

DESCRIPTION

Recessed medium distribution LED lens downlight luminaire with 4 inch square aperture utilizing a LED array. Modular platform can be reconfigured from below the ceiling to accept a broad range of lamp modules and optical elements. Platform is suitable for 2x6 residential or shallow plenum commercial applications. Insulation must be kept 3" from top and sides of housing. Platform + module + element combination produces square distribution with excellent light control and low aperture brightness.

| | | |
|--------------------|--|-------------|
| Catalog # | | Type |
| Project | | |
| Comments | | Date |
| Prepared By | | |

SPECIFICATION FEATURES

Frame

Galvanized steel plaster frame with integral bar hanger receivers. Setscrews provide positive horizontal locking.

Collar

Matte black aluminum collar adjusts vertically for 1/2" - 1" thick ceilings and can be rotated ± 7.5° thru the aperture. Integral gun sights facilitate the use of guide strings or laser lines. Shipped with a paint overspray protector.

Housing

Steel housing painted matte black for a visually dark interior. Removable hinged cover allow for top access. All fasteners are captive.

Bar Hangers

Captive preinstalled bar hangers adjust from 8-1/2" to 24" wide; pass thru allows shortening without removal. Captive nail penetrates standard and engineered lumber. Mounting flange levels platform with ceiling. Integral clip attaches direction to tee grid.

Universal Mounting Bracket

Accepts 1/2" EMT, C channel and bar hangers and adjusts 3" vertically from above the ceiling.

Gaskets

Closed cell gaskets achieve restrictive airflow requirements without additional caulking.

Lamp Module

Integral mounting clips facilitate installation from top access or thru the aperture. Locking screws (provided) lock lamp module to the housing. Electrical quick disconnect facilitates field service.

LED Array

Field interchangeable and upgradable light engine provides a uniform source with high efficiency and no pixilation. Available in remote or proximity phosphors in various color temperatures. Select color rendering index (CRI) of 90, 95 or 97 minimum providing excellent color quality. Color accuracy within 2 SDCM.

Primary Reflector

Segmented Miro® upper reflector yields a smooth square beam with uniform distribution. Diffuse glass mixing dome provides shielding to source and excellent color over angle uniformity over rated life.

Lower Reflector

Die cast aluminum parabolic reflector with integral glass lens is seamless and provides for 55° cutoff. Self-flanged standard; may be installed rimless with optional rimless adapter.

Trim Retention

Mousetrap type springs pull flange tight to ceiling. Light trap eliminates spill light at edge of flange and reflector.

Shielding

Specify clear or optional lens for additional light control and source shielding.

Junction Box

(7) 1/2" trade size pry outs, (3) non-metallic cable. Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring. Wago® quick connects for field wiring.

Driver

Integral 120 or 120-277V 50/60 Hz constant current driver provides noise free operation. Continuous, flicker-free leading or trailing edge phase cut dimming from 100 to 1% with select controls.

Compliance

cULus listed for wet locations. UL1598 wet location labeled, covered ceiling mount only. Restrictive airflow per ASTM E283. EMI/RFI emissions per FCC 47CFR Part 15 class B limits and suitable for residential and commercial use. Contains no mercury or lead and RoHS compliant. Zhaga certified luminaire. Photometric testing in accordance with IES LM79. LED life testing in accordance with LM80.

Warranty

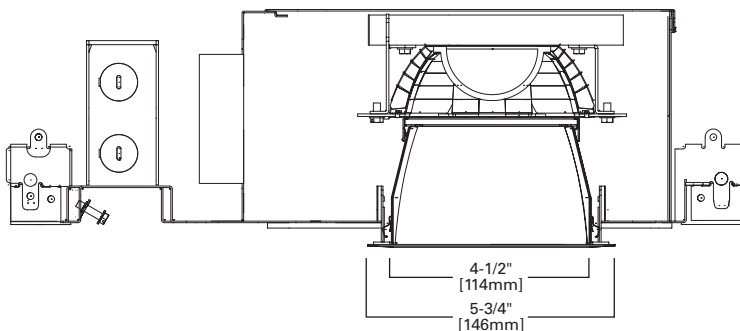
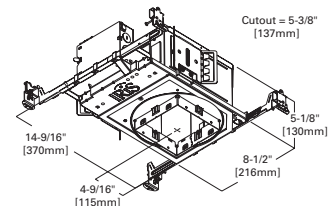
5 year warranty.



P406TAT MH4LED E4DCSR

**Medium Distribution
LED Lens Downlight**


4-Inch Square Aperture



Refer to ENERGY STAR® Qualified Products List. Can be used to comply with California Title 24 High Efficacy requirements. Certified to California Title 20 Appliance Efficiency Database.



Cooper Lighting Solutions is a founding member of the Zhaga Consortium

| Delivered Performance | | V927 | V930 | V935 | V940 | D927 | D930 | A927 | A930 | |
|--|------------|--------------|------|------|------|------|------|------|---------------|--|
|  | CRI (Min) | 90 | 90 | 90 | 90 | 97 | 97 | 95 | 95 | |
| | R9 (Min) | 50 | 50 | 50 | 50 | 95 | 95 | 90 | 90 | |
| | CCT (K5) | 2700 | 3000 | 3500 | 4000 | 2700 | 3000 | 2700 | 3000 | |
| | SDCM | 2-Step | | | | | | | | |
| | Life (L70) | 50,000 Hours | | | | | | | 40,000 Hours* | |
| | LPW** | 52 | 55 | 61 | 68 | 41 | 45 | 41 | 44 | |
| Lumens | 15W | 743 | 793 | 874 | 977 | 595 | 649 | 596 | 636 | |
| | 20W | 1008 | 1076 | 1186 | 1325 | 807 | 880 | 809 | 863 | |
| | 33W | 1634 | 1711 | 1821 | 2107 | 1234 | 1345 | 1238 | 1320 | |
| Performance data based on goniometer measurements with 'E' driver option and E4DCSR3GMW lower shielding reflector. *Projected lumen maintenance. **LPW based on 15W and 'E' driver option. | | | | | | | | | | |

ORDERING INFORMATION

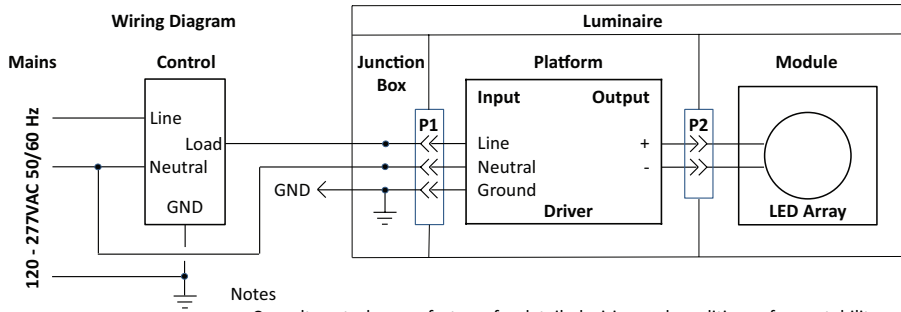
(Order housing platform, lamp module and optical element separately)

| Housing Platform | Accessories |
|--|--|
| <p>P406TAT = 4" square housing platform, non-IC, airtight P406TCP = 4" square housing platform, non-IC, CCEA listed for City of Chicago plenum requirements</p> | <p>RA4X4 = Rimless adapter for 4" housing platforms EDC4X41 = Extended depth collar for 1" - 1-1/2" thick ceilings EDC4X42 = Extended depth collar for 1-1/2" - 2" thick ceilings MTR4MW = 4" Metal Trim Ring, Matte White MTR4MB = 4" Metal Trim Ring, Matte Black MTR4SN = 4" Metal Trim Ring, Satin Nickel MTR4TBZ = 4" Metal Trim Ring, Tuscon Bronze</p> |

| Lamp Module | Wattage | Light Engine | Driver |
|---|--|---|---|
| <p>MH4LED = 4" square LED module</p> | <p>15 = 15 Watts 20 = 20 Watts 33 = 33 Watts</p> | <p>V927 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 2700 K CCT V930 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 3000 K CCT V935 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 3500 K CCT V940 = Bridgelux Vero Series, Zhaga certified, 90 CRI min, 4000 K CCT D927 = Bridgelux Décor Series, Zhaga certified, 97 CRI min, 2700 K CCT D930 = Bridgelux Décor Series, Zhaga certified, 97 CRI min, 3000 K CCT A927 = Xicato XTM Artist Series, Zhaga compatible, 95 CRI min, 2700 K CCT A930 = Xicato XTM Artist Series, Zhaga compatible, 95 CRI min, 3000 K CCT</p> | <p>E = 120 - 277V 50/60 Hz LE/TE phase cut dimming to 1% (dimming at 120V input only, available in 15 and 20 watt only) 1ELTE = 120V 60 Hz LE phase cut dimming to 1%, Lutron A-Series</p> |

| Element | Media | Texture | Finish | Flange Style |
|---|--|-------------------------|--|--|
| <p>E4DCSR = 4" Die Cast Lens Reflector</p> | <p>1G = Prismatic Glass 2G = Diffuse Glass 3G = Clear Glass 5G = Opal White Glass</p> | <p>[Blank] = Smooth</p> | <p>Painted Finishes MB = Matte Black MW = Matte White W = Gloss White MMS = Gloss White</p> | <p>[Blank] = Self-flanged RL = Rimless, Use with Rimless Adapter</p> |

WIRING DIAGRAM



- Notes
- Consult controls manufacturer for detailed wiring and conditions of acceptability
 - Input voltage contingent on control and driver options selected
 - Field wiring to confirm to all national and local codes
 - Phase cut dimming at 120V input only.

ENERGY

| ENERGY DATA | | | |
|-----------------------|-------------------|-------|-------|
| E = LE & TE Phase Cut | | | |
| Input Voltage | 120V | 277V | |
| 15W | Input Power (W) | 14.4 | 15.4 |
| | Input Current (A) | 0.121 | 0.059 |
| | Inrush (A) | 0.16 | 0.288 |
| 20W | Input Power (W) | 21.2 | 21.8 |
| | Input Current (A) | 0.178 | 0.082 |
| | Inrush (A) | 0.218 | 0.403 |
| T Ambient -40 - +40°C | | | |
| Power Factor ≥ 0.90 | | | |
| Sound Rating Class A | | | |
| THD ≤ 20% | | | |

COMPATIBLE CONTROLS

| Manufacturer | Series | Model | 15W | | | | LE Start Time | 20W | | | | LE Start Time |
|--------------|-----------|-----------|----------------------------------|----------------------------------|-------------------------------|-------------------------------|---------------|----------------------------------|---|-------------------------------|--------------------|---------------|
| | | | Minimum Luminaires (per Circuit) | Maximum Luminaires (per Circuit) | Minimum Measured Light Output | Maximum Measured Light Output | | Maximum Luminaires (per Circuit) | Minimum Measured Light Output (per Circuit) | Maximum Measured Light Output | Minimum Luminaires | |
| Lutron | Ariadni | AY-600P | 1 | 37 | 9% | 98% | <1s | 1 | 27 | 11% | 98% | <1s |
| Lutron | Contour | CT103P | 1 | 62 | 1% | 98% | >1s | 1 | 45 | 4% | 98% | <1s |
| Lutron | Contour | CT-600P | 1 | 37 | 1% | 98% | >1s | 1 | 27 | 3% | 98% | <1s |
| Lutron | Rotary | D-600P | 1 | 37 | 1% | 98% | >1s | 1 | 27 | 3% | 98% | >1s |
| Lutron | Diva | DV-600P | 1 | 37 | 1% | 98% | >1s | 1 | 27 | 2% | 98% | <1s |
| Lutron | Glyder | GL-600P | 1 | 37 | 2% | 99% | <1s | 1 | 27 | 7% | 98% | <1s |
| Lutron | Lumia | LG-600PH | 1 | 37 | 1% | 98% | >1s | 1 | 27 | 1% | 98% | >1s |
| Lutron | Nova | N-600 | 1 | 37 | 0% | 99% | >1s | 1 | 27 | 1% | 99% | <1s |
| Lutron | Skylark | S-600P | 1 | 37 | 1% | 98% | >1s | 1 | 27 | 1% | 98% | >1s |
| Lutron | Centurion | C-600P | 1 | 37 | 3% | 99% | >1s | 1 | 27 | 5% | 99% | >1s |
| Lutron | Ariadni | AYLV-600P | 1 | 28 | 4% | 98% | <1s | 1 | 20 | 9% | 98% | <1s |
| Lutron | Glyder | GLV600 | 1 | 28 | 1% | 99% | <1s | 1 | 20 | 3% | 99% | <1s |
| Lutron | Diva | DVLV-600P | 1 | 28 | 2% | 97% | <1s | 1 | 20 | 6% | 98% | <1s |
| Lutron | Lumina | LG-103P | 1 | 62 | 5% | 98% | <1s | 1 | 45 | 10% | 98% | <1s |
| Lutron | Skylark | SLV-600P | 1 | 28 | 1% | 98% | >1s | 1 | 20 | 3% | 98% | >1s |
| Lutron | Nova | NTLV600 | 1 | 28 | 9% | 99% | <1s | 1 | 20 | 12% | 99% | <1s |
| Lutron | Nova | NT600 | 1 | 37 | 2% | 99% | >1s | 1 | 27 | 4% | 99% | >1s |

COMPATIBLE CONTROLS

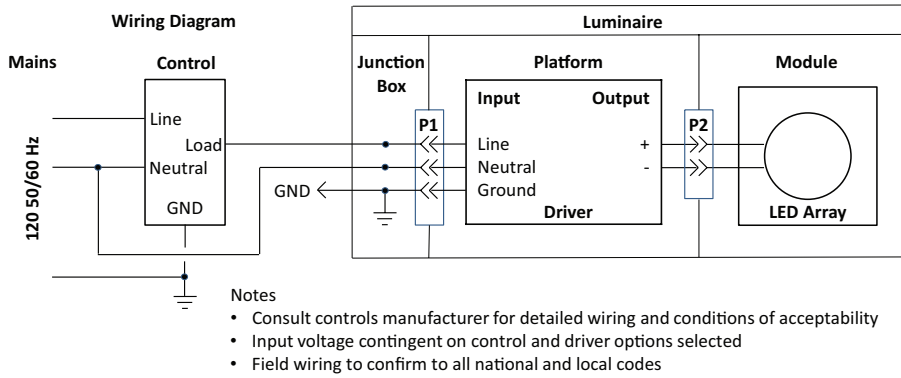
| Manufacturer | Series | Model | 15W | | Minimum Measured Light Output | Maximum Measured Light Output | LE Start Time | 20W | | Minimum Measured Light Output | Maximum Measured Light Output | LE Start Time |
|--------------|---|---|---------------------------------|---------------------------------|-------------------------------|-------------------------------|---------------|---------------------------------|---------------------------------|-------------------------------|-------------------------------|---------------|
| | | | Minimum Luminaires (per Output) | Maximum Luminaires (per Output) | | | | Minimum Luminaires (per Output) | Maximum Luminaires (per Output) | | | |
| Lutron | Maestro | MACL-153M()* | 1 | 10 | 20% | 98% | <1s | - | - | - | - | - |
| Lutron | Maestro Wireless | MRF2-6ND | 1 | 10 | 20% | 99% | >1s | 1 | 7 | 19% | 100% | >1s |
| Lutron | Maestro Wireless | MRF2-6ELV | - | - | - | - | - | 1 | 7 | 19% | 100% | >1s |
| Lutron | RadioRA2 1000 W | RRD-10ND | 1 | 10 | 20% | 99% | >1s | 1 | 7 | 19% | 100% | >1s |
| Lutron | RadioRA2 Adaptive Dimmer | RRD-6NA | - | - | - | - | - | 1 | 7 | 19% | 100% | >1s |
| Lutron | HomeWorks QS 600 W | HQRD-6ND | 1 | 10 | 20% | 99% | >1s | 1 | 7 | 19% | 100% | >1s |
| Lutron | HomeWorks QS 1000 W | HQRD-10ND | 1 | 10 | 20% | 99% | >1s | 1 | 7 | 19% | 100% | >1s |
| Lutron | HomeWorks QS Adaptive Dimmer | HQRD-6NA | - | - | - | - | - | 1 | 7 | 19% | 100% | >1s |
| Lutron | HomeWorks 600 W Dimmer | HxD-6ND | 1 | 23 | 19% | 99% | >1s | 1 | 15 | 20% | 99% | >1s |
| Lutron | "Grafik Eye 3000/ HomeWorks" | "Grafik Eye 3000 Family/ HWI-WPM-6D-120" | 1 | 35 | 20% | 98% | >1s | 1 | 22 | 20% | 100% | >1s |
| Lutron | "Grafik QS/ Wallbox Power Module" | "Grafik Eye QS Main Unit Family/ LQRJ-WPM-6P" | 1 | 35 | 20% | 98% | >1s | 1 | 22 | 20% | 100% | >1s |
| Lutron | RPM-4U Module (LCP, HomeWorks, GRAFIK Systems, Quantum) | HW-RPM-4U-120, LP-RPM-4U-120 | 1 | 86 | 20% | 96% | >1s | 1 | 55 | 18% | 97% | >1s |
| Lutron | RPM-4A Module (LCP, HomeWorks, GRAFIK Systems, Quantum) | HW-RPM-4A-120, LP-RPM-4A-120 | 1 | 53 | 19% | 99% | >1s | 1 | 34 | 19% | 98% | >1s |
| Lutron | Panel module | GP (Harrier) Card | - | - | - | - | - | 1 | 50 | 19% | 97% | >1s |
| Lutron | Stanza | SZ-6ND | 1 | 23 | 19% | 99% | >1s | 1 | 15 | 20% | 99% | >1s |
| Lutron | | "PHPM-PA with Grafik Eye QS Main Unit" | 1 | 71 | 19% | 98% | >1s | 1 | 55 | 20% | 99% | >1s |
| Lutron | | "PHPM-WBX with 3-wire fluorescent control" | 1 | 71 | 19% | 98% | >1s | 1 | 55 | 20% | 99% | >1s |

COMPATIBLE CONTROLS

| Manufacturer | Series | Model | 15W | | Maximum Measured | Minimum Measured | LE Start Time | 20W | | Maximum Measured | Minimum Measured | LE Start Time |
|--------------|------------------|--------------|----------------------------------|----------------------------------|------------------|------------------|---------------|--------------------|--------------------|------------------|------------------|---------------|
| | | | Minimum Luminaires (per circuit) | Maximum Luminaires (per circuit) | | | | Minimum Luminaires | Maximum Luminaires | | | |
| Vantage | Enclosure Module | SDM12 EM | 1 | 25 | 96.1% | 1.7% | 3.4s | 1 | 17 | 95.9% | 0.2% | 5s |
| Vantage | Enclosure Module | EDIMMOD | 1 | 37 | 98.8% | 3.8% | 2.4s | 1 | 25 | 95.8% | 4.9% | 1.9s |
| Vantage | ScenePoint | DS / RD | 1 | 8 | 96.1% | 1.7% | 3.4s | 1 | 7 | 95.9% | 0.2% | 5s |
| Vantage | RFLC | DRD4 | 1 | 8 | 100% | 6.3% | 2.3s | 1 | 7 | 100% | 8.4% | 1.9s |
| Crestron | Green Light | GLX-DIM6 | -- | -- | 100% | 15% | -- | -- | -- | 100% | 9% | -- |
| Crestron | Green Light | GLXX-2DIM8 | -- | -- | 100% | 15% | -- | -- | -- | 100% | 9% | -- |
| Crestron | Green Light | CLS-EXP-DIMU | -- | -- | 100% | 8% | -- | -- | -- | 100% | 11% | -- |
| Crestron | Green Light | DIN-1DIM4 | -- | -- | 100% | 6% | -- | -- | -- | 100% | 7% | -- |
| Crestron | Green Light | DIN-1DIMU4 | -- | -- | 100% | 14% | -- | -- | -- | 100% | 9% | -- |
| Savant | | LMD-4120 | -- | -- | 100% | 3.5% | <1s | -- | -- | 100% | 2.7% | <1s |
| Savant | | LMD-8120 | -- | -- | 100% | 10.1% | <1s | -- | -- | 100% | 10.4% | <1s |
| Savant | | LMD-IN120 | -- | -- | 100% | 3.5% | <1s | -- | -- | 100% | 3.1% | <1s |

| Manufacturer | Series | Model | 15W | | Maximum Measured | Minimum Measured | LE Start Time | 20W | | Maximum Measured | Minimum Measured | LE Start Time |
|--------------|--------|-------------|----------------------------------|----------------------------------|------------------|------------------|---------------|--------------------|--------------------|------------------|------------------|---------------|
| | | | Minimum Luminaires (per circuit) | Maximum Luminaires (per circuit) | | | | Minimum Luminaires | Maximum Luminaires | | | |
| CWD | Ilumen | SC277-06-UN | 1 | 38 | 100% | 13% | <1s | 1 | 28 | 99.40% | 16.58% | <1s |
| CWD | Aspire | 9530AW | 1 | 30 | 100% | 5% | <1s | 1 | 21 | 100.00% | 13.07% | <1s |
| CWD | Skye | DE06P | 1 | 30 | 98% | 11% | <1s | 1 | 21 | 96.78% | 14.81% | <1s |
| CWD | Devine | RI061 | 1 | 30 | 99% | 21% | >1s | 1 | 21 | 98.81% | 24.23% | >1s |
| CWD | Devine | TAL06P | 1 | 37 | 100% | 10% | <1s | 1 | 27 | 99.22% | 11.91% | <1s |
| CWD | Toggle | DAL06P | 1 | 37 | 100% | 4% | <1s | 1 | 27 | 99.16% | 5.66% | <1s |
| CWD | Skye | SAL06P | 1 | 37 | 100% | 9% | <1s | 1 | 27 | 99.16% | 13.00% | <1s |
| CWD | Skye | SLC06P | 1 | 37 | 99% | 2% | >1s | 1 | 27 | 98.27% | 1.76% | >1s |
| CWD | Devine | DLC06P | 1 | 18 | 99% | 2% | >1s | 1 | 13 | 98.57% | 3.09% | <1s |
| CWD | Toggle | TI061 | 1 | 30 | 97% | 5% | <1s | 1 | 21 | 96.36% | 12.58% | <1s |
| CWD | Smart | AAL06 | 1 | 37 | 99% | 10% | <1s | 1 | 27 | 98.51% | 13.33% | <1s |

WIRING DIAGRAM



ENERGY

| ENERGY DATA | | |
|-----------------------|-------------------|-------|
| 1ELTE = LE Phase Cut | | |
| Input Voltage | | 120V |
| 15W | Input Power (W) | 16.3 |
| | Input Current (A) | 0.14 |
| | Inrush (A) | 1.128 |
| 20W | Input Power (W) | 23.2 |
| | Input Current (A) | 0.195 |
| | Inrush (A) | 1.112 |
| 33W | Input Power (W) | 33.7 |
| | Input Current (A) | 0.283 |
| | Inrush (A) | 0.072 |
| T Ambient -40 - +40°C | | |
| Power Factor ≥ 0.90 | | |
| Sound Rating Class A | | |
| THD ≤ 20% | | |

Discontinued
09-20-2021

COMPATIBLE CONTROLS

| Manufacturer | Series | Model | 15W | | Maximum Measured | Minimum Measured | LE Start Time | 20W | | Maximum Measured | Minimum Measured | LE Start Time | 33W | | Maximum Measured | Minimum Measured | LE Start Time |
|--------------|--------------------------------|--------------------|--------------------|--------------------|------------------|------------------|---------------|--------------------|--------------------|------------------|------------------|---------------|--------------------|--------------------|------------------|------------------|---------------|
| | | | Minimum Luminaires | Maximum Luminaires | | | | Minimum Luminaires | Maximum Luminaires | | | | Minimum Luminaires | Maximum Luminaires | | | |
| Lutron | Nova T | NTLV-600-CPN0199 | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | Maestro Wireless | MRF2-6ND-120 | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | RadioRA2 1000 W | RRD-10ND | 1 | 13 | 100% | 1% | <1s | 1 | 13 | 100% | 1% | <1s | 1 | 13 | 100% | 1% | <1s |
| Lutron | RadioRA2 Adaptive Dimmer | RRD-6NA | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | RadioRA 600 W | RA-6ND | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | RadioRA 1000 W | RA-10ND | 1 | 13 | 100% | 1% | <1s | 1 | 13 | 100% | 1% | <1s | 1 | 13 | 100% | 1% | <1s |
| Lutron | HomeWorks QS 600 W | HQRD-6ND | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | HomeWorks QS 1000 W | HQRD-10ND | 1 | 13 | 100% | 1% | <1s | 1 | 13 | 100% | 1% | <1s | 1 | 13 | 100% | 1% | <1s |
| Lutron | HomeWorks QS Adaptive Dimmer | HQRD-6NA | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | HomeWorks QS WPM | HQRJ-WPM-6D-120 | 1 | 10 | 100% | 1% | <1s | 1 | 10 | 100% | 1% | <1s | 1 | 10 | 100% | 1% | <1s |
| Lutron | HomeWorks 600 W Dimmer | HRD-6ND | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | HomeWorks 1000 W dimmer | HWD-10ND, HRD-10ND | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| | HomeWorks WPM | HWI-WPM-6D-120 | 1 | 10 | 100% | 1% | <1s | 1 | 10 | 100% | 1% | <1s | 1 | 10 | 100% | 1% | <1s |
| Lutron | GRAFIK Eye QS | QSGR-, QSGRJ- | 1 | 10 | 100% | 1% | <1s | 1 | 10 | 100% | 1% | <1s | 1 | 10 | 100% | 1% | <1s |
| | GRAFIK Eye 3000 | GRX-3100, GRX-3500 | 1 | 10 | 100% | 1% | <1s | 1 | 10 | 100% | 1% | <1s | 1 | 10 | 100% | 1% | <1s |
| Lutron | RPM-4U Module (LCP, HomeWorks, | HW-RPM-4U-120, | 1 | 26 | 100% | 1% | <1s | 1 | 26 | 100% | 1% | <1s | 1 | 26 | 100% | 1% | <1s |
| | GRAFIK Systems, Quantum) | LP-RPM-4U-120 | | | | | | | | | | | | | | | |
| Lutron | RPM-4A Module (LCP, HomeWorks, | HW-RPM-4A-120, | 1 | 13 | 100% | 1% | <1s | 1 | 13 | 100% | 1% | <1s | 1 | 13 | 100% | 1% | <1s |
| | GRAFIK Systems, Quantum) | LP-RPM-4A-120 | | | | | | | | | | | | | | | |
| Lutron | GP Panels | Various | 1 | 26 | 100% | 1% | <1s | 1 | 26 | 100% | 1% | <1s | 1 | 26 | 100% | 1% | <1s |
| Lutron | Stanza | SZ-6ND | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | "Ariadni® C•L® 250 W dimmer" | AYCL-253P- | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| Lutron | "Diva® C•L® 250 W dimmer" | DVCL-253P-S | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |
| | | DVSCCL-253P | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s | 1 | 8 | 100% | 1% | <1s |

COMPATIBLE CONTROLS

| Manufacturer | Series | Model | 15W | | Maximum Measured | Minimum Measured | LE Start Time | 20W | | Maximum Measured | Minimum Measured | LE Start Time | 33W | | Maximum Measured | Minimum Measured | LE Start Time |
|---------------------------|------------------|----------------|--------------------|--------------------|------------------|------------------|---------------|--------------------|--------------------|------------------|------------------|---------------|--------------------|--------------------|------------------|------------------|---------------|
| | | | Minimum Luminaires | Maximum Luminaires | | | | Minimum Luminaires | Maximum Luminaires | | | | Minimum Luminaires | Maximum Luminaires | | | |
| Vantage | Enclosure Module | SDM12 EM | 1 | 21 | 95.1% | 1.0% | 1.90s | 1 | 17 | 95.3% | 1.0% | 1.70s | 1 | 17 | 98.7% | 1.1% | 1.7s |
| Vantage | Enclosure Module | EDIMMOD | 1 | 31 | 95.8% | 0.9% | 1.90s | 1 | 25 | 96.2% | 1.0% | 1.80s | 1 | 30 | 95.8% | 1.1% | 2.2s |
| Vantage | ScenePoint | DS / RD | 1 | 7 | 95.1% | 1.0% | 1.90s | 1 | 4 | 95.3% | 1.0% | 1.70s | 1 | 7 | 98.7% | 1.1% | 1.7s |
| Crestron | Green Light | GLX-DIM6 | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- |
| Crestron | Green Light | CLX-2DIM8 | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- |
| Crestron | Green Light | GLXX-2DIM8 | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- |
| Crestron | Green Light | CLS-EXP-DIM | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- |
| Crestron | Green Light | CLS-C6 | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- |
| Crestron | Green Light | CLW-DIMEX | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- |
| Crestron | Green Light | CLX-1DELV4 | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- |
| Crestron | Green Light | DIN-1DIMU4 | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- | -- | -- | 100% | 1% | -- |
| Cooper Lighting Solutions | ilumin | SC277-06-UN-1P | 1 | 38 | 99% | 0% | >1s | 1 | 28 | 99% | 0% | <1s | 1 | 17 | 100 | 1% | <1s |
| Savant | -- | LMD-8120 | -- | -- | 100% | 3.0% | <1s | -- | -- | 100% | 3.0% | <1s | -- | -- | 100% | 2% | <1s |
| Savant | -- | LMD-IN120 | -- | -- | 100% | 4.0% | <1s | -- | -- | 100% | 4.0% | <1s | -- | -- | 100% | 2% | <1s |
| Savant | -- | WCD-101xx | -- | -- | 100% | 3% | <1s | -- | -- | 100% | 0.03 | <1s | -- | -- | 1 | 2% | <1s |

FINISH MULTIPLIERS

| | MB | MW | W | MMS |
|------------------|------|------|------|------|
| [Blank] = Smooth | 0.76 | 1.04 | 1.04 | 0.82 |

LIGHTING FACTS

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens) **793**
Watts **14.5**
Lumens per Watt (Efficacy) **54.69**

Color Accuracy **90**
Color Rendering Index (CRI)

Light Color **3000 (Bright White)**
Correlated Color Temperature (CCT)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-6J67Z3 (9/25/2015)
Model Number: P406TAT MH4LED15V930E E4DCSR3GMW [Upgrade: 9/25/2015]
Type: Luminaire - Downlight

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens) **600**
Watts **15**
Lumens per Watt (Efficacy) **40**

Color Accuracy **97**
Color Rendering Index (CRI)

Light Color **3000 (Bright White)**
Correlated Color Temperature (CCT)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-SM11NJ (7/27/2015)
Model Number: P406TAT MH4LED15D930E E4DCSR3GMW
Type: Luminaire - Downlight

LED lighting facts
A Program of the U.S. DOE

Light Output (Lumens) **654**
Watts **13**
Lumens per Watt (Efficacy) **50.32**

Color Accuracy **97**
Color Rendering Index (CRI)

Light Color **2949 (Warm White)**
Correlated Color Temperature (CCT)

Warm White | Bright White | Daylight
2700K | 3000K | 4500K | 6500K


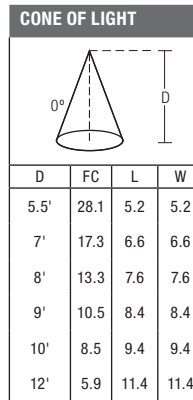
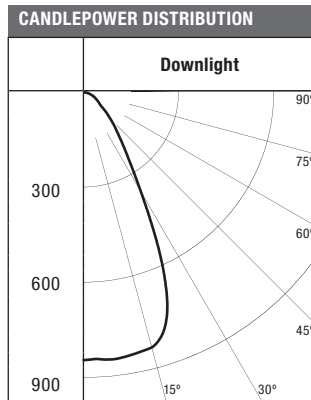
All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: F4QJ-2OTBST (7/30/2015)
Model Number: P406TAT MH4LED15A930E E4DCSR3GMW
Type: Luminaire - Downlight

PHOTOMETRICS

| | |
|-------------|--------------------------|
| Test Number | P175817 |
| Platform | P406TAT |
| Element | MH4LED15V930EE4DCS-R2GMW |
| Lumens | 979 |
| Efficacy | 68 Lm/W |
| SC | 0.95 |

CANDELA TABLE

| Degrees Vertical | Candela |
|------------------|---------|
| 0 | 849 |
| 5 | 850 |
| 15 | 838 |
| 25 | 597 |
| 35 | 250 |
| 45 | 133 |
| 55 | 67 |
| 65 | 44 |
| 75 | 24 |
| 85 | 7 |
| 90 | 0 |


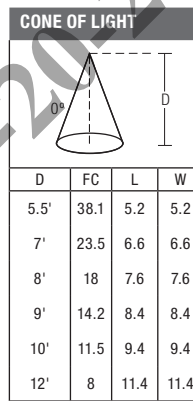
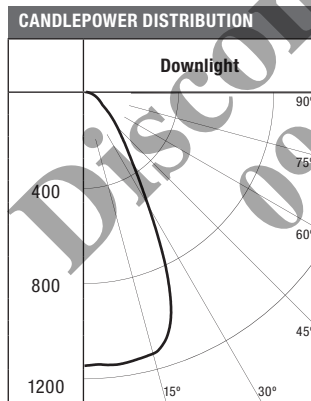
ZONAL LUMEN SUMMARY

| Zone | Lumens | %Fixture |
|--------|--------|----------|
| 0-30 | 582 | 59.5 |
| 0-40 | 744 | 76 |
| 0-60 | 901 | 92.1 |
| 0-90 | 979 | 100 |
| 90-180 | 0 | 0 |
| 0-180 | 979 | 100 |

COEFFICIENTS OF UTILIZATION

| Ceiling Wall % RCR | 80% | | | | 70% | | | | 50% | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 10 | |
| Zonal cavity method -- floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 111 | 111 | |
| 1 | 112 | 108 | 105 | 102 | 106 | 103 | 101 | 102 | 98 | |
| 2 | 105 | 99 | 94 | 90 | 97 | 92 | 89 | 94 | 87 | |
| 3 | 98 | 91 | 85 | 80 | 89 | 84 | 79 | 86 | 78 | |
| 4 | 92 | 83 | 77 | 72 | 82 | 76 | 71 | 80 | 70 | |
| 5 | 87 | 77 | 70 | 65 | 76 | 70 | 65 | 74 | 64 | |
| 6 | 82 | 72 | 65 | 60 | 71 | 64 | 60 | 69 | 59 | |
| 7 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 65 | 55 | |
| 8 | 73 | 63 | 56 | 51 | 62 | 56 | 51 | 61 | 51 | |
| 9 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 47 | |
| 10 | 66 | 55 | 49 | 45 | 55 | 49 | 45 | 54 | 44 | |

| | |
|-------------|--------------------------|
| Test Number | P175793 |
| Platform | P406TAT |
| Element | MH4LED20V930EE4DCS-R2GMW |
| Lumens | 1328 |
| Efficacy | 62.4 Lm/W |
| SC | 0.95 |

CANDELA TABLE

| Degrees Vertical | Candela |
|------------------|---------|
| 0 | 1151 |
| 5 | 1153 |
| 15 | 1137 |
| 25 | 810 |
| 35 | 340 |
| 45 | 180 |
| 55 | 90 |
| 65 | 60 |
| 75 | 33 |
| 85 | 10 |
| 90 | 0 |

ZONAL LUMEN SUMMARY


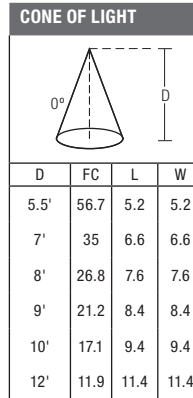
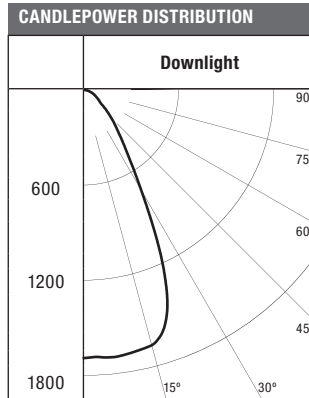
| Zone | Lumens | %Fixture |
|--------|--------|----------|
| 0-30 | 790 | 59.5 |
| 0-40 | 1010 | 76 |
| 0-60 | 1223 | 92.1 |
| 0-90 | 1328 | 100 |
| 90-180 | 0 | 0 |
| 0-180 | 1328 | 100 |

COEFFICIENTS OF UTILIZATION

| Ceiling Wall % RCR | 80% | | | | 70% | | | | 50% | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 10 | |
| Zonal cavity method -- floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 111 | 111 | |
| 1 | 112 | 108 | 105 | 102 | 106 | 103 | 101 | 102 | 98 | |
| 2 | 105 | 99 | 94 | 90 | 97 | 92 | 89 | 94 | 87 | |
| 3 | 98 | 91 | 85 | 80 | 89 | 84 | 79 | 86 | 78 | |
| 4 | 92 | 83 | 77 | 72 | 82 | 76 | 71 | 80 | 70 | |
| 5 | 87 | 77 | 70 | 65 | 76 | 70 | 65 | 74 | 64 | |
| 6 | 82 | 72 | 65 | 60 | 71 | 64 | 60 | 69 | 59 | |
| 7 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 65 | 55 | |
| 8 | 73 | 63 | 56 | 51 | 62 | 56 | 51 | 61 | 51 | |
| 9 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 47 | |
| 10 | 66 | 55 | 49 | 45 | 55 | 49 | 45 | 54 | 44 | |

PHOTOMETRICS

| | |
|-------------|------------------------------|
| Test Number | P173207 |
| Platform | P406TAT |
| Element | MH4LED33V9301ELTEE4DC-SR2GMW |
| Lumens | 1977 |
| Efficacy | 53.9 Lm/W |
| SC | 0.95 |

CANDELA TABLE

| Degrees Vertical | Candela |
|------------------|---------|
| 0 | 1714 |
| 5 | 1716 |
| 15 | 1693 |
| 25 | 1206 |
| 35 | 506 |
| 45 | 268 |
| 55 | 135 |
| 65 | 90 |
| 75 | 49 |
| 85 | 15 |
| 90 | 0 |


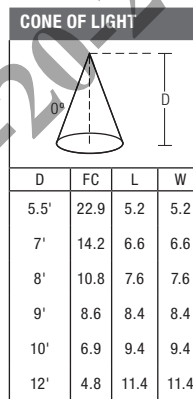
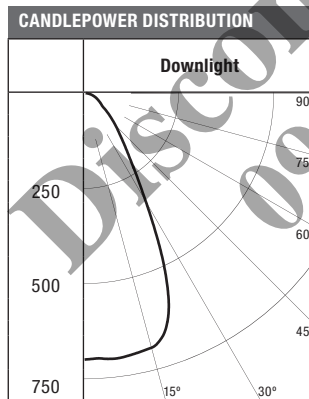
ZONAL LUMEN SUMMARY

| Zone | Lumens | %Fixture |
|--------|--------|----------|
| 0-30 | 1175 | 59.5 |
| 0-40 | 1503 | 76 |
| 0-60 | 1820 | 92.1 |
| 0-90 | 1977 | 100 |
| 90-180 | 0 | 0 |
| 0-180 | 1977 | 100 |

COEFFICIENTS OF UTILIZATION

| Ceiling Wall % RCR | 80% | | | | 70% | | | | 50% | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 10 | |
| Zonal cavity method -- floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 111 | 111 | |
| 1 | 112 | 108 | 105 | 102 | 106 | 103 | 101 | 102 | 98 | |
| 2 | 105 | 99 | 94 | 90 | 97 | 92 | 89 | 94 | 87 | |
| 3 | 98 | 91 | 85 | 80 | 89 | 84 | 79 | 86 | 78 | |
| 4 | 92 | 83 | 77 | 72 | 82 | 76 | 71 | 80 | 70 | |
| 5 | 87 | 77 | 70 | 65 | 76 | 70 | 65 | 74 | 64 | |
| 6 | 82 | 72 | 65 | 60 | 71 | 64 | 60 | 69 | 59 | |
| 7 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 65 | 55 | |
| 8 | 73 | 63 | 56 | 51 | 62 | 56 | 51 | 61 | 51 | |
| 9 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 47 | |
| 10 | 66 | 55 | 49 | 45 | 55 | 49 | 45 | 54 | 44 | |

| | |
|-------------|--------------------------|
| Test Number | P175821 |
| Platform | P406TAT |
| Element | MH4LED15D930EE4DCS-R2GMW |
| Lumens | 800 |
| Efficacy | 55.6 Lm/W |
| SC | 0.95 |

CANDELA TABLE

| Degrees Vertical | Candela |
|------------------|---------|
| 0 | 694 |
| 5 | 694 |
| 15 | 685 |
| 25 | 488 |
| 35 | 205 |
| 45 | 108 |
| 55 | 54 |
| 65 | 36 |
| 75 | 20 |
| 85 | 6 |
| 90 | 0 |

ZONAL LUMEN SUMMARY


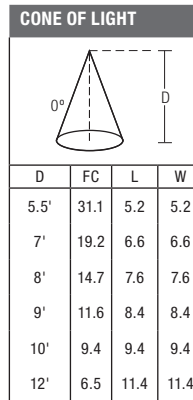
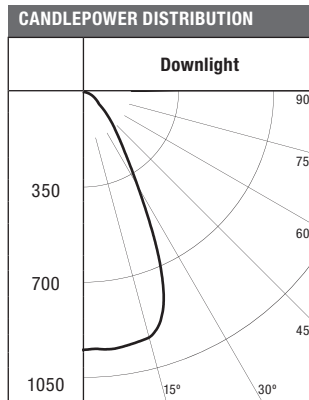
| Zone | Lumens | %Fixture |
|--------|--------|----------|
| 0-30 | 476 | 59.5 |
| 0-40 | 608 | 76 |
| 0-60 | 737 | 92.1 |
| 0-90 | 800 | 100 |
| 90-180 | 0 | 0 |
| 0-180 | 800 | 100 |

COEFFICIENTS OF UTILIZATION

| Ceiling Wall % RCR | 80% | | | | 70% | | | | 50% | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 10 | |
| Zonal cavity method -- floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 111 | 111 | |
| 1 | 112 | 108 | 105 | 102 | 106 | 103 | 101 | 102 | 98 | |
| 2 | 105 | 99 | 94 | 90 | 97 | 92 | 89 | 94 | 87 | |
| 3 | 98 | 91 | 85 | 80 | 89 | 84 | 79 | 86 | 78 | |
| 4 | 92 | 83 | 77 | 72 | 82 | 76 | 71 | 80 | 70 | |
| 5 | 87 | 77 | 70 | 65 | 76 | 70 | 65 | 74 | 64 | |
| 6 | 82 | 72 | 65 | 60 | 71 | 64 | 60 | 69 | 59 | |
| 7 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 65 | 55 | |
| 8 | 73 | 63 | 56 | 51 | 62 | 56 | 51 | 61 | 51 | |
| 9 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 47 | |
| 10 | 66 | 55 | 49 | 45 | 55 | 49 | 45 | 54 | 44 | |

PHOTOMETRICS

| | |
|-------------|--------------------------|
| Test Number | P175797 |
| Platform | P406TAT |
| Element | MH4LED20D930EE4DCS-R2GMW |
| Lumens | 1085 |
| Efficacy | 51 Lm/W |
| SC | 0.95 |

CANDELA TABLE

| Degrees Vertical | Candela |
|------------------|---------|
| 0 | 941 |
| 5 | 942 |
| 15 | 929 |
| 25 | 662 |
| 35 | 278 |
| 45 | 147 |
| 55 | 74 |
| 65 | 49 |
| 75 | 27 |
| 85 | 8 |
| 90 | 0 |


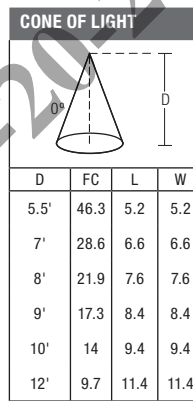
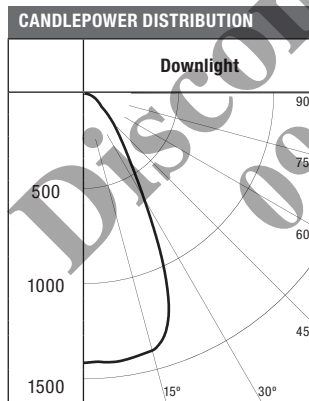
ZONAL LUMEN SUMMARY

| Zone | Lumens | %Fixture |
|--------|--------|----------|
| 0-30 | 645 | 59.5 |
| 0-40 | 825 | 76 |
| 0-60 | 999 | 92.1 |
| 0-90 | 1085 | 100 |
| 90-180 | 0 | 0 |
| 0-180 | 1085 | 100 |

COEFFICIENTS OF UTILIZATION

| Ceiling Wall % RCR | 80% | | | | 70% | | | | 50% | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 10 | |
| Zonal cavity method -- floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 111 | 111 | |
| 1 | 112 | 108 | 105 | 102 | 106 | 103 | 101 | 102 | 98 | |
| 2 | 105 | 99 | 94 | 90 | 97 | 92 | 89 | 94 | 87 | |
| 3 | 98 | 91 | 85 | 80 | 89 | 84 | 79 | 86 | 78 | |
| 4 | 92 | 83 | 77 | 72 | 82 | 76 | 71 | 80 | 70 | |
| 5 | 87 | 77 | 70 | 65 | 76 | 70 | 65 | 74 | 64 | |
| 6 | 82 | 72 | 65 | 60 | 71 | 64 | 60 | 69 | 59 | |
| 7 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 65 | 55 | |
| 8 | 73 | 63 | 56 | 51 | 62 | 56 | 51 | 61 | 51 | |
| 9 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 47 | |
| 10 | 66 | 55 | 49 | 45 | 55 | 49 | 45 | 54 | 44 | |

| | |
|-------------|------------------------------|
| Test Number | P173211 |
| Platform | P406TAT |
| Element | MH4LED33D9301ELTEE4DC-SR2GMW |
| Lumens | 1616 |
| Efficacy | 44.1 Lm/W |
| SC | 0.95 |

CANDELA TABLE

| Degrees Vertical | Candela |
|------------------|---------|
| 0 | 1401 |
| 5 | 1403 |
| 15 | 1384 |
| 25 | 986 |
| 35 | 414 |
| 45 | 219 |
| 55 | 110 |
| 65 | 73 |
| 75 | 40 |
| 85 | 12 |
| 90 | 0 |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Fixture |
|--------|--------|----------|
| 0-30 | 961 | 59.5 |
| 0-40 | 1229 | 76 |
| 0-60 | 1488 | 92.1 |
| 0-90 | 1616 | 100 |
| 90-180 | 0 | 0 |
| 0-180 | 1616 | 100 |

COEFFICIENTS OF UTILIZATION

| Ceiling Wall % RCR | 80% | | | | 70% | | | | 50% | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 10 | |
| Zonal cavity method -- floor reflectance = 20% | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 111 | 111 | |
| 1 | 112 | 108 | 105 | 102 | 106 | 103 | 101 | 102 | 98 | |
| 2 | 105 | 99 | 94 | 90 | 97 | 92 | 89 | 94 | 87 | |
| 3 | 98 | 91 | 85 | 80 | 89 | 84 | 79 | 86 | 78 | |
| 4 | 92 | 83 | 77 | 72 | 82 | 76 | 71 | 80 | 70 | |
| 5 | 87 | 77 | 70 | 65 | 76 | 70 | 65 | 74 | 64 | |
| 6 | 82 | 72 | 65 | 60 | 71 | 64 | 60 | 69 | 59 | |
| 7 | 78 | 67 | 60 | 55 | 66 | 60 | 55 | 65 | 55 | |
| 8 | 73 | 63 | 56 | 51 | 62 | 56 | 51 | 61 | 51 | |
| 9 | 70 | 59 | 52 | 48 | 58 | 52 | 48 | 57 | 47 | |
| 10 | 66 | 55 | 49 | 45 | 55 | 49 | 45 | 54 | 44 | |