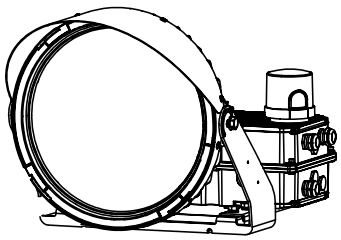
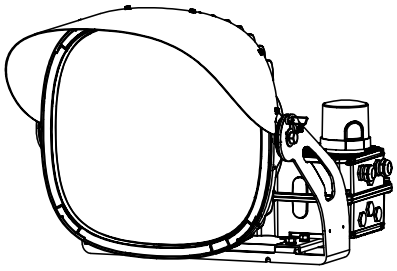
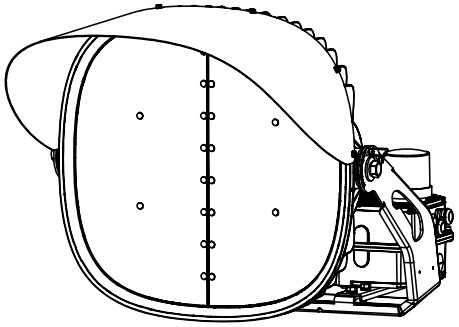
RENO LIGHTING

# INSTALLATION INSTRUCTION
LED SPORT LIGHT

## Before

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 about the product or installation, please contact the supplier immediately

## 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.

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**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.

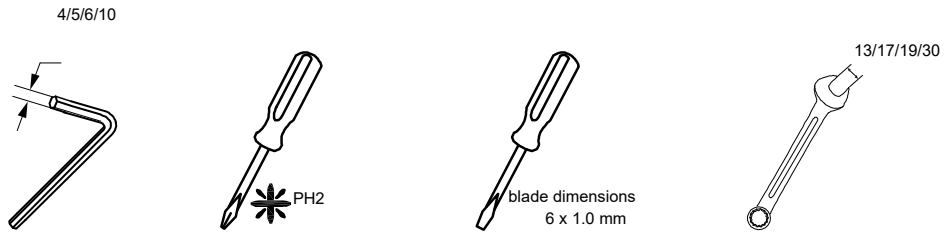
**DISCLAIMER OF LIABILITY: The Company shall not be liable for any damage or loss resulting from incorrect, careless or negligent installation, handling or use of this product.**

**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.

**APPLICATIONS**: This lighting fixture should not be used in area of limited ventilation or inside high ambient temperature enclosures. It must be stored in a dry location before installation. Do not expose lighting fixture to rain, dust or other environmental conditions prior to installation. Best results will be obtained if installed and maintained according to the following recommendations.

Required Tools and Materials




### Power Supply

LED luminaires are not traditional metal halide lights; they are high-tech, new-generation solid-sate devices. To protect your valuable investment, ensure the electrical power supply is clean and stable with no spikes or sags.

The power transformer feeding the site electrical distribution system must be a three-phase, four-wire wye configuration or a single-phase configuration. An ungrounded delta configuration is **NOT** an approved power supply.

All issues with supply power must be corrected before luminaires are installed. Failure to use an approved power supply configuration may result in equipment damage.

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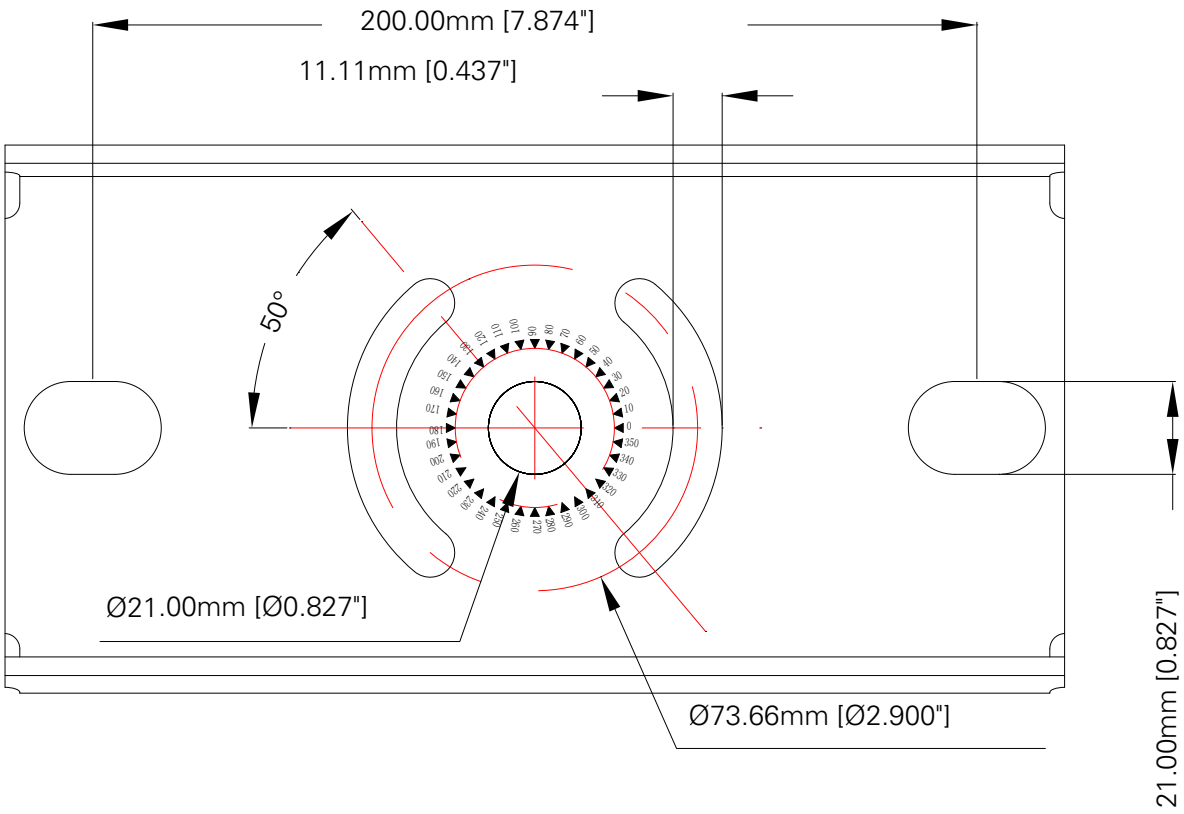
## Mounting Hole Dimensions



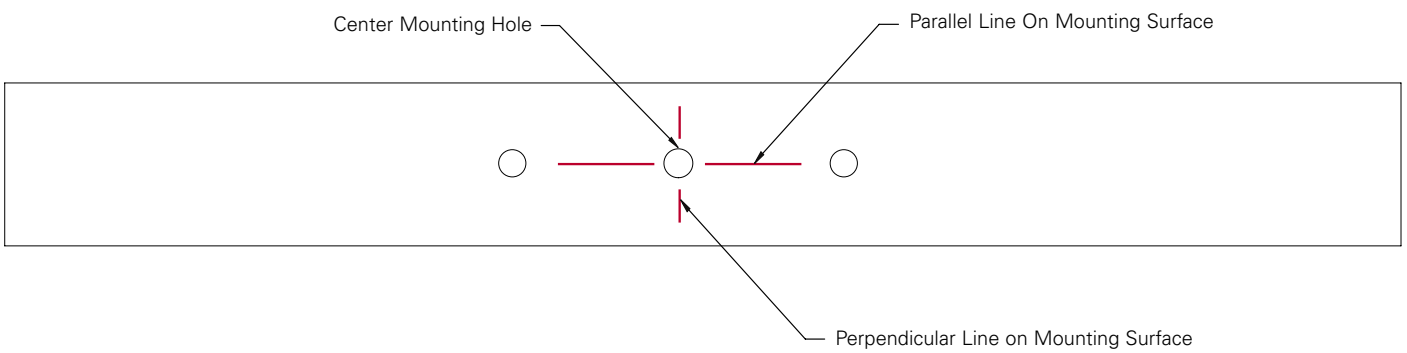

The central hole is sized for a ¾in bolt and the crescent shaped features are sized for a 3/8in bolt.

## Mounting Hardware (Surface Mount)

Mounting center bolt shall be ¾in diameter corrosion resistant steel (HDG, hot dipped galvanized high-strength steel is recommended) with nut, jam nut and locking washers. A secondary 3/8in diameter corrosion resistant steel bolt with nut, flat and locking washers shall be used to lock the orient. The length of bolts is determined in the field depending upon thickness of mounting structure. Size bolts appropriately to allow secure fastening of the luminaire to the mounting structure. Tighten hardware so that fixture is secure but do not fully torque hardware until aiming is complete.

## Mark the Mounting Surface (Pre-Aim Orientation)

To pre-aim the fixture orientation, draw a reference line on the mounting surface. Use a paint pen or other marker to draw a line across the center of the mounting hole, parallel and perpendicular with the crossarm or mounting structure. The crossarm should typically but not necessarily be perpendicular to the direction of the field of play. The line should extend at least 3in out from the center of the mounting hole.



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**Power Quality**

Follow proper grounding methods. The electrical system must be properly grounded for power electronics in accordance with IEEE Emerald Book, including using equipment grounding conductors. Power must also be phase balanced. If you are not sure if your power system is grounded or load balanced, **DO NOT** install the luminaire and contact a licensed electrician for information on proper grounding and balancing methods as required by the National Electrical Code and IEEE standards.

**Surge Protection**

Installation of surge protection is recommended in power distribution systems that feed LED sports lighting. Failure to protect electrical circuits from surges may result in damage to fixtures.

**Branch Circuits**

Branch power circuits feeding luminaires shall have a measured voltage of within 4% of nominal voltage with no sags, swells, or transients.

**Voltage Configuration**

Before installing luminaires, verify that the fixture model number has the correct voltage configuration for your application. See fixture specification sheet for acceptable branch circuit voltage. Failure to confirm proper configuration may result in injury damage to fixtures.

**WARNING**

Failure to confirm proper configuration may result in injury or fixture damage.

When circuiting power to luminaires, load balance all circuits. See fixture specification sheet for power characteristic data.

**Electrical Performance Specifications**

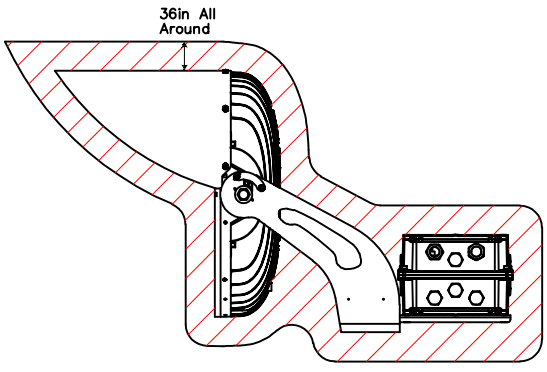
**Technical Data**

**Operating Conditions and Clearances**

Refer to the following sections for thermal, optical, and mechanical clearance requirements.

**Thermal Clearances - Safe Operation**

Installer shall verify there are adequate clearances around fixture to allow for proper heat dissipation and fire hazards. The luminaire produces a significant amount of heat and should not be installed in any confined space. Any combustible materials luminaire produces a significant amount of heat and should not be installed in any confined space. Any combustible materials or structures that could limit the airflow around the luminaire heatsink must be at least 36in away from the luminaire (example ceiling). Mounting structures, adjacent fixtures or non-combustible materials can be within this limit.




**Risk of Fire.** Do not install fixture within 915 mm (36 in) of any combustible material.

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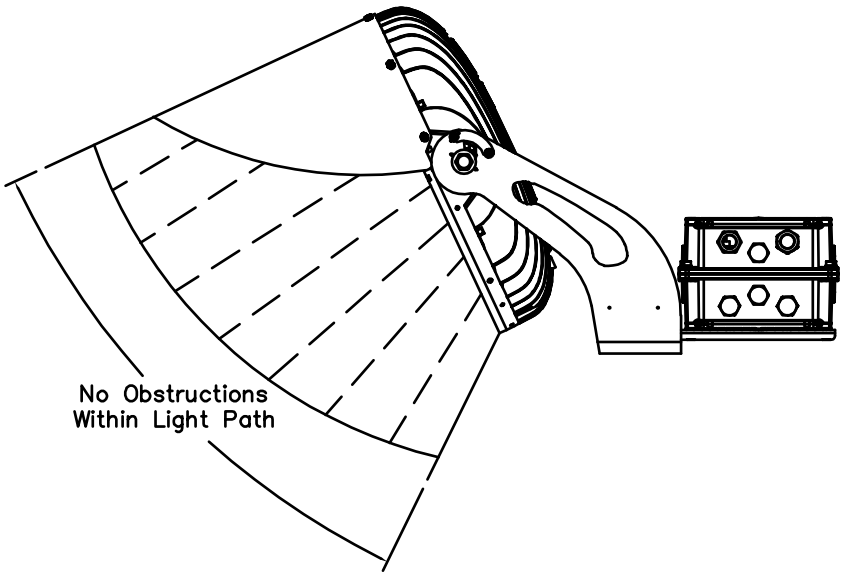
**Optical Clearances - Maximizing Light Levels**

Install fixtures according to the location and aiming data exported from photometric models to achieve desired results. However, any objects in the light path between the luminaire and the playing surface will diminish the light levels. Some examples of obstructions are building structural members, electrical panels, HVAC ductwork, banners, and scoreboards.

Before installing your lighting project, verify that there is a clear line of sight from every luminaire location to the designed aiming area, which includes not only the aiming point coordinate but also the area surrounding that aiming point. The illumination area for each fixture varies with mounting height and beam angle, but the purpose is to identify all obstructions and analyze how each will impact the light output on the playing surface, and then take corrective action as necessary to avoid the obstruction. For example, a structural beam directly in front of a luminaire will block the light from reaching the target, so in that case, the luminaire should be shifted to avoid the beam.




**Mechanical Clearances - Avoiding Obstructions**

In general, fixtures can be moved up to 5ft from the designed location without affecting photometric results as long as they are aimed at the designed aiming coordinates. For significant obstructions, photometric models should be revised with accurate obstruction dimensions to provide new fixture location and aiming data that avoids the obstruction. If options are limited,consider swapping that fixture aiming with a nearby fixture of the same type that allows clear line of sight to the aiming points. Consult your photometric designer for assistance with finding solutions to major obstructions for your project.

Proper planning will ensure the best results for your sports lighting project. Once these steps are completed, then proceed to the luminaire installation.

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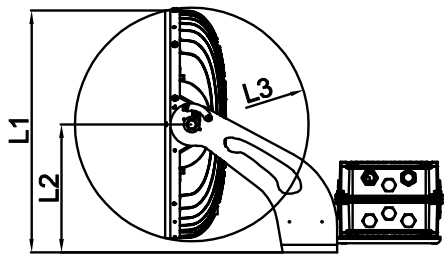
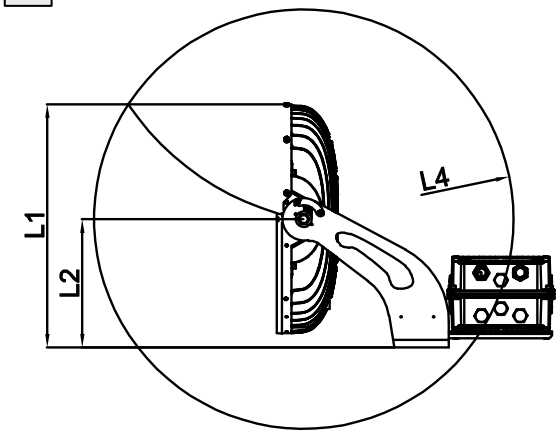
**Operational Working Clearances**

1a Yoke Mount



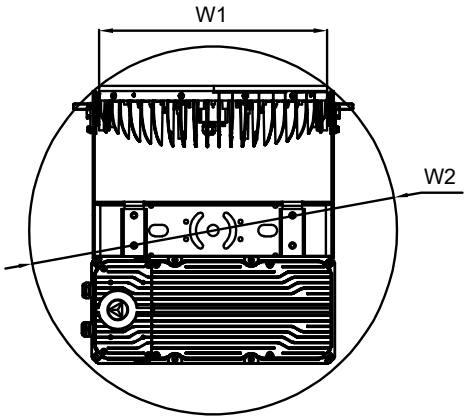

| | L1 (in) | L2 (in) | L3 (in) |
|---|---|---|---|
| 300-500W | 15.3 | 7.9 | Ø15 |
| 600-800W | 17.4 | 9.3 | Ø16.9 |
| 1000-1300W | 21.2 | 10.9 | Ø21.2 |

1c Yoke Mount with Visor



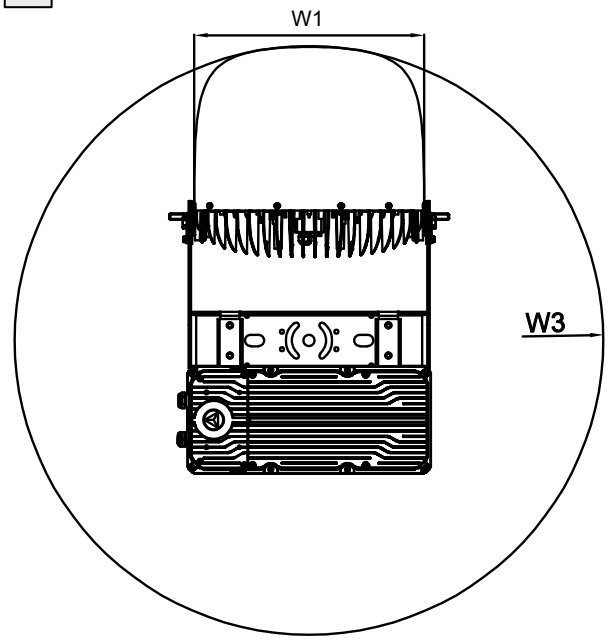

| | L1 (in) | L2 (in) | L4 (in) |
|---|---|---|---|
| 300-500W | 15.3 | 7.9 | Ø21.5 |
| 600-800W | 17.4 | 9.3 | Ø30.3 |
| 1000-1300W | 21.2 | 10.9 | Ø41.5 |

1b




| | W1 (in) | W2 (in) |
|---|---|---|
| 300-500W | 14.6 | 25.5 |
| 600-800W | 16.6 | 26.6 |
| 1000-1300W | 20.9 | 32.7 |

1d




| | W1 (in) | W3 (in) |
|---|---|---|
| 300-500W | 14.6 | 28.3 |
| 600-800W | 16.6 | 42.5 |
| 1000-1300W | 20.9 | 57 |

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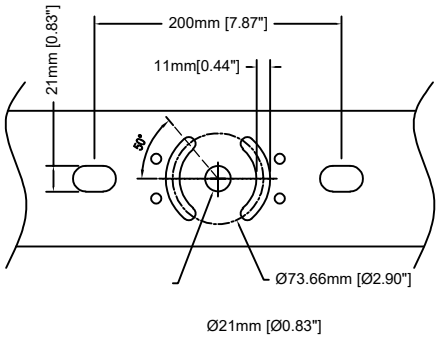
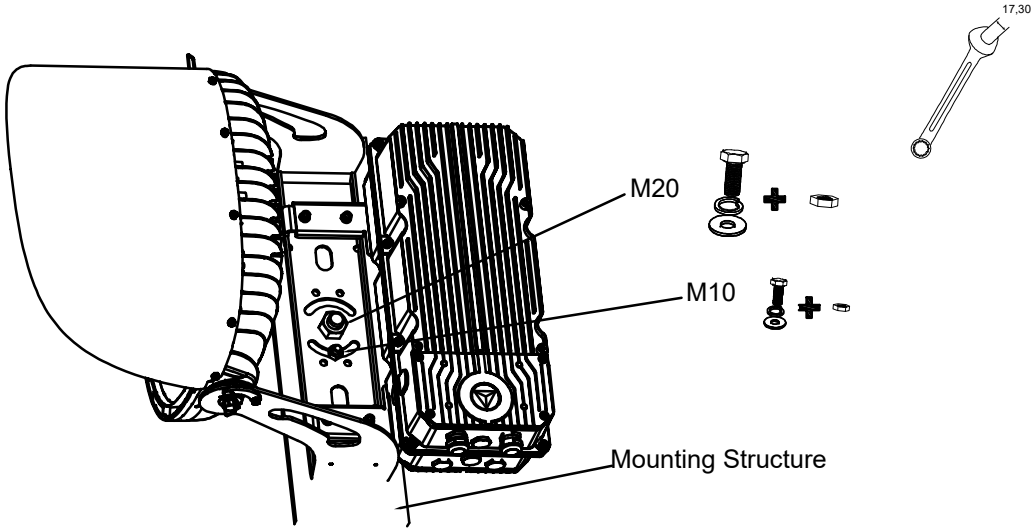
**Mount the Luminaires**

1. Insert M20 bolts and plain washers onto bracket
2. Align rotatable bracket with mounting structure
3. Secure bracket, bolts, plain & lock washers with mounting structure
4. Tighten the nuts (hand tighten) so mounting structure is secure but do not fully torque nuts until desired aiming is achieved

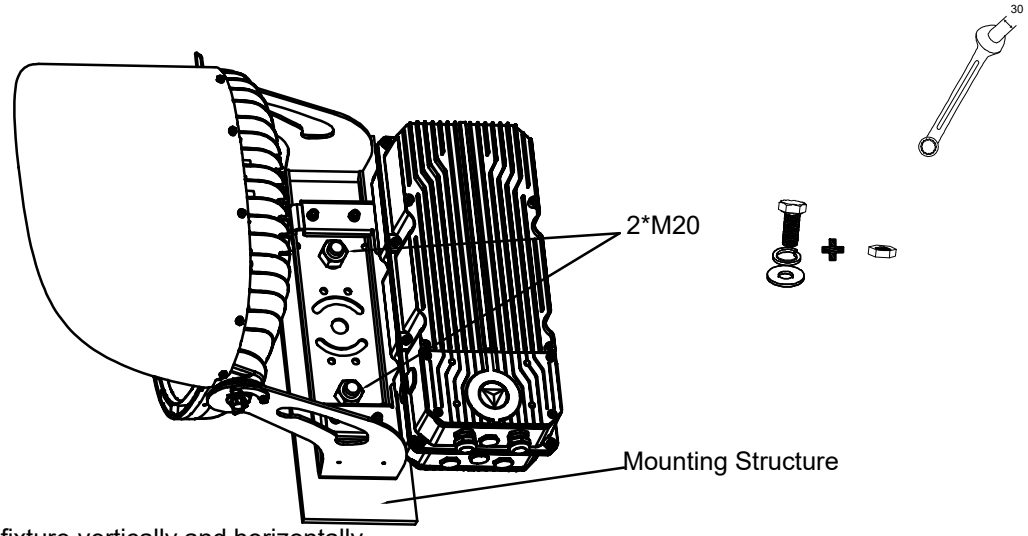



**STEP 1**




1. Put the fixture on the install stand
2. Fix the fixture by M20 and M10 screws(not fully screwed)

**STEP 2**




3. Adjust the bracket and fixture vertically and horizontally
4. Fully tighten the screws

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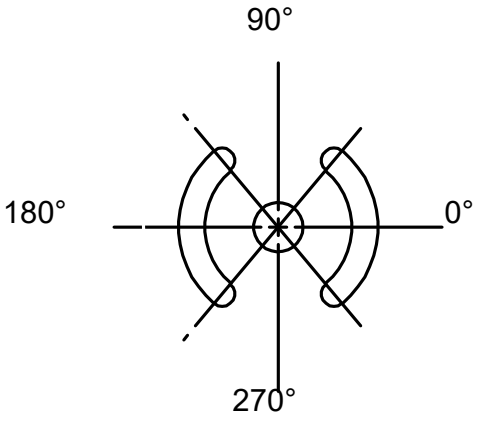
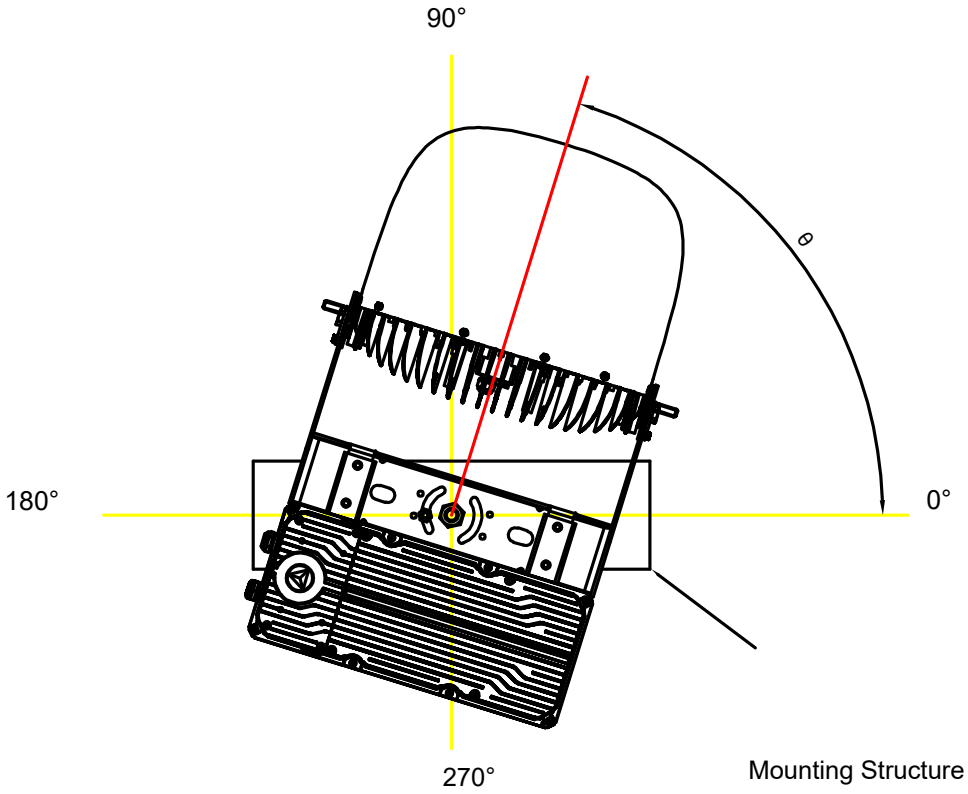
**1.Orientation Set up**

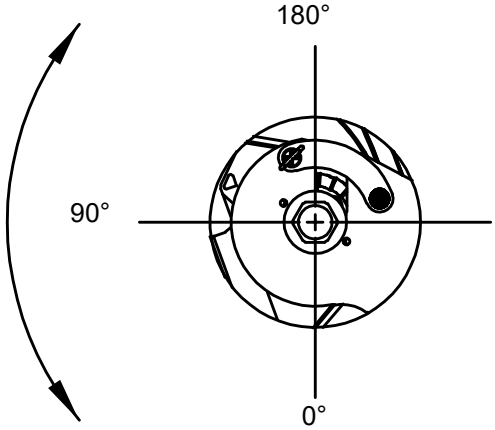


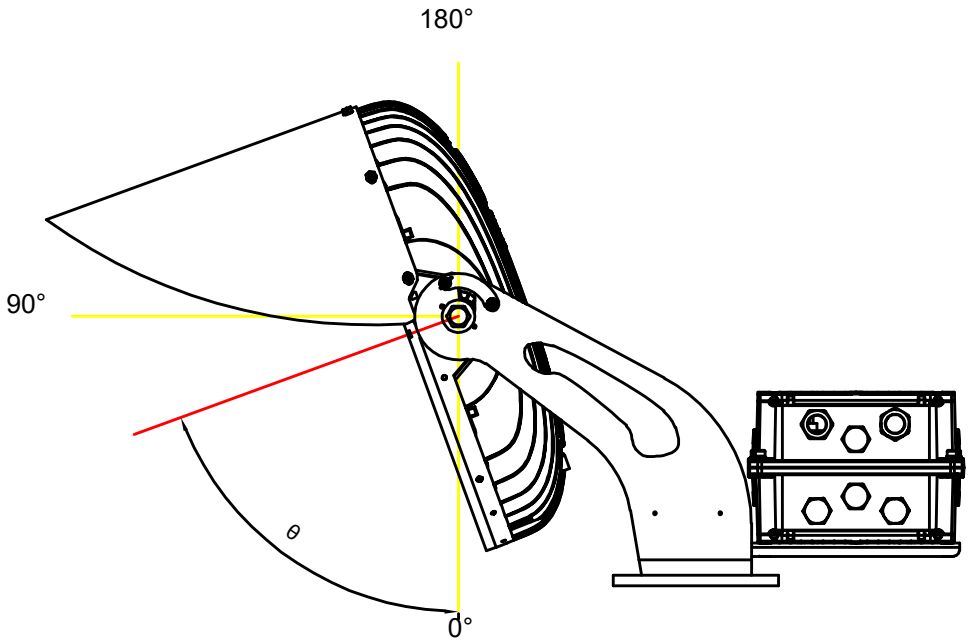




Mounting Structure

When the positions of M20nut and M10nut are determined,40°≤ θ ≤140°.

**2.Tilt**



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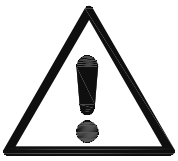
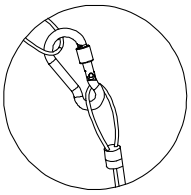
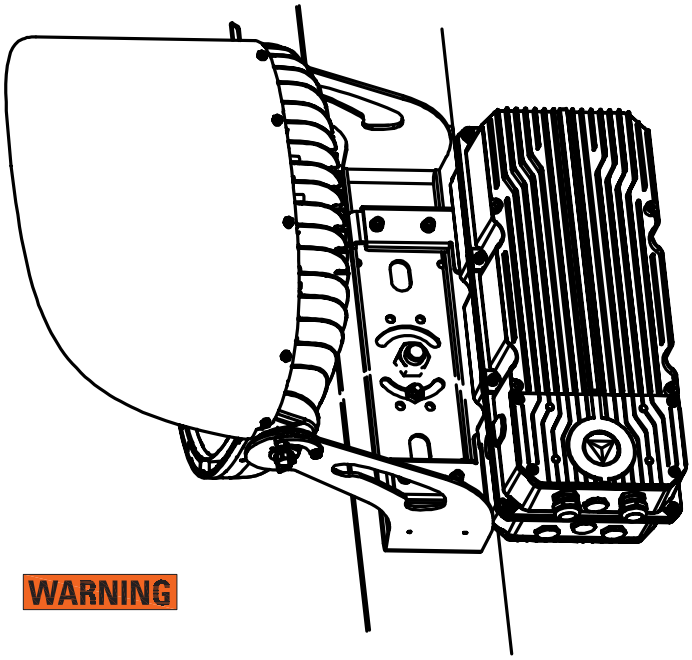
## Fasten safety cable



Lamp must be fastened by individual safety cable






**Install Secondary Retention**

If required, install a secondary retention cable between the fixture and the supporting structure that is designed to support the weight of the fixture, such as the crossarm, catwalk railing, or beam. Route the cable through the cable port located on the bottom edge of the fixture, through the mounting bracket arm, and around the support structure.

**Note**: Never secure the secondary retention cable to electrical conduits, power or HVAC equipment, other light fixtures, frangible material, or any other object not designed to support heavy loads.

Failure to properly install fixture and secondary retention cable may result in damage, injury or death.

Secure secondary retention cable to a structural component at a point above and directly behind the fixture if possible. Leave enough slack to allow fixture aiming if not completed, then pull extra slack through the locking clip after its aimed.

Recommended secondary retention cable is Gripple model #HF4-LT-10ft for indoor applications and equivalently sized vinyl coated cable with cable clamp for outdoor rated applications.

Failure to properly install fixture and secondary retention cable may result in damage, injury or death.

## Luminaire Operation

**Default Response**

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

**Control Details**

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

For DMX control, takes a single DMX channel. The start address can be set by using an RDM (Remote Device Management) tool such as DMXCat or front-end controls. DMX start addresses can be set as desired per project.

**Basic Functionality**

When initial AC power is applied, the luminaries may have a fraction of a second delay and appear staggered for banks of lights.

The minimum light output on the fixtures is 10%. Therefore, the diming range is 0, 10%-100%. A slight jump in light output may be perceived when dimmed up from blackout.

**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.