# Central Oregon Electric LLC

BID

1250 NW 17th.
Redmond, OR 97756
Ph: 541-548-4499
CCB 141709

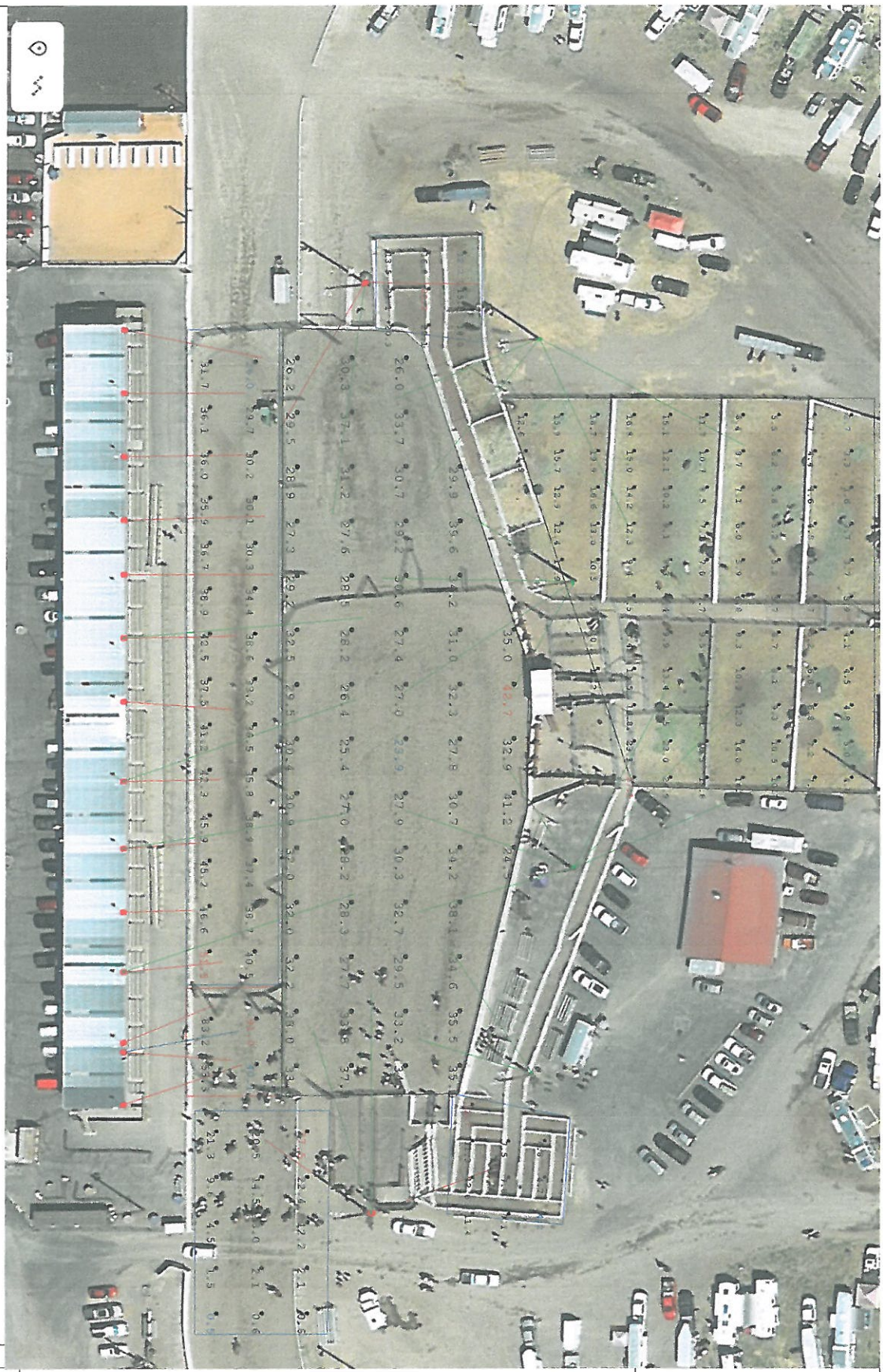
| Date | BID # |
|---|---|
| 5/24/2021 | 21-29 |

| Submitted To: |
|---|
| Crook Cty Fairgrounds Ph1<br>casey.daly@co.crook.or.us |

| Job Name | JOB NUMBER |
|---|---|
| Phase 1 Lights | |

| Description | Qty | Price | Total |
|---|---|---|---|
| INSTALL LIGHTS FOR PHASE #1 ARENA LIGHTS | | | |
| MATERIALS & LABOR | | 75,500.00 | 75,500.00 |
| NOTE: GRANDSTAND POLES BY OTHERS, LIFT PROVIDED BY OTHERS | | | |
| | | **Total** | $75,500.00 |

******NOTE*** BID DOES NOT INCLUDE THE FOLLOWING UNLESS SPECIFICALLY STATED ABOVE; PAINTING OF SURFACE RACEWAY & BOXES, ANY UTILITY FEES, CONCRETE AND/OR ASPHALT SAW CUTTING, REMOVAL OR REPAIR , SHEET ROCK REPAIR, TRENCHING AND PERMITS.***



| | | | |
|---|---|---|---|
| Page 2 of 2 | Crook County Fairgrounds | Drawn By: J Burgess<br>Date:5/13/2021 | Sitelorcam Lighting solutions |

15A

| Luminaire Schedule | | | | |
|---|---|---|---|---|
| Symbol | Qty | Label | Arrangement | LLF |
| | 1 | NOVA2-1000-57-U-D-3_IESNA2002 | SINGLE | 0.900 |
| | 19 | NOVA2-1000-57-U-D-5 | SINGLE | 0.900 |
| | 1 | NOVA2-1000-57-U-D-7 | SINGLE | 0.900 |

| Calculation Summary | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min | # Pts |
| Arena Entry_Planar | Illuminance | Fc | 9.17 | 24.2 | 0.4 | 22.93 | 60.50 | 15 |
| North Paddock_Planar | Illuminance | Fc | 11.01 | 21.1 | 5.3 | 2.08 | 3.98 | 9 |
| Photo Finish Line_Planar | Illuminance | Fc | 60.75 | 94.0 | 31.2 | 1.95 | 3.01 | 4 |
| Rodeo Arena_Planar | Illuminance | Fc | 9.39 | 36.5 | 2.1 | 4.47 | 17.38 | 59 |
| South Paddock_Planar | Illuminance | Fc | 7.69 | 12.9 | 3.8 | 2.02 | 3.39 | 10 |
| West Strip_West Strip | Illuminance | Fc | 27.43 | 39.2 | 17.7 | 1.55 | 2.21 | 28 |

| Luminaire Location Summary | | | | | | |
|---|---|---|---|---|---|---|
| LumNo | Label | X | Y | Z | Orient | Tilt |
| 1 | NOVA2-1000-57-U-D-5 | 180 | 66 | 50 | 78.69 | 54.992 |
| 2 | NOVA2-1000-57-U-D-5 | 215 | 66 | 50 | 90 | 50.659 |
| 3 | NOVA2-1000-57-U-D-5 | 250 | 66 | 50 | 90.868 | 52.856 |
| 4 | NOVA2-1000-57-U-D-5 | 285 | 66 | 50 | 91.614 | 54.857 |
| 5 | NOVA2-1000-57-U-D-5 | 315 | 66 | 50 | 90 | 56.31 |
| 6 | NOVA2-1000-57-U-D-5 | 350 | 66 | 50 | 91.005 | 48.747 |
| 7 | NOVA2-1000-57-U-D-5 | 385 | 66 | 50 | 85.84 | 47.802 |
| 9 | NOVA2-1000-57-U-D-5 | 429 | 66 | 50 | 91.169 | 44.427 |
| 10 | NOVA2-1000-57-U-D-5 | 466 | 66 | 50 | 94.399 | 38.036 |
| 11 | NOVA2-1000-57-U-D-5 | 501 | 66 | 50 | 91.637 | 35.003 |
| 12 | NOVA2-1000-57-U-D-5 | 534 | 66 | 50 | 95.711 | 45.143 |
| 13 | NOVA2-1000-57-U-D-5 | 573 | 66 | 50 | 112.443 | 44.868 |
| 14 | NOVA2-1000-57-U-D-5 | 607 | 66 | 50 | 108.435 | 51.671 |
| 15 | NOVA2-1000-57-U-D-3_IESNA2002 | 578 | 66 | 50 | 100.204 | 50 |
| 17 | NOVA2-1000-57-U-D-5 | 154 | 199 | 50 | 329.995 | 58.623 |
| 18 | NOVA2-1000-57-U-D-5 | 154 | 199 | 50 | 352.147 | 66.878 |
| 19 | NOVA2-1000-57-U-D-5 | 667 | 203 | 50 | 235.081 | 52.276 |
| 20 | NOVA2-1000-57-U-D-5 | 667 | 203 | 50 | 177.51 | 54.097 |
| 21 | NOVA2-1000-57-U-D-5 | 667 | 203 | 50 | 110.136 | 51.96 |
| 22 | NOVA2-1000-57-U-D-7 | 154 | 199 | 50 | 90 | 30.964 |
| 24 | NOVA2-1000-57-U-D-5 | 578 | 66 | 50 | 85.84 | 47.802 |

Slatercom LIGHTING SOLUTIONS

| Revisions | | | |
|---|---|---|---|
| # | Date | Comments | |
| | | | |

Drawn By: J Burgess

Date:5/3/2021

Building 1



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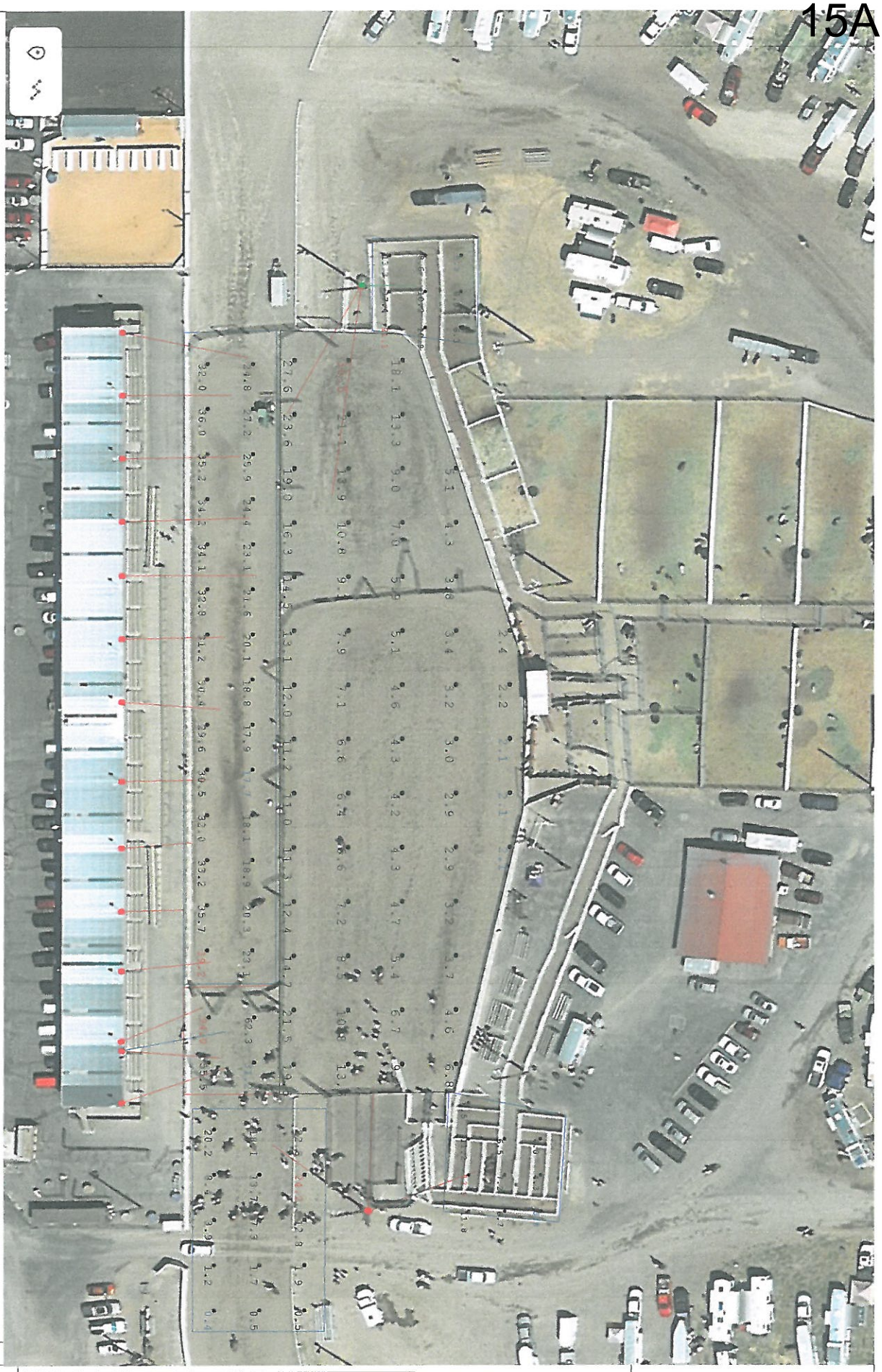


| | | |
|---|---|---|
| Crook County Fairgrounds | Drawn By: J Burgess | |
| | Date:5/3/2021 | |



15A

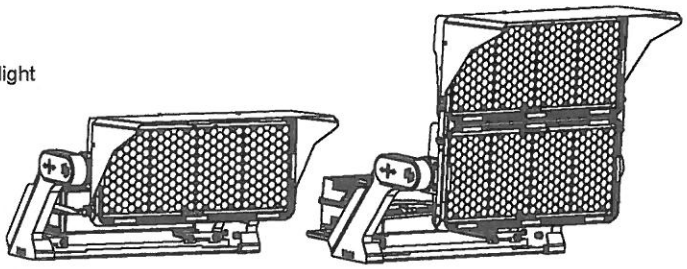
# NOVA™ G2 Installation Instructions

**This manual applies to the following:**

400W,500W,600W,800W,1000W,1200W

**Product Features:**

* Professional designed lamps for LED characteristics makes the best light efficiency.
* Multiple optional NEMA meets the requirement of wide application in different place.
* The holder can be adjust from front to back for two module lamps.
* Separate driver and heat sink help to speed up heat dissipation and easier to change the driver.
* No screws at front and side makes the appearance more perfect.
* The material is high strength alloy anti-corrosion aluminum.



## 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 TGS Sports Customer Service at (818) 206-4404.

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. TGS Sports 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.**

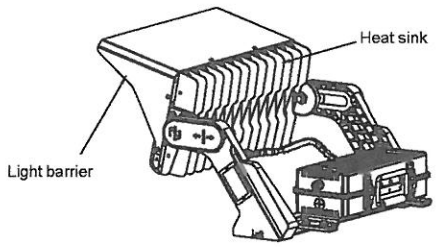
Store luminaires in a clean, dry place, protected from dirt, water, and sunlight. See table for required storage and operating conditions:

| Storage Temperature | Operating Temperature | Humidity |
|---|---|---|
| 40°F to 167°F | -20°~131°F | 5% to 95% non-condensing |

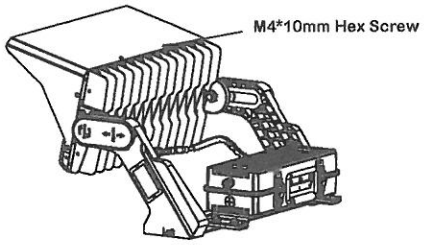
## WARNING:

*Please read the manual carefully before installation. Power off before installation. Please authorize only a qualified person or professional engineer to install the fixture. Before installation, please check if the local voltage range corresponds with working voltage of the fixture. If the fixture is damaged, it should be replaced by the supplier, a service agent or a qualified person. Please keep the fixture away from fire, electric shock, and/or vibration.*

## Step 1: Attach the Visor




Attach the visor onto the fixture body

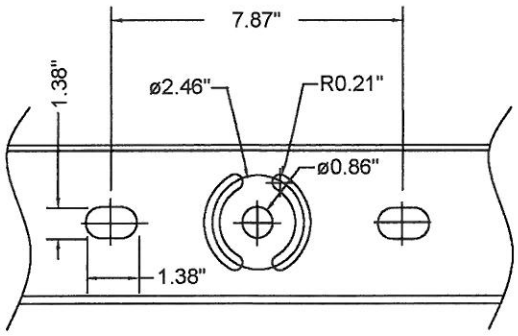



Use M4x10mm screw to lock the visor on the fixture body

**Figure 1. Visor Attachment**

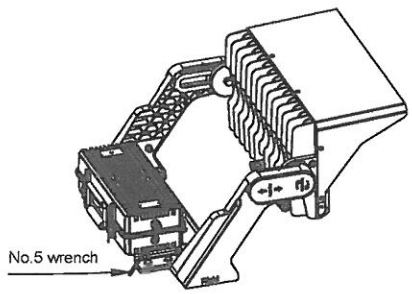
## Step 2: Mount the Luminaires

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

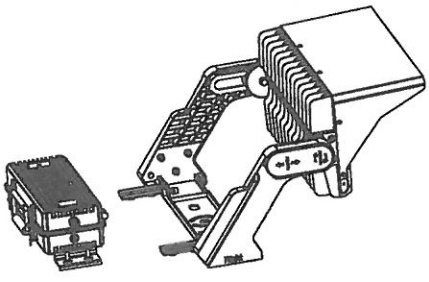



**Installation Metheds:**

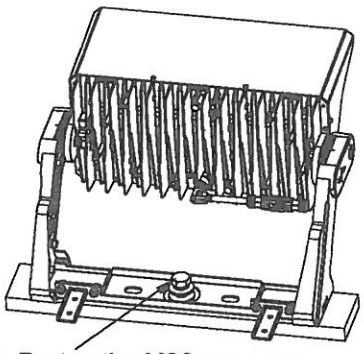
400W, 500W, 600W



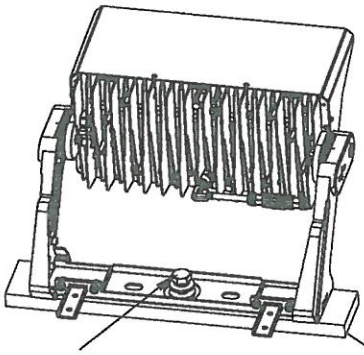

1. Loosen 4pcs M8 screws on driver box with no.5 wrench



2.Move out the driver box

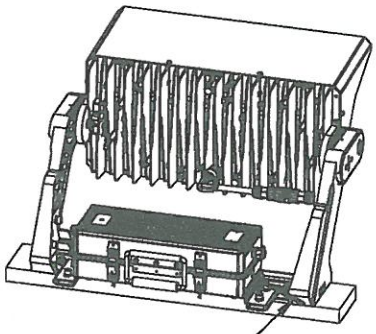


3. Fasten the M20 screw on the hole with wrench



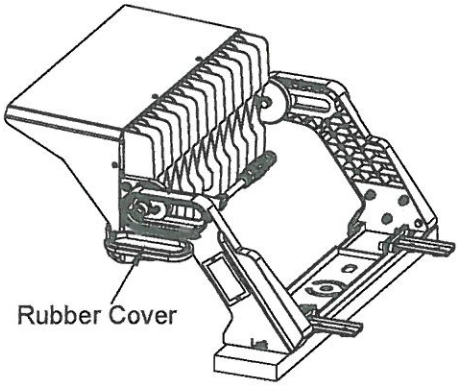
4. Fix the M20 screw on the hole with wrench

Mounting surface plate

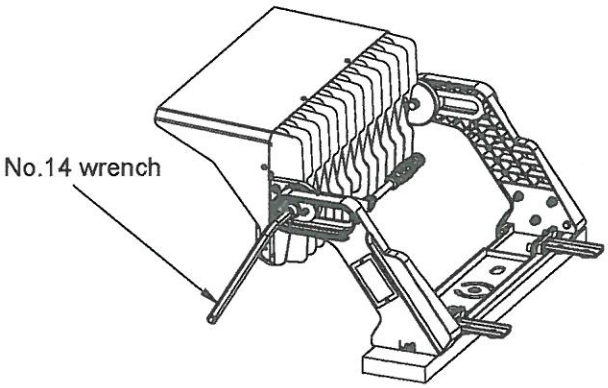


5. Fasten the M8 screw and the driver box with No.5 wrench

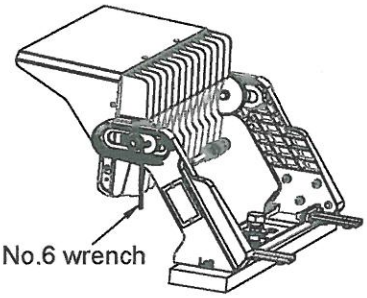
**Horizental Movement Instuctions:**

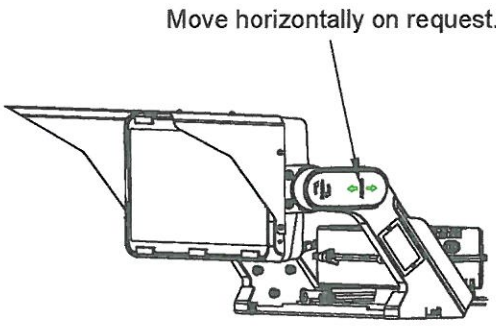



1. Take out the rubber with hand



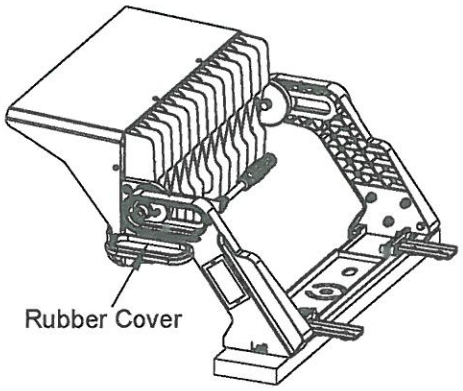

2. Loosen M16 screw with No.14 wrench



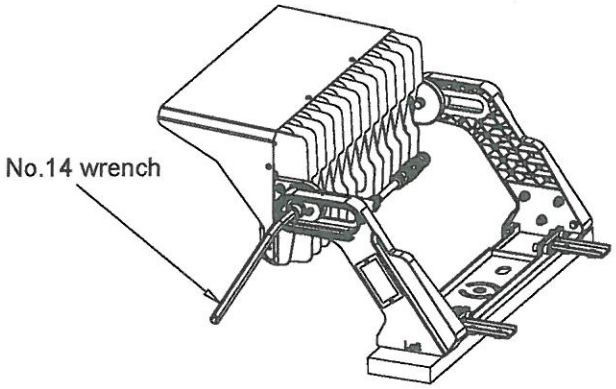




3. Loosen M10 screw with No.6 wrech, moving the M10 screw to the location you want, then fix the screw.

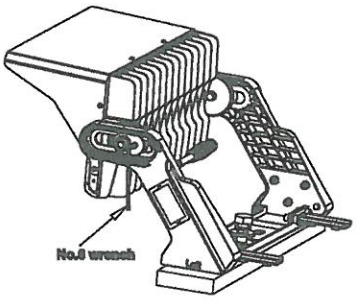
**Vertical Angle Adjustment Instructions:**




1. Take out the rubber with hand

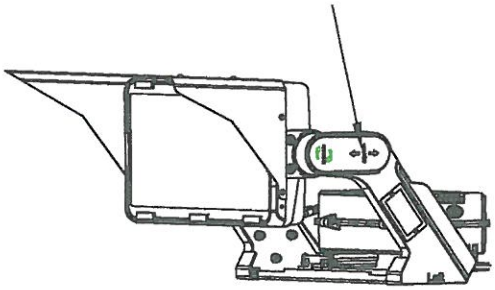



2. Loosen M16 screw with No.14 wrench




3. Loosen M10 screw with No.6 wrech, moving the M10 screw to the location you want, then fix the screw.

Move horizontally on request.



**Accessories Included**

| Mounting Type | Accessory | Specifications | Quantity |
|---|---|---|---|
|  | Hex Head Screws | Stainless Steal 304 M20 3/4-10Thread length2-3/4 | 2 |
|  | Spring Washers | M20 | 2 |
|  | Plain Washers | M20 | 2 |
|  | Nuts | M20 | 2 |
|  | Wrench | No.5 Wrench | 1 |
|  | Wrench | No.6 Wrench | 1 |
|  | Wrench | No.14 Wrench | 1 |

## Step 3: Aim the Luminaires

Aiming the luminaire 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 Coordinated, and Orient-Tilt.

### Orient-Tilt

This technique involved turning the luminaire to predetermined angles before the lighting pole is lifted up and set in place. The Orient angle refers to the direction the luminaire faces in the Z-plane. Mount the luminaire to the structure but leave the mounting nut slightly loose to allow spinning flexibility about the mounting bolt.

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 fixture may rotate up inside the mounting bracket. Set the luminaire Tilt angle by rotating the fixture relative to the luminaire mounting structure.

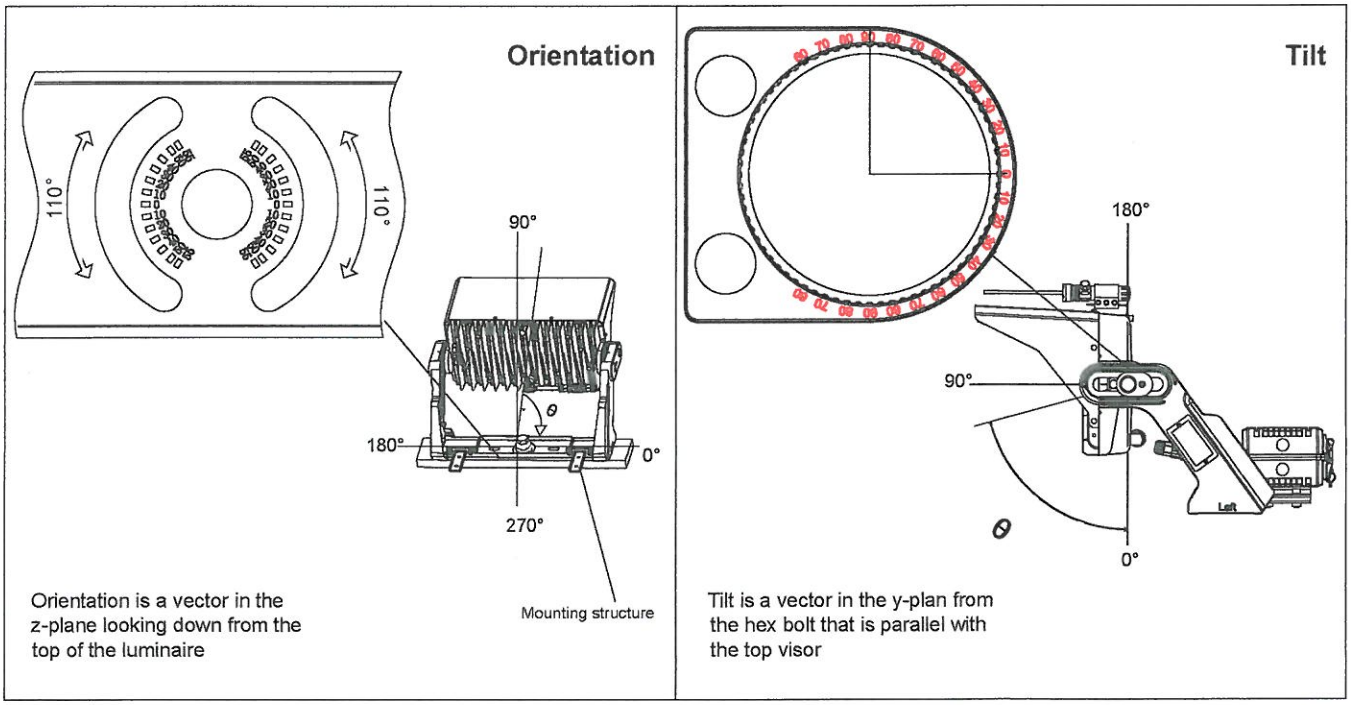



**Figure 4. Orient and tilt**

Electrical Load

| System Wattage (W) | Current (A) | | | | | |
|---|---|---|---|---|---|---|
| | Input Voltage | | | | | |
| | 120V | 208V | 240V | 277V | 247V | 480V |
| 400 | 3.3 | 1.9 | 1.7 | 1.4 | 1.6 | 0.83 |
| 500 | 4.2 | 2.4 | 2.1 | 1.8 | 2.0 | 1.1 |
| 600 | 5.0 | 2.9 | 2.5 | 2.1 | 2.4 | 1.25 |
| 800 | 6.7 | 3.8 | 3.3 | 2.9 | 3.3 | 1.7 |
| 1000 | 8.3 | 4.8 | 4.2 | 3.6 | 4.0 | 2.0 |
| 1200 | 10.0 | 5.8 | 5.0 | 4.3 | 4.9 | 2.5 |

EPA Rating Information ($ft^2$)

| Wattage (W) | Front | Side | Top |
|---|---|---|---|
| 400/500/600 | 2.57 | 0.52 | 0.57 |
| 800/1000/1200 | 3.48 | 0.75 | 0.57 |

## Laser Aiming

**Precision Laser Aiming by Coordinates:**
Laser aiming is the most effective and preferred technique for aiming NOVA G2 Installation Instructions This method uses a laser mounted to the luminaire to point the fixture at a predetermined point on the playing surface using (X,Y) co-ordinates. Unless otherwise noted, aiming coordinates on NOVA G2 Installation Instructions drawings are based on the origin (0,0,0) placed at center field, court, or ice. All dimensions from that point are in feet along the playing surface unless otherwise noted.

### ⚠ WARNING

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

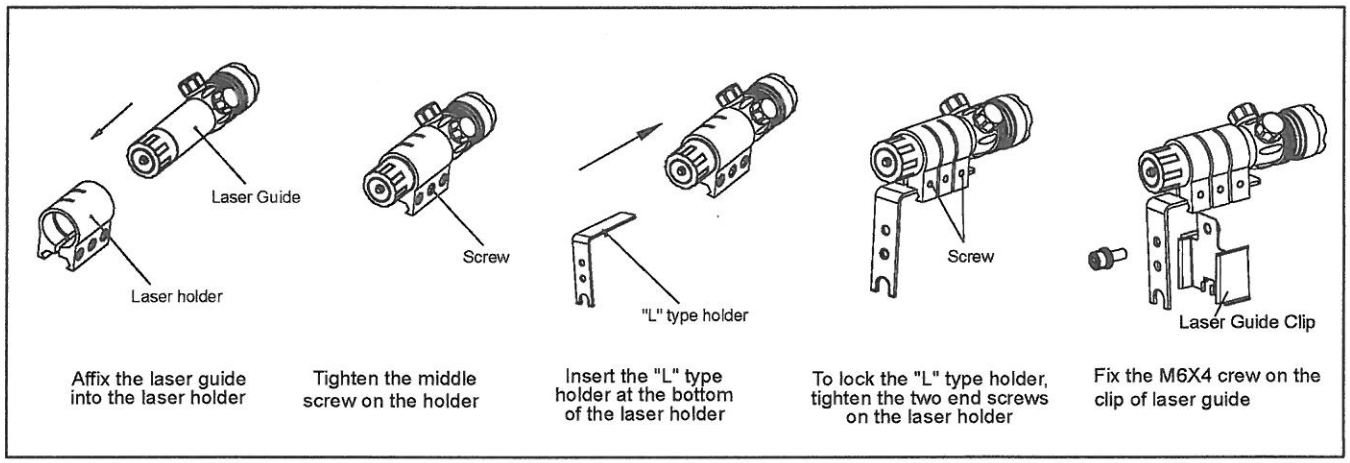



**Figure 5. Laser Components**

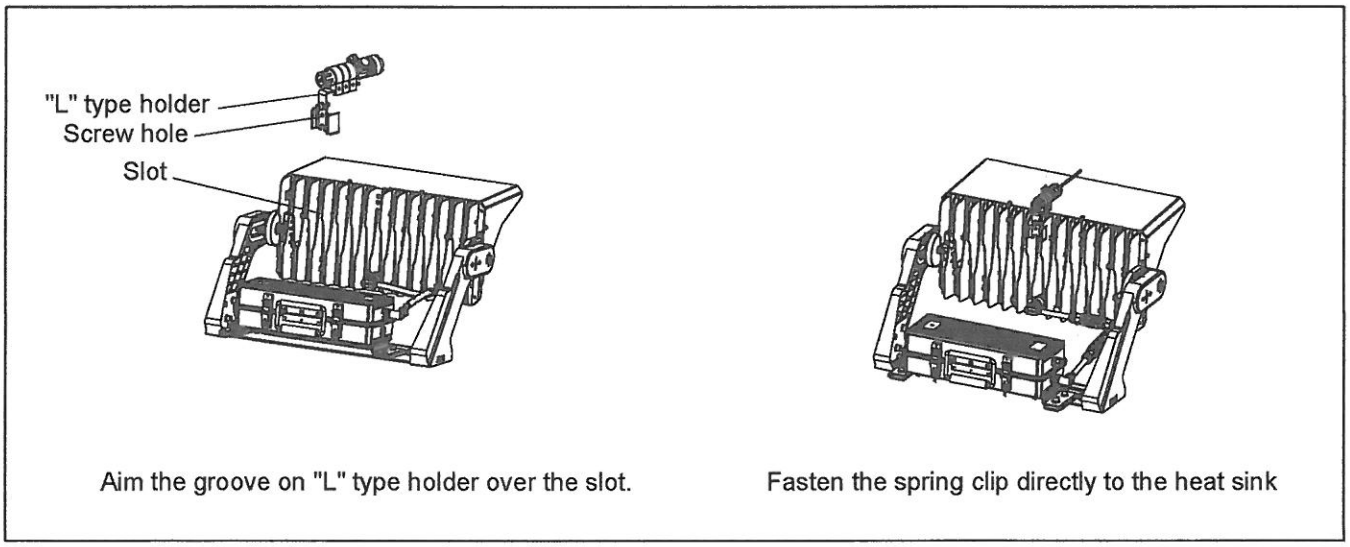


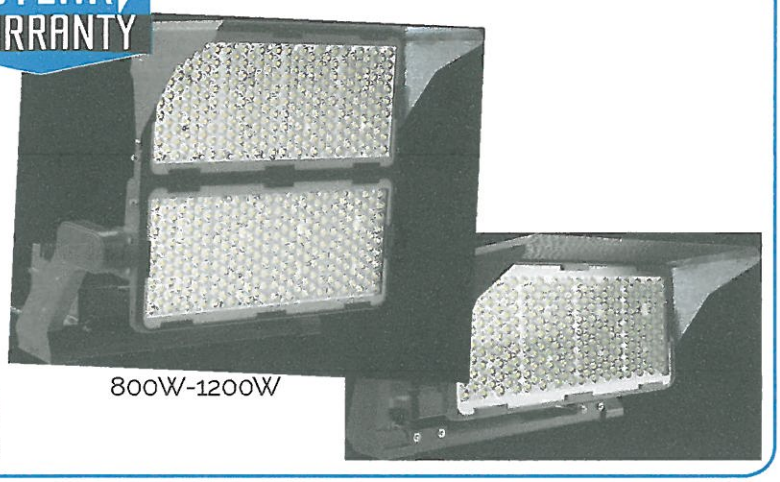

**Figure 6. Laser Installation**

# Nova™ G2
## SPORTS LIGHTER

tgs SPORTS a TGS company

15A

10 YEAR WARRANTY



800W-1200W

UL LISTED

Project:

Prepared by:

Type:

Date:

400W (54,000 lm)
500W (67,500 lm)
600W (88,000 lm)
800W (108,000 lm)
1000W (135,000 lm)
1200W (162,000 lm)

## ORDERING INFORMATION

Sample SKU: NOVA2-800-50-U-D-3-ID

| Series | Wattage | CCT | Input Voltage | Controls | Distribution | Driver Option |
|---|---|---|---|---|---|---|
| NOVA2 | | | | | | |
| NOVA2 | 400 - 400W<br>500 - 500W<br>600 - 600W<br>800 - 800W<br>1000 - 1000W<br>1200 - 1200W | 57 - 5700K<br>50 - 5000K<br>40 - 4000K | U - 100-277VAC<br>H - 277-480VAC | D - 0-10V Dimming<br>D0 - Non-Dimming<br>D1 - Radiant Wireless Control System<br>DIM4-U - Dimulator 120-277 VAC w/7 pin<br>DIM4-H - Dimulator 480VAC w/ 7 pin | 3 - NEMA3 (H2V3)<br>4 - NEMA4 (H4V4)<br>5 - NEMA5 (H6V5)<br>6 - NEMA6 (H6V6)<br>7 - NEMA7 (H7V6) | ID - Integrated Driver<br>‡RD - Remote Driver |

### Accessories

NOVA2-LG (Laser Guide)
NOVA2-FO (Field Adjustable Lumen Output)
IP65EM (Consult with Sales Represenatative for available emergency driver wattage)

**‡Specify the length for the DC cord (Cord between the driver to the LED module) for remore driver. Max Length: 100'**

***MOQ and longer lead times may apply, please contact customer service for more information.**

## TECHNICAL SPECIFICATIONS

### CONSTRUCTION

**IP/Enclosure Rating:**
IP67 Enclosure/IK08 Impact/
3G Vibration Rating (Per ANSI/IEEE C136.31)

**Operating Temperature:**
-20°F~131°F

**Housing:**
A383 (ADC 12) die-cast aluminum

**Driver Compartment:**
Die-cast aluminum/NEMA4X enclosure

**Optics:**
Tempered glass diffuser and injection molded UV resistance PC modular optic

**Power Cord:**
- 14/3, 6' SOW (600V)

### ELECTRICAL

**Input Voltage:**
- 100-277VAC
- 277-480VAC

**THD:**
<20%

**Power Factor:**
>0.95

**Surge Protection:**
20kV/10kA:
Compliant With:
- ANSI C136.2-2015 Extreme
- ANSI C82.77-5-2015 High Exposure
- IEEE C62.41.2 Location Category C High Exposure

### CONTROLS/DIMMING

- Non-Dimming
- 0-10V Dimming
- Dimulator Dimming Photocontrol
- RADIANT® Wireless Control System

### ENGINE & OPTICAL

**Available NEMA Distribution:**
NEMA3, NEMA4, NEMA5, NEMA6, NEMA7

**CRI/TLCI:**
- CRI>70 (Standard)
- *CRI>80 (Optional)
- *CRI>90 (Optional)

TLCI is option available upon request

**Available CCT:**
4000K, 5000K, 5700K

**Projected L70:**
>100,000 hrs

### WARRANTY

10 Year Warranty
25 Year Warranty Option Available
*See warranty documentation for more information.*

Phone: 818-206-4404 Email: info@tgssports.com Website: www.tgssports.com

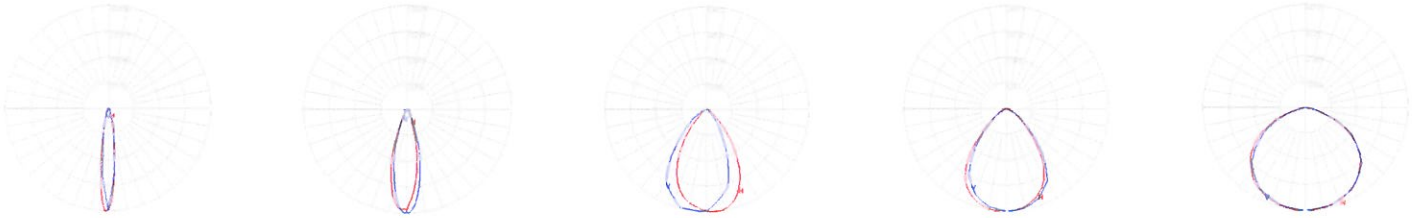
## PERFORMANCE DATA

| | | | | | | |
|---|---|---|---|---|---|---|
| **Wattage** | 400W | 500W | 600W | 800W | 1000W | 1200W |
| **Delivered Lumens** | 54000lm | 67500lm | 88000lm | 108000lm | 135000lm | 162000lm |
| **System Efficacy** | 135 lm/W | 135 lm/W | 135 lm/W | 135 lm/W | 135 lm/W | 135 lm/W |

Typical delivered lumen data is approximate. Actual lumens may vary due to installation environment and NEMA Distribution. Please See IES Files

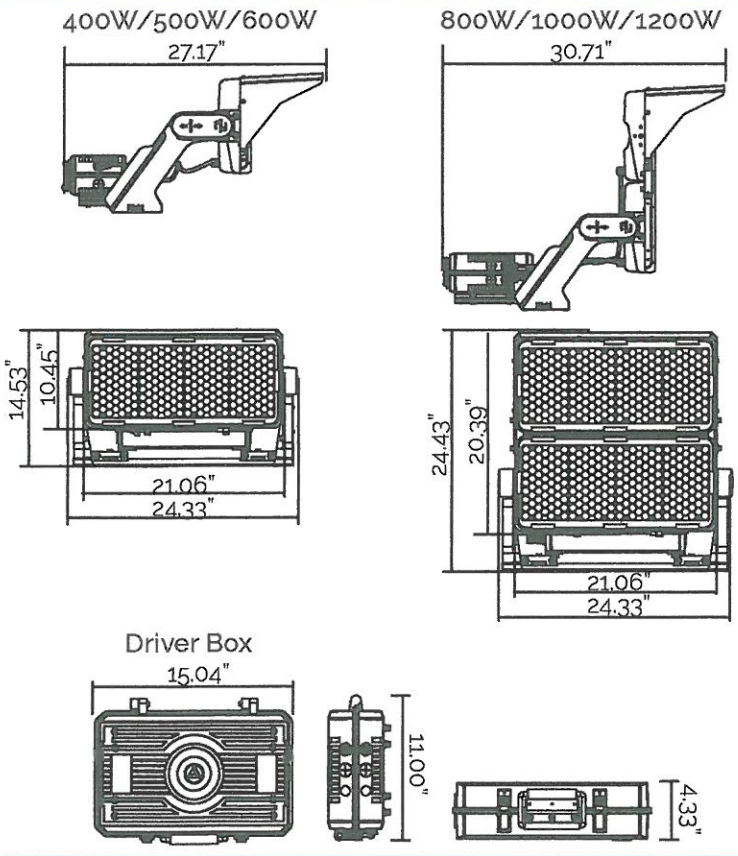
## NEMA DISTRIBUTION

*IESNA LM-63 IES Available upon request



NEMA3 (H2xV3) | NEMA4 (H4xV4) | NEMA5 (H6xV5) | NEMA6 (H6xV6) | NEMA7 (H7xV6)

## DIMENSIONS




## ELECTRICAL LOAD

| | Input Voltage | | | | | |
|---|---|---|---|---|---|---|
| | 120V | 208V | 240V | 277V | 347V | 480V |
| Wattage (W) | Current (A) | | | | | |
| 400 | 3.3 | 1.9 | 1.7 | 1.4 | 1.5 | 0.83 |
| 500 | 4.2 | 2.4 | 2.1 | 1.8 | 2.0 | 1.1 |
| 600 | 5.0 | 2.9 | 2.5 | 2.1 | 2.4 | 1.25 |
| 800 | 6.7 | 3.8 | 3.3 | 2.9 | 3.3 | 1.7 |
| 1000 | 8.3 | 4.8 | 4.2 | 3.6 | 4.0 | 2.0 |
| 1200 | 10.0 | 5.8 | 5.0 | 4.3 | 4.9 | 2.5 |

## EPA RATING (ft²)

| Wattage (W) | Front | Side |
|---|---|---|
| 400/500/600 | 1.90 | 0.52 |
| 800/1000/1200 | 3.60 | 0.75 |

Front (Visor Included) and Side (Visor Included): [DC (Drag Coefficient)= 1.2]

## WEIGHT (lbs)

| Wattage (W) | Weight (lb.) | |
|---|---|---|
| | Housing + Bracket | Driver |
| 400-600 | 31 | 12 |
| 800-1200 | 54 | 23 |

## ACCESSORIES

Visor Hood
[Included]

Laser Guide
[NOVA2-LG]

IP65 Emergency
Battery Backup
[IP65EM]

7 Pin Receptacle &
Dimulator
[DIM4-U or DIM4-H]

## Dimulator

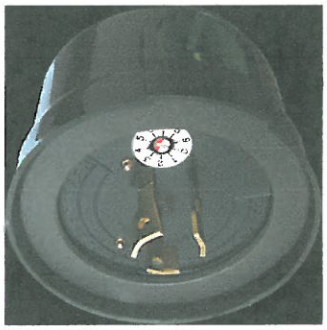
### Stand-Alone LED Dimming Photocontrol

**Features**

- Factory preset dimming - no selector switch
- 10 Year Warranty
- Compliant with ANSI C136.41 receptacle
- Optional constant all night dimming
- Adaptive lighting control with progressive intensities
- 40kV Surge Protection
- High voltage version available
- Advance time/date algorith auto-adjusts for daylight savings
- Automatically synchronize to local time

**Bat Eye Technology**

- Advanced light sensor, only reacts to sunlight
- Immune to LED and other artificial light
- No false activation (no cycling)
- May be oriented in any direction



Patent #9210746

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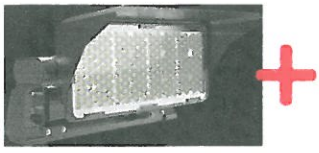
## RADIANT™

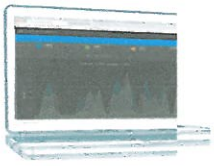
### WIRELESS CONTROL SYSTEM

- Future-Proof: Integral Wireless Access Node
- Adaptable Deployment – Offline or Cloud-Connected
- Web-Browser or App Based Management
- Multiple Zones, Behaviors, Events, and Schedules
- LTE Cellular Connectivity – No Internet Required
- Professional Commissioning and After-Sales Support



Integrated Node

Central Control Base
Station



WiFi or LAN Network
with browser base con-
trol interface

Cloud Control with
Verizon 4G LTE
(Optional)

**COOPER ELECTRIC**
690 North Main Street
Prineville, Oregon 97754
(541) 447-7574
CCB #49744

# JOB ESTIMATE

**Date: May 28, 2021**
**Prepared For**
**Casey Daly**
**Crook County Fairgrounds**
**541-447-6575**

**Job Location**
**1280 S Main St**
**Prineville, OR. 97754**

**Job Description**
**Crook County Fairgrounds**
**LED Arena Lighting Phase 1**

Furnish and install (15) new Ephesus Sports Lighting fixtures across the front of the outdoor arena on existing circuits. Two of these are for photo finish illumination. Furnish and install (6) lights on the poles illuminating north and south end corrals including new cross arm support. Final material will not ship for 8-10 weeks after it is ordered.

**Total: $66,800.00**

Transition from metal halide to LED style lighting and the electronic age allows a new form of scene control heretofore unimagined and unseen at the Crook County Fairgrounds. These lights can blink and flash for blackout or independent, addressable, programmable control from your phone or the crow's nest and contributing to the show. The lights can communicate thru Wi-Fi to each other and the controller, syncing and coordinating at the speed of light. Simply astonishing. It may be possible to purchase separately and later, but in my experience, lighting control is always best installed when the lights are installed, or prices go up and problems arise, or models change.

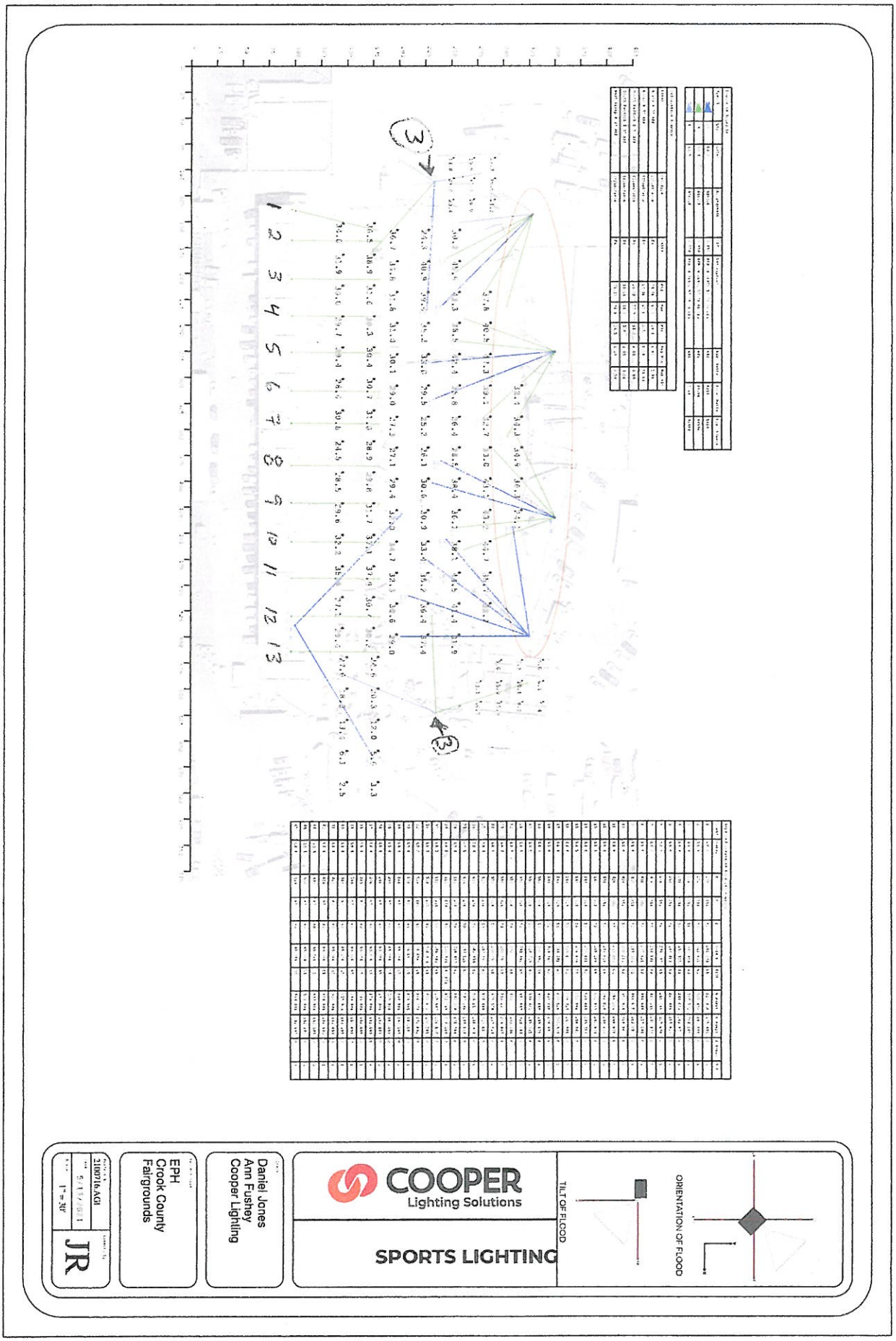
AirMesh Hub Control option
**Total: $8,600.00**

*All work shall be performed during normal business hours, Monday-Friday, 8:00a.m.-4:30p.m., unless otherwise specified.*

Contractors Signature _____ Date 5-28-21
*Payment Terms: Negotiated upon acceptance. NOTE: This proposal may be withdrawn if not accepted within 30 days.*

Accepted: The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified.

Signature _____ Date _____
Thank you for giving us the opportunity to bid your job. If you have questions after looking it over, please feel free to call us. Upon acceptance of our proposal, please return to our office a signed copy of the job estimate.


COOPER
Lighting Solutions
SPORTS LIGHTING
TILT OF FLOOD
ORIENTATION OF FLOOD
Daniel Jones
Ann Fushey
Cooper Lighting
EPH
Crook County
Fairgrounds
210716.AGI
1" = 30'
JR

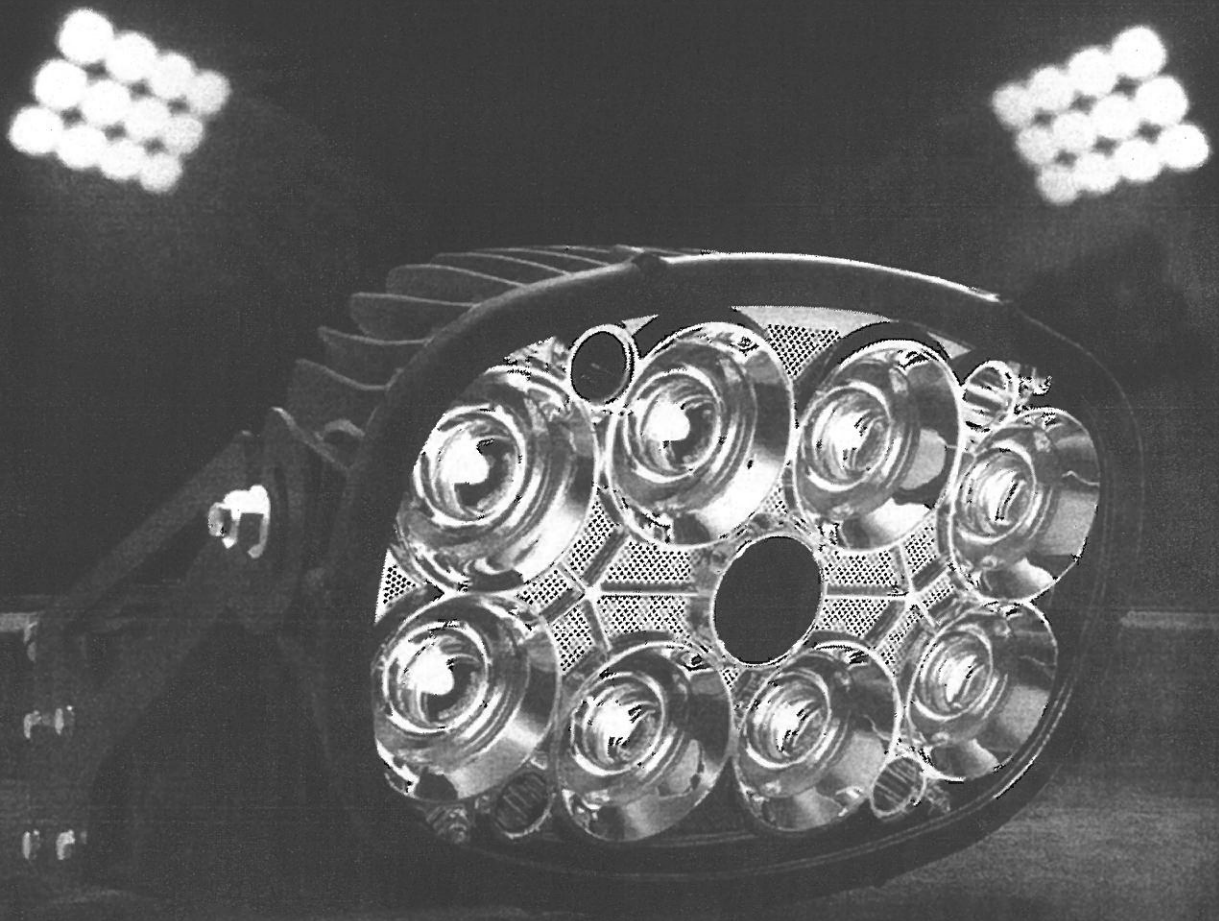
15A

INTRODUCING

# LUMASPORT 8

OPTIMIZED PERFORMANCE LIGHTING

ephesus
SPORTS LIGHTING

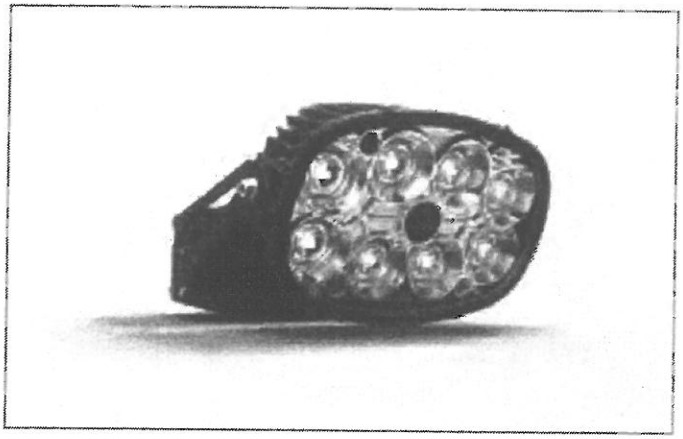


## LOWEST TOTAL COST OF OWNERSHIP IN THE INDUSTRY.

The LUMA**SPORT 8** luminaire combines interchangeable modular power, controls, and easy-to-install mounting options to deliver the optimum lighting system solution for every unique indoor and outdoor sports lighting venue with industry-leading reliability.

VISIT **EPHESUSLIGHTING.COM**

| | | | | | |
|---|---|---|---|---|---|
| Project | | Catalog # | | Type | |
| Prepared by | | Notes | | Date | |



# Ephesus

## LUMASPORT 8

White LED Sports & Entertainment Luminaire

**Typical Applications**

Pro Arenas • University & Collegiate Arenas • University & Collegiate Stadiums • Multi-Event & Convention Centers • Gymnasiums & Field Houses

### Interactive Menu



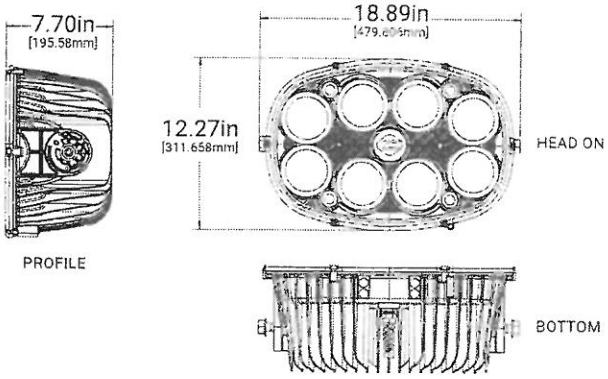
### Product Certification

### Top Product Features

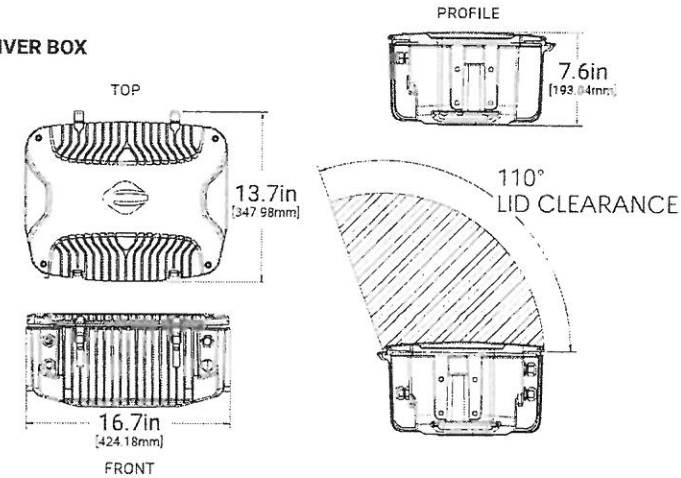
- 55,000 or 90,000 lumen output options
- Glare and cutoff control via Hybrid Reflector and TIR Optical System
- Reduce install time with pre-aimable two-piece assembly
- Virtually eliminate maintenance with power redundancy
- Industry leading light source reliability with Chip-on-Board LEDs
- Greater than 92% lumen maintenance at 55,000 hours
- Wired DMX or Wireless AirMesh controls options to suit your needs

## Dimensional Details

**LIGHT HEAD**



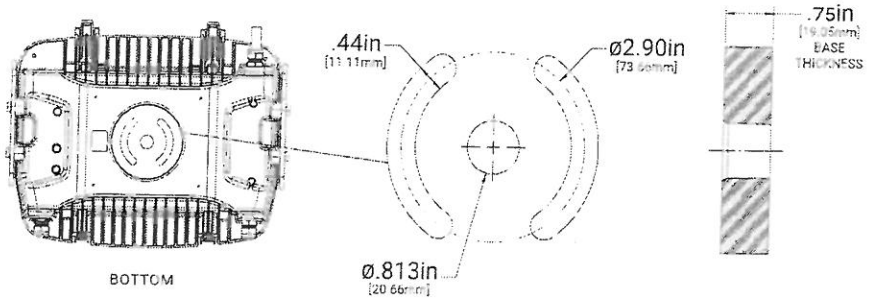

**DRIVER BOX**




Installation Instructions

## Dimensional and Mounting Details

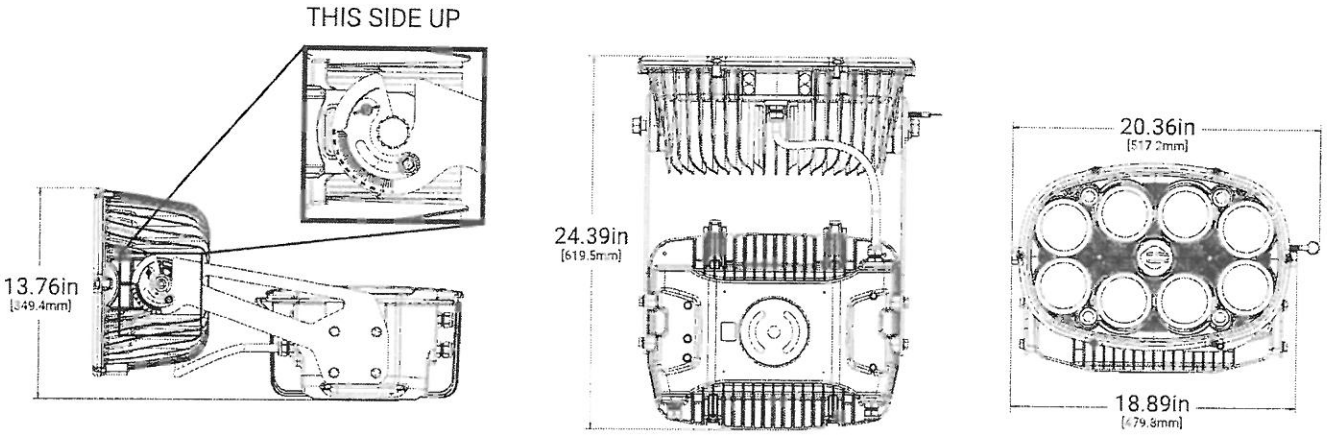
### MOUNTING: DRIVER BOX




BOTTOM

LATERAL ORIENTATION MOUNT

### MOUNTING CONFIGURATION: LOCAL YOKE

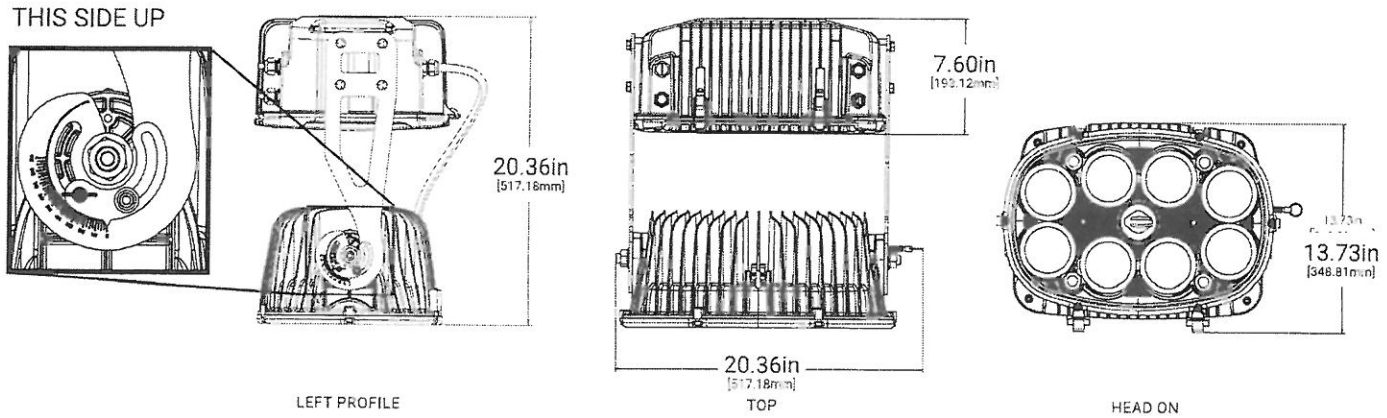



LEFT PROFILE

BOTTOM: LATERAL ORIENTATION MOUNT

HEAD ON

### MOUNTING CONFIGURATION: LOCAL PENDANT

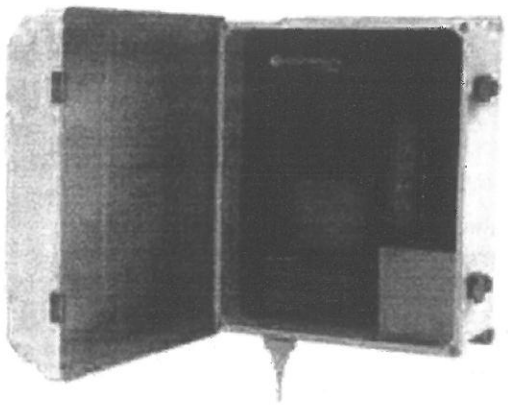



LEFT PROFILE

TOP

HEAD ON

| | | | | | |
|---|---|---|---|---|---|
| Project | | Catalog # | | Type | |
| Prepared by | | Notes | | Date | |



# Ephesus

## AirMesh Hub

### Wireless Lighting System Controls

**Typical Indoor/Outdoor Applications**

• Professional Stadiums & Arenas University/Collegiate Stadiums & Arenas • K-12 Stadiums & Arenas • Game Fields • Practice Fields • Multi-use Recreational & Municipal Fields • Public Assembly & Convention Centers • Gymnasiums & Field Houses • Unmanned Sports Facilities

### Interactive Menu



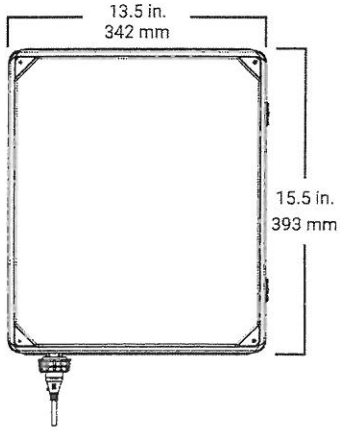
### Product Certification

### Top Product Features

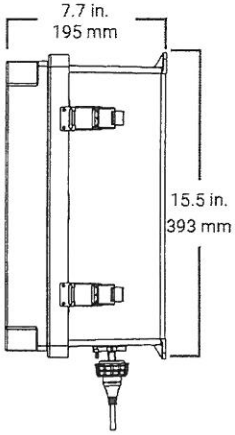
- Can be installed anywhere you need wireless, push-button control
- Five-button, pre-programmed switch provides easy control of all lights at specified dimming levels (0%,25%, 50%, 75%, 100%)
- Can communicate via LAN connection, Wi-Fi, or through a cellular network*
- Weather-protected for outdoor venues
- Includes internal surge protection
- Enables Static and Dynamic Scenes

### Dimensional Details

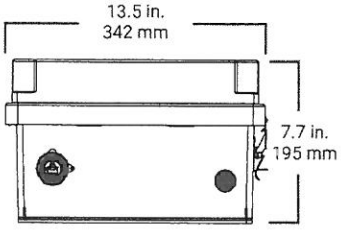
**HEAD ON**



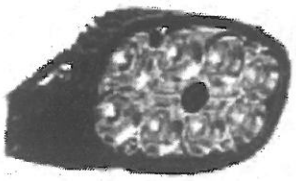

**LEFT PROFILE**




**BOTTOM**




Due to our continuous improvement efforts, specifications are subject to change without notice.
*Cellular and/or data charges may apply



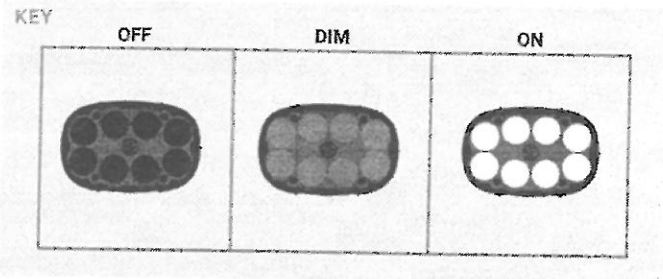
# LUMASPORT 8

## Dynamic Scenes

### White LED

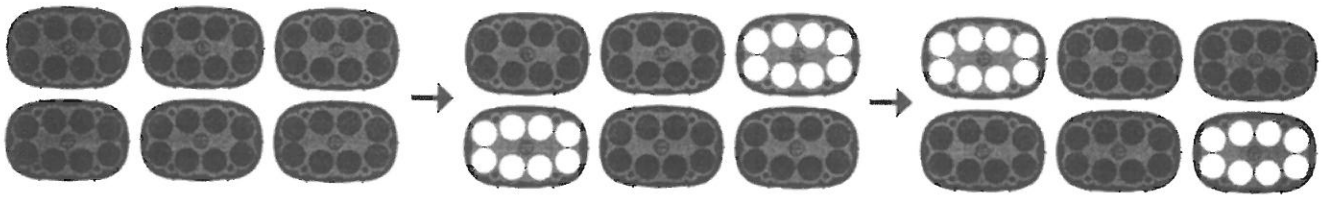
**Lumen(lm) Output:**

**55,000 & 90,000**



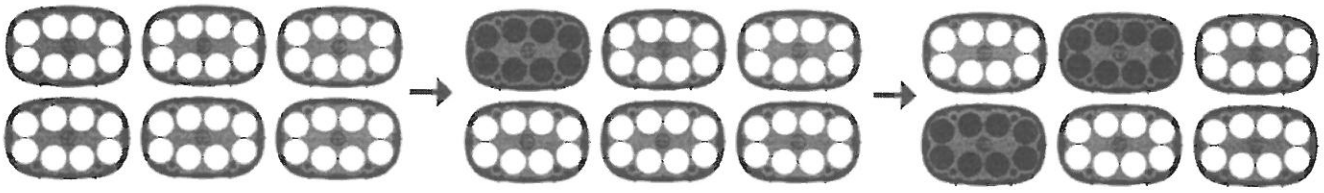

**Paparazzi [Standard & Fast][1]**

Each light illuminates briefly in a random manner that resembles paparazzi flash bulbs.
When entering this mode, all fixtures will immediately turn **OFF**. Fast paparazzi fires faster than standard paparazzi.



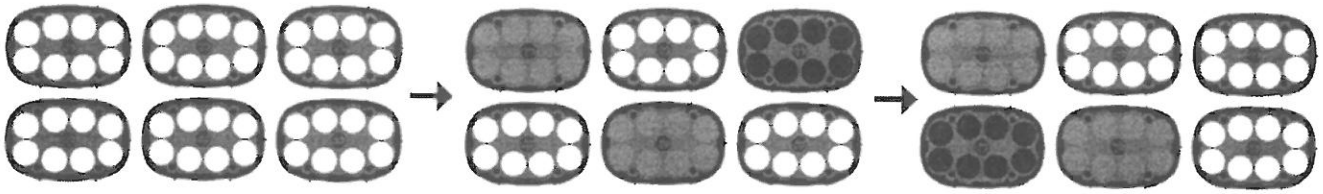
**Sparkle [Standard & Fast][2]**

Each light illuminates briefly in a random manner mimicking a glittery, sparkling appearance.
When entering this mode, all fixtures will immediately turn **ON**. Fast Sparkle fires more rapidly than standard sparkle.



**Random**

Lights illuminate throughout the installation in a random manner.
All fixtures will immediately turn **ON** to a random dimming level between 0 and 100%. Every 100 milliseconds, each fixture will change to another random dimming level.



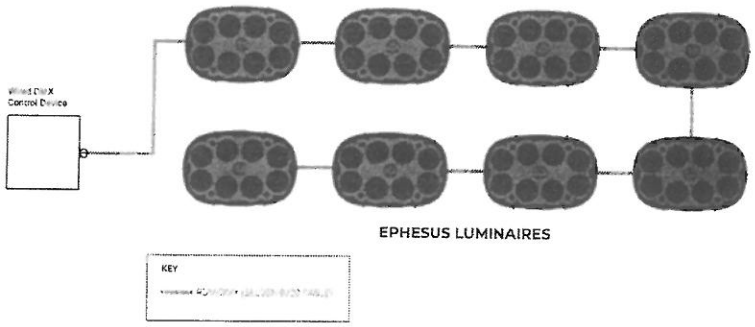
Unless otherwise stated for a particular scene affects independently and the scene will remain in operation until another scene or mode of operation is selected.
[1]For each flash period, a light will have a 10% chance of turning on under Paparazzi, and a 20% chance under Fast Paparazzi. For each flash period, a light will have a 10% chance of turning on under Paparazzi, and a 20% chance under Fast Paparazzi.
[2]For each flash period, a light will have a 10% chance of turning on under Sparkle, and a 20% chance under Fast Sparkle.



Ephesus Sports lighting
125 East Jefferson Street
Syracuse, NY 13202
P: 800-523-1620
www.Ephesuslighting.com

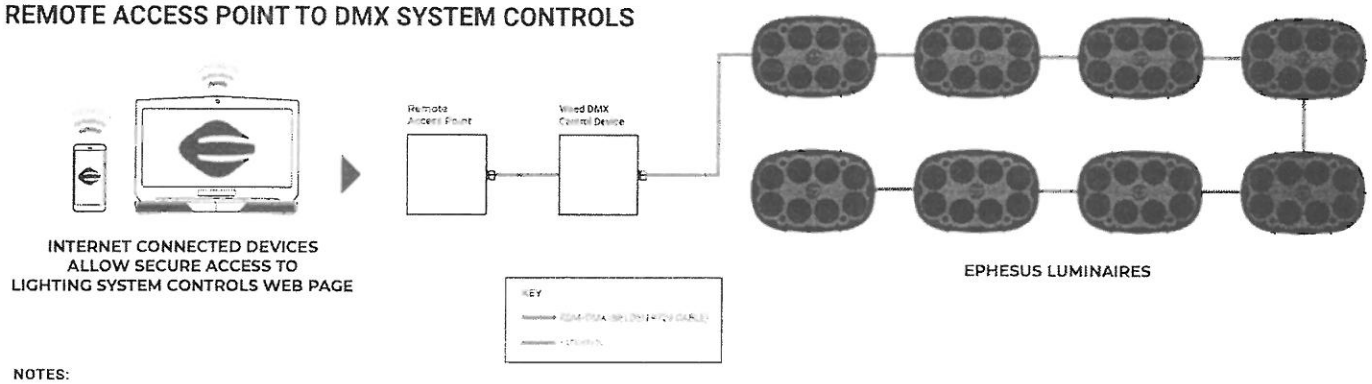
## Example System Topology (Wired DMX Controls)

Example system topology showing the LUMA**SPORT 8** System in a commonly used wired DMX Control Installation. Refer to the specifications and limitations of your wired DMX control device before installing this configuration.




## Example System Topology (Remote Access Point With Wired DMX Controls)

Example system topology showing the LUMA**SPORT 8** System in a commonly used remote access point with wired DMX Control Installation. Refer to the specifications and limitations of your wired DMX control device before installing this configuration. Note: Laptop or mobile device not included. A cellular network connection requires a cellular carrier network plan.




**NOTES:**

Remote Access Point requires either a wired Internet connection at the lighting system site or through a cellular carrier network connection plan

## Optical Performance Data (VHE Visor Configuration Option)

**LUMASPORT 8 (320W) Lumen Outputs**

| Optic | NEMA TYPE | CRI | CCT | Lumens | Input Power (W) | Lm/W | Beam Angle | Field Angle |
|---|---|---|---|---|---|---|---|---|
| 1S | NEMA 3 | 70 | 4000K | 50557 | 346 | 146.1 | 18.3 | 33.0 |
| | | | 5000K | 51415 | 346 | 148.6 | 18.3 | 33.0 |
| | | | 5700K | 50516 | 346 | 146.0 | 18.3 | 33.0 |
| | | 80 | 4000K | 47645 | 346 | 137.7 | 18.3 | 33.0 |
| | | | 5000K | 48530 | 346 | 140.3 | 18.3 | 33.0 |
| | | | 5700K | 47681 | 346 | 137.8 | 18.3 | 33.0 |
| 2S | NEMA 3 | 70 | 4000K | 51545 | 339 | 152.1 | 22.5 | 38.8 |
| | | | 5000K | 52420 | 339 | 154.6 | 22.5 | 38.8 |
| | | | 5700K | 51504 | 339 | 151.9 | 22.5 | 38.8 |
| | | 80 | 4000K | 48568 | 339 | 143.3 | 22.5 | 38.8 |
| | | | 5000K | 49478 | 339 | 146.0 | 22.5 | 38.8 |
| | | | 5700K | 48619 | 339 | 143.4 | 22.5 | 38.8 |
| 3S | NEMA 3 | 70 | 4000K | 50127 | 344 | 145.7 | 25.7 | 44.3 |
| | | | 5000K | 50977 | 344 | 148.2 | 25.7 | 44.3 |
| | | | 5700K | 50086 | 344 | 145.6 | 25.7 | 44.3 |
| | | 80 | 4000K | 47234 | 344 | 137.3 | 25.7 | 44.3 |
| | | | 5000K | 48115 | 344 | 139.9 | 25.7 | 44.3 |
| | | | 5700K | 47242 | 344 | 137.3 | 25.7 | 44.3 |
| 4S | NEMA 4 | 70 | 4000K | 50235 | 344 | 146.0 | 35.1 | 63.7 |
| | | | 5000K | 51087 | 344 | 148.5 | 35.1 | 63.7 |
| | | | 5700K | 50193 | 344 | 145.9 | 35.1 | 63.7 |
| | | 80 | 4000K | 47334 | 344 | 137.6 | 35.1 | 63.7 |
| | | | 5000K | 48218 | 344 | 140.2 | 35.1 | 63.7 |
| | | | 5700K | 47343 | 344 | 137.6 | 35.1 | 63.7 |
| 5S | NEMA 5 | 70 | 4000K | 49723 | 344 | 144.5 | 44.5 | 80.5 |
| | | | 5000K | 50567 | 344 | 147.0 | 44.5 | 80.5 |
| | | | 5700K | 49683 | 344 | 144.4 | 44.5 | 80.5 |
| | | 80 | 4000K | 46954 | 344 | 136.2 | 44.5 | 80.5 |
| | | | 5000K | 47728 | 344 | 138.7 | 44.5 | 80.5 |
| | | | 5700K | 46862 | 344 | 136.2 | 44.5 | 80.5 |
| 7F | NEMA 7 | 70 | 4000K | 43036 | 344 | 125.1 | 66.7 | 121.6 |
| | | | 5000K | 43767 | 344 | 127.2 | 66.7 | 121.6 |
| | | | 5700K | 43001 | 344 | 125.0 | 66.7 | 121.6 |
| | | 80 | 4000K | 40552 | 344 | 117.9 | 66.7 | 121.6 |
| | | | 5000K | 41309 | 344 | 120.1 | 66.7 | 121.6 |
| | | | 5700K | 40560 | 344 | 117.9 | 66.7 | 121.6 |

**LUMASPORT 8 (640W) Lumen Outputs**

| Optic | NEMA TYPE | CRI | CCT | Lumens | Input Power (W) | Lm/W | Beam Angle | Field Angle |
|---|---|---|---|---|---|---|---|---|
| 1S | NEMA 3 | 70 | 4000K | 80066 | 686 | 116.7 | 18.3 | 33.0 |
| | | | 5000K | 82642 | 686 | 120.5 | 18.3 | 33.0 |
| | | | 5700K | 80913 | 686 | 117.9 | 18.3 | 33.0 |
| | | 80 | 4000K | 75453 | 686 | 110.0 | 18.3 | 33.0 |
| | | | 5000K | 78003 | 686 | 113.7 | 18.3 | 33.0 |
| | | | 5700K | 76373 | 686 | 111.3 | 18.3 | 33.0 |
| 2S | NEMA 3 | 70 | 4000K | 85162 | 667 | 127.7 | 22.5 | 38.8 |
| | | | 5000K | 87901 | 667 | 131.8 | 22.5 | 38.8 |
| | | | 5700K | 86062 | 667 | 129.0 | 22.5 | 38.8 |
| | | 80 | 4000K | 80242 | 667 | 120.3 | 22.5 | 38.8 |
| | | | 5000K | 82967 | 667 | 124.4 | 22.5 | 38.8 |
| | | | 5700K | 81241 | 667 | 121.8 | 22.5 | 38.8 |
| 3S | NEMA 3 | 70 | 4000K | 83460 | 681 | 122.6 | 25.7 | 44.3 |
| | | | 5000K | 86145 | 681 | 126.5 | 25.7 | 44.3 |
| | | | 5700K | 84343 | 681 | 123.9 | 25.7 | 44.3 |
| | | 80 | 4000K | 78643 | 681 | 115.5 | 25.7 | 44.3 |
| | | | 5000K | 81309 | 681 | 119.4 | 25.7 | 44.3 |
| | | | 5700K | 79554 | 681 | 116.8 | 25.7 | 44.3 |
| 4S | NEMA 4 | 70 | 4000K | 83374 | 681 | 122.4 | 35.1 | 63.7 |
| | | | 5000K | 86055 | 681 | 126.4 | 35.1 | 63.7 |
| | | | 5700K | 84255 | 681 | 123.7 | 35.1 | 63.7 |
| | | 80 | 4000K | 78561 | 681 | 115.4 | 35.1 | 63.7 |
| | | | 5000K | 81223 | 681 | 119.3 | 35.1 | 63.7 |
| | | | 5700K | 79470 | 681 | 116.7 | 35.1 | 63.7 |
| 5S | NEMA 5 | 70 | 4000K | 82314 | 681 | 120.9 | 44.5 | 80.5 |
| | | | 5000K | 84961 | 681 | 124.8 | 44.5 | 80.5 |
| | | | 5700K | 83184 | 681 | 122.1 | 44.5 | 80.5 |
| | | 80 | 4000K | 77563 | 681 | 113.9 | 44.5 | 80.5 |
| | | | 5000K | 80191 | 681 | 117.8 | 44.5 | 80.5 |
| | | | 5700K | 78460 | 681 | 115.2 | 44.5 | 80.5 |

# LUMASPORT 8

## Performance Data[1]

| | LUMASPORT 8 (320W) | LUMASPORT 8 (640W) |
|---|---|---|
| Lumen Output Range[2] | 48,303 - 55,419lm | 80,572 - 92,929lm |
| Nominal Power[3] | 340W | 680W |
| Input Voltage (Low Voltage) | 120-277VAC | 120-277VAC |
| Input Voltage (High Voltage) | 347-480VAC | 347-480VAC |
| Efficacy Range[3] | 140.4 - 163.5 lm/W | 117.5 - 139.3 lm/W |
| CRI[4] | 70, 80 | 70, 80 |
| TLCI[5] | 75 | 75 |
| CCT Range | 4000K, 5000K, 5700K | 4000K, 5000K, 5700K |
| Distribution (NEMA) | 3-5 , 7 | 3-5 |
| Dimming Range | DIM TO OFF, 10%-100% | DIM TO OFF, 10%-100% |
| Operating Temperature Range | -40°C to +40°C | -40°C to +40°C |
| Usage | INDOOR, OUTDOOR[6] | INDOOR, OUTDOOR[6] |
| Mounting Options (3G RATED) | LOCAL YOKE; LOCAL PENDANT | LOCAL YOKE; LOCAL PENDANT |
| Electrical Certifications | FCC, UL8750, UL1598, DLC Standard (NANQSV) | FCC, UL8750, UL1598, DLC Standard (NANQSV) |
| Environmental Certifications | ANSI C136.31-2010 3G, IP66, NEMA4X[7] | ANSI C136.31-2010 3G, IP66, NEMA4X[7] |
| Surge | 10kV | 10kV |
| Effective Projected Area (EPA) | 1.8 (sq. ft.) | 1.8 (sq. ft.) |
| Effective Projected Area (EPA) with Visor (VHE)[8] | 1.8 - 2.5 (sq. ft.) | 1.8 - 2.5 (sq. ft.) |
| Approximate Weight[9] | 67.5 LBS | 71.5 LBS |

NOTES:

(1) Specifications are subject to change without notice.
(2) Refer to Optical Performance Data.
(3) Values are +/- 4% when fixture is operated at 25°C ambient.
(4) Values are +/- 2%.
(5) Values are +/- 3 points.
(6) When driver box is mounted in upright position.
(7) Light head meets NEMA4X Certification.
(8) EPA may vary depending on the aiming angle of the fixture.
(9) Weight may vary depending on mounting bracket, VHE Visor option, light head and driver box selection.

EC electric

ecpowerslife.com

May 28, 2021

ATTN:

**Re: Crook County Stadium Lighting**
**Revision Number: 0**

EC Electric proposes the Lump Sum price of **$87,459** for consideration as a best value solution for your design build project located at the Crook County Fairgrounds, Prineville, OR.

## General Clarifications

- Proposal pricing is based on the following documents:
- Project Schedule:
  - Work schedule is anticipated to be a standard 5x8's work schedule, with work performed Monday through Friday, 7:00am through 4:30pm.
- This proposal is subject to the successful negotiation of a mutually agreeable contract.
- Warranty for items not furnished by EC Electric are limited to installation of that equipment; the supplier shall carry the warranty for the equipment being supplied.
- Due to the limited availability of skilled craftsman, EC's cost of work might be impacted by increases in rates and burdens that could not have been reasonably anticipated by EC as of the date of this proposal and is subject to change and/or escalation if not accepted within the time set forth below.
- No daily labor incentives have been included in this proposal.
- Labor rates are based on our current union agreement through 2021 and include burden. Once an agreement has been reached for 2022 and 2023 the labor rates will be adjusted accordingly.
- As your trusted partner of choice, EC must inform our clients of included costs associated with trade tariffs, Oregon business taxes, and Portland Clean Energy Surcharge taxes [if applicable] levied against us. EC is in constant negotiation with vendors and partners to limit the impact to our client partners. These costs are included in this proposal for acceptance up to *6.30.21* and subject to change and/or escalation if accepted thereafter. Further levied costs and taxes after this date will require renegotiation between EC and our client partners.
- Existing electrical installations assumed to be installed per code requirements.
- This proposal excludes pricing associated with any tax not in effect as of the date of this proposal. This proposal Includes pricing associated with the Oregon Corporate Activity Tax under HB 3427, which became effective January 1, 2020, or any bills to correct, clarify or amend the same (collectively CAT). The parties acknowledge that the Department of Revenue (DOR) has identified numerous issues with the Oregon Corporate Activity Tax (CAT) that need to be addressed. Accordingly, the parties agree that the ultimate Subcontract Price shall be adjusted at Final Completion to include net tax payments incurred or to be incurred as a result of CAT and that a provision addressing the same will be included in the Subcontract.
- Proposal pricing is valid for 30 days.



15A

EC electric

ecpowerslife.com

## Scope of Work Clarifications

- Installation of Slatercom Provided Luminaries
  - (1) NOVA2-1000-57-U-D-3
  - (19) NOVA2-1000-57-U-D-5
  - (1) NOVA2-1000-57-U-D-7
- Procurement and installation of PVC raceway up to 1.5" strapped to (13) existing Stadium 12' poles & (2) existing 45' arena poles. Misc. hardware included. Meyers hubs to be supplied by Slatercom.
- Installation of Slatercom provided remote drivers, mounting brackets & hardware, 8x8 aluminum j-box, beam clamps, & ground wire.
- Existing Stadium lighting wire and breakers to be reused.
- Circuit labeling & identification included.
- Electrical permits included.

## Exclusions

- Premium or overtime pay.
- Performance or payment bond premium.
- Hazardous material handling and disposal.
- Structural steel, framing, or metal fabrication.
- Roof penetrations and/or repair.
- Any and/or all cutting, patching, and painting has been excluded.
- Concrete encasement, housekeeping pads, and all grouting.
- Dumpster & Waste management fees
- Excavation, Earthmoving, trenching & backfill activities
- Lift rentals – EC intends to use the Fairgrounds boom lift provided all safety logs have been maintained the equipment is found in working order.
- Assumes Fairground boom lift can pass an EC Lift Safety Daily Checklist
- Short circuit coordination and/ or arc-flash studies.
- Calibration of new fixtures or programming of Lighting Control Panel by Slatercom.
- Horizontal supports for Arena Light fixtures to be supplied by others.

Thank you for the opportunity to provide this proposal. Please feel free to contact me with any questions, comments, or to be of further assistance. EC looks forward to being your trusted partner of choice on this project.

Respectfully,

Grant Oberholzer
Project Manager
Grant.oberholzer@ecpowerslife.com
541.405.0787

# Nova™ G2
## SPORTS LIGHTER

tgs SPORTS
a TGS company


Project:

Prepared by:

Type:

Date:

400W (54,000 lm)
500W (67,500 lm)
600W (88,000 lm)
800W (108,000 lm)
1000W (135,000 lm)
1200W (162,000 lm)

## ORDERING INFORMATION

Sample SKU: NOVA2-800-50-U-D-3-ID

| Series | Wattage | CCT | Input Voltage | Controls | Distribution | Driver Option |
|---|---|---|---|---|---|---|
| NOVA2 | | | | | | |
| NOVA2 | 400 - 400W<br>500 - 500W<br>600 - 600W<br>800 - 800W<br>1000 - 1000W<br>1200 - 1200W | 57 - 5700K<br>50 - 5000K<br>40 - 4000K | U - 100-277VAC<br>H - 277-480VAC | D - 0-10V Dimming<br>D0 - Non-Dimming<br>D1 - Radiant Wireless Control System<br>DIM4-U - Dimulator 120-277 VAC w/7 pin<br>DIM4-H - Dimulator 480VAC w/ 7 pin | 3 - NEMA3 (H2V3)<br>4 - NEMA4 (H4V4)<br>5 - NEMA5 (H6V5)<br>6 - NEMA6 (H6V6)<br>7 - NEMA7 (H7V6) | ID - Integrated Driver<br>‡RD - Remote Driver |

‡Specify the length for the DC cord (Cord between the driver to the LED module) for remore driver. Max Length: 100'

*MOQ and longer lead times may apply, please contact customer service for more information.

### Accessories

NOVA2-LG (Laser Guide)
NOVA2-FO (Field Adjustable Lumen Output)
IP65EM (Consult with Sales Represenatative for available emergency driver wattage)

## TECHNICAL SPECIFICATIONS

### CONSTRUCTION

**IP/Enclosure Rating:**
IP67 Enclosure/IK08 Impact/
3G Vibration Rating (Per ANSI/IEEE C136.31)

**Operating Temperature:**
-20°F-131°F

**Housing:**
A383 (ADC 12) die-cast aluminum

**Driver Compartment:**
Die-cast aluminum/NEMA4X enclosure

**Optics:**
Tempered glass diffuser and injection molded UV resistance PC modular optic

**Power Cord:**
- 14/3, 6' SOW (600V)

### ELECTRICAL

**Input Voltage:**
- 100-277VAC
- 277-480VAC

**THD:**
<20%

**Power Factor:**
>0.95

**Surge Protection:**
20kV/10kA:
Compliant With:
- ANSI C136.2-2015 Extreme
- ANSI C82.77-5-2015 High Exposure
- IEEE C62.41.2 Location Category C High Exposure

### CONTROLS/DIMMING

- Non-Dimming
- 0-10V Dimming
- Dimulator Dimming Photocontrol
- RADIANT* Wireless Control System

### ENGINE & OPTICAL

**Available NEMA Distribution:**
NEMA3, NEMA4, NEMA5, NEMA6, NEMA7

**CRI/TLCI:**
- CRI>70 (Standard)
- *CRI>80 (Optional)
- *CRI>90 (Optional)
  TLCI is option available upon request

**Available CCT:**
4000K, 5000K, 5700K

**Projected L70:**
>100,000 hrs

### WARRANTY

10 Year Warranty
25 Year Warranty Option Available
*See warranty documentation for more information.*

Phone: 818-206-4404 Email: info@tgssports.com Website: www.tgssports.com

# Nova™ G2
SPORTS LIGHTER

tgs SPORTS a TGS company

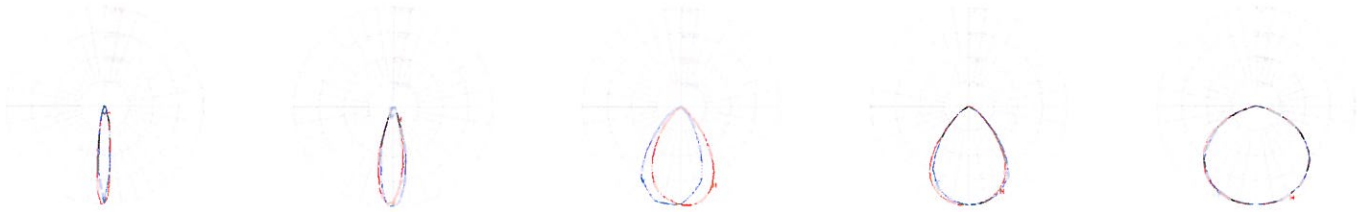
## PERFORMANCE DATA

| | | | | | | |
|---|---|---|---|---|---|---|
| **Wattage** | 400W | 500W | 600W | 800W | 1000W | 1200W |
| **Delivered Lumens** | 54000lm | 67500lm | 88000lm | 108000lm | 135000lm | 162000lm |
| **System Efficacy** | 135 lm/W | 135 lm/W | 135 lm/W | 135 lm/W | 135 lm/W | 135 lm/W |

Typical delivered lumen data is approximate. Actual lumens may vary due to installation environment and NEMA Distribution. Please See IES Files

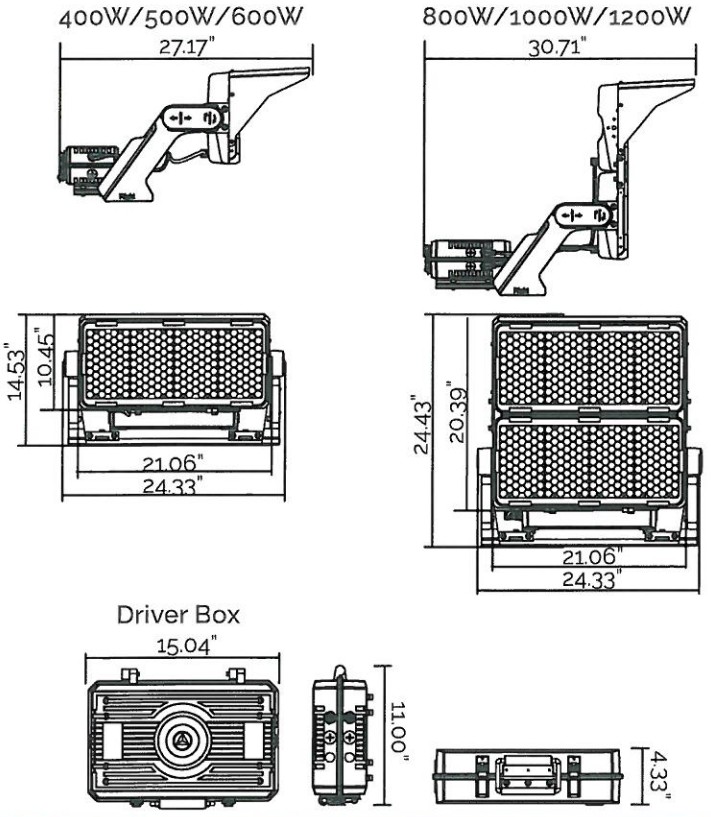
## NEMA DISTRIBUTION

*IESNA LM-63 IES Available upon request



NEMA3 (H2xV3) | NEMA4 (H4xV4) | NEMA5 (H6xV5) | NEMA6 (H6xV6) | NEMA7 (H7xV6)

## DIMENSIONS




## ELECTRICAL LOAD

| | Input Voltage | | | | | |
|---|---|---|---|---|---|---|
| | 120V | 208V | 240V | 277V | 347V | 480V |
| Wattage (W) | Current (A) | | | | | |
| 400 | 3.3 | 1.9 | 1.7 | 1.4 | 1.5 | 0.83 |
| 500 | 4.2 | 2.4 | 2.1 | 1.8 | 2.0 | 1.1 |
| 600 | 5.0 | 2.9 | 2.5 | 2.1 | 2.4 | 1.25 |
| 800 | 6.7 | 3.8 | 3.3 | 2.9 | 3.3 | 1.7 |
| 1000 | 8.3 | 4.8 | 4.2 | 3.6 | 4.0 | 2.0 |
| 1200 | 10.0 | 5.8 | 5.0 | 4.3 | 4.9 | 2.5 |

## EPA RATING ($ft^2$)

| Wattage (W) | Front | Side |
|---|---|---|
| 400/500/600 | 1.90 | 0.52 |
| 800/1000/1200 | 3.60 | 0.75 |

Front (Visor Included) and Side (Visor Included): (DC (Drag Coefficient)= 1.2)

## WEIGHT (lbs)

| Wattage (W) | Weight (lb.) | |
|---|---|---|
| | Housing + Bracket | Driver |
| 400-600 | 31 | 12 |
| 800-1200 | 54 | 23 |

Phone: 818-206-4404 Email: info@tgssports.com Website: www.tgssports.com

## ACCESSORIES

Visor Hood
[Included]

Laser Guide
[NOVA2-LG]

IP65 Emergency
Battery Backup
[IP65EM]

7 Pin Receptacle &
Dimulator
[DIM4-U or DIM4-H]

## Dimulator
### Stand-Alone LED Dimming Photocontrol

**Features**

- Factory preset dimming - no selector switch
- 10 Year Warranty
- Compliant with ANSI C136.41 receptacle
- Optional constant all night dimming
- Adaptive lighting control with progressive intensities
- 40kV Surge Protection
- High voltage version available
- Advance time/date algorith auto-adjusts for daylight savings
- Automatically synchronize to local time

**Bat Eye Technology**

- Advanced light sensor, only reacts to sunlight
- Immune to LED and other artificial light
- No false activation (no cycling)
- May be oriented in any direction

Patent #9210746

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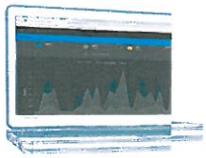
## RADIANT™
### WIRELESS CONTROL SYSTEM

- Future-Proof: Integral Wireless Access Node
- Adaptable Deployment – Offline or Cloud-Connected
- Web-Browser or App Based Management
- Multiple Zones, Behaviors, Events, and Schedules
- LTE Cellular Connectivity – No Internet Required
- Professional Commissioning and After-Sales Support

Integrated Node

Central Control Base
Station



WiFi or LAN Network
with browser base con-
trol interface

Cloud Control with
Verizon 4G LTE
(Optional)

| Luminaire Schedule | | | | |
|---|---|---|---|---|
| Symbol | Qty | Label | Arrangement | LLF |
| | 1 | NOVA2-1000-57-U-D-3_IESNA2002 | SINGLE | 0.900 |
| | 19 | NOVA2-1000-57-U-D-5 | SINGLE | 0.900 |
| | 1 | NOVA2-1000-57-U-D-7 | SINGLE | 0.900 |

| Calculation Summary | | | | | | |
|---|---|---|---|---|---|---|
| Label | CalcType | Units | Avg | Max | Min | Av |
| Arena Entry_Planar | Illuminance | Fc | 9.17 | 24.2 | 0.4 | 22 |
| North Paddock_Planar | Illuminance | Fc | 11.01 | 21.1 | 5.3 | 2.0 |
| Photo Finish Line_Planar | Illuminance | Fc | 60.75 | 94.0 | 31.2 | 1.9 |
| Rodeo Arena_Planar | Illuminance | Fc | 9.39 | 36.5 | 2.1 | 4.4 |
| South Paddock_Planar | Illuminance | Fc | 7.69 | 12.9 | 3.8 | 2.0 |
| West Strip_West Strip | Illuminance | Fc | 27.43 | 39.2 | 17.7 | 1.5 |

| Luminaire Location Summary | | | | | | |
|---|---|---|---|---|---|---|
| LumNo | Label | X | Y | Z | Orient | Tilt |
| 1 | NOVA2-1000-57-U-D-5 | 180 | 66 | 50 | 78.69 | 54.992 |
| 2 | NOVA2-1000-57-U-D-5 | 215 | 66 | 50 | 90 | 50.659 |
| 3 | NOVA2-1000-57-U-D-5 | 250 | 66 | 50 | 90.868 | 52.856 |
| 4 | NOVA2-1000-57-U-D-5 | 285 | 66 | 50 | 91.614 | 54.857 |
| 5 | NOVA2-1000-57-U-D-5 | 315 | 66 | 50 | 90 | 56.31 |
| 6 | NOVA2-1000-57-U-D-5 | 350 | 66 | 50 | 91.005 | 48.747 |
| 7 | NOVA2-1000-57-U-D-5 | 385 | 66 | 50 | 85.84 | 47.802 |
| 9 | NOVA2-1000-57-U-D-5 | 429 | 66 | 50 | 91.169 | 44.427 |
| 10 | NOVA2-1000-57-U-D-5 | 466 | 66 | 50 | 94.399 | 38.036 |
| 11 | NOVA2-1000-57-U-D-5 | 501 | 66 | 50 | 91.637 | 35.003 |
| 12 | NOVA2-1000-57-U-D-5 | 534 | 66 | 50 | 95.711 | 45.143 |
| 13 | NOVA2-1000-57-U-D-5 | 573 | 66 | 50 | 112.443 | 44.868 |
| 14 | NOVA2-1000-57-U-D-5 | 607 | 66 | 50 | 108.435 | 51.671 |
| 15 | NOVA2-1000-57-U-D-3_IESNA2002 | 578 | 66 | 50 | 100.204 | 50 |
| 17 | NOVA2-1000-57-U-D-5 | 154 | 199 | 50 | 329.995 | 58.623 |
| 18 | NOVA2-1000-57-U-D-5 | 154 | 199 | 50 | 352.147 | 66.878 |
| 19 | NOVA2-1000-57-U-D-5 | 667 | 203 | 50 | 235.081 | 52.276 |
| 20 | NOVA2-1000-57-U-D-5 | 667 | 203 | 50 | 177.51 | 54.097 |
| 21 | NOVA2-1000-57-U-D-5 | 667 | 203 | 50 | 110.136 | 51.96 |
| 22 | NOVA2-1000-57-U-D-7 | 154 | 199 | 50 | 90 | 30.964 |
| 24 | NOVA2-1000-57-U-D-5 | 578 | 66 | 50 | 85.84 | 47.802 |


2.4 2.2
5.1 4.3 3.8 3.4 3.2
18.1 13.3 9.0 7.0 5.9 5.1 4.6
21.1 13.9 10.8 7.9 7.1
27.6 23.6 19.0 16.3 14.5 13.1 12.0
24.8 27.2 25.9 24.4 23.1 21.6 20.1 18.8
32.0 36.0 35.2 34.2 34.1 32.8 31.2 30.4