

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: P367655

Luminaire Tested: **MSA-SA3A-727-U-5MQ**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367655
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-SA3A-727-U-5MQ
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10566 lumens
Efficiency: N/A
Efficacy: 110.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B3 - U0 - G2

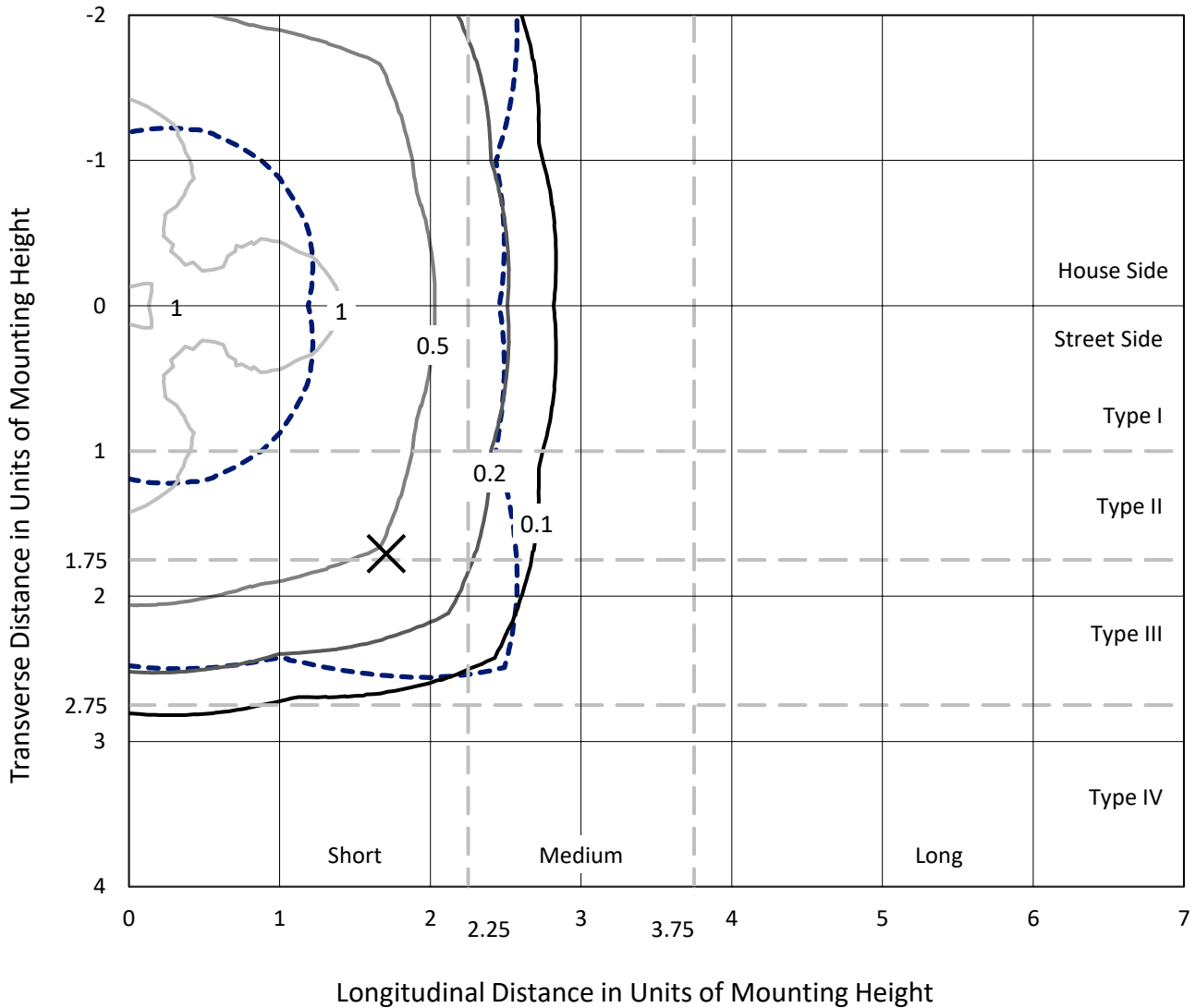
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

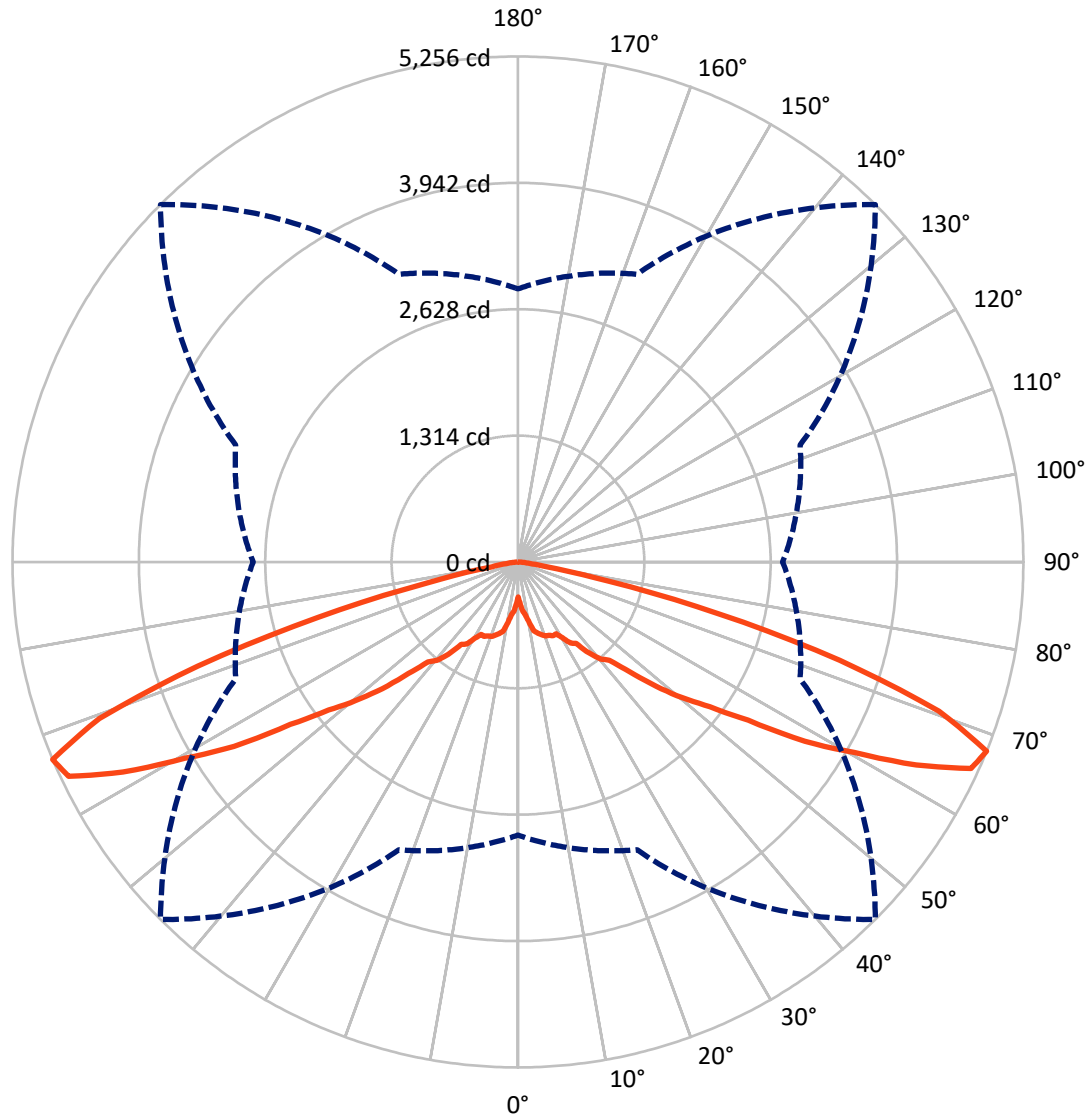
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type V - Short - N/A

REPORT NUMBER: P367655
CATALOG NUMBER: MSA-SA3A-727-U-5MQ

Luminous Intensity Polar Plot



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

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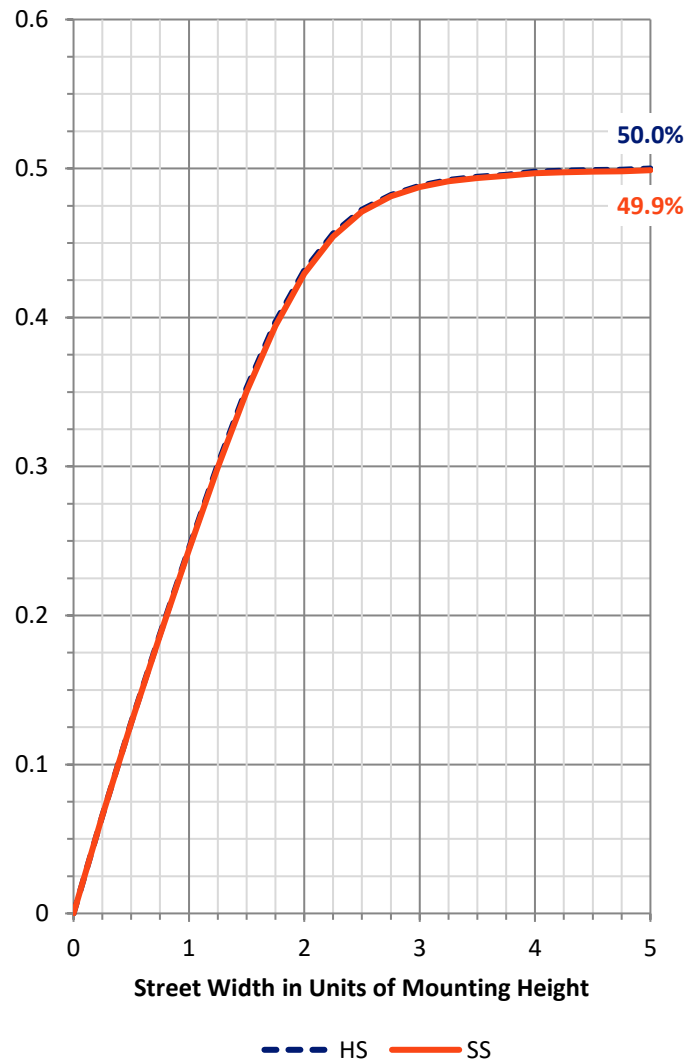
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 5283.0 | 0.0 | 5283.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 5283.0 | 0.0 | 5283.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 10566.0 | 0.0 | 10566.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 54.0 | 0.5 |
| 10°-20° | 213.5 | 2.0 |
| 20°-30° | 407.3 | 3.9 |
| 30°-40° | 744.7 | 7.0 |
| 40°-50° | 1444.0 | 13.7 |
| 50°-60° | 2757.5 | 26.1 |
| 60°-70° | 3725.6 | 35.3 |
| 70°-80° | 1157.1 | 11.0 |
| 80°-90° | 62.3 | 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° | 10566.0 | 100.0 |
| 0°-180° | 10566.0 | 100.0 |



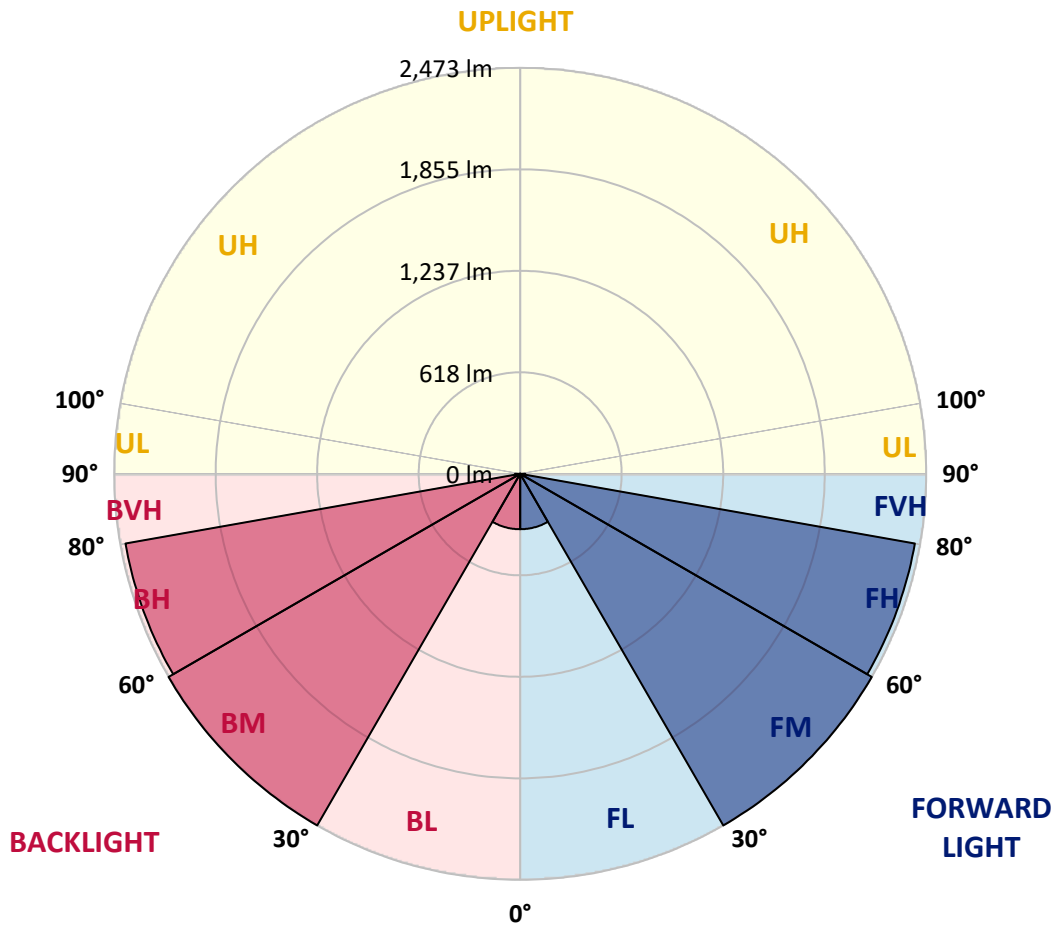
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 337.4 | 3.2 | | | |
| FM (30°-60°) | 2473.1 | 23.4 | | | |
| FH (60°-80°) | 2441.4 | 23.1 | | | G2/5000 |
| FVH (80°-90°) | 31.2 | 0.3 | | | G1/100 |
| BL (0°-30°) | 337.4 | 3.2 | B1/500 | | |
| BM (30°-60°) | 2473.1 | 23.4 | B2/2500 | | |
| BH (60°-80°) | 2441.4 | 23.1 | B3/2500 | | G2/5000 |
| BVH (80°-90°) | 31.2 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 362.1 | 362.1 | 362.1 | 362.1 | 362.1 |
| 2.5° | 445.8 | 417.2 | 430.2 | 417.2 | 445.8 |
| 5° | 566.6 | 536.8 | 510.7 | 529.4 | 568.2 |
| 7.5° | 651.1 | 606.6 | 551.5 | 601.7 | 647.4 |
| 10° | 665.4 | 640.5 | 638.0 | 637.6 | 663.7 |
| 12.5° | 718.8 | 702.1 | 735.6 | 703.7 | 720.5 |
| 15° | 760.5 | 751.1 | 766.2 | 762.9 | 762.1 |
| 17.5° | 825.0 | 761.3 | 795.6 | 757.6 | 822.9 |
| 20° | 853.5 | 763.3 | 820.9 | 758.8 | 853.1 |
| 22.5° | 888.6 | 811.5 | 828.6 | 813.5 | 885.4 |
| 25° | 908.6 | 842.5 | 848.6 | 843.3 | 909.1 |
| 27.5° | 990.7 | 911.1 | 845.8 | 922.1 | 1005.8 |
| 30° | 1053.1 | 955.6 | 912.7 | 956.8 | 1060.9 |
| 32.5° | 1143.4 | 1022.1 | 1005.4 | 1038.5 | 1157.6 |
| 35° | 1255.2 | 1134.0 | 1040.1 | 1134.4 | 1278.9 |
| 37.5° | 1474.4 | 1235.6 | 1202.5 | 1271.5 | 1490.7 |
| 40° | 1629.1 | 1396.0 | 1325.4 | 1421.8 | 1655.6 |
| 42.5° | 1866.7 | 1576.0 | 1396.9 | 1589.1 | 1907.5 |
| 45° | 2087.9 | 1794.4 | 1624.6 | 1809.5 | 2117.7 |
| 47.5° | 2321.8 | 1994.9 | 1931.2 | 2013.6 | 2343.9 |
| 50° | 2598.2 | 2266.3 | 2221.8 | 2287.5 | 2607.6 |
| 52.5° | 2924.3 | 2629.6 | 2498.2 | 2641.9 | 2927.6 |
| 55° | 3311.7 | 2934.5 | 2905.1 | 2968.0 | 3316.6 |
| 57.5° | 3690.5 | 3329.7 | 3518.2 | 3333.3 | 3624.8 |
| 60° | 3960.7 | 3693.8 | 4022.4 | 3599.9 | 3815.0 |
| 62.5° | 3977.9 | 3963.6 | 4650.2 | 3804.4 | 3774.2 |
| 65° | 3607.2 | 3854.6 | 5175.9 | 3730.1 | 3426.0 |
| 67.5° | 2839.4 | 3238.2 | 5255.5 | 3175.4 | 2752.5 |
| 70° | 1784.2 | 2242.2 | 4646.1 | 2328.4 | 1834.8 |
| 72.5° | 822.9 | 1208.3 | 3498.7 | 1360.1 | 869.9 |
| 75° | 294.7 | 462.5 | 2158.5 | 496.8 | 308.2 |
| 77.5° | 167.4 | 187.4 | 954.0 | 188.2 | 173.1 |
| 80° | 107.8 | 116.7 | 275.5 | 123.3 | 104.9 |
| 82.5° | 61.2 | 81.6 | 120.8 | 86.5 | 56.3 |
| 85° | 33.1 | 51.8 | 53.5 | 53.1 | 33.1 |
| 87.5° | 11.8 | 20.4 | 11.8 | 23.3 | 11.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)