

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: P368690

Luminaire Tested: **MSA-SA4D-830-U-5NQ**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368690  
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-SA4D-830-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: 21392 lumens  
Efficiency: N/A  
Efficacy: 82.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short  
BUG Rating: B4 - U0 - G2

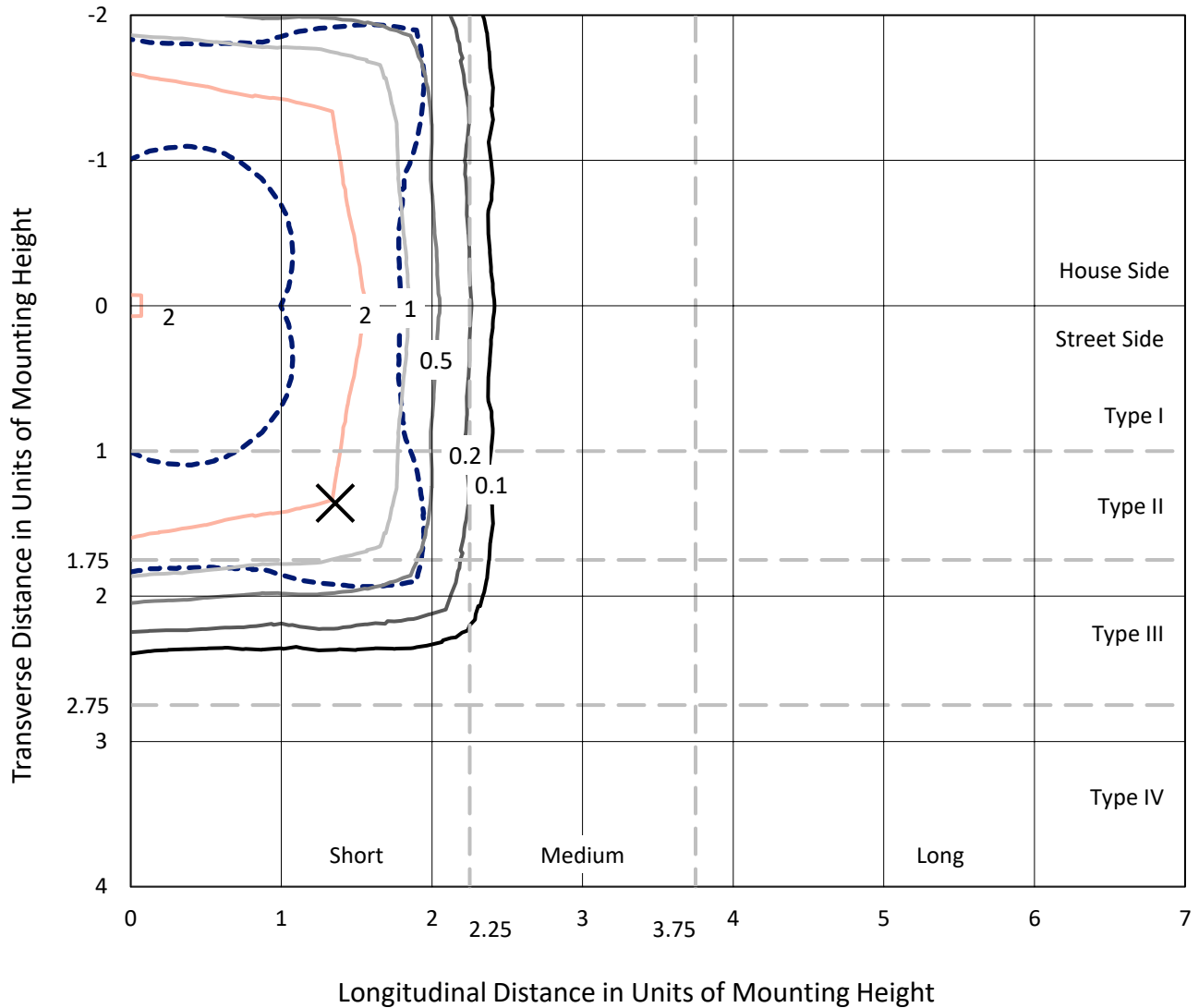
Input Watts (W): 259  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

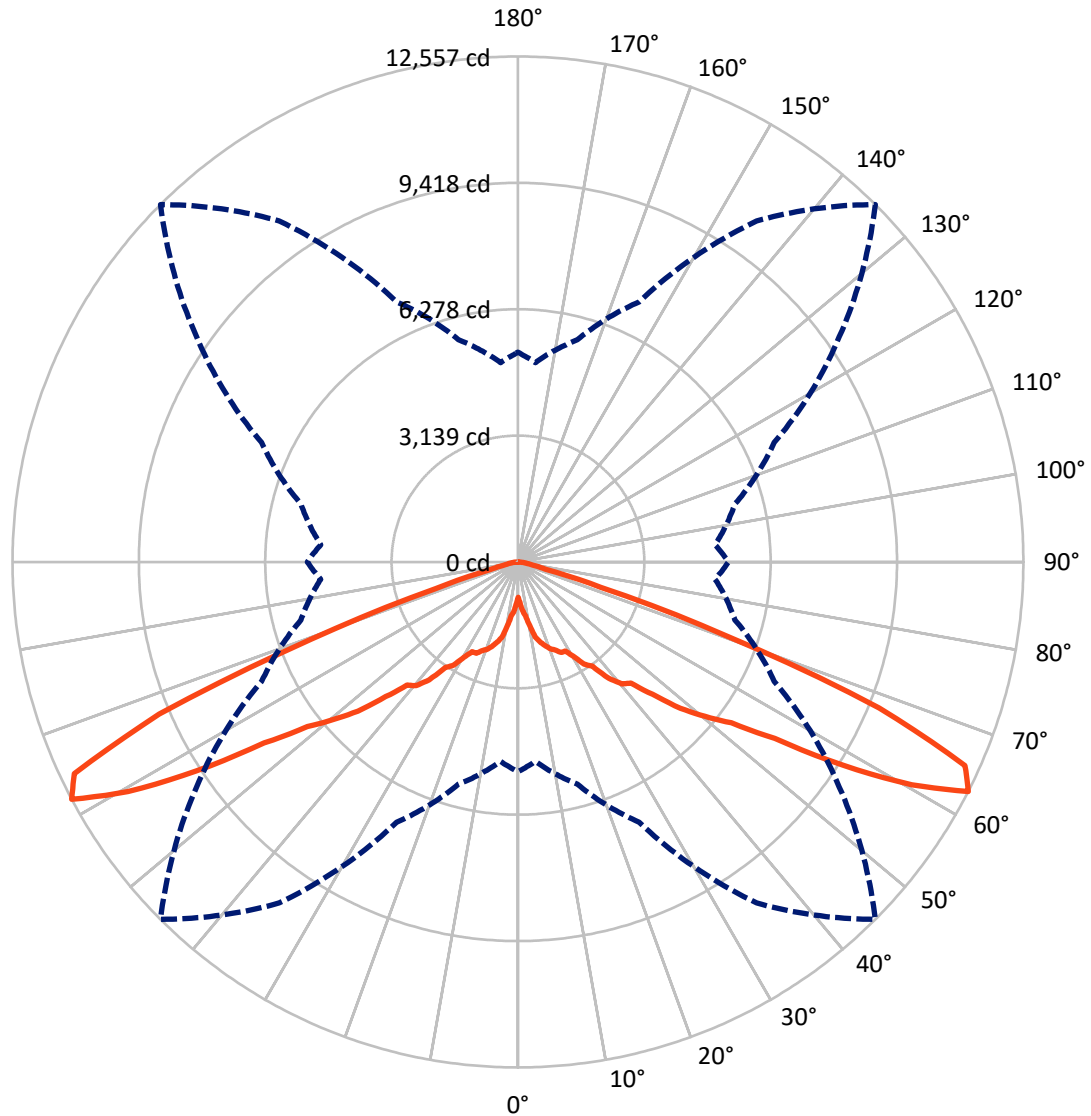
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 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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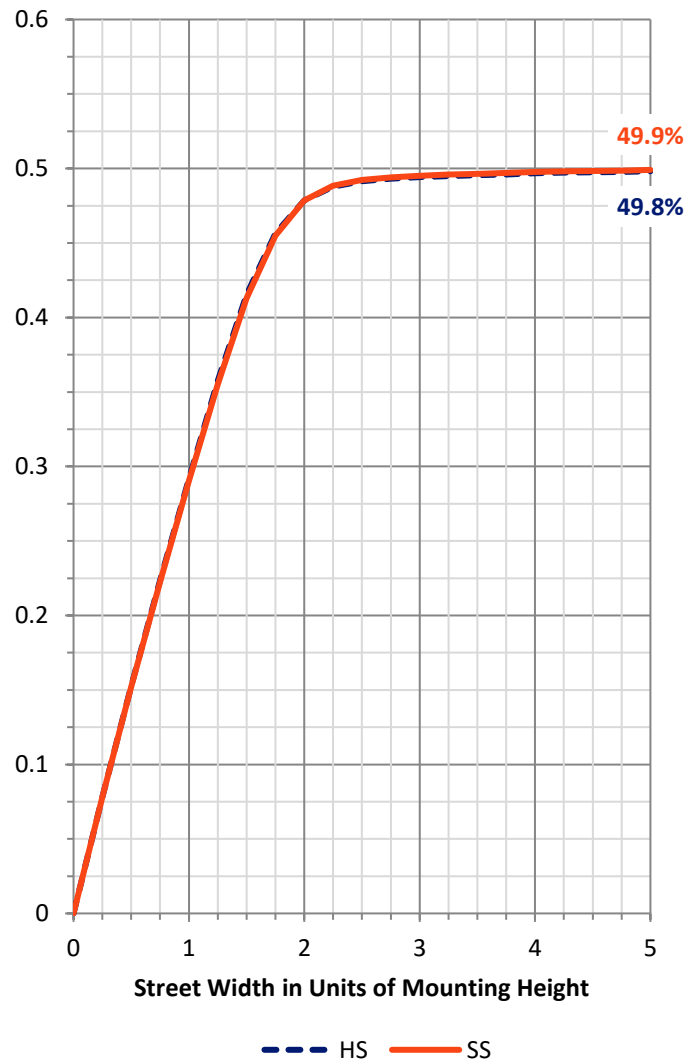
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10696.0	0.0	10696.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10696.0	0.0	10696.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	21392.0	0.0	21392.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.8	0.6
10°-20°	581.2	2.7
20°-30°	1218.2	5.7
30°-40°	2295.3	10.7
40°-50°	4165.9	19.5
50°-60°	7039.1	32.9
60°-70°	5262.1	24.6
70°-80°	588.7	2.8
80°-90°	109.5	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°	21392.0	100.0
0°-180°	21392.0	100.0



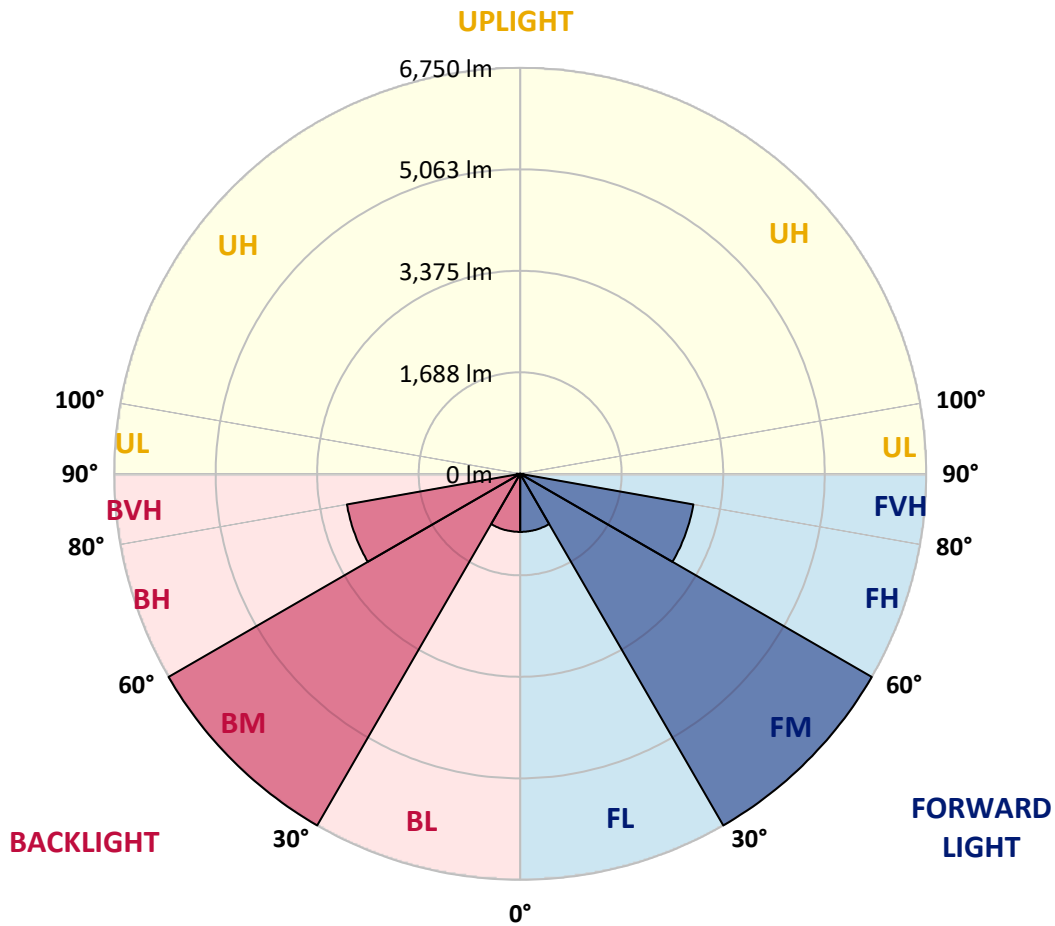
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 CATALOG NUMBER: MSA-SA4D-830-U-5NQ

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	965.7	4.5			
FM (30°-60°)	6750.2	31.6			
FH (60°-80°)	2925.4	13.7			G2/5000
FVH (80°-90°)	54.8	0.3			G1/100
BL (0°-30°)	965.7	4.5	B2/1000		
BM (30°-60°)	6750.2	31.6	B4/8500		
BH (60°-80°)	2925.4	13.7	B4/5000		G2/5000
BVH (80°-90°)	54.8	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°	874.7	874.7	874.7	874.7	874.7	874.7	874.7	874.7	874.7	874.7	874.7
2.5°	1063.5	1044.4	977.4	1000.9	1025.2	1021.7	1015.7	997.4	980.8	1049.6	1063.5
5°	1355.9	1312.4	1288.9	1269.8	1265.4	1218.4	1282.8	1275.9	1297.6	1334.2	1369.9
7.5°	1589.2	1548.3	1486.5	1473.4	1402.9	1350.7	1406.4	1475.2	1496.9	1563.9	1604.0
10°	1674.5	1638.8	1650.1	1591.8	1588.3	1603.1	1590.9	1606.6	1664.0	1656.2	1685.8
12.5°	1865.9	1872.0	1835.5	1820.7	1850.3	1914.7	1859.9	1840.7	1826.8	1886.0	1904.2
15°	2045.2	2080.9	2020.9	2011.3	1999.1	2059.2	2000.0	2028.7	2053.9	2066.1	2059.2
17.5°	2299.4	2301.1	2234.1	2127.0	2167.1	2186.2	2160.1	2110.5	2229.7	2289.8	2293.3
20°	2466.5	2472.6	2340.3	2173.2	2286.3	2303.7	2290.7	2187.1	2345.5	2445.6	2441.2
22.5°	2646.6	2625.7	2446.4	2324.6	2364.6	2375.1	2347.2	2334.2	2445.6	2627.5	2600.5
25°	2767.6	2805.9	2627.5	2549.1	2515.2	2490.8	2526.5	2533.5	2647.5	2812.8	2721.5
27.5°	3056.5	2990.4	2711.0	2740.6	2668.4	2503.9	2660.5	2746.7	2722.3	3004.3	3073.1
30°	3313.3	3315.0	2923.4	2979.9	2845.9	2712.8	2882.5	3006.9	2976.5	3337.6	3272.4
32.5°	3641.4	3653.6	3289.8	3138.3	3047.8	3022.6	3001.7	3139.2	3328.9	3621.4	3627.5
35°	3995.6	4100.0	3605.7	3446.4	3292.4	3181.0	3301.1	3491.7	3615.3	4082.6	3999.9
37.5°	4685.8	4509.9	4105.3	3805.9	3707.5	3663.1	3726.7	3837.2	4104.4	4507.3	4649.2
40°	5093.9	5045.2	4494.3	4243.6	3864.2	3982.5	3947.7	4250.6	4471.7	5073.0	5086.1
42.5°	5717.9	5472.5	4977.3	4658.8	4317.6	4112.2	4329.8	4736.2	5003.4	5511.7	5751.9
45°	6211.4	5896.4	5514.3	5272.3	4841.5	4689.2	4767.6	5288.0	5623.1	5972.1	6288.0
47.5°	6757.1	6415.9	6033.9	5603.9	5183.6	5431.6	5293.2	5751.0	6078.2	6578.7	6874.6
50°	7442.9	7065.2	6576.1	6221.0	5942.5	6029.5	6007.8	6334.1	6737.9	7194.0	7529.9
52.5°	8198.3	7771.0	7299.3	6969.4	6852.0	6636.1	6918.1	7052.1	7349.8	7767.5	8161.8
55°	8726.6	8299.3	8013.8	8120.0	8088.7	7742.3	7989.4	8003.4	7859.8	8010.3	8407.2
57.5°	8644.8	8236.6	8197.5	8598.7	9198.3	9533.4	9151.3	8329.7	7791.9	7721.4	8141.8
60°	7558.6	7209.7	7568.2	8473.3	10220.1	11240.1	9769.2	8083.4	7197.5	6831.1	7236.6
62.5°	5208.8	4973.0	5716.2	7131.3	10342.8	12556.8	9746.6	7024.3	5582.2	4917.3	5232.3
65°	2469.1	2383.8	3011.3	4521.3	8615.2	12205.2	8515.1	4752.8	3213.2	2566.5	2637.9
67.5°	928.6	886.0	1105.3	1997.4	5426.4	9680.5	5724.0	2344.6	1242.8	966.0	999.1
70°	527.4	496.9	525.7	728.4	2184.5	5483.0	2469.1	804.2	528.3	481.3	512.6
72.5°	415.1	391.6	396.0	440.4	753.7	2152.3	798.9	458.7	383.8	364.7	392.5
75°	342.9	322.0	321.1	345.5	439.5	698.9	451.7	350.7	310.7	296.8	319.4
77.5°	272.4	260.2	263.7	282.9	315.1	390.8	327.2	283.7	255.0	238.5	254.1
80°	199.3	197.6	211.5	228.9	235.0	262.8	245.4	228.9	203.7	180.2	186.2
82.5°	130.5	131.4	157.5	171.5	168.8	168.0	175.8	174.9	152.3	119.2	119.2
85°	74.8	76.6	96.6	107.9	106.2	84.4	111.4	112.3	97.5	72.2	69.6
87.5°	24.4	30.5	41.8	44.4	42.6	23.5	42.6	47.0	42.6	30.5	27.0
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)