

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: P366974

Luminaire Tested: **MSA-SA1C-830-U-5NQ**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366974  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-830-U-5NQ  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5100 lumens  
Efficiency: N/A  
Efficacy: 86.4 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

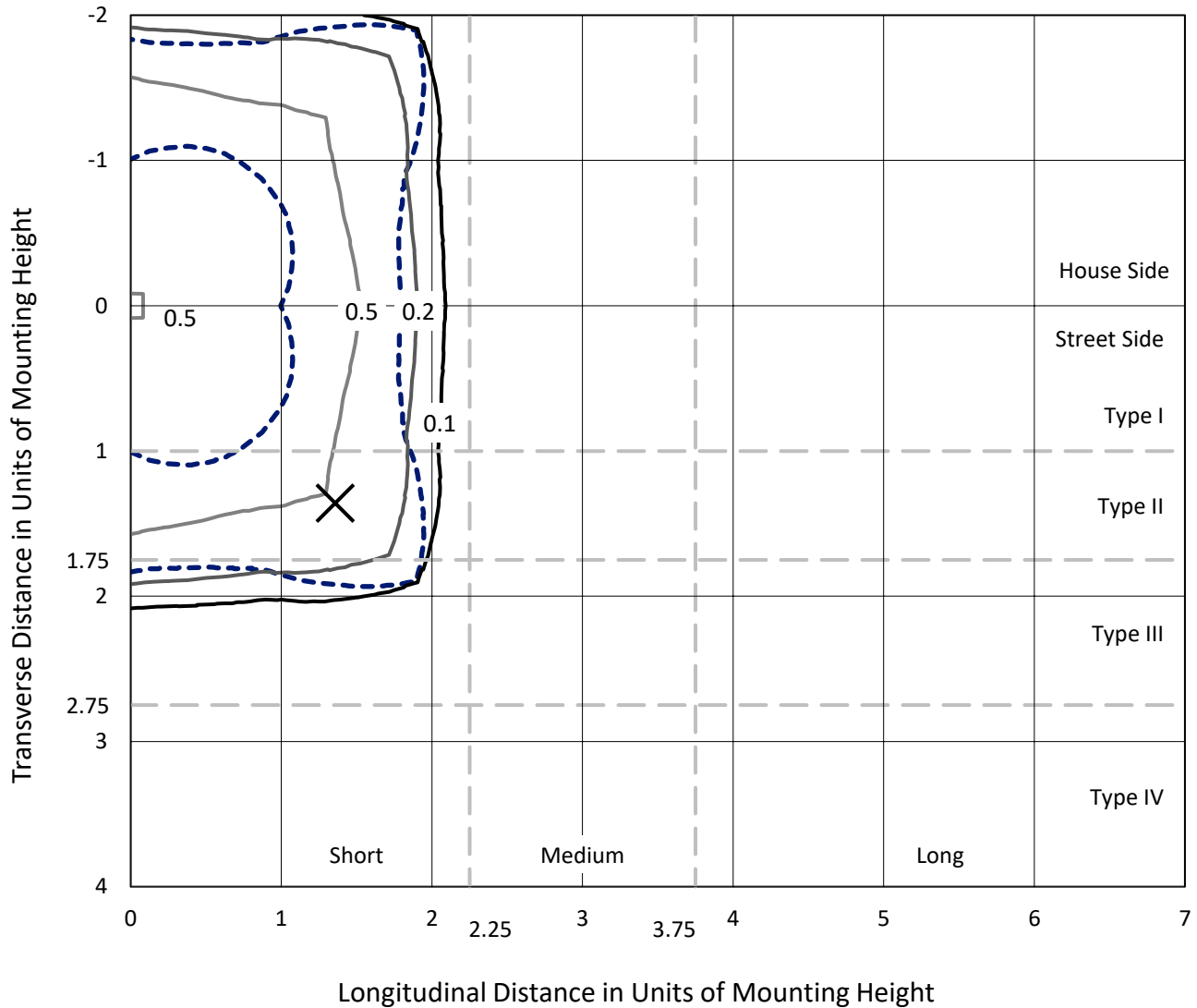
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

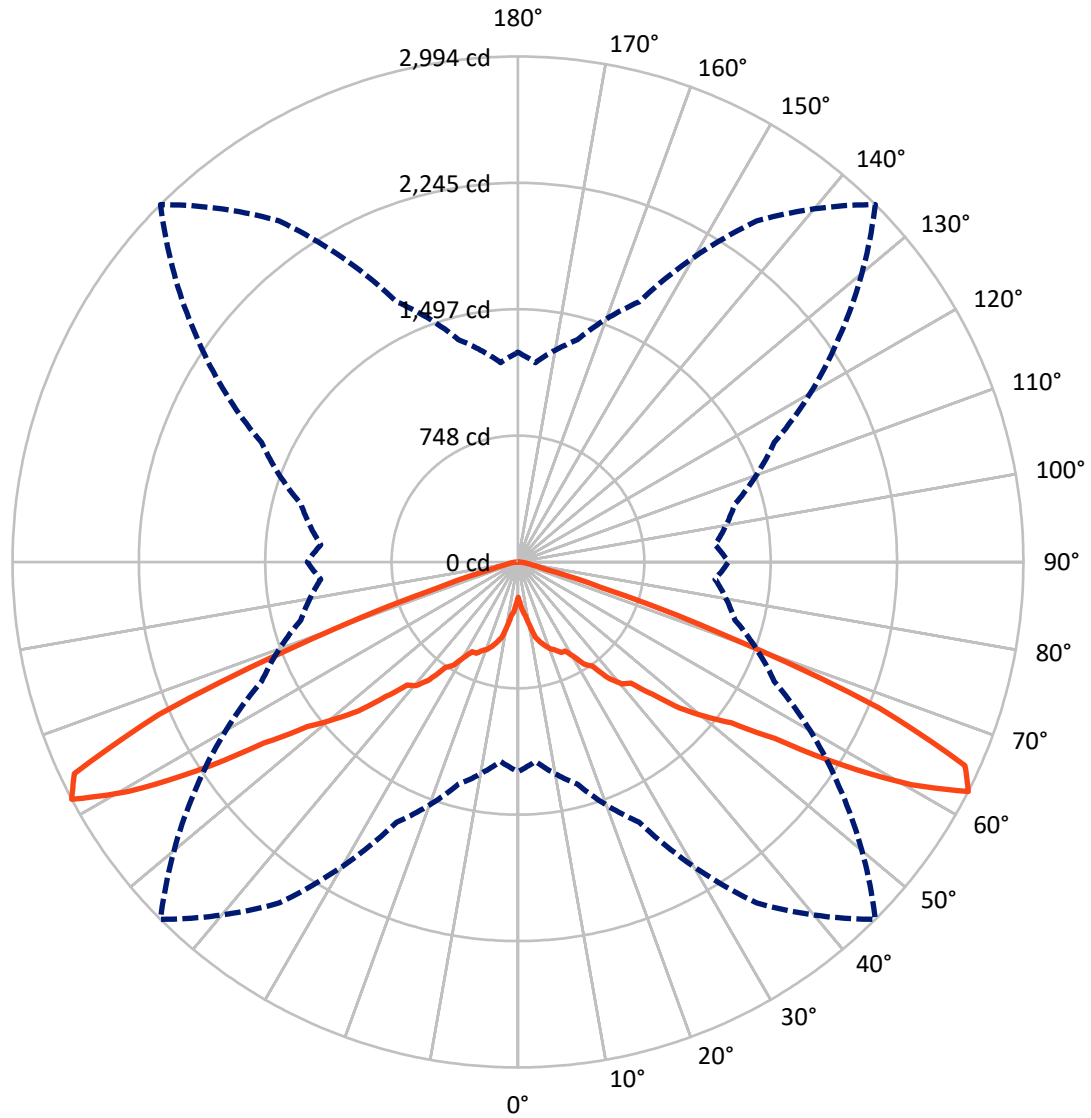
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc  
 Type V - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

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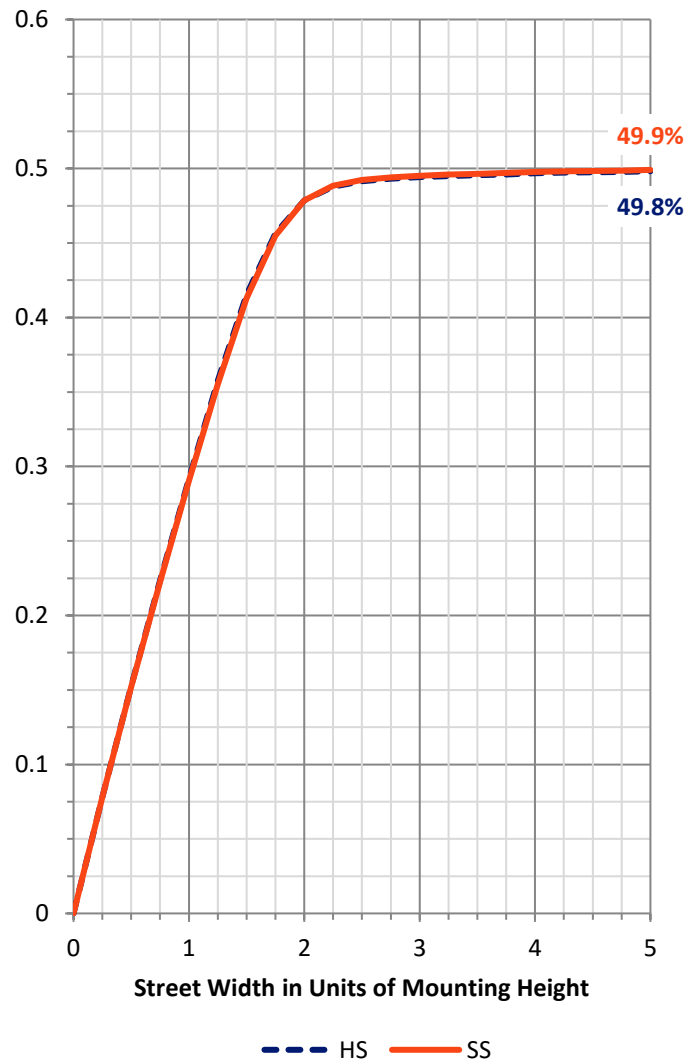
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2550.0	0.0	2550.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	2550.0	0.0	2550.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	5100.0	0.0	5100.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.4	0.6
10°-20°	138.6	2.7
20°-30°	290.4	5.7
30°-40°	547.2	10.7
40°-50°	993.2	19.5
50°-60°	1678.2	32.9
60°-70°	1254.5	24.6
70°-80°	140.4	2.8
80°-90°	26.1	0.5
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°	5100.0	100.0
0°-180°	5100.0	100.0



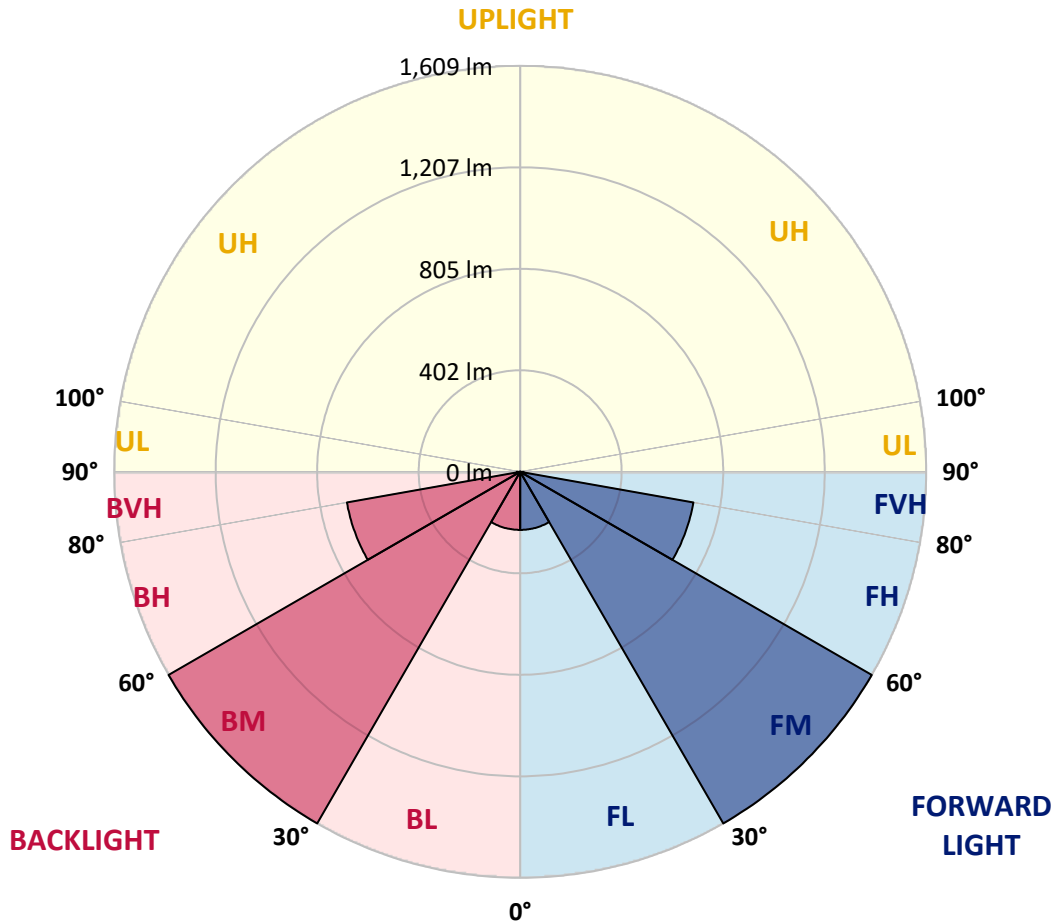
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	230.2	4.5			
FM (30°-60°)	1609.3	31.6			
FH (60°-80°)	697.4	13.7			G1/1800
FVH (80°-90°)	13.1	0.3			G1/100
BL (0°-30°)	230.2	4.5	B1/500		
BM (30°-60°)	1609.3	31.6	B2/2500		
BH (60°-80°)	697.4	13.7	B2/1000		G1/1800
BVH (80°-90°)	13.1	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°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	208.5	208.5	208.5	208.5	208.5	208.5	208.5	208.5	208.5	208.5	208.5
2.5°	253.6	249.0	233.0	238.6	244.4	243.6	242.1	237.8	233.8	250.2	253.6
5°	323.3	312.9	307.3	302.7	301.7	290.5	305.8	304.2	309.4	318.1	326.6
7.5°	378.9	369.1	354.4	351.3	334.5	322.0	335.3	351.7	356.9	372.9	382.4
10°	399.2	390.7	393.4	379.5	378.7	382.2	379.3	383.0	396.7	394.8	401.9
12.5°	444.9	446.3	437.6	434.1	441.1	456.5	443.4	438.8	435.5	449.6	454.0
15°	487.6	496.1	481.8	479.5	476.6	490.9	476.8	483.7	489.7	492.6	490.9
17.5°	548.2	548.6	532.6	507.1	516.6	521.2	515.0	503.2	531.6	545.9	546.7
20°	588.0	589.5	557.9	518.1	545.1	549.2	546.1	521.4	559.2	583.0	582.0
22.5°	631.0	626.0	583.2	554.2	563.7	566.2	559.6	556.5	583.0	626.4	620.0
25°	659.8	668.9	626.4	607.7	599.6	593.8	602.3	604.0	631.2	670.6	648.8
27.5°	728.7	712.9	646.3	653.4	636.2	596.9	634.3	654.8	649.0	716.2	732.6
30°	789.9	790.3	697.0	710.4	678.5	646.7	687.2	716.9	709.6	795.7	780.2
32.5°	868.1	871.0	784.3	748.2	726.6	720.6	715.6	748.4	793.6	863.4	864.8
35°	952.6	977.5	859.6	821.7	784.9	758.4	787.0	832.4	861.9	973.3	953.6
37.5°	1117.1	1075.2	978.7	907.3	883.9	873.3	888.5	914.8	978.5	1074.6	1108.4
40°	1214.4	1202.8	1071.5	1011.7	921.2	949.5	941.2	1013.4	1066.1	1209.4	1212.6
42.5°	1363.2	1304.7	1186.6	1110.7	1029.3	980.4	1032.3	1129.1	1192.8	1314.0	1371.3
45°	1480.8	1405.7	1314.6	1257.0	1154.3	1117.9	1136.6	1260.7	1340.6	1423.8	1499.1
47.5°	1610.9	1529.6	1438.5	1336.0	1235.8	1294.9	1261.9	1371.1	1449.1	1568.4	1638.9
50°	1774.4	1684.4	1567.8	1483.1	1416.7	1437.5	1432.3	1510.1	1606.4	1715.1	1795.2
52.5°	1954.5	1852.7	1740.2	1661.6	1633.6	1582.1	1649.3	1681.3	1752.2	1851.8	1945.8
55°	2080.5	1978.6	1910.5	1935.9	1928.4	1845.8	1904.7	1908.1	1873.8	1909.7	2004.3
57.5°	2061.0	1963.7	1954.3	2050.0	2192.9	2272.8	2181.7	1985.9	1857.6	1840.8	1941.0
60°	1802.0	1718.8	1804.3	2020.1	2436.5	2679.7	2329.1	1927.1	1715.9	1628.6	1725.3
62.5°	1241.8	1185.6	1362.8	1700.2	2465.8	2993.6	2323.7	1674.6	1330.8	1172.3	1247.4
65°	588.6	568.3	717.9	1077.9	2053.9	2909.8	2030.1	1133.1	766.0	611.9	628.9
67.5°	221.4	211.2	263.5	476.2	1293.7	2307.9	1364.6	559.0	296.3	230.3	238.2
70°	125.7	118.5	125.3	173.7	520.8	1307.2	588.6	191.7	125.9	114.7	122.2
72.5°	99.0	93.4	94.4	105.0	179.7	513.1	190.5	109.3	91.5	86.9	93.6
75°	81.8	76.8	76.6	82.4	104.8	166.6	107.7	83.6	74.1	70.8	76.1
77.5°	64.9	62.0	62.9	67.4	75.1	93.2	78.0	67.6	60.8	56.9	60.6
80°	47.5	47.1	50.4	54.6	56.0	62.7	58.5	54.6	48.6	43.0	44.4
82.5°	31.1	31.3	37.6	40.9	40.3	40.0	41.9	41.7	36.3	28.4	28.4
85°	17.8	18.3	23.0	25.7	25.3	20.1	26.6	26.8	23.2	17.2	16.6
87.5°	5.8	7.3	10.0	10.6	10.2	5.6	10.2	11.2	10.2	7.3	6.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)