

Born for Industrial Safety



Warrior™ (ESS-FEL-D Series)

Hazardous Location LED Luminaire

Warrior™

Hazardous Location LED Luminaire

ESS-FEL-D Series



Product description

The Warrior™ ESS-FEL-D Series LED Luminaire is designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or NEMA 3 and 4X areas where wind, water, snow or high ambient can be expected.

They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC.

ESS-FEL-D Series is ideal for retrofit of existing HPS/MH and offers higher efficacy for increased energy savings, lower maintenance costs and shorter paybacks.

Features

- High luminous efficacy-Up to 150 Lm/W
- Input Voltage: AC120-277,347-480V (50/60Hz)
- Instant illumination and restrike-no warm-up time required
- Safe and reliable heat transfer-Offering a T-rating of T4A (CID2) / T5 (CIID1)
- Shock and vibration resistant-Durable LEDs with solderless board connection
- Die-cast aluminum body and frame-corrosion resistant
- All exposed fasteners with quality stainless steel
- High Temperature silicone gasketing
- Thermal shock and impact resistant tempered glass
- Light weight and compact design

Compliance

NEC/CEC Standard

UL844

Class I Division 2, Group A, B, C, D

Class II Division 1, Group E, F, G

Class II Division 2, Group F, G

Class III, Division 1

Class I, Zone 2, Group IIC

Zone 21, Group IIIC

Simultaneous Presence

UL 1598 Wet Locations

UL 1598A Marine Outside Type (Salt Water)

CSA C22.2 No. 137

CSA C22.2 NO. 250.0

FCC

IP66

IK08/IK07(Drop Lens)

5G vibration

1000hrs salt spray

Application

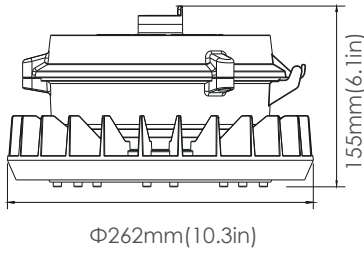
- Power Plants
- Heavy Industrials Storage Facility
- Paper mills
- Wastewater Treatment Plants
- Loading Docks Platforms
- Shipyards
- Chemical Processing Facility
- Petrochemical Processing Facility

Warranty

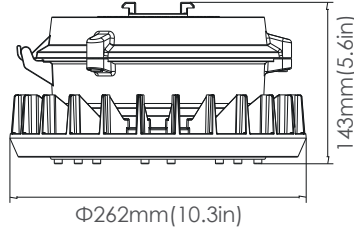
5-Year Standard Warranty

LED lumen Maintenance: L70>150,000 Operation Hours@55°C

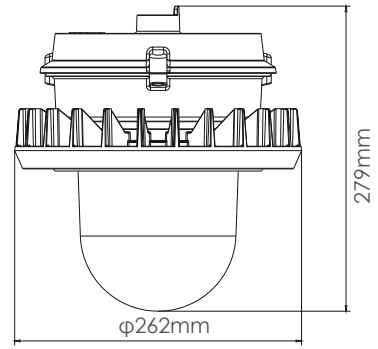
Product Dimensions



ADAPTER P



ADAPTER F



Drop lens without Wire guard

Unit:mm

Model	Net weight	Dimensions (L×W×H)	Gross weight	Dimensions (L×W×H)
ESS-FEL-D (Flat glass)	4.2kg/9.3lbs	Φ262×155mm Φ10.3×6.1in	4.9kg/10.8lbs	323×295×220mm
ESS-FEL-D (Drop glass)	4.8kg/10.6lbs	Φ262×279mm Φ10.3×11in	5.6kg/12.3lbs	323×295×360mm

Mounting



Pendant Top



Bracket



Safety cable installed



Multi-mount Top



Ceiling Mount



Stanchion 25°



Stanchion 90°



Wall 25°



Wall 90°



Drop Lens



With glare shield installed-25°



With glare shield installed-90°

Technical Parameter

Electrical

Specification		ESS-FEL-D-45	ESS-FEL-D-65	ESS-FEL-D-40	ESS-FEL-D-60
Rated Power		45W	65W	40W	60W
Input Voltage		AC120-277		AC347-480	
Input Frequency		50/60Hz			
Input Current	(AC120/277V)	0.35/0.15A	0.54/0.24A		
	(AC347/480V)			0.12/0.08A	0.18/0.13A
Power Factor		≥0.9			
Driver Efficiency		≥90%			
Surge Protection		4Kv			

Optical

Specification		ESS-FEL-D-45	ESS-FEL-D-65	ESS-FEL-D-40	ESS-FEL-D-60
Lumen Output		6750Lm-9750Lm			
Lumens Per Watt		150Lm/W* (130Lm/W for Drop lens)*			
Beam Angle		110° (130° for Drop lens)			
Correlated Color Temperature (CCT)		3000K/4000K/5000K			
Color Rendering Index (CRI)		Ra>70			

*value calculated based on 5000K ,varies to different spec

Environmental

Specification		ESS-FEL-D-45	ESS-FEL-D-65	ESS-FEL-D-40	ESS-FEL-D-60
Ambient Operating Temperature		-40°C~+55°C/-40°F~+131°F			-40°C~+52°C /-40°F~+126°F
T-code	CID2	T4A	T4A	T5	T4A
CIID1		T5			

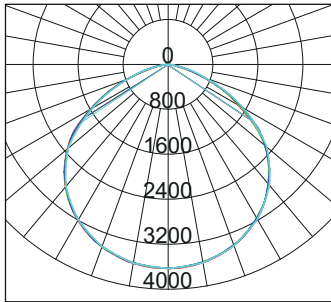
Mechanical

Specification		ESS-FEL-D-45	ESS-FEL-D-65	ESS-FEL-D-40	ESS-FEL-D-60
Housing Material		Copper-free Aluminum			
Lens Material		Tempered glass			
Hardware		Stainless steel 316			
Color		Dark Grey (RAL7037)			
Finish		Polyster powder coating for uniform corrosion resistance			
Protection		IP66/IK08*/5G vibration/1000hrs salt spray			
Mounting		Pendant, Bracket, Ceiling, Pole, Wall			
Installation		MIN 90°C SUPPLY CONDUCTORS			
Cable entries		1 x NPT3/4 (one at pendant top)			
Termination		3 x WAGO 221-413 (max. 4 mm²,3-conductor,with levers)			

*Flat glass lens only/IK07(Drop Lens)

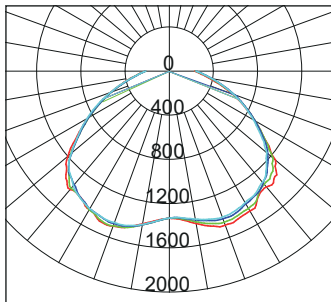
Photometric

110 Degree



- C0/180, 113.0°
- C30/210, 112.9°
- C60/240, 113.6°
- C90/270, 112.9°

130 Degree for drop lens



- UNIT:cd**
- C0/180, 134.2
 - C30/210, 134.4
 - C60/240, 134.9
 - C90/270, 135.0

Ordering Information and Mounting Accessories



*: Suffix not within nomenclature as per Certification, for marketing purpose only

<u>BRAND</u>	<u>SERIES</u>	<u>WATTAGE</u>	<u>VOLTAGE</u>	<u>COLOR TEMP</u>
ESS	FEL-D	45=45W 65=65W 40=40W 60=60W	V01= AC100-240/277V V04= AC347-480V	RN= 3000K (Warm White) RL= 4000K (Neutral White) RZ= 5000K (Neutral White)
Note: 45W & 65W when operating @120-277 40W & 60W when operating @347-480				

<u>BEAM ANGLE</u>	<u>HAZLOC</u>	<u>LENS TYPE</u>	<u>MOUNT TYPE</u>
110=110°(Flat Glass) 130=130° (Glass Globe)	25=CID2,CIID1	T=Transparent glass D=Diffuse flat glass DL01=Drop glass globe	P=NPT 3/4 pendant mount U=Bracket F=Multi-mount (Ceiling/Stanchion/Wall)

<u>COLOR OF FINISH</u>	<u>ACCESSORIES</u>
GR=Gray(Standard) BL=Black WT=White BZ=Bronze	JB01=Junction Box NPT 3/4" PB01= U-Bracket (SUS 304) WL25=Wall mount-25° WL90=Wall mount-90° SN2501=Stanchion-25°(NPT 1.25") SN2502=Stanchion-25°(NPT 1.50") SN9001=Stanchion-90°(NPT 1.25") SN9002=Stanchion-90°(NPT 1.50") WG02=Stainless Steel Wire guard for Flat Lens WG03=Stainless Steel Wire guard for Drop Lens SC04=Stainless Steel Safety Cable CA01=3' SEOWW-18/3 Cord (Factory installed) CA-X=Cable, order upon request DL01=Drop Lens LS03=Glare Shield -25° LS04=Glare Shield -90° SP01=10kv Surge Protector for 100-277V SP02=10kv Surge Protector for 347-480V

<u>INSTALLATION TIPS</u>
1. Termination 3x WAGO 3-conductor for L, N, G connection Conductor range: 0,2 ... 4 mm ² / 24 ... 12 AWG Rated voltage UL: 600 V Rated current UL: 20A
2. Cable Entries 3/4" NPT (Top x1 open)
3. Dimming Unavailable



Not all product variations listed on this page are DLC qualified.*
Visit www.designlights.org/search to confirm qualification.



JB01

Ceiling
Junction Box NPT 3/4"
Grey Painted A356 Aluminum AL



PB01

Wall/Pipe
U-Bracket (SUS 304)
Stainless steel bracket



WL25

Wall mount-25°
NPT 3/4" Grey Painted
A356 Aluminum AL



WL90

Wall mount-90°
NPT 3/4" Grey Painted
A356 Aluminum AL



SN2501

Stanchion-25°,
NPT 1.25"(1.660"Pole OD)
slip-fit stanchion mount

SN2502

Stanchion-25°,
NPT 1.50"(1.900"Pole OD)
slip-fit stanchion mount



SN9001

Stanchion-90°,
NPT 1.25"(1.660"Pole OD)
slip-fit stanchion mount

SN9002

Stanchion-90°,
NPT 1.50"(1.900"Pole OD)
slip-fit stanchion mount



WG02

Stainless Steel
Wire guard



WG03

Stainless Steel
Wire guard



SC04

Stainless Steel
Safety Cable



CA01

3' SEOWW-18/3 Cord
(Factory installed)



DL01

Drop Lens
Tempered Glass



LS03

Glare Shield-25°
Aluminium alloy



LS04

Glare Shield-90°
Aluminium alloy



SP01/SP02

10KV Surge Protector

Class I Locations

Class I locations are those in which inflammable gases or vapors are or may be present in sufficient quantities to produce explosive or flammable mixtures.

CLASS I, DIVISION 1

Class I, Division 1 locations are where hazardous atmosphere may be present during normal operations. It may be present continuously, intermittently, periodically or during normal repair or maintenance operations, or those areas where a breakdown in processing equipment releases hazardous vapors with the simultaneous failure of electrical equipment.

CLASS I, DIVISION 2

Class I, Division 2 locations are those in which volatile flammable liquids or gases are handled, processed or used. Normally they will be confined within closed containers or in closed systems from which they can escape only in the case of rupture or deterioration of the containers or systems.

Class II Locations

Class II locations are those that are hazardous because of the presence of combustible dust.

CLASS II, DIVISION 1

Class II, Division 1 locations include areas where combustible dust may be in suspension in the air under normal conditions in sufficient quantities to produce explosive or ignitable mixtures (Dust may be emitted into the air continuously, intermittently or periodically), or where failure or malfunction of equipment might cause a hazardous location to exist and provide an ignition source with the simultaneous failure of electrical equipment, included also are locations in which combustible dust of an electrically conductive nature may be present.

CLASS II, DIVISION 2

Class II, Division 2 locations are those in which combustible dust will not normally be in suspension nor will normal operations put dust in suspension, but where accumulation of dust may interfere with heat dissipation from electrical equipment or where accumulations near electrical equipment may be ignited.

Class III Locations

Class III locations are those considered hazardous due to the presence of easily ignitable fibers or flyings, which are in quantities sufficient to produce ignitable mixtures.

CLASS III, DIVISION 1

Locations in which easily ignitable fibers or materials producing combustible flyings are handled, manufactured or used.

CLASS III, DIVISION 2

Locations where easily ignitable fibers are stored or handled.