

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: P367111

Luminaire Tested: **MSA-SA1D-830-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367111  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1D-830-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4475 lumens  
Efficiency: N/A  
Efficacy: 66.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1

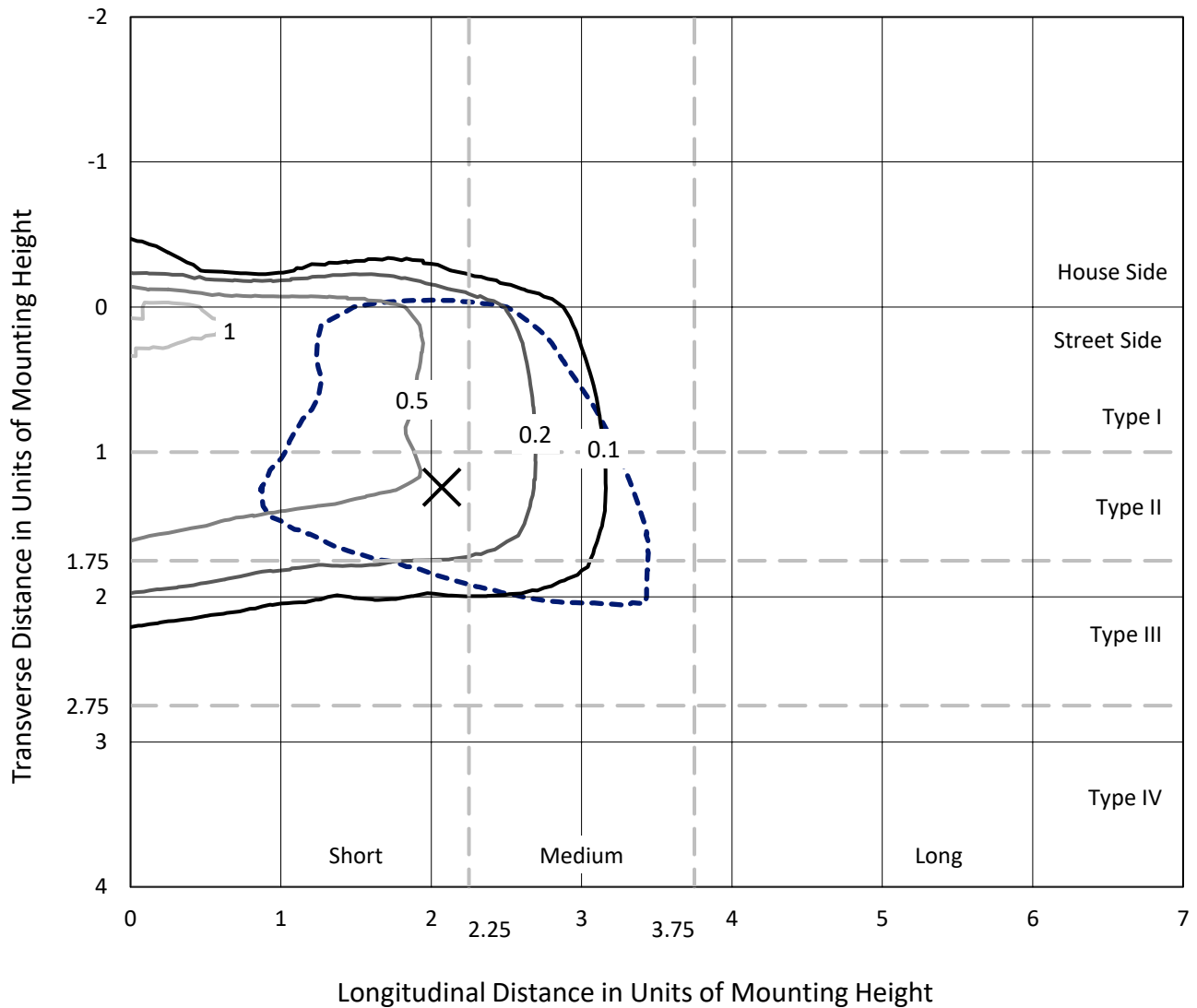
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

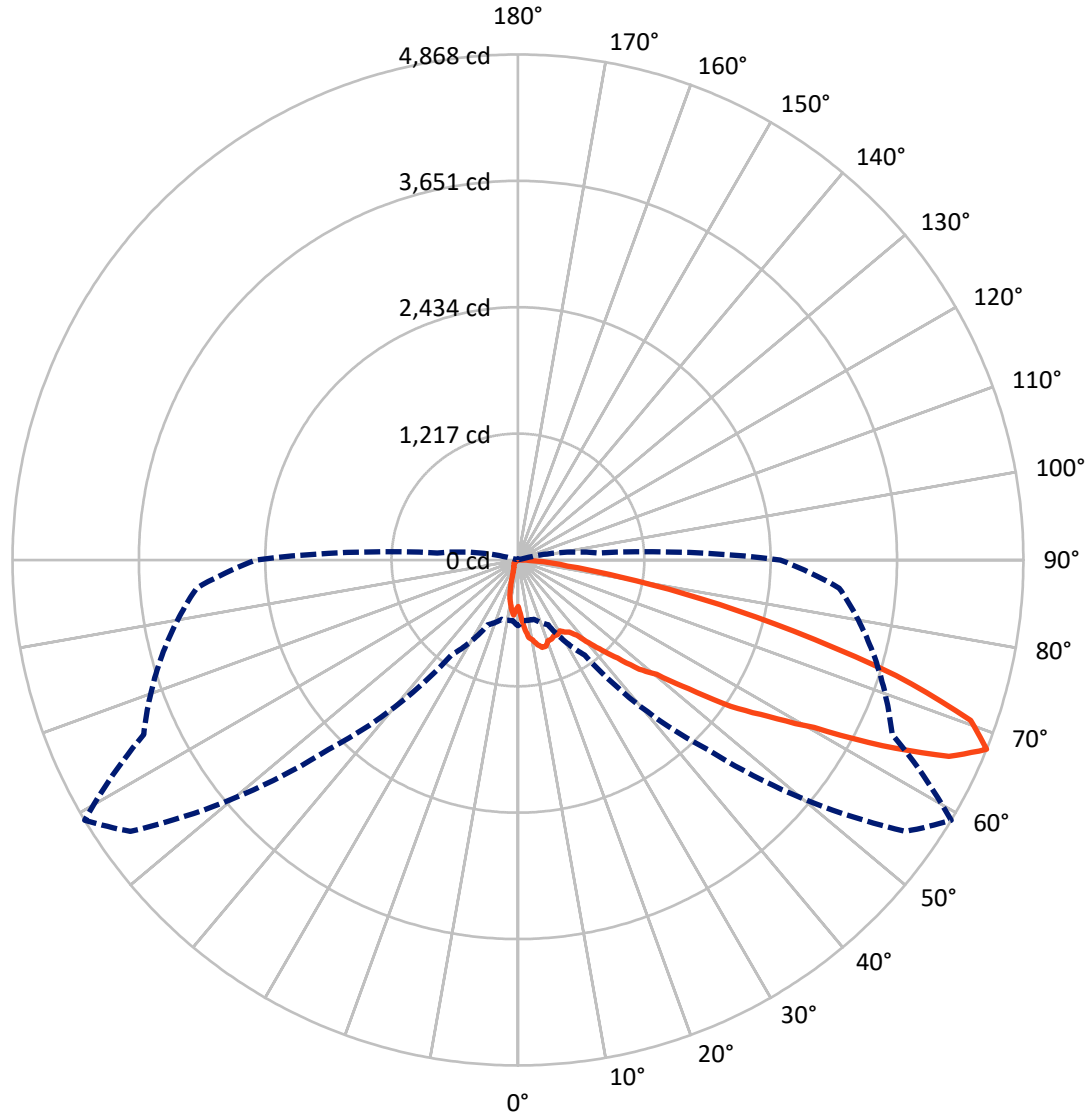
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	380.6	0.0	380.6
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	4094.4	0.0	4094.4
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	4475.0	0.0	4475.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.4	1.2
10°-20°	153.3	3.4
20°-30°	228.0	5.1
30°-40°	351.8	7.9
40°-50°	627.8	14.0
50°-60°	1117.2	25.0
60°-70°	1301.1	29.1
70°-80°	578.6	12.9
80°-90°	62.8	1.4
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°	4475.0	100.0
0°-180°	4475.0	100.0

**Coefficient of Utilization**



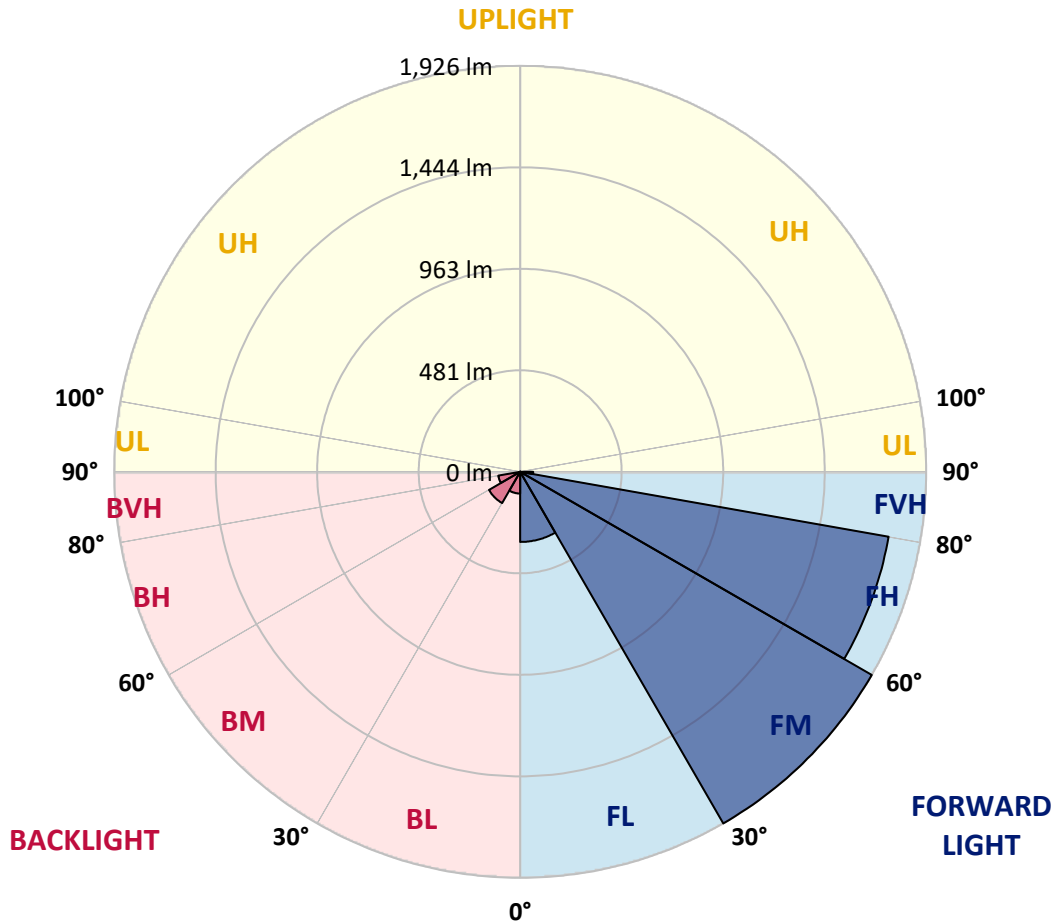
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	332.8	7.4			
FM (30°-60°)	1925.6	43.0			
FH (60°-80°)	1774.3	39.6			G1/1800
FVH (80°-90°)	61.7	1.4			G1/100
BL (0°-30°)	102.9	2.3	B0/110		
BM (30°-60°)	171.1	3.8	B0/220		
BH (60°-80°)	105.4	2.4	B0/110		G0/110
BVH (80°-90°)	1.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7
2.5°	583.7	561.7	530.4	539.7	548.1	556.0	542.9	535.4	531.8	499.6	540.0
5°	716.7	689.3	675.0	671.4	662.3	642.2	675.7	660.7	665.7	672.1	685.2
7.5°	757.3	744.8	724.2	731.9	697.4	694.5	740.9	753.9	770.9	759.3	775.2
10°	736.4	714.9	724.6	721.9	720.6	750.9	783.5	784.2	809.6	821.8	768.1
12.5°	695.2	697.7	732.6	729.8	775.2	835.9	843.4	835.4	876.9	855.6	847.4
15°	722.6	743.0	723.7	730.3	746.4	822.3	848.8	873.3	912.5	925.2	870.1
17.5°	755.7	757.7	722.6	714.4	755.0	790.3	852.9	873.0	876.9	988.2	921.1
20°	737.8	755.2	713.3	661.9	724.9	772.9	836.3	830.0	855.8	1006.7	932.6
22.5°	785.4	760.4	706.7	668.0	689.3	733.0	786.7	828.2	866.9	962.3	947.6
25°	789.9	780.8	733.0	698.6	694.9	706.0	780.8	807.6	868.3	1002.2	934.9
27.5°	840.9	830.4	732.6	736.0	702.0	667.8	752.3	815.0	893.0	978.0	961.9
30°	906.6	907.5	781.3	791.9	743.4	688.4	775.6	792.8	909.8	1016.7	981.8
32.5°	973.2	1000.6	877.6	821.2	806.0	766.5	746.6	826.1	891.4	1082.9	1031.7
35°	1074.5	1093.1	956.9	906.4	846.8	801.9	825.5	854.0	957.3	1170.6	1097.1
37.5°	1246.0	1212.5	1099.2	1011.3	997.0	930.8	942.6	917.0	1024.6	1273.9	1226.7
40°	1342.5	1312.2	1194.3	1151.5	1060.4	1070.6	1033.5	1048.4	1122.3	1381.5	1344.8
42.5°	1443.1	1414.1	1310.8	1280.4	1193.7	1151.5	1134.8	1188.5	1272.1	1560.7	1514.1
45°	1544.2	1470.6	1426.8	1442.0	1403.0	1319.6	1300.2	1348.0	1435.7	1781.0	1692.6
47.5°	1629.4	1567.3	1534.5	1527.4	1512.2	1628.0	1548.7	1569.8	1608.5	1975.8	1915.1
50°	1783.0	1721.8	1670.4	1656.1	1730.0	1894.3	1771.9	1731.1	1808.6	2211.3	2173.0
52.5°	2004.9	1926.9	1845.1	1845.3	1984.7	2074.9	2132.9	2061.3	2075.8	2470.3	2453.3
55°	2183.2	2084.2	2016.4	2069.9	2277.7	2328.2	2549.6	2486.8	2468.0	2710.4	2689.6
57.5°	2207.6	2088.9	2056.7	2150.5	2434.9	2757.6	2995.7	2838.9	2810.1	2911.4	2952.9
60°	1979.2	1853.3	1877.5	2028.4	2486.1	3019.3	3405.4	3277.4	3094.5	3146.9	3175.4
62.5°	1476.2	1375.6	1443.6	1643.4	2288.8	3194.7	3879.6	3939.0	3424.4	3323.6	3317.5
65°	957.8	894.8	939.4	1103.3	1732.0	3174.7	4303.4	4560.8	3684.3	3467.7	3362.1
67.5°	633.5	585.7	592.1	689.1	1120.0	2582.0	4556.7	4867.8	3976.6	3549.5	3106.3
70°	472.2	434.6	436.9	489.4	664.8	1702.8	4203.4	4625.6	4083.3	3266.0	2507.2
72.5°	340.6	315.4	336.5	394.9	529.8	900.5	3133.0	3809.4	3560.6	2576.1	1689.2
75°	235.9	219.3	253.8	330.4	483.5	559.0	2070.3	2742.2	2495.6	1616.3	763.6
77.5°	130.7	125.8	175.4	269.2	438.9	458.2	1268.2	1801.8	1384.2	579.4	181.7
80°	57.1	55.3	85.0	202.1	368.9	414.0	714.0	999.0	544.5	103.3	58.7
82.5°	24.5	23.6	36.3	121.7	268.1	346.2	440.3	480.8	187.4	31.9	33.3
85°	4.3	4.8	14.5	64.1	163.1	175.8	318.8	284.6	94.3	15.2	23.8
87.5°	0.0	0.0	2.3	12.5	30.6	50.3	138.2	99.7	17.9	5.0	4.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7
2.5°	545.6	532.9	484.7	478.6	472.0	462.2	458.6	437.8	435.0	461.8	461.8
5°	679.1	633.8	587.8	551.5	519.1	474.2	461.6	448.4	437.8	435.0	443.4
7.5°	749.6	694.3	622.0	529.8	455.0	390.0	362.8	343.7	322.4	328.8	332.2
10°	745.7	687.0	594.8	476.3	393.4	321.5	252.4	212.1	189.7	178.6	177.2
12.5°	783.5	728.3	576.4	433.7	327.9	228.6	158.8	130.1	113.5	113.7	112.4
15°	805.5	745.2	555.1	379.8	230.9	147.1	110.1	103.8	101.5	104.0	102.6
17.5°	844.3	763.1	506.9	299.3	158.8	111.0	101.3	98.8	101.7	106.9	105.6
20°	841.3	732.1	438.2	211.0	117.4	99.9	95.8	92.0	98.1	103.6	102.6
22.5°	838.6	701.7	373.6	155.7	98.1	91.1	87.7	86.1	89.3	95.6	97.0
25°	814.6	686.8	308.2	116.9	88.8	82.7	81.1	79.8	80.9	86.1	85.9
27.5°	844.0	648.9	237.9	98.1	82.3	75.0	73.6	71.4	69.1	73.6	74.3
30°	837.9	654.2	186.5	86.3	75.7	65.9	66.4	61.6	57.6	61.6	61.6
32.5°	860.1	616.1	149.3	78.4	69.1	62.1	56.4	51.4	48.5	51.0	51.4
35°	892.5	617.7	116.9	73.4	63.4	55.3	48.5	43.5	40.8	41.9	42.6
37.5°	1001.1	606.8	97.7	69.6	61.4	51.2	44.2	37.6	35.8	37.2	37.8
40°	1071.8	635.8	86.1	67.5	56.2	47.1	37.8	33.1	31.5	32.2	33.3
42.5°	1205.0	651.9	80.4	65.3	51.4	40.3	32.4	29.7	27.4	28.3	29.2
45°	1347.5	679.3	76.1	62.8	47.8	35.3	28.6	26.3	23.3	23.6	24.5
47.5°	1522.7	744.6	71.1	58.5	42.8	32.2	25.4	22.0	19.3	19.0	20.2
50°	1757.9	831.8	66.6	53.0	39.7	29.5	22.2	17.9	15.6	15.0	15.9
52.5°	2008.9	944.6	61.9	49.2	35.8	25.8	19.0	14.5	12.5	12.0	12.7
55°	2257.7	1053.0	57.3	46.7	31.7	22.2	16.1	12.0	10.2	9.7	10.2
57.5°	2541.2	1170.1	51.4	41.7	27.9	19.3	13.4	10.0	8.4	7.9	8.2
60°	2754.6	1211.3	46.5	36.3	24.2	17.0	11.3	7.9	6.8	6.3	6.6
62.5°	2855.9	1144.0	41.7	31.5	21.3	14.7	9.5	6.6	5.7	5.2	5.2
65°	2829.6	994.9	36.9	27.0	18.4	12.2	7.5	5.7	5.0	4.3	4.1
67.5°	2526.0	778.6	31.5	22.7	15.4	10.0	6.3	5.4	4.5	4.1	3.4
70°	2003.3	563.8	25.6	18.8	12.9	8.2	5.0	5.0	4.3	4.1	3.2
72.5°	1313.1	354.8	20.8	15.2	10.6	6.3	3.9	4.5	4.1	4.1	2.9
75°	569.0	126.9	16.8	12.2	8.8	4.3	3.4	4.1	4.3	4.1	3.4
77.5°	133.2	39.4	13.1	9.7	7.3	2.9	3.4	4.1	4.3	3.9	2.9
80°	50.1	16.8	8.6	6.3	5.7	1.8	2.9	2.5	2.3	1.6	0.5
82.5°	30.4	7.0	4.5	3.2	2.7	0.5	1.4	0.9	0.5	0.5	0.0
85°	21.5	3.4	2.5	2.3	1.4	0.0	0.2	0.0	0.0	0.2	0.0
87.5°	2.9	0.9	1.1	1.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0
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)