

# ATX™ FDLED Series Luminaires

Standard or with Emergency Battery Backup  
Flameproof

ATEX/IECEx: Zones 1 and 2 – 21 and 22

## Applications

- Can be installed in hazardous areas designated as Zone 1 and 2, 21 and 22.
- For use in locations where a high degree of corrosion resistance is required.
- For indoor/outdoor use where protection against dirt, water and moisture is necessary.
- Typical applications include:
  - Oil refineries
  - Petrochemical facilities
  - Pulp and paper, mills
  - Painting, sewage and water treatment facilities
  - Warehouses
  - Underground tunnels
  - General manufacturing facilities
  - Hydrogen and Biofuels plants
  - LNG (Liquid Natural Gas) plants

## Features

- Impact resistant borosilicate glass sealed tube.
- Easy access to LED array through gray painted aluminum threaded entry cap.
- Supplied with O-ring for improved ingress protection.
- Corrosion-resistant gray painted aluminum.
- Supplied with energy efficient electronic driver on a removable gear tray.
- Supplied with external and internal ground/earth connection.
- Fixture supplied with one M20 blanking plug.
- Easy connection to wire and disconnect with plug-in terminal blocks.
- IPX8 compliant at a depth of 10 meters (33 feet), duration 30 min.

## Warranty

- 5 year standard warranty.

## Standard Materials

- End caps and cover: aluminum.
- Glass tube: tempered borosilicate glass.
- O-ring gasket: nitrile (NBR).
- Internal reflector: aluminium.
- Mounting accessories: several accessories in different material such as zinc plated steel, galvanized steel or 316 stainless steel.

## Options

- Diffused polycarbonate lens
- Ta -40 °C (-40 °F) IP66/68 (with gasket)

## ATEX/IECEx Certifications and Compliances

- Certification Type: FDLED
  - Gas: Zone 1 and 2:
    - Conforming to ATEX 2014/34/UE: Ⓜ II 2 G
    - Type of Protection: Ex db IIC Gb
    - Temperature Class: T6
  - Dust: Zone 21 and 22:
    - Conforming to ATEX 2014/34/UE: Ⓜ II 2 D
    - Type of Protection: Ex tb IIC Db
    - Surface Temperature: +80 °C (+176 °F)



4725 lm



2400 lm

- Ambient Temperature:
  - Standard Version: -40 °C to +60 °C (-40 °F to +140 °F)
  - Emergency Version: -20 °C to +37 °C (-4 °F to +98 °F)
- CE Declaration of Conformity: 50312
- ATEX Certificate: INERIS 15 ATEX 0042X
- IECEx Certificate: IECEx INE 15.0046X
- UKEX Certificate: CML 21UKEX1156X
- Index of Protection according EN/IEC 60529: IP66/68
- Impact Resistance (shock): IK08 (2400 lm version), IK10 (4725 lm version)
- Internal Volume: > 2 dm<sup>3</sup> (122 in<sup>3</sup>) - 2 liters

## Other Certifications

- INMETRO Certificate: BVC17.5710-X

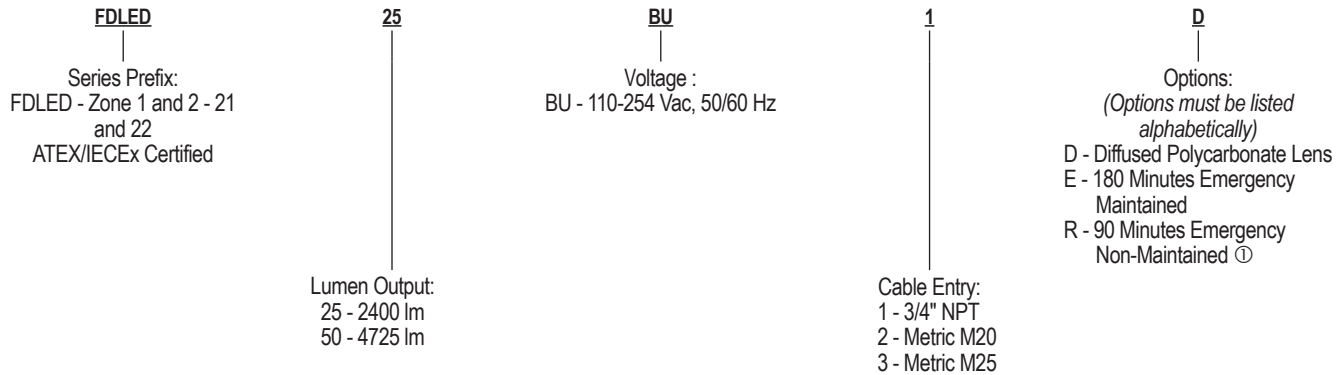
☛ For warranty details go to [www.appleton.emerson.com](http://www.appleton.emerson.com).

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## Order Using Catalog Numbering Guide — FDLED Series Luminaires



### Lumen Output (Efficacy) ②

Model	Fluorescent Equivalency	Light Distribution Pattern	CCT (Correlated Color Temperature)	CRI (Color Rendering Index)	Lumen Output	Efficacy (lm/W)
<b>Standard Model — Clear Lens</b>						
FDLED25BU*	2X18W, 3X18W, 1X36W	Linear	5650K	70	2550	109
FDLED50BU*	2X36W, 1X58W	Linear	5650K	70	5200	121
<b>Standard Model — Diffused Polycarbonate Lens</b>						
FDLED25BU*	2X18W, 3X18W, 1X36W	Linear	5650K	70	2125	91
FDLED50BU*	2X36W, 1X58W	Linear	5650K	70	4350	101

### Electrical Specifications ③

Model	Voltage	Input Power (Watts)	Input Current (Amps)	Power Factor (PF)	Total Harmonic Distortion (THD)
<b>Standard Model</b>					
FDLED25BU*	110 to 254	23	0.21 @110V	>0.9	<20%
FDLED50BU*	110 to 254	46	0.42 @110V	>0.9	<20%
<b>Emergency Model</b>					
FDLED25BU*E	110 to 254	23	0.21 @110V	>0.9	<20%
FDLED50BU*E	110 to 254	46	0.42 @110V	>0.9	<20%

① Available only with FDLED25 without driver and without diffuser.

② All lumen values are typical (tolerance +/- 10%).

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## Temperature Codes

Model Type	Gas IIC — T Rating			Dust — Surface T°		
	Ta = +37 °C (+98 °F)	Ta = +50 °C (+122 °F)	Ta = +55 °C (+131 °F)	Ta = +37 °C (+98 °F)	Ta = +50 °C (+122 °F)	Ta = +55 °C (+131 °F)
<b>Standard Models</b>						
FDLED	T6	T6	T6	+80 °C (+176 °F)	+80 °C (+176 °F)	+80 °C (+176 °F)
FDLED*D	T6	T6	T6	+85 °C (+185 °F)	+85 °C (+185 °F)	+85 °C (+185 °F)
<b>Emergency Models</b>						
FDLED	T6	T6	T6	+80 °C (+176 °F)	+80 °C (+176 °F)	+80 °C (+176 °F)
FDLED*D	T6	T6	T6	+85 °C (+185 °F)	+85 °C (+185 °F)	+85 °C (+185 °F)

## “T” Numbers Represent the Maximum Temperature

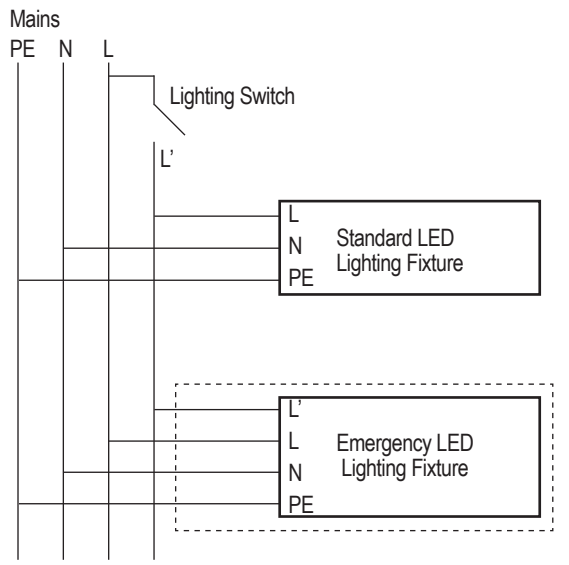
“T” #	T1	T2	T3	T4	T5	T6
Temp. Range °C (°F)	+301 to +450 (+547 to +842)	+201 to +300 (+394 to +572)	+136 to +200 (+277 to +392)	+101 to +135 (+214 to +275)	+86 to +100 (+187 to +212)	+85 (+185)

# ATX™ FDLED Series Luminaires

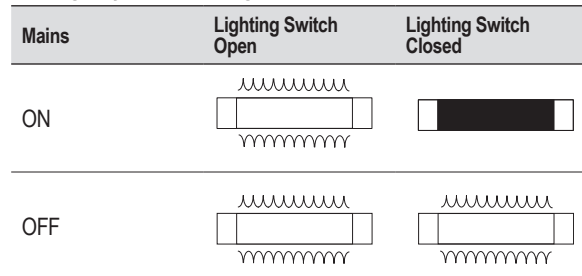
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## Wiring Diagram



## Emergency Function Diagram



## LED Indicator Signals

Color	Timing	Function
Green	LED Blinking	Mains voltage available - Battery Charging
	LED Continuous	Mains voltage available - Battery connected and loaded
Green and Red	LED Blinking Alternately (2s)	Mains voltage available - Battery in repair mode
	LED Blinking	Mains voltage available - No battery connected or defective
Red	LED Continuous	Mains voltage NOT available - Light unit powered by batteries (emergency mode)
	LED Flashing	Mains voltage NOT available - Battery low (emergency mode completed)
	LED Blinking Alternately	Mains voltage available - Last automatic or manual operational check has been unsuccessful
Yellow (Orange) and another color	LED Blinking Alternately	Mains voltage available - Last automatic or manual operational check has been unsuccessful
None (Off)	No Light Emitted	Mains voltage NOT available - Battery completely empty

*Self-Test: In 3 month intervals batteries are automatically discharged and recharged once.*


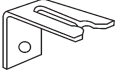
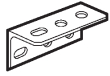

## Emergency Light Duration

Version	Lumen Model	Battery Capacity	Duration	Light Output
<b>Clear Lens</b>				
Emergency Maintained	2400 lm	7 Ah – 6 V	180 minutes	800 lm
	4725 lm			1530 lm
Emergency Non-Maintained	750 lm	7 Ah – 6 V	90 Minutes	800 lm
<b>Diffused Polycarbonate Lens</b>				
Emergency Maintained	2400 lm	7 Ah – 6 V	180 minutes	680 lm
	4725 lm			1290 lm

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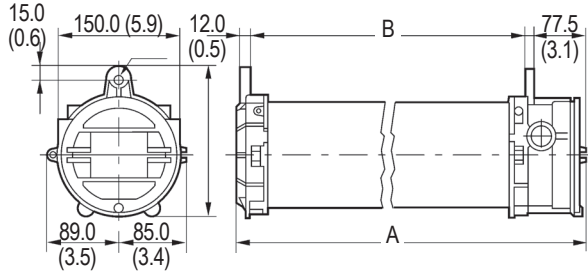
Accessories and Replacement Parts				
	Description	Weight in kg (lb)	Catalog Number	
<b>Replacement Drivers and Inverter</b>				
	FDLED Replacement Driver	0.50 (1.10)	FDLEDRV	
	FDLED Emergency Model Inverter	0.40 (0.88)	FDLEDINV	
<b>Battery Pack</b>				
	FDLED Emergency Battery Pack	1.10 (2.43)	FDLEDBP	
<b>Protective Guard — Zinc Plated Steel</b>				
	Model 0.4 (for 2400 lm)	0.42 (0.92)	FDPG5Z	
	Model 0.6 (for 4725 lm)	0.69 (1.52)	FDPG2Z	
<b>Fixing Brackets for Ease of Surface Installation — Set of Two</b>				
	Zinc plated steel	0.2 (0.44)	FDFBZ	
	316 stainless steel	0.27(0.60)	FDFBS	
<b>Surface Mounting Brackets — Set of Two</b>				
	Zinc plated steel	0.54 (1.20)	FDSBZ	
	316 stainless steel	0.45 (1.00)	FDSBS	
<b>Half Clamp 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)	FDHC49Z	
	• 316 stainless steel	0.34 (0.7)	FDHC49S	
	Diameter for 2" pole: 60 mm (2.3")			
	• Zinc plated steel	0.48 (1.1)	FDHC60Z	
	• 316 stainless steel	0.52 (1.2)	FDHC60S	
<b>Fall Prevention Kit</b>				
	1.20 meter (3.93 feet) stainless steel chain	0.15 (0.33)	FDSCS	

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## Dimensions in Millimeters (Inches)



Catalog Number	Dimension A in mm (in)	Dimension B in mm (in)	Weight in kg (lb)	Volume in dm <sup>3</sup> (in <sup>3</sup> )
FDLED25BU2	470 (18.50)	375 (14.76)	5.4 (11.9)	37.1 (2264.0)
FDLED50BU2	745 (29.33)	650 (25.59)	7.4 (16.3)	58.0 (3539.4)
FDLED25BU2DE	470 (18.50)	375 (14.76)	6.5 (14.3)	37.1 (2264.0)
FDLED50BU2DE	745 (29.33)	650 (25.59)	9.0 (19.8)	58.0 (3539.4)

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## Photometric Data — DATA SHOWN IS ABSOLUTE

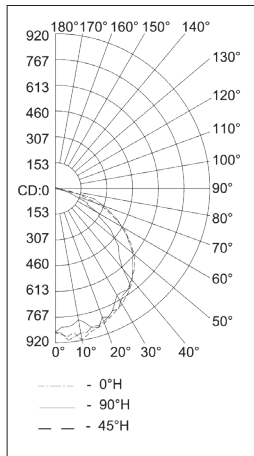
### Standard Mode

#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED25BU2**

Luminaire Lumens: 2556

#### Polar Candela Distribution

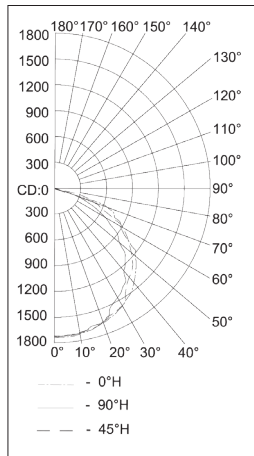


#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED50BU2**

Luminaire Lumens: 5213

#### Polar Candela Distribution

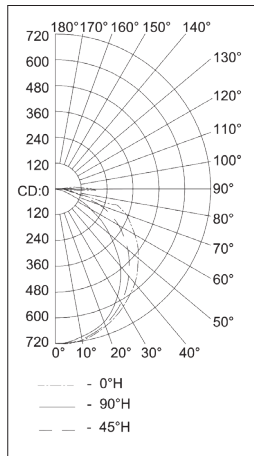


#### 5000K CCT, Diffused Lens

REPORT NUMBER:  
**FDLED25BU2D**

Luminaire Lumens: 2127

#### Polar Candela Distribution

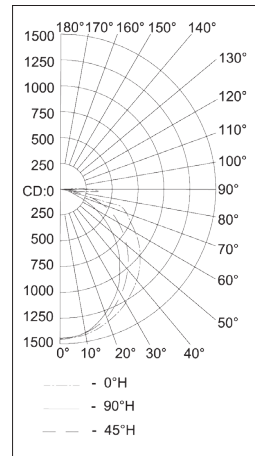


#### 5000K CCT, Diffused Lens

REPORT NUMBER:  
**FDLED50BU2D**

Luminaire Lumens: 4348

#### Polar Candela Distribution



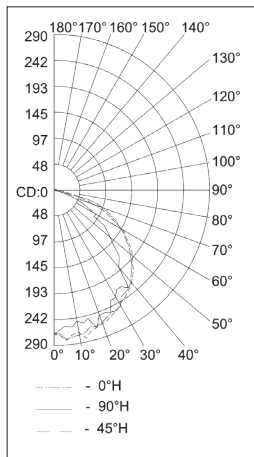
### Emergency Mode

#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED25BU2E**

Luminaire Lumens: 797

#### Polar Candela Distribution

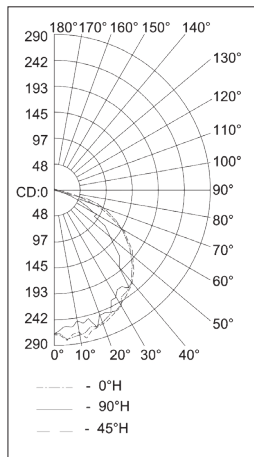


#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED50BU2E**

Luminaire Lumens: 1533

#### Polar Candela Distribution

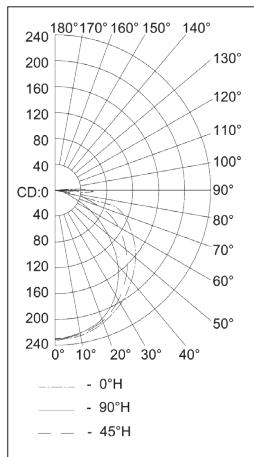


#### 5000K CCT, Diffused Lens

REPORT NUMBER:  
**FDLED25BU2DE**

Luminaire Lumens: 680

#### Polar Candela Distribution

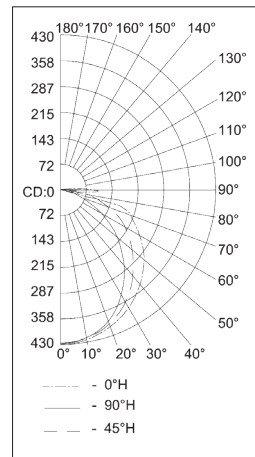


#### 5000K CCT, Diffused Lens

REPORT NUMBER:  
**FDLED50BU2DE**

Luminaire Lumens: 1289

#### Polar Candela Distribution



#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED25BU2R**

Luminaire Lumens: 681

#### Polar Candela Distribution

