

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: P368359

Luminaire Tested: **MSA-SA4B-740-U-5MQ**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368359  
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-SA4B-740-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: 20927 lumens  
Efficiency: N/A  
Efficacy: 122.4 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): 171  
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: 24 FT

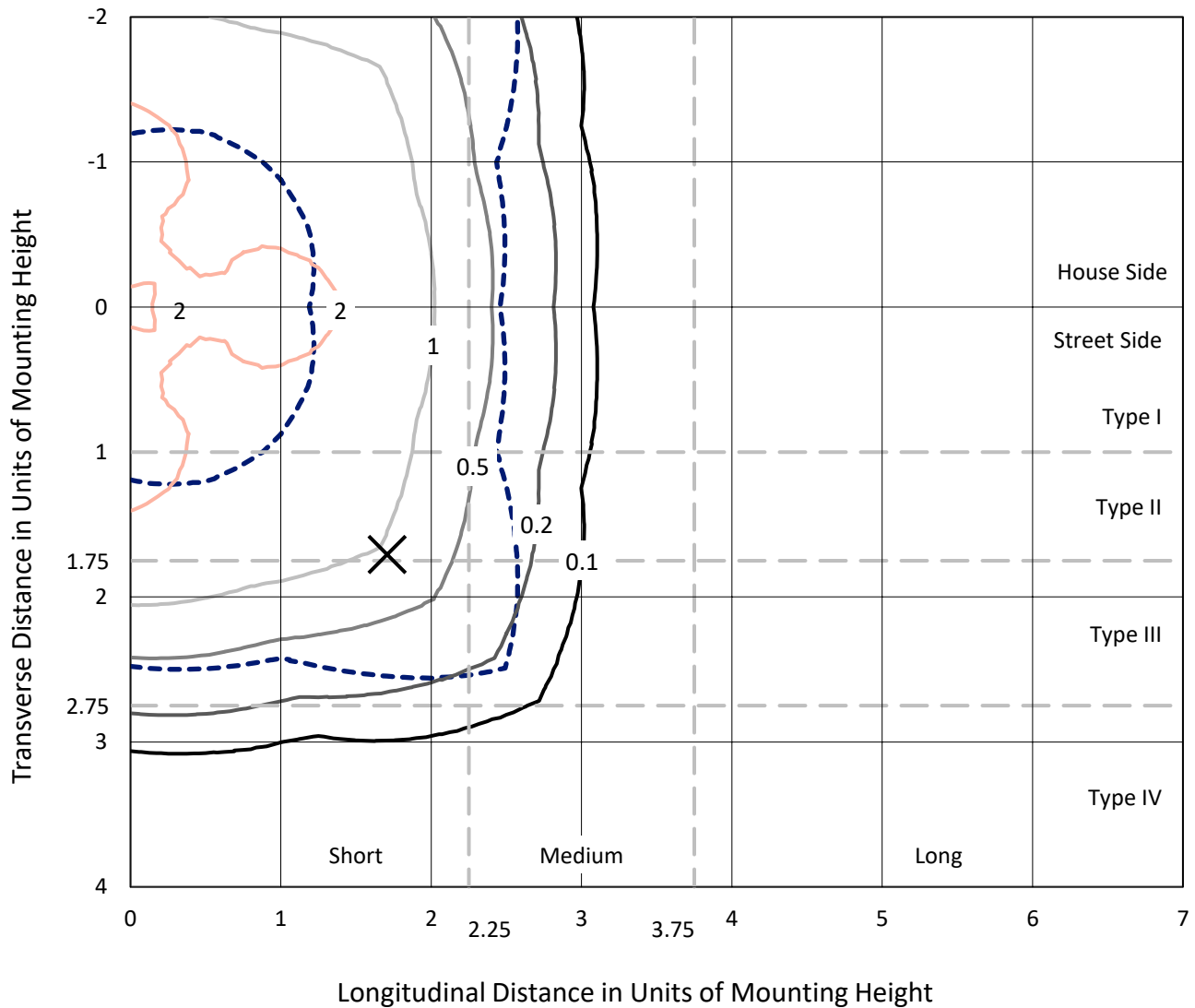


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## Iso-Footcandle Lines of Horizontal Illumination

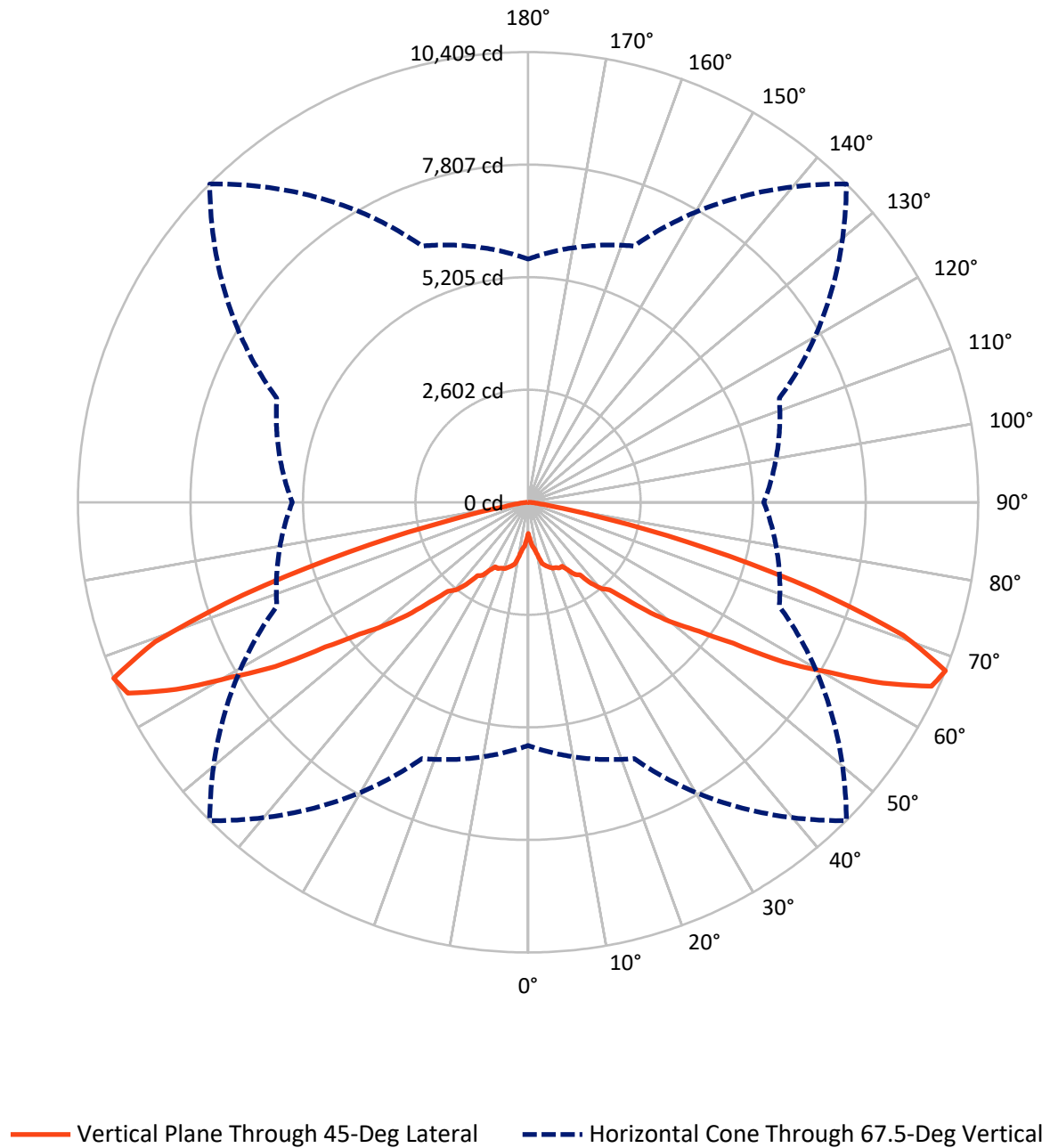
✕ Max cd  
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
Type V - Short - N/A

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## Luminous Intensity Polar Plot



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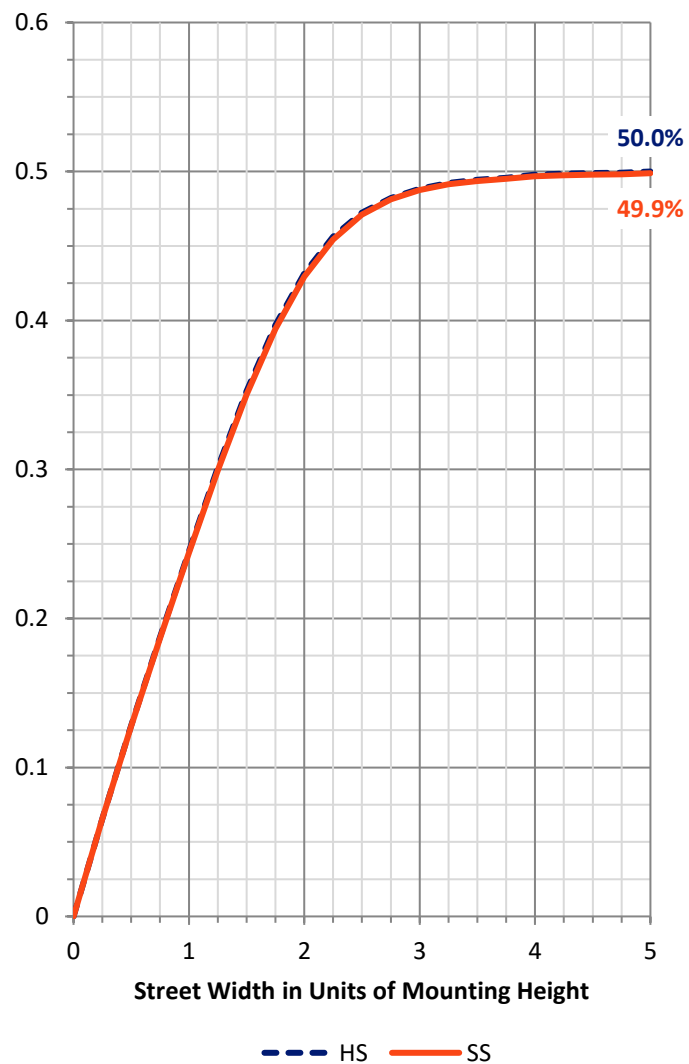
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 10463.5  | 0.0    | 10463.5 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 10463.5  | 0.0    | 10463.5 |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 20927.0  | 0.0    | 20927.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 106.9   | 0.5       |
| 10°-20°   | 422.8   | 2.0       |
| 20°-30°   | 806.7   | 3.9       |
| 30°-40°   | 1475.0  | 7.0       |
| 40°-50°   | 2859.9  | 13.7      |
| 50°-60°   | 5461.5  | 26.1      |
| 60°-70°   | 7379.0  | 35.3      |
| 70°-80°   | 2291.7  | 11.0      |
| 80°-90°   | 123.5   | 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°    | 20927.0 | 100.0     |
| 0°-180°   | 20927.0 | 100.0     |

**Coefficient of Utilization**



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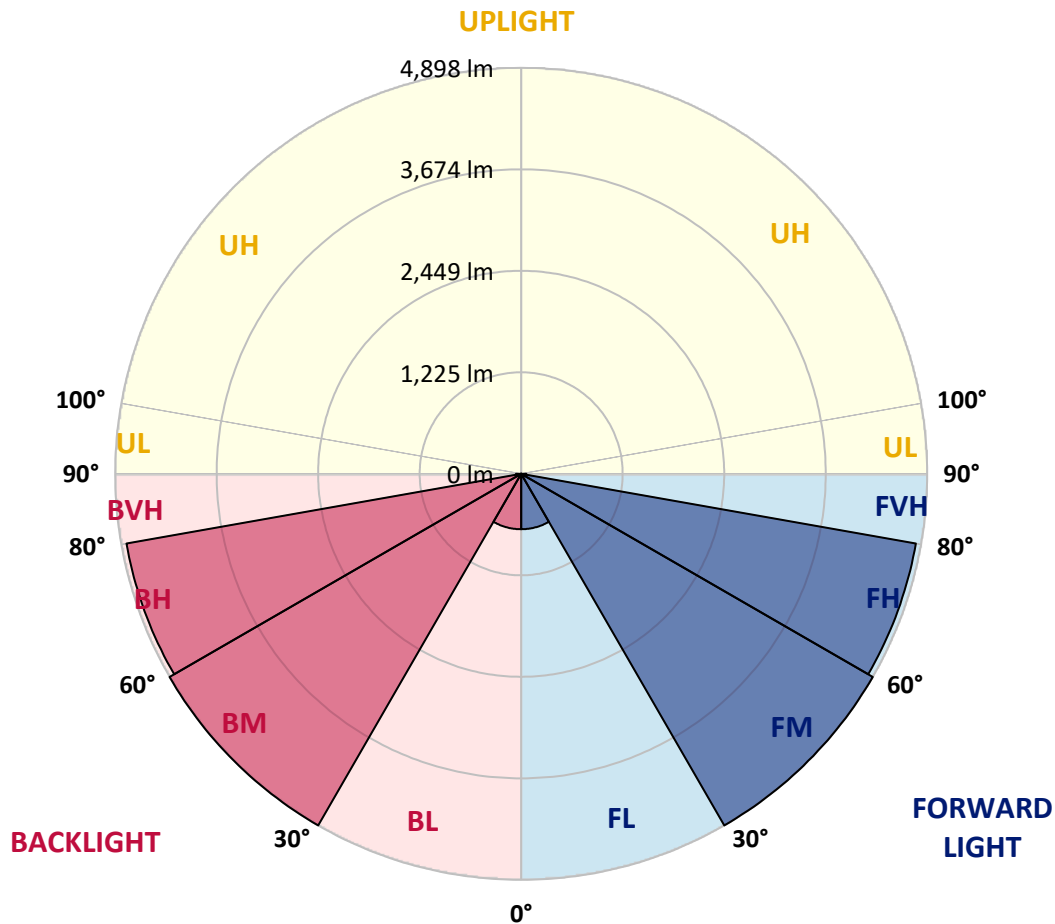
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 668.3  | 3.2       |                         |      |         |
| FM   | (30°-60°)   | 4898.2 | 23.4      |                         |      |         |
| FH   | (60°-80°)   | 4835.3 | 23.1      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 61.7   | 0.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 668.3  | 3.2       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 4898.2 | 23.4      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 4835.3 | 23.1      | B4/5000                 |      | G2/5000 |
| BVH  | (80°-90°)   | 61.7   | 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°    | 717.1  | 717.1  | 717.1   | 717.1  | 717.1  |
| 2.5°  | 882.9  | 826.3  | 852.1   | 826.3  | 882.9  |
| 5°    | 1122.2 | 1063.1 | 1011.4  | 1048.6 | 1125.4 |
| 7.5°  | 1289.5 | 1201.4 | 1092.2  | 1191.7 | 1282.2 |
| 10°   | 1317.8 | 1268.5 | 1263.6  | 1262.8 | 1314.6 |
| 12.5° | 1423.7 | 1390.6 | 1456.9  | 1393.8 | 1427.0 |
| 15°   | 1506.2 | 1487.6 | 1517.5  | 1511.0 | 1509.4 |
| 17.5° | 1633.9 | 1507.8 | 1575.7  | 1500.5 | 1629.9 |
| 20°   | 1690.5 | 1511.8 | 1625.8  | 1503.0 | 1689.7 |
| 22.5° | 1760.0 | 1607.2 | 1641.2  | 1611.3 | 1753.6 |
| 25°   | 1799.7 | 1668.7 | 1680.8  | 1670.3 | 1800.5 |
| 27.5° | 1962.2 | 1804.5 | 1675.2  | 1826.3 | 1992.1 |
| 30°   | 2085.9 | 1892.6 | 1807.7  | 1895.1 | 2101.2 |
| 32.5° | 2264.5 | 2024.4 | 1991.3  | 2056.8 | 2292.8 |
| 35°   | 2486.1 | 2245.9 | 2060.0  | 2246.7 | 2532.9 |
| 37.5° | 2920.2 | 2447.3 | 2381.8  | 2518.4 | 2952.5 |
| 40°   | 3226.6 | 2765.0 | 2625.1  | 2815.9 | 3279.2 |
| 42.5° | 3697.2 | 3121.5 | 2766.6  | 3147.4 | 3778.0 |
| 45°   | 4135.3 | 3554.1 | 3217.7  | 3584.0 | 4194.4 |
| 47.5° | 4598.6 | 3951.0 | 3824.9  | 3988.2 | 4642.3 |
| 50°   | 5145.9 | 4488.6 | 4400.5  | 4530.7 | 5164.5 |
| 52.5° | 5791.9 | 5208.2 | 4947.9  | 5232.4 | 5798.4 |
| 55°   | 6559.2 | 5812.1 | 5753.9  | 5878.4 | 6568.9 |
| 57.5° | 7309.4 | 6594.7 | 6968.2  | 6602.0 | 7179.3 |
| 60°   | 7844.6 | 7315.9 | 7966.7  | 7129.9 | 7556.0 |
| 62.5° | 7878.6 | 7850.3 | 9210.1  | 7535.0 | 7475.2 |
| 65°   | 7144.5 | 7634.4 | 10251.5 | 7387.8 | 6785.5 |
| 67.5° | 5623.7 | 6413.6 | 10409.1 | 6289.1 | 5451.5 |
| 70°   | 3533.8 | 4440.9 | 9202.1  | 4611.5 | 3634.1 |
| 72.5° | 1629.9 | 2393.1 | 6929.4  | 2693.8 | 1722.9 |
| 75°   | 583.7  | 916.0  | 4275.2  | 983.9  | 610.4  |
| 77.5° | 331.5  | 371.1  | 1889.4  | 372.7  | 342.8  |
| 80°   | 213.4  | 231.2  | 545.7   | 244.2  | 207.8  |
| 82.5° | 121.3  | 161.7  | 239.3   | 171.4  | 111.6  |
| 85°   | 65.5   | 102.7  | 105.9   | 105.1  | 65.5   |
| 87.5° | 23.4   | 40.4   | 23.4    | 46.1   | 21.8   |
| 90°   | 0.0    | 0.0    | 0.0     | 0.0    | 0.0    |

(END OF REPORT)