

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number: P366709

Luminaire Tested: **MSA-SA1A-830-U-5MQ**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366709
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-6)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-830-U-5MQ
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3459 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short
BUG Rating: B2 - U0 - G1

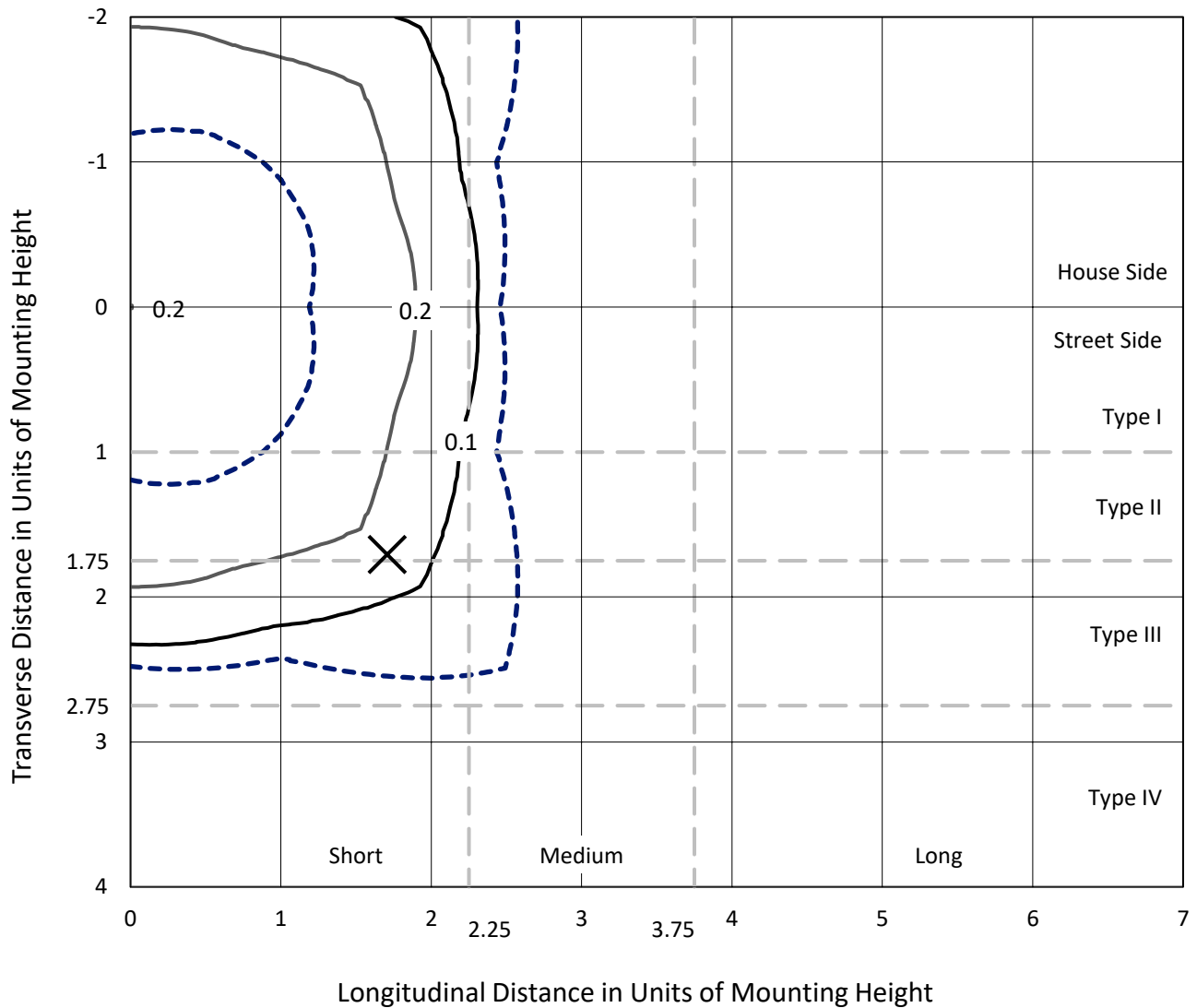
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

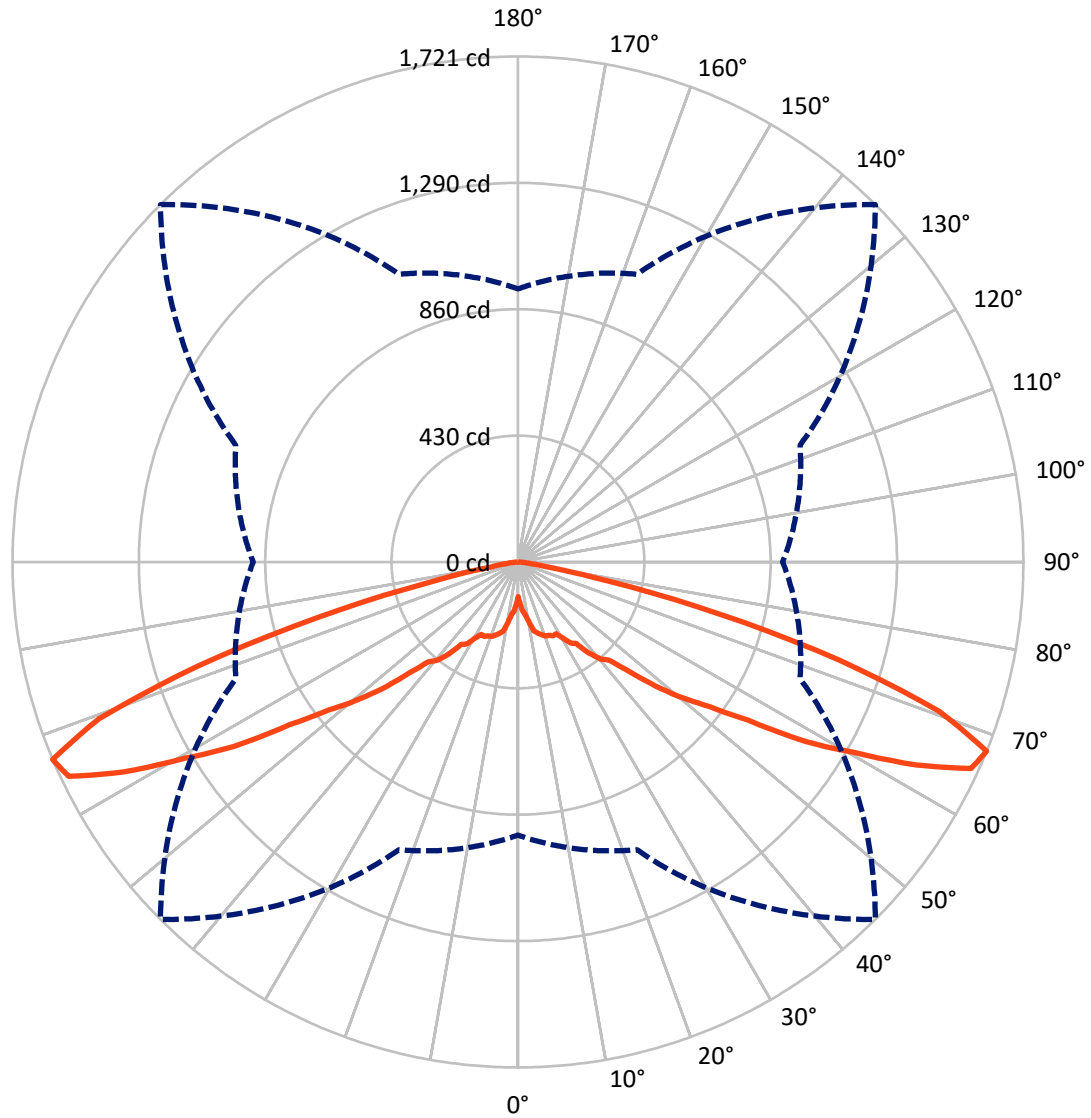
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.4 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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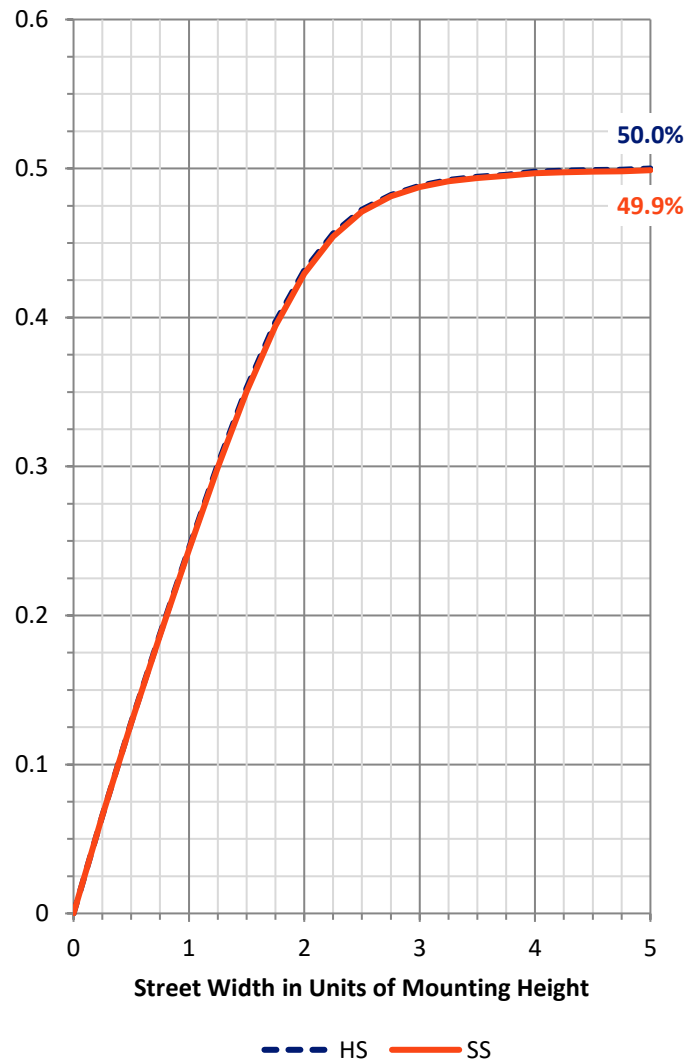
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1729.5 | 0.0 | 1729.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 1729.5 | 0.0 | 1729.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 3459.0 | 0.0 | 3459.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 17.7 | 0.5 |
| 10°-20° | 69.9 | 2.0 |
| 20°-30° | 133.3 | 3.9 |
| 30°-40° | 243.8 | 7.0 |
| 40°-50° | 472.7 | 13.7 |
| 50°-60° | 902.7 | 26.1 |
| 60°-70° | 1219.7 | 35.3 |
| 70°-80° | 378.8 | 11.0 |
| 80°-90° | 20.4 | 0.6 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-90° | 3459.0 | 100.0 |
| 0°-180° | 3459.0 | 100.0 |



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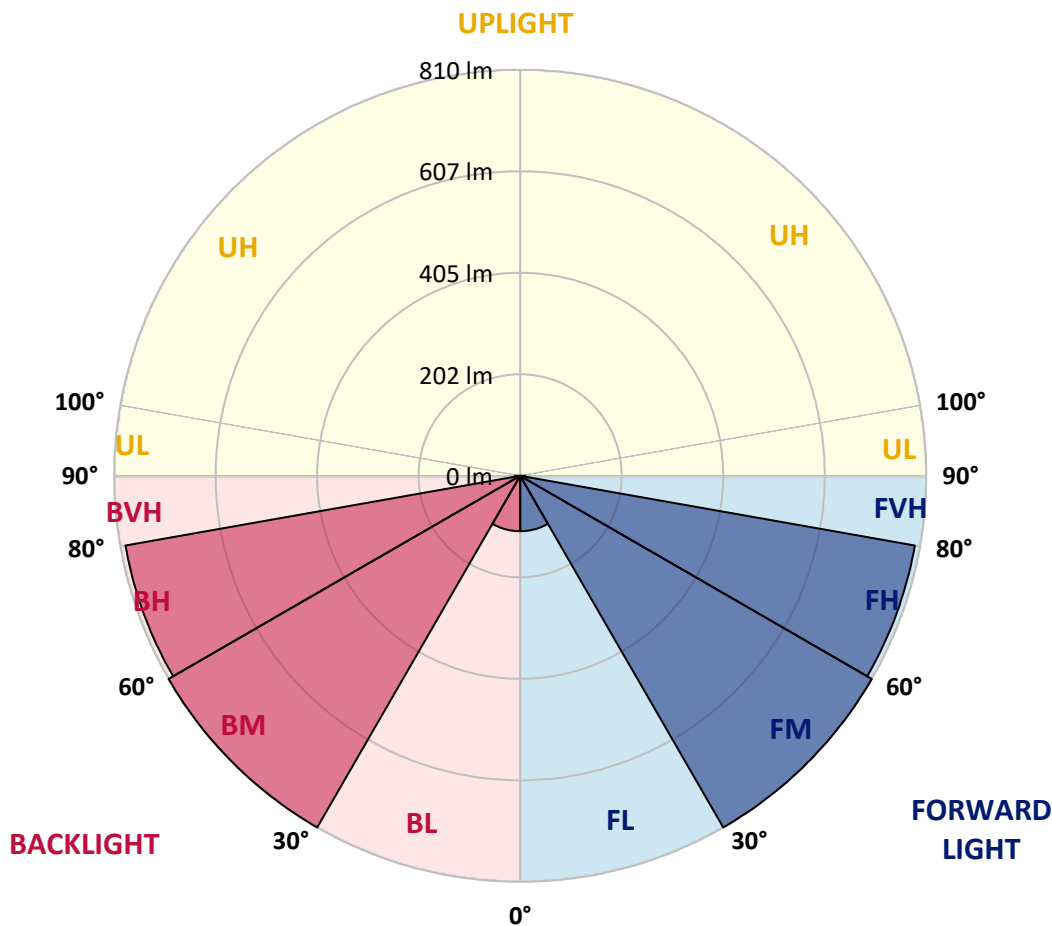
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 110.5 | 3.2 | | | |
| FM (30°-60°) | 809.6 | 23.4 | | | |
| FH (60°-80°) | 799.2 | 23.1 | | | G1/1800 |
| FVH (80°-90°) | 10.2 | 0.3 | | | G1/100 |
| BL (0°-30°) | 110.5 | 3.2 | B1/500 | | |
| BM (30°-60°) | 809.6 | 23.4 | B1/1000 | | |
| BH (60°-80°) | 799.2 | 23.1 | B2/1000 | | G1/1800 |
| BVH (80°-90°) | 10.2 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 118.5 | 118.5 | 118.5 | 118.5 | 118.5 |
| 2.5° | 145.9 | 136.6 | 140.8 | 136.6 | 145.9 |
| 5° | 185.5 | 175.7 | 167.2 | 173.3 | 186.0 |
| 7.5° | 213.1 | 198.6 | 180.5 | 197.0 | 211.9 |
| 10° | 217.8 | 209.7 | 208.9 | 208.7 | 217.3 |
| 12.5° | 235.3 | 229.8 | 240.8 | 230.4 | 235.9 |
| 15° | 249.0 | 245.9 | 250.8 | 249.8 | 249.5 |
| 17.5° | 270.1 | 249.2 | 260.4 | 248.0 | 269.4 |
| 20° | 279.4 | 249.9 | 268.7 | 248.4 | 279.3 |
| 22.5° | 290.9 | 265.7 | 271.3 | 266.3 | 289.8 |
| 25° | 297.5 | 275.8 | 277.8 | 276.1 | 297.6 |
| 27.5° | 324.3 | 298.3 | 276.9 | 301.9 | 329.3 |
| 30° | 344.8 | 312.8 | 298.8 | 313.2 | 347.3 |
| 32.5° | 374.3 | 334.6 | 329.1 | 340.0 | 379.0 |
| 35° | 410.9 | 371.2 | 340.5 | 371.4 | 418.7 |
| 37.5° | 482.7 | 404.5 | 393.7 | 416.3 | 488.0 |
| 40° | 533.3 | 457.0 | 433.9 | 465.4 | 542.0 |
| 42.5° | 611.1 | 516.0 | 457.3 | 520.2 | 624.5 |
| 45° | 683.5 | 587.4 | 531.9 | 592.4 | 693.3 |
| 47.5° | 760.1 | 653.1 | 632.2 | 659.2 | 767.3 |
| 50° | 850.6 | 741.9 | 727.4 | 748.9 | 853.6 |
| 52.5° | 957.3 | 860.9 | 817.8 | 864.9 | 958.4 |
| 55° | 1084.2 | 960.7 | 951.1 | 971.6 | 1085.8 |
| 57.5° | 1208.2 | 1090.0 | 1151.8 | 1091.2 | 1186.7 |
| 60° | 1296.6 | 1209.2 | 1316.8 | 1178.5 | 1248.9 |
| 62.5° | 1302.2 | 1297.6 | 1522.3 | 1245.4 | 1235.6 |
| 65° | 1180.9 | 1261.9 | 1694.5 | 1221.1 | 1121.6 |
| 67.5° | 929.5 | 1060.1 | 1720.5 | 1039.5 | 901.1 |
| 70° | 584.1 | 734.0 | 1521.0 | 762.2 | 600.7 |
| 72.5° | 269.4 | 395.6 | 1145.4 | 445.3 | 284.8 |
| 75° | 96.5 | 151.4 | 706.6 | 162.6 | 100.9 |
| 77.5° | 54.8 | 61.3 | 312.3 | 61.6 | 56.7 |
| 80° | 35.3 | 38.2 | 90.2 | 40.4 | 34.3 |
| 82.5° | 20.0 | 26.7 | 39.6 | 28.3 | 18.4 |
| 85° | 10.8 | 17.0 | 17.5 | 17.4 | 10.8 |
| 87.5° | 3.9 | 6.7 | 3.9 | 7.6 | 3.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)