

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: P367517

Luminaire Tested: **MSA-SA2C-830-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367517
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-830-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7239 lumens
Efficiency: N/A
Efficacy: 64.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

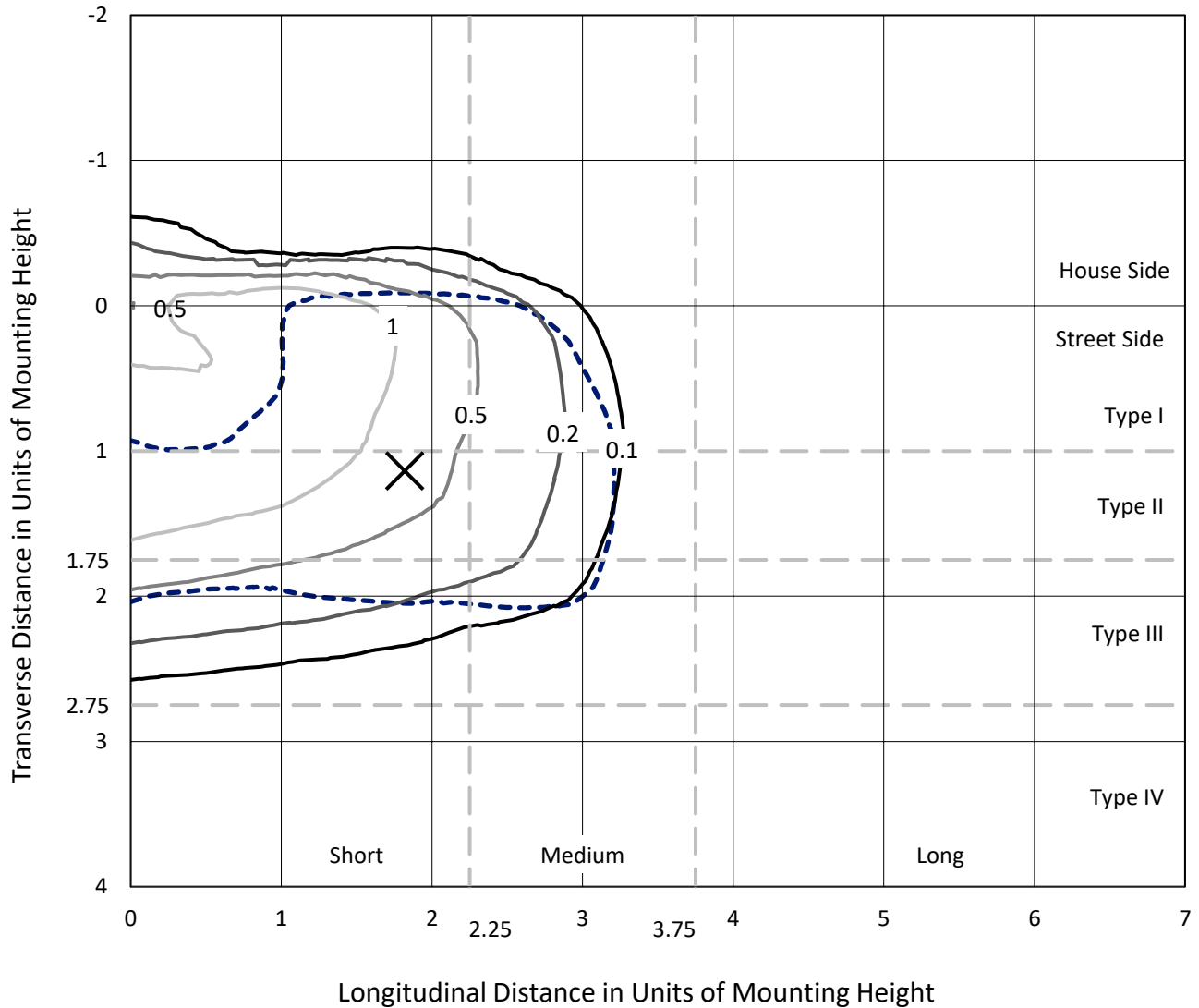
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

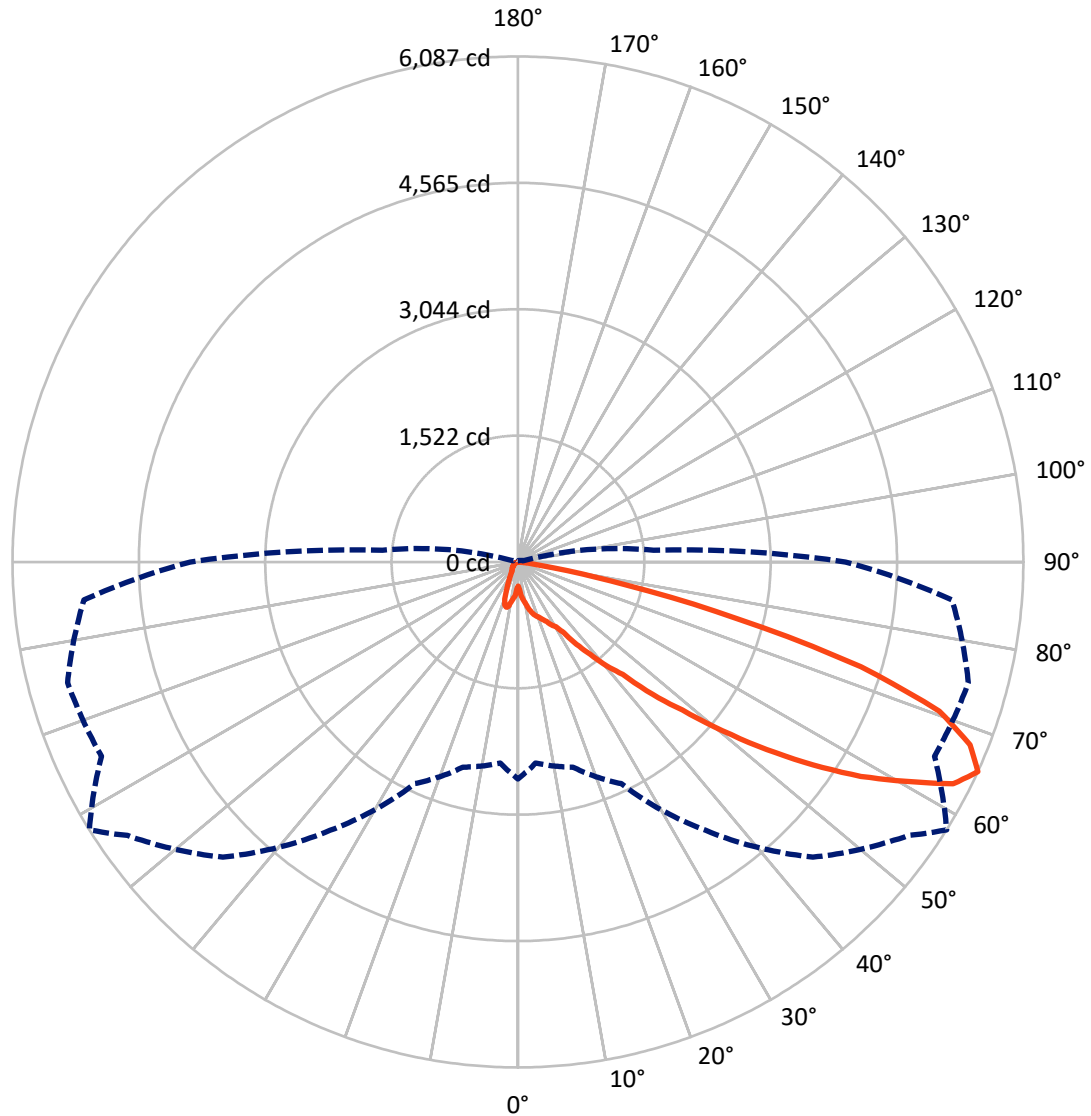
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	714.3	0.0	714.3
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	6524.7	0.0	6524.7
	% Fixture	90.1	0.0	90.1
Total	Lumens	7239.0	0.0	7239.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.7	0.6
10°-20°	148.6	2.1
20°-30°	287.6	4.0
30°-40°	573.9	7.9
40°-50°	1173.2	16.2
50°-60°	2080.9	28.7
60°-70°	2193.8	30.3
70°-80°	711.2	9.8
80°-90°	29.1	0.4
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°	7239.0	100.0
0°-180°	7239.0	100.0

Coefficient of Utilization



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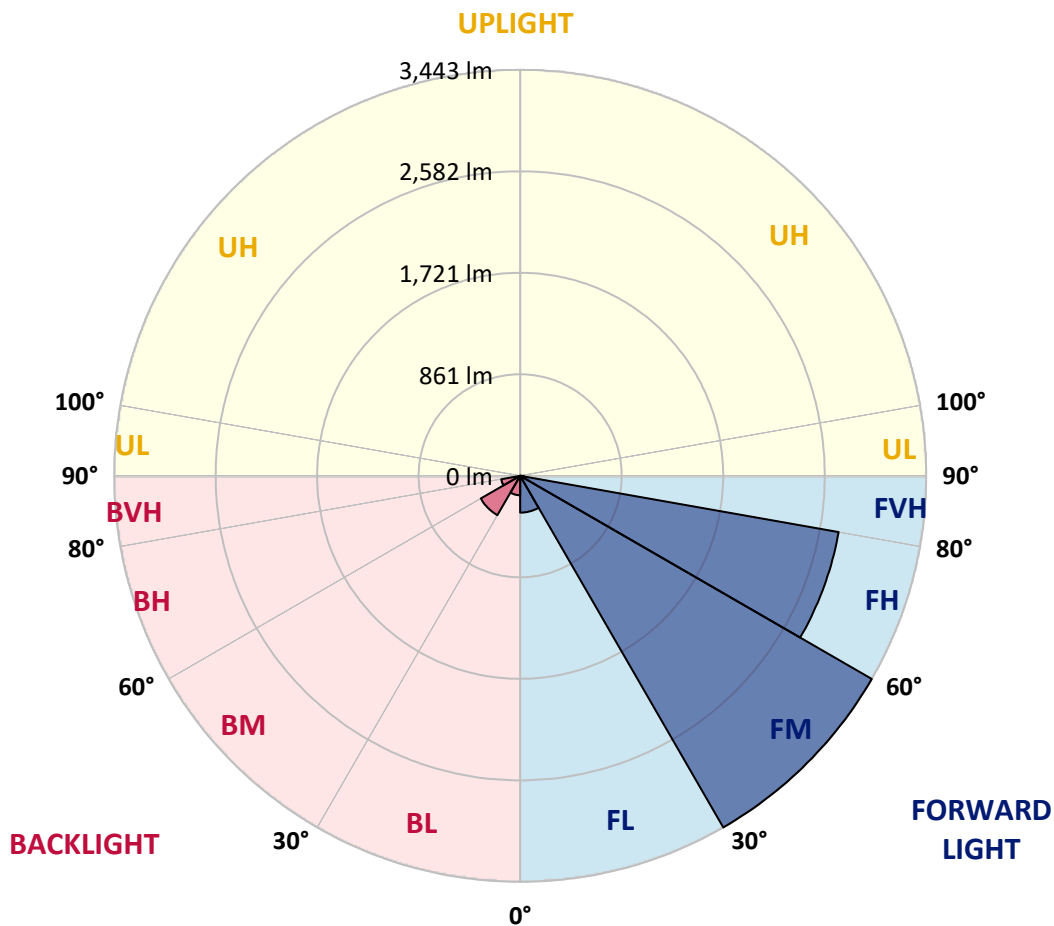
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	312.3	4.3			
FM (30°-60°)	3442.5	47.6			
FH (60°-80°)	2742.0	37.9			G2/5000
FVH (80°-90°)	27.9	0.4			G1/100
BL (0°-30°)	164.6	2.3	B1/500		
BM (30°-60°)	385.4	5.3	B1/1000		
BH (60°-80°)	163.0	2.3	B1/500		G1/500
BVH (80°-90°)	1.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	289.8	289.8	289.8	289.8	289.8	289.8	289.8	289.8	289.8	289.8	289.8
2.5°	353.8	343.2	326.5	329.3	332.6	339.1	333.8	328.9	323.6	316.7	343.2
5°	427.1	409.6	408.0	404.3	401.5	401.1	407.6	405.5	408.4	421.4	434.9
7.5°	454.0	446.7	432.8	438.6	429.6	422.7	451.6	461.0	478.9	485.0	520.1
10°	451.2	440.6	446.3	449.2	455.3	480.5	498.9	509.1	524.6	558.0	551.0
12.5°	464.2	473.6	479.7	480.1	511.5	558.0	571.0	579.6	607.3	620.3	654.6
15°	507.8	523.3	513.5	517.6	527.8	584.5	615.0	633.8	672.9	715.3	723.9
17.5°	570.2	580.0	559.6	544.9	573.1	604.0	659.5	679.0	703.9	802.9	821.3
20°	648.9	665.6	621.6	563.3	600.4	637.0	697.4	706.7	733.2	862.4	891.4
22.5°	832.7	807.8	740.6	649.7	638.7	655.0	712.4	749.1	794.0	895.9	963.1
25°	1014.1	1005.5	906.5	805.0	731.6	694.9	771.1	791.5	864.9	975.3	1012.4
27.5°	1215.8	1232.9	1067.4	1005.9	862.0	742.2	807.8	858.8	945.6	1004.3	1093.5
30°	1482.0	1454.6	1260.6	1199.1	1034.8	872.2	902.8	906.0	1033.6	1099.6	1184.4
32.5°	1690.6	1708.2	1464.4	1369.9	1238.6	1072.3	974.1	1016.5	1107.8	1254.9	1335.2
35°	1916.4	1914.8	1677.2	1550.0	1378.4	1235.8	1185.6	1216.6	1331.2	1497.9	1519.0
37.5°	2253.9	2225.0	1944.6	1758.3	1612.4	1490.5	1452.2	1411.0	1529.2	1688.2	1767.7
40°	2572.2	2472.4	2213.2	1992.2	1805.6	1755.8	1617.3	1642.5	1677.6	1887.5	2107.2
42.5°	2893.8	2831.9	2485.4	2300.4	2070.9	1952.7	1862.2	1850.4	2017.1	2265.7	2492.8
45°	3318.1	3128.6	2851.4	2688.8	2423.1	2304.4	2231.5	2275.1	2425.1	2788.2	2939.5
47.5°	3674.3	3499.9	3261.9	3014.9	2736.1	2869.4	2732.4	2663.5	2869.4	3244.7	3445.7
50°	3980.4	3786.0	3545.1	3362.1	3316.9	3444.9	3167.7	3193.0	3326.7	3767.7	3881.0
52.5°	4203.0	3998.3	3788.0	3699.6	3885.0	3949.4	3810.5	3754.6	3876.1	4213.5	4268.6
55°	4370.5	4161.0	3996.7	4118.6	4477.3	4456.1	4505.0	4314.2	4430.4	4678.6	4652.5
57.5°	4380.7	4132.4	4036.3	4232.3	4724.7	5052.8	5195.8	4871.4	4937.4	5042.2	4983.5
60°	4060.3	3813.3	3805.6	4083.9	4796.4	5207.2	5520.2	5362.1	5273.7	5351.5	5240.2
62.5°	3422.0	3249.2	3329.9	3637.6	4529.4	5122.0	5693.1	5883.4	5539.0	5556.5	5398.4
65°	2613.0	2431.6	2558.0	2945.6	3945.8	5026.7	5742.0	6087.2	5534.1	5614.8	5246.8
67.5°	1730.6	1625.4	1768.5	2195.6	3137.1	4437.3	5716.7	5873.2	5358.4	5387.0	4683.9
70°	893.4	867.7	983.5	1320.6	2109.2	3409.0	5468.5	5382.9	5001.8	4640.7	3612.8
72.5°	286.1	287.3	398.6	603.2	1137.1	2075.4	4203.4	4320.7	4002.4	3394.7	2205.8
75°	126.8	124.7	166.7	253.1	474.0	930.5	2611.4	2738.1	2491.9	1867.5	927.2
77.5°	91.3	88.4	106.8	148.0	234.8	315.5	1224.4	1321.4	1129.8	647.2	212.3
80°	64.4	64.0	77.4	103.9	146.7	140.2	386.8	433.7	347.3	156.9	62.4
82.5°	36.3	37.5	53.8	73.4	89.3	70.1	108.8	119.8	117.0	83.6	27.3
85°	17.5	19.6	35.1	53.0	46.9	27.3	38.7	42.0	48.9	48.5	13.9
87.5°	0.0	0.0	14.3	24.0	12.6	4.1	11.8	13.5	13.0	15.5	3.3
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°	289.8	289.8	289.8	289.8	289.8	289.8	289.8	289.8	289.8	289.8	289.8
2.5°	348.5	346.0	315.1	317.5	324.4	321.6	324.0	318.3	311.8	338.3	337.9
5°	440.6	422.3	412.5	403.5	405.1	386.8	397.4	402.3	401.5	416.5	420.6
7.5°	521.3	496.8	477.3	458.5	430.0	404.3	420.2	430.4	437.3	463.4	473.6
10°	559.2	539.2	531.5	494.8	474.4	458.5	439.4	425.5	431.2	424.3	431.2
12.5°	642.3	628.9	599.1	562.1	537.6	505.0	433.7	374.2	337.5	337.9	335.4
15°	718.2	717.3	672.9	611.4	540.4	447.5	336.3	261.3	226.6	216.8	213.6
17.5°	817.2	805.0	723.9	633.0	505.4	346.4	229.1	178.9	175.7	181.4	178.9
20°	880.4	862.4	749.1	601.6	416.5	234.4	172.8	158.5	168.3	176.5	174.4
22.5°	943.5	916.6	768.3	563.3	296.3	171.6	156.1	153.7	159.8	170.0	171.6
25°	978.2	972.9	805.8	491.5	203.0	150.4	150.4	149.6	151.6	159.0	157.7
27.5°	1078.9	1007.1	777.7	383.5	156.9	138.2	140.2	139.4	132.1	139.4	139.8
30°	1141.6	1108.6	779.7	273.1	138.2	122.3	127.6	121.1	110.0	116.2	114.9
32.5°	1268.0	1185.6	773.6	184.2	125.9	116.6	108.4	99.0	90.9	93.3	91.3
35°	1415.1	1352.3	690.8	148.0	117.4	103.1	90.1	80.7	72.1	74.2	73.8
37.5°	1707.8	1508.4	622.4	133.3	111.7	94.6	79.5	66.4	62.0	63.2	64.4
40°	1978.8	1768.9	494.8	126.8	101.9	84.4	65.6	56.2	53.4	54.2	55.4
42.5°	2383.9	1975.9	373.7	120.2	92.1	71.3	54.6	48.5	45.6	47.3	48.1
45°	2776.0	2152.0	279.2	114.5	84.0	61.5	46.1	42.0	38.7	39.9	41.6
47.5°	3167.7	2347.7	208.3	105.6	75.0	53.0	39.5	36.7	34.6	35.1	37.1
50°	3518.2	2439.0	163.8	94.6	67.7	46.1	35.9	33.0	32.2	32.6	34.2
52.5°	3775.8	2439.8	138.2	84.8	60.7	40.8	33.8	30.6	30.2	31.0	32.6
55°	4008.5	2374.6	119.8	76.2	54.6	37.1	32.2	29.3	29.3	30.2	31.8
57.5°	4163.0	2254.7	103.9	67.3	49.3	35.1	31.0	28.1	27.7	27.3	28.5
60°	4238.4	2091.3	88.0	59.1	44.4	33.8	30.2	24.9	24.5	23.6	24.5
62.5°	4190.7	1886.7	73.8	50.9	39.5	32.2	26.5	21.6	20.8	19.2	20.4
65°	3947.0	1638.1	62.4	43.6	34.2	27.3	22.4	18.3	16.3	14.3	13.9
67.5°	3448.5	1330.7	52.2	37.5	29.3	22.4	18.3	16.3	12.6	11.0	10.6
70°	2584.5	908.5	43.2	32.2	24.5	19.2	15.5	14.7	11.8	10.6	9.8
72.5°	1516.2	490.3	36.3	28.1	20.8	15.9	12.6	13.5	11.8	9.8	9.0
75°	605.7	163.0	28.9	22.4	16.7	11.4	10.6	11.0	10.6	9.0	7.3
77.5°	138.2	51.4	22.4	17.5	13.0	7.3	8.6	9.4	9.4	7.3	5.3
80°	43.2	20.4	13.0	11.0	9.4	4.1	6.1	6.5	4.5	2.0	0.0
82.5°	13.9	5.7	4.5	4.5	4.1	0.8	1.2	0.8	0.0	0.0	0.0
85°	5.3	3.7	2.9	2.9	1.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.0	1.6	1.2	1.6	0.8	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)