

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: P367634

Luminaire Tested: **MSA-SA2D-830-U-5NQ**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367634  
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-SA2D-830-U-5NQ  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10967 lumens  
Efficiency: N/A  
Efficacy: 85.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B3 - U0 - G1

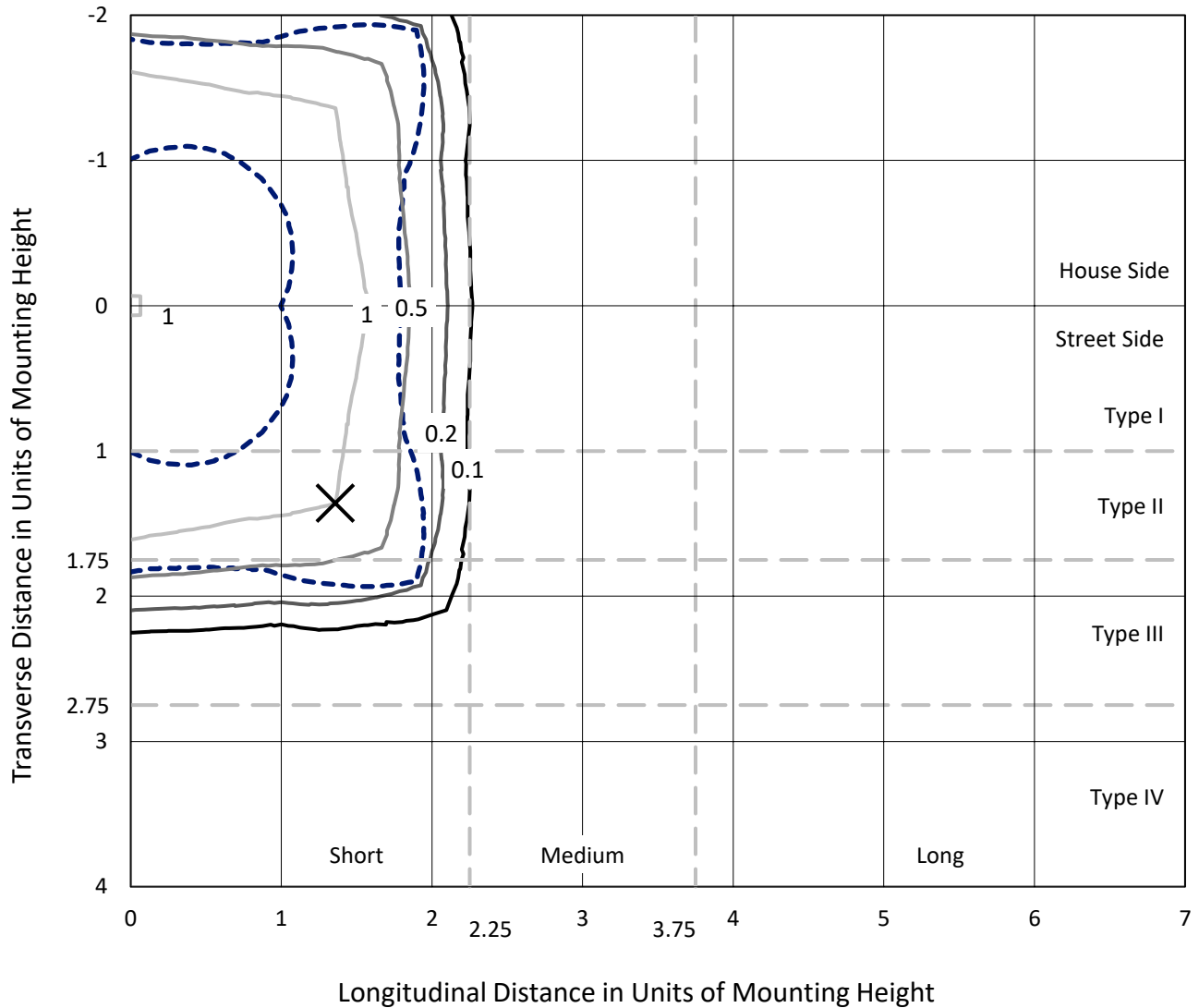
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

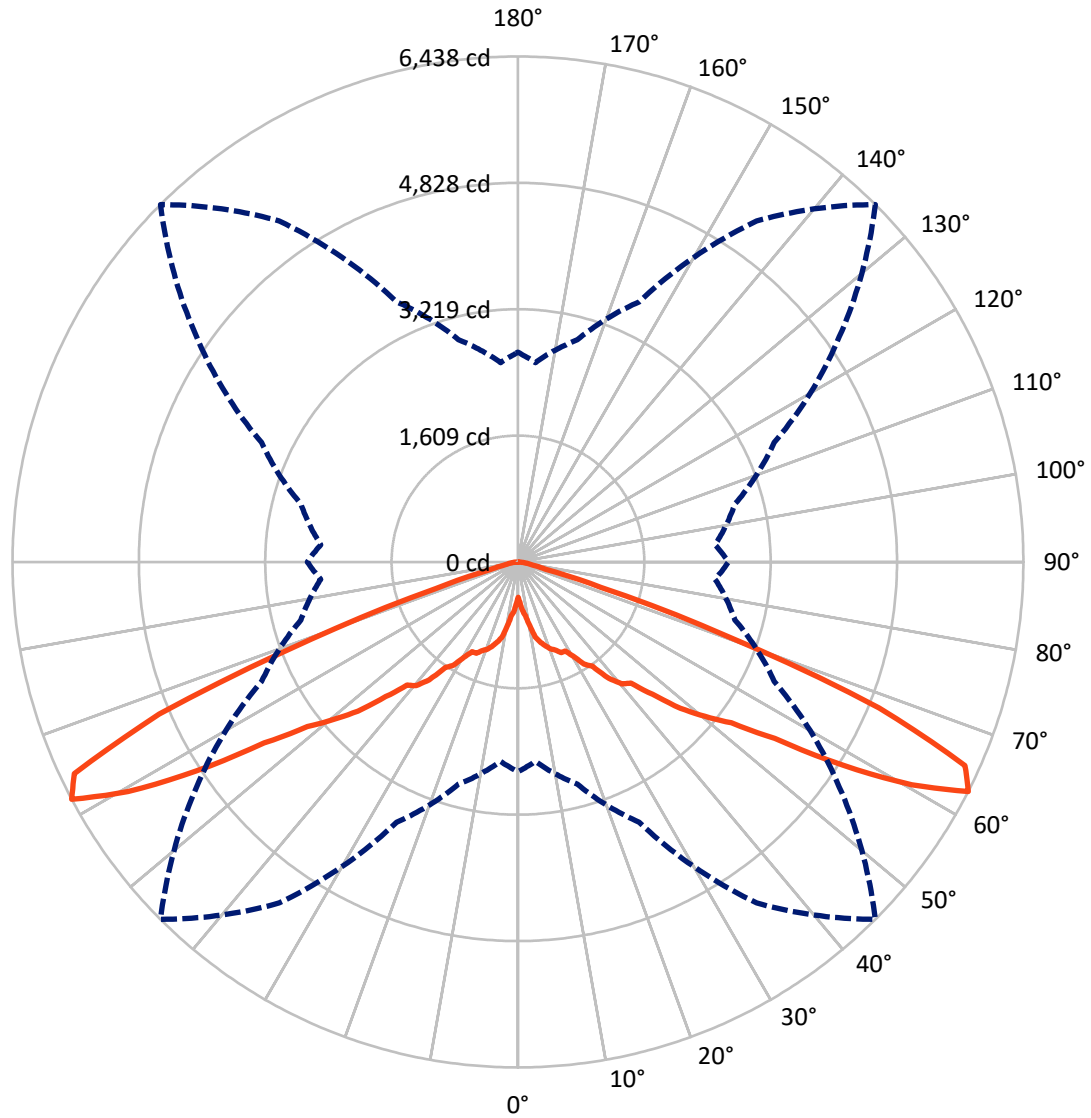
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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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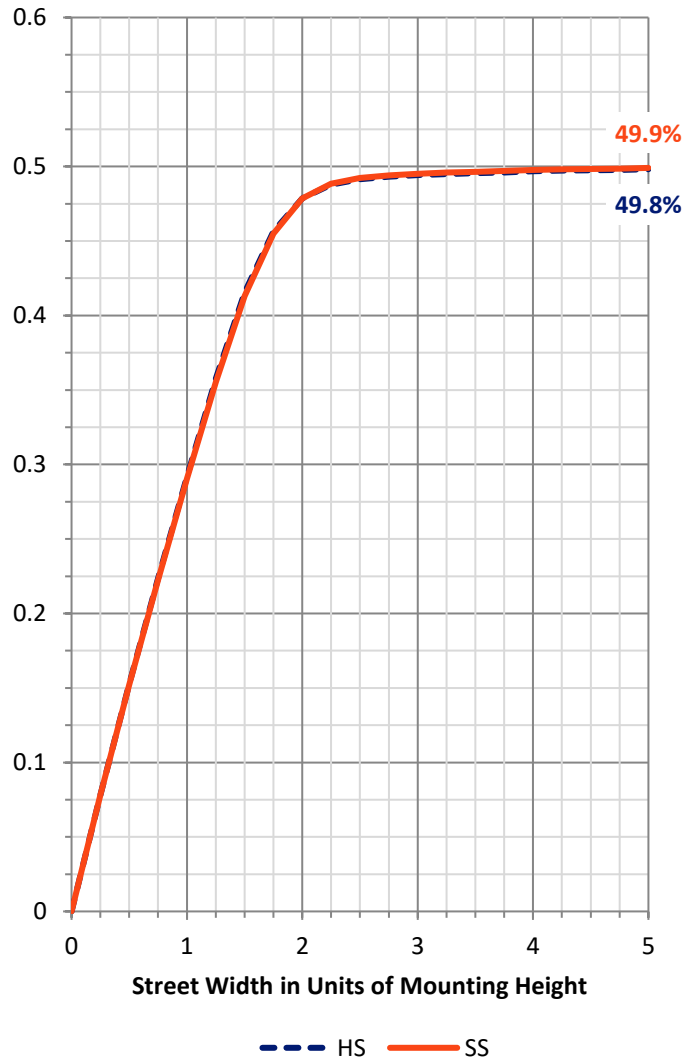
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5483.5	0.0	5483.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5483.5	0.0	5483.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	10967.0	0.0	10967.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.6	0.6
10°-20°	298.0	2.7
20°-30°	624.6	5.7
30°-40°	1176.7	10.7
40°-50°	2135.8	19.5
50°-60°	3608.7	32.9
60°-70°	2697.7	24.6
70°-80°	301.8	2.8
80°-90°	56.2	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°	10967.0	100.0
0°-180°	10967.0	100.0

**Coefficient of Utilization**



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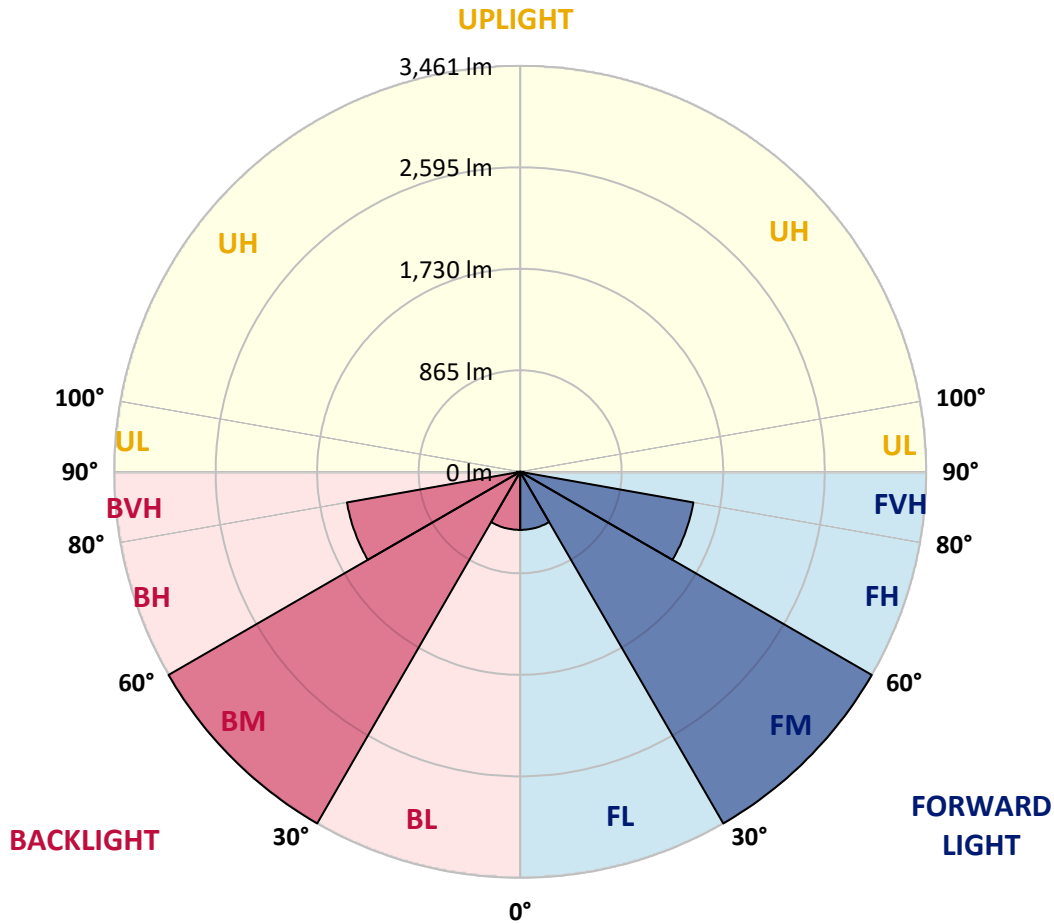
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	495.1	4.5			
FM (30°-60°)	3460.6	31.6			
FH (60°-80°)	1499.8	13.7			G1/1800
FVH (80°-90°)	28.1	0.3			G1/100
BL (0°-30°)	495.1	4.5	B1/500		
BM (30°-60°)	3460.6	31.6	B3/5000		
BH (60°-80°)	1499.8	13.7	B3/2500		G1/1800
BVH (80°-90°)	28.1	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	448.4	448.4	448.4	448.4	448.4	448.4	448.4	448.4	448.4	448.4	448.4
2.5°	545.2	535.4	501.1	513.1	525.6	523.8	520.7	511.3	502.8	538.1	545.2
5°	695.1	672.8	660.8	651.0	648.7	624.7	657.7	654.1	665.3	684.0	702.3
7.5°	814.7	793.8	762.1	755.4	719.2	692.5	721.0	756.3	767.4	801.8	822.3
10°	858.5	840.2	846.0	816.1	814.3	821.9	815.6	823.6	853.1	849.1	864.3
12.5°	956.6	959.7	941.0	933.4	948.6	981.6	953.5	943.7	936.5	966.9	976.2
15°	1048.5	1066.8	1036.0	1031.1	1024.9	1055.7	1025.3	1040.0	1053.0	1059.2	1055.7
17.5°	1178.8	1179.7	1145.3	1090.5	1111.0	1120.8	1107.4	1082.0	1143.1	1173.9	1175.7
20°	1264.5	1267.6	1199.8	1114.1	1172.1	1181.0	1174.3	1121.3	1202.5	1253.8	1251.5
22.5°	1356.8	1346.1	1254.2	1191.7	1212.3	1217.6	1203.3	1196.7	1253.8	1347.0	1333.2
25°	1418.9	1438.5	1347.0	1306.9	1289.5	1277.0	1295.3	1298.8	1357.3	1442.1	1395.2
27.5°	1567.0	1533.1	1389.9	1405.0	1368.0	1283.7	1364.0	1408.1	1395.7	1540.2	1575.5
30°	1698.6	1699.5	1498.7	1527.7	1459.0	1390.7	1477.7	1541.6	1525.9	1711.1	1677.6
32.5°	1866.8	1873.1	1686.6	1608.9	1562.5	1549.6	1538.9	1609.4	1706.6	1856.6	1859.7
35°	2048.4	2102.0	1848.5	1766.9	1687.9	1630.8	1692.4	1790.1	1853.4	2093.0	2050.6
37.5°	2402.2	2312.1	2104.6	1951.1	1900.7	1878.0	1910.5	1967.2	2104.2	2310.8	2383.5
40°	2611.5	2586.5	2304.1	2175.6	1981.0	2041.7	2023.9	2179.1	2292.5	2600.8	2607.5
42.5°	2931.4	2805.6	2551.7	2388.4	2213.5	2108.2	2219.7	2428.1	2565.1	2825.7	2948.8
45°	3184.4	3022.9	2827.0	2703.0	2482.1	2404.0	2444.2	2711.0	2882.8	3061.7	3223.7
47.5°	3464.1	3289.2	3093.4	2873.0	2657.5	2784.6	2713.7	2948.4	3116.1	3372.7	3524.4
50°	3815.7	3622.1	3371.3	3189.3	3046.5	3091.1	3080.0	3247.3	3454.3	3688.1	3860.4
52.5°	4203.0	3983.9	3742.1	3573.0	3512.8	3402.1	3546.7	3615.4	3768.0	3982.2	4184.3
55°	4473.9	4254.8	4108.4	4162.9	4146.8	3969.2	4095.9	4103.1	4029.5	4106.6	4310.1
57.5°	4431.9	4222.7	4202.6	4408.3	4715.7	4887.5	4691.6	4270.4	3994.7	3958.5	4174.0
60°	3875.1	3696.2	3880.0	4344.0	5239.5	5762.4	5008.4	4144.1	3689.9	3502.1	3710.0
62.5°	2670.4	2549.5	2930.5	3656.0	5302.4	6437.5	4996.8	3601.1	2861.8	2520.9	2682.4
65°	1265.8	1222.1	1543.8	2317.9	4416.7	6257.2	4365.4	2436.6	1647.3	1315.8	1352.4
67.5°	476.1	454.2	566.6	1024.0	2781.9	4962.9	2934.5	1202.0	637.1	495.3	512.2
70°	270.4	254.8	269.5	373.5	1119.9	2810.9	1265.8	412.3	270.8	246.7	262.8
72.5°	212.8	200.8	203.0	225.8	386.4	1103.4	409.6	235.1	196.8	186.9	201.2
75°	175.8	165.1	164.6	177.1	225.3	358.3	231.6	179.8	159.3	152.1	163.7
77.5°	139.7	133.4	135.2	145.0	161.5	200.3	167.8	145.5	130.7	122.3	130.3
80°	102.2	101.3	108.4	117.3	120.5	134.7	125.8	117.3	104.4	92.4	95.5
82.5°	66.9	67.4	80.8	87.9	86.6	86.1	90.1	89.7	78.1	61.1	61.1
85°	38.4	39.3	49.5	55.3	54.4	43.3	57.1	57.6	50.0	37.0	35.7
87.5°	12.5	15.6	21.4	22.8	21.9	12.0	21.9	24.1	21.9	15.6	13.8
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)