

### **Standard Increased Safety**

ATEX/IECEx:

Zone 2 and 22 II 3 GD

IP66 - IK10

### **Applications**

- · For use in locations where:
  - Hazardous areas are designated as Zone 2 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

#### eatures

- Available in 5000K or 4000K Color Temperatures.
- Meets photobiological requirement for Risk Group 0 (RG0).
- Easy to retrofit in same mounting footprint as Appleton's FN series nonmetallic fluorescent luminaires.
- Full range of lumen outputs, with light distribution equivalent to Appleton's FN 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.
- 60,000+ hour LED life for years of maintenance free operation.
- 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 1.5 to 6 mm<sup>2</sup> 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 6KV 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.

#### **Standard Materials**

- · Housing: fiberglass reinforced polyester
- Lens: polycarbonate
- Diffuser: polycarbonate
- · Gasket: elastomer
- Internal reflector: highly reflective white polycarbonate
- 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: FNLED
  - Gas: Zone 2
  - Conforming to ATEX 2014/34/EU: II 3 G
  - Type of Protection: Ex ec IIC Gc
  - Temperature Class: T5 to T3
  - Dust: Zone 22
    - Conforming to ATEX 2014/34/EU: II 3 D
    - Type of Protection: Ex tc IIIC Dc
    - Surface Temperature: +60 °C to +80 °C (+140 °F to +176 °F)
- Ambient Temperature: -30 °C up to +55 °C (-22 °F up to +131 °F)
- EU Declaration of Conformity: 50319
- ATEX Certificate: INERIS 19 ATEX 3005X
- IECEx Certificate: IECEx INE 19.0006X
- 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 5K lumen models only.

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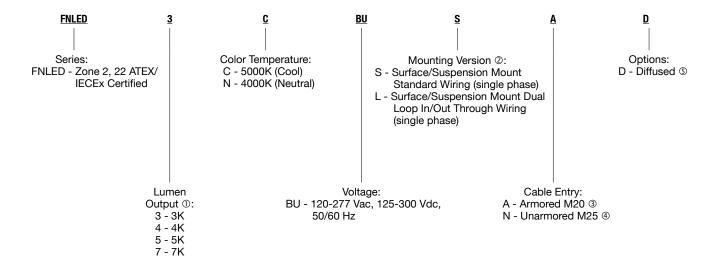




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ATEX/IECEx: Zone 2 and 22 Il 3 GD IP66 – IK10

Order using catalog numbering guide below or select catalog number from tables on following pages.



- ① All values displayed reflect typical values.
- ② Standard and Loop In/Out cable entries provide 3 entries; 1 at one and 2 at the other end of the housing.
- ® 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.
- © Diffuser required for RG0 photobiological rating.





# **Standard Increased Safety**

ATEX/IECEx: Zone 2 and 22 

**Lumen Comparison Chart** 

Line Current Amps	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficacy (lm/w)	Correlated Color Temperature (CCT)	Color Rendering Index (CRI)	Length	Weight	Catalog Number
0.132 A at	30		3,300	110	5000K	_			FNLED3CBUxxI
230 Vac	30		3,200	107	4000K	_	0,785 m	5 kg	FNLED3NBUxxE
0.173 A at	40		4,300	108	5000K	-	(2,58 ft)		FNLED4CBUxxD
230 Vac 40	40		4,200	105	4000K	00.			FNLED4NBUxxE
0.193 A at	40	> 0.9	5,100	119	5000K	- 80+		8 kg (17.5 lb)	FNLED5CBUxxE
230 Vac	43		5,000	116	4000K	-	1,39 m		FNLED5NBUxxE
0.296 A at 230 Vac	0 296 Δ at			7,000	106 5000K	(4,56 ft)	8.75 kg	FNLED7CBUxxE	
	66		7,000	106	4000K	-		(19.0 lb)	FNLED7NBUxx

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# **Standard Increased Safety**

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### **Technical Data**

Technical Data					1			
		Gas			Dust			
Position		T Rating			Surface T°			
Model Type	Horizontal / Vertical	Ta = +40°C (+104°F)	Ta = +50°C (+122°F)	Ta = +55°C (+131°F)	Ta = +40°C (+104°F)	Ta = +50°C (+122°F)	Ta = +55°C (+131°F)	
FNLED3		T4	Т4	Т4	60 °C (140 °F)	70 °C (158 °F)	75 °C (167 °F)	
	ЛПП		ТЗ					
FNLED4		T4 T4	Т3	60 °C (140 °F)	70 °C (158 °F)	75 °C (167 °F)		
	71111				60 °C (140 °F)	70 °C (158 °F)	75 °C (167 °F)	
FNLED5		T5	T4	T4	65 °C (149 °F)	75 °C (167 °F)	80 °C (176 °F)	
	ЛТТ				65 °C	75 °C	80 °C	
FNLED7		T4	Т4	T4	(149 °F)	(167 °F)	(176 °F)	

### "T" Numbers Represent the Maximum Temperature

"T" #	T1	T2	Т3	T4	T5	T6
Temp.	301-450	201-300	136-200	101-135	86-100	85
Range °C (°F)	(547-842)	(394-572)	(277-392)	(214-275)	(187-212)	(185)



## **Standard Increased Safety**

ATEX/IECEx: Zone 2 and 22 II 3 GD IP66 – IK10

### Wiring Diagrams

### Standard

### Version: L

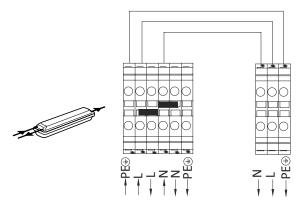
Dual Loop In/Out - Through Wiring (Single Phase)

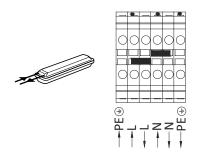
3 entries, 1 at one end and 2 at the other

#### Version: S

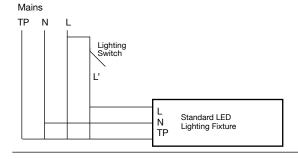
Standard (Single Phase)

3 entries, 1 at one end and 2 at the other





### Wiring Diagram



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# **Standard Increased Safety**

ATEX/IECEx: 

Accessories and Replacement Parts		
	Description	Catalog Number
Fixing Brackets		
	Set of two brackets for surface installation	
	Zinc plated steel	FEFBZ
Brackets for Surface Mounting		
	Set of two	
	316 stainless steel	FESBS
M8 Ring Bolts		
	Set of two	
	Zinc plated steel	FERBM8Z
Half Clamps Brackets for Pole Mounting		
	Set of two	
	Diameter for 1-1/4 to 1-1/2" pole: 42 mm (1.65 in) to 49 mm (1.93 in)	
	Zinc plated steel	FEHC49Z
	316 stainless steel	FEHC49S
	Diameter for 2" pole: 60 mm (2.36 in)	
	Zinc plated steel	FEHC60Z
	316 stainless steel	FEHC60S
Hinged Brackets		
<b>@</b>	Set of two brackets for adjusting luminaire	
	Aluminum	FEHBA
	316 stainless steel	FEHBS
Fall Prevention Kit		
	Safety chain retains fixture temporarily to ease installation	
	For M25 cable entry	FESCM25
	For M20 cable entry	FESCM20



# **Standard Increased Safety**

ATEX/IECEx: Zone 2 and 22 II 3 GD IP66 – IK10

Accessories and Replace	ement Parts
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	Description	Catalog Number
Replacement Drivers and Inverte	er	
	FNLED3 Replacement Driver (1 each)	APMS050C135UD52
	FNLED4 Replacement Driver (1 each)	APMS050C135UD70
	FNLED5 Replacement Driver (1 each)	APMS050C135UD84
	FNLED7 Replacement Driver (1 each)	APMS050C135UD60
Replacement Lens		
au .	0.79 m (2.6 ft) clear polycarbonate external lens with gasket	Z00650
	1.39 m (4.6 ft) clear polycarbonate external lens with gasket	<b>Z</b> 00651

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## **Standard Increased Safety**

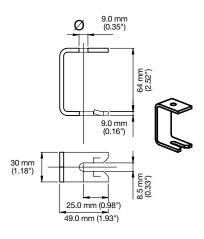
ATEX/IECEx: Zone 2 and 22 ii) II 3 GD IP66 – IK10

**Mounting Options Dimensions in Millimeters (Inches)** 

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

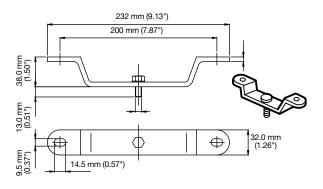






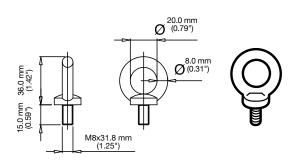
FESBS: 316 stainless steel - Set of two brackets for surface mounting





FERBM8Z: zinc plated steel — Set of two ring bolts









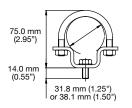
### **Standard Increased Safety**

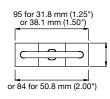
ATEX/IECEx: Zone 2 and 22 II 3 GD IP66-IK10

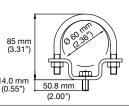
### **Mounting Options Dimensions in Millimeters (Inches)**

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).





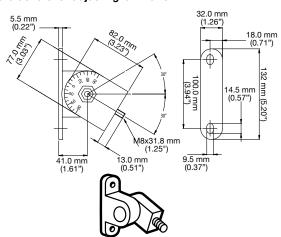






FEHBA: aluminum or FEHBS: 316 stainless steel - Set of two hinged brackets for adjusting luminaire.





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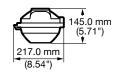




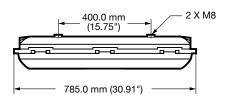
## **Standard Increased Safety**

ATEX/IECEx: Zone 2 and 22 II 3 GD IP66 – IK10

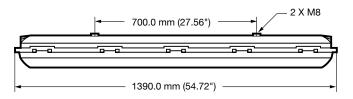
### **Luminaire Dimensions in Millimeters (Inches)**



**End View** 



Side View — 0.785 m (2.58 ft)



Side View — 1.39 m (4.56 ft) Version

### **Standard Increased Safety**

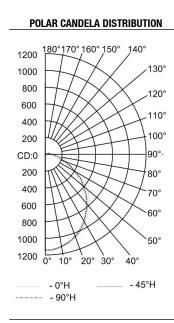
ATEX/IECEx: Zone 2 and 22 II 3 GD IP66 – IK10

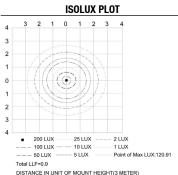
### Photometric Data — DATA SHOWN IS ABSOLUTE

5000K CCT, With Diffuser

REPORT NUMBER: FNLED3CBUxxD

Luminaire Lumens: 3,333





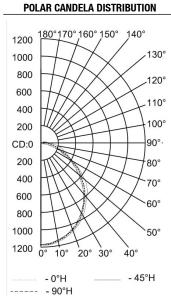
ZONAL LUMEN SUMMARY						
Zone	Lumens	% Lamp	% Luminaire			
0-30	921.2	27.6%	27.6%			
0-40	1,485.3	44.6%	44.6%			
0-60	2,529.8	75.9%	75.9%			
60-90	654.9	19.6%	19.6%			
70-100	377.6	11.3%	11.3%			
90-120	131.3	3.9%	3.9%			
0-90	3,184.7	95.5%	95.5%			
90-180	148.4	4.5%	4.5%			
0-180	3,333.0	100%	100%			

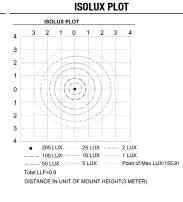
	LUMENS PER ZONE							
Zone	Lumens	% Total	Zone	Lumens	% Total			
0-10	114.4	3.4%	90-100	57.2	1.7%			
10-20	324.4	9.7%	100-110	43.2	1.3%			
20-30	482.3	14.5%	110-120	30.9	0.9%			
30-40	564.1	16.9%	120-130	10.6	0.3%			
40-50	565.8	17.0%	130-140	2.3	0.1%			
50-60	478.8	14.4%	140-150	1.6	0%			
60-70	334.5	10.0%	150-160	1.3	0%			
70-80	206.9	6.2%	160-170	0.9	0%			
80-90	113.4	3.4%	170-180	0.3	0%			

### 5000K CCT, With Diffuser

REPORT NUMBER: FNLED4CBUxxD

Luminaire Lumens: 4,294





ZUNAL LUMEN SUMMARY							
Zone	Lumens	% Lamp	% Luminaire				
0-30	1,186.7	27.6%	27.6%				
0-40	1,913.0	44.6%	44.6%				
0-60	3,258.4	75.9%	75.9%				
60-90	844.0	19.7%	19.7%				
70-100	486.8	11.3%	11.3%				
90-120	168.3	3.9%	3.9%				
0-90	4,102.4	95.5%	95.6%				
90-180	190.8	4.4%	4.4%				
0-180	4,293.2	100%	100%				

**ZONAL LUMEN SUMMARY** 

LUMENS PER ZUNE							
Zone	Lumens	% Total	Zone	Lumens	% Total		
0-10	147.4	3.4%	90-100	73.8	1.7%		
10-20	418.0	9.7%	100-110	55.1	1.3%		
20-30	621.3	14.5%	110-120	39.5	0.9%		
30-40	726.3	16.9%	120-130	13.9	0.3%		
40-50	729.5	17.0%	130-140	3.0	0.1%		
50-60	616.0	14.3%	140-150	2.1	0%		
60-70	431.0	10.0%	150-160	1.7	0%		
70-80	267.0	6.2%	160-170	1.3	0%		
80-90	146.0	3.4%	17 <b>0\i\$i8@</b> ur v	vebsit@a <b>t ww</b>	w.en <b>g</b> rson.d		
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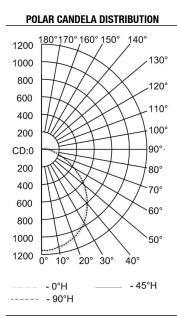
ATEX/IECEx: Zone 2 and 22 II 3 GD IP66 – IK10

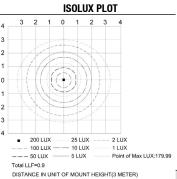
#### Photometric Data - DATA SHOWN IS ABSOLUTE

#### 5000K CCT, With Diffuser

REPORT NUMBER: FNLED5CBUxxD

Luminaire Lumens: 5,094





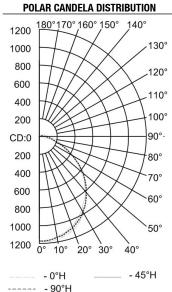
ZUNAL LUMEN SUMMAKY							
Zone	Lumens	% Lamp	% Luminaire				
0-30	1,393.3	27.4%	27.4%				
0-40	2,263.1	44.4%	44.4%				
0-60	3,874.4	76.1%	76.1%				
60-90	999.6	19.6%	19.6%				
70-100	566.8	11.1%	11.1%				
90-120	196.1	3.8%	3.8%				
0-90	4,874.0	95.7%	95.7%				
90-180	219.2	4.3%	4.3%				
0-180	5,093.2	100%	100%				

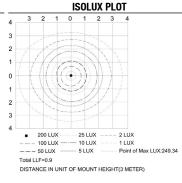
LUMENS PER ZONE								
Zone	Lumens	% Total	Zone	Lumens	% Total			
0-10	170.6	3.4%	90-100	83.6	1.6%			
10-20	488.2	9.6%	100-110	63.7	1.3%			
20-30	734.5	14.4%	110-120	48.7	1%			
30-40	869.8	17.1%	120-130	15.8	0.3%			
40-50	874.4	17.2%	130-140	2.7	0.1%			
50-60	736.9	14.5%	140-150	1.8	0%			
60-70	516.4	10.1%	150-160	1.4	0%			
70-80	314.7	6.2%	160-170	1.0	0%			
80-90	168.5	3.3%	170-180	0.4	0%			

### TCC 5000 K sin difusor

REPORT NUMBER: FNLED7CBUxxD

Luminaire Lumens: 7,038





ZONAL LUMEN SUMMARY								
Zone	Lumens	% Lamp	% Luminaire					
0-30	1,927.1	27.4%	27.4%					
0-40	3,129.4	44.5%	44.5%					
0-60	5,354.9	76.1%	76.1%					
60-90	1,378.2	19.6%	19.6%					
70-100	781.8	11.1%	11.1%					
90-120	271.9	3.9%	3.9%					
0-90	6,733.2	95.7%	95.7%					
90-180	304.2	4.3%	4.3%					
0-180	7,037.4	100%	100%					

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LUMENS PER ZUNE								
Zone	Lumens	% Total	Zone	Lumens	% Total			
0-10	236.0	3.4%	90-100	115.6	1.6%			
10-20	675.4	9.6%	100-110	88.6	1.3%			
20-30	1,015.7	14.4%	110-120	67.7	1%			
30-40	1,202.3	17.1%	120-130	22.0	0.3%			
40-50	1,208.0	17.2%	130-140	3.8	0.1%			
50-60	1,017.5	14.5%	140-150	2.5	0%			
60-70	712.0	10.1%	150-160	2.0	0%			
70-80	433.6	6.2%	160-170	1.4	0%			
80-90	232.7	3.3%	170-180	0.5	0%			



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