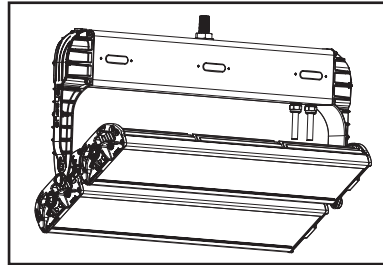


Installation Instructions - Arena Series



This manual applies to the following models:

1. Arena Pro 600/300/190
2. Arena 600/300/190
3. Prism 256/128/64
4. Visium 600/300/190

SAFETY INSTRUCTIONS

Read and understand this entire manual before attempting to assemble, operate, or install the LED Luminaire. If you have any questions regarding the product, please call Ephesus Customer Service at (800) 573-3600.

1. All electrical work must conform to the National Electric Code (NEC) and all applicable local codes and ordinances.
2. Only qualified personnel shall install and maintain the luminaires. Ephesus recommends that a licensed electrician install and maintain the luminaire. Verify the safety of existing power distribution system before beginning installation. **FAILURE TO FOLLOW OPERATING INSTRUCTIONS MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.**

WARNING

Turn off power before performing any electrical or control work. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

DO NOT make or alter any open holes in the luminaire. Do not modify the luminaire.

WARNING

Follow all applicable safety procedures and use Personal Protective Equipment such as hardhats, safety glasses, reflective vests, electrical safety gloves, fall protection equipment and safety toe boots during the installation, operation, and maintenance of the luminaire. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

WARNING

Risk of eye injury! Eye protection is required at all times during the installation, operation, and maintenance of the luminaire. The high intensity light produced by the luminaire can cause severe damage to the eye if viewed directly at close range. Avoid being in front of a luminaire that is on or wear suitable light blocking protective eyewear such as welding goggles.

Installation Instructions - Arena Series

Store luminaires in a clean, dry place, protected from dirt, water, and sunlight. See table for required storage and operating conditions:

Storage Temperature	Operating Temperature	Humidity
-40°C to +75°C (-40°F to 167°F)	-40°C to +55°C (-40°F to 131°F)	5% to 95% non-condensing

Storage and Operating Conditions

Note: Charge the provided laser battery before installation begins.

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Required Materials & Tools

Required Material Installer shall provide:	For more information refer to Section:
Mounting Hardware for multi-mount fixtures	Step 1 - Mount the Luminaires
Electrical splicing connectors	Step 3 - Make Electrical Connections
Cable ties or wire management	Step 4 - Aim the Luminaires

Required Tools Installer shall provide:	For more information refer to Section:
Socket wrenches and/or crescent wrenches sized to fit mounting hardware (1 5/16" for center stud mounting)	Step 1 - Mount the Luminaire
DMX Tester/RDM Controller (for Airburst/Landburst controls)	Step 3 – Electrical Connections
3/8" Hex driver for side aiming bolt	Step 4 – Aim the Luminaire
Torque wrench rated to a minimum of 35 ft-lbs	Step 4 – Aim the Luminaire
Torque driver with 3/8" hex bit rated to a minimum of 35 in-lbs	Step 4 – Aim the Luminaire
Calibrated light meter	Step 4 – Aim the Luminaire

Tools Provided by Ephesus:	For more information refer to Section:
Aiming Laser	Step 4 – Aim the Luminaire
Aiming Mount	Step 4 – Aim the Luminaire

SUPPLY POWER SPECIFICATIONS

Ephesus LED light Luminaires are not traditional incandescent lights; they are high-tech, new generation solid-state devices. To protect your valuable investment, the electrical power shall be clean and have stable voltage and current and undistorted waveforms.

Power Configuration

The power transformer secondary feeding the electrical distribution system must be a three-phase, four-wire wye configuration. A single phase configuration is acceptable in the case of 240V or 120V circuits. If any other transformer configuration is present, notify Ephesus before proceeding with installation.

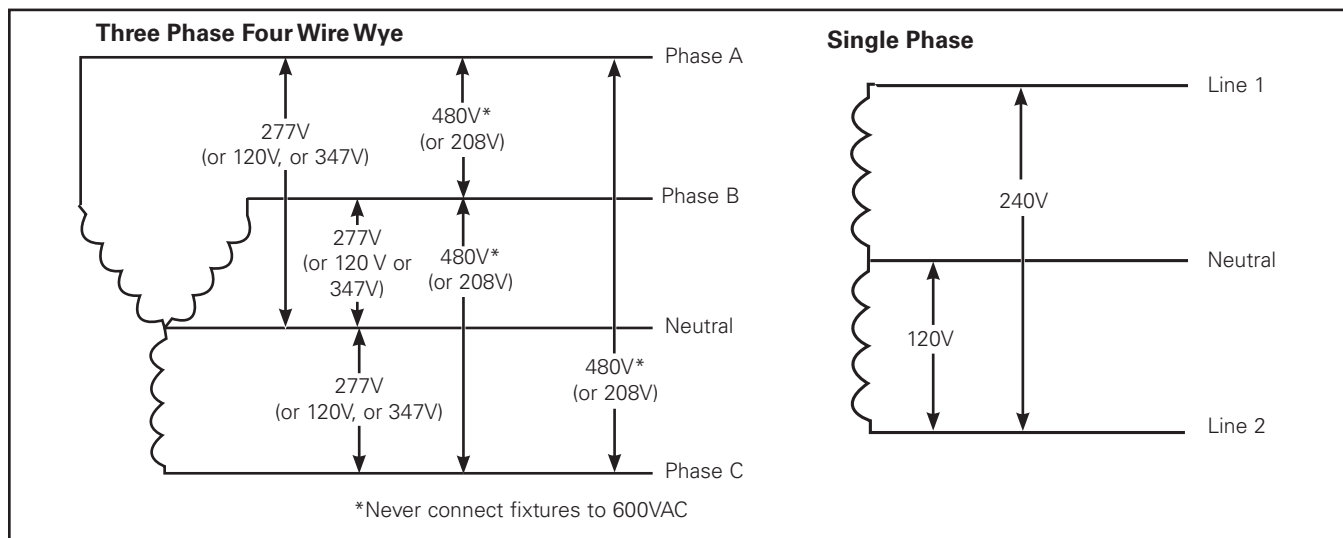


Figure 1. Acceptable Power Configurations

⚠ WARNING

Follow proper grounding methods: Electrical system must be grounded. If you are not sure if your power system is grounded, DO NOT install the luminaire. Contact a licensed electrician for information on proper grounding methods as required by the electrical code. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

Circuit Voltage

Branch power circuits feeding Arena Luminaires shall be:

Acceptable Lighting Circuit Voltages (Volts AC)	
Low Voltage	High Voltage
120	347
208	480
240	
277	

Installation Instructions - Arena Series

Arena 600 Current Draw	
Voltage (Volts AC)	Current (Amps)
120	5.3
208	3.3
240	2.8
277	2.3
347	2.0
480	1.5

WARNING

Do not attempt to connect Arena Luminaires to any circuits with nominal voltage outside the below ranges for high voltage and low voltage power supplies, respectively:

- **Between 120V AC and 277 V AC for low voltage power supplies.**
- **Between 347V AC and 480V AC for high voltage power supplies**

In other words, make sure the circuit voltage matches the power supply ratings defined in the table above. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO LUMINAIRE INTERNAL DAMAGE AND FAILURE.

Power Quality

The voltage on the lighting circuits must stay within 3% of nominal at 60Hz. Voltage that is consistently too high or low shall be corrected before LED luminaires are installed.

If you require assistance in checking your power system or designing or implementing solutions, contact Eaton's Electrical Engineering Services and Systems. Find more information at www.eaton.com.

INSTALLATION

Step 1 – Mount The Luminaire

The first step is to attach the luminaire to the mounting structure. The mounting structure may be a light pole cross arm, an indoor catwalk bracket, or other structural component that will hold the Luminaire in place. Refer to photometric drawings or project Installation Drawings for luminaire installation locations and any additional mounting instructions.

WARNING

It is the responsibility of the installer to verify that all proposed mounting structures including poles, cross arms, catwalk brackets, and other mounting structures are certified to support the weight of the luminaires, withstand wind loads, and meet all other applicable codes and regulations. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

WARNING

Do not suspend any luminaire by electrical or control wires, as these will not support the weight of the Luminaire, resulting in the potential for the Luminaire to fall and cause damage or injury. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

Equipment Required:

- Mounting Hardware
- Socket wrenches and/or crescent wrenches sized to fit mounting hardware
- Cable ties or wire management restraints (For outdoor installations use UV rated material)

Note: Before mounting luminaires, refer to the steps below to verify correct installation.

- Refer to the photometrics or project Installation Drawings to determine luminaire installation locations and luminaire type.
- Verify there are no obstructions in the designed luminaire locations and light paths. If beams, rigging, or any other obstructions are present, shift the mounting location up to +/-2' in either direction to install the fixtures in the closest available location to provide a clear conical light path from the fixture to a 20' diameter circle around the aiming point that is completely free of obstructions.
- All LED arrays in each fixture must have clear line of sight to aiming area. Do not install fixture partially obscured.
- For each location, install a luminaire of the correct type. Unless otherwise noted, luminaires that share the same model number are identical.

There are two standard mounting options for the luminaires:

1. Center Stud: For Ephesus catwalk mounting brackets
2. Multi-Mount: For threaded rods, pendants, eye nuts, or hooks

Select the appropriate mounting option for your project.

Mounting Option 1 - Center Stud Mounting:

- If used with Catwalk Bracket, secure the bracket to the catwalk first.
- Before installing fixtures, verify there are no obstructions in the designed luminaire locations and light paths. If beams, rigging, or any other obstructions are present, shift the mounting bracket +/-2' in either direction to install the fixtures in the closest available location to provide a clear conical light path from the fixture to a 20' diameter circle around the aiming point that is completely free of obstructions.

Catwalk Bracket (If applicable):

1. SET TOP RAIL BRACKET: Slide the top rail bracket over the uppermost rail in the catwalk structure.
 - a. Ensure the back set screw is secure to the railing. The set screw must make contact with the catwalk railing prior to tightening the nut to prevent loosening. Tighten securely, but do not over tighten. Use of thread locking compound is recommended.
2. BOTTOM RAIL BRACKET: Ensure bottom rail bracket slides over the lowest rail in the catwalk structure. If it needs to be repositioned, remove the thru bolts and slide the bracket into the correct position, returning the thru bolts when the rail mount is in the correct location.
 - a. Engage back set screw and tighten so that it is secure. The set screw must make contact with the catwalk railing prior to tightening the nut to prevent loosening. Do not over-tighten. Use of thread locking compound is recommended.

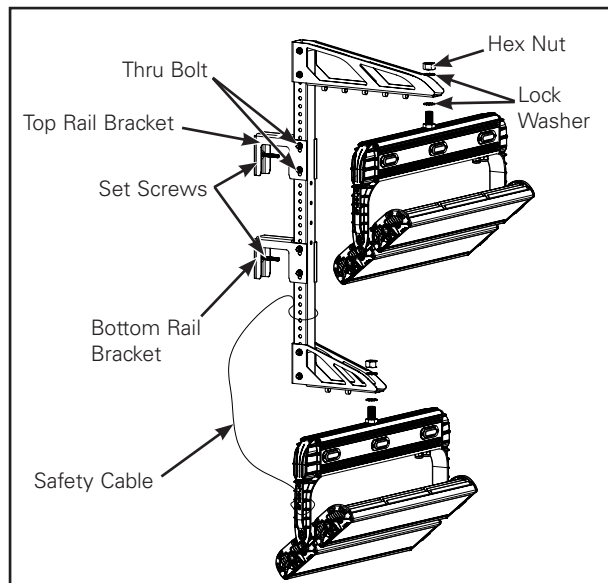


Figure 2. Catwalk

Installation Instructions - Arena Series

Installing Center Stud Mounted Luminaire:

1. Set luminaire in place and install lock washer and nut to securely fasten the Luminaire mounting bracket to the mounting structure. Tighten hardware so that Luminaire is secure but do not fully torque hardware until aiming is complete.
2. Install the safety cable through the luminaire mounting bracket and around a building structure such as catwalk rail or building truss.
3. Use of thread locking compound is recommended.

Note: Safety cables must be installed on every luminaire

Mounting Option 2 - Secondary Option - Multi-Mount

Included mounting points:

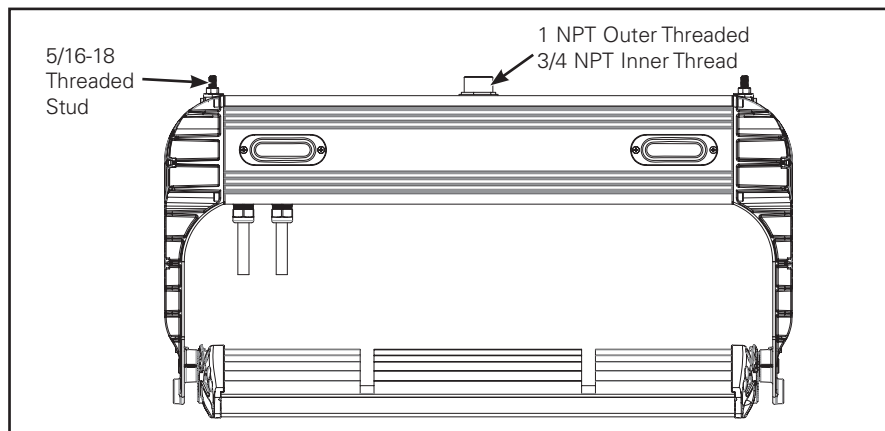


Figure 3. Multimount

Recommended Connection Methods:

1. For multi mount configurations, the installer shall supply all required hardware, unless otherwise noted.

Note: During installation, ensure power and control wires are not pinched or pulled taut.

- a. If attaching to the inner thread of the center piece, thread the attachment (hook or pendant) completely into the luminaire stud. Torque set screw to 5 ft-lbs against attachment (ex. Hook or pendant). Apply thread-locking compound to all threaded connections to prevent loosening.
- b. If attaching to the 5/16-18 threaded stud, torque all hardware connections to minimum of 10 ft-lbs. Apply thread-locking compound to all threaded connections.

WARNING

An impact driver may be used on mounting hardware while the power is off, but NEVER use any power tools on the Luminaire while the power is on. The vibration caused by power tools may damage the Luminaire. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO LUMINAIRE INTERNAL DAMAGE AND FAILURE.

Step 2 – Label the Luminaires (If Required)

Note: For outdoor applications where smaller groups of luminaires are installed on poles, it is not necessary to label the Luminaires.

For indoor applications where luminaires are installed along a catwalk, the Luminaires are typically labeled to allow identification of each one at a glance from the catwalk.

1. Label each Luminaire with Luminaire Number as indicated on the schedules in the photometrics or project Installation drawings.
2. Labels shall be white background with black lettering. Text shall be at least 1/4" tall.
3. Affix the label to the mounting bracket in a prominent location, avoiding manufacturer labels.

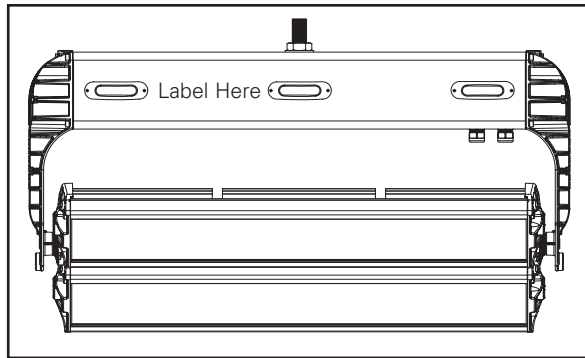


Figure 4. Label

Step 3 – Make Electrical Connections

⚠ WARNING

Never connect the luminaire to an electrical system that is not grounded. Installing a luminaire in an ungrounded electrical system could allow the metal housing to become energized in the event of an electrical short, resulting in the risk of electrical shock for anyone who comes into contact with the Luminaire. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

Electrical Power & Control Connections

Wiring connections:

- Connect the incoming power wires to the Luminaire power wire. See the table below for the color designation.

Luminaire power wire color	Designation
Black	Line
White	Line or Neutral
Green	Ground

Power wiring connections

Note: When power is turned on, the sports luminaires (Arena, Arena Pro) default to 100% on unless a different control signal is present. Prism fixtures remain off until they detect a DMX signal.

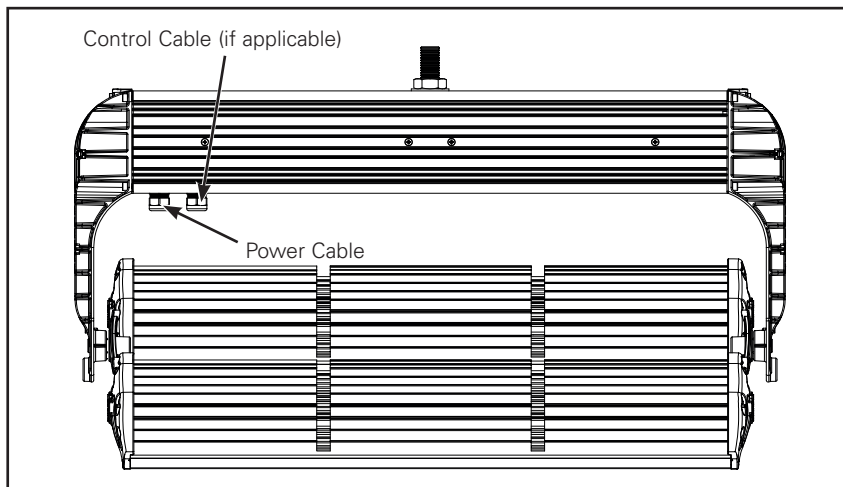


Figure 5. Electrical

⚠ WARNING

NEVER connect the bare or green insulation ground wire to the black (HOT) current-carrying or white (NEUTRAL) supply wire, as this could energize the metal housing and create the risk of electrical shock. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

⚠ WARNING

Do not damage or cut the wire insulation (covering) during installation. Do not permit wires to contact any surface having a sharp edge, as this may damage the wire insulation and create the risk of electrical shock. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

Control Wiring

⚠ WARNING

Always turn power to Luminaire OFF before performing any work on control wiring. Turn transmitters off before working on main control lines. Performing any work on control connections while Luminaires are receiving the signal may result in transient or fluttering control signals which can cause damage to the luminaire. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO LUMINAIRE INTERNAL DAMAGE AND FAILURE.

Control Standards

All control work shall conform to ANSI E1.11 – 2008 (r2013), USITT DMX512-A, Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories. At a minimum, DMX cable shall be 1-pair (24AWG, 7x32 Stranding) Twisted (minimum of 4.8 twists/foot), Shielded (minimum of 100 ohms impedance) and <25pF/ft. Capacitance.

⚠ WARNING

Use caution when connecting any 24AWG wires as they are more prone to breaking. 24 AWG may be used in terminal blocks. If wire will be connected with wire nut, wago connector, or other mechanical splices, use 22AWG wire.

- **LANDBURST CONTROLS:** Plug in the control lines via the 3-pin XLR whips provided with the luminaire. Use the male XLR as the DMX input and the female as the DMX output to reduce the risk of injury and poor connection. Use an RDM controller to set the DMX start channel(s) of the fixture.

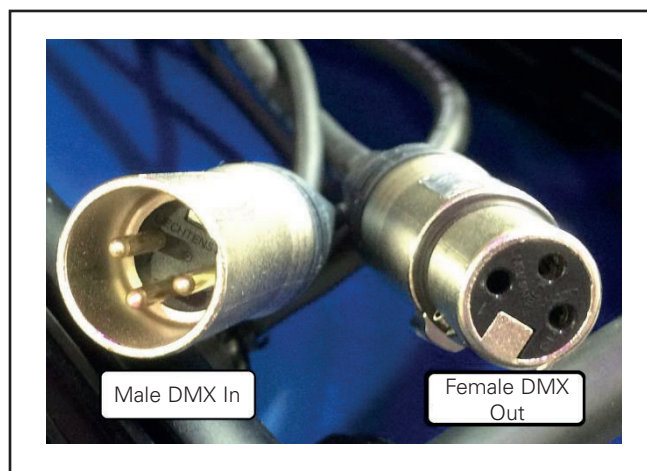


Figure 6. XLR Cables

- **AIRBURST CONTROLS:** Using an RDM controller, program the DMX start channel(s) for the luminaire’s wireless controller card. See the table below for a breakdown of controller card personality by model series. This takes 3 main steps, unless otherwise noted:

1. Set the luminaire DMX start channel
2. The personality setting sets the footprint. Verify the personality is correct (see chart below).
3. Set the show id to match the transmitter show id
4. If desired, label the luminaire to identify it easier during scene programming

Note: In order to use Airburst controls, you must be using a City Theatrical Transceiver and the show ID must be set to the same channel as the show ID on the fixtures.

Default channels unless otherwise noted

Light Series	Personality	Channel Assignment	
Arena Pro	2 Channel	Channel 1	Warm LEDs
		Channel 2	Cool LEDs
Arena	1 Channel	Channel 1	All LEDs
Prism	3 Channel	Channel 1	Red LEDs
		Channel 2	Green LEDs
		Channel 3	Blue LEDs

- **AIRMESH CONTROLS:** With Airmesh controls, Ephesus will provide the Bluetooth program to connect wirelessly. Simply open the provided application and connect to each fixture through Bluetooth recognition. Refer to the Airmesh control manual provided for more information regarding the mesh network controls.

There are no physical control connections necessary for wireless controls.

Step 4 – Aim The Luminaires

Aiming the luminaires is a critical part of the LED lighting solution to ensure that light is evenly distributed on the playing surface. There are two basic methods to properly aim a sports venue – Precision Laser Aiming by Coordinates, and Orient Tilt.

Precision Laser Aiming by Coordinates

Laser aiming is the most effective and preferred technique for aiming Ephesus LED sports lighting. This method uses a laser mounted to the luminaire to point the Luminaire at a predetermined point on the playing surface using (X,Y) coordinates, provided with the installation photometric drawings.

Note: Unless otherwise noted, aiming coordinates on Ephesus photometric or project Installation drawings are based on the origin (0, 0, 0) placed at center field, court, or ice. For baseball fields, origin is usually the back point of home plate. All dimensions from that point are in feet along the playing surface unless otherwise noted.

Orient –tilt

With the Orient-Tilt method, the installer turns the luminaire according to predetermined angles. This technique is extremely helpful for pre-aiming Luminaires mounted on a cross arm on the ground before the lighting pole is lifted up and set in place. However, this method is less accurate due to the variances in actual final structure and luminaire locations and orientations compared to the approximated parameters used in the photometric design.

Orient Angle:

Refers to the direction the luminaire faces in the Z-plane. In other words, mount the luminaire to the structure but leave the mounting nut slightly loosened to allow the entire Luminaire to spin about the mounting bolt. Set the luminaire Orient by rotating the luminaire mounting bracket relative to the mounting structure.

Installation Instructions - Arena Series

Note: Unless otherwise noted, Orient values shown in Ephesus photometrics or project Installation Drawings are based on 0° being Plan East. Plan East means 0° is heading to the right side of the sheet as you hold it in front of you, which is not necessarily geodetic or True East. When using catwalk brackets, unless otherwise noted the fixture orient angle shall be relative to the catwalk or other mounting platform, even though the fixture will be offset by the mounting bracket arm.

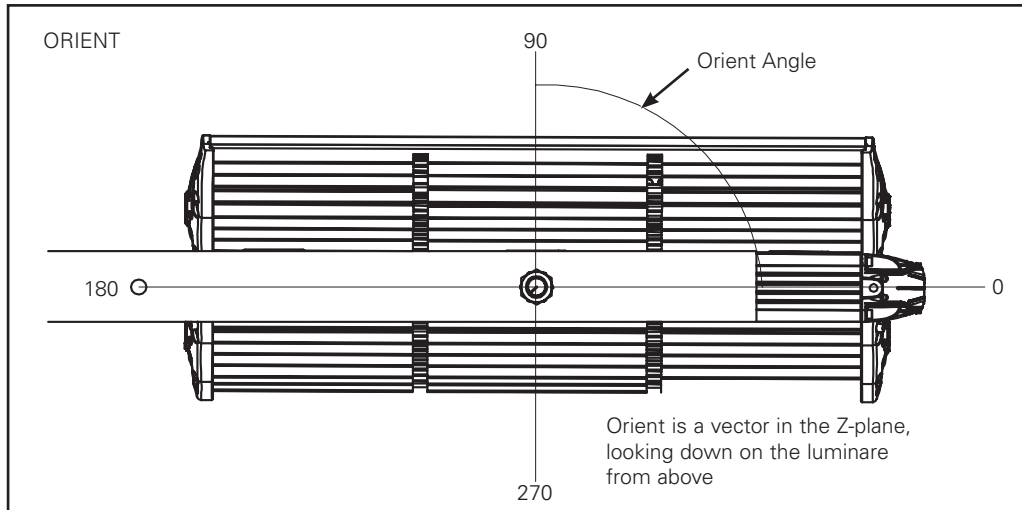


Figure 7. Orient

Tilt angle:

Refers to the direction the luminaire faces in the Y-plane. When the luminaire is securely mounted to the structure so that the mounting bracket does not move but the side Hex and Set screws are loosened, the Luminaire may rotate up inside the mounting bracket. Set the luminaire Tilt angle by rotating the Luminaire housing relative to the luminaire mounting bracket.

Note: If aiming by Orient-Tilt, use an inclinometer and protractor or similar tools to set the luminaires to the correct angles and skip to Final Aiming.

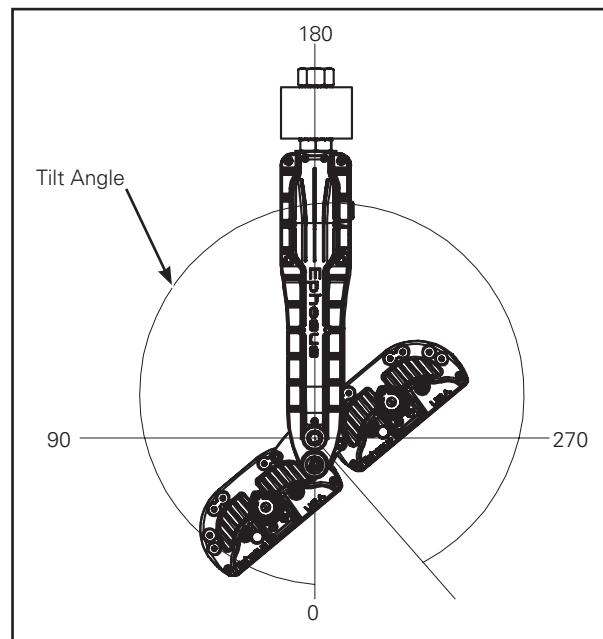


Figure 8. Tilt

 **WARNING**

NEVER use any power tools on the Luminaire while the power is on. The vibration caused by power tools may damage the Luminaire. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO LUMINAIRE INTERNAL DAMAGE AND FAILURE.

Note: For outdoor daytime aiming when the laser dot is difficult to see, a piece of rigid tubing may be used in place of the laser. Outside diameter of tube must be 0.8"-0.87" (ANSI NPS ½") to fit into the Aiming Mount. Slightly smaller conduit such as ½" EMT may be used in the mount with a grommet or other shim only if the shim is evenly distributed around the tubing to keep it correctly aligned perpendicular to the front face plates of the luminaire.

 **WARNING**

NEVER point the aiming laser at any person or animal as it can cause permanent damage to eyes. Use laser only for aiming Luminaires as directed. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO SEVERE INJURY.

Note: Turn off laser while not in use to conserve battery life. Have a spare battery charged to facilitate the aiming process.

Laser Aiming Instructions

Equipment Required:

- Tape Measures or Digital Range Finder
- Paper Plates
- Spare batteries for Laser or charger if needed
- Laser or Aiming Tube
- Aiming Mount
- 1 5/16" Socket Wrench or impact driver (For hex nuts on center stud mounts, Orient aiming)
- 3/8" Hex driver (For allen bolt, Tilt aiming)
- Torque wrench/driver

PROCEDURE:

1. Slide the laser into the Mount, with the on/off button at the top and the laser end directed out toward the end with the U-shaped flange. The laser does not need to fit all the way in – it's designed to interfere as it is pressed in, about halfway down is sufficient.

Note: It may be necessary to file off the knurled section of the laser if it doesn't fit properly in the Mount, as shown. This can be done with a metal file and won't damage the laser.

2. For each light, insert the Mount into the back of the light Luminaire between the two heat sinks near the center, as shown on the right. If necessary, gently rock the Mount back and forth until it fully seats into place.

Position the Mount to either side of the gap in the fins, this will allow the fins to help hold the mount in place. If the fit is too tight, do not force the Mount to snap in – just press in gently and align it perpendicular to the face of the light. If the fit is too loose and the Mount wobbles, hold it in place during aiming by pressing down. This will hold it flat against the fins and ensure alignment.

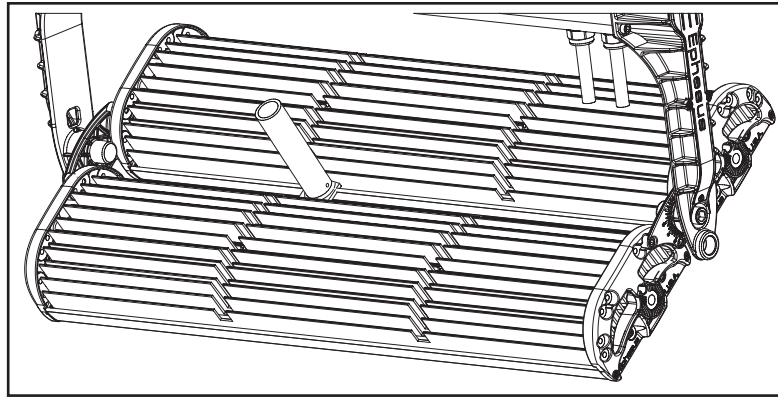


Figure 9. Aiming Mount

3. Press the button on the top of the laser to turn on and aim the Luminaire to the point designated on the installation diagram/schedule.

Note: To preserve battery life, be prepared to adjust Luminaire before turning laser on, then adjust Luminaire and turn laser back off until ready at the next Luminaire.

4. To adjust Luminaire aiming direction:
 - a. Orient the Luminaire about the top mounting point.
 - b. Tilt the Luminaire up or down by slightly loosening the large Allen bolt on both sides of the Luminaire where the mounting bracket connects to the LED modules.
 - c. Retighten all hardware after the Luminaire is aimed to the correct point.

Note: Luminaire may shift while tightening: After tightening Luminaire bolts, briefly turn laser back on to verify aim point is still correct.

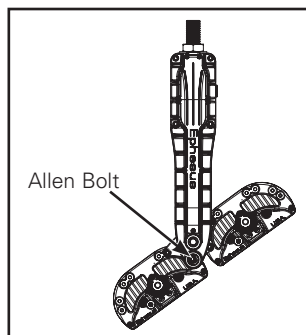


Figure 10. Hex bolt

SUGGESTED AIMING TECHNIQUES:

1. Two-Person Aiming
 - a. This technique works best for a smaller area such as basketball-only layout.
 - b. For each luminaire, one person acts as the spotter by locating the aiming point and standing on the court in that location while the other person aims that luminaire at the feet of the spotter.
 - c. Repeat the procedure for each luminaire.
2. Paper Plate Grid
 - a. This technique is helpful for larger layouts such as hockey rinks or to allow multiple luminaires to be aimed simultaneously.

- b. Using tape measures, set paper plates on the floor along an x/y grid every 20 feet. Write the location coordinates in large numbers on the back of each plate and set it face down on the floor so the numbers are up.
 - i. For example, a plate 20 feet in the positive x direction and 40 feet in the negative y direction would have "20,-40" written on it.
 - ii. As a second option, you can also use the individual aiming coordinates from the schedules to lay a plate at each aiming location rather than in a grid format.
 - c. Other type of marking items could be used, but keep in mind that lightweight items such as blank pieces of paper could easily move and disrupt proper aiming.
 - d. When you are finished laying out the grid, the numbers should be visible from the luminaire locations.
 - e. For each luminaire, determine the correct aiming point by using the grid plates as visual guides. Aim the luminaire.
 - f. Repeat the procedure for each luminaire.
3. Other techniques
- a. As long as the lights are aimed at the correct points according to the project design as shown in the Installation Drawings, the installer may use any combination of these suggestions or other aiming techniques to facilitate the aiming process.

Final aiming:

Aiming information is exported from computer lighting simulation software. Since on site conditions may vary from the computer models, final aiming is usually required to fully achieve desired lighting specifications. Final aiming means deviating from designed aiming parameters to produce the best outcome on the playing surface. Typically, final aiming only requires slight adjustments.

1. Verify that all lights are correctly aimed according to the photometric or installation drawings.
2. Measure light levels on the playing surface using a calibrated light meter. Unless otherwise noted, foot-candle readings are taken at 3' above ground, holding the meter out at arm's length as much as possible, thereby reducing the effect of the shadow from your body.

Note: Take horizontal readings by holding the meter face up, horizontal with the ground. Take Vertical foot-candle readings by facing the meter at an angle toward the vertical main or vertical end point. These vary based on venue and sport, but basically refer to the typical locations for elevated main cameras, at the center lines directly off of the side and off of the end of the playing surface.

Refer to specific project requirements or governing league regulations for more information. For reference, the NCAA lighting best practices website has grid layouts by sport:

<http://www.ncaa.com/news/ncaa/article/2013-11-21/ncaa-best-lighting-practices>

3. Review the light measurements and compare the data to project requirements or photometric drawings. If the light measurements do not meet designed levels, final aiming is required.

Note: There is no hard and fast rule on how to make final aiming adjustments as it is essentially an art form due to the propagation and reflection properties of light. A bright spot is usually not caused by one individual luminaire but rather the additive effect from several luminaires aimed in the same general vicinity.

4. Note the areas of the playing surface that are the brightest and darkest and determine which luminaires are aimed toward the bright areas and which are aimed near the darkest areas.
5. Re-aim one or a few lights away from the bright areas and closer to the darker areas.

WARNING

During final re-aiming, always minimize the number and size of aiming modifications. Make just one or a few small adjustments and then re-check light levels. Making too many significant aiming changes may result in failure to meet specified levels or introducing unwanted results such as glare.

6. Re-measure light levels in areas where adjustments were made and compare new results to project specifications.
7. Repeat steps 5-6 as necessary to meet light level requirements.

Installation Instructions - Arena Series

AFTER FINAL AIMING

1. After aiming is complete, tighten all bolts and screws including the Allen bolt on side of Luminaire and mounting hardware.

Hardware	Torque Value
Side Allen Bolt	20-30 ft-lbs
Mounting bolt/nut	35-45 ft-lbs

2. Briefly turn the laser back on or re-check view through tube to verify that the luminaire aim did not shift during tightening.
3. Remove the aiming mount from the Luminaire and proceed to the next luminaire.

Note: After aiming, verify that every luminaire is securely mounted, the hardware is fully tightened down, and that all safety cables are in place.

Step 5 – Finishing Touches

To complete the installation, verify that all mounting, connection, and aiming work is finished.

- Verify all electrical connections are tight and secured. The installer is responsible for the integrity of all connections.
- Verify all bolts and screws are tightened and properly torqued.
- Straighten up all cabling. Tie down all cables neatly. For all outdoor projects, use UV rated tie wraps and wire management.

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. Remove any dirt, leaves and other foreign debris from the luminaire housing. Wipe the optical lenses with a clean, dry, cotton cloth to remove dust and other contaminants. A non-abrasive polycarbonate cleanser may be used periodically.

WARNING

Do NOT use any abrasives such as car wax, brass cleaners or other polishes or chemicals. These may scratch, remove, or damage the protective coating, allowing moisture and pollutants to come into contact with the aluminum, possibly discoloring or pitting the finish.

TROUBLESHOOTING

WARNING

Before performing any work on the luminaire, shut off the power circuit, verify the power is off with a multimeter, and wait 2 minutes before handling luminaire to avoid electrical shock. FAILURE TO FOLLOW THIS WARNING MAY LEAD TO DEATH, SEVERE INJURY, OR PROPERTY DAMAGE.

Symptom	Possible Cause	Corrective Action
No light output	Power is off.	Check if circuit power is on.
	Bad wire connection.	Check input wiring connections.
	Control signal set to 0	Verify control signal
Fuse blows or circuit breaker trips	Crossed wires or a supply wire is grounding out.	Check wiring connections.
	Improperly sized fuse or breaker	Refer to Table 5

Troubleshooting Guide

Warranties and Limitation of Liability

Please refer to www.eaton.com/LightingWarrantyTerms for our terms and conditions.

Garanties et limitation de responsabilité

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Garantías y Limitación de Responsabilidad

Visite www.eaton.com/LightingWarrantyTerms para conocer nuestros términos y condiciones.

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