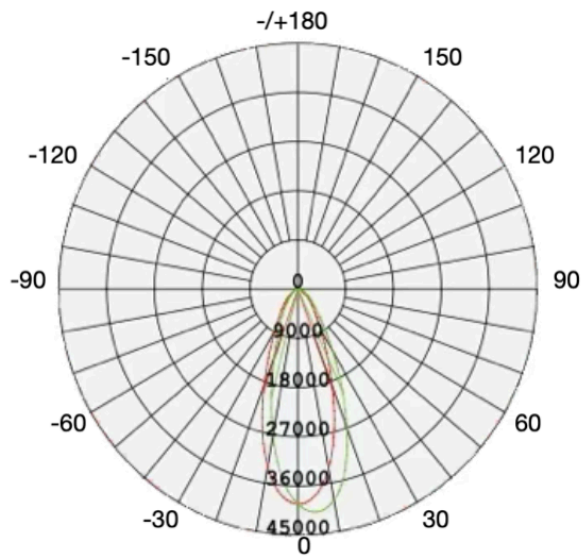


90° Stanchion Junction Box



25° Stanchion Junction Box

Photometric



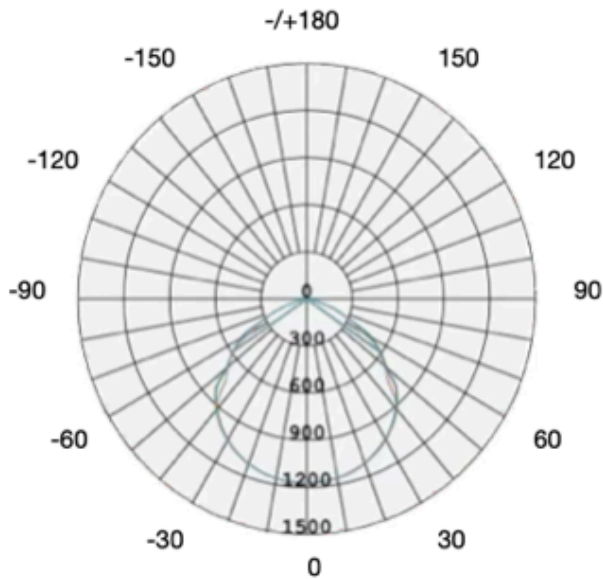
40 Degree

Average Beam Angle (50%): 38.6 Degree

UNIT: cd

— C0/180,38.5°

— C90/270,38.5°



120 Degree

Average Beam Angle (50%): 110.2 Degree

UNIT: cd

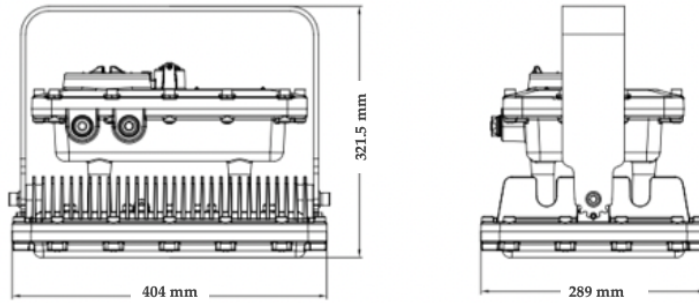
— C30/210,110.8°

— C60/240,110.3°

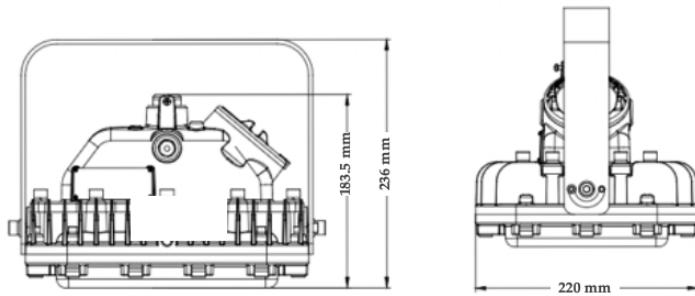
— C90/270,109.5°

Product Dimensions

D3



D4

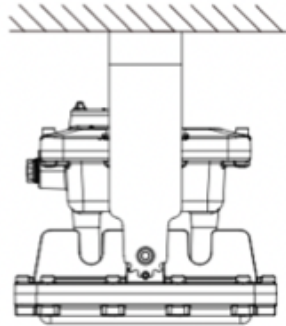


Packaging Information

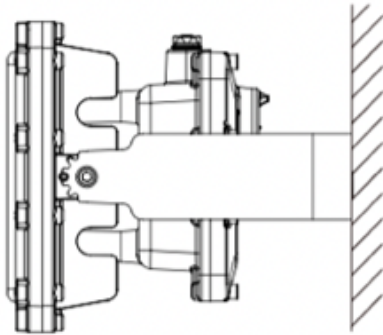
	D2	D4
Pieces		
Fixture Dimensions	See Product Dimensions Drawing	See Product Dimensions Drawing
Package Dimensions	23.39 x 19.45 x 18.86 in (594 x 494 x 479 mm)	15.55 x 13.19 x 14.17 in (395 x 335 x 360 mm)
Net Fixture Weight	50.71lbs (23kg)	19.84lbs (9kg)
Gross Weight	59.52lbs (27kg)	22.05lbs (10kg)

Mounting Methods

Option 1: Ceiling Mount



Option 2: Wall Mount

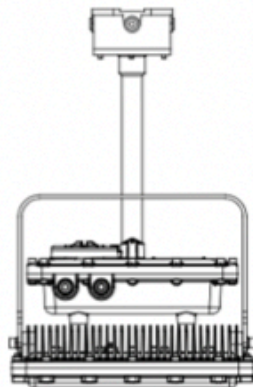


Accessory



Bracket

Option 3: Pendant Mount



Accessory

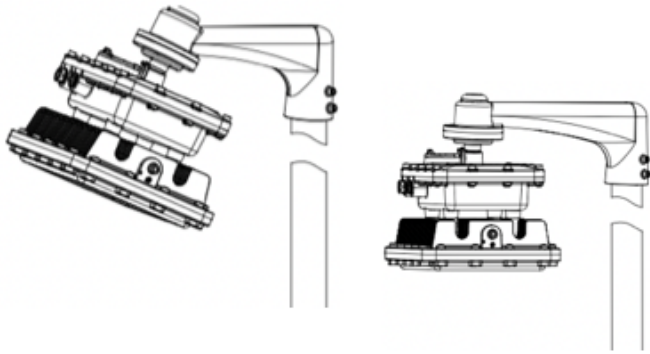


EX Junction Box



Threaded Pipe

Option 4: Stanchion Pole Mount



Accessory

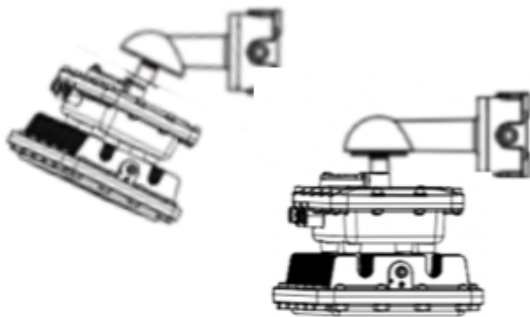


25° Stanchion Pole Mount



90° Stanchion Pole Mount

Option 5: Wall Stanchion Mount With Junction Box



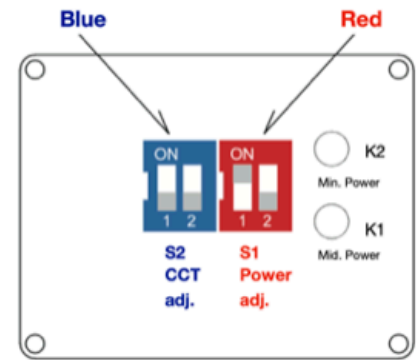
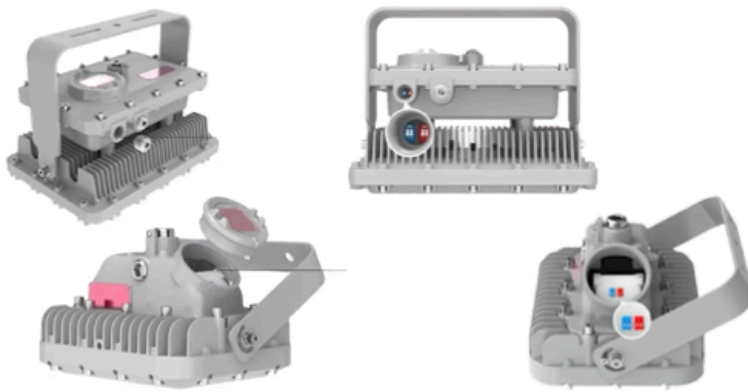
Accessory



25° Stanchion Junction Box




90° Stanchion Junction Box





OPERATING INSTRUCTIONS

S1 DIP SWITCH - RED (S1 Power adj.)

The power adjustment dial switch can be set to three power levels, and the factory default setting can be defined according to order requirements.

- 


First gear (Max. power), 100% full power.
Operation instructions: Dial 1 and 2 are both in the OFF position;
Example: 100W
- 


Second gear (Mid. power), 70%-80% power, can be set according to the required power.
Operation instructions: Dial 1 is in the ON position, Dial 2 is in the OFF position;
Example: 80W
- 


Third gear (Min. power), 50%-60% power, can be set according to the required power.
Operation instructions: Dial 1 is in the OFF position, Dial 2 is in the ON position;
Example: 60W

S2 DIP SWITCH - BLUE (S2 CCT adj.)

The color temperature dial switch can be set to three levels of color temperature, and the factory default setting can be defined according to order requirements.

- 

First gear, the cold white temperature gear, for example, 6500K.
Operation instructions: Dial 1 and 2 are both in the OFF position;
6500K
- 

Second gear, the neutral temperature gear, for example, 5000K.
Operation instructions: Dial 1 is in the ON position, and Dial 2 is in the OFF position;
5000K
- 

Third gear, the warm white temperature gear, for example, 4000K.
Operation instructions: Dial 1 and 2 are both in the ON position;
4000K

(1) Power Adjuster:

Connect to the 0/1-10V dimming port of the LED driver.

(2) CCT Adjuster:

Connect the output voltage of the LED driver:

DC20 - 60V LED driver maximum no - load output voltage: 68V max

(3) The three - gear power setting principle is as follows:

The first gear is 100%, the second gear is 70 - 80%, and the third gear is 50 - 60%.

The minimum setting cannot be lower than 50%.