

# ATX™ FELED Series Nonmetallic LED Luminaires

Standard or with Emergency Battery Backup  
Increased Safety

ATEX/UKEX/IECEX: Zone 1 and 2 - 21 and 22 | II 2 GD | IP66 | IK10

## Applications

- For use in locations where:
  - Hazardous areas are designated as Zone 1 and 2 – 21 and 22
  - A high degree of corrosion resistance is required
  - Protection against dirt, water and moisture is necessary
- Typical applications include:
  - Oil refineries
  - Petrochemical facilities
  - Food processing plants
  - Waste and water treatment plants
  - Underground tunnels
  - General manufacturing facilities
  - Hydrogen and Biofuels plants
  - LNG (Liquid Natural Gas) plants

## Features

- Available in 5000K or 4000K Color Temperatures.
- Meets photobiological requirement for Risk Group 0 (RG0).
- Easy to retrofit in same mounting footprint as the Appleton FE Series nonmetallic fluorescent luminaires.
- Full range of lumen outputs, with light distribution equivalent to the Appleton FE Series fluorescent luminaires.
- Corrosion-resistant fiberglass reinforced polyester body and hinged polycarbonate lens.
- High impact resistance housing (20 Joules – IK10) from -30 °C to +55 °C (-22 °F to +131 °F) ambient temperature and wind profile for use in extreme offshore and onshore environments.
- Reported L70 > 100,000 hours at +30 °C (+86 °F).
- Lightweight design, hinged cover with captive screws, and terminal block wiring for easy installation and maintenance.
- Contemporary, low profile design suitable for tight spaces.
- Standard screw-type terminal block can accept 4 mm<sup>2</sup>/6 mm<sup>2</sup> (flexible/rigid) wire.
- Field replaceable LED driver.
- Industry-leading thermal management for safe, reliable operation over wide temperature range.
- Universal, high efficiency, drivers cover voltage requirements for 120-277 Vac, 125-300 Vdc, 50/60 Hz +/-10%.
- High power factor electronic driver (>0.95).
- Standard 6 kV surge suppression.
- M20 plug or M25 plug provided.
- Latch assembly and elastomer gasket seals against water and dust ingress, IP66.
- Easily accessed for maintenance using Allen key or straight blade screwdriver.
- Central opening with unique patented release system to prevent damage.
- Can be horizontally or vertically mounted.
- Available in 3 hour emergency version, including built-in monthly self-test. Test results through multi-colored LED.
- Positive safety switch disconnects power to LED's and driver to allow maintenance in hazardous locations (emergency version).
- Ex e battery with plug-in connector.
- 5 year standard warranty.

## Options

- 3 Hours Emergency/Battery Back-Up available ①;
  - Add suffix **-E** to the end of the catalog number.Example: FELED5CBUSADE



FELED3 | FELED4



FELED5 | FELED7

## Standard Materials

- Housing: fiberglass reinforced polyester
- Lens: polycarbonate
- Diffuser: polycarbonate
- Gasket: elastomer
- Internal reflector: highly reflective white polycarbonate (standard versions) or powder coated aluminum (emergency versions)
- Mounting accessories available in different materials such as gray painted aluminum, zinc plated steel, galvanized steel or 316 stainless steel

## ATEX/IECEX Certifications and Compliances

- Certification Type: FELED30
  - Gas: Zones 1 and 2
    - Conforming to ATEX 2014/34/EU: II 2 G
    - Type of Protection: Ex eb mb IIC Gb
    - Temperature Class: T4
  - Dust: Zones 21 and 22
    - Conforming to ATEX 2014/34/EU: II 2 D
    - Type of Protection: Ex tb IIIC Db
    - Surface Temperature: +60 °C to +75 °C (+140 °F to +167 °F)
  - Ambient Temperature: -30 °C up to +55 °C (-22 °F up to +131 °F)
  - ATEX Certificate: INERIS 18 ATEX 0042X
  - UKEX Certificate: CML 21UKEX1154X
  - IECEX Certificate: IECEX INE 18.0039X
- Certification Type: FELED30 Emergency
  - Gas: Zones 1 and 2
    - Conforming to ATEX 2014/34/EU: II 2 G
    - Type of Protection: Ex db eb mb IIC Gb
    - Temperature Class: T4
  - Dust: Zones 21 and 22
    - Conforming to ATEX 2014/34/EU: II 2 D
    - Type of Protection: Ex tb IIIC Db
    - Surface Temperature: +60 °C to +70 °C (+140 °F to +158 °F)
  - Ambient Temperature: -20 °C up to +50 °C (-4 °F up to +122 °F)
  - ATEX Certificate: INERIS 18 ATEX 0042X
  - UKEX Certificate: CML 21UKEX1154X
  - IECEX Certificate: IECEX INE 18.0039X
- Standard and Emergency:
  - Index of Protection according EN/IEC 60529: IP66
  - Impact Resistance (shock): IK10
  - Photobiological Safety, IEC 62778 and IEC 62471: RG0 at 0.25 m mounting height

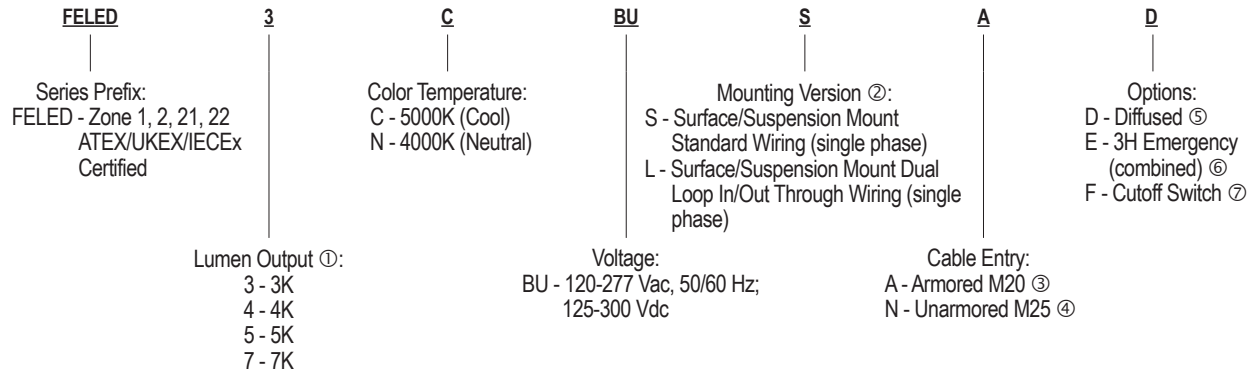
① Available for 3K and 5K lumen models only.

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## Order Using Catalog Numbering Guide — ATX™ FELED Series Nonmetallic LED Luminaires



### Lumen Output (Efficacy) ①

Model	Fluorescent Equivalency	Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Output	Efficacy (lm/W)	CCT	CRI	Lumen Output	Efficacy (lm/W)
<b>Clear Polycarbonate Lens With Internal Diffuser — Standard Mode</b>										
FELED3	3 x 18W	7x7	4000K	>80	2512	81	5000K	>70	3058	99
FELED4	2 x 36W	7x7	4000K	>80	3428	78	5000K	>70	4196	95
FELED5	1 x 58W	7x7	4000K	>80	4380	88	5000K	>70	5290	106
FELED7	3 x 58W	7x7	4000K	>80	5878	78	5000K	>70	7181	96
<b>Clear Polycarbonate Lens With Internal Diffuser — Emergency Model</b>										
FELED3	3 x 18W	7x7	4000K	>80	2512   560	81	5000K	>70	3058   640	99
FELED5	1 x 58W	7x7	4000K	>80	4380   550	88	5000K	>70	5290   620	106

① All lumen values are typical (tolerance +/- 10%).

② Standard and Loop In/Out cable entries provide 3 entries; 1 at one and 2 at the other end of the housing.

③ Must order armored cable glands separately. M20 entries are with brass earth continuity plate for armored cable.

④ Cable glands provided in luminaires with unarmored hub entries.

⑤ Diffuser required.

⑥ Available for 3K and 5K lumen models only.

⑦ Select to have cutoff switch with standard model. Cutoff Switch included with Emergency option.

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## Electrical Specifications ①

Model	Voltage	Input Power (Watts)	Input Current (Amps)	Power Factor (PF)	Total Harmonic Distortion (THD)
<b>Standard Model</b>					
FELED3	230 Vac	31	0.14	>0.9	<20%
FELED4	230 Vac	44	0.195	>0.9	<20%
FELED5	230 Vac	50	0.244	>0.9	<20%
FELED7	230 Vac	75	0.333	>0.9	<20%
<b>Emergency Model</b>					
FELED3	230 Vac	31	0.14	>0.9	<20%
FELED5	230 Vac	50	0.244	>0.9	<20%

## Temperature Codes

Model Type	Gas — T Rating				Dust — Surface T°			
	Ta = +40 °C (+104 °F)	Ta = +45 °C (+113 °F)	Ta = +50 °C (+122 °F)	Ta = +55 °C (+131 °F)	Ta = +40 °C (+104 °F)	Ta = +45 °C (+104 °F)	Ta = +50 °C (+122 °F)	Ta = +55 °C (+131 °F)
<b>Standard Model</b>								
FELED3	T4	T4	T4	T4	+60 °C (+140 °F)	+60 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)
FELED4	T4	T4	T4	T4	+60 °C (+140 °F)	+60 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)
FELED5	T4	T4	T4	T4	+60 °C (+140 °F)	+60 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)
FELED7	T4	T4	T4	T4	+60 °C (+140 °F)	+65 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)
<b>Emergency Model</b>								
FELED3 Emergency Model	T4	T4	T4	T4	+60 °C (+140 °F)	+65 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)
FELED5 Emergency Model	T4	T4	T4	T4	+60 °C (+140 °F)	+65 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)

## “T” Numbers Represent the Maximum Temperature

“T” #	T1	T2	T3	T4	T5	T6
Temp. Range °C (°F)	+301 to +450 (+547 to +842)	+201 to +300 (+394 to +572)	+136 to +200 (+277 to +392)	+101 to +135 (+214 to +275)	+86 to +100 (+187 to +212)	+85 (+185)

① All values are typical (tolerance +/-10%). Same electrical ratings apply to each luminaire with different LED position, mounting versions and cable entries.

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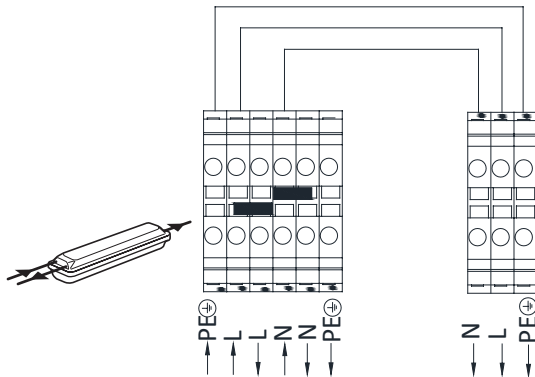
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## Wiring Diagrams

### Standard Model

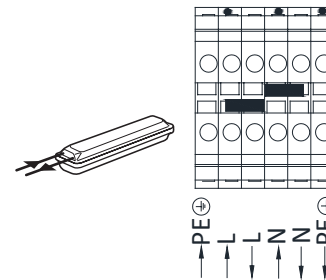
#### Version : L

Dual Loop In / Out — Through Wiring (Single Phase)  
3 Entries, 1 at one end and 2 at the other



#### Version : S

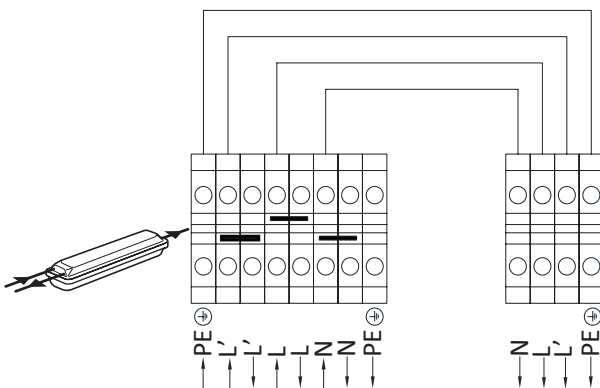
Standard (Single Phase)  
3 Entries, 1 at one end and 2 at the other



### Emergency Model

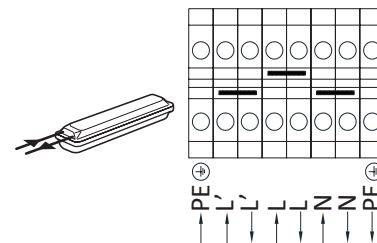
#### Version : L

Dual Loop In / Out — Through Wiring (Single Phase)  
3 Entries, 1 at one end and 2 at the other



#### Version : S

Standard (Single Phase)  
3 Entries, 1 at one end and 2 at the other

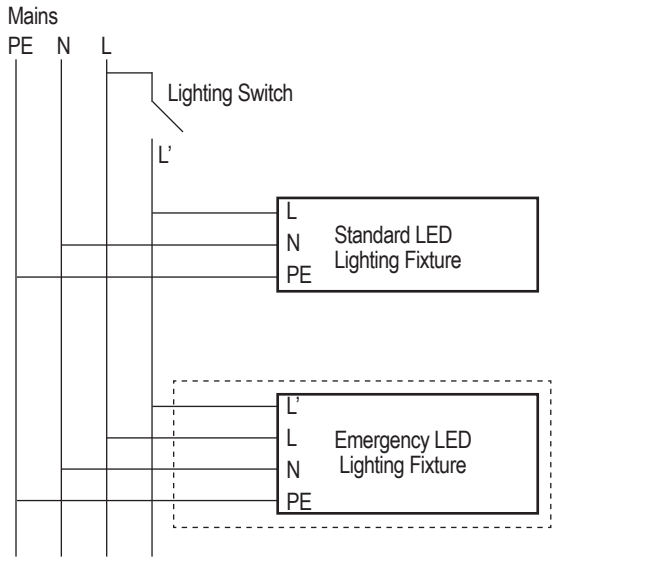


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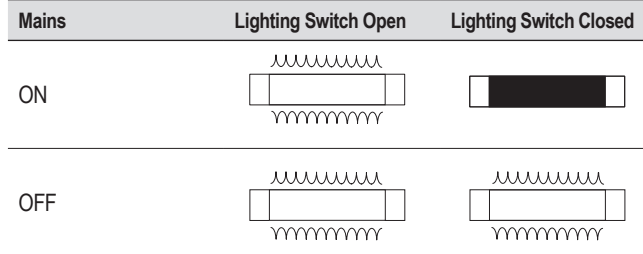
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## Wiring Diagram



## Emergency Function Diagram



## LED Signals

Indicator Color	Timing	Function
Green	1 sec ON: 1 sec OFF	Normal charging ok, Battery not yet fully charged, No fault detected, Testing ok
Green	0.25 sec ON: 0.25 sec OFF	Functional / Duration Self-Test on-going
Green	Steady ON	Charging ok, Battery fully charged, No fault detected, Testing ok
Red	1 sec ON: 1 sec OFF	Fault condition. Installation issue. Battery is reverse, not connected or shorted. Functional test failure, full duration test failure
LED Indicators OFF, LED Array ON	LED Indicators Light OFF, Light ON	No AC, Emergency mode ON

## Automatic Testing System (ATS) — Emergency Battery Backup Model — Functionality

At the completion of functional and full duration tests, and when AC power is present, LED indicators will display status of the emergency luminaire.

Functional Test	Full Duration Test
Starts within 24-48 hours after the initial power up of the luminaire	Starts within 5 to 26 days after the initial power up of the module
Occurs every 14 days after the initial functional test	Occurs once every 364 days after the initial duration test
Lasts for 30 seconds	Lasts for 180 minutes

At the completion of functional and full duration tests, LED indicator will display the status of the emergency luminaire when AC is present

## Emergency Light Duration



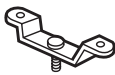



Lumen Level	Battery Capacity	Duration	Light Output
3K (FELED3)	6 Ah – 6V	180 minutes	5000K CCT: 650 lumens
5K (FELED5)			5000K CCT: 455 lumens

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## Accessories and Replacement Parts

	Description	Weight in kg (lbs)	Catalog Number
<b>Replacement Lens</b>			
	0.79 m (2.6 ft) clear polycarbonate external lens with gasket	0.8 (1.76)	Z00650
	1.39 m (4.6 ft) clear polycarbonate external lens with gasket	1.4 (3.09)	Z00651
	0.79 m (2.6 ft) internal diffuser lens	0.08 (0.18)	Z00962
	1.39 m (4.6 ft) internal diffuser lens	1.7 (3.75)	Z00965
<b>Replacement Drivers and Inverter ①</b>			
	FELED3 Replacement Driver (1 each)	0.95 (2.09)	APMZ050C135UD55
	FELED4 Replacement Driver (1 each)	0.95 (2.09)	APMZ050C135UD80
	FELED5 Replacement Driver (1 each)	0.95 (2.09)	APMZ050C135UD95
	FELED7 Replacement Driver (2 each)	0.95 (2.09)	APMZ050C135UD67
	FELED3 and FELED5 Emergency Model Inverter (BMM) (1 each)	0.65 (1.43)	BMMLLED
<b>Battery Pack ①</b>			
	FELED3 and FELED5 Emergency 6V 6Ah Battery Pack (1 each)	0.73 (1.6)	BPLLED
<b>Fuse Assembly ①</b>			
	FELED3 and FELED5 Replacement Fuse Assembly (1 each)	0.02 (0.04)	APPFUSEZ1
<b>Fixing Brackets for Surface Installation — Set of Two</b>			
	Zinc plated steel	0.39 (0.85)	FEFBZ
<b>Brackets for Surface Mounting — Set of Two</b>			
	316 stainless steel	0.64 (1.4)	FESBS
<b>Hinged Brackets for Adjusting Luminaire</b>			
	Aluminum	0.75 (1.7)	FEHBA
	316 stainless steel	0.57 (1.25)	FEHBS
<b>M8 Ring Bolts — Set of Two</b>			
	Zinc plated steel	0.11 (0.2)	FERBM8Z
<b>Half Clamps Brackets for Pole Mounting — Set of two</b>			
	Diameter for 1-1/4" to 1-1/2" pole: 42 mm to 49 mm (1.65" to 1.93")		
	• Zinc plated steel	0.34 (0.7)	FEHC49Z
	• 316 stainless steel	0.34 (0.7)	FEHC49S
	Diameter for 2" pole: 60 mm (2.3")		
	• Zinc plated steel	0.48 (1.1)	FEHC60Z
	• 316 stainless steel	0.52 (1.2)	FEHC60S
<b>Fall Prevention Kit — Safety chain retains fixture temporarily to ease installation</b>			
	For M25 cable entry	0.76 (1.7)	FESCM25
	For M20 cable entry	0.76 (1.7)	FESCM20

① Replacement parts FELED luminaires purchased prior to 2019 may differ. Contact your local sales representative for more information.

LED Luminaires | Linear | Increased Safety | ATEX / IECEX

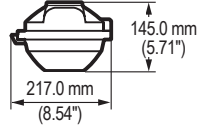
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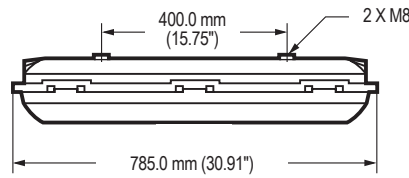
ATEX/UKEX/IECEX: Zone 1 and 2 - 21 and 22 | II 2 GD | IP66 | IK10

## Luminaire Dimensions in Millimeters (Inches)

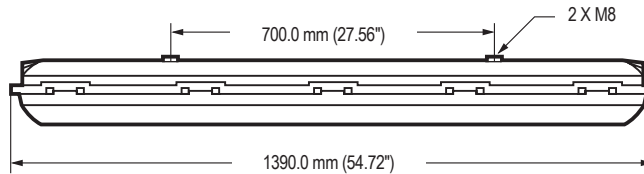
### End View



### Side View — 0.785 m (2.58 ft)



### Side View — 1.39 m (4.56 ft) Version



## Luminaire Specifications

Model	Length m (ft)	Weight in kg (lb)
<b>Standard Model</b>		
FELED3	0.785 (2.58)	4.5 (9.9)
FELED4		
FELED5	1.39 (4.56)	8.5 (18.7)
FELED7		
<b>Emergency Model</b>		
FELED3	0.785 (2.58)	6 (13)
FELED5	1.39 (4.56)	10 (22)

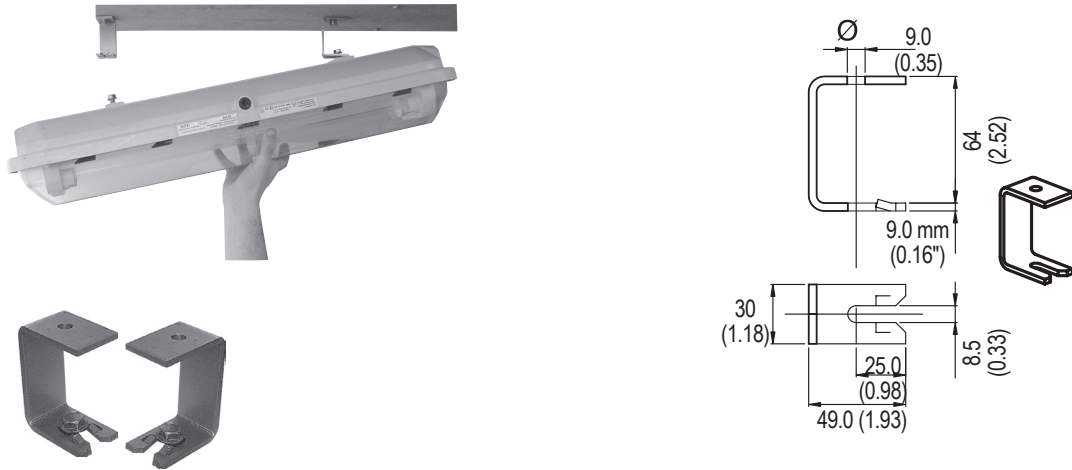
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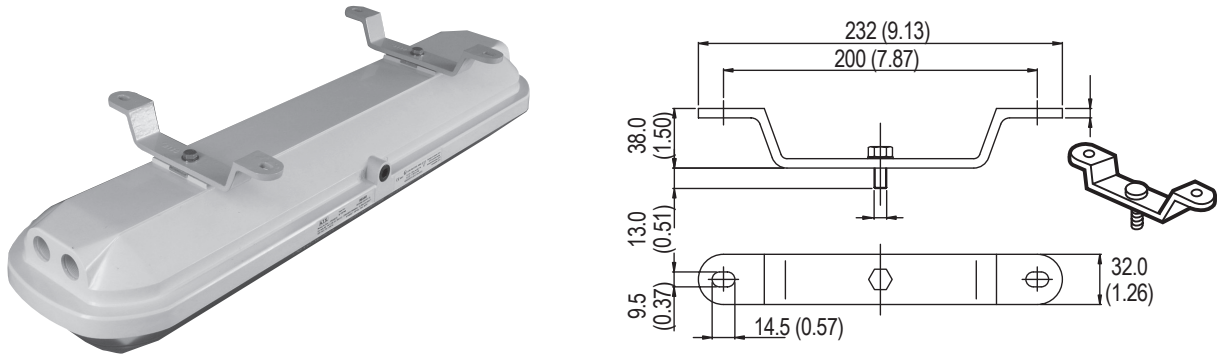
ATEX/UKEX/IECEX: Zone 1 and 2 - 21 and 22 | II 2 GD | IP66 | IK10

## Mounting Options Dimensions in Millimeters (Inches)

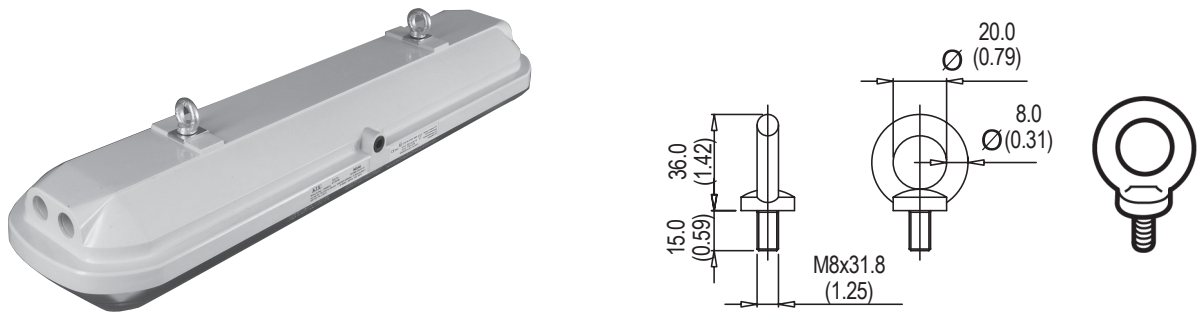
**FEFBZ: zinc plated steel — Set of two quick fixing brackets for ease of surface mounting**



**FESBS: 316 stainless steel — Set of two brackets for surface mounting**



**FERBM8Z: zinc plated steel — Set of two ring bolts**



LED Luminaires | Linear | Increased Safety | ATEX / IECEx



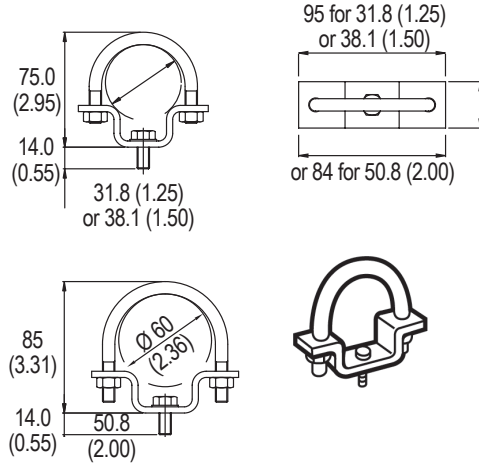
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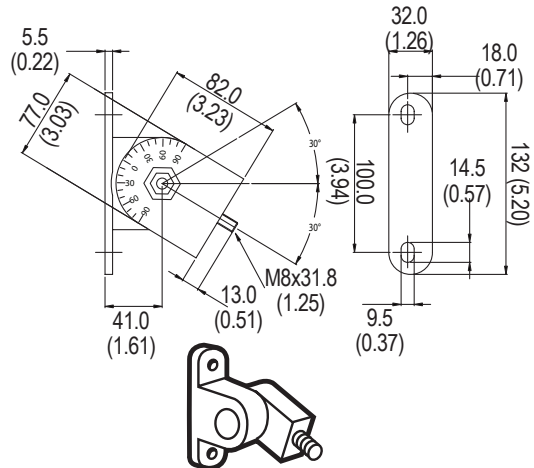
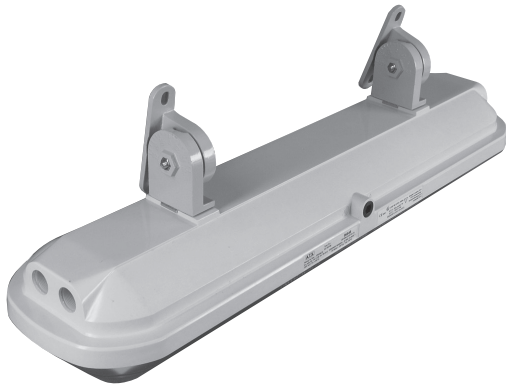
ATEX/UKEX/IECEX: Zone 1 and 2 - 21 and 22 | II 2 GD | IP66 | IK10

## Mounting Options Dimensions in Millimeters (Inches)

FEHC49Z: zinc plated steel or FEHC49S: 316 stainless steel — Set of two clamps for pole diameter 42 mm to 49 mm (for 1-1/4" to 1-1/2" pole).  
FEHC60Z: zinc plated steel or FEHC60S: 316 stainless steel — Set of two clamps for pole diameter 60 mm (for 2" pole).



FEHBA: aluminum or FEHBS: 316 stainless steel — Set of two hinged brackets for adjusting luminaire.



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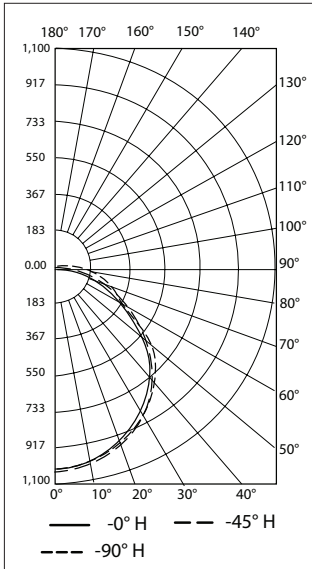
## Photometric Data — DATA SHOWN IS ABSOLUTE

5000K CCT, With Diffuser

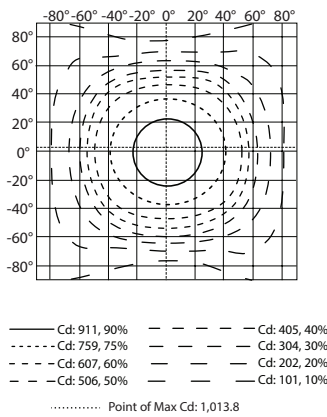
REPORT NUMBER: FELED3CBUxxD

Luminaire Lumens: 3,057

**POLAR CANDELA DISTRIBUTION**



**ISOCANDELA PLOT**



**ZONAL LUMEN SUMMARY**

Zone	Lumens	% Lamp	% Luminaire
0-30	785.8	25.7%	25.7%
0-40	1,285.8	42%	42.1%
0-60	2,256.9	73.8%	73.8%
60-90	650.7	21.3%	21.3%
70-100	385.9	12.6%	12.6%
90-120	133.2	4.4%	4.4%
0-90	2,907.6	95.1%	95.1%
90-180	150.1	4.9%	4.9%
0-180	3,057.7	100%	100%

**LUMENS PER ZONE**

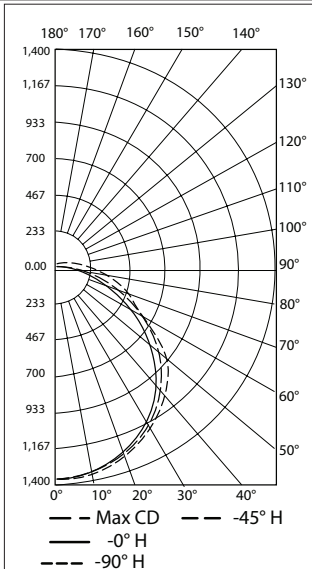
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	95.8	3.1%	90-100	58.8	1.9%
10-20	274.2	9.0%	100-110	43.6	1.4%
20-30	415.8	13.6%	110-120	30.8	1%
30-40	500.0	16.4%	120-130	11.0	0.4%
40-50	519.2	17.0%	130-140	2.3	0.1%
50-60	451.8	14.8%	140-150	1.4	0%
60-70	323.6	10.6%	150-160	1.1	0%
70-80	209.4	6.8%	160-170	0.8	0%
80-90	117.6	3.8%	170-180	0.3	0%

5000K CCT, With Diffuser

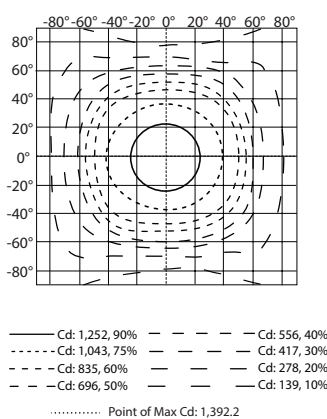
REPORT NUMBER: FELED4CBUxxD

Luminaire Lumens: 4,195

**POLAR CANDELA DISTRIBUTION**



**ISOCANDELA PLOT**



**ZONAL LUMEN SUMMARY**

Zone	Lumens	% Lamp	% Luminaire
0-30	1,078.1	25.7%	25.7%
0-40	1,763.6	42%	42%
0-60	3,095.2	73.8%	73.8%
60-90	894.2	21.3%	21.3%
70-100	530.3	12.6%	12.6%
90-120	182.8	4.4%	4.4%
0-90	3,989.4	95.1%	95.1%
90-180	206.3	4.9%	4.9%
0-180	4,195.7	100%	100%

**LUMENS PER ZONE**

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	131.5	3.1%	90-100	80.8	1.9%
10-20	376.3	9.0%	100-110	59.7	1.4%
20-30	570.3	13.6%	110-120	42.3	1%
30-40	685.5	16.3%	120-130	15.3	0.4%
40-50	712.1	17.0%	130-140	3.3	0.1%
50-60	619.5	14.8%	140-150	2.0	0%
60-70	444.6	10.6%	150-160	1.5	0%
70-80	288.2	6.9%	160-170	1.1	0%
80-90	161.4	3.8%	170-180	0.4	0%

LED Luminaires | Linear | Increased Safety | ATEX / IECEx

# ATX™ FELED Series Nonmetallic LED Luminaires

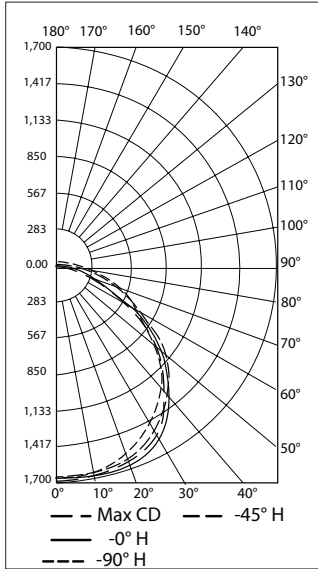
Standard or with Emergency Battery Backup  
Increased Safety

ATEX/UKEX/IECEX: Zone 1 and 2 - 21 and 22 | II 2 GD | IP66 | IK10

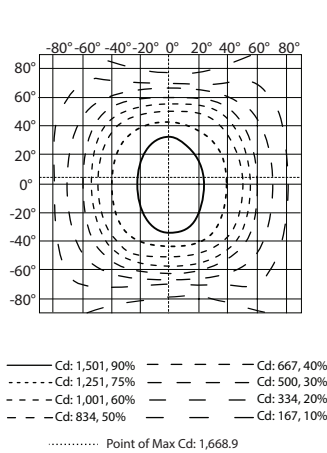
## Photometric Data — DATA SHOWN IS ABSOLUTE

5000K CCT, With Diffuser  
REPORT NUMBER: FELED5CBUxxD  
Luminaire Lumens: 5,289

POLAR CANDELA DISTRIBUTION



ISOCANDELA PLOT



ZONAL LUMEN SUMMARY

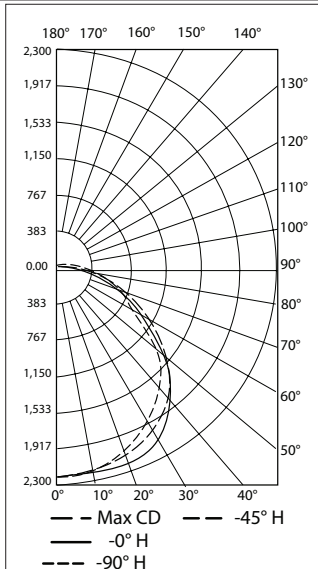
Zone	Lumens	% Lamp	% Luminaire
0-30	1,326.7	25.1%	25.1%
0-40	2,201.8	41.6%	41.6%
0-60	3,907.1	73.9%	73.9%
60-90	1,149.8	21.7%	21.7%
70-100	671.2	12.7%	12.7%
90-120	209.3	4%	4%
0-90	5,057.0	95.6%	95.6%
90-180	232.5	4.4%	4.4%
0-180	5,289.5	100%	100%

LUMENS PER ZONE

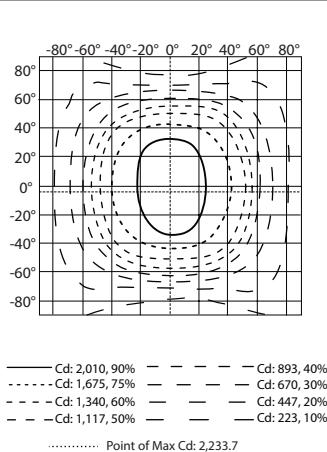
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	158.0	3.0%	90-100	100.4	1.9%
10-20	458.6	8.7%	100-110	64.4	1.2%
20-30	710.2	13.4%	110-120	44.6	0.8%
30-40	875.0	16.5%	120-130	15.6	0.3%
40-50	913.0	17.3%	130-140	3.0	0.1%
50-60	792.3	15.0%	140-150	1.8	0%
60-70	579.0	10.9%	150-160	1.4	0%
70-80	370.8	7.0%	160-170	1.0	0%
80-90	200.1	3.8%	170-180	0.4	0%

5000K CCT, With Diffuser  
REPORT NUMBER: FELED7CBUxxD  
Luminaire Lumens: 7,038

POLAR CANDELA DISTRIBUTION



ISOCANDELA PLOT



ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Luminaire
0-30	1,784.7	24.9%	24.9%
0-40	2,966.4	41.3%	41.3%
0-60	5,282.4	73.6%	73.6%
60-90	1,560.7	21.7%	21.7%
70-100	911.3	12.7%	12.7%
90-120	304.8	4.2%	4.2%
0-90	6,843.1	95.3%	95.3%
90-180	337.9	4.7%	4.7%
0-180	7,180.9	100%	100%

LUMENS PER ZONE

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	211.9	3.0%	90-100	138.3	1.9%
10-20	615.8	8.6%	100-110	97.5	1.4%
20-30	957.1	13.3%	110-120	69.0	1%
30-40	1,181.6	16.5%	120-130	22.9	0.3%
40-50	1,235.6	17.2%	130-140	3.9	0.1%
50-60	1,080.4	15.0%	140-150	2.5	0%
60-70	787.7	11.0%	150-160	1.9	0%
70-80	499.0	6.9%	160-170	1.4	0%
80-90	274.0	3.8%	170-180	0.5	0%