

# 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

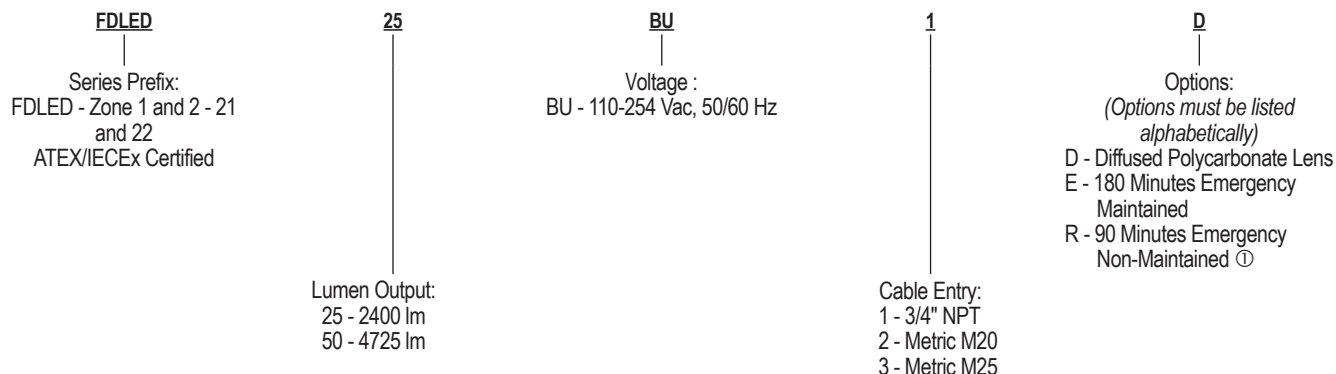
☞ For warranty details go to [www.appleton.emerson.com](http://www.appleton.emerson.com).

# ATX™ FDLED Series Luminaires

Standard or with Emergency Battery Backup  
Flameproof

ATEX/IECEx: Zones 1 and 2 – 21 and 22

## 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%).

③ All values are typical (tolerance +/-10%). Same electrical ratings apply to each luminaire with different LED position, mounting versions and cable entries.

ATX™ FDLED Series Luminaires  
Standard or with Emergency Battery Backup  
Flameproof

ATEX/IECEx: Zones 1 and 2 – 21 and 22

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) |
| Standard Models  |                      |                       |                       |                      |                       |                       |
| 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)      |
| Emergency Models |                      |                       |                       |                      |                       |                       |
| 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

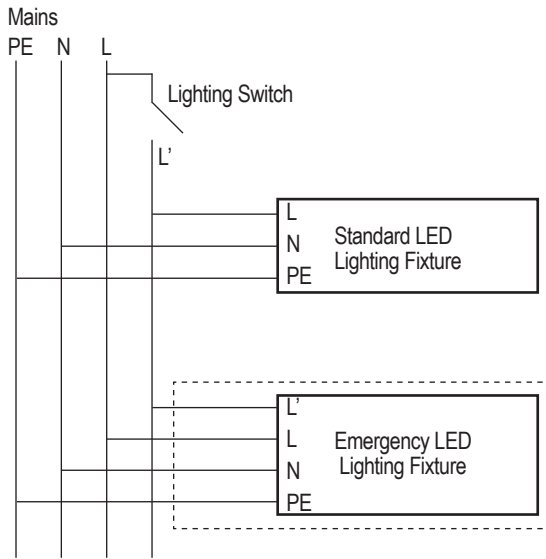
| “T” #               | T1                             | T2                             | T3                             | T4                             | T5                            | T6            |
|---------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-----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

# ATX™ FDLED Series Luminaires

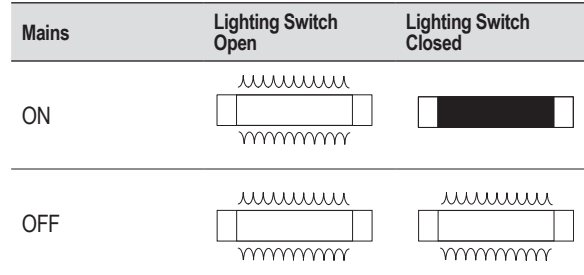
Standard or with Emergency Battery Backup  
Flameproof

ATEX/IECEx: Zones 1 and 2 – 21 and 22

## 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)                       |
| 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

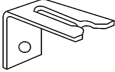
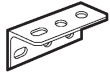
| Version                            | Lumen Model | Battery Capacity | Duration    | Light Output |
|------------------------------------|-------------|------------------|-------------|--------------|
| <b>Clear Lens</b>                  |             |                  |             |              |
| 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      |

# ATX™ FDLED Series Luminaires

Standard or with Emergency Battery Backup  
Flameproof

ATEX/IECEx: Zones 1 and 2 – 21 and 22

## Accessories and Replacement Parts

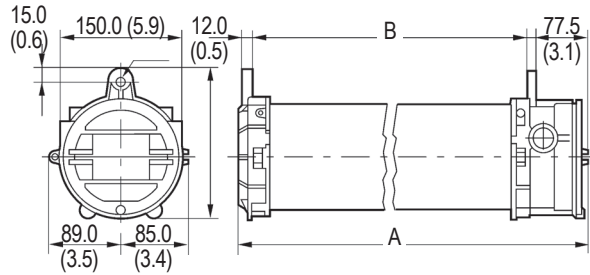
|                                                                                     | Description                                                         | Weight in kg (lb) | Catalog Number |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------|----------------|
| <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          |

# ATX™ FDLED Series Luminaires

Standard or with Emergency Battery Backup  
Flameproof

ATEX/IECEx: Zones 1 and 2 – 21 and 22

## Dimensions in Millimeters (Inches)



| Catalog Number | Dimension A<br>in mm (in) | Dimension B<br>in mm (in) | Weight in<br>kg (lb) | Volume in<br>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)                                   |

# ATX™ FDLED Series Luminares

Standard or with Emergency Battery Backup  
Flameproof

ATEX/IECEx: Zones 1 and 2 – 21 and 22

## Photometric Data — DATA SHOWN IS ABSOLUTE

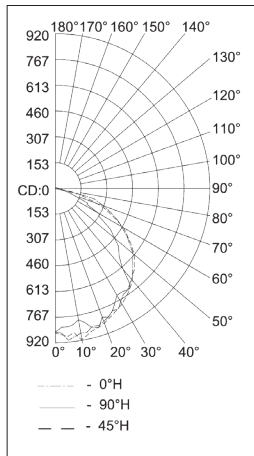
### Standard Mode

#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED25BU2**

Luminaire Lumens: 2556

#### Polar Candela Distribution

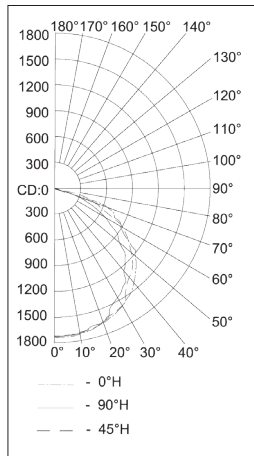


#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED50BU2**

Luminaire Lumens: 5213

#### Polar Candela Distribution

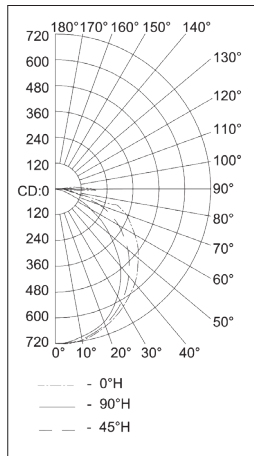


#### 5000K CCT, Diffused Lens

REPORT NUMBER:  
**FDLED25BU2D**

Luminaire Lumens: 2127

#### Polar Candela Distribution

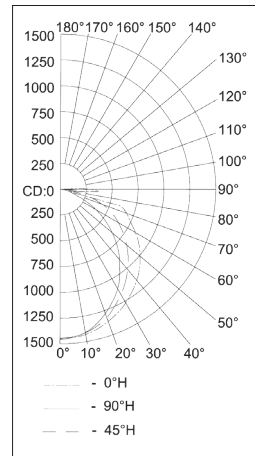


#### 5000K CCT, Diffused Lens

REPORT NUMBER:  
**FDLED50BU2D**

Luminaire Lumens: 4348

#### Polar Candela Distribution



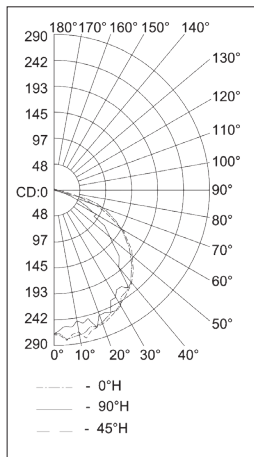
### Emergency Mode

#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED25BU2E**

Luminaire Lumens: 797

#### Polar Candela Distribution

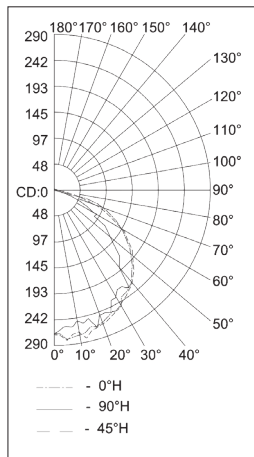


#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED50BU2E**

Luminaire Lumens: 1533

#### Polar Candela Distribution

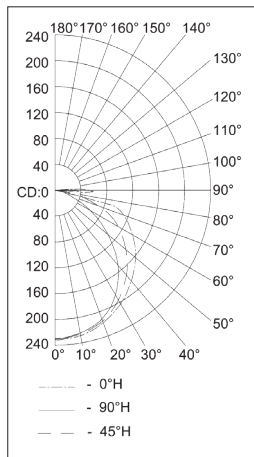


#### 5000K CCT, Diffused Lens

REPORT NUMBER:  
**FDLED25BU2DE**

Luminaire Lumens: 680

#### Polar Candela Distribution

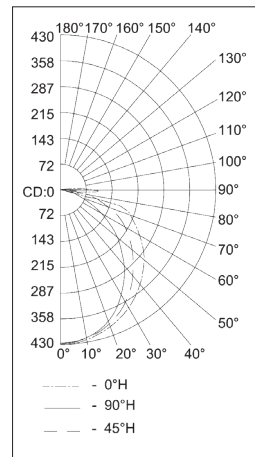


#### 5000K CCT, Diffused Lens

REPORT NUMBER:  
**FDLED50BU2DE**

Luminaire Lumens: 1289

#### Polar Candela Distribution



#### 5000K CCT, Clear Lens

REPORT NUMBER:  
**FDLED25BU2R**

Luminaire Lumens: 681

#### Polar Candela Distribution

