

Also available in 16 cells and in lensed.

FEATURES

- Ideal for manufacturing areas, retail stores, and gymnasiums
- Shallow depth allows for installation in a myriad of shallow plenum applications
- Uses EISA compliant pulse start metal halide technology
- Removable power door allows for access to the ballast from below fixture

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Housing constructed of code gauge steel. Power door is constructed of 18 gauge steel and is secured with (3) ¼ turn fasteners. The power door contains all of the electrical components and can easily be removed from the fixture for maintenance. The ballast housing is constructed of aluminum for maximum heat dissipation. The housing is riveted together for maximum rigidity. A tempered glass overlay is standard on all pulse start metal halide lamped units. The tempered overlay is secured to the louver. Aluminum louver is retained by die formed latches and T-hinges and can be installed from either side.

FINISH

End and side rails are painted black to eliminate any light leaks. Housing and all other parts are painted after fabrication with a white polyester finish for maximum reflectance longevity.

AIR HANDLING

Supply or return air functions are provided on the side of the housing through the black reveal.

INSTALLATION

A ⅝" knockout is provided in the capacitor housing. All leads are pulled through the knockout for installation. A plastic dust cover which eliminates construction dust and protects the louver is supplied around the louver.

ELECTRICAL

Wired with core and coil ballasts and are SCWA. HV requires use of ED28 lamps.

CEILING COMPATIBILITY

Luminaire is available to fit most standard ceiling types as shown at left. For information on compatibility with specific ceilings, contact your Columbia representative. All luminaires are provided as standard with integral T-Bar clips.

CERTIFICATION

All luminaires are built to UL 1598 standards and bear appropriate UL and cUL or CSA labels. Damp location labeling is standard.

ORDERING INFORMATION

EXAMPLE HV22-P400G-LD33-S-QT277-QR

| HV | | 22 | | - | | P | | - | | LD | | - | | - | | - | |
|---------------------------------|--|----------------------------|--|--------------------|--|---------------------------------|--|--|--|---|--|--|--|------------|--|--|--|
| MODEL | | LAMP TYPE | | CEILING TYPE | | LOUVER FINISH | | CELLS WIDE BY CELLS LONG | | VOLTAGE | | OPTIONS | | SIZE | | LAMP WATTS | |
| HV Vertical Lamp Orientation | | P Pulse Start Metal Halide | | G Grid F Flange | | LD Semi-Specular Low Iridescent | | 33 3 cells by 3 cells 44 4 cells by 4 cells | | QT Quad-Tap, 120V, 208V, 240V, 277V 480 480V | | QR Quartz Restrike GLR Fast Blow Fuse NYC NYC Compliant NYCU NYC Compliant, Union Label | | 22 2' x 2' | | 175 175 Watt 200 200 Watt 250 250 Watt 320 320 Watt 350 350 Watt 400 400 Watt | |
| AIR HANDLING FUNCTION | | WIRED TO | | | | | | | | | | | | | | | |
| S Static | | 120 120V | | | | | | | | | | | | | | | |
| A Air Handling | | 208 208V | | | | | | | | | | | | | | | |
| AV Air Handling w/ supply vanes | | 240 240V | | | | | | | | | | | | | | | |
| | | 277 277V (Std.) | | | | | | | | | | | | | | | |

PHOTOMETRIC DATA

LUMINAIRE DATA

| | |
|------------------------|---|
| Luminaire | HV22-M400G-LD33 HH/HV HID 2 x 2 with 3 x 3 cell semi-specular louver, tempered glass overlay, and baked white enamel reflector lamp |
| Ballast | N/A |
| Ballast Factor | 1.00 |
| Lamp | M400/C |
| Lumens per Lamp | 36000 |
| Watts | 458 |
| Spacing Criterion | 0° = 1.34 90° = 1.31 |
| Luminous Opening in Ft | Length: 1.77 Width: 1.77 Height: 0.00 |

AVG. LUMINANCE (Candela/Sq. M.)

| Average Luminance Angle | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|-------------------------|-------|-------|-------|-------|-------|
| 0 | 25799 | 25799 | 25799 | 25799 | 25799 |
| 30 | 26220 | 25331 | 23566 | 25041 | 25724 |
| 40 | 28534 | 25148 | 24596 | 25399 | 29507 |
| 45 | 27370 | 24052 | 26442 | 24596 | 28828 |
| 50 | 22530 | 20504 | 28137 | 21049 | 23887 |
| 55 | 16221 | 15844 | 24476 | 16161 | 17168 |
| 60 | 11283 | 10898 | 15702 | 11036 | 11895 |
| 65 | 4479 | 5146 | 7504 | 5870 | 6569 |
| 70 | 1396 | 1557 | 2321 | 1718 | 1557 |
| 75 | 969 | 1009 | 1049 | 1009 | 969 |
| 80 | 791 | 851 | 791 | 712 | 712 |
| 85 | 631 | 631 | 631 | 512 | 512 |

ZONAL LUMEN SUMMARY

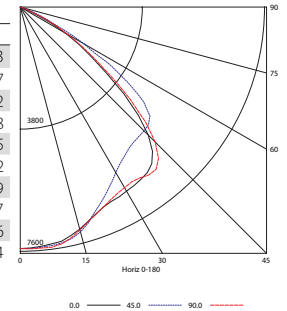
| Zone | Lumens | Lamp | Fixt. |
|-------|--------|------|-------|
| 0-30 | 5765 | 16.0 | 33.4 |
| 0-40 | 9569 | 26.6 | 55.5 |
| 0-60 | 16328 | 45.4 | 94.7 |
| 0-90 | 17251 | 47.9 | 100.0 |
| 0-180 | 17251 | 47.9 | 100.0 |

COEFFICIENTS OF UTILIZATION (%)

| RCR | 80 | | | | 70 | | | | 50 | | | | 0 |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| | RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 1 | 53 | 52 | 50 | 49 | 52 | 50 | 49 | 48 | 48 | 47 | 46 | 43 | |
| 2 | 49 | 46 | 43 | 41 | 48 | 45 | 43 | 41 | 44 | 42 | 40 | 37 | |
| 3 | 46 | 41 | 38 | 35 | 44 | 41 | 37 | 35 | 39 | 37 | 34 | 32 | |
| 4 | 42 | 37 | 33 | 31 | 41 | 36 | 33 | 30 | 35 | 32 | 30 | 28 | |
| 5 | 39 | 33 | 29 | 27 | 38 | 33 | 29 | 27 | 32 | 29 | 26 | 25 | |
| 6 | 36 | 30 | 26 | 23 | 35 | 30 | 26 | 23 | 29 | 26 | 23 | 22 | |
| 7 | 33 | 27 | 24 | 21 | 33 | 27 | 23 | 21 | 26 | 23 | 21 | 19 | |
| 8 | 31 | 25 | 21 | 19 | 30 | 25 | 21 | 19 | 24 | 21 | 19 | 17 | |
| 9 | 29 | 23 | 19 | 17 | 28 | 23 | 19 | 17 | 22 | 19 | 17 | 16 | |
| 10 | 27 | 21 | 18 | 15 | 27 | 21 | 18 | 15 | 21 | 17 | 15 | 14 | |

RCR = Room Cavity Ratio
RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

INDOOR CANDELA PLOT



LUMINAIRE DATA

| | |
|------------------------|---|
| Luminaire | HV22-M400-LD44 HH/HV HID 2 x 2 with 4 x 4 cell semi-specular louver, clear glass overlay and baked white enamel reflector |
| Ballast | N/A |
| Ballast Factor | 1.00 |
| Lamp | M400/C |
| Lumens per Lamp | 36000 |
| Watts | 458 |
| Spacing Criterion | 0° = 1.28 90° = 1.26 |
| Luminous Opening in Ft | Length: 1.77 Width: 1.77 Height: 0.00 |

AVG. LUMINANCE (Candela/Sq. M.)

| Average Luminance Angle | 0.0 | 22.5 | 45.0 | 67.5 | 90.0 |
|-------------------------|-------|-------|-------|-------|-------|
| 0 | 26002 | 26002 | 26002 | 26002 | 26002 |
| 30 | 26236 | 27104 | 28362 | 26763 | 25648 |
| 40 | 24825 | 25587 | 24906 | 27198 | 25664 |
| 45 | 23284 | 24460 | 23420 | 27074 | 24435 |
| 50 | 19253 | 20910 | 21883 | 23037 | 20237 |
| 55 | 13765 | 14280 | 17713 | 15622 | 14574 |
| 60 | 4851 | 6913 | 10191 | 8754 | 8266 |
| 65 | 2041 | 2577 | 3536 | 3439 | 2919 |
| 70 | 1457 | 1808 | 1929 | 1949 | 1678 |
| 75 | 1142 | 1434 | 1500 | 1434 | 1181 |
| 80 | 970 | 1227 | 1227 | 1128 | 930 |
| 85 | 788 | 986 | 986 | 867 | 670 |

ZONAL LUMEN SUMMARY

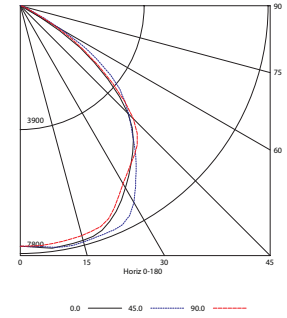
| Zone | Lumens | Lamp | Fixt. |
|-------|--------|------|-------|
| 0-30 | 6250 | 17.4 | 36.9 |
| 0-40 | 10171 | 28.3 | 60.0 |
| 0-60 | 16332 | 45.4 | 96.3 |
| 0-90 | 16953 | 47.1 | 100.0 |
| 0-180 | 16953 | 47.1 | 100.0 |

COEFFICIENTS OF UTILIZATION (%)

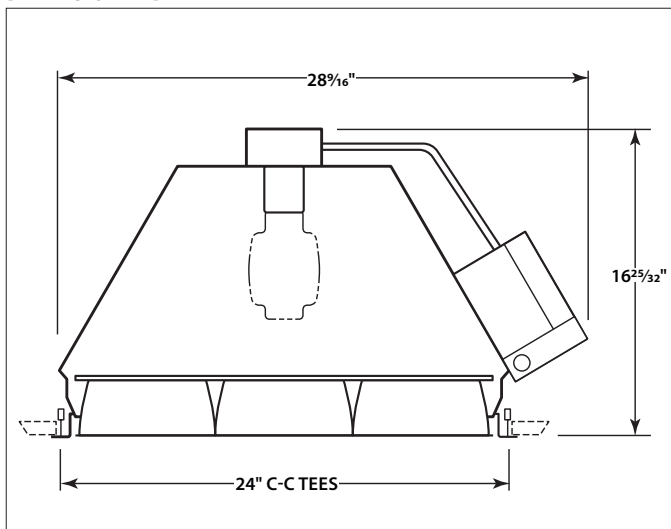
| RCR | 80 | | | | 70 | | | | 50 | | | | 0 |
|-----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| | RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 1 | 53 | 51 | 49 | 48 | 51 | 50 | 48 | 47 | 48 | 47 | 46 | 42 | |
| 2 | 49 | 46 | 43 | 41 | 48 | 45 | 43 | 41 | 43 | 41 | 40 | 37 | |
| 3 | 45 | 41 | 38 | 35 | 44 | 40 | 38 | 35 | 39 | 37 | 35 | 33 | |
| 4 | 42 | 37 | 34 | 31 | 41 | 36 | 33 | 31 | 35 | 33 | 30 | 29 | |
| 5 | 39 | 34 | 30 | 27 | 38 | 33 | 30 | 27 | 32 | 29 | 27 | 25 | |
| 6 | 36 | 30 | 27 | 24 | 35 | 30 | 27 | 24 | 29 | 26 | 24 | 23 | |
| 7 | 34 | 28 | 24 | 22 | 33 | 27 | 24 | 21 | 27 | 24 | 21 | 20 | |
| 8 | 31 | 26 | 22 | 19 | 31 | 25 | 22 | 19 | 25 | 21 | 19 | 18 | |
| 9 | 29 | 23 | 20 | 18 | 29 | 23 | 20 | 17 | 23 | 20 | 17 | 16 | |
| 10 | 27 | 22 | 18 | 16 | 27 | 21 | 18 | 16 | 21 | 18 | 16 | 15 | |

RCR = Room Cavity Ratio
RC = Effective Ceiling Cavity Reflectance RW = Wall Reflectance

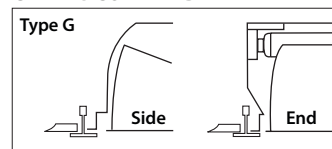
INDOOR CANDELA PLOT



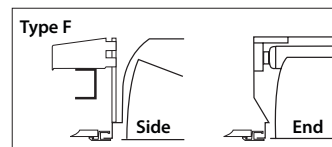
DIMENSIONAL DATA



CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For tile, plaster or plasterboard type ceilings. Overlapping extruded aluminum trim conceals edges of ceiling opening. Wing hanger suspension system included. For row mounting, row information is required.