

## Installation Instructions for Appleton™ Mercmaster™ LED Luminaire

FOR PROPER AND SAFE INSTALLATION OF THIS PRODUCT, PLEASE READ THE FOLLOWING INSTRUCTIONS.

### Product Safety

#### Signal Words Defined

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION** indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE** is used to address practices not related to physical injury.

#### Safety Instructions for Complete Luminaire

##### ⚠ WARNING

- Do not open or remove the luminaire with the circuit energized.
- Do not remove or replace fuse when luminaire is energized.
- Do not use this luminaire on ungrounded systems. Failure to ground the luminaire can result in an electric shock, which may be fatal.
- Before installation, ensure that the unit complies with the hazardous area classification. Refer to luminaire nameplate, located on exterior of housing body, for suitability in specific hazardous locations.
- Do not use on ungrounded 480 volt circuits.
- Do not open when explosive atmospheres are present.
- Beware of electrostatic charges. Use a moist cloth to clean polycarbonate globe.

##### ⚠ CAUTION:

- Do not look directly at the LEDs when energized.
- Disconnect the luminaire from the supply circuit before opening to reduce the risk of ignition in hazardous atmospheres.
- It is necessary that the globe and all conduit plugs are tightly secured and all luminaire fittings (mounting hood and optic) are tightly secured to the LED housing to prevent water and dust entry. The optic should be cleaned periodically to maintain lighting efficiency.

##### ⚠ NOTICE:

- Do not touch the LEDs; touching could leave oily deposits, causing hot spots and potential premature failure.
- This luminaire is designed for and should be installed with hazardous locations wiring method required in accordance with the National Electrical Code®/Canadian Electrical Code and all applicable local codes.
- This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and hazards involved.
- Do not use this equipment for anything other than its intended use.

### Applications/Intended Use

- To reduce the risk of ignition of hazardous atmosphere, disconnect the luminaire from the supply circuit before opening. Keep tightly closed when in operation.
- Marine and wet locations: Apply a corrosion-inhibiting grease, such as petroleum or soap-thickened mineral oils, in 3 lines, spaced approximately 120 degrees apart, perpendicular to the threads. Tighten all unused close-up plugs.
- Areas where flammable gases and vapors are present under conditions defined by the ratings below.
- Non-hazardous locations where severe weather conditions, excessive moisture, dirt, dust, corrosive atmospheres, and high ambient temperatures are encountered.
- Luminaire to be mounted at a minimum of four (4) feet above the ground.

### Agency Ratings ①

- |  |   |
|--|---|
| • Class I, Division 2, Groups A, B, C, D | • Zone 21 IIIC                                    |
| • Class II, Division I, Groups E, F, G ② | • Zone 22 IIIC                                    |
| • Class II, Division 2, Groups F, G      | • Wet Locations                                   |
| • Class III                              | • Marine Outside Type (Salt Water) for USA only ② |
| • Simultaneous Exposure                  | • Type 3R, 4, 4X                                  |
| • Class I, Zone 2, Group IIC             | • IP66/67   |

#### NOTES:

① Refer to product nameplate, located on the exterior of the housing body for details.



② To be installed in accordance with CG-259 of American Bureau of Shipping and Coast Guard.

## Agency Ratings: (IECEX/ATEX) / Classements de l'agence : (IECEX/ATEX)

For Catalog Numbers Starting With "MLG" and Ending With "BU"

INSTALLATION INSTRUCTIONS FOR MERCMaster LED - Series MLG

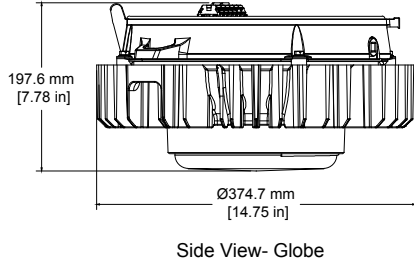
INSTRUCTION D'INSTALLATION POUR MERCMaster LED - Série MLG

<b>Equipment / Equipement</b>		
Protection Level / Niveau de protection	Gc - Dc	Db
Protection Mode / Mode de protection	Ex ec IIC - Ex tc IIIC	Ex tb IIIC; Ex op is IIIC
Ambient Temperature / Classe de temperature	-40°C ≤ Ta ≤ +65°C	
ATEX Certificate / Certificat ATEX	Sira 17ATEXTBDX	
IECEX Certificate / Certificat IECEX	IECEX SIR 17.TBDX	
IP & IK Codes / Codes IP & IK	IP66 - IK08	

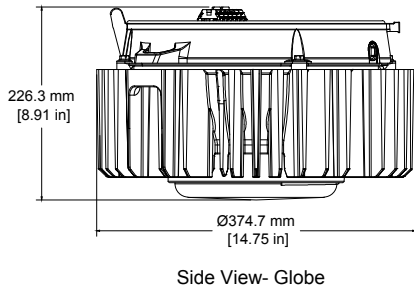
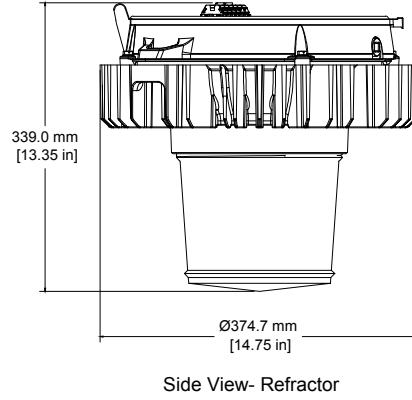
### Temperatures Class & Surface Temperatures

Series	GAS			DUST		
	40°C	55°C	65°C	40°C	55°C	65°C
<b>MLGL3...</b>	T6	T5	T4	51	63	74
<b>MLGL5...</b>	T5	T4	T4	55	67	77
<b>MLGL7...</b>	T6	T5	T4	58	70	78
<b>MLGL9...</b>	T5	T4	T4	62	73	83
<b>MLGH9...</b>	T4	T4	T4	64	75	82
<b>MLGH1...</b>	T4	T3	T3	67	78	85
<b>MLGH3...</b>	T4	T3	T3	73	82	89
<b>MLGH6...</b>	T3	T3	T3	76	86	95

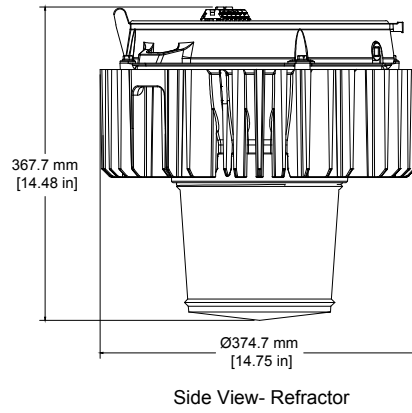
# Luminaire Dimensions



Luminaire with Small Heat Sink



Luminaire with Large Heat Sink



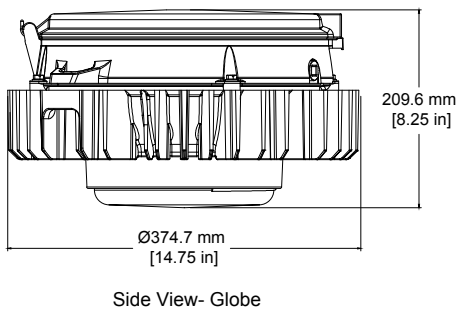
**FIGURE 1: MERCMaster LED LUMINAIRE**

# Mounting Hood Dimensions and Installation

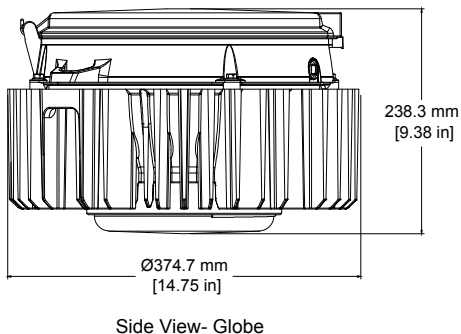
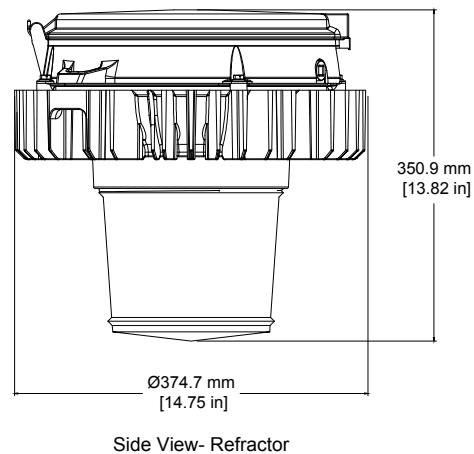
## Pendant:

**KPA-75, KPA-100**

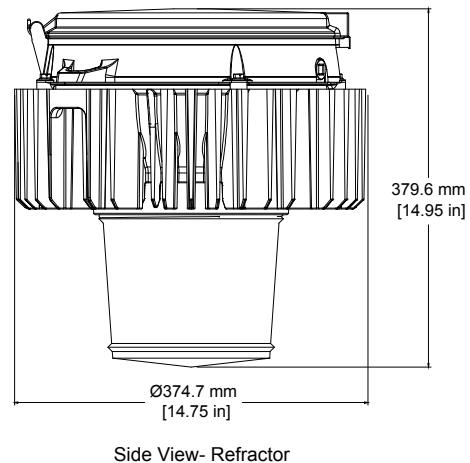
## Dimensions:



Luminaire with Small Heat Sink



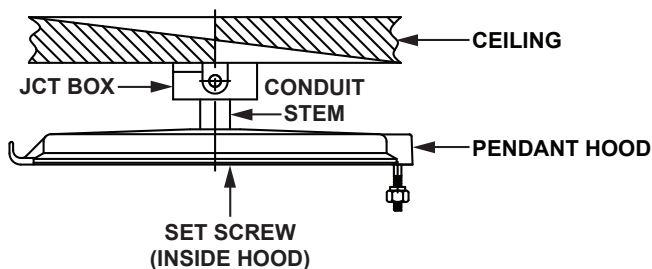
Luminaire with Large Heat Sink



**FIGURE 2: LUMINAIRE WITH PENDANT HOOD**

## Installation:

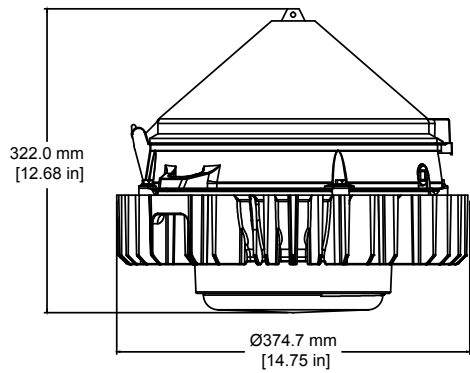
1. Apply a corrosion-inhibiting grease, such as petroleum or soap-thickened mineral oils, in 3 lines, spaced approximately 120 degrees apart perpendicular to the threads on the conduit stem. Thread the pendant hood onto the 3/4 inch or 1 inch conduit stem.
2. Tighten the set screw inside the hood.



**FIGURE 3: PENDANT HOOD DETAILS**

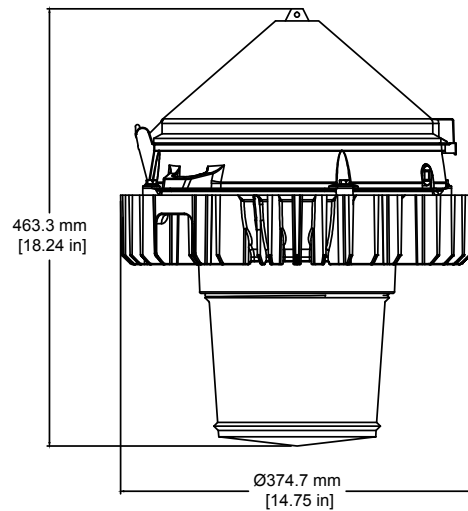
**Pendant Cone:  
KPCH-75, KPCH-100**

Dimensions:

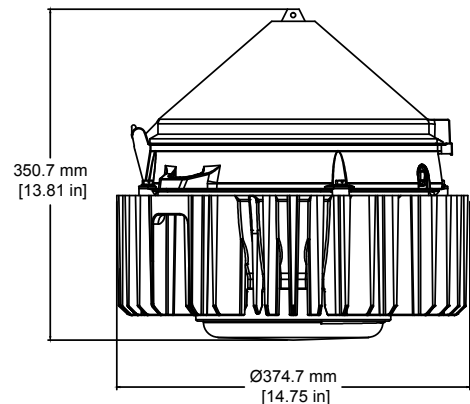


Side View- Globe

Luminaire with Small Heat Sink

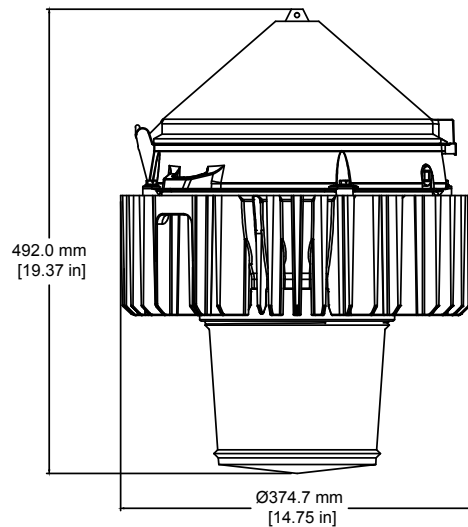


Side View- Refractor



Side View- Globe

Luminaire with Large Heat Sink

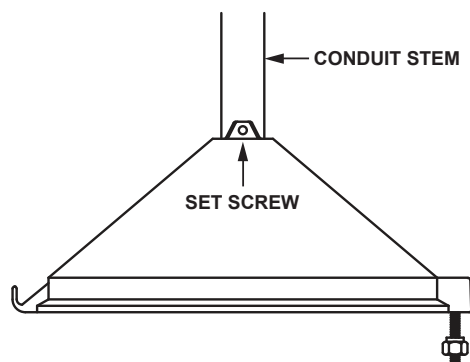


Side View- Refractor

**FIGURE 4: LUMINAIRE WITH PENDANT CONE**

**Installation:**

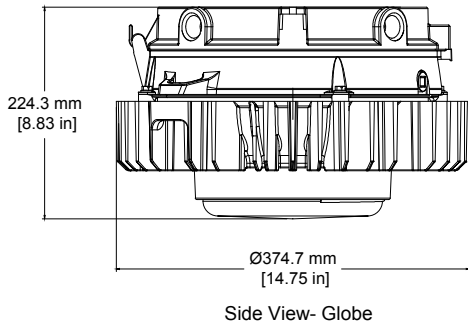
1. Apply a corrosion-inhibiting grease, such as petroleum or soap-thickened mineral oils, in 3 lines, spaced approximately 120 degrees apart perpendicular to the threads on the conduit stem.
2. Thread the pendant cone hood onto the 3/4 inch or 1 inch conduit stem.
3. Tighten the set screw.



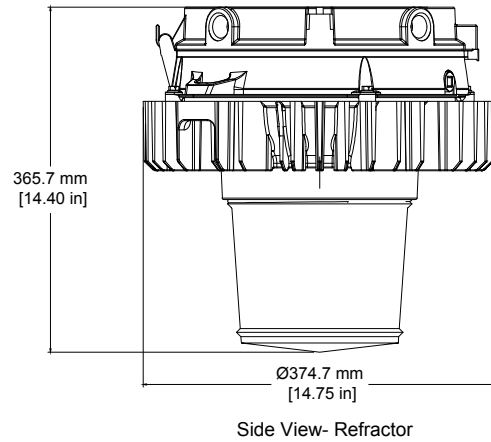
**FIGURE 5: PENDANT CONE HOOD DETAILS**

**Ceiling:  
KPC-75, KPC-100**

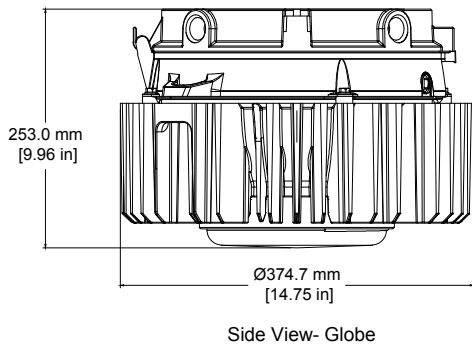
**Dimensions:**



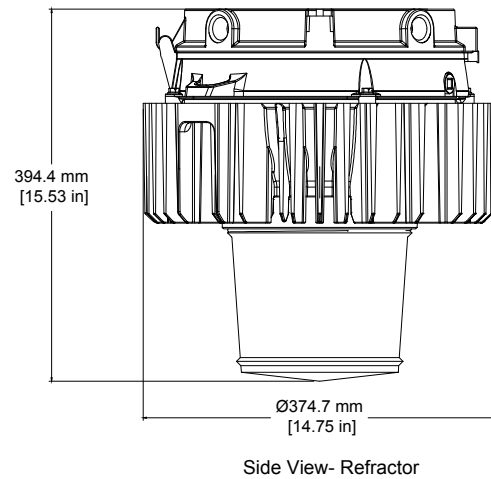
**Luminaire with Small Heat Sink**



**Side View- Refractor**



**Luminaire with Large Heat Sink**

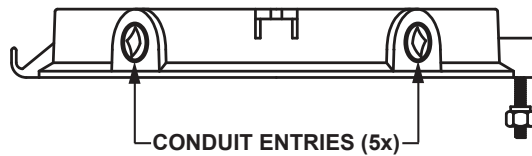


**Side View- Refractor**

**FIGURE 6: LUMINAIRE WITH CEILING HOOD**

**Installation:**

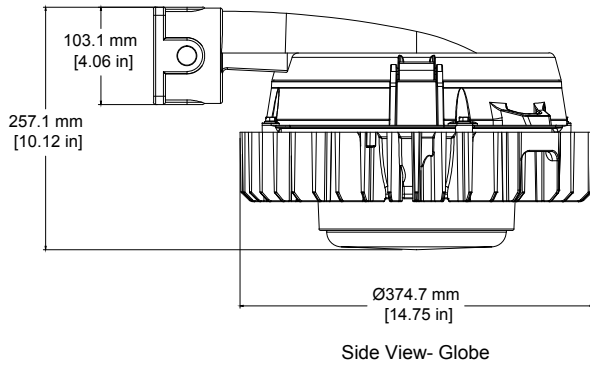
1. Bolt the ceiling hood directly to a structural member; thread onto a 3/4 inch or 1 inch conduit stem.
2. Remove unused conduit plugs and reinstall with a corrosion-inhibiting grease, such as petroleum or soap-thickened mineral oils, in 3 lines, spaced approximately 120 degrees apart perpendicular to the threads on the conduit plugs.



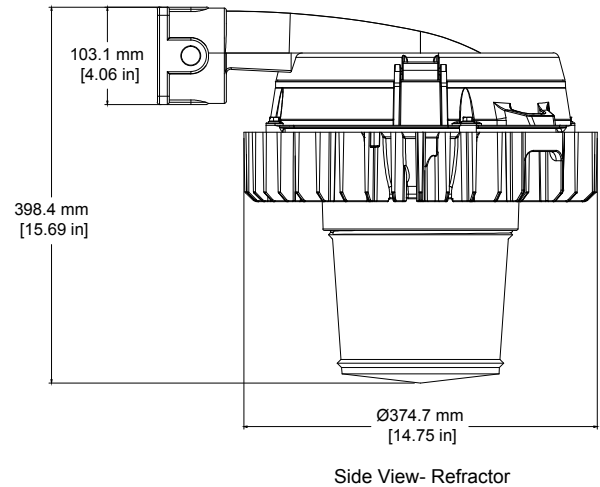
**FIGURE 7: CEILING HOOD DETAILS**

**Wall:  
KPWB-75, KPWB-100**

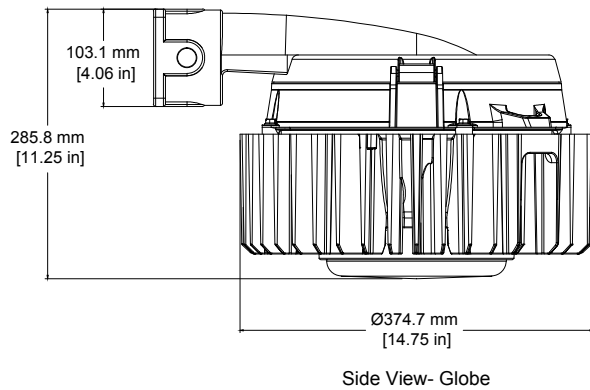
**Dimensions:**



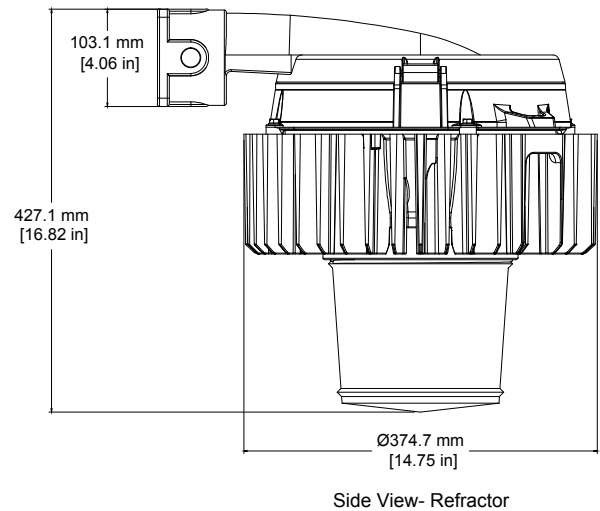
**Luminaire with Small Heat Sink**



**Side View- Refractor**



**Luminaire with Large Heat Sink**

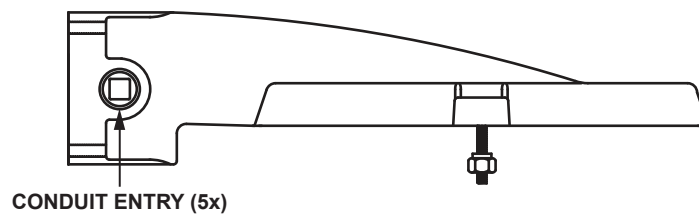


**Side View- Refractor**

**FIGURE 8: LUMINAIRE WITH WALL HOOD**

**Installation:**

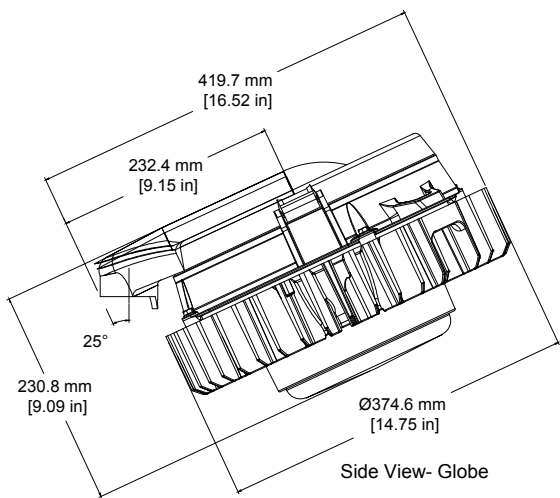
1. Bolt the wall hood to a structural member.
2. Remove unused conduit plugs and reinstall a corrosion-inhibiting grease, such as petroleum or soap-thickened mineral oils, in 3 lines, spaced approximately 120 degrees apart perpendicular to the threads on the conduit plugs.



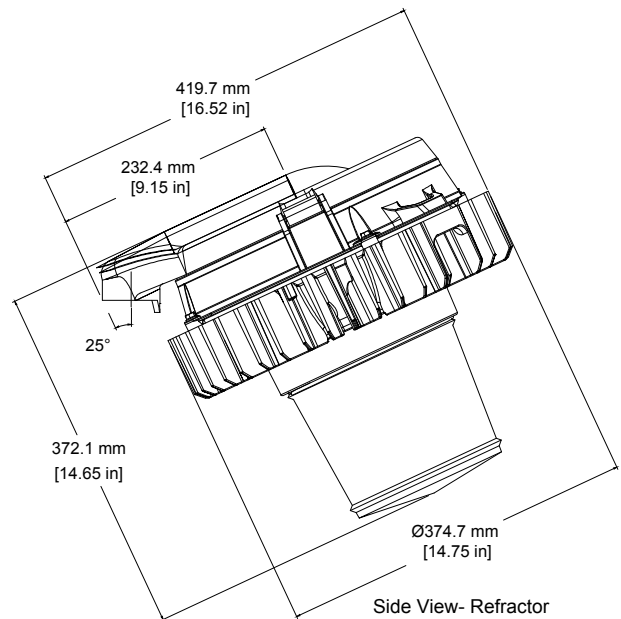
**FIGURE 9: WALL HOOD DETAILS**

**25° Stanchion:  
KPS-125, KPS-150**

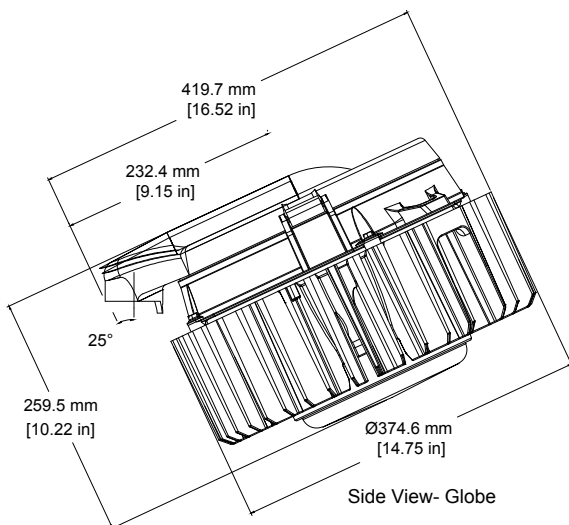
Dimensions:



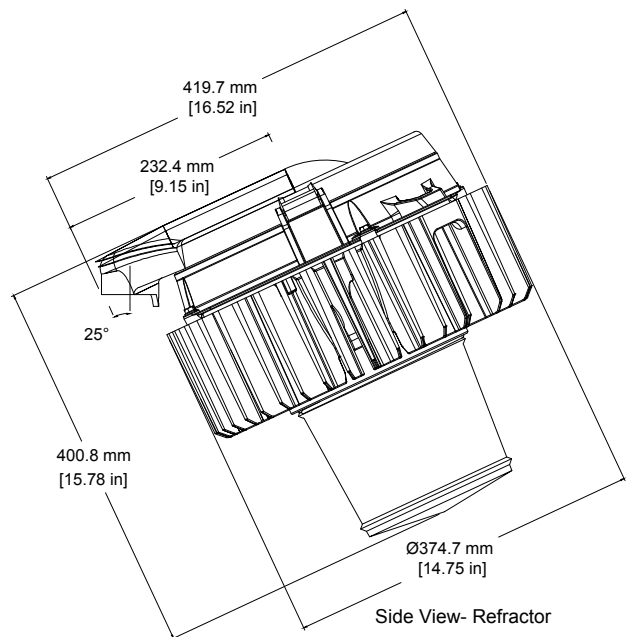
Luminaire with Small Heat Sink



Side View- Refractor



Luminaire with Large Heat Sink

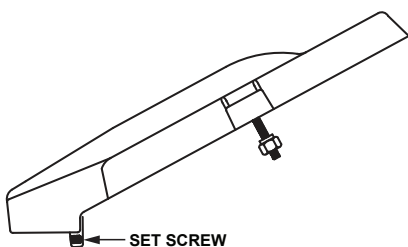


Side View- Refractor

**FIGURE 10: LUMINAIRE WITH 25° STANCHION HOOD**

**Installation:**

1. Apply a corrosion-inhibiting grease, such as petroleum or soap-thickened mineral oils, in 3 lines, spaced approximately 120 degrees apart perpendicular to the threads on the conduit.
2. Thread the stanchion hood onto the 1-1/4 inch or 1-1/2 inch conduit. NOTE: Five full threads must be engaged.
3. Determine the appropriate orientation and tighten the set screw.

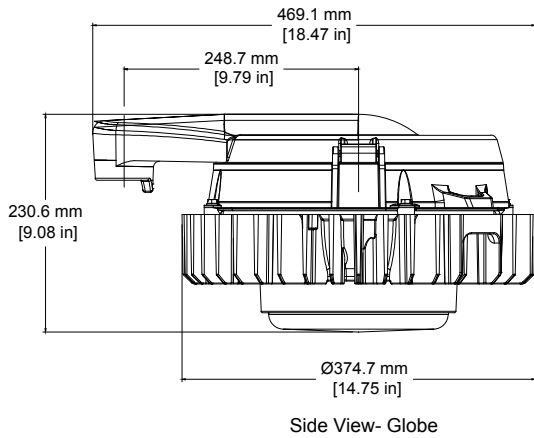


**FIGURE 11: 25° STANCHION HOOD DETAILS**

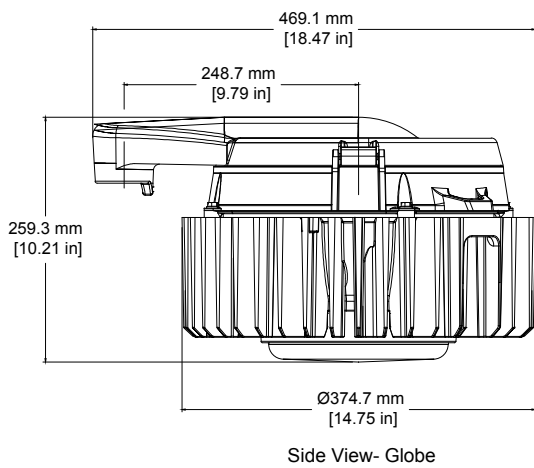
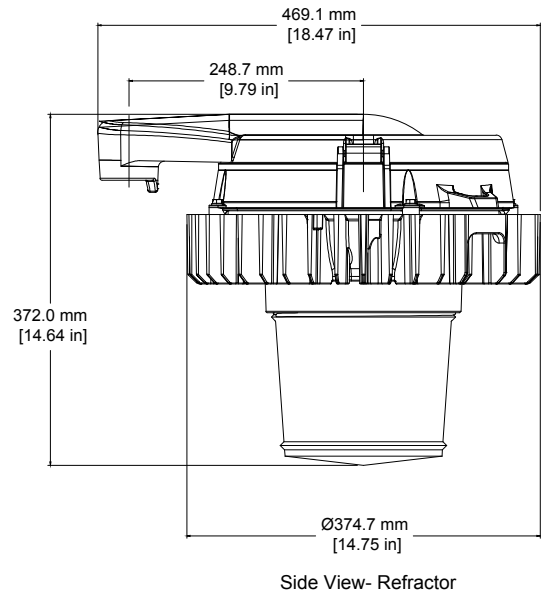


**90° Stanchion:  
KPST-125, KPST-150**

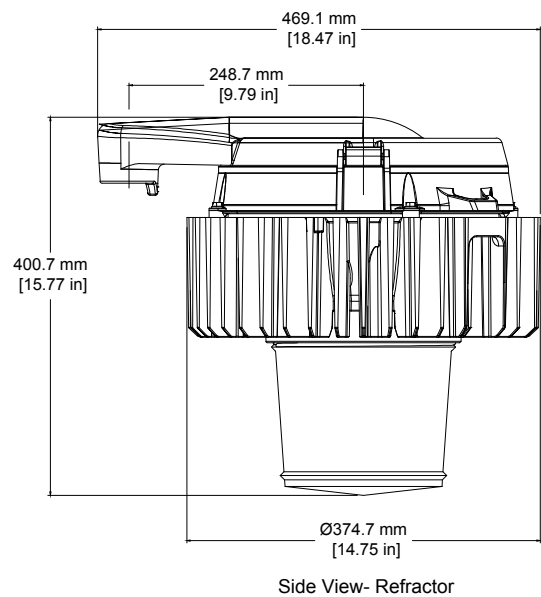
**Dimensions:**



**Luminaire with Small Heat Sink**



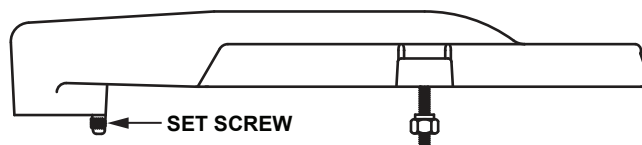
**Luminaire with Large Heat Sink**



**FIGURE 12: 90° STANCHION HOOD DETAILS**

**Installation:**

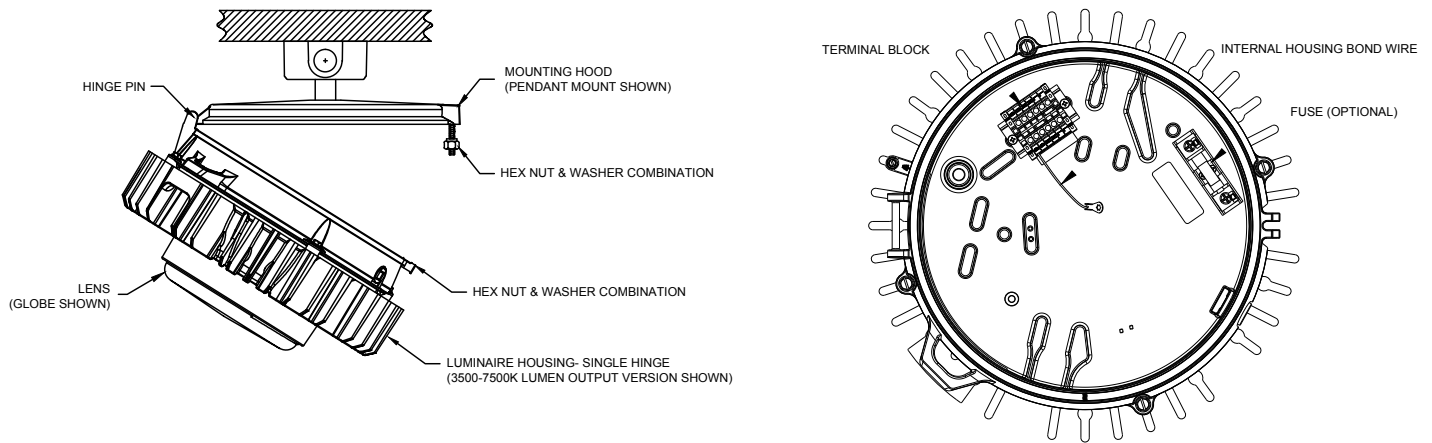
1. Apply a corrosion-inhibiting grease, such as petroleum or soap-thickened mineral oils, in 3 lines, spaced approximately 120 degrees apart perpendicular to the threads on the conduit stem. Thread the stanchion hood onto the 1-1/4 inch or 1-1/2 inch conduit stem. NOTE: Five full threads must be engaged.
2. Determine the appropriate orientation and tighten the set screw.



**FIGURE 13: 90° STANCHION HOOD DETAILS**

## LED Housing Installation

**⚠ WARNING:** The luminaire must be grounded as required by the National Electrical Code (Paragraph 410-21 and Article 250) or Canadian Electrical Code (Rule 30-500 and Section 10). Verify that ground continuity has been established by using an Ohm meter or other suitable test equipment before energizing the luminaire. Failure to properly ground the luminaire will create an electric shock hazard, which can cause serious injury or death.

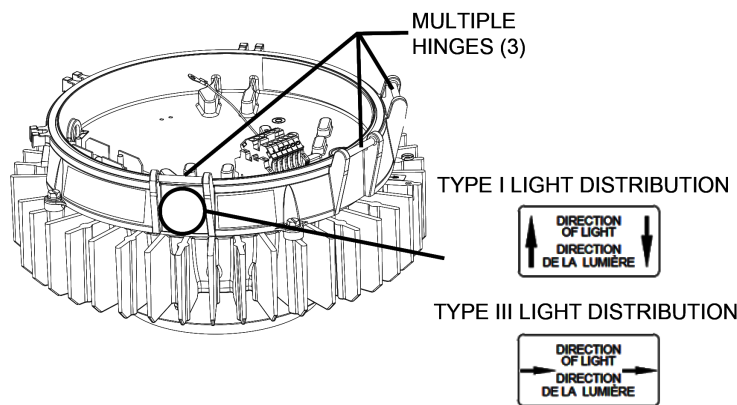


**FIGURE 14: WIRING COMPARTMENT**

### Installation Instructions for Luminaire With Single Hinge Design

1. Disconnect facility power to the electric power supply leads.
2. Feed the supply wires through the conduit entry in the mounting hood.
3. Hang the luminaire on the hinge; secure with the hinge pin.
4. Strip the individual conductors to bare wire and insert them into the proper terminal block connections. The connection points are identified on the terminal block as: “L” = Line, “N” = Neutral, and “G” = Ground. Tighten down the terminal block screws onto the wire.
5. Luminaire requires bonding to mounting hood. Connect internal housing bond wire to GREEN ground screw in the mounting hood.
6. Fold all excess supply leads and fasten them into the mounting hood with the wire tie (supplied) to avoid pinching the wires.
7. Swing the luminaire up and tightly secure with the hex nut and washer combination.

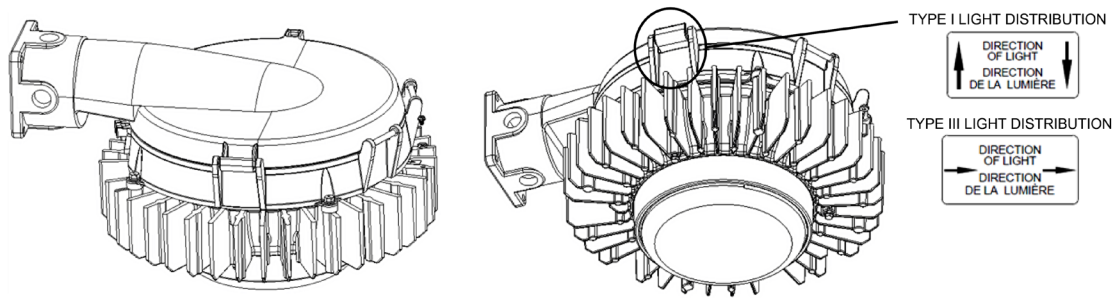
### Installation Instructions for Luminaire With Multi-Hinge Design (Type I and Type III Light Distribution)



**FIGURE 15: HOUSING INSTALLATION - MULTI-HINGE DESIGN**

1. Disconnect facility power to the electric power supply leads.
2. Feed the supply wires through the conduit entry in the mounting hood.
3. Find the “Direction of Light” label near one of the hinges on the LED Housing.
4. Use the label to determine the direction of the light and select the hinge that will orient the luminaire appropriate for your application. **NOTE:** Hinge interference exists with the 90° stanchion, 25° stanchion, and wall mount hoods. Therefore, these designs are limited to one hinge. See diagram below.

# Installation Instructions for Luminaire With Multi-Hinge Design (Continued) (Type I and Type III Light Distribution)

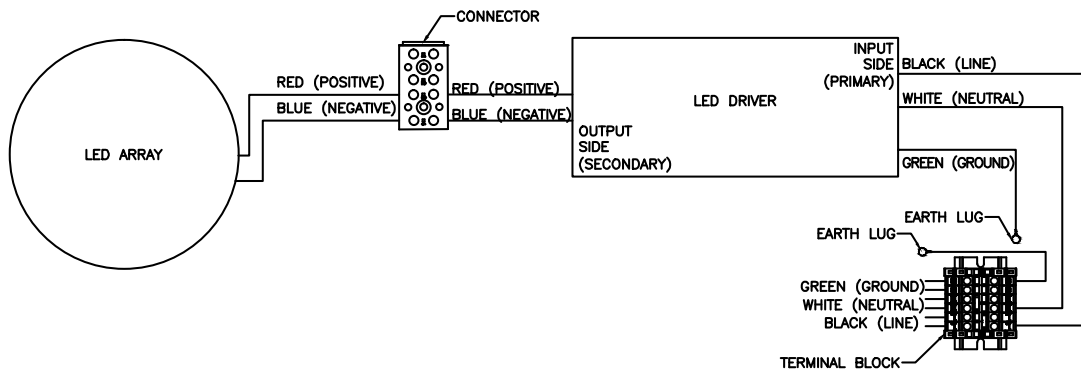


**FIGURE 16: MULTI-HINGE WALL HOOD DETAIL**

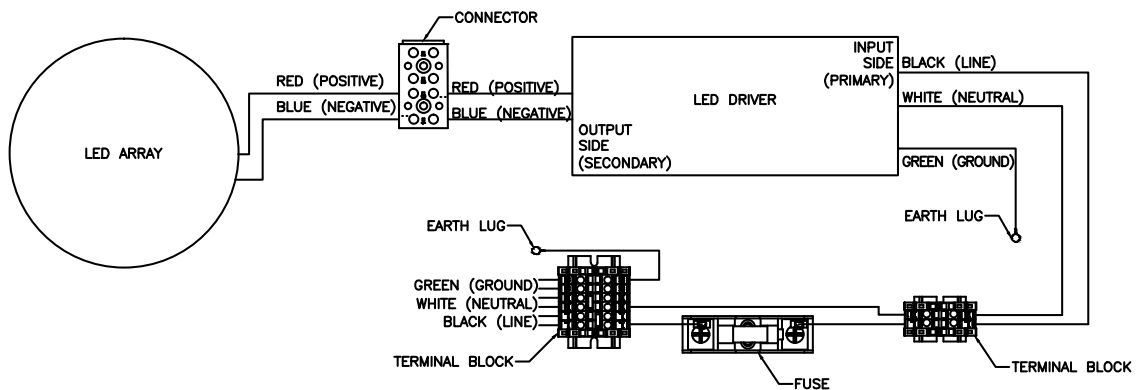
5. Hang the luminaire on the appropriate hinge; secure with the hinge pin.
6. Strip the individual conductors to bare wire and insert them into the proper terminal block connections. The connection points are identified on the terminal block as: “L” = Line, “N” = Neutral, and “G” = Ground. Tighten down the terminal block screws onto the wire.
7. Luminaire requires bonding to mounting hood. Connect internal housing bond wire to GREEN ground screw in the mounting hood.
8. Fold all excess supply leads and fasten them into the mounting hood with the wire tie (supplied) to avoid pinching the wires.
9. Swing the luminaire up and tightly secure with the hex nut and washer combination.

## Wiring Diagrams

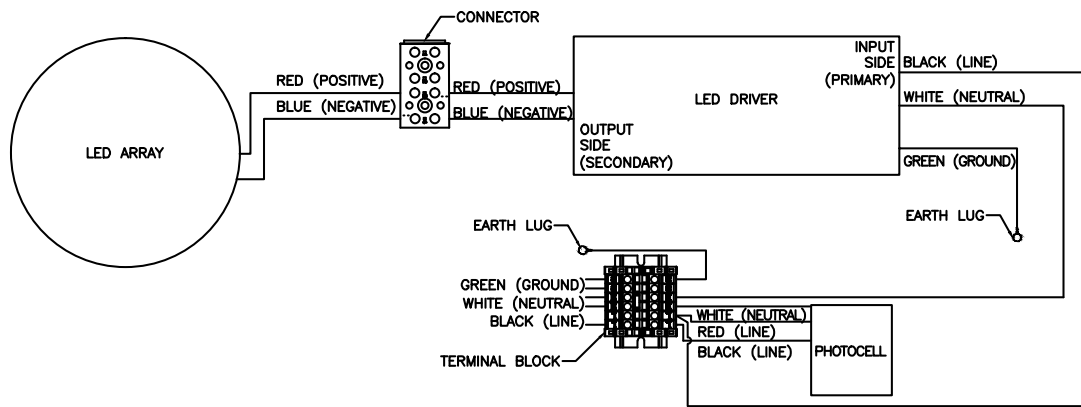
Complete the wire connections per the appropriate diagram below.



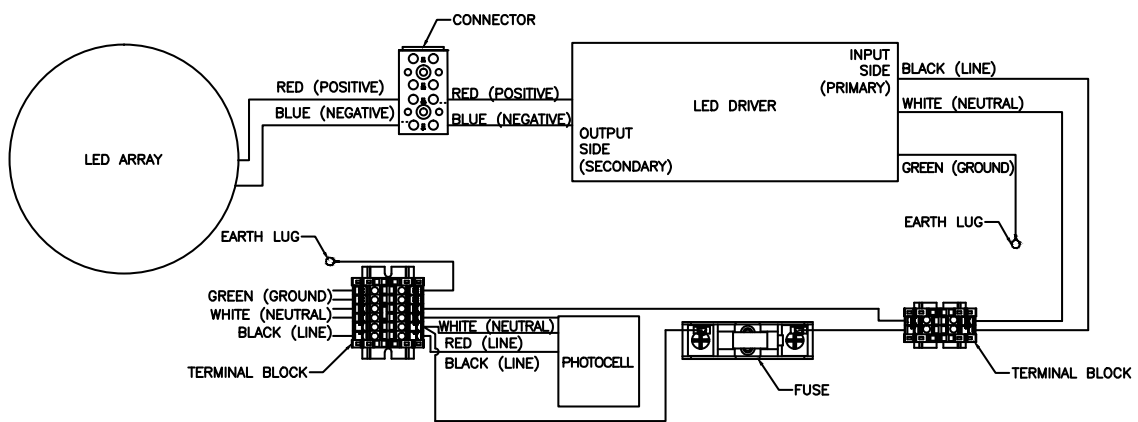
**FIGURE 17: LUMINAIRE**



**FIGURE 18: LUMINAIRE WITH OPTIONAL FUSE**



**FIGURE 19: LUMINAIRE WITH OPTIONAL PHOTOCONTROL**



**FIGURE 20: LUMINAIRE WITH OPTIONAL PHOTOCONTROL AND FUSE**

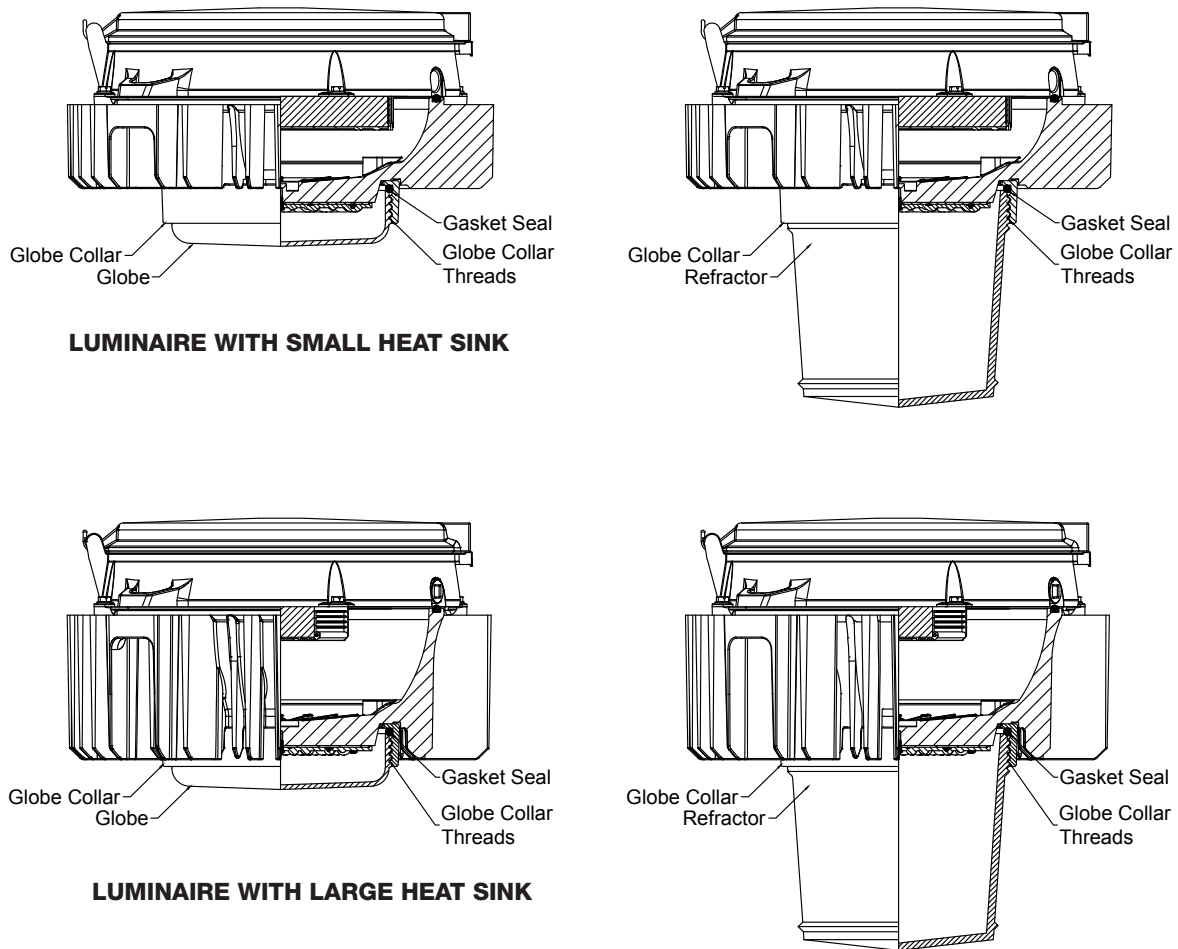
**NOTES:**

- Available photocontrol: PC120D2 for 120V ac; PC247D2 for 208-277V ac.
- Photocontrol does not fit ceiling or pendant cone mounting hoods.
- Photocontrol provides automatic dusk-to-dawn lighting control in Class I, Division 2 locations only.
- Luminaires with photocontrol are not rated IP66/67, Class II, 3R, 4, or 4X.

**Fuse Replacement**

- Replace only with a fuse rating (ampere and volts) as specified on the fuse label (located in the luminaire housing).
- The replacement fuse must be non-arcing (filled), non-indicating, and current limiting.
- The fuse is for supplementary protection only.

## Globe/Reflector Replacement: VPGL-LED, VPGL-DIFF, VPGL-GLASS, LPG-R5



**FIGURE 21: GLOBE/REFRACTOR SEALING DETAIL**

### Globe/refractor replacement:

1. If desired, globe/refractor may be replaced with parts listed on the fitting label inside the luminaire.
2. De-energize the fixture before removing the globe/refractor.
3. Remove globe/refractor by unthreading it counter clockwise.
4. Ensure that the gasket seal surface is clean and free from dirt or foreign particles.
5. Ensure that the globe/refractor is clean and free from dirt or foreign particles.
6. Align the threads of the globe/refractor with that of the globe collar. Rotate the globe /refractor into the globe collar clockwise making certain to compress the gasket seal.