

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: P368183

Luminaire Tested: **MSA-SA4A-727-U-5MQ**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368183
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-SA4A-727-U-5MQ
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13965 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B4 - U0 - G2

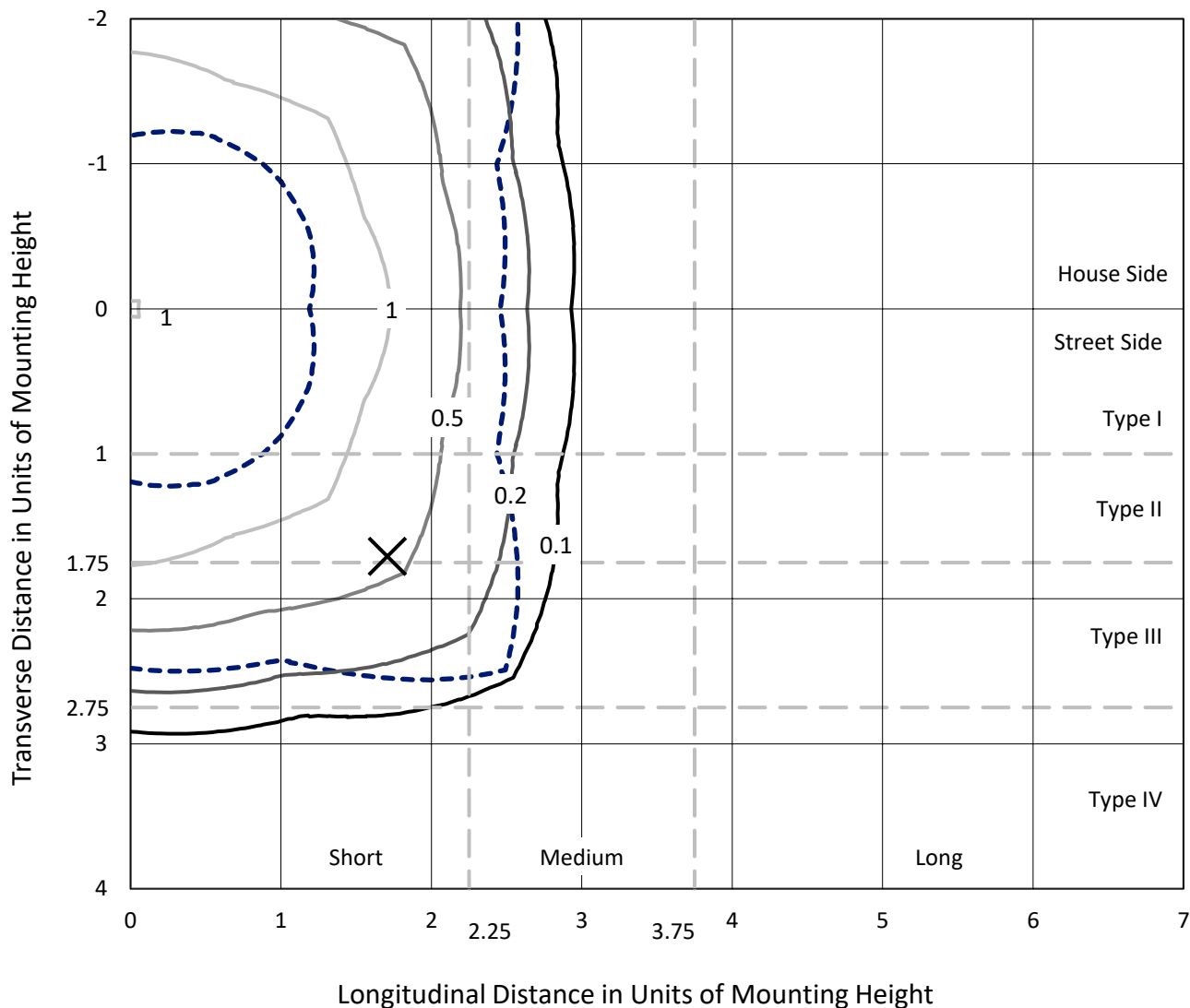
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

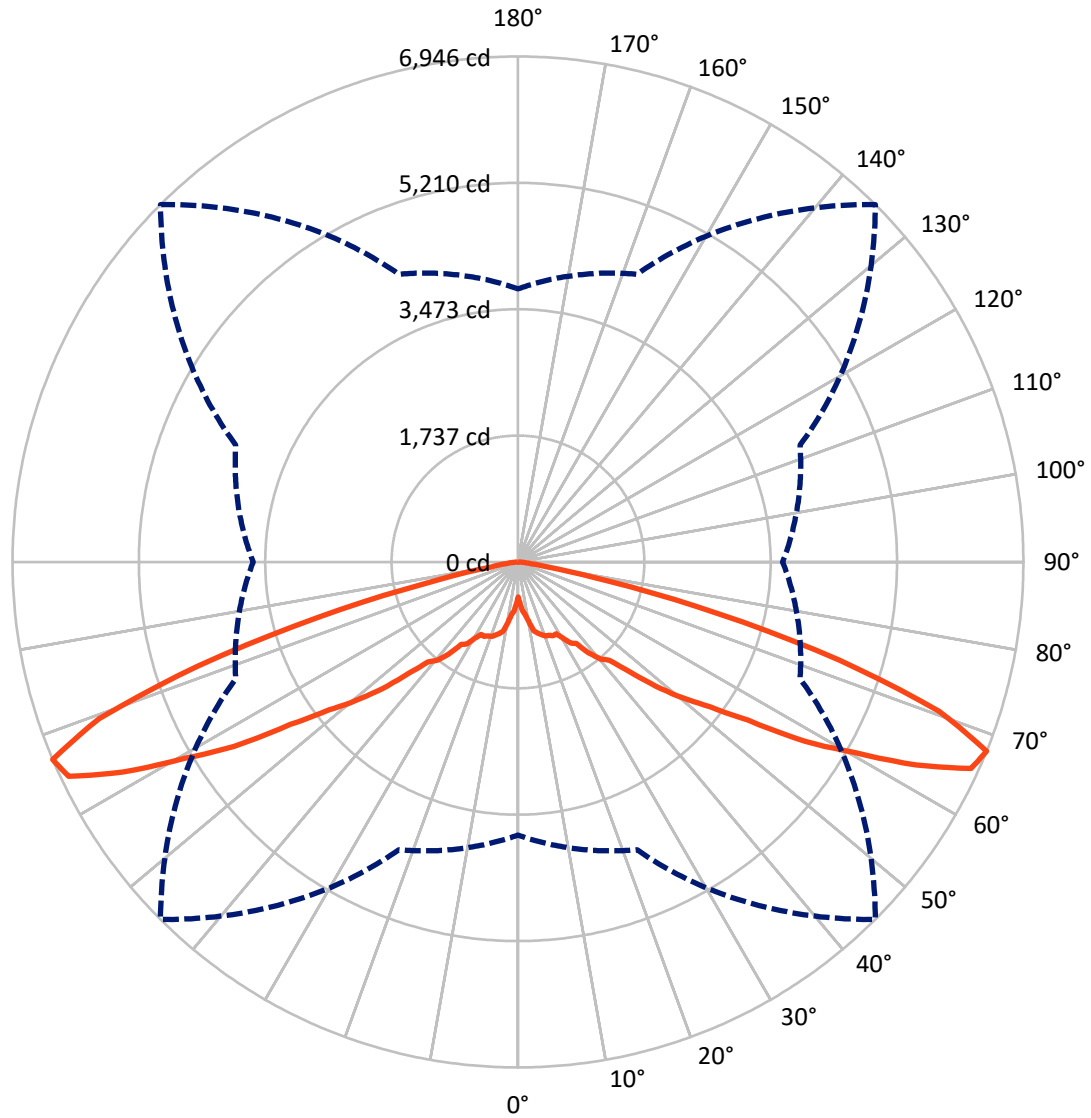
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 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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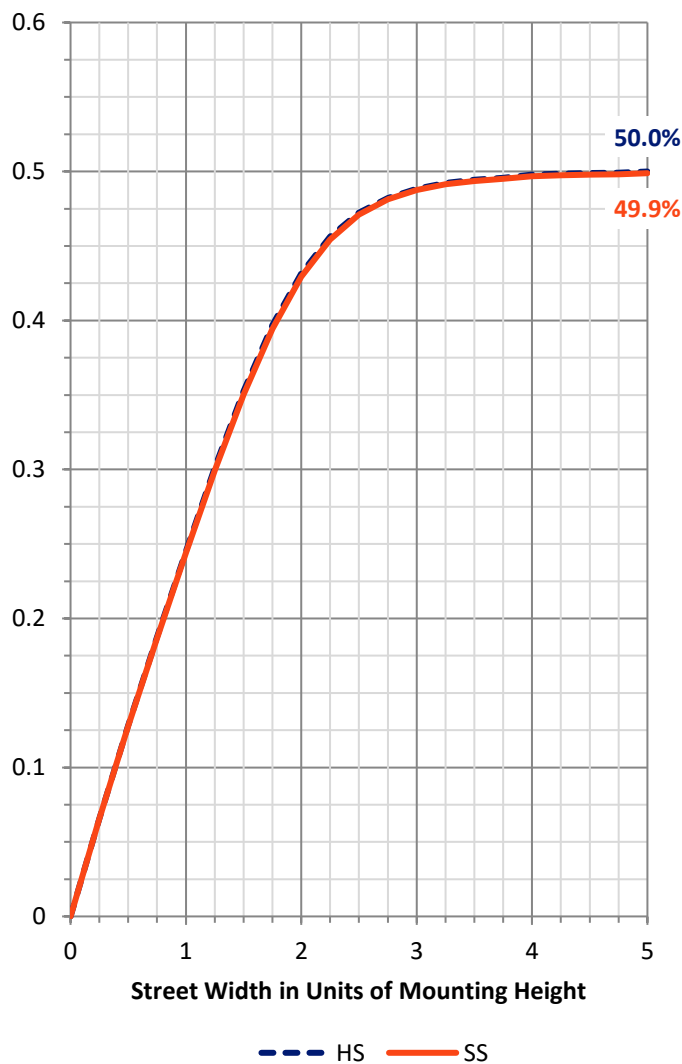
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 6982.5 | 0.0 | 6982.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 6982.5 | 0.0 | 6982.5 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 13965.0 | 0.0 | 13965.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 71.4 | 0.5 |
| 10°-20° | 282.2 | 2.0 |
| 20°-30° | 538.4 | 3.9 |
| 30°-40° | 984.3 | 7.0 |
| 40°-50° | 1908.5 | 13.7 |
| 50°-60° | 3644.5 | 26.1 |
| 60°-70° | 4924.1 | 35.3 |
| 70°-80° | 1529.3 | 11.0 |
| 80°-90° | 82.4 | 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° | 13965.0 | 100.0 |
| 0°-180° | 13965.0 | 100.0 |

Coefficient of Utilization

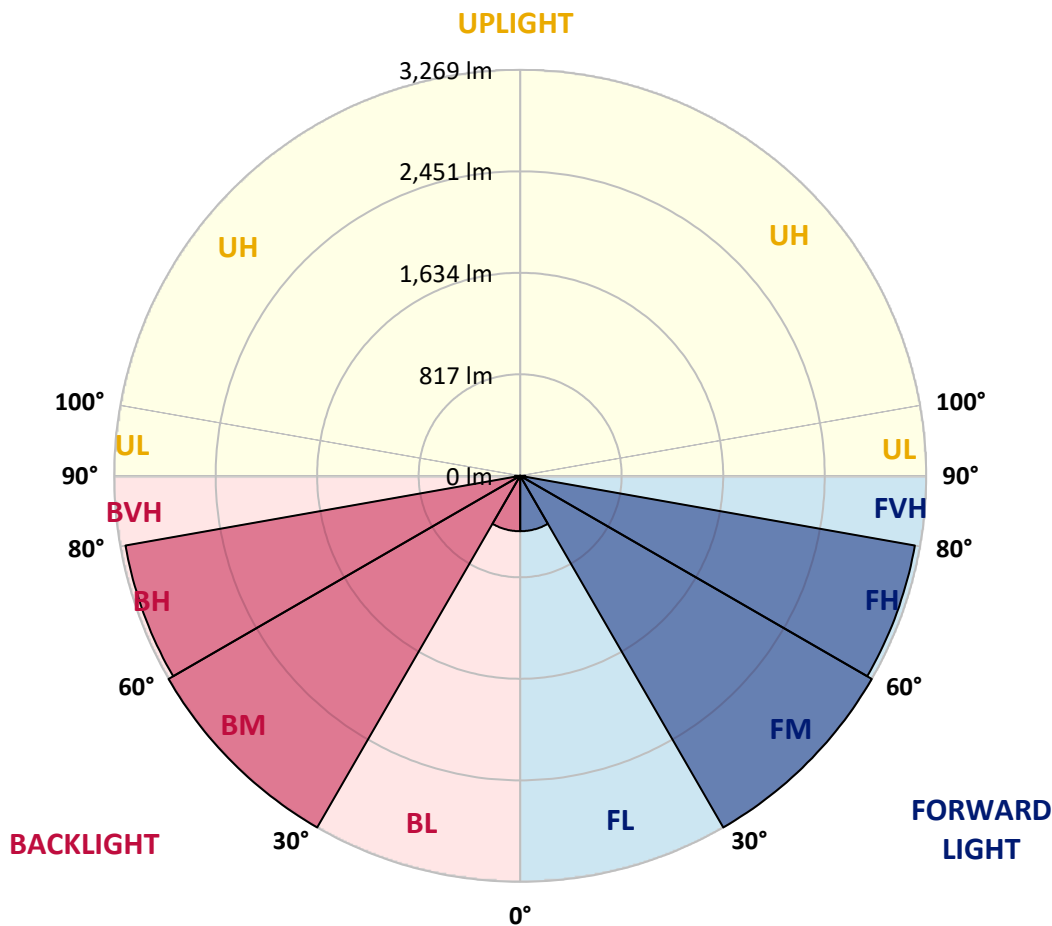


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 445.9 | 3.2 | | | |
| FM (30°-60°) | 3268.6 | 23.4 | | | |
| FH (60°-80°) | 3226.7 | 23.1 | | | G2/5000 |
| FVH (80°-90°) | 41.2 | 0.3 | | | G1/100 |
| BL (0°-30°) | 445.9 | 3.2 | B1/500 | | |
| BM (30°-60°) | 3268.6 | 23.4 | B3/5000 | | |
| BH (60°-80°) | 3226.7 | 23.1 | B4/5000 | | G2/5000 |
| BVH (80°-90°) | 41.2 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G2
 Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 478.5 | 478.5 | 478.5 | 478.5 | 478.5 |
| 2.5° | 589.1 | 551.4 | 568.6 | 551.4 | 589.1 |
| 5° | 748.8 | 709.5 | 674.9 | 699.7 | 751.0 |
| 7.5° | 860.5 | 801.7 | 728.9 | 795.2 | 855.7 |
| 10° | 879.4 | 846.5 | 843.3 | 842.7 | 877.2 |
| 12.5° | 950.1 | 928.0 | 972.2 | 930.1 | 952.2 |
| 15° | 1005.1 | 992.7 | 1012.7 | 1008.3 | 1007.3 |
| 17.5° | 1090.4 | 1006.2 | 1051.5 | 1001.3 | 1087.7 |
| 20° | 1128.1 | 1008.9 | 1085.0 | 1003.0 | 1127.6 |
| 22.5° | 1174.5 | 1072.5 | 1095.2 | 1075.2 | 1170.2 |
| 25° | 1201.0 | 1113.6 | 1121.6 | 1114.6 | 1201.5 |
| 27.5° | 1309.4 | 1204.2 | 1117.9 | 1218.8 | 1329.4 |
| 30° | 1391.9 | 1263.0 | 1206.3 | 1264.6 | 1402.2 |
| 32.5° | 1511.2 | 1350.9 | 1328.8 | 1372.5 | 1530.1 |
| 35° | 1659.0 | 1498.8 | 1374.7 | 1499.3 | 1690.3 |
| 37.5° | 1948.7 | 1633.1 | 1589.4 | 1680.6 | 1970.3 |
| 40° | 2153.2 | 1845.1 | 1751.8 | 1879.1 | 2188.3 |
| 42.5° | 2467.2 | 2083.1 | 1846.2 | 2100.3 | 2521.1 |
| 45° | 2759.6 | 2371.7 | 2147.3 | 2391.7 | 2799.0 |
| 47.5° | 3068.7 | 2636.6 | 2552.4 | 2661.4 | 3097.9 |
| 50° | 3434.0 | 2995.4 | 2936.6 | 3023.4 | 3446.4 |
| 52.5° | 3865.1 | 3475.5 | 3301.8 | 3491.7 | 3869.4 |
| 55° | 4377.1 | 3878.5 | 3839.7 | 3922.8 | 4383.5 |
| 57.5° | 4877.7 | 4400.8 | 4650.0 | 4405.6 | 4790.9 |
| 60° | 5234.9 | 4882.0 | 5316.3 | 4757.9 | 5042.3 |
| 62.5° | 5257.5 | 5238.6 | 6146.1 | 5028.2 | 4988.3 |
| 65° | 4767.7 | 5094.6 | 6841.0 | 4930.0 | 4528.1 |
| 67.5° | 3752.8 | 4279.9 | 6946.2 | 4196.9 | 3637.9 |
| 70° | 2358.2 | 2963.5 | 6140.7 | 3077.4 | 2425.1 |
| 72.5° | 1087.7 | 1597.0 | 4624.1 | 1797.6 | 1149.7 |
| 75° | 389.5 | 611.3 | 2852.9 | 656.6 | 407.3 |
| 77.5° | 221.2 | 247.6 | 1260.8 | 248.7 | 228.8 |
| 80° | 142.4 | 154.3 | 364.2 | 162.9 | 138.7 |
| 82.5° | 80.9 | 107.9 | 159.7 | 114.4 | 74.5 |
| 85° | 43.7 | 68.5 | 70.7 | 70.1 | 43.7 |
| 87.5° | 15.6 | 27.0 | 15.6 | 30.8 | 14.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)