

Defender

Hazardous Location LED Luminaire

FEL-B Series



Product description

The Defender FEL-B Series LED Luminaire is designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or 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 ATEX.

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

Features

- Instant illumination and restrike no warm-up time required
- Wide power range from 20W to 150W
- High luminous efficacy-Up to 130 Lm/W
- Universal Voltage: AC100-270V (50/60Hz)
- Optional lighting distribution 25°, 60°, 110°
- Anti-corrosion aluminum housing tested 1000hrs to standard ASTM"B117-11"
(Marine reinforced ver. available upon request)
- All exposed fasteners with quality stainless steel 316
- Robust design rated with IP66 / IK08 / 5G

Compliance

ATEX Standard

Ex II 2G Ex d IIB T5 Gb

Ex II 2D Ex tb IIIC 95°C Max Db IP66

EN 60079-0, EN 60079-1, EN 60079-31

Zone 1, 21

Zone 2, 22

Ta. -30~ +50°C

Enclosed and Gasketed

IP66

IK08

5G

1000hrs salt spray

Application

Power Plant / Heavy Industrials

Storage Facility / Paper Mills

Wastewater Treatment Plants

Loading Docks / Platforms / Shipyards

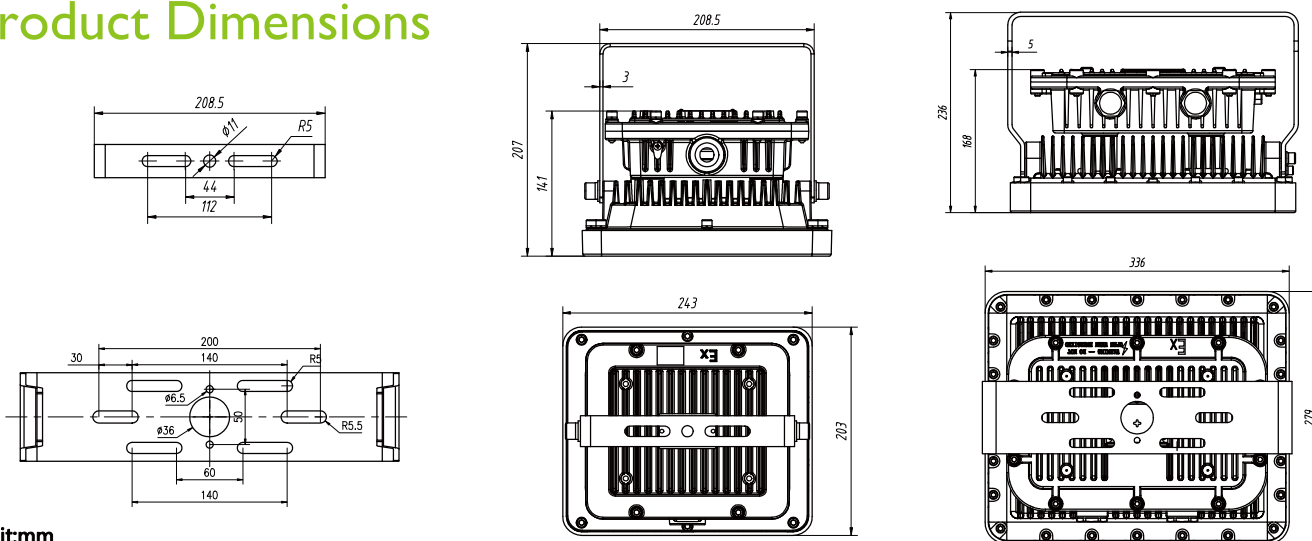
Chemical Processing Facility

Petrochemical Processing Facility

LED lumen Maintenance:

L70>140,000 Operation Hours @ 50°C

Product Dimensions



Unit:mm

Model	Net weight	Dimensions (L×W×H)	Gross weight	Dimensions (L×W×H)
FEL-B-20	4.6kg/10.1lbs	243×203×141 mm 9.6×8×5.6in	6.0kg/13.2lbs	327×290×200 mm 12.9×11.4×7.9in
FEL-B-40				
FEL-B-50				
FEL-B-60				
FEL-B-80	12.2kg/26.9lbs	336×279×168 mm 13.2×11×6.6in	13.5kg/29.8lbs	370×362×233mm 14.6×14.3×9.2in
FEL-B-100				
FEL-B-120				
FEL-B-150				

Mounting



Ceiling Type



Pole Type



Wall Type

Technical Parameter

Electrical

Specification	FEL-B-20	FEL-B-40	FEL-B-50	FEL-B-60
Rated Power	20W	40W	50W	60W
Input Voltage	AC100-270V			
Input Frequency	50/60Hz			
Input Current (AC230V)	0.09A	0.17A	0.22A	0.26A
Power Factor	≥0.95			
Driver Efficiency	≥91%			

Optical

Specification	FEL-B-20	FEL-B-40	FEL-B-50	FEL-B-60
Lumen Output	2400Lm	4400Lm	5500Lm	6000Lm
Lumens Per Watt	120Lm/W			
Beam Angle	25° / 60° / 110°			
Correlated Color Temperature (CCT)	3000K/4000K/5500K			
Color Rendering Index (CRI)	Ra>70			

Environmental

Specification	FEL-B-20	FEL-B-40	FEL-B-50	FEL-B-60
Ambient Operating Humidity	5% ~ 95% RH			
Ambient Operating Temperature	-30°C ~ +50°C			
Optimal Operating Temperature	25°C			

Mechanical

Specification	FEL-B-20	FEL-B-40	FEL-B-50	FEL-B-60
Housing Material	Copper-free Aluminum			
Lens Material	Tempered glass			
Mounting Options	Ceiling, Wall, Pole			
IP Rating	IP66			
IK Rating	IK08			

Technical Parameter

Electrical

Specification	FEL-B-80	FEL-B-100	FEL-B-120	FEL-B-150
Rated Power	80W	100W	120W	150W
Input Voltage	AC100-270V			
Input Frequency	50/60Hz			
Input Current (AC230V)	0.35A	0.43A	0.52A	0.65A
Power Factor	≥0.95			
Driver Efficiency	≥91%			

Optical

Specification	FEL-B-80	FEL-B-100	FEL-B-120	FEL-B-150
Lumen Output	9600Lm	12000Lm	16000Lm	19500Lm
Lumens Per Watt	130Lm/W			
Beam Angle	25°/ 60°/ 110°			
Correlated Color Temperature (CCT)	3000K/4000K/5500K			
Color Rendering Index (CRI)	Ra>70			

Environmental

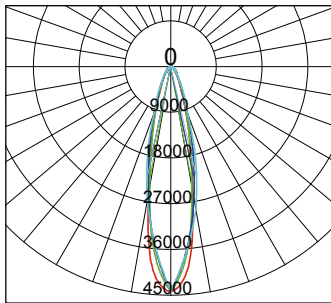
Specification	FEL-B-80	FEL-B-100	FEL-B-120	FEL-B-150
Ambient Operating Humidity	5% ~ 95% RH			
Ambient Operating Temperature	-30°C ~ +50°C			
Optimal Operating Temperature	25°C (77°F)			

Mechanical

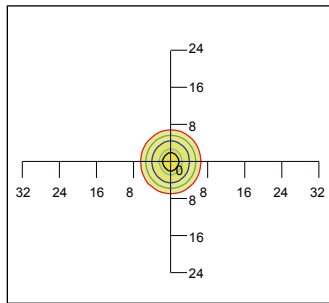
Specification	FEL-B-80	FEL-B-100	FEL-B-120	FEL-B-150
Housing Material	Copper-free Aluminum			
Lens Material	Tempered glass			
Mounting Options	Ceiling, Wall, Pole			
IP Rating	IP66			
IK Rating	IK08			

Photometric

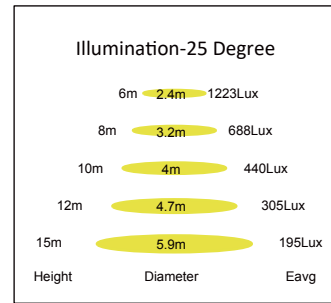
25 Degree



- C0/180,22.4
- C30/210,21.5
- C60/240,23.7
- C90/270,25.8

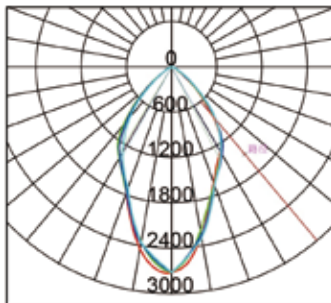


Mounting Height 33'(10m), 0 Tilt

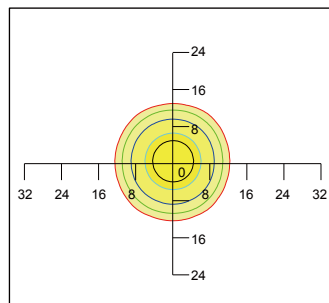


Flux out: 5727 lm

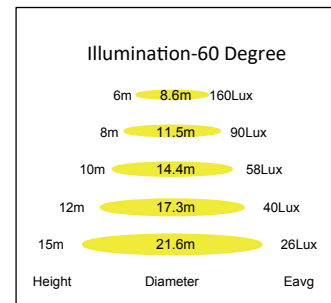
60 Degree



- C0/180,57.8deg
- C30/210,59.9deg
- C60/240,59.9deg
- C90/270,57.2deg

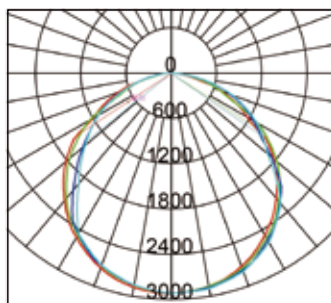


Mounting Height 33'(10m), 0 Tilt

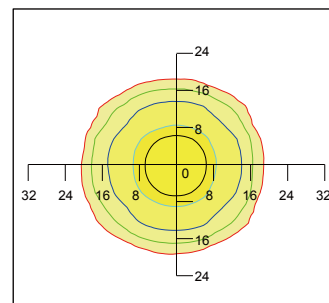


Flux out: 9544 lm

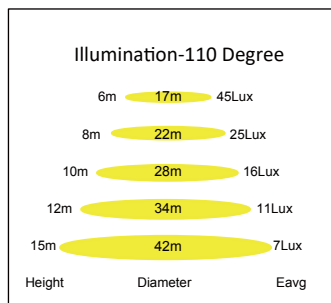
110 Degree



- C0/180,113.0deg
- C30/210,113.4deg
- C60/240,108.3deg
- C90/270,108.4deg



Mounting Height 33'(10m), 0 Tilt



Flux out: 10387 lm



Ordering Information and Mounting Accessories

FEL-B — **150** — **V01** — **RN** — **60** — **3** — **T** — **XX**

Series

Wattage

Voltage

Color Temp

Beam Angle

Hazloc

Tempered Glass

Option

SERIES

FEL-B

WATTAGE

20=20W
40=40W
50=50W
60=60W
80=80W
100=100W
120=120W
150=150W

VOLTAGE

V01= AC100-270V

COLOR TEMP

RN= 3000K (Warm White)
RL= 4000K (Neutral White)
RM= 5500K (Cool White)

BEAM ANGLE

25=25°
60=60°
110=110°

HAZLOC

3=Zone1,Zone21

TEMPERED GLASS

T=Transparent

ACCESSORIES

UB01=Stainless steel U-Bracket
UB03=Anti-vibration U-bracket
UB04=360Deg rotation U-bracket
SN01=Stanchion
SP01=10kv Surge Protector 100~277V
SC01=Stainless Steel Safety Cable kit



UB01

Ceiling/Wall Type
Stainless steel U-Bracket



UB03

Anti-vibration
U-bracket



UB04

360Deg rotation
U-bracket



SN01

Pole Type
Stanchion



SP01

10KV Surge Protector



SC01

Stainless Steel
Safety Cable kit

Hazardous area zones and equipment categories

Hazardous places are classified in terms of zones on the basis of the frequency and duration of the occurrence of an explosive atmosphere.

Gases, vapours and mists

For gases, vapours and mists the zone classifications are:

Zone 0 A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is present continuously or for long periods or frequently.

Zone 1 A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally.

Zone 2 A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Dusts

For dusts the zone classifications are:

Zone 20 A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, or for long periods or frequently. **Zone 21** A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.

Zone 22 A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

Notes:

1. Layers, deposits and heaps of combustible dust must be considered as any other source which can form an explosive atmosphere.
2. "Normal operation" means the situation when installations are used within their design parameters.