

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: P366980

Luminaire Tested: **MSA-SA1C-830-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366980
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-830-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4890 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

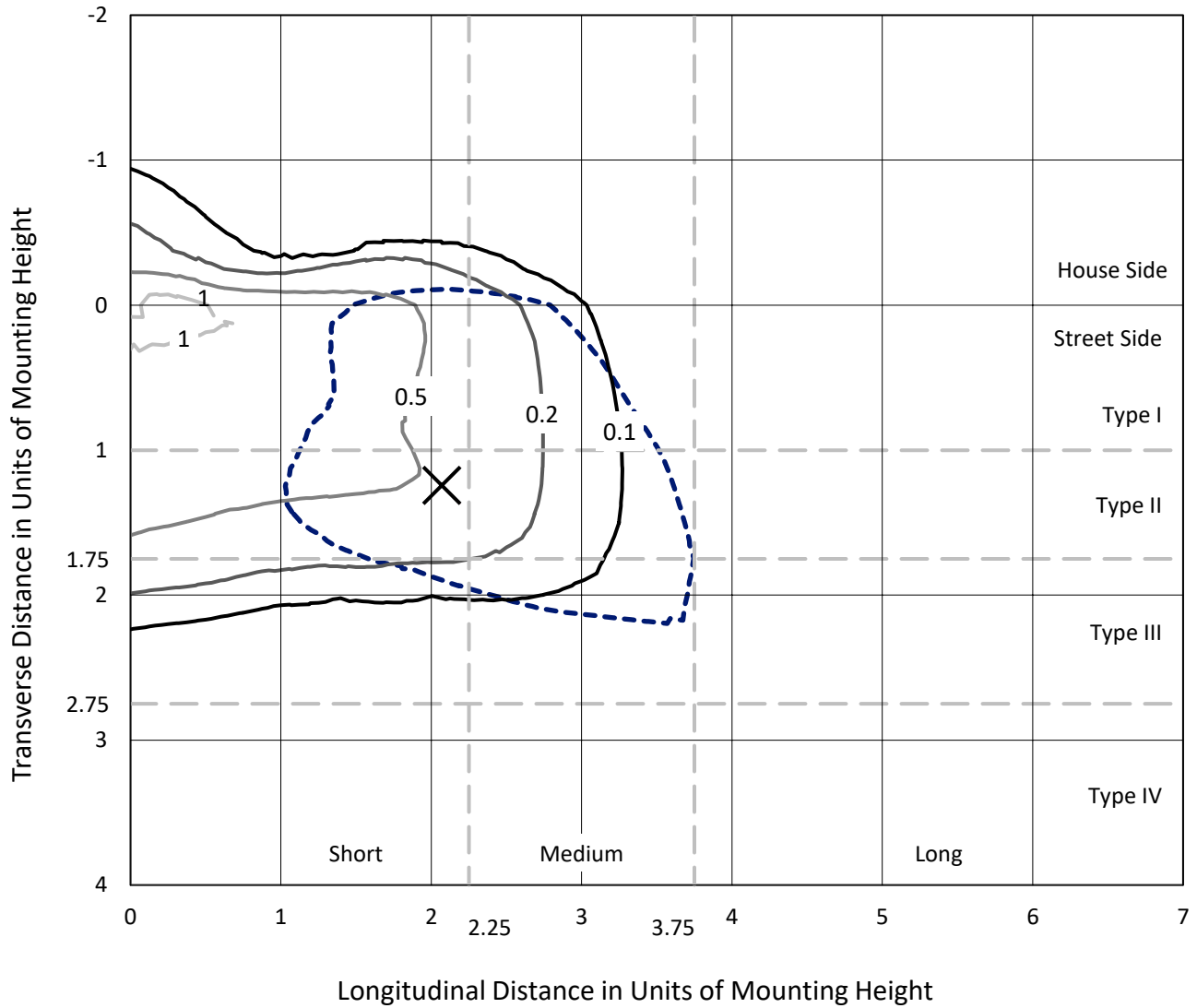
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

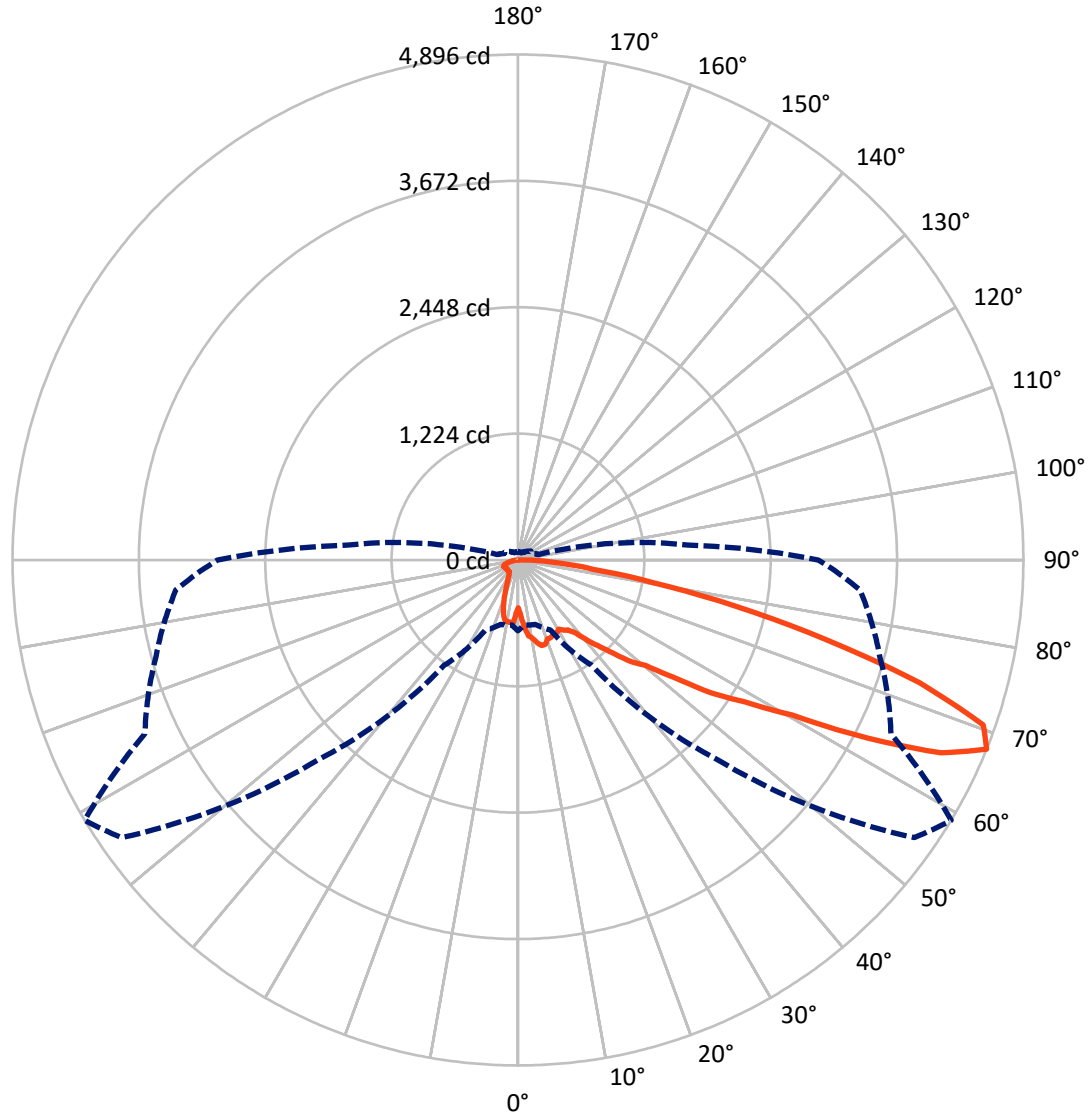
× Max cd
 - - - 1/2 Max cd



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
House Side	Lumens	736.1	0.0	736.1
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	4154.0	0.0	4154.0
	% Fixture	84.9	0.0	84.9
Total	Lumens	4890.0	0.0	4890.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.4	1.2
10°-20°	178.8	3.7
20°-30°	255.4	5.2
30°-40°	376.3	7.7
40°-50°	635.8	13.0
50°-60°	1106.5	22.6
60°-70°	1410.0	28.8
70°-80°	746.6	15.3
80°-90°	120.1	2.5
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°	4890.0	100.0
0°-180°	4890.0	100.0

Coefficient of Utilization



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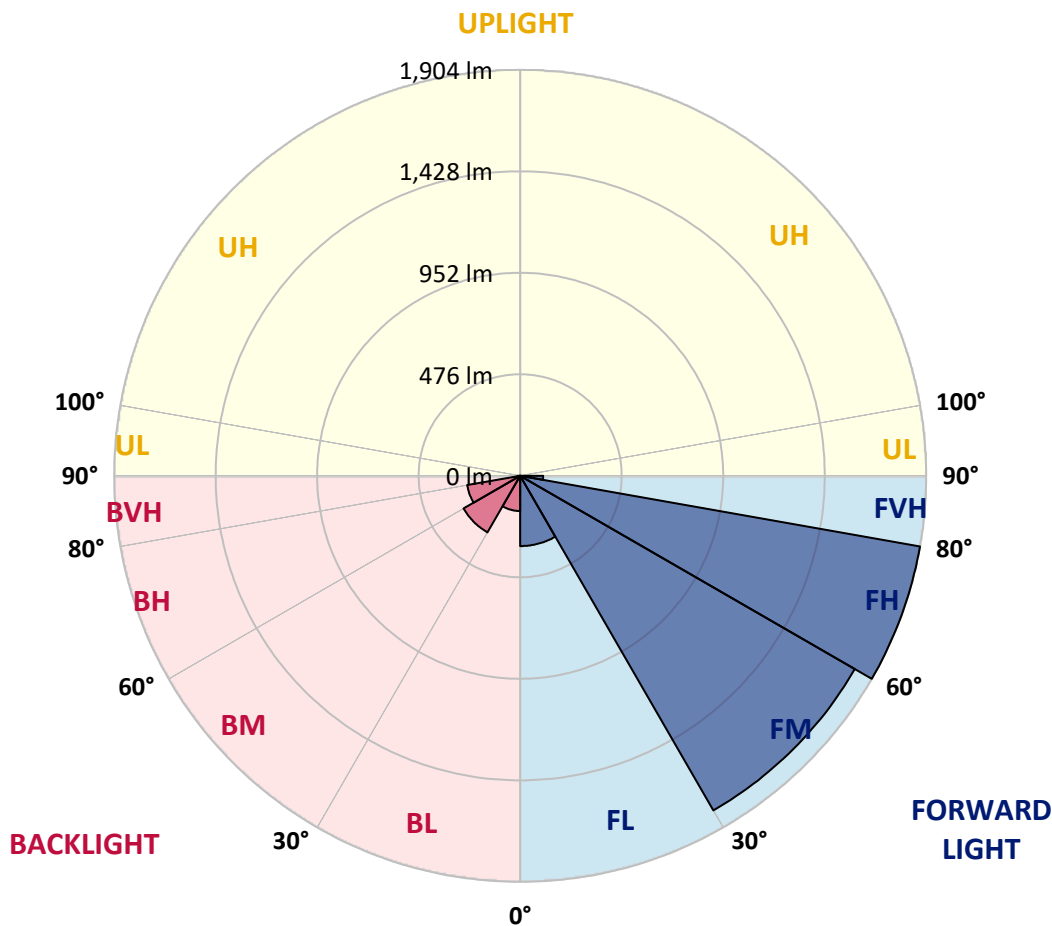
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	329.6	6.7			
FM (30°-60°)	1812.2	37.1			
FH (60°-80°)	1904.3	38.9			G2/5000
FVH (80°-90°)	107.9	2.2			G2/225
BL (0°-30°)	165.1	3.4	B1/500		
BM (30°-60°)	306.5	6.3	B1/1000		
BH (60°-80°)	252.3	5.2	B1/500		G1/500
BVH (80°-90°)	12.2	0.3			G1/100
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°	59°	65°	75°	85°
0°	462.7	462.7	462.7	462.7	462.7	462.7	462.7	462.7	462.7	462.7	462.7
2.5°	577.7	550.8	522.2	530.3	546.6	554.1	546.0	538.2	528.0	516.0	557.0
5°	700.6	660.6	654.8	654.6	648.8	625.6	655.4	653.4	665.4	677.8	709.7
7.5°	735.6	720.7	704.5	712.2	683.0	681.8	728.2	741.4	764.6	757.0	799.9
10°	717.6	700.8	709.3	706.2	708.9	739.6	768.0	768.8	793.7	818.1	790.5
12.5°	685.9	687.1	720.9	719.7	763.2	820.2	828.7	822.0	862.7	846.1	869.7
15°	708.5	723.6	715.1	722.4	739.6	812.1	835.7	859.8	898.3	913.2	889.6
17.5°	744.5	752.6	714.5	710.6	746.0	780.4	839.0	859.5	865.6	971.9	938.5
20°	729.2	745.6	708.3	660.4	719.3	764.9	822.7	816.4	845.7	976.4	948.7
22.5°	772.7	745.6	698.1	664.1	684.9	726.7	775.8	816.7	851.3	949.7	963.4
25°	781.0	768.2	723.8	690.0	683.0	697.9	768.0	794.7	853.1	986.2	955.5
27.5°	831.6	812.3	722.0	723.0	688.0	661.7	743.1	799.2	874.3	963.6	974.8
30°	894.4	879.7	766.3	770.4	722.0	673.5	760.1	777.1	886.5	998.8	999.0
32.5°	941.4	967.3	853.5	797.2	780.0	743.7	734.0	810.4	872.2	1062.6	1040.5
35°	1026.2	1046.3	920.7	875.5	817.3	776.5	804.8	832.4	931.7	1146.5	1102.0
37.5°	1183.0	1159.8	1045.4	974.3	952.6	893.7	909.5	890.2	996.3	1240.8	1222.6
40°	1273.8	1253.7	1133.3	1093.9	1007.7	1015.2	995.5	1009.6	1082.7	1341.1	1335.3
42.5°	1363.3	1336.4	1234.6	1207.3	1121.3	1084.8	1088.3	1133.9	1216.0	1503.2	1483.9
45°	1451.8	1382.8	1338.2	1345.5	1304.0	1229.2	1234.4	1277.3	1361.4	1688.4	1644.1
47.5°	1519.5	1462.6	1427.7	1418.8	1398.3	1498.4	1453.7	1471.1	1508.1	1853.4	1836.6
50°	1647.8	1581.3	1535.9	1523.1	1592.7	1731.9	1640.8	1603.3	1682.2	2066.6	2057.9
52.5°	1853.2	1770.3	1694.6	1693.8	1794.5	1884.9	1949.1	1884.5	1913.5	2285.0	2309.9
55°	2032.4	1936.5	1868.5	1906.0	2049.4	2104.7	2322.9	2272.4	2247.9	2505.5	2576.6
57.5°	2099.3	1987.2	1942.9	1998.2	2209.6	2493.9	2724.5	2591.5	2567.7	2755.0	2904.0
60°	1952.4	1833.9	1836.6	1940.8	2307.0	2779.7	3163.6	3050.7	2911.0	3065.6	3211.1
62.5°	1533.8	1426.7	1496.5	1655.1	2225.3	3057.3	3752.1	3799.8	3303.3	3323.2	3381.4
65°	1042.5	968.3	1031.3	1186.5	1804.9	3208.8	4312.7	4503.7	3660.5	3491.9	3455.0
67.5°	686.1	633.7	645.9	749.1	1242.5	2735.5	4687.5	4895.8	3987.1	3630.3	3325.3
70°	531.3	489.0	483.7	537.7	736.9	1900.4	4465.4	4782.0	4186.1	3500.6	2898.4
72.5°	416.9	384.8	387.7	439.7	570.7	1054.3	3455.4	4066.5	3886.4	3019.0	2226.8
75°	325.1	298.8	313.5	373.0	527.8	655.2	2384.1	3086.3	3004.7	2235.5	1270.1
77.5°	236.0	219.0	240.0	317.7	496.1	562.2	1484.1	2153.2	1924.9	1147.8	435.8
80°	154.8	145.3	162.5	259.0	449.9	541.1	917.2	1319.4	951.1	322.4	164.9
82.5°	91.2	87.0	101.3	175.3	361.6	507.1	611.7	733.1	389.2	136.4	87.7
85°	47.9	44.8	60.1	100.7	249.3	462.9	481.6	438.9	187.9	59.3	41.9
87.5°	16.0	15.5	25.5	39.0	94.3	245.8	257.0	208.5	77.5	17.2	9.1
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°	462.7	462.7	462.7	462.7	462.7	462.7	462.7	462.7	462.7	462.7	462.7
2.5°	562.6	554.3	506.7	513.3	519.5	516.4	514.5	493.0	490.9	521.6	519.1
5°	708.9	674.5	633.9	632.0	605.3	577.9	583.3	574.6	577.1	589.7	591.0
7.5°	786.2	743.3	704.5	641.6	588.1	544.8	551.6	549.5	544.0	572.5	580.2
10°	784.7	746.6	702.9	626.6	590.6	555.4	513.1	473.1	461.3	447.2	448.4
12.5°	836.5	802.8	707.5	629.7	580.8	520.1	441.0	397.2	355.4	354.6	344.0
15°	852.7	827.8	717.2	611.9	512.7	425.6	343.8	296.3	266.1	260.1	251.2
17.5°	893.5	854.6	687.6	554.3	433.5	332.8	258.4	225.2	222.8	226.9	222.3
20°	896.2	833.0	634.1	469.1	348.3	252.2	210.7	194.2	203.1	213.2	212.8
22.5°	893.9	805.9	587.9	396.6	261.7	202.7	184.6	180.9	189.2	204.3	206.2
25°	870.7	797.0	530.1	325.8	212.4	173.7	168.7	171.0	181.3	199.1	199.1
27.5°	895.0	760.7	457.5	265.0	178.6	154.6	158.1	163.9	171.6	191.9	195.6
30°	887.1	772.7	399.1	213.4	157.5	141.3	149.2	155.0	163.7	184.8	186.7
32.5°	908.2	740.6	350.0	179.5	143.6	136.1	138.0	145.9	157.3	173.9	177.2
35°	940.6	752.4	293.6	161.4	136.8	130.1	133.7	139.9	151.3	167.4	170.1
37.5°	1043.8	751.8	254.7	151.5	135.5	128.9	130.5	134.9	148.2	162.9	169.1
40°	1110.1	794.9	219.2	149.2	134.1	128.3	126.8	131.6	142.2	159.6	163.9
42.5°	1234.6	821.2	203.9	148.4	133.9	124.7	123.3	128.9	139.3	155.4	162.0
45°	1366.2	858.7	191.7	148.0	133.2	124.1	119.8	126.8	135.5	151.1	158.7
47.5°	1521.0	938.1	184.8	146.5	132.0	125.0	118.5	122.1	131.8	147.3	155.0
50°	1723.7	1043.1	186.3	144.4	133.9	125.2	116.7	118.3	127.2	142.4	150.2
52.5°	1970.0	1205.8	195.6	145.3	135.1	124.1	115.8	115.0	122.7	135.9	143.8
55°	2267.0	1436.7	223.6	149.2	135.1	123.9	114.6	110.9	116.7	127.4	135.1
57.5°	2625.3	1704.0	278.3	151.1	134.1	122.7	111.9	105.3	108.8	117.7	125.0
60°	2933.0	1919.7	334.7	152.3	136.1	119.8	106.5	98.2	100.5	107.3	113.8
62.5°	3089.9	1980.2	351.7	151.3	141.7	117.9	100.1	90.8	91.0	96.8	102.6
65°	3119.3	1899.6	283.5	150.2	149.0	117.7	95.5	84.3	82.9	87.0	92.0
67.5°	2909.6	1648.9	204.5	148.0	149.8	116.5	92.4	79.2	75.4	78.3	82.5
70°	2470.5	1327.9	171.8	143.4	139.9	110.2	87.0	73.8	68.8	70.9	74.0
72.5°	1841.8	982.4	149.8	133.7	121.8	94.3	78.7	67.8	62.6	64.0	66.3
75°	1023.3	524.1	125.4	116.3	99.5	76.3	67.1	60.1	55.5	56.2	58.6
77.5°	339.8	193.3	92.0	92.2	75.2	58.9	55.3	51.4	47.9	48.1	50.1
80°	154.0	106.9	65.9	66.3	52.4	42.7	42.5	41.2	39.0	38.3	39.8
82.5°	89.3	64.9	45.2	43.1	33.8	27.8	30.9	30.3	29.6	27.4	27.8
85°	43.9	34.8	23.6	22.4	18.6	13.9	16.6	17.2	16.6	14.1	13.9
87.5°	10.8	11.4	5.8	5.4	3.1	1.5	2.5	2.5	3.1	2.1	1.0
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)