

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: P366688

Luminaire Tested: **MSA-SA1A-760-U-5NQ**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366688  
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-SA1A-760-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: 4135 lumens  
Efficiency: N/A  
Efficacy: 121.6 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

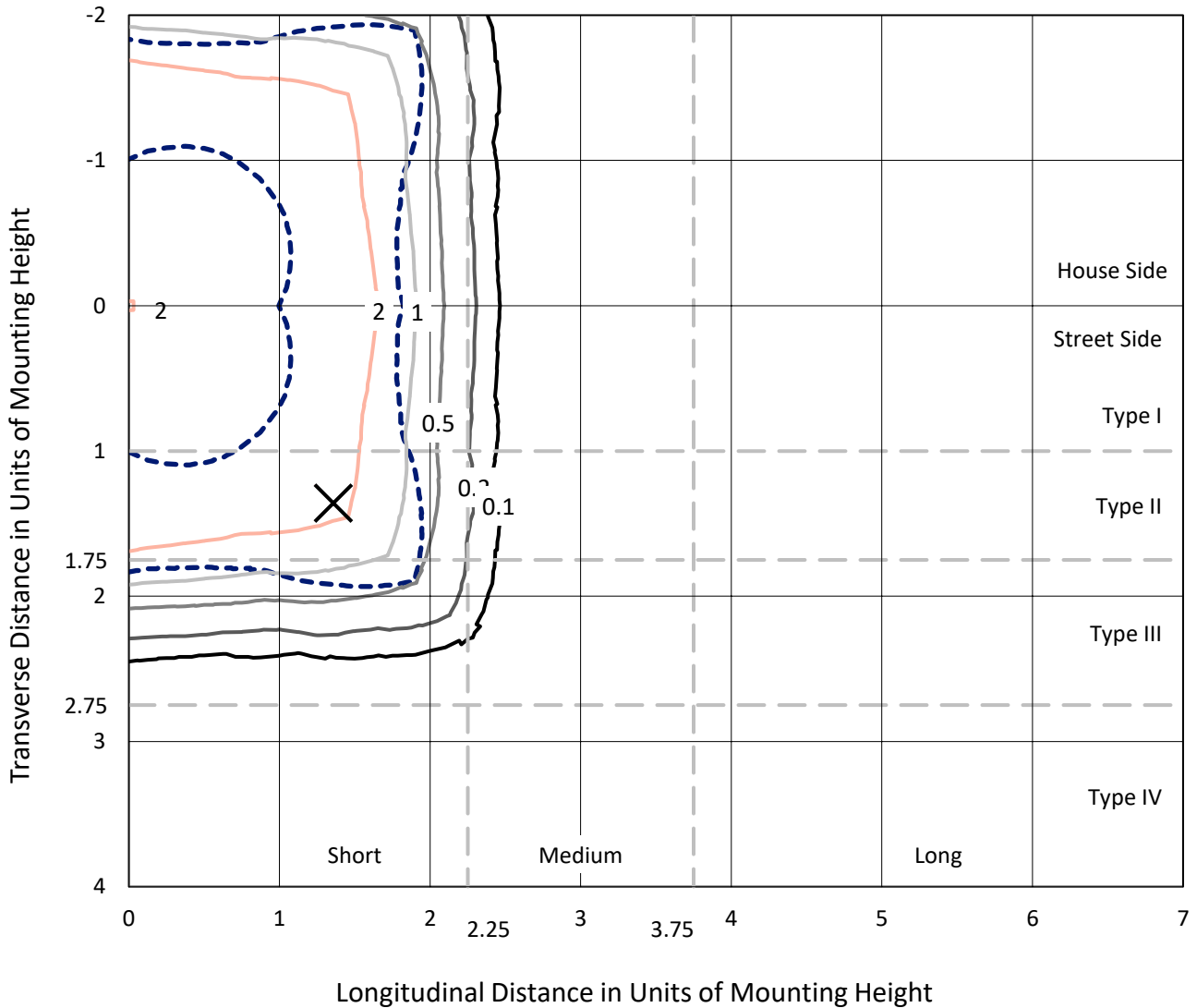
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

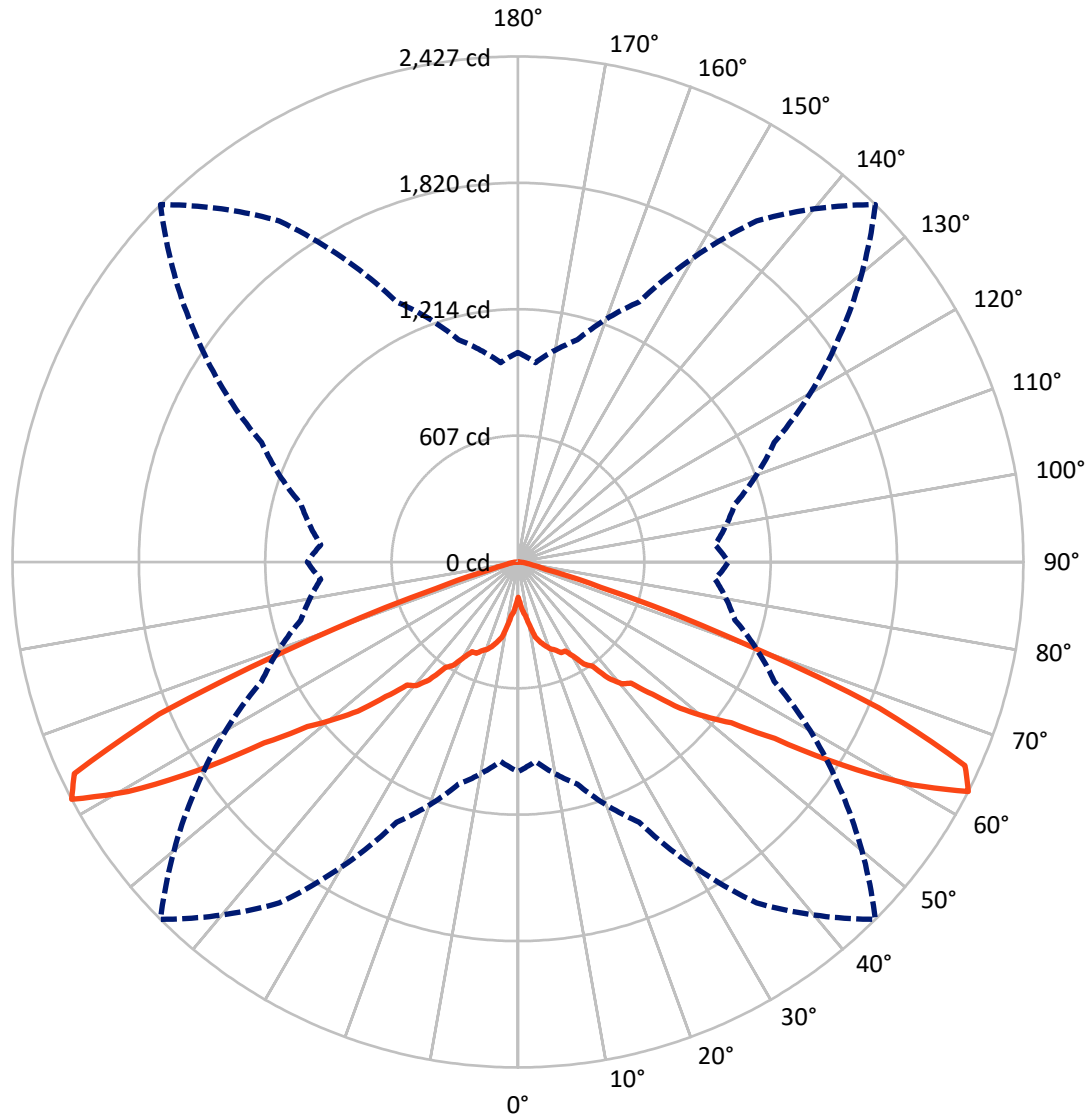
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.5 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	2067.5	0.0	2067.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	2067.5	0.0	2067.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	4135.0	0.0	4135.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.5	0.6
10°-20°	112.4	2.7
20°-30°	235.5	5.7
30°-40°	443.7	10.7
40°-50°	805.3	19.5
50°-60°	1360.6	32.9
60°-70°	1017.1	24.6
70°-80°	113.8	2.8
80°-90°	21.2	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°	4135.0	100.0
0°-180°	4135.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P366688

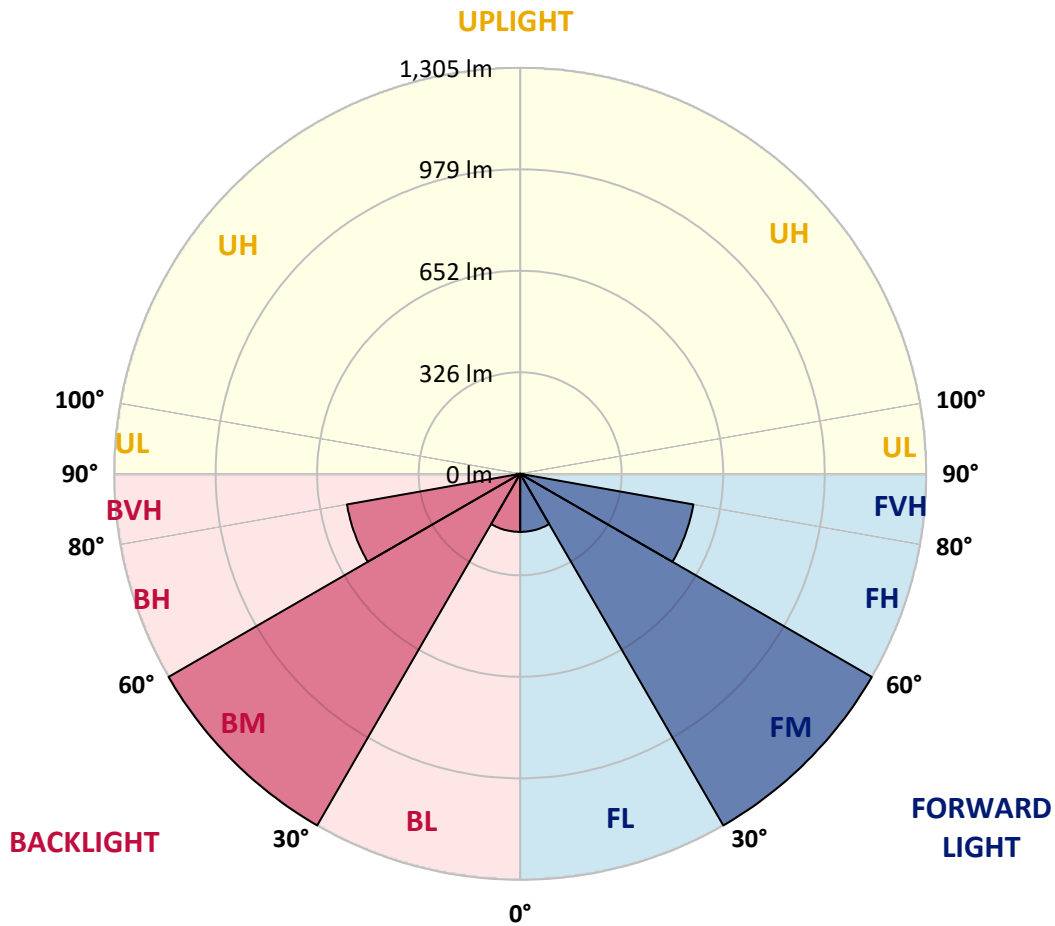
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	186.7	4.5			
FM (30°-60°)	1304.8	31.6			
FH (60°-80°)	565.5	13.7			G0/660
FVH (80°-90°)	10.6	0.3			G1/100
BL (0°-30°)	186.7	4.5	B1/500		
BM (30°-60°)	1304.8	31.6	B2/2500		
BH (60°-80°)	565.5	13.7	B2/1000		G0/660
BVH (80°-90°)	10.6	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G1**

Type V Short





REPORT NUMBER: P366688

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1	169.1
2.5°	205.6	201.9	188.9	193.5	198.2	197.5	196.3	192.8	189.6	202.9	205.6
5°	262.1	253.7	249.1	245.4	244.6	235.5	248.0	246.6	250.8	257.9	264.8
7.5°	307.2	299.3	287.3	284.8	271.2	261.1	271.9	285.1	289.4	302.3	310.0
10°	323.7	316.8	319.0	307.7	307.0	309.9	307.5	310.5	321.7	320.1	325.9
12.5°	360.7	361.9	354.8	351.9	357.7	370.1	359.5	355.8	353.1	364.6	368.1
15°	395.3	402.2	390.6	388.8	386.4	398.0	386.6	392.1	397.0	399.4	398.0
17.5°	444.5	444.8	431.8	411.1	418.9	422.6	417.5	408.0	431.0	442.6	443.3
20°	476.8	477.9	452.4	420.1	441.9	445.3	442.8	422.8	453.4	472.7	471.9
22.5°	511.6	507.5	472.9	449.3	457.1	459.1	453.7	451.2	472.7	507.9	502.7
25°	535.0	542.4	507.9	492.7	486.2	481.5	488.4	489.7	511.7	543.7	526.0
27.5°	590.8	578.0	524.0	529.7	515.8	484.0	514.3	530.9	526.2	580.7	594.0
30°	640.4	640.8	565.1	576.0	550.1	524.4	557.2	581.2	575.3	645.2	632.5
32.5°	703.9	706.2	635.9	606.6	589.1	584.3	580.2	606.8	643.5	700.0	701.2
35°	772.3	792.5	697.0	666.2	636.4	614.9	638.1	674.9	698.8	789.2	773.2
37.5°	905.7	871.8	793.5	735.7	716.7	708.1	720.4	741.7	793.4	871.3	898.7
40°	984.6	975.2	868.7	820.3	746.9	769.8	763.1	821.6	864.4	980.6	983.1
42.5°	1105.3	1057.8	962.1	900.5	834.6	794.9	836.9	915.5	967.1	1065.4	1111.8
45°	1200.6	1139.7	1065.9	1019.1	935.9	906.4	921.6	1022.2	1086.9	1154.4	1215.4
47.5°	1306.1	1240.2	1166.3	1083.2	1002.0	1049.9	1023.2	1111.7	1174.9	1271.6	1328.8
50°	1438.7	1365.7	1271.1	1202.5	1148.7	1165.5	1161.3	1224.4	1302.4	1390.6	1455.5
52.5°	1584.7	1502.1	1410.9	1347.2	1324.5	1282.7	1337.2	1363.2	1420.7	1501.4	1577.6
55°	1686.8	1604.2	1549.0	1569.6	1563.5	1496.6	1544.3	1547.0	1519.3	1548.4	1625.1
57.5°	1671.0	1592.1	1584.5	1662.1	1778.0	1842.8	1768.9	1610.1	1506.1	1492.5	1573.8
60°	1461.1	1393.6	1462.9	1637.9	1975.5	2172.7	1888.4	1562.5	1391.2	1320.4	1398.8
62.5°	1006.8	961.3	1104.9	1378.5	1999.2	2427.2	1884.0	1357.8	1079.0	950.5	1011.4
65°	477.3	460.8	582.1	873.9	1665.3	2359.2	1645.9	918.7	621.1	496.1	509.9
67.5°	179.5	171.3	213.6	386.1	1048.9	1871.2	1106.4	453.2	240.2	186.7	193.1
70°	101.9	96.1	101.6	140.8	422.3	1059.8	477.3	155.4	102.1	93.0	99.1
72.5°	80.2	75.7	76.5	85.1	145.7	416.0	154.4	88.7	74.2	70.5	75.9
75°	66.3	62.2	62.1	66.8	85.0	135.1	87.3	67.8	60.1	57.4	61.7
77.5°	52.7	50.3	51.0	54.7	60.9	75.5	63.3	54.8	49.3	46.1	49.1
80°	38.5	38.2	40.9	44.2	45.4	50.8	47.4	44.2	39.4	34.8	36.0
82.5°	25.2	25.4	30.4	33.1	32.6	32.5	34.0	33.8	29.4	23.0	23.0
85°	14.5	14.8	18.7	20.9	20.5	16.3	21.5	21.7	18.8	14.0	13.5
87.5°	4.7	5.9	8.1	8.6	8.2	4.5	8.2	9.1	8.2	5.9	5.2
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)