



# LIGHTING

## C1D1 FLOOD – INTRODUCTION & LOGIC



**Class I, Div. 1&2, Groups B,C,D**  
**Class I, Zone 1&2, Groups IIB+H2, IIA**  
**Class II, Div. 1&2, Groups EFG, Class III**  
**Enclosure Type 4X, IP66 (-50°C to +55°C)**

CSA File LR11713

**IEC Ex Rated model (w/ IEX or IEX4B suffix) Zone 1, Zone 21**  
**Ex de IIB+H2 T6..T5, Gb, IP66**  
**Tamb -20°C ≤ Ta ≤ +55°C; Option LT for -50°C ≤ Ta ≤ +55°C**  
**Ex de IIB T6..T5, Gb, -50°C ≤ Ta ≤ +55°C**  
**Ex tb IIIC T90°C Db, -50°C ≤ Ta ≤ +55°C**  
**Certificate IECEX CSA 14.0010**  
**ATEX Certificate SIR14ATEX1159X**

### PETROBRIGHT® LED

#### FEATURES-SPECIFICATIONS

##### Applications

LED KF1L Series Explosion-proof Floods are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or NEMA 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities

##### Compliances

- UL-8750 for LED lighting
- ANSI/UL 1598A
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 1; Class II, Division 1; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- IEX or IEX4B suffix for Zone 1 and Zone 21 to IEC 60079-0, 60079-1, 60079-31, 60079-7 Standards
- Enclosed and gasketed
- NEMA 3, 4X
- IP66

##### Materials

- Body, end caps and lens frame corrosion resistant copper-free aluminum alloy with baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware - stainless steel
- Thermal shock and impact resistant extra heavy-duty glass lens
- High temperature silicone gasketing
- Trunnion heavy gauge 316 SS

#### LED Flood Features and Standards

- **Factory Sealed Construction**
- One 3/4" NPT & one M20 entry standard (see logic for other choices)
- **Supplemental surge protection (AC models 120-277VAC only) and looping terminals are standard**
- Crisp White Light for Excellent Color Rendering – Chromaticity 5000 K (CCT); approx. 70 CRI
- Energy Savings – High lumens per watt
- Long Life – 100,000+ maintenance free hours to 70% initial lumens
- Instant On – Including after power interruption
- World Voltage 120 – 277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant
- LM80-08\* Measurement of lumen maintenance for LED light sources
- LM79-08\* Certified "Absolute" Photometry, including Chromaticity Color for Solid State Lighting
- L70 Values – Industry Nomenclature for Hours of use to 70% of initial Lumens – TM-21\* & calculated

#### Patent Pending Fixture Design



KF1L with KFS-6 Slipfitter mount on 2" pipe



Dark Sky Visor KF1L-DARK

Suitable for Paint Spray

\* LM-xx & TM-xx are Illumination Engineering Society Standards designed to promote uniformity in testing procedures among test labs and manufacturers. For more information go to [www.ies.org](http://www.ies.org)

#### Catalog Number Logic

|   |                   |      |     |    |    |
|---|-------------------|------|-----|----|----|
|   |                   | KF1L | 125 | 30 | XX |
| <b>KF1L - Series Constant</b>                           | _____             |      |     |    |    |
| <b>Fixture Wattage</b>                                  | _____             |      |     |    |    |
| <b>090 - 90W</b>  | <b>150 - 150W</b> |      |     |    |    |
| <b>105 - 105W</b>                                       | <b>165 - 165W</b> |      |     |    |    |
| <b>110 - 110W</b>                                       | <b>195 - 195W</b> |      |     |    |    |
| <b>125 - 125W</b>                                       |                   |      |     |    |    |
| <b>Voltage</b>  | _____             |      |     |    |    |
| <b>30 - 120 - 277VAC 50/60Hz</b>                        |                   |      |     |    |    |
| <b>33 - 347 - 480VAC 60Hz (90W-125W)</b>                |                   |      |     |    |    |
| <b>34 - 120-250VDC (90W-125W)</b>                       |                   |      |     |    |    |
| <b>Options</b>  | _____             |      |     |    |    |
| <b>IEX4B - Four bolt termination cover (see Note 1)</b> |                   |      |     |    |    |
| <b>LT - For -50°C to +55°C, IEC Zone 1 (see Note 1)</b> |                   |      |     |    |    |
| <b>F - Single Fuse</b>                                  |                   |      |     |    |    |
| <b>FF - Double Fuse</b>                                 |                   |      |     |    |    |
| <b>D20 - Dual M-20 Entries</b>                          |                   |      |     |    |    |
| <b>D25 - Dual M-25 Entries</b>                          |                   |      |     |    |    |
| <b>D75 - Dual 3/4" NPT</b>                              |                   |      |     |    |    |

① Construction/Certification Notes: KF1L units are standard with one 3/4" NPT hub & one M20 hub – both plugged, with an 8-bolt factory sealed termination chamber, suitable for CID1 BCD -50°C to +55°C and IEC Zone 1 Ex de suitable for -20°C to 55°C.

Use option LT for models needing IEC Zone 1, -50°C to +55°C suitability for hydrogen.

Option IEX4B utilizes 4 terminal cover bolts for Ex de and maintains all ratings EXCEPT CID1 BCD.

See logic for other entry options

© Fusing not for Canadian or Marine Installations



## C1D1 FLOOD – ORDERING & TECHNICAL DATA

| ORDERING INFORMATION AND AMBIENT SUITABILITY |                |            |            |           |        | C1D1 |       | C2D1  |      | IEC ZONE 1 |        | IEC ZONE 21 |        | L70    |            |
|--|----------------|------------|------------|-----------|--------|------|-------|-------|------|------------|--------|-------------|--------|--------|------------|
| CATALOG NO.                                  | WEIGHT LBS./KG | WATTS      | VOLTAGE    | AMPS      | LUMENS | 40°C | 55°C  | 40°C  | 55°C | 40°C       | 55°C   | 40°C        | 55°C   | TM-21  | CALCULATED |
| KF1L09030                                    | 46.00 / 20.87  | 90         | 120-277VAC | 0.72-0.31 | 7182   | T6   | T6    | (EFG) | ⊙    | T6         | T5     | 160-75      | 175-90 | 60100  | 270000     |
| KF1L09033                                    |                |            | 347-480VAC | 0.25-0.18 |        |      |       |       |      |            |        |             |        |        |            |
| KF1L09034                                    |                |            | 120-250VDC | 0.72-0.28 |        |      |       |       |      |            |        |             |        |        |            |
| KF1L10530                                    |                | 120-277VAC | 0.85-0.37  | 8362      | T6     | T6   | (EFG) | ⊙     | T6   | T5         | 160-76 | 175-91      | 60100  | 270000 |            |
| KF1L10533                                    |                | 347-480VAC | 0.29-0.21  |           |        |      |       |       |      |            |        |             |        |        |            |
| KF1L10534                                    |                | 120-250VDC | 0.85-0.33  |           |        |      |       |       |      |            |        |             |        |        |            |
| KF1L11030                                    |                | 120-277VAC | 0.95-0.41  | 10590     | T6     | T6   | (EFG) | ⊙     | T6   | T5         | 160-77 | 175-92      | 72600  | 278000 |            |
| KF1L11033                                    |                | 347-480VAC | 0.33-0.24  |           |        |      |       |       |      |            |        |             |        |        |            |
| KF1L11034                                    |                | 120-250VDC | 0.95-0.37  |           |        |      |       |       |      |            |        |             |        |        |            |
| KF1L12530                                    |                | 120-277VAC | 1.10-0.48  | 11590     | T6     | T6   | (EFG) | ⊙     | T6   | T5         | 160-78 | 175-93      | 72600  | 278000 |            |
| KF1L12533                                    |                | 347-480VAC | 0.38-0.28  |           |        |      |       |       |      |            |        |             |        |        |            |
| KF1L12534                                    |                | 120-250VDC | 1.10-0.43  |           |        |      |       |       |      |            |        |             |        |        |            |
| KF1L15030                                    |                | 120-277VAC | 1.25-0.54  | 13280     | T5     | -    | -     | -     | -    | T5         | -      | -           | 60300  | 190000 |            |
| KF1L16530                                    |                | 120-277VAC | 1.38-0.60  | 13760     | T5     | -    | -     | -     | -    | T5         | -      | -           | 72600  | 278000 |            |
| KF1L19530                                    |                | 120-277VAC | 1.63-0.70  | 15707     | T5     | -    | -     | -     | -    | T5         | -      | -           | 72600  | 278000 |            |

① Yellow highlighted models have extra high lumen LED's.

② See logic for 347-480V availability

③ Amperage measured at 120VAC; 277VAC calculated

④ Use minimum 75° Supply Wire @40°C Ambient; 90°@55°C Ambient

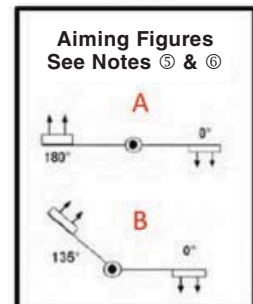
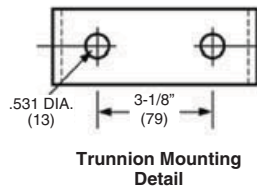
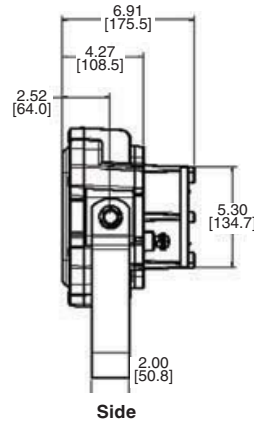
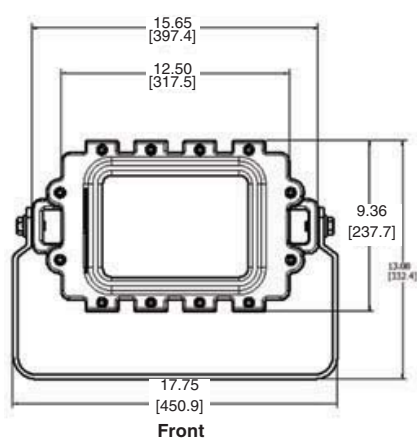
⑤ CID1 40°/55° & C2D1 40°C use Aiming Figure "A" below.

⊙ 55°C C2D1 EFG T3C Aiming Figure "B", 55°C C2D1 EF T3A Aiming Figure "A"

⑦ First number is lens temperature under 25mm layer of dust; Second number is lens temp for dust cloud.

\*\* TM-21 based values require very long duration testing. IES TM-21 "official reported" is based on at 8,000 to 10,000 hours of LED chip manufacturer's LM-80 Testing at printing.

### Dimensions



| KFL MOUNTS AND ACCESSORIES ① |  |
|------------------------------|--|
| CATALOG NUMBER               | DESCRIPTION  |
| KFS-6                        | Steel Slipfitter for 2" Pipe (2-3/8" o.d.) Tenon. Slips 3.75" Over Pipe.                                       |
| KFCB                         | Heavy Duty Cast-Iron Crossarm Fitting for Horizontal Trunnion  |
| KFWB                         | Heavy Duty Wall Mount and/or Pipe Clamp Fitting Clamps 2" Pipe (2-3/8" o.d.) Through 2-1/2" Pipe (2-7/8" o.d.) |
| K4040                        | Heavy Duty Steel Wall Bracket. (Must be with KFCB Crossarm Fitting).   |
| 4041                         | Heavy Duty Steel Wall Bracket 2" Pipe (2-3/8" o.d.) Tenon Fitting.   |
| KFLG                         | Wire Guard, 316 Stainless Steel  |
| VMSC10                       | 10' Stainless Steel Safety Cable with loop grip ②  |
| KF1L-DARK                    | Dark Sky Visor, White Painted Aluminum ③   |
| KF1L-DOOR                    | Replacement Door and Lens Assembly   |

① Fittings available to adapt trunnion mount floodlights to crossarms, poles and walls. Must be ordered separately.

② Drop limit 1'. Attaches to luminaire cable provision and to mounting structure.

③ Designed to eliminate upright when aimed at 45°.



KFS-6 Slipfitter



KFCB Cross Arm Mount



KFWB Wall/Pipe Bracket



K4040 Wall Bracket



4041 Tenon Fitting