

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: P596651

Luminaire Tested: **MSA-SA3A-827-U-5MQ**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596651  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-6)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-827-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: 9288 lumens  
Efficiency: N/A  
Efficacy: 96.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B3 - U0 - G2

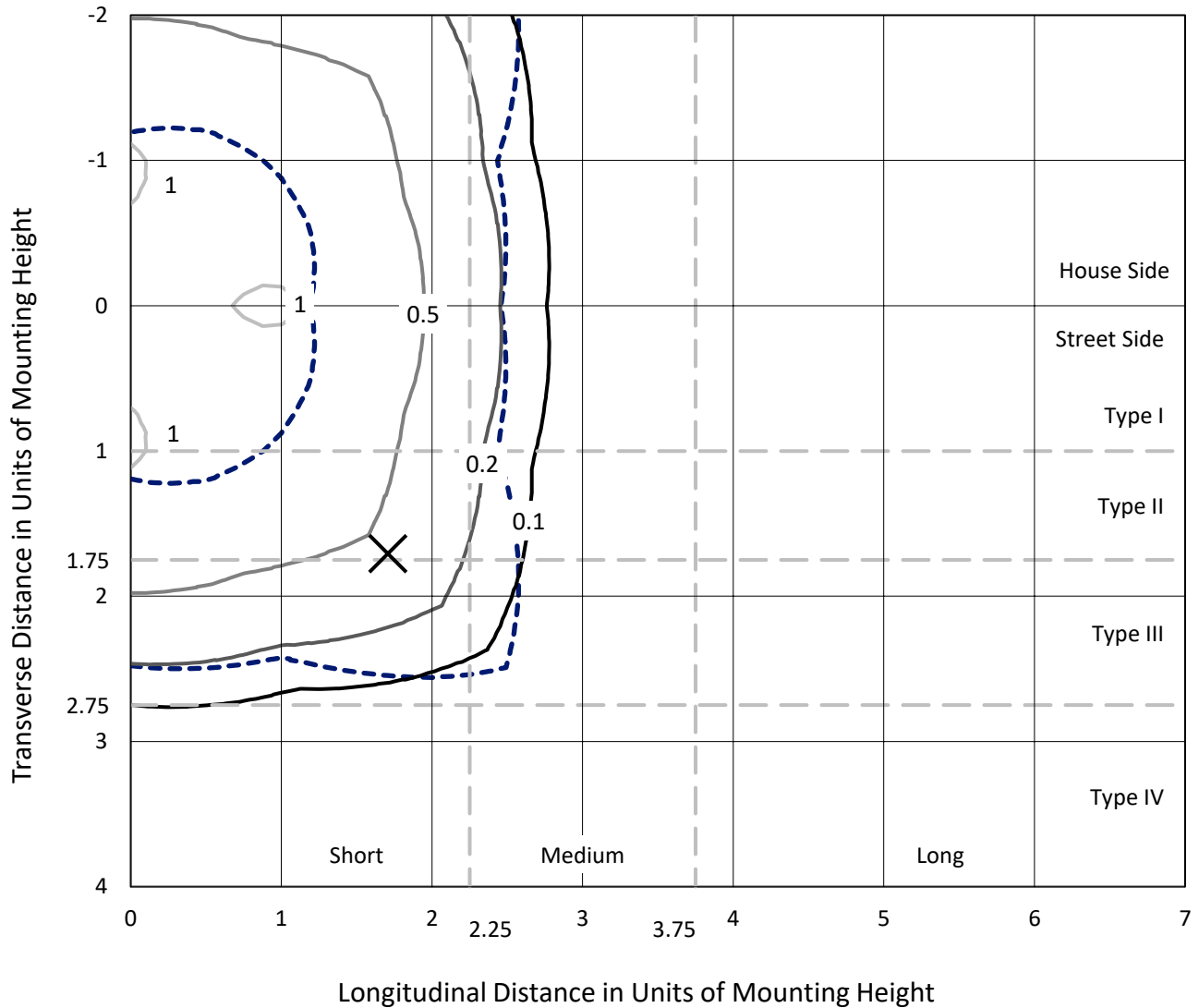
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

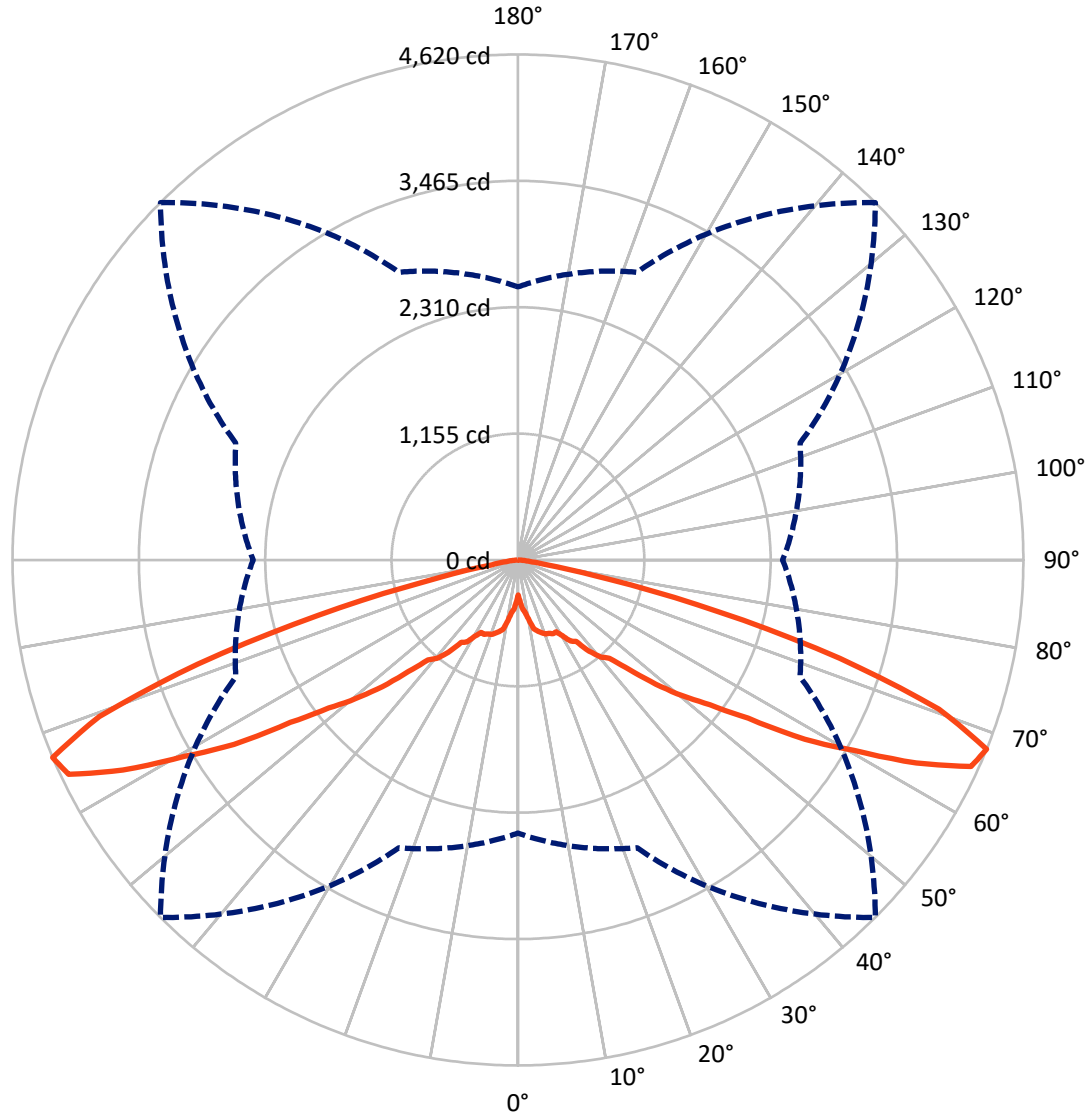
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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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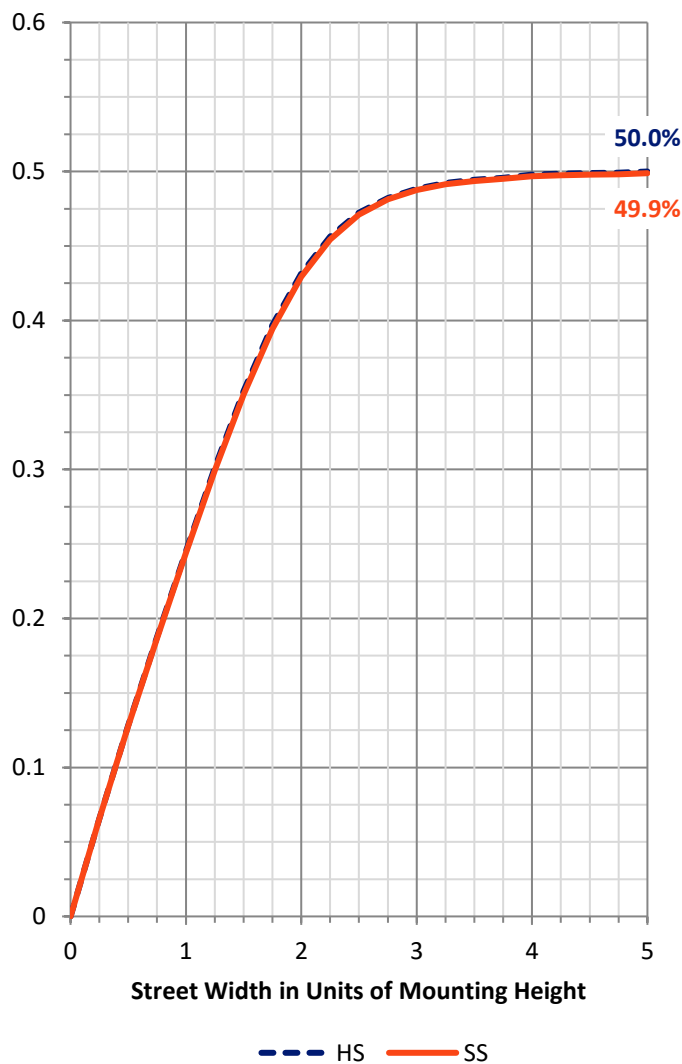
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 4644.0   | 0.0    | 4644.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Street Side</b> | Lumens    | 4644.0   | 0.0    | 4644.0 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Total</b>       | Lumens    | 9288.0   | 0.0    | 9288.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 47.5   | 0.5       |
| 10°-20°   | 187.7  | 2.0       |
| 20°-30°   | 358.1  | 3.9       |
| 30°-40°   | 654.6  | 7.0       |
| 40°-50°   | 1269.3 | 13.7      |
| 50°-60°   | 2423.9 | 26.1      |
| 60°-70°   | 3275.0 | 35.3      |
| 70°-80°   | 1017.1 | 11.0      |
| 80°-90°   | 54.8   | 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°    | 9288.0 | 100.0     |
| 0°-180°   | 9288.0 | 100.0     |

**Coefficient of Utilization**



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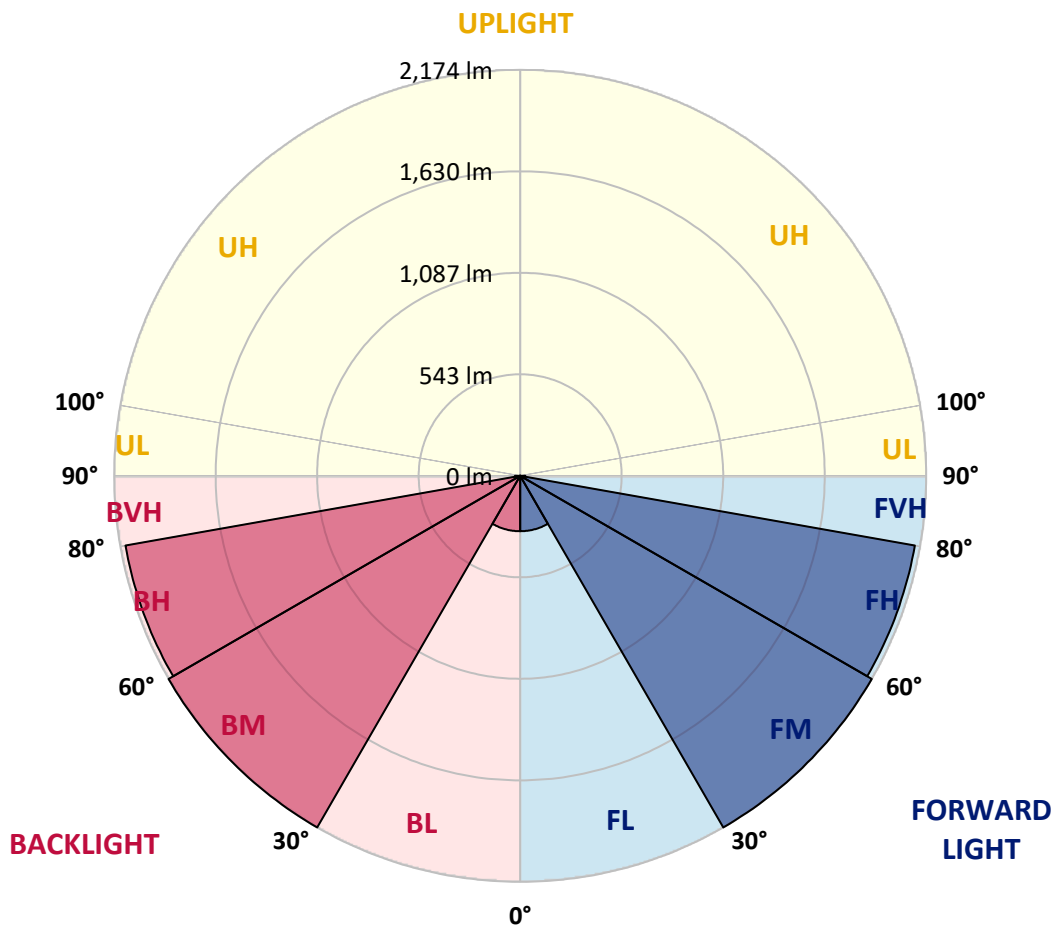
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 296.6  | 3.2       |                         |      |         |
| FM (30°-60°)   | 2174.0 | 23.4      |                         |      |         |
| FH (60°-80°)   | 2146.1 | 23.1      |                         |      | G2/5000 |
| FVH (80°-90°)  | 27.4   | 0.3       |                         |      | G1/100  |
| BL (0°-30°)    | 296.6  | 3.2       | B1/500                  |      |         |
| BM (30°-60°)   | 2174.0 | 23.4      | B2/2500                 |      |         |
| BH (60°-80°)   | 2146.1 | 23.1      | B3/2500                 |      | G2/5000 |
| BVH (80°-90°)  | 27.4   | 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°    | 318.3  | 318.3  | 318.3  | 318.3  | 318.3  |
| 2.5°  | 391.8  | 366.7  | 378.2  | 366.7  | 391.8  |
| 5°    | 498.0  | 471.9  | 448.9  | 465.4  | 499.5  |
| 7.5°  | 572.3  | 533.2  | 484.8  | 528.9  | 569.1  |
| 10°   | 584.9  | 563.0  | 560.8  | 560.5  | 583.4  |
| 12.5° | 631.9  | 617.2  | 646.6  | 618.6  | 633.3  |
| 15°   | 668.5  | 660.2  | 673.5  | 670.6  | 669.9  |
| 17.5° | 725.2  | 669.2  | 699.3  | 666.0  | 723.4  |
| 20°   | 750.3  | 671.0  | 721.6  | 667.1  | 749.9  |
| 22.5° | 781.2  | 713.3  | 728.4  | 715.1  | 778.3  |
| 25°   | 798.7  | 740.6  | 746.0  | 741.3  | 799.1  |
| 27.5° | 870.9  | 800.9  | 743.5  | 810.6  | 884.1  |
| 30°   | 925.8  | 840.0  | 802.3  | 841.1  | 932.6  |
| 32.5° | 1005.1 | 898.5  | 883.8  | 912.8  | 1017.6 |
| 35°   | 1103.4 | 996.8  | 914.3  | 997.2  | 1124.2 |
| 37.5° | 1296.1 | 1086.2 | 1057.1 | 1117.7 | 1310.4 |
| 40°   | 1432.1 | 1227.2 | 1165.1 | 1249.8 | 1455.4 |
| 42.5° | 1640.9 | 1385.4 | 1227.9 | 1396.9 | 1676.8 |
| 45°   | 1835.4 | 1577.4 | 1428.1 | 1590.7 | 1861.6 |
| 47.5° | 2041.0 | 1753.6 | 1697.6 | 1770.1 | 2060.4 |
| 50°   | 2283.9 | 1992.2 | 1953.1 | 2010.8 | 2292.2 |
| 52.5° | 2570.6 | 2311.5 | 2196.0 | 2322.3 | 2573.5 |
| 55°   | 2911.1 | 2579.6 | 2553.7 | 2609.0 | 2915.4 |
| 57.5° | 3244.1 | 2926.9 | 3092.7 | 2930.2 | 3186.4 |
| 60°   | 3481.7 | 3247.0 | 3535.9 | 3164.5 | 3353.6 |
| 62.5° | 3496.7 | 3484.2 | 4087.7 | 3344.2 | 3317.7 |
| 65°   | 3170.9 | 3388.4 | 4549.9 | 3278.9 | 3011.6 |
| 67.5° | 2496.0 | 2846.6 | 4619.9 | 2791.3 | 2419.5 |
| 70°   | 1568.4 | 1971.0 | 4084.1 | 2046.7 | 1612.9 |
| 72.5° | 723.4  | 1062.1 | 3075.5 | 1195.6 | 764.7  |
| 75°   | 259.1  | 406.5  | 1897.5 | 436.7  | 270.9  |
| 77.5° | 147.1  | 164.7  | 838.6  | 165.4  | 152.1  |
| 80°   | 94.7   | 102.6  | 242.2  | 108.4  | 92.2   |
| 82.5° | 53.8   | 71.8   | 106.2  | 76.1   | 49.5   |
| 85°   | 29.1   | 45.6   | 47.0   | 46.6   | 29.1   |
| 87.5° | 10.4   | 17.9   | 10.4   | 20.5   | 9.7    |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)