

# SLD-HM Series



## LED HIGH MAST SERIES



Figure 1

With its phenomenal performance and cost effectiveness, *Lumingen Technologies' SLD-HM-XXXX LED Luminaire Series* is the top contender for the succession of current high mast technologies. Utilizing the latest in LED technology and thermal dissipation systems, the *SLD-HM-XXXX High Output Series* has top performance ratings such as 162,000 hours DLC-rated L70 life, top-of-the-line output at 60,000+ lumens, and high output efficiency. This is critically important in high mast applications such as roadway lighting, port/railway intermodal yard, sports field or airport lighting, which requires such high performance characteristics in their lighting.

With a diverse selection of beam angles and an IP65 ingress protection rating, this luminaire is remarkably light weight and low-cost, yet incredibly powerful and robust, with a design that allows it to withstand any variety of harsh conditions. The combination of these features makes this light the perfect replacement for existing LED high mast lights, but also a very cost-effective replacement for traditional lighting sources.

IP65



BC hydro e.CATALOG



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NOTES: Specifications and dimensions are subject to change without notice.

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# SLD-HM Series



## FEATURES

Optical diversification – luminaire optics tailored to the application
Long Lifespan—DLC-rated L70 of <b>162,000 hours</b>
Performance stability over luminaire's entire lifetime
High delivered lumens per watt for exceptional energy savings—up to DLC-rated 116 lumens/watt delivered light!
IP65 Rating—operational in extremely wet and/or dusty locations
Light weight design—easy installation and handling at less than 20 kg (45 lb.)
EPA-rated design—tested to perform under high-elevation lighting applications

Orientation	EPA (ft <sup>2</sup> )
45°	3.43
0° (Normal Down)	1.20

Comprehensive wind tunnel testing data is available upon request.

## EXTERIOR (PART 1)

The housing is made with a corrosion-resistant powder-coat finished aluminum housing and other components UL94-V0 plastic. UL94-V0 rated plastic is a type of flame resistant plastic—V0 being the strictest rating under the UL94 standard. This shelters the inner components from heavy wear from the environment and permits proper heat dissipation, while maintaining a sleek and elegant form.

This luminaire has also been analyzed in a wind-tunnel testing laboratory. These tests characterize the way the light fixture performs in conditions of high wind speeds. The value it yields is the luminaire's EPA rating. This specification is important to determining how to utilize this fixture in a high-elevation outdoor lighting application.

Figure 2



## EXTERIOR (PART 2)

The exterior is designed with a track system that allows the bracket to be oriented in a multitude of orientation. Made with the flexibility to hit any target at the area of illumination, this housing employs this design feature while keeping with great cost-efficiency.

## OPTICAL DIVERSIFICATION

Manipulation of LED positioning, drive current, and appropriate optics allow for the desired characteristics for a lighting layout design of a project. The lenses offer high optical efficiencies with precise light patterns on target surfaces. These lenses manipulate the light coming from the LED to allow for even distribution for lenses with larger beam angles and excellent cut-off for lenses with small beam angles.



Figure 3

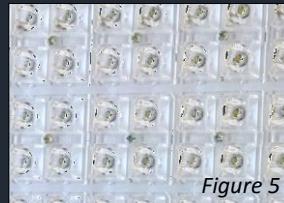


Figure 5

## LED CIRCUIT DESIGN

To promote the most efficient and controllable light output, proper layout design and excellent current control is imperative. A stable current source from a premium quality power supply offers great light output stability, which goes a long way to optimally drive the LEDs for a extended length of time.

The LEDs operate at a current substantially lower than the specified max value. Some of these max values range from 3 Amps to 4.2 Amps. Lower drive currents cause the LEDs to run at lower temperatures, which equates to better reliability. Better reliability means: less risk of failure, color temperature stability, long L70 lifespan, and longer overall lifespan. All this is possible while maintaining light outputs as high as 60,000 lumens.

For the absolute highest quality in components, ceramic-based LEDs are used. For LED quality assurance and reliability on a component-level basis, this luminaire only uses CREE LED—the best and most trusted in quality and performance.

## THERMAL DESIGN

Designing the heatsink to match the heat signatures of the LEDs in each of their configurations allows for low junction temperatures at the base of the LED chips. A properly designed heatsink maximizes life span of the LEDs, some fixtures reaching spans as long as 162,000 hours.

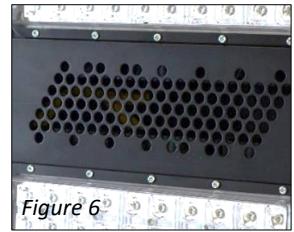


Figure 6

## INGRESS PROTECTION – IP65

The luminaire was designed to the spec of IP65. This rating is designated for designs that allow no dust or water to enter into sensitive components. IP65 is specific for devices that can operate in an environment with heavy particulate and be able to operate while being subjected to pressurized water jets from any direction.

The exterior lens is made of high-quality plastic, making this light incredibly robust and shatter-resistant. This lens allows the luminaire to achieve an IP65 rating. This lens also has a rating of UL94-V0, which denotes the flammability standard of the plastic part. V0 classification is the strictest ratings for components under the UL94 standard for safety of flammability.



# SLD-HM Series



## HIGH MAST 2-MOD FIXTURE

### Specifications

Model	SLD-HM-0400	SLD-HM-0560
Delivered Lumens	46,400 lm	62,079 lm
Wattage	400 W	561.5 W
Delivered Efficacy	116 lm/W	111 lm/W
Voltage	AC100-480V	AC100-480V
Available Color Temp.	2700-6500 K	2700-6500 K
L70	162,000 hours	162,000 hours
CRI Optional CRI	>70 >80, >90	>70 >80, >90
Beam Angle <sup>1</sup>	10°, 25°, 66°, 120°, 131° Type II, Type III	10°, 25°, 66°, 120°, 131° Type II, Type III
Ingress Protection Rating	IP65 Rating	IP65 Rating
Weight <sup>2</sup>	19.4 kg [42.7 lb.]	19.4 kg [42.7 lb.]
Operating Temperature	-40° to 55°C	-40° to 55°C
Dimensions	695mm×448mm×157mm [27.4" ×17.6" ×6.18"]	695mm×448mm×157mm [27.4" ×17.6" ×6.18"]
Dimming Compatibility	0/1-10Vdc Optional	0/1-10Vdc Optional
Warranty	5 years	5 years
Functional Features <sup>3</sup>	Dimming, Motion Sensing, Photocell Function, Surge Protection	
Additional Features <sup>3</sup>	Per Request	
Installation	Surface or Wall mounting	

<sup>1</sup>Glare-reduction for beam angles of 131°, Type II, and Type III only

<sup>2</sup>Fixture weights specified are displayed for the standard configuration for the model. Weight fluctuation will be dependent on desired configuration.

<sup>3</sup>Other features, not listed, may be added per customer request.



# SLD-HM Series



## Dimensions

HIGH MAST LUMINAIRE (*SLD-HM-0400, SLD-HM-0560*)

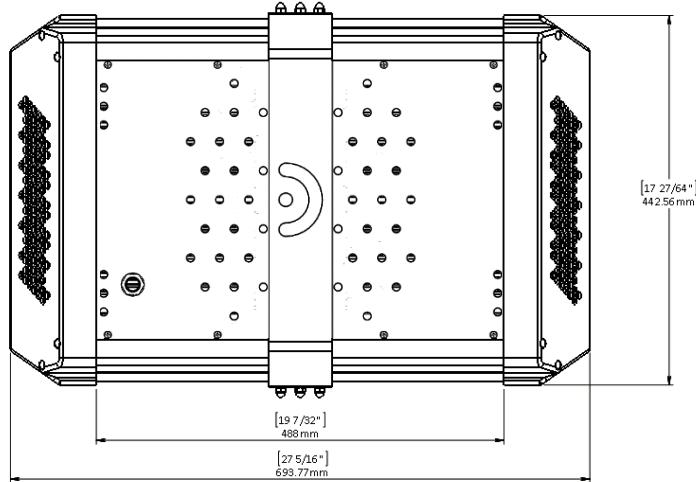


Figure 7

The bracket has the freedom to be positioned at angles from -180° to 180° with respect to the normal orientation of the bracket (0° as shown in the adjacent images). The angular freedom is furthermore constrained by the position of the bracket along the fixture.

The bracket can be positioned along the length of the luminaire of 488mm [19-7/32"].

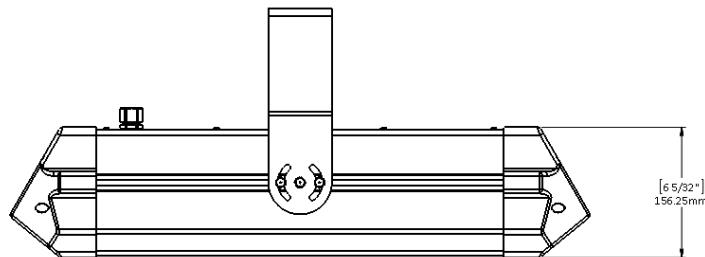


Figure 8

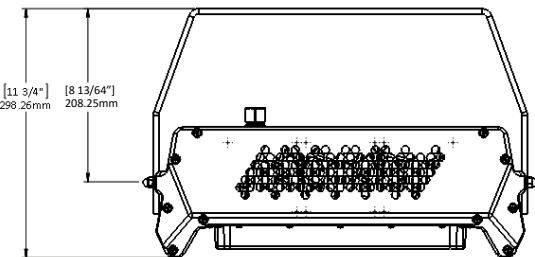


Figure 9

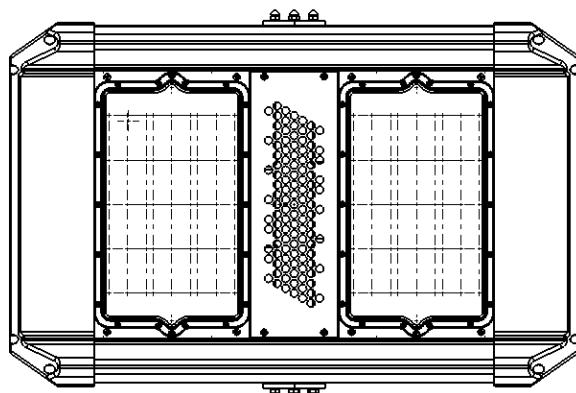


Figure 10



# SLD-HM Series



## Installation

### Mechanical Installation

***Washers and Bolts not provided. Please verify local installation codes with your contractor.***

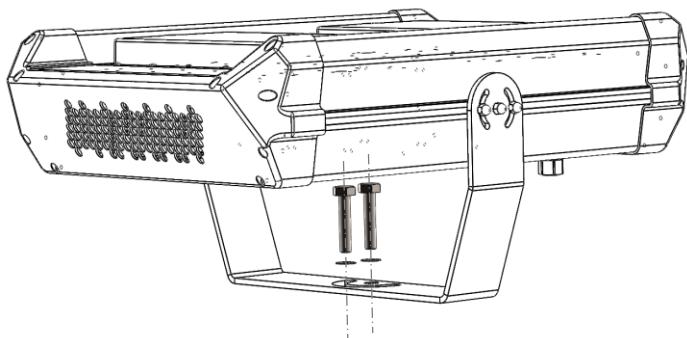


Figure 11

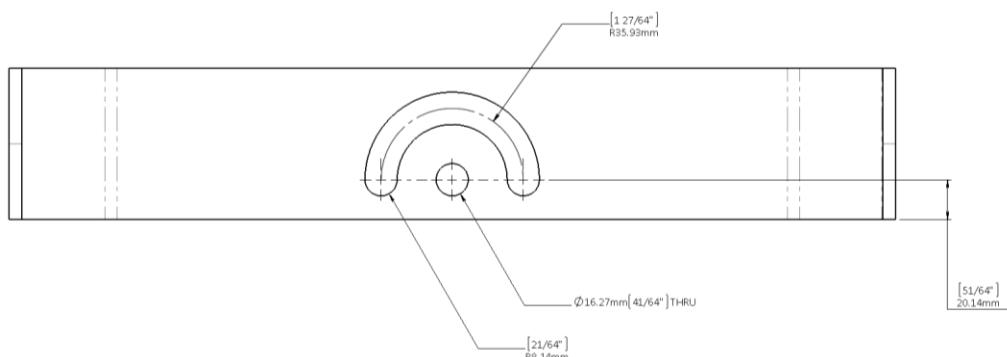


Figure 12—bolt pattern for bracket



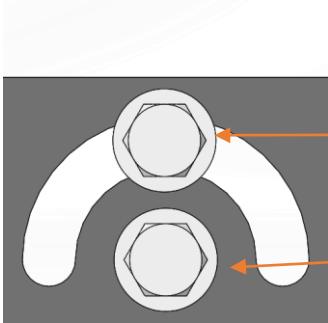


Figure 13—close-up on bolt pattern on the bracket.

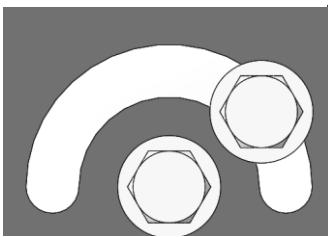


Figure 14—depicts rotational adjustability of the bracket.

## Adjustment Procedure

**NOTE:** Any adjustment procedure or modification of the orientation of the fixture must be well supported and secure. Always exercise caution when making adjustments.

Properly secure main body [fixture body] with the appropriate safety cable before making any field adjustments. Use cable approved for loads up to 900 lb.

Do not remove any supports or safety cabling until the adjustment procedure is completed and the luminaire is secure.

1. Support the luminaire properly—safely securing the luminaire as determined by the contractor/technician. **Do not remove the bolts during the adjustment procedure.**
2. Loosen **Bolt-2**.
3. Loosen **Bolt-1**.
4. Adjust angle of the entire fixture. Use appropriate equipment to ensure the proper angular positions are met.
5. Tighten **Bolt-1**.
6. Tighten **Bolt-2**.
7. Remove safety cables from luminaire after the light fixture's bracket and components are fastened properly.



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## Fixture Orientation

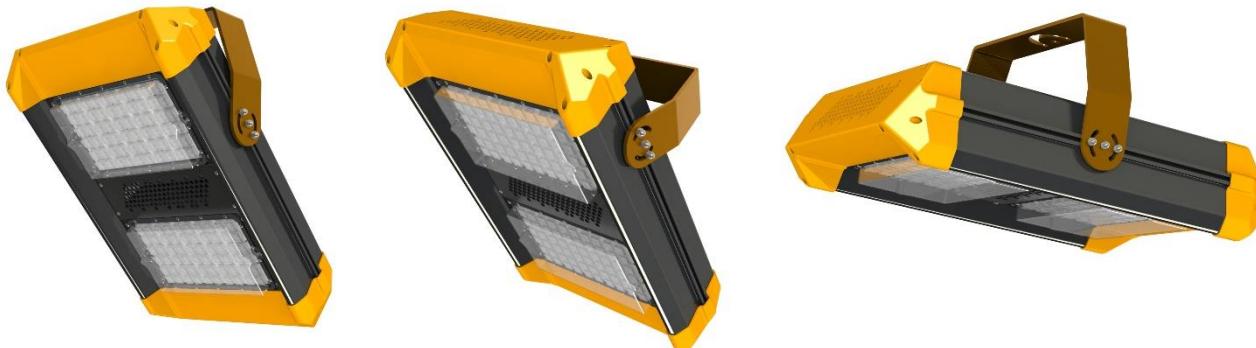


Figure 15, 16, 17—the sides of the luminaire allows for variable orientations while maintaining low cost and high durability.



Figure 18—the acorn nuts secure the bracket in any rotational position (as permitted by the light fixture)

### Recommended Angular Adjustment Procedure

**NOTE:** Any adjustment procedure or modification of the orientation of the fixture must be well supported and secure. Always exercise caution when making adjustments.

Properly secure main body [fixture body] with the appropriate safety cable before making **any** field adjustments. Use cable approved for loads up to 900 lb.

*Do not remove any supports or safety cabling until the adjustment procedure is completed and the luminaire is secure.*

1. Support the LED fixture properly—safely securing the luminaire as determined by the contractor/technician. **Do not remove any fasteners during the adjustment process.**
2. Loosen both **Acorn Nuts**, do not remove the acorn nuts. Do the same on the opposite end of the bracket. **Caution: support the light fixture to prevent unintended movement of the fixture.**
3. Adjust the angle and/or linear position of the luminaire. Use appropriate equipment to ensure the proper angular/linear positions are met.
4. Tighten all **Acorn Nuts**. Do the same on the opposite end of the bracket.
5. After the fixture returns to a secured state. Remove supports and safety cables from the fixture.



# SLD-HM Series



Figure 19—the hex nuts secure the bracket in any linear position (as permitted by the light fixture)

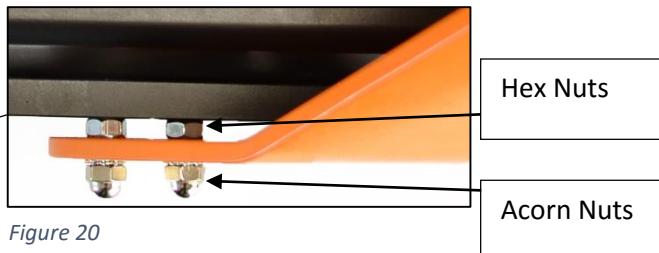


Figure 20

## Recommended Linear Repositioning Procedure

**NOTE:** Any adjustment procedure or modification of the orientation of the fixture must be well supported and secure. Always exercise caution when making adjustments. Properly secure main body [fixture body] with the appropriate safety cable before making any field adjustments. Use cable approved for loads up to 900 lb. Do not remove any supports or safety cabling until the adjustment procedure is completed and the luminaire is secure.

1. Support the LED fixture properly—safely securing the luminaire as determined by the contractor/technician. **Do not remove any fasteners during the adjustment process.**
2. Loosen both **Acorn Nuts**, do not remove the acorn nuts. Do the same on the opposite end of the bracket. **Caution: support the light fixture to prevent unintended movement of the fixture.**
3. Loosen the **Hex Nuts** on both ends of the bracket to allow the bracket to slide up and down the luminaire
4. Adjust the linear position of the luminaire. Use appropriate equipment to ensure the proper angular/linear positions are met.
5. **Retighten all Hex Nuts to secure the position of the bracket.**
6. Return the bracket to the desired angular position. Tighten all **Acorn Nuts**.
7. After the fixture returns to a secured state. Remove supports and safety cables from the fixture.

## Electrical Installation

**Verify electrical codes with your electrical contractor. Input voltages:  
AC100-480V compatibility.**

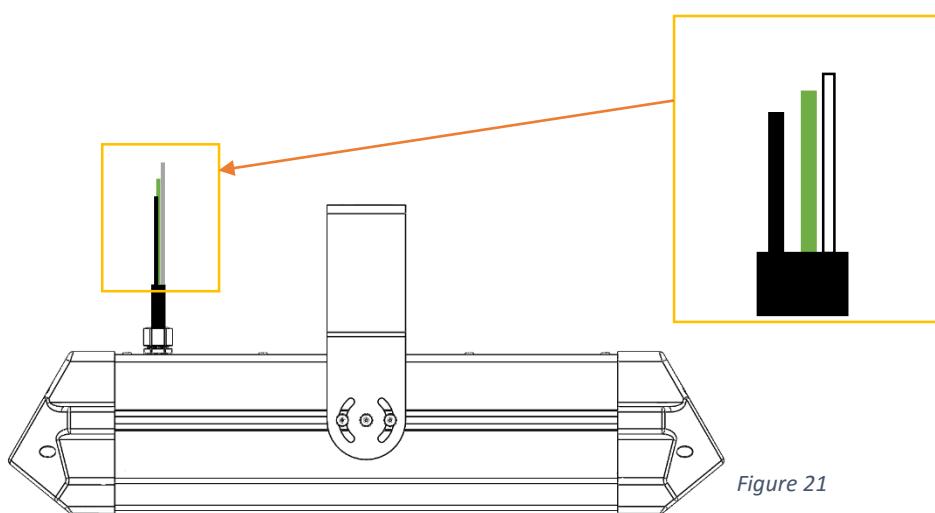


Figure 21



# SLD-HM Series



## Testimonial

*"When you are mounting lights 200' in the air on a construction crane, it requires a very specific technology to deliver the kind of foot-candles required to the work surface, and to the particular area that you need to light. The SLD-HM luminaires from Lumingen Technologies worked perfectly. We are very happy with the results. The lights performed even better than we had expected."*

Brian Vooy  
*Optiprime Electric & Crane*

When BBE Hydro Constructors were awarded the contract to build a multi-billion-dollar hydro-electric dam, they faced a specific set of challenges and requirements in illuminating their worksite. The lights had to be mounted on construction crane towers and booms that were 200 feet in the air. It was important to ensure that they provided optimal working conditions for the 2,000 workers employed on the project.

The SLD-HM-0560 fixture was the most optimal choice. With its high efficacy and beam angle diversity, some as narrow as 10 degrees, they were able to light the work plane effectively and efficiently. The accuracy of the light projections from these luminaires allowed their engineers to place the light exactly where it was needed.

This project will use a total of 75 fixtures of the SLD-HM-0560 luminaire model.



Figure 22—Illumination of 4 of the SLD-HM-0560 fixtures from a mounting height of 200'

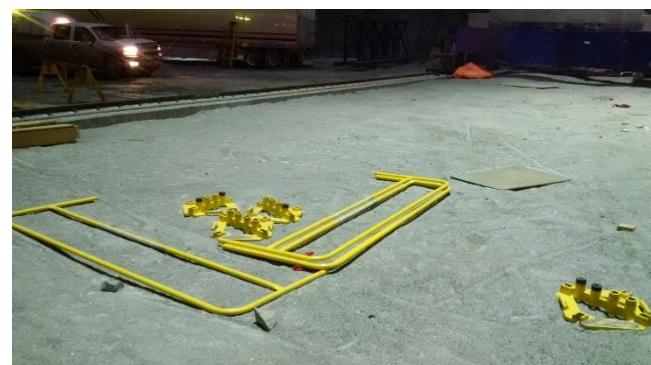


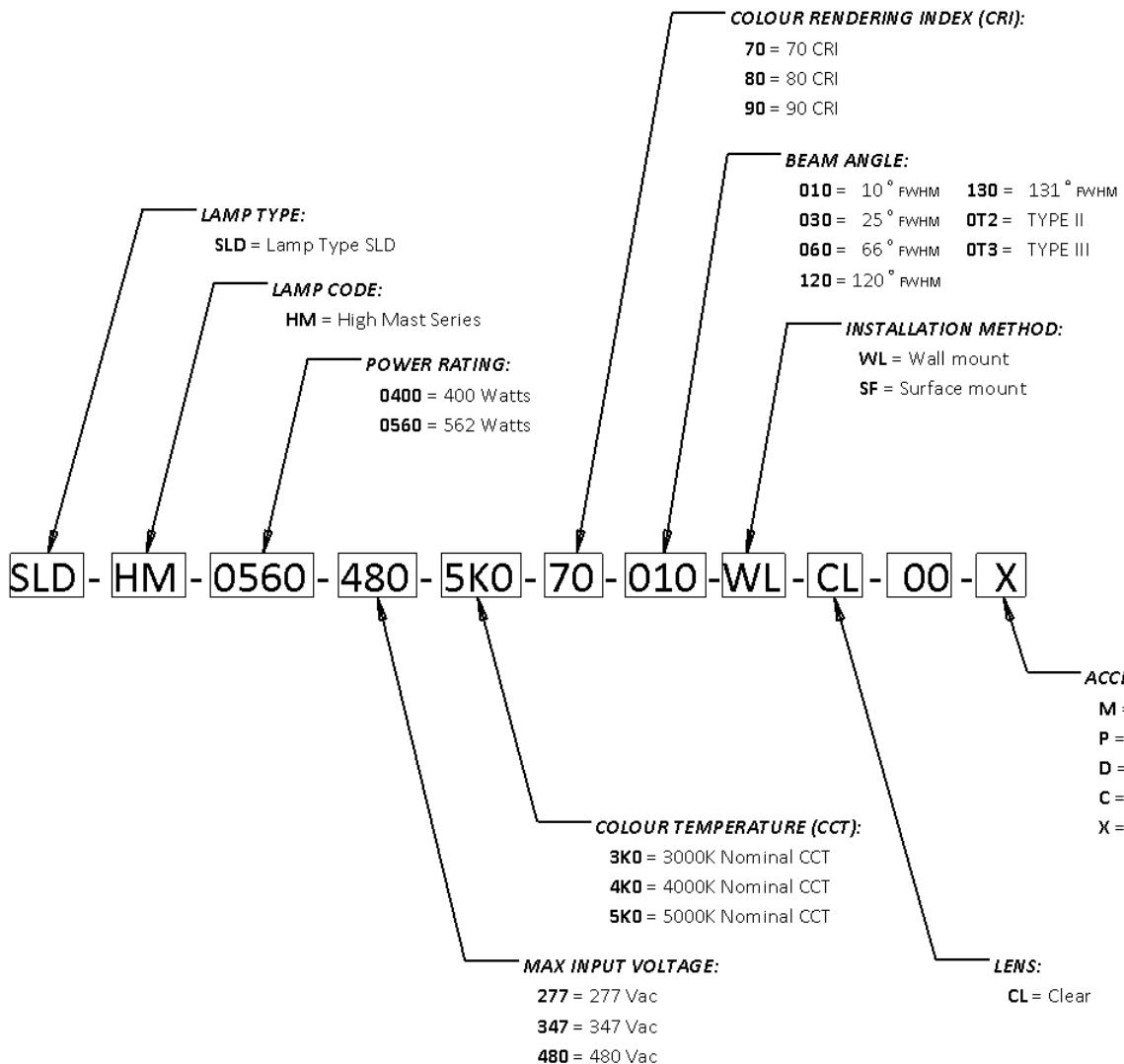
Figure 23—Illumination of 4 of the SLD-HM-0560 fixtures from a mounting height of 200'.



# SLD-HM Series



## Ordering Code



### Ordering Code Table

LAMP TYPE	LAMP CODE	POWER RATING	MAX INPUT VOLTAGE	CCT	CRI	BEAM ANGLE	INSTALLATION METHOD	LENS	[NULL]	ACCESSORY:
SLD	HM	0400 0560	277 347 480	3K0 4K0 5K0	70 80 90	010 030 060 120 130 OT2 OT3	WL SF	CL	00	M P D C X

<sup>4</sup>Glare-reduction for lenses with beam types of 131°, Type II, & Type III only



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