

ATX™ FNLED Series Nonmetallic LED Luminaires

Standard or with Emergency Battery Backup
Increased Safety

ATEX/IECEx: Zones 2–21 and 22

Applications

- For use in locations where:
 - Hazardous areas are designated as Zone 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 FN Series nonmetallic fluorescent luminaires.
- Full range of lumen outputs, with light distribution equivalent to the Appleton 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.
- 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 1.5 to 6 mm² 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.

Warranty

- 5 year standard warranty.

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

⚙ For warranty details go to www.appleton.emerson.com.



Options

- 3 Hours Emergency/Battery Back-Up available ①;
 - Add suffix **-E** to the end of the catalog number.
 - Example: FNLED5CBUSADE, FNLED3CBUSADE

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

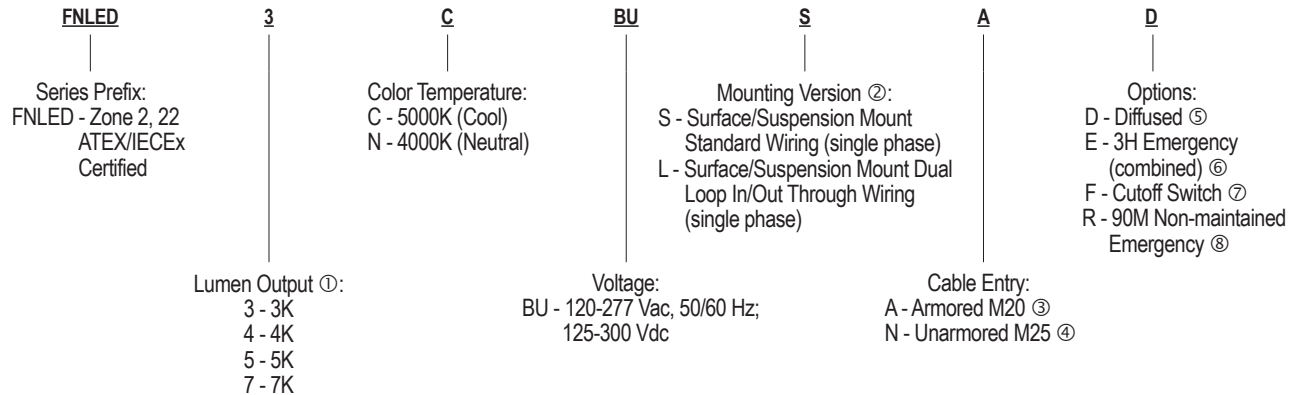
- Certification Type: FNLED
 - Gas: Zone 2
 - Conforming to ATEX 2014/34/EU: II 3 G
 - Type of Protection: Ex ec IIC Gc
 - Temperature Class: T5 to T3
 - Dust: Zone 22
 - Conforming to ATEX 2014/34/EU: II 3 D
 - Type of Protection: Ex tc IIIC Dc
 - Surface Temperature: +60 °C to +80 °C (+140 °F to +176 °F)
- Ambient Temperature:
 - Standard: -30 °C up to +55 °C (-22 °F up to +131 °F)
 - Emergency: -20 °C up to +50 °C (-4 °F up to +122 °F)
- ATEX Certificate: INERIS 19 ATEX 3005X
- IECEx Certificate: IECEx INE 19.0006X
- UKEX Certificates: CML 21UKEX11410X and CML 21UKEX31412X
- 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

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



Lumen Output (Efficacy) — All Models ①

Model	HID Equivalency (Max. Wattage)	Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Output	Efficacy (lm/W)	CCT	CRI	Lumen Output	Efficacy (lm/W)
Standard Model										
FNLED3	3 x 18W	Linear	4000K	>80	3,200	107	5000K	>80	3,300	110
FNLED4	2 x 36W	Linear	4000K	>80	4,200	105	5000K	>80	4,300	108
FNLED5	1 x 58W	Linear	4000K	>80	5,290	106	5000K	>80	5,100	119
FNLED7	3 x 58W	Linear	4000K	>80	7,000	106	5000K	>80	7,000	106
Emergency Model										
FNLED3	3 x 18W	Linear	4000K	>80	3,200 550	107	5000K	>80	3,300 650	110
FNLED5	2 x 58W	Linear	4000K	>80	5,000 550	116	5000K	>80	5,100 650	119

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 for direct.

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

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

⑧ Non-maintained Emergency option includes 90 minutes of battery backup. To include cutoff switch, please order with -F option also. Ex: FNLED5CBUSAFR.

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Electrical Specifications ①

Model	Voltage	Input Power (Watts)	Input Current (Amps)	Power Factor (PF)	Total Harmonic Distortion (THD)
Standard Model					
FNLED3	230 Vac	30	0.132	>0.9	<20%
FNLED4	230 Vac	40	0.173	>0.9	<20%
FNLED5	230 Vac	43	0.193	>0.9	<20%
FNLED7	230 Vac	66	0.296	>0.9	<20%
Emergency Model					
FNLED3	230 Vac	33	0.180	>0.9	<20%
FNLED5	230 Vac	50	0.270	>0.9	<20%

Temperature Codes

Model Type	Gas — T Rating			Dust — Surface T°		
	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)
Standard Model						
FNLED3	T4	T4	T4	+60 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)
FNLED4	T4	T3	T3	+60 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)
	T4	T4	T3			
FNLED5	T5	T4	T4	+60 °C (+140 °F)	+70 °C (+158 °F)	+75 °C (+167 °F)
				+65 °C (+149 °F)	+75 °C (+167 °F)	+80 °C (+176 °F)
FNLED7	T4	T4	T4	+65 °C (+149 °F)	+75 °C (+167 °F)	+80 °C (+176 °F)
Emergency Model						
FNLED3	T4	T4	—	+60 °C (+140 °F)	+70 °C (+158 °F)	—
FNLED5	T4	T4	—	+60 °C (+140 °F)	+70 °C (+158 °F)	—

“T” Numbers Represent the Maximum Temperature

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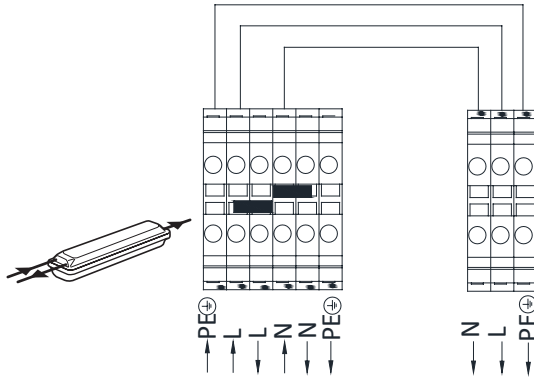
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Wiring Diagrams

Standard Model

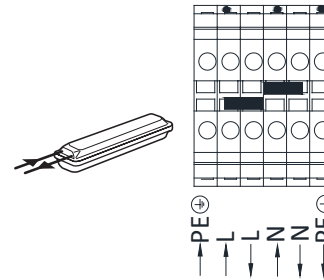
Version : L

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



Version : S

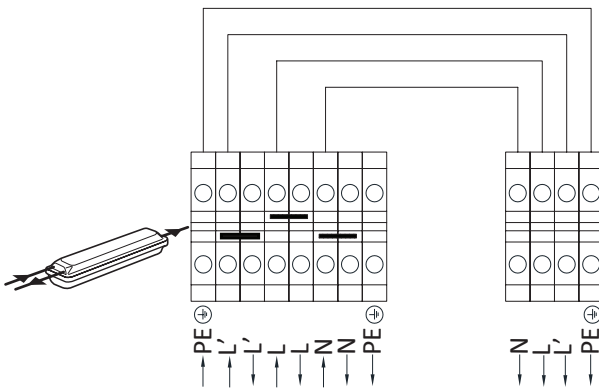
Standard (Single Phase)
3 Entries, 1 at one end and 2 at the other



Emergency Model

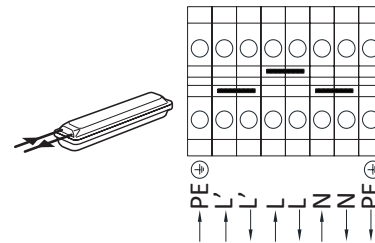
Version : L

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

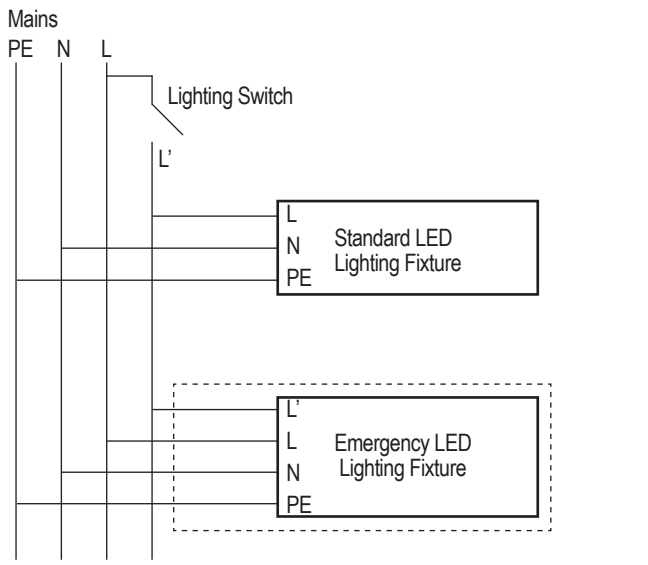


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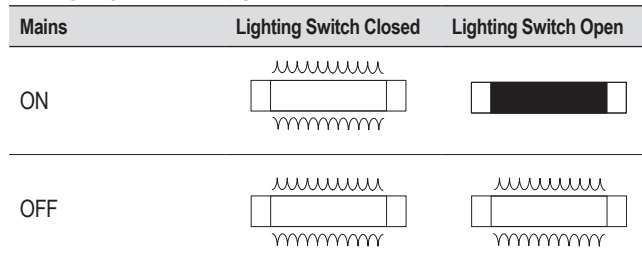
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Wiring Diagram



Emergency Function Diagram



LED Signals

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 Indicator (Red and Green) OFF	No AC, Emergency mode ON

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

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, and when AC power is present, LED indicators will display status of the emergency luminaire.	

Emergency Light Duration



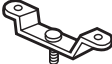



Lumen Level	Battery Capacity	Duration	Light Output
3K (FNLED3)	6 Ah – 6V	180 minutes	5000K CCT: 650 lumens
5K (FNLED5)			4000K CCT: 550 lumens

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Accessories and Replacement Parts

	Description	Weight in kg (lbs)	Catalog Number
Replacement Lens			
	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
	0.61 m (2 ft), 1 pc needed and 1.22 m (4 ft), 2 pc needed	0.07 (0.154)	Z00966
Replacement Drivers and Inverter ①			
	FNLED3 Replacement Driver (1 each)	0.95 (2.09)	APMS050C135UD52
	FNLED4 Replacement Driver (1 each)	0.95 (2.09)	APMS050C135UD70
	FNLED5 Replacement Driver (1 each)	0.95 (2.09)	APMS050C135UD84
	FNLED7 Replacement Driver (1 each)	0.95 (2.09)	APMS050C135UD60
	FNLED3 and FNLED5 Emergency Model Inverter (BMM) (1 each)	0.65 (1.43)	BMMLED
Battery Pack and BMM ①			
	FNLED3 and FNLED5 Emergency 6V 6Ah Battery Pack (1 each)	0.73 (1.6)	BPLLED
Fuse Assembly ①			
	FNLED3 and FNLED5 Replacement Fuse Assembly (1 each)	N/A	APPFUSEZ1
Fixing Brackets for Surface Installation — Set of Two			
	Zinc plated steel	0.39 (0.85)	FEFBZ
Brackets for Surface Mounting — Set of Two			
	316 stainless steel	0.64 (1.4)	FESBS
Hinged Brackets for Adjusting Luminaire			
	Aluminum	0.75 (1.7)	FEHBA
	316 stainless steel	0.57 (1.25)	FEHBS
M8 Ring Bolts — Set of Two			
	Zinc plated steel	0.11 (0.2)	FERBM8Z
Half Clamps Brackets for Pole Mounting — Set of two			
	Diameter for 1-1/4 to 1-1/2" pole: 42 mm to 49 mm (1.65 in to 1.93 in)		
	• Zinc plated steel	0.34 (0.7)	FEHC49Z
	• 316 stainless steel	0.34 (0.7)	FEHC49S
	Diameter for 2" pole: 60 mm (2.36 in)		
	• Zinc plated steel	0.48 (1.1)	FEHC60Z
	• 316 stainless steel	0.52 (1.2)	FEHC60S
Fall Prevention Kit — Safety chain retains fixture temporarily to ease installation			
	For M25 cable entry	0.76 (1.7)	FESCM25
	For M20 cable entry	0.76 (1.7)	FESCM20

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

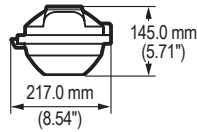
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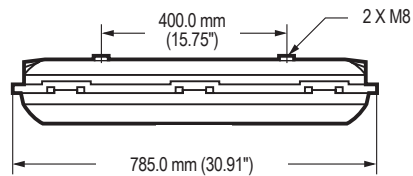
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Luminaire Dimensions in Millimeters (Inches)

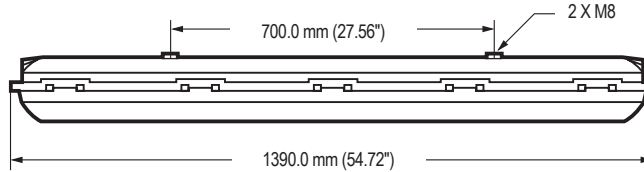
End View



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)
Standard Model		
FNLED3	0.79 (2.58)	5.00 (11.00)
FNLED4	0.79 (2.58)	5.00 (11.00)
FNLED5	1.39 (4.56)	8.00 (17.50)
FNLED7	1.39 (4.56)	8.75 (19.00)
Emergency Model		
FNLED3	0.79 (2.58)	6.00 (13.00)
FNLED5	1.39 (4.56)	10.00 (22.00)

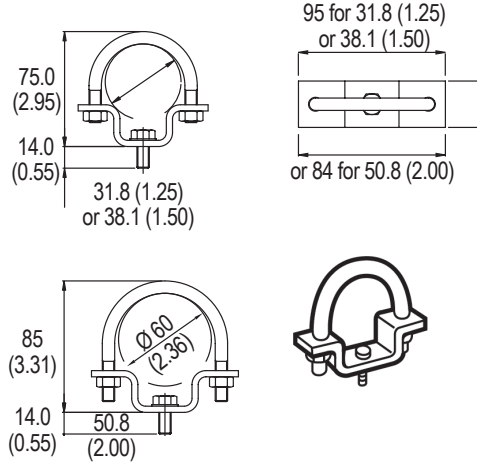
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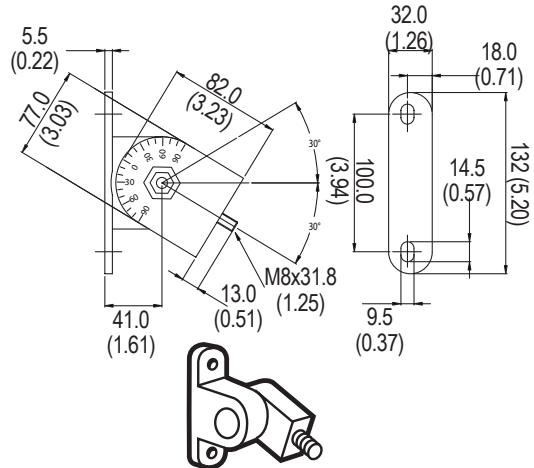
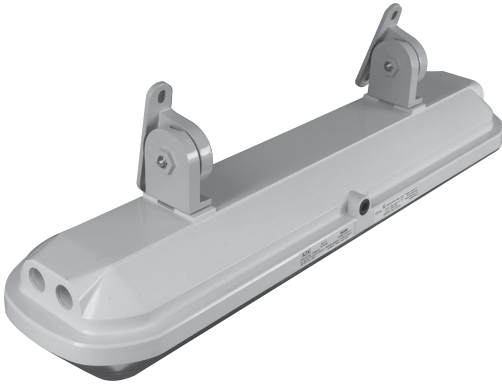
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Mounting Options Dimensions in Millimeters (Inches)

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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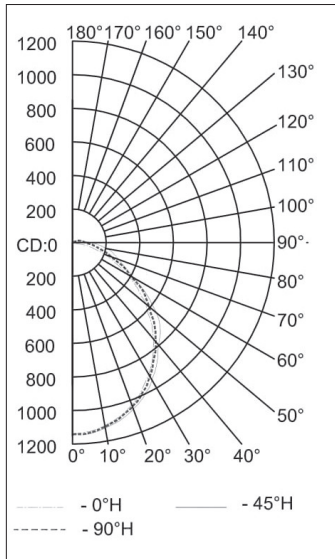
Photometric Data — DATA SHOWN IS ABSOLUTE

5000K CCT, With Diffuser

REPORT NUMBER: **FNLED3CBUxxD**

Luminaire Lumens: 3,333

POLAR CANDELA DISTRIBUTION

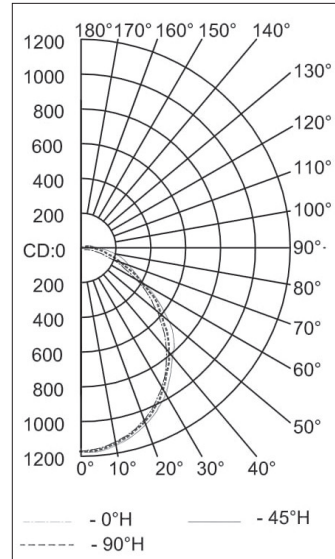


5000K CCT, With Diffuser

REPORT NUMBER: **FNLED4CBUxxD**

Luminaire Lumens: 4,294

POLAR CANDELA DISTRIBUTION

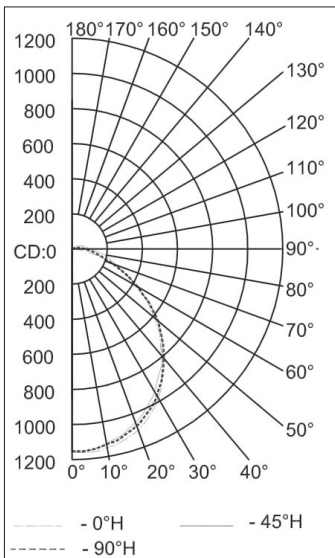


5000K CCT, With Diffuser

REPORT NUMBER: **FNLED5CBUxxD**

Luminaire Lumens: 5,094

POLAR CANDELA DISTRIBUTION



5000K CCT, With Diffuser

REPORT NUMBER: **FNLED7CBUxxD**

Luminaire Lumens: 7,038

