

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: P368316

Luminaire Tested: **MSA-SA4B-727-U-5NQ**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368316  
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-SA4B-727-U-5NQ  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16627 lumens  
Efficiency: N/A  
Efficacy: 97.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B4 - U0 - G2

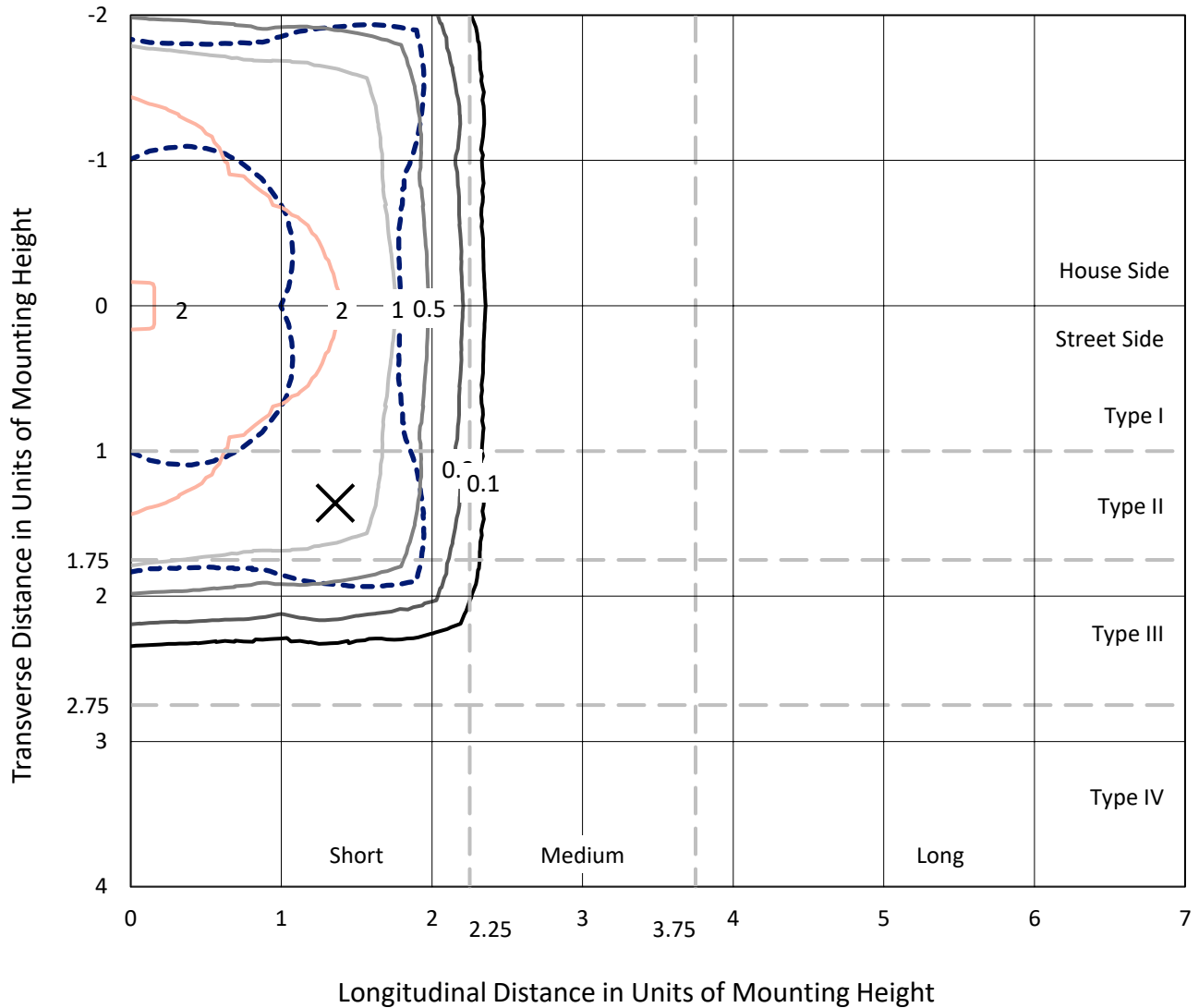
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

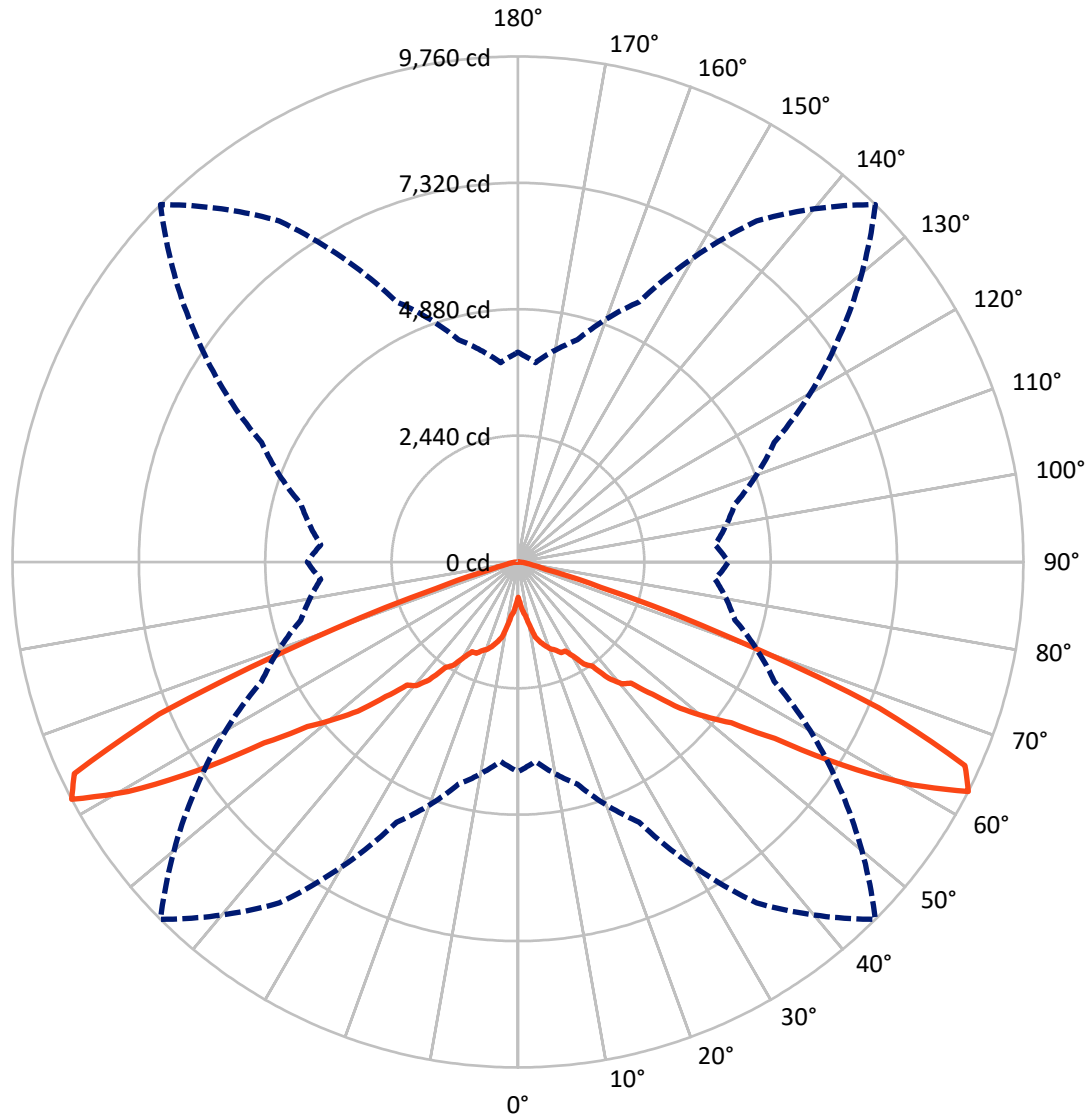
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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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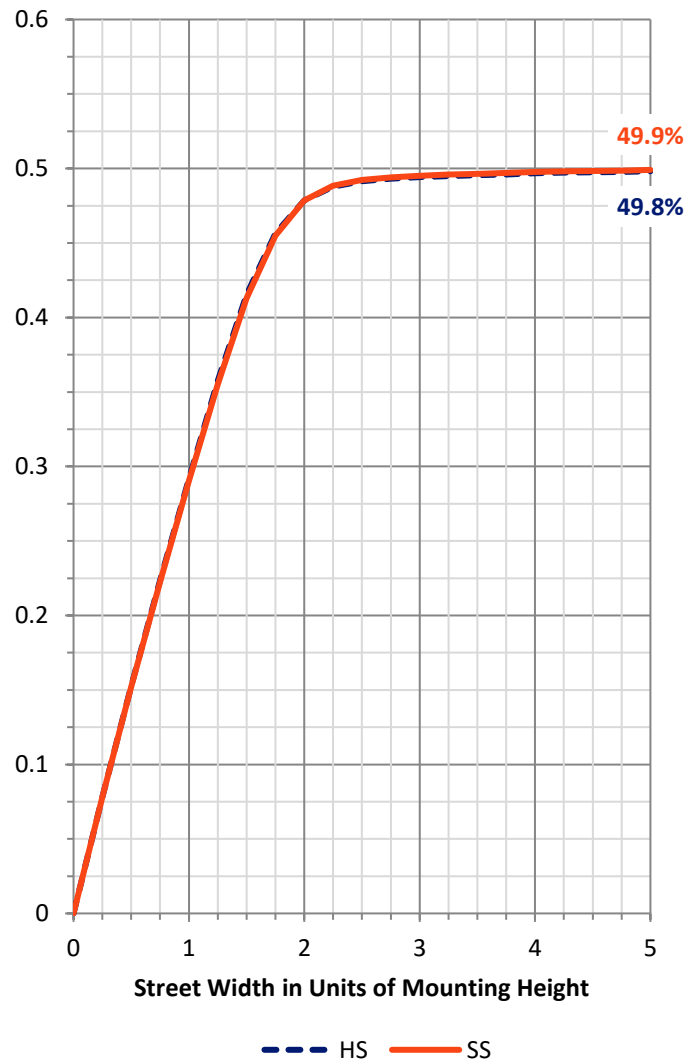
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8313.5	0.0	8313.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8313.5	0.0	8313.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	16627.0	0.0	16627.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.5	0.6
10°-20°	451.8	2.7
20°-30°	946.9	5.7
30°-40°	1784.1	10.7
40°-50°	3238.0	19.5
50°-60°	5471.1	32.9
60°-70°	4090.0	24.6
70°-80°	457.6	2.8
80°-90°	85.1	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°	16627.0	100.0
0°-180°	16627.0	100.0



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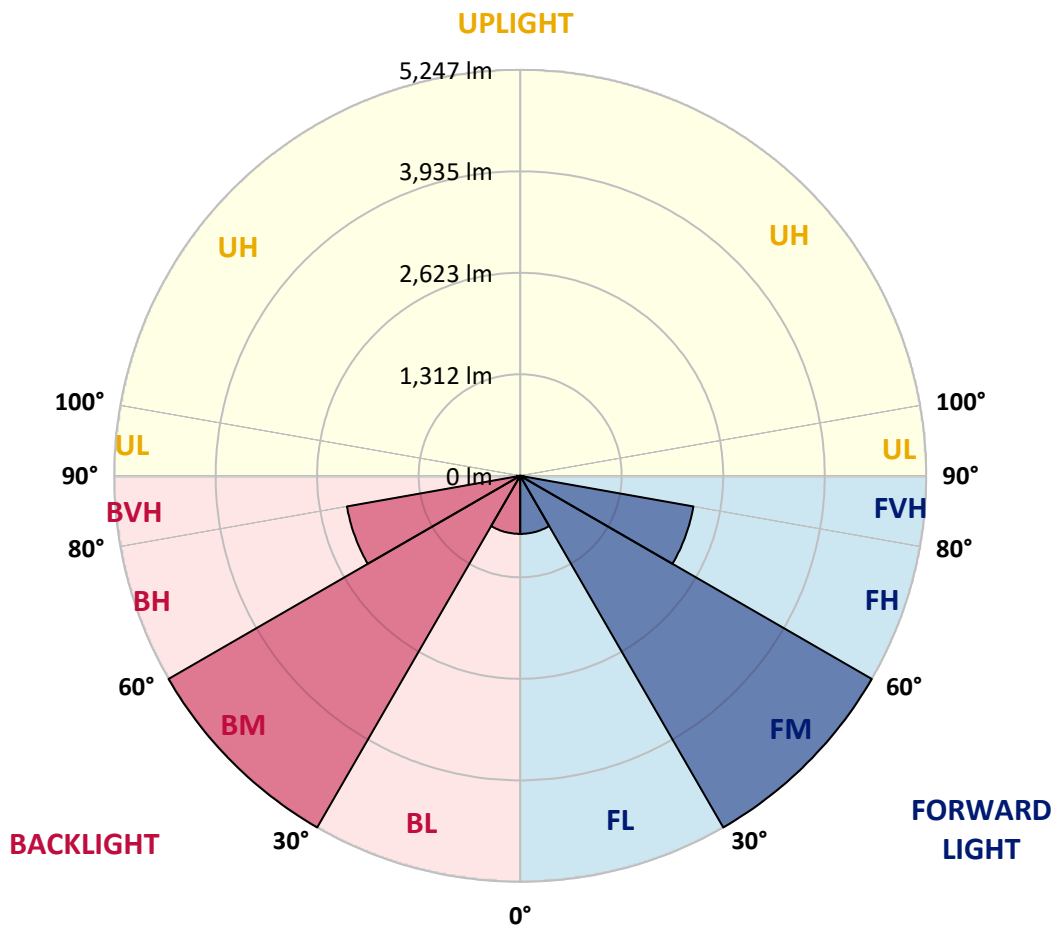
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	750.6	4.5			
FM (30°-60°)	5246.6	31.6			
FH (60°-80°)	2273.8	13.7			G2/5000
FVH (80°-90°)	42.6	0.3			G1/100
BL (0°-30°)	750.6	4.5	B2/1000		
BM (30°-60°)	5246.6	31.6	B4/8500		
BH (60°-80°)	2273.8	13.7	B3/2500		G2/5000
BVH (80°-90°)	42.6	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°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8
2.5°	826.6	811.7	759.7	777.9	796.9	794.2	789.4	775.2	762.4	815.8	826.6
5°	1053.9	1020.1	1001.8	986.9	983.6	947.0	997.1	991.7	1008.6	1037.0	1064.7
7.5°	1235.2	1203.4	1155.4	1145.2	1090.4	1049.9	1093.1	1146.6	1163.5	1215.6	1246.7
10°	1301.5	1273.8	1282.6	1237.2	1234.5	1246.0	1236.6	1248.7	1293.4	1287.3	1310.3
12.5°	1450.3	1455.0	1426.6	1415.1	1438.1	1488.2	1445.6	1430.7	1419.9	1465.9	1480.1
15°	1589.7	1617.4	1570.7	1563.3	1553.8	1600.5	1554.5	1576.8	1596.4	1605.9	1600.5
17.5°	1787.2	1788.5	1736.5	1653.2	1684.4	1699.2	1679.0	1640.4	1733.1	1779.7	1782.4
20°	1917.1	1921.8	1819.0	1689.1	1777.0	1790.6	1780.4	1699.9	1823.0	1900.8	1897.4
22.5°	2057.1	2040.9	1901.5	1806.8	1837.9	1846.0	1824.4	1814.2	1900.8	2042.2	2021.2
25°	2151.1	2180.9	2042.2	1981.3	1954.9	1936.0	1963.7	1969.2	2057.8	2186.3	2115.3
27.5°	2375.7	2324.3	2107.1	2130.1	2074.0	1946.2	2067.9	2134.9	2115.9	2335.1	2388.6
30°	2575.3	2576.6	2272.2	2316.2	2212.0	2108.5	2240.4	2337.1	2313.5	2594.2	2543.5
32.5°	2830.3	2839.7	2557.0	2439.3	2368.9	2349.3	2333.1	2440.0	2587.4	2814.7	2819.4
35°	3105.6	3186.8	2802.5	2678.7	2559.0	2472.4	2565.8	2713.9	2810.0	3173.2	3109.0
37.5°	3642.0	3505.4	3190.8	2958.1	2881.7	2847.2	2896.6	2982.5	3190.1	3503.3	3613.6
40°	3959.3	3921.4	3493.2	3298.4	3003.4	3095.4	3068.4	3303.8	3475.6	3943.0	3953.2
42.5°	4444.3	4253.5	3868.6	3621.0	3355.9	3196.2	3365.3	3681.2	3888.9	4284.0	4470.7
45°	4827.8	4583.0	4286.0	4097.9	3763.1	3644.7	3705.6	4110.1	4370.6	4641.8	4887.4
47.5°	5252.0	4986.8	4689.8	4355.7	4028.9	4221.7	4114.2	4470.0	4724.3	5113.3	5343.3
50°	5785.0	5491.4	5111.3	4835.3	4618.8	4686.5	4669.5	4923.2	5237.1	5591.5	5852.7
52.5°	6372.2	6040.0	5673.4	5417.0	5325.7	5157.9	5377.1	5481.3	5712.6	6037.3	6343.8
55°	6782.8	6450.6	6228.8	6311.3	6286.9	6017.7	6209.8	6220.6	6109.0	6226.1	6534.5
57.5°	6719.2	6401.9	6371.5	6683.3	7149.4	7409.8	7112.9	6474.3	6056.3	6001.5	6328.2
60°	5875.0	5603.7	5882.4	6585.9	7943.6	8736.4	7593.2	6282.9	5594.3	5309.5	5624.7
62.5°	4048.6	3865.2	4442.9	5542.8	8038.9	9759.8	7575.6	5459.6	4338.8	3822.0	4066.8
65°	1919.1	1852.8	2340.5	3514.2	6696.2	9486.6	6618.4	3694.1	2497.5	1994.9	2050.3
67.5°	721.8	688.6	859.1	1552.5	4217.7	7524.2	4449.0	1822.4	966.0	750.9	776.6
70°	409.9	386.3	408.6	566.2	1697.9	4261.6	1919.1	625.0	410.6	374.1	398.4
72.5°	322.7	304.4	307.8	342.3	585.8	1672.9	621.0	356.5	298.3	283.4	305.1
75°	266.5	250.3	249.6	268.6	341.6	543.2	351.1	272.6	241.5	230.7	248.3
77.5°	211.7	202.3	205.0	219.8	244.9	303.7	254.3	220.5	198.2	185.3	197.5
80°	154.9	153.6	164.4	177.9	182.6	204.3	190.8	177.9	158.3	140.0	144.8
82.5°	101.5	102.1	122.4	133.3	131.2	130.6	136.6	136.0	118.4	92.7	92.7
85°	58.2	59.5	75.1	83.9	82.5	65.6	86.6	87.3	75.8	56.1	54.1
87.5°	18.9	23.7	32.5	34.5	33.1	18.3	33.1	36.5	33.1	23.7	21.0
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)