

REPLACES: 1000W HID

PRODUCT LIFE: L70 > 100,000 HRS.

OPTIC LENS: BOROSILICATE GLASS



31 SERIES

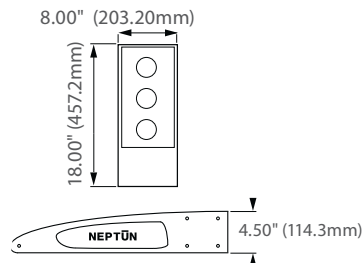
MODULAR AREA FIXTURES

Neptun's LED parking lot /area fixtures combine architectural form and versatility to make it an excellent choice for new construction or retrofit applications. The LED-31 series fixture is offered in a variety of wattages to provide maximum flexibility in all types of applications. The high output LEDs and custom engineered optics provide excellent uniformity and efficiency. It can replace existing HID & HPS fixtures up to 1000W.

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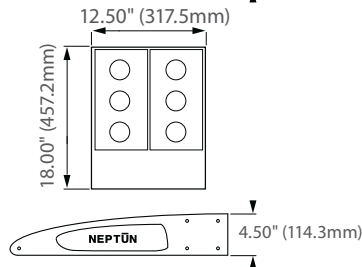


Model: M1



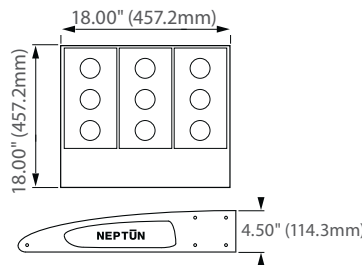
Rated Watts	Input Watts	HID/HPS Replacement	Initial Lumens	Weight
40	42	100W	4,200	25 lbs
60	62	150W	6,200	25 lbs
80	82	175W	8,200	25 lbs

Model: M2



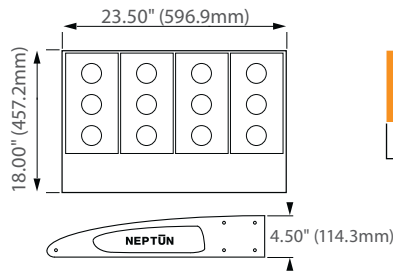
Rated Watts	Input Watts	HID/HPS Replacement	Initial Lumens	Weight
100	102	175W	10,200	30 lbs
120	122	250W	12,200	30 lbs

Model: M3



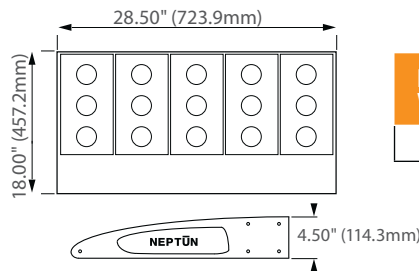
Rated Watts	Input Watts	HID/HPS Replacement	Initial Lumens	Weight
150	154	320W	15,400	35 lbs
200	204	400W	20,400	35 lbs
260	264	500W	26,400	35 lbs

Model: M4



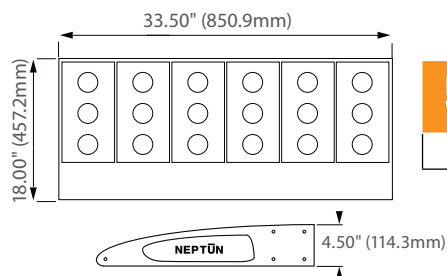
Rated Watts	Input Watts	HID/HPS Replacement	Initial Lumens	Weight
320	323	750W	32,300	40 lbs

Model: M5



Rated Watts	Input Watts	HID/HPS Replacement	Initial Lumens	Weight
400	405	1000W	40,500	50 lbs

Model: M6

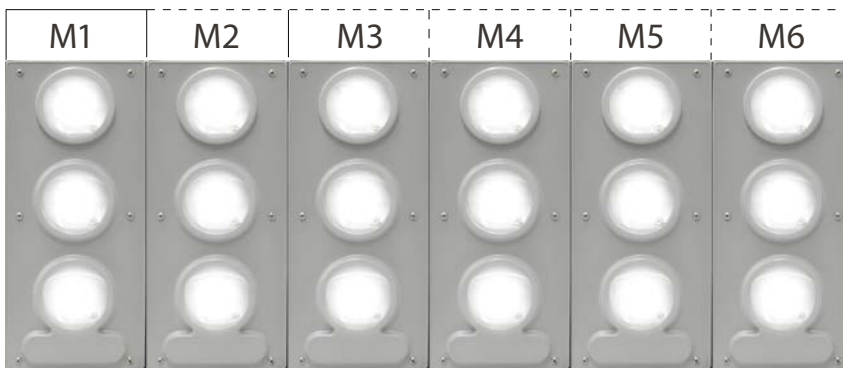


Rated Watts	Input Watts	HID/HPS Replacement	Initial Lumens	Weight
450	455	1000W+	45,500	55 lbs

Neptun Light, Inc.
13950 Business Center Drive
Lake Forest, IL 60045
Fax: 847.735.8004

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MODULAR DESIGN



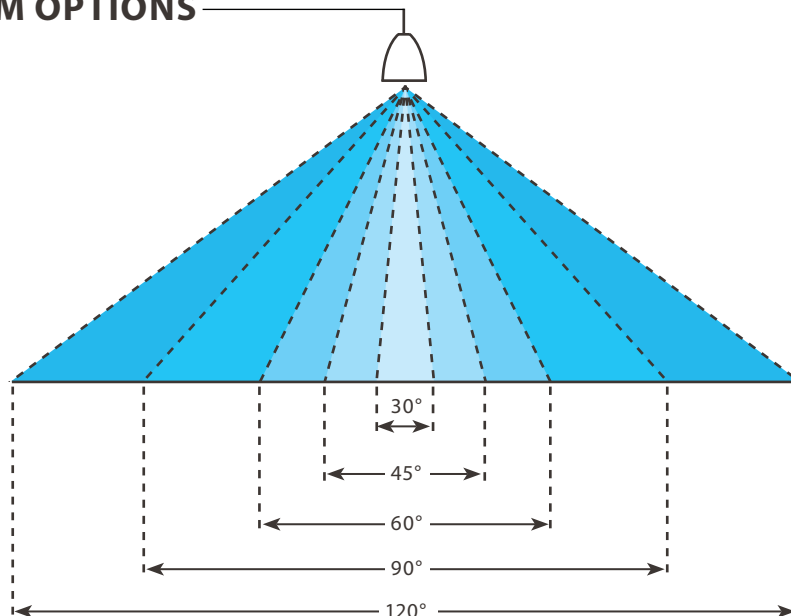
With the continual upgrade in LED technology, Neptun's 31 series fixtures incorporate a patented modular design to allow for simple upgrading as well as maintenance of the unit.

LENS AND CHIP

Neptun area fixtures are fitted with LEDs from the most advanced SSL technology. LM-80 tested and (L70) > 100,000 hours. Chip On Board (COB) technology allows up to 100 lm/w. Borosilicate glass lenses resist against UV rays, chemicals, yellowing, impact, and dust collection. These optics are designed to provide highly uniform photometric output exceeding the standards of many current designs.



BEAM OPTIONS



Neptun's advanced optic design allows for various beam spread options. Depending on the application, the 31 series fixture can be offered in 30°, 45°, 60°, 90°, and 120° beams to focus the light on a desired location.

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MOUNTING OPTIONS

Pole Mount



6" Side Arm (SA6)

Flood Mount



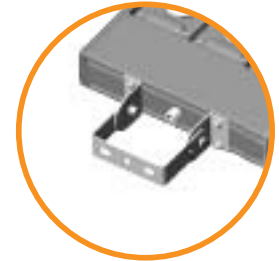
Slip Fitter (SF)

Wall Mount



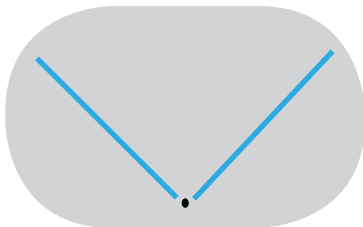
6" Wall Mount (WM6)

Yoke Mount



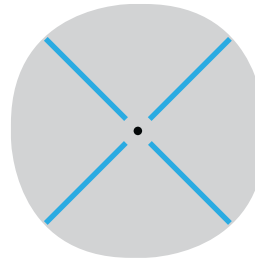
Yoke Mount (YK)

DISTRIBUTION OPTIONS



Type 3

Ideal for roadways, general parking, and other area lighting applications. Intended to be located on an area perimeter.



Type 5

Ideal for general parking and area lighting applications. Intended to be located at or near the center of an area.

SPECIFICATIONS

- Driver Constant Current
- Start Method InstantON
- Hot Re-start InstantON
- Power Supply 350mA
- Driver UL Rating Class 1
- Driver UL Outdoor Rated Wet Location
- Sound Rating Class A
- ANSI Surge Protection IEEE C62.41 C High
- Current Crest Factor 1.5 maximum
- Load Regulation: 5% output current variation across load range
- Line Regulation: 1% output voltage variation across voltage range
- Driver Off-State Draw 0 Watts
- Vibration Compliance 3G
- Universal Input Line Voltage 120-277 VAC
- Input Line Frequency 50/60 Hz
- Projected (L70) @ 25°C > 100,000 Hrs.

- Color Temperature 35K, 41K, 5K
- Color Rendering Index (CRI) > 80
- Minimum Starting Temperature -40°C
- Maximum Starting Temperature +50°C
- Lumens per Watt > 90
- Shock / Vibration Resistant Yes
- Power Factor > 0.90
- Total Harmonic Distortion < 20%
- Inrush Current Peak < 10 Amp
- FCC Compliance Part 15, Subp. C
- ETL Listed / UL Standard 1598 Yes
- Housing IP Rating IP65
- Driver IP Rating IP67
- Optics IP Rating IP68
- Warranty 10 Year

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STRUCTURE, MATERIALS, & FEATURES

- * Heavy-gauge, die-cast aluminum housing.
- * Corrosion resistant electrocoat grey or dark bronze finish (custom colors available).
- * Slim, state of the art, low profile design for minimum wind load resistance.
- * Continuous silicone gasket surrounds lens for weather-tight seal (IP68).
- * Correlated Color Temperature of (5000°K) for greater visibility and safety (optional CCTs available)
- * High Output COB LEDs.
- * High power factor, low THD driver with 10kV Surge Protection.
- * InstantON flicker-free Cold Start and Hot Re-Start.
- * Up to 15 years Maintenance free operation.
- * 10 Year Warranty on complete fixture. (LED's, Driver, & Housing)

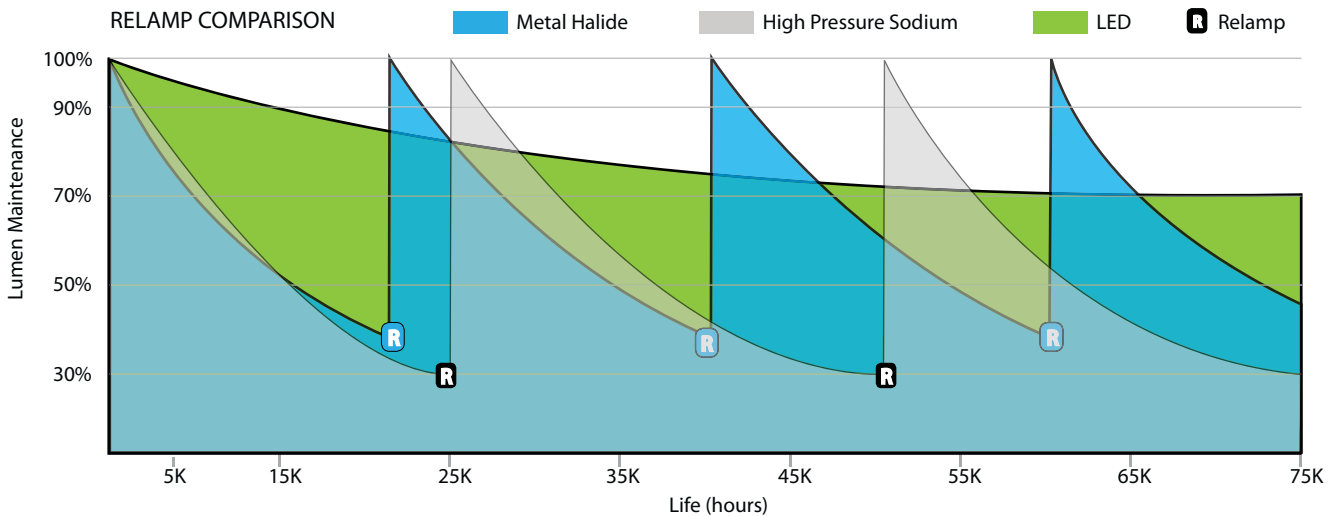


ADDITIONAL ENERGY SAVING OPTIONS

Option	Description	Benefits	Ordering Information
 <p>Motion Sensor</p>	Motion Sensor Detectors for On/Off Control.	Shuts fixtures off during no traffic activity.	MD ex: LED-31400-M5-UNV-850-MD-T3-GRY
 <p>Photocell</p>	Photocell / Light Detector Sensors for Dusk-to-Dawn Control	Controls On/Off state with no monitoring needed	LD ex: LED-31400-M5-UNV-850-LD-T3-GRY
 <p>Bi Level Dimming</p>	Bi-level Dimming controls 100% / 50% output controlled through motions sensors, photocells, or switch activation.	Consumes 50% less energy during no traffic operation when security lighting is still needed.	BL-DIM ex: LED-31400-M5-UNV-BL-DIM-850-T3-GRY
 <p>0-10V Dimming</p>	0-10V Dimming controls variable dimming and monitoring through Wireless Wi-Fi or Wired Ethernet.	Using dimming systems, lighting can be dimmed down to 10% light/power. Using monitoring systems, customers can control output, track energy usage and outages.	0-10VDIM ex: LED-31400-M5-UNV-0-10VDIM-850-T3-GRY
 <p>24VDC Operation</p>	24VDC operation allows for use with Solar or Wind Energy systems.	Using Neptun's Solar Lighting Systems, customers can enjoy complete Off-Grid operation.	24VDC ex: LED-31040-M1-24VDC-850-T3-GRY
 <p>Smart Driver</p>	Smart Driver control to allow for constant light output over the life of the unit.	Fixture will maintain constant lumen output (lm/w) throughout its entire life.	SMD ex: LED-31400-M5-UNV-SMD 850-T3-GRY

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COMPARISON

	H.P.S.	Metal Halide	LED
Rated Wattage	1000W	1000W	400W
Input Wattage	1085W	1075W	405W
CRI	21	65	80
Color Temp.	2,300°K	4,100°K	5,000°K
Maintained	90	67	90
Lumen Depreciation	30% @ 2,000Hrs.	40% @ 2,000Hrs.	5% @ 2,000Hrs.
Life Span	18,000 Hrs.	15,000 Hrs.	L70 > 100,000 Hrs.
Start Up	15min. Warm Up	15min. Warm Up	InstantOn/Flicker Free
Noise Operation	Humming/Buzzing	Humming/Buzzing	None
Warranty	None	None	10 Years

ANALYSIS

	H.P.S.	Metal Halide	LED
Rated Wattage	1000W	1000W	400W
Input Wattage	1085W	1075W	405W
No. of Fixtures	100	100	100
Running Time/Year	4,380 Hrs.	4,380 Hrs.	4,380 Hrs.
kWr Rate	\$0.12	\$0.12	\$0.12
Annual (kWh)	475,230	470,850	177,390
Annual (kWh) Savings			297,840 (HPS) / 293,460 (MH)
Annual Energy Costs	\$57,028	\$56,502	\$21,287
Annual Energy Savings			\$35,741 (HPS) / \$35,215 (MH)
Annual Labor Cost/Year	\$647	\$777	\$0
Labor Savings over Life of LED			\$9,709 (HPS) / \$11,651 (MH)
Annual Material Cost/Year	\$1095	\$1,314	\$0
Material Savings over Life of LED			\$16,425 (HPS) / \$19,710 (MH)
Life Cycle Gross Cost Savings			\$562,248 (HPS) / \$559,588 (MH)
PAY BACK (includes parts & labor)			2.99 YRS. (HPS) / 3.00 YRS. (MH)
LBS of CO2 Removed			6,294,717 lbs.
# Cars Removed from Road			5,445
Acres of Forest Planted			8,584

** Contact Factory for Complete Savings Analysis

PARKING LOT LIGHTING



APPLICATION DESCRIPTION

Illuminate your parking lot with Neptun's 31 Series LED Area luminaires. These high output LED fixtures set a new standard for energy efficiency, light quality, and beam control. Highly engineered optics and advanced housing technologies deliver outstanding visibility for enhanced security and general aesthetic appeal.

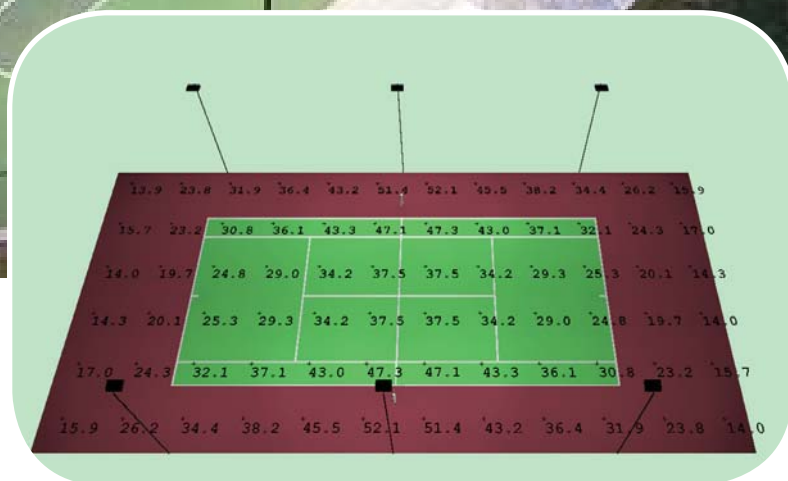
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NEPTUN[®]
 LIGHT

TENNIS COURT LIGHTING



Dark Sky
FRIENDLY



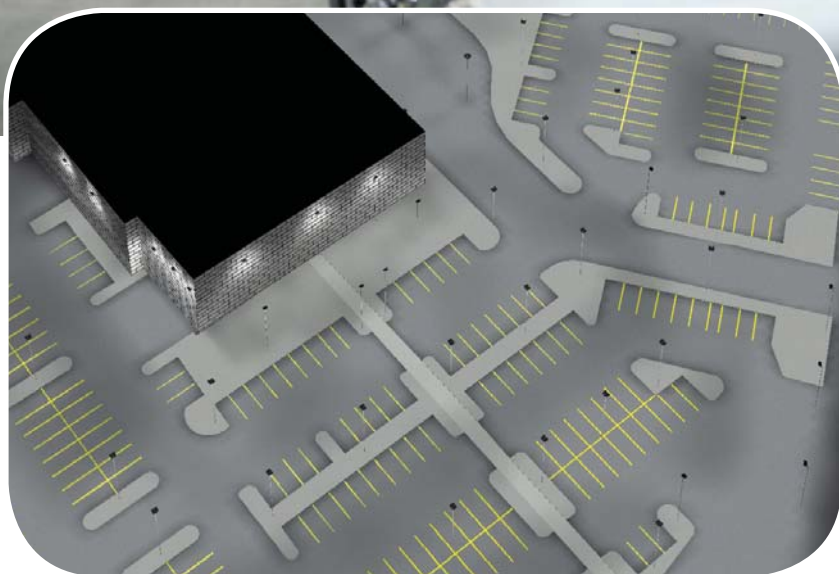
APPLICATION DESCRIPTION

Illuminate your tennis court with Neptun's DarkSky friendly 31 Series Area Lights for vivid game play and crisp shadows, all while significantly reducing operating costs related to energy and maintenance. State of the art SSL lensing technology offers greater beam control than ever before, which allows for more flexible designs and precise beam distribution.

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NEPTUN[®]
 LIGHT

CAR DEALERSHIP LIGHTING



APPLICATION DESCRIPTION

Illuminate your dealership with Neptun's DarkSky friendly 31 Series Parking Lot luminaires for a more effective display and substantial reductions in energy costs. Neptun's patented modular design delivers a 75,000 hour maintenance-free product life. This State of the Art LED fixture eliminates color shifting, thereby giving your lot an even and consistent color appearance.

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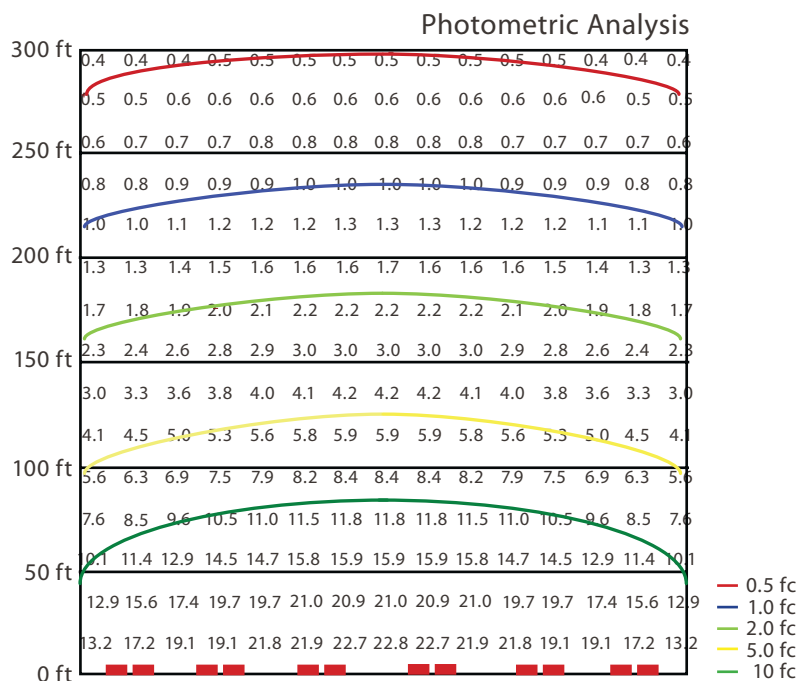
NEPTUN[®]
L I G H T

AIRPORT LIGHTING



APPLICATION DESCRIPTION

Neptun's 31 Series LED Area Luminaires offer state of the art optics technology for enhanced beam control and substantial energy savings. Minimizing light distortion and glare, Neptun's Luminaires enhance operational visibility for pilots and ground control.



* (4) 400W Fixtures Per Pole = 145,632 lm

* Fixture Spacing = 50'

* Mounting Height = 60'

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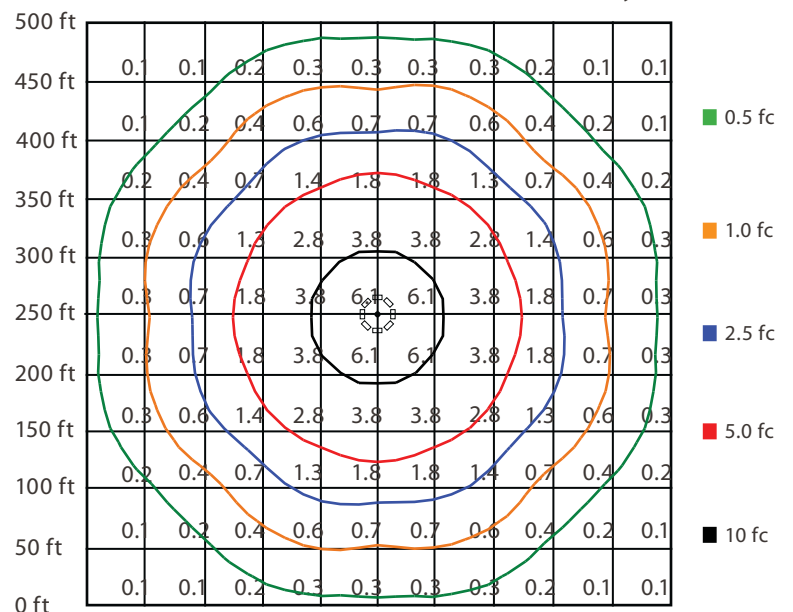
HIGH-MAST LIGHTING



APPLICATION DESCRIPTION

Neptun's revolutionary 31 Series High Mast Luminaires set the standard in energy savings and beam control with a modular design and State of the Art SSL technology. Light output is virtually absent of any deviation in efficiency and color temperature over the product's 75,000 hour life, greatly reducing maintenance costs.

Photometric Analysis



* (8) 400W Fixtures = 291,264 lm
 * Mounting Height = 80'

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 LIGHT

About Neptun Light

Neptun Light is a leader in the manufacture of energy efficient retrofit products and light fixtures in the fields of LED, Induction, and Solar technology. We boast a highly diversified product portfolio of indoor and outdoor products. Additionally, our products span a wide range of commercial, industrial, government, and utility infrastructure applications. Neptun Light achieves its level of success through timely development of new technology that caters to a constantly evolving marketplace. Among Neptun Light's core values are continuous innovation, high quality products, a focus on energy conservation, and an uncompromised commitment to customer service.



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