



Before You Begin

Read and understand this entire manual and any additional site-specific installation documents before attempting to assemble, install, or operate the luminaire. If you have any questions regarding the product or installation, contact Cooper Lighting Customer Service at 1-800-573-3600.

Safety

Follow all safety items outlined here as well as any local safety procedures.

1. All electrical work must conform to National Electrical Code (NFPA 70), IEEE Emerald book, and all applicable local codes and ordinances.
2. Verify the capacity and integrity of existing power distribution system and correct branch circuit voltage before beginning installation.
3. Verify the structural capacity and safety of all facility/venue/pole supports and mounting apparatus before installation. See fixture specification sheet for weight and wind loading data.
4. In harsh settings where the system is subjected to factors such as extreme temperatures, high corrosion, hurricanes, or lightning, always follow local codes and additional protocols to ensure the cabling and other system components can withstand the environmental stress for the life of the system.
5. DO NOT make or alter any open holes in the luminaire. Do not modify the luminaire, internal wiring, or fixture mounting features. Opening or modifying the luminaire or bracket will void the warranty.
6. Use Personal Protective Equipment including hardhats, safety glasses, reflective vests, electrical safety gloves, fall protection equipment, and safety toe boots during installation, operation, and maintenance of luminaire.
7. Verify compliance with local standards to prevent access to the area below where installation activities are occurring to prevent injury from accidental drops of fixtures, tools or hardware.

Storage

Store luminaires in a clean, dry place, protected from dirt, water, and sunlight prior to installation. See Table 1 for required storage and operating conditions:

Storage Temperature	Operating Temperature	Humidity
-40°C to +75°C (-40°F to 167°F)	-40°C to +40°C (-40°F to 104°F)	5% to 95% non-condensing

Table 1. Storage and Operating Conditions



IB506022EN

⚠ WARNING



Risk of Fire, Electrical Shock, Cuts or other Casualty Hazards - Installation and maintenance of this product must be performed by a qualified electrician. 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.



Risk of Fire and Electric Shock - Make certain power is OFF before starting installation or attempting any maintenance. Disconnect power at fuse or circuit breaker.



Risk of Fire - Refer to product label for specific minimum supply conductor requirements.



Risk of Burn - Disconnect power and allow fixture to cool before handling or servicing.



Risk of Personal Injury - Fixture may become damaged and/or unstable if not installed properly.

DISCLAIMER OF LIABILITY: Cooper Lighting Solutions assumes no liability for damages or losses of any kind that may arise from the improper, careless, or negligent installation, handling or use of this product.

NOTICE: Green ground wire provided in proper location. Do not relocate.

ATTENTION Receiving Department: Note actual fixture description of any shortage or noticeable damage on delivery receipt. File claim for common carrier (LTL) directly with carrier. Claims for concealed damage must be filed within 15 days of delivery. All damaged material; complete with original packing must be retained.

Safety: This fixture must be wired in accordance with the National Electrical Code and applicable local codes and ordinances. Proper grounding is required to insure personal safety. Carefully observe grounding procedure under installation section.

APPLICATIONS: This lighting fixture is designed for outdoor lighting services, and should not be used in area of limited ventilation or inside high ambient temperature enclosures. It must be stored in a dry location prior to installation. Do not expose lighting fixture to rain, dust or other environmental conditions prior to installation and insertion of photo control or shorting cap (if so equipped). UL requires minimum fixture mounting height of 12 feet.

Product	Input Voltage Range (VAC)	Nominal Input Power (W)	Input Current (A)	Power Factor (>60% Loaded)	THD (60% Loaded)	Inrush Period (µs)	Peak Inrush (A)
EPH-LV-03	120-277	237	0.9 - 2.0	> 0.9	< 20%	220	289
	347-480	237	0.5 - 0.7	> 0.9	< 20%	224	106
EPH-LV-04	120-277	312	1.1 - 2.6	> 0.9	< 20%	220	289
	347-480	312	0.6 - 0.9	> 0.9	< 20%	224	106
EPH-LV-06	120-277	482	1.7 - 4.0	> 0.9	< 20%	220	578
	347-480	482	1.0 - 1.4	> 0.9	< 20%	224	212
EPH-LV-07	120-277	549	2.0 - 4.6	> 0.9	< 20%	220	578
	347-480	549	1.1 - 1.6	> 0.9	< 20%	224	212
EPH-LV-08	120-277	490	1.8 - 4.1	> 0.9	< 20%	220	578
	347-480	490	1.0 - 1.4	> 0.9	< 20%	224	212

BEFORE YOU BEGIN - Record MAC Address (Wireless AirMesh Configurations)

Note: No control cables are required for wireless applications.

For wireless applications, every fixture also has a unique MAC address. It is important to record that MAC address for each fixture with the corresponding fixture number to ensure the control system programmers can identify each fixture.

Every fixture that has wireless control capability will have a sticker inside the driver box that has the MAC address of the wireless control card that was installed in that fixture. Remove the sticker from the inside of the driver box and place it on the MAC address recording sheet. If you do not have a MAC address recording sheet, simply affix the sticker to a piece of paper and write the fixture number next to the sticker. Keep all MAC address stickers in a safe location and provide them to the Controls Technician.



INSTALLATION

Yoke Mounting (Figure 1)

Tools Required: Ratchet, Torque wrench (ft-lbs), 3/4 inch and 1-1/8 inch socket, and electrical wiring tools as needed.

- Mount luminaire to a surface ensuring maximum contact across the bottom surface of the yoke as shown in Figure 1. Use hole pattern provided in Figure 2 to properly align the yoke with center hole and 2x .58 slots with spacing of 3.75 inches.

Note: Do not invert or mount the yoke in any other orientation besides what is shown in figure 1.

Note: Mounting hardware recommended (supplied by others); all hardware must have proper outdoor corrosion-resistant coating (Hot-Dip Galvanized or equivalent):

- (2) 1/2 inch-13 flange bolts (long enough to go through the yoke and mounting structure) with (2) 1/2 inch-13 nuts to be mounted in 3.75 inch center spacing. Torque to 40 ft lbs after horizontally aiming the luminaire.
 - (1) 3/4 bolt with flat washer thru center bolt (long enough to go through the yoke and mounting structure) and (1) 3/4 nut. Torque to 80 ft-lbs.
- Loosen but do not remove the (2) center bolts (Fig 1).
 - Rotate luminaire to desired aiming position and tighten center bolts to 40 ft-lbs.
 - Refer to wiring diagrams for power connection (Fig 3.a).

Note: If only center bolt is used, a secondary retention cable rated for the weight of the fixture must also be secured around the fixture and to the mounting structure.

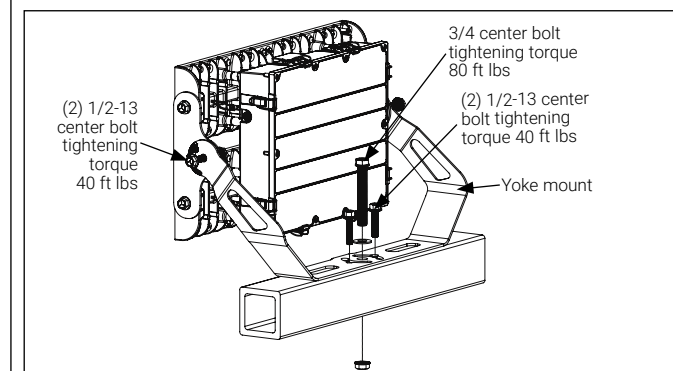


Figure 1.

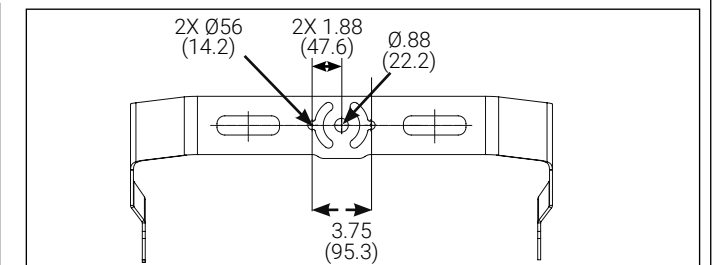


Figure 2.

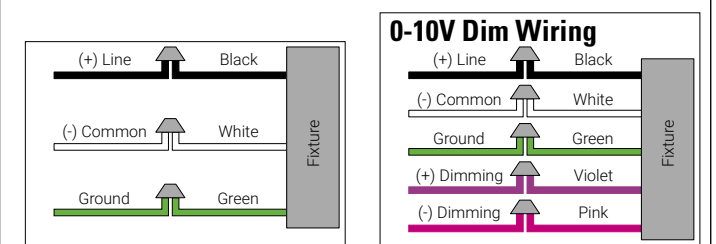


Figure 3.

Figure 3.a

Slip Fitter Mounting (Figure 4, 5)

Note: The slip fitter is only intended to mount on a vertical orientation with a suitable 3 inch outer diameter pole or accessory tenon top. For 2 3/8 inch outer diameter tenon sizes, a separate spacer accessory is needed that isn't included with the standard unit.

Tools Required: Ratchet, 9/16 inch socket, Torque wrench (ft-lbs), 1/4 inch Allen hex, 3/4 open wrench and #2 Phillips screwdriver.

- Loosen (3) #8 screws to remove the access cover from the slip fitter arm. Set aside for installation.
- Remove the protective plug on the lower side of the slip fitter arm and discard.
- Pull the supply wire leads through the top of pole or tenon top. Support fixture and lower onto pole while feeding supply wires through the slot in the slip fitter (Fig 5).
- Once fixture is oriented properly, hand tighten the (3) angled set screws to secure fixture in place. Hand tighten the lower (3) set screws and then torque the upper angled set screws to 25 ft-lbs. Install (3) hex nuts to the lower set screws and torque both the (3) set screws and (3) nuts to 25 ft-lbs (Fig 4).
- Inside the slip fitter arm, connect supply wires to appropriate fixture leads:
 - Supply side ground wire to green fixture lead.
 - Supply side neutral wire to white fixture lead.
 - Supply side line voltage wire to black fixture lead.

- Loosen the (2) 3/8-16 located in the slots to make angle adjustments to the fixture. After angle adjustments have been made, torque to 23 ft-lbs. The fixture can be adjusted from -10 degrees to 80 degrees from horizontal.
- Replace the access cover to the arm. Tighten the (3) #8 screws and torque to ~12 to 14 in-lbs.

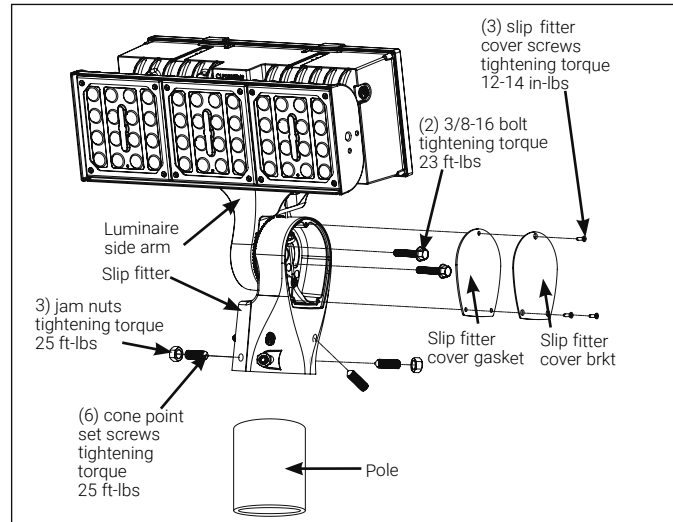


Figure 4.

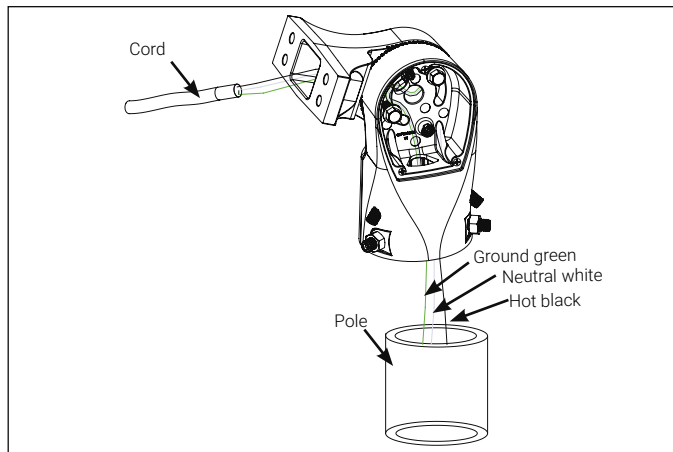


Figure 5.

Adjustable Arm Mounting (Figure 6)

Tools Required: Ratchet, 3/4 inch socket, Torque wrench (ft-lbs) and #2 Phillips screwdriver.

- Loosen (3) #8 screws to remove access cover from the arm and carefully set aside the cover plate and the screws.
- If installing to round pole, use round pole adapter provided at this point. If mounting to square pole disregard the round pole adapter. Make sure round pole adapter draft matches the back side of the arm properly.

Note: Ensure the pole is drilled for a "N" pattern. A template may be provided as required

- Remove pole top cap and place aside.

- Install and hold provided nut plate inside the pole. With fixture supported, align (2) 1/2-13 fasteners through the arm, pole adapter if used and hole pattern in the pole into the nut plate. Hand tighten to ensure fixture is aligned prior to tightening.
- Tighten both flange bolts within the fixture to 40 ft-lbs., while making sure pole side arm is level to the pole.
- While using cable clamp provided in the nut plate to dress the wires as needed inside the pole, connect the supply wires to appropriate luminaire leads (Fig 3.a).
 - Supply side ground wire to green fixture lead.
 - Supply side neutral wire to white fixture lead.
 - Supply side line voltage wire to black fixture lead.
- To change luminaire tilt angle, loosen (2) adjusting bolts, rotate fixture to the desired angle, and tighten the (2) adjusting bolts to 20 ft lbs. The fixture can be adjusted from -10 degrees to 80 degrees from horizontal.
- Reinstall the cover plate with gasket onto the pole side arm with (3) 8-32 screws.

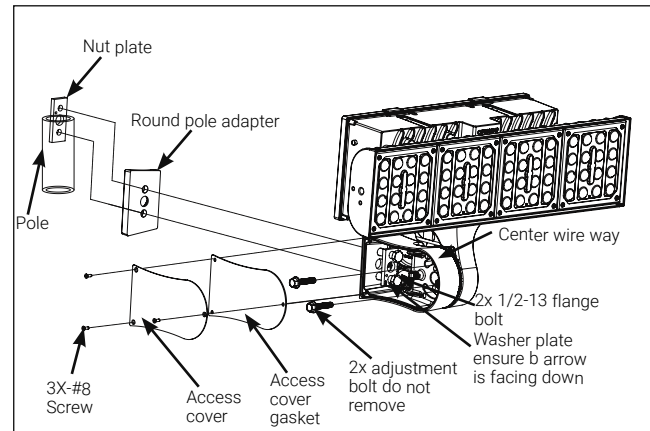


Figure 6.

Pendant Mounting (Figure 7, 8, 9) Surface mount

Tools Required: Ratchet, 1-1/8 inch and 9/16 inch socket, Torque wrench (ft-lbs) and #2 Phillips screwdriver.

- Mount luminaire to a surface ensuring maximum contact across the bottom surface of the pendant. Use hole pattern provided in Figure 8 to properly align the pendant with center hole and 2x .45 holes with spacing of 2.90 inches (Fig 7).

Note: Mounting hardware recommended (supplied by others); if mounting outdoor, all hardware must have proper outdoor corrosion-resistant coating (Hot -Dip Galvanized or equivalent):

- (2) 3/8-16 bolts (long enough to go through the pendant and mounting structure) with (2) 3/8 -16 nuts. Torque to 25 ft lbs after horizontally aiming the luminaire.
- (1) 3/4 bolt with flat washer thru center bolt (long enough to go through the yoke and mounting structure) and (1) 3/4 nut. Torque to 80 ft lb.

- Loosen but do not remove the (2) center bolts (Fig 1).
- Rotate Luminaire to desired aiming position and tighten center bolts to 40 ft-lbs (Fig 7).
- Refer to wiring diagrams for power connection (Fig 3.a).

Pendant Mount (Center bolt or Conduit)

- Feed the supply wire through threaded end of pendant (not supplied).
- Thread the first conduit nut (not supplied) onto the end of the threaded conduit. Place the conduit through the circular opening of pendant luminaire bracket (Fig 8).
- Secure the pendant to bracket by threading the second conduit nut (not provided) underneath the bracket.
- Tighten both nuts securely.
- Loosen but do not remove the (2)1/2-13 center bolts of luminaire (Fig 7).
- Rotate Luminaire to desired aiming position and tighten center bolts to 40 ft-lbs (Fig 7).
- Refer to wiring diagrams for power connection (Fig 3.a).

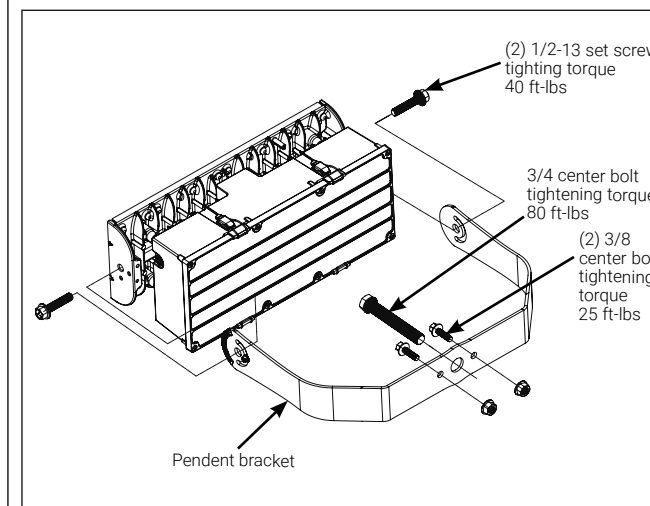


Figure 7.

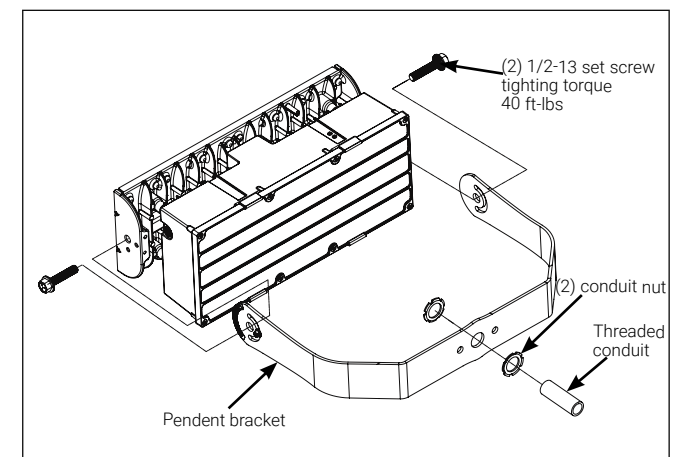


Figure 8.

Maintenance

Note: A regular maintenance schedule should be followed to retain optimal light output and thermal performance. Optical lens cleaning should be performed with a clean dry cloth to remove any dust or other contaminants. Additional cleaning can be performed with using a non-abrasive polycarbonate polycarbonate cleaner. Remove any dirt, leaves or other foreign debris from the housing. Remove any dirt, leaves or other foreign debris from the housing.

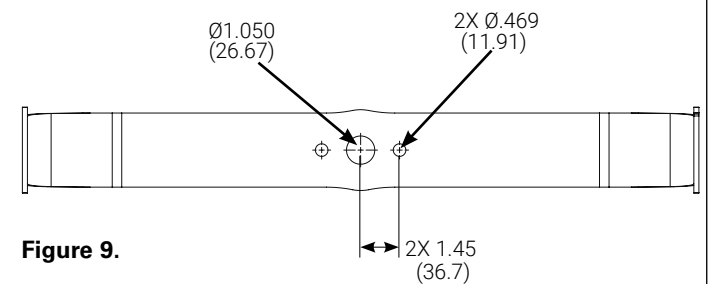


Figure 9.

Note: If only center attachment point is used, a secondary retention cable rated for the weight of the fixture must also be secured around the fixture and to the mounting structure.

Pendant Mount – Fastening Hardware Accessory Part Details:

Center Bolt Mount Fastening Hardware (HWCB)

Center Bolt Mount with a 3/4 - 10 x 1.75in bolt in the center of pedant mount. Fastening hardware used to replace common Arena Mounting style "CS" for catwalk brackets and other center stud mount applications.

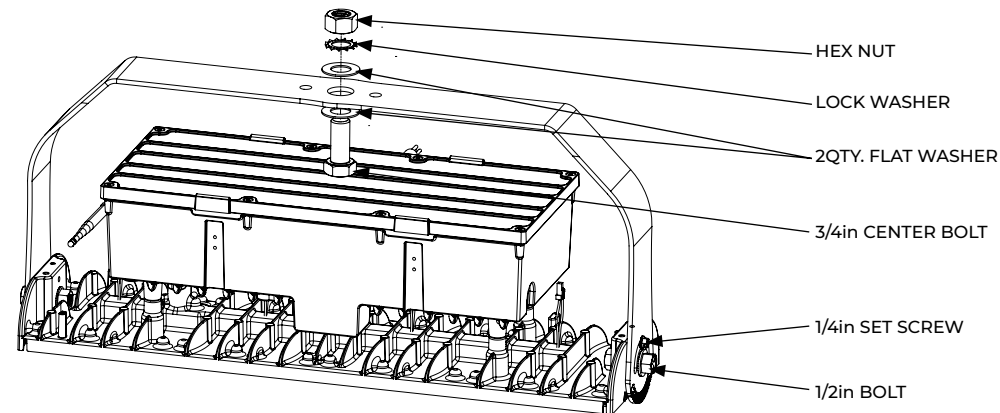


Figure 10.

Multi-point Mount Fastening Hardware (HWMM)

Multi-Point Mounting with 2 qty. 5/16-18 x 1.25in bolts on either edge of the pendant yoke. Can be paired with "HWCB" or "HWCN" as necessary.

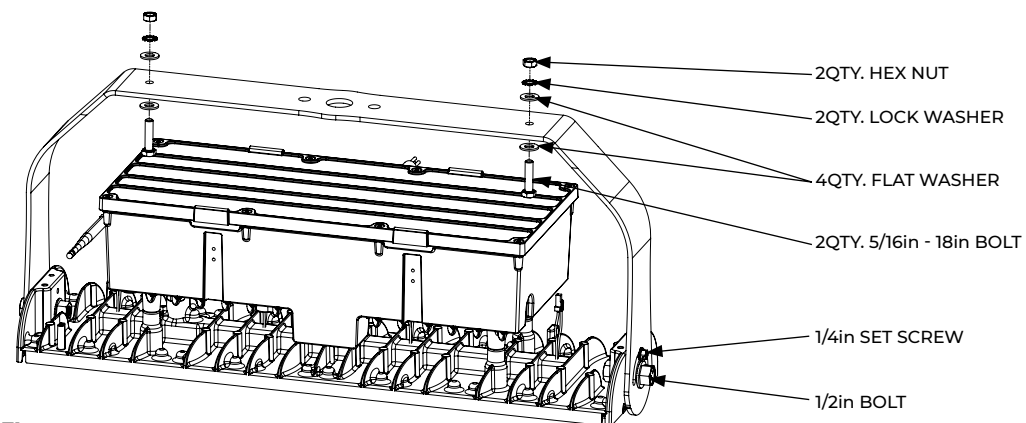


Figure 11.

Conduit Nuts Fastening Hardware (HWCN)

Two Conduit Nuts to attach a standard 3/4in threaded conduit to the center of the pendant mount yoke. Equivalent to the Arena "MM" multi-mount style mount when paired with "HWMM".

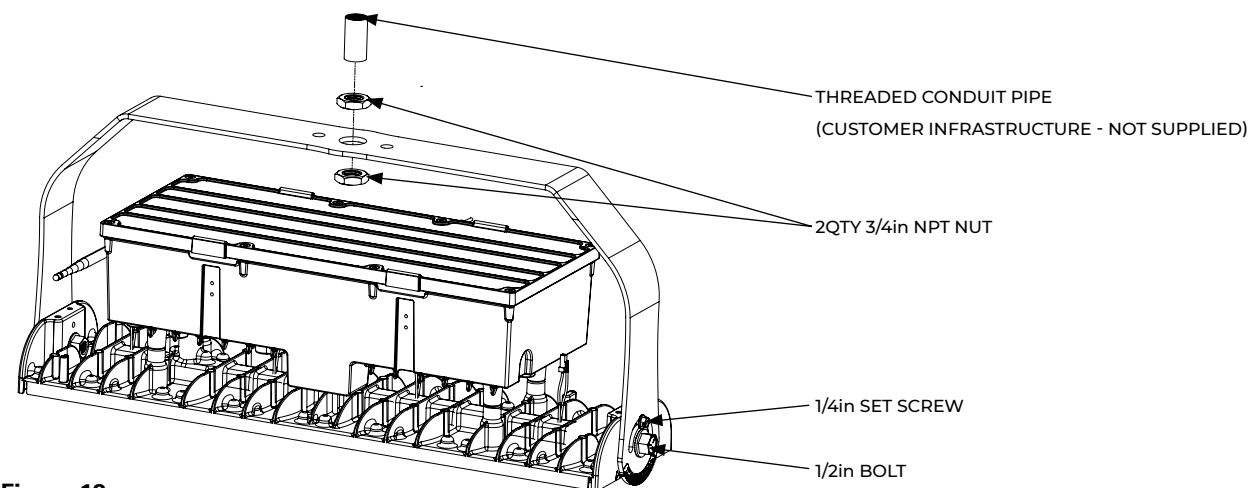


Figure 12.

Accessories Mounting

Wire Guard (Figure 13)

Tools Required: Torx screwdriver T20, #2 philips screw driver.

1. Loosen and remove the existing (4) 8-32 torx screws on the face of the fixture (Fig 10).
2. Align wire guard on top of lens clips matching the four existing holes.
3. Use (4) 8-32 philips screws provided to tighten the wireguard in place onto each LED square.
4. To remove wire guard, follow steps 1-3 in reverse order.

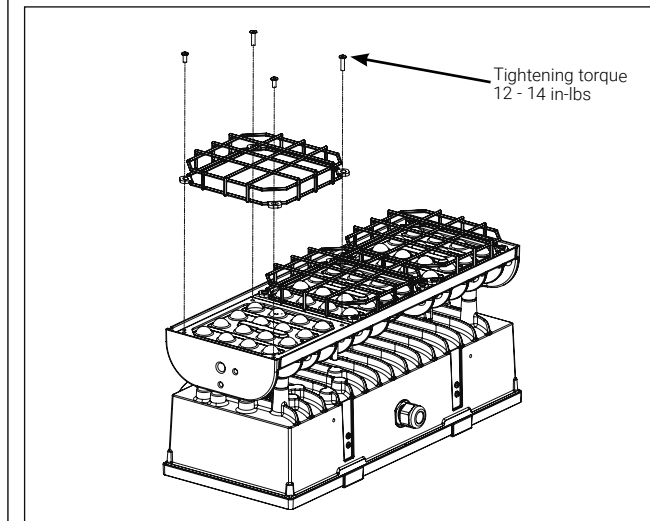


Figure 13.

Vandal Shield (Figure 14)

Tools Required: Torx screwdriver T20, #2 philips screw driver.

1. Loosen and remove the existing (4) 8-32 screws on the face of the fixture (Fig 11).
2. Align (4) 7/8 inch long spacers with existing holes (4).
3. Use (4) 8-32 x 1-1/2 inch screws to secure vandal shield on top of fixture.
4. To remove vandal shield, follow steps 1-3 in reverse order.

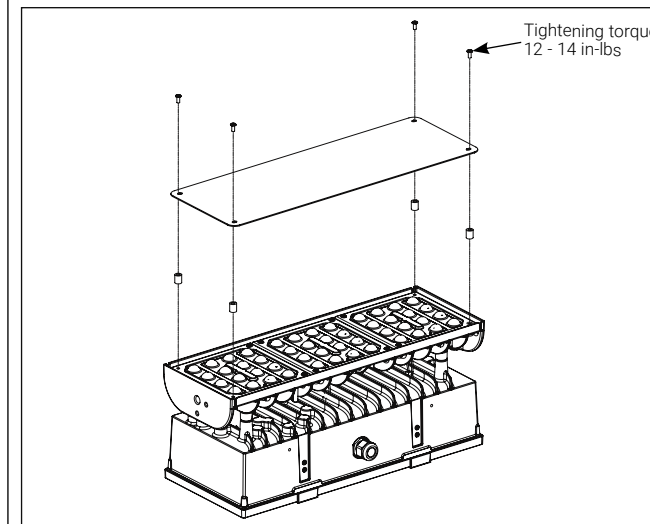


Figure 14.

Visor (Figure 15)

Tools Required: Torx screwdriver T20.

1. Loosen and remove the existing (4) corner 8-32 screws on the face of the fixture (Fig 12) and retain for future reference.
2. Align visor on top of lens clips matching the (4) existing holes.
3. Use the existing (4) 8-32 screws to secure visor.
4. To remove visor, follow steps 1-3 in reverse order.

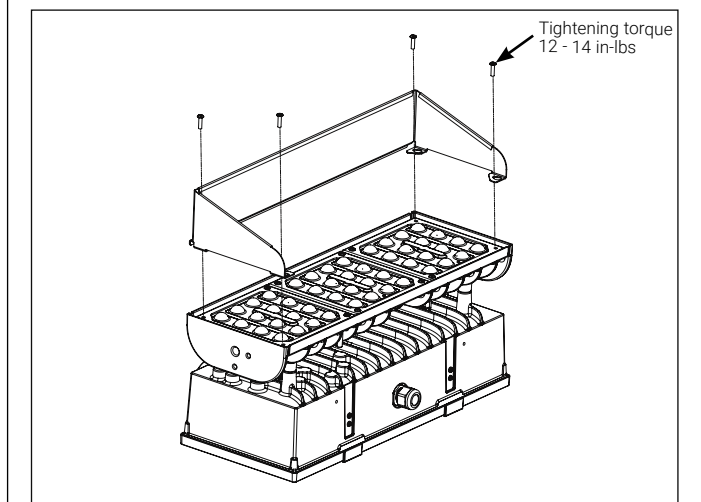


Figure 15.

Baffle or House Side Shield [HSS] (Figure 16)

Tools Required: Torx screwdriver T20.

1. Loosen and remove the existing (4) 8-32 screws on the face of the fixture (Fig 16) and retain for future reference.
2. Remove the trim plate from top of LEDs completely and discard.
3. Align baffle on top of lens clips matching the (4) existing holes.
4. Use the existing (4) 8-32 screws to secure visor.
5. To remove baffle, follow steps 1-3 in reverse order.

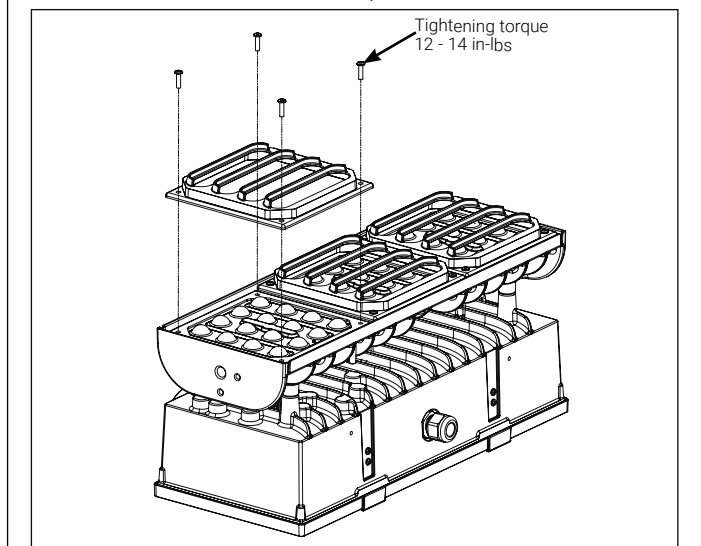


Figure 16.

Luminaire Operation

Default Response

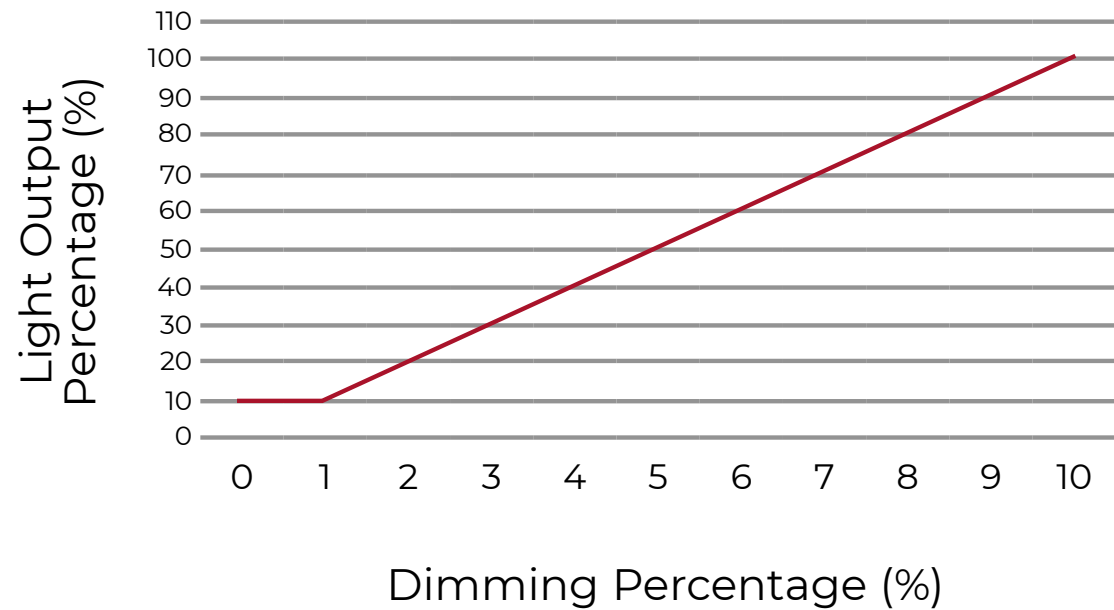
LumaSport fixtures will turn on to 100% full on when the AC power is applied.

Control Details

For luminaires equipped with wireless AirMesh Hub control, the luminaire can be turned on, off or dimmed using a front-end control system.

Basic Functionality

For 0-10V dimming, the luminaire driver sources the current. The dimming source current from the driver is 150µA (@0<Vdim<8).



Advanced Functionality

It is recommended that advanced or fast dynamic scenes are controlled up from blackout to a value greater than 40% and have a delay longer than 100ms between transitions. Strobe, chase or other synchronized dynamic scenes may appear staggered when the luminaire is controlled up from blackout to a value less than 40% or transition faster than 100ms.

Ephesus luminaires have a DMX response rate within 500ms. However, overall response rate can be influenced by factors such as network latency, mixed luminaire types, and other external conditions. When integrating with third-party system controllers, control timing adjustments may be necessary to ensure accurate activation of static, dynamic, and entertainment lighting scenes.



Maintenance & Preventative Maintenance

Fixture Care and Maintenance

All luminaires are prepared with a powder-coated finish. The finish on exterior luminaires may weather over time, depending on the environmental conditions at the installation site. Proper care of the luminaires will maintain their performance and appearance.

Follow a regular maintenance schedule to retain optimal light output and thermal performance. Lack of preventative maintenance may disqualify owner from warranty. Not adhering to this minimum system cleaning requirement is considered negligence as outlined in your product warranty documents. Refer to your product and/or labor warranty documentation for further details.

Cleaning

1. Clean all luminaires at a minimum of once every 12 months from receipt of your product.
2. Remove physical elements such as dirt, leaves and other foreign debris from the luminaire housing that can block and modify the air cooling (heatsink fins)
3. Wipe the optical lenses with a clean, dry, cotton cloth to remove dust and other contaminants. A non-abrasive optical cleanser or water may be used periodically.
4. Do not apply cleaners in direct sunlight or at elevated temperatures

Inspection of Hardware

Inspect mounting system and products at least once every 12 months. Replace all rusted hardware elements.



Troubleshooting

The Ephesus luminaire is designed to provide many years of reliable quality lighting. If the system appears to not be operating correctly, perform the following steps:

Gather Data

The first step is always to find out as much about the issue as possible. Ask the following questions:

1. **How many fixtures are not operating correctly?** If only one fixture is not responding, continue investigating at that fixture itself. If a group of fixtures are not responding correctly, start at the source of the power or controls for that group.
2. **Have any obvious external forces been in the area?** For instance, were any riggers, electricians, or other workers near the fixtures or controls? Have there been any power disturbances in the facility such as lightning storms?
3. **Are your fixtures responding according to the input control function?** Run the system through some different control scenes, including all on and then all off (blackout mode). Take note of any fixtures not responding correctly to the scenes.

Problem	Remedy
Luminaire does not power on	<ul style="list-style-type: none">• Verify the power supply is on, at the proper voltage, and stable.• Check connections at the source and at the fixture.• Verify control signal is above 50%.
Luminaire does not respond to controls	<ul style="list-style-type: none">• Reset the fixture by turning all power sources off for at least 10 seconds.• Inspect all system control wiring to make sure there are no poor connections or breaks in the control wiring.

FCC Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Énoncé de la FCC

Note: Cet équipement a été mis à l'essai et déclaré conforme aux limites établies pour un dispositif numérique de catégorie A en vertu de l'article 15 des règlements de la FCC. Ces limites sont conçues pour assurer une protection raisonnable contre tout brouillage nuisible lorsque l'équipement fonctionne dans un environnement commercial. Cet équipement produit, utilise et peut émettre de l'énergie radioélectrique et, s'il n'est pas installé et utilisé conformément aux instructions, il peut créer des parasites nuisibles aux communications radio. L'utilisation de cet équipement dans une installation résidentielle est susceptible de provoquer des interférences nuisibles, auquel cas l'utilisateur devra corriger ces interférences à ses propres frais.

Declaración de FCC

Nota: Se ha probado este equipo y se ha determinado que cumple con los límites para un dispositivo digital de Clase A, de conformidad con la Sección 15 de las normas de la Comisión Federal de Comunicaciones (FCC, por sus siglas en inglés). Estos límites están diseñados para proporcionar una protección razonable contra interferencias perjudiciales cuando el equipo se opera en un entorno comercial. Este equipo genera, utiliza y puede emitir energía de radiofrecuencia y, si no se instala y utiliza de acuerdo con el manual de instrucciones, puede causar interferencias perjudiciales en las comunicaciones de radio. El funcionamiento de este equipo en un área residencial puede causar interferencias perjudiciales, en cuyo caso el usuario deberá corregir las interferencias por su cuenta.

Fixture Replacement

Contacting Warranty Technical Support

1. Before you call, make sure you have completed the troubleshooting steps.
2. Gather as much detailed information as possible about the situation.
3. Have your fixture and project information handy, including the model number of the fixture in question.

Refer to your fixture warranty document for more information

If you have attic stock fixtures available and need to replace a fixture, simply follow the installation instructions in this manual to replace the fixture in question. Be sure to address the replacement fixture with the correct luminaire number.

All Luminaires, materials, and accessory equipment being returned through the warranty process need to be placed back in their original packaging in the same orientation that they were originally shipped from the factory. If the packaging is damaged or if there are questions on the orientation in returning equipment and materials, you need to contact the Warranty Department for replacement packaging materials at:

EphesusWarranty@Signify.com | +1 (800)-573-3600



**CLICK OR SCAN
FOR WARRANTY
INFORMATION
& CLAIM FORM**

Warranties and Limitation of Liability

Please refer to www.cooperlighting.com/global/resources/legal for our terms and conditions.