

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: P366846

Luminaire Tested: **MSA-SA1B-830-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366846
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-830-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3998 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G1

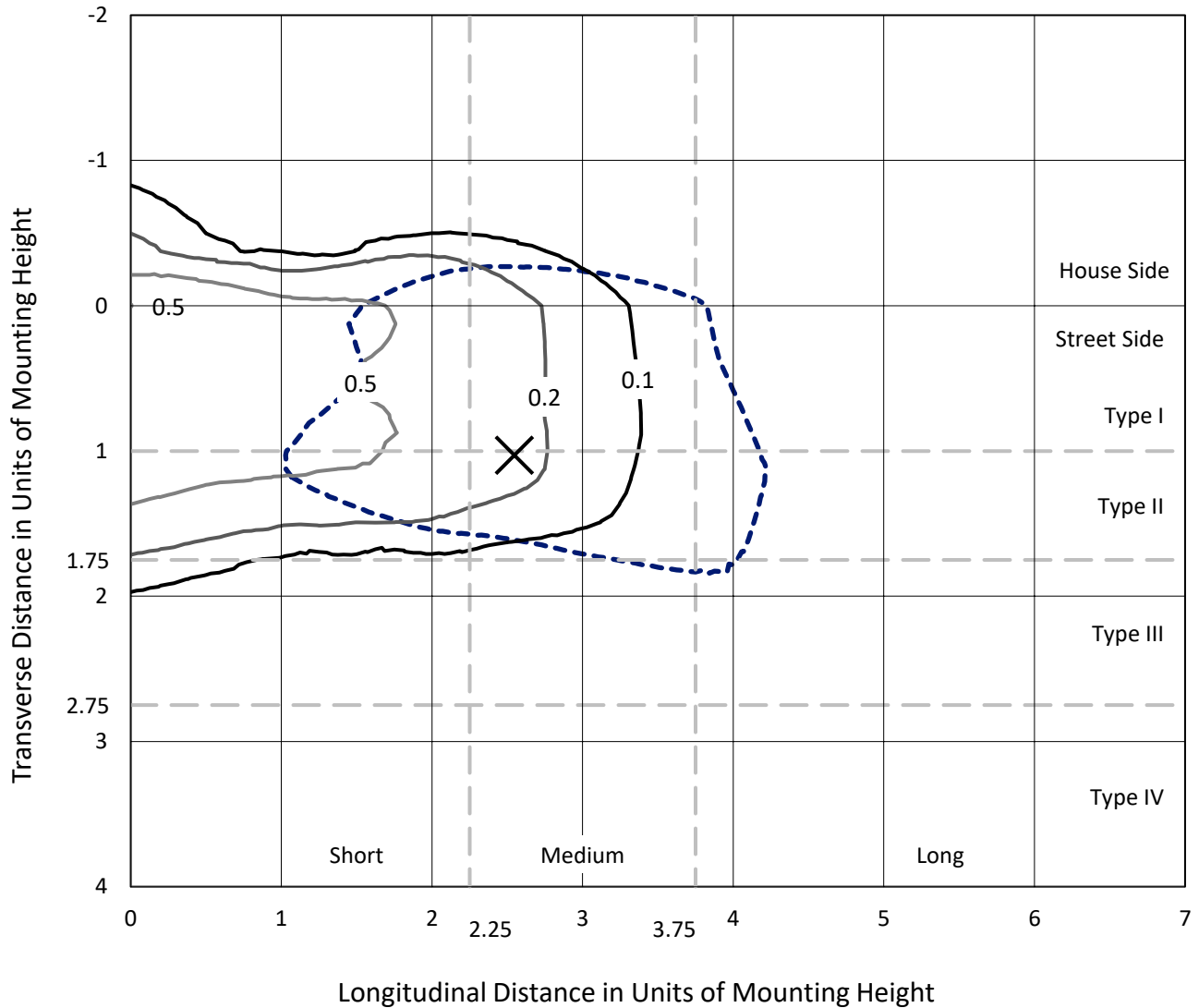
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366846
 CATALOG NUMBER: MSA-SA1B-830-U-SL2

Iso-Footcandle Lines of Horizontal Illumination

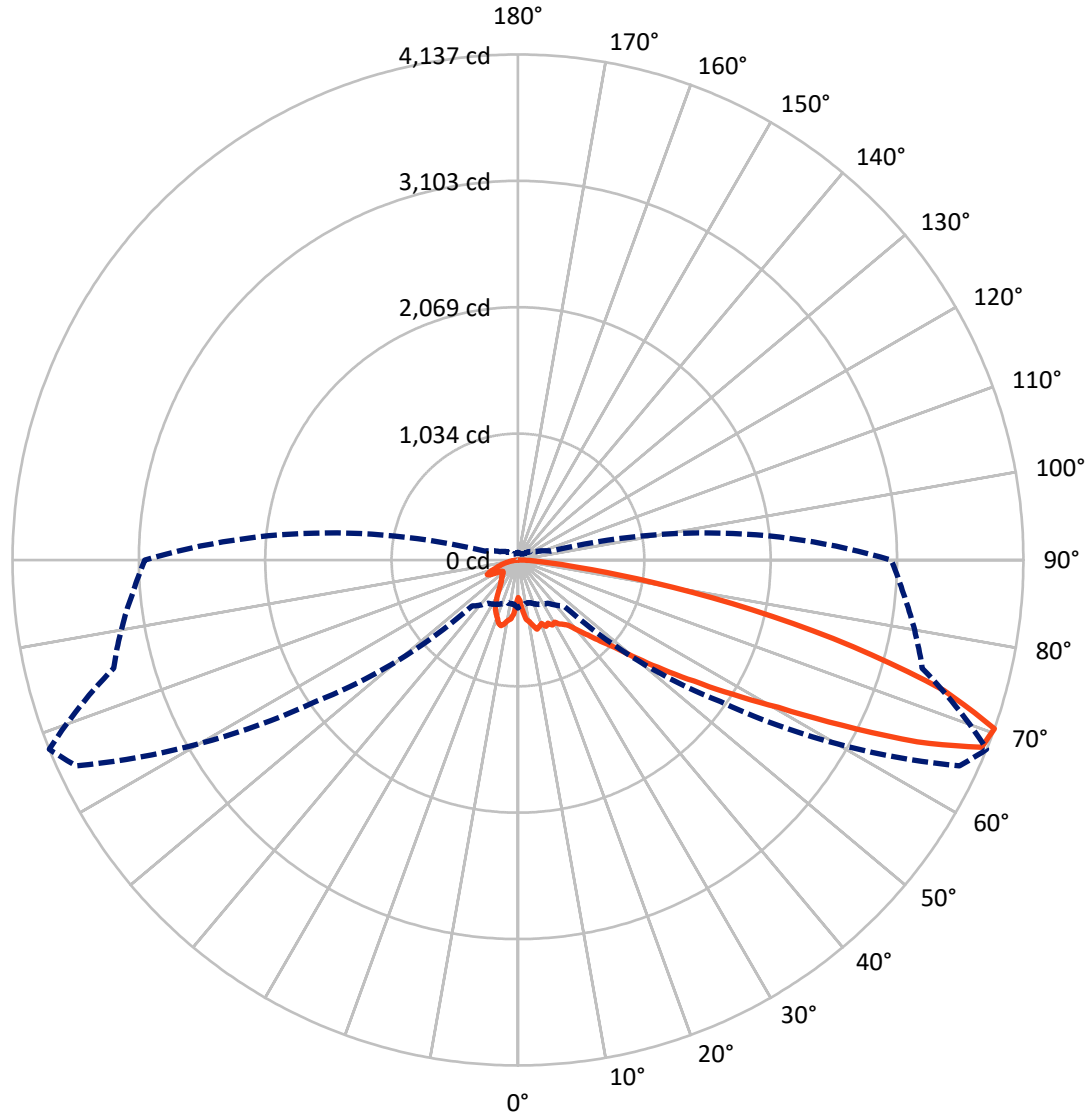
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type III - Medium - N/A

REPORT NUMBER: P366846
CATALOG NUMBER: MSA-SA1B-830-U-SL2

Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P366846

CATALOG NUMBER: MSA-SA1B-830-U-SL2

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	763.3	0.0	763.3
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	3234.7	0.0	3234.7
	% Fixture	80.9	0.0	80.9
Total	Lumens	3998.0	0.0	3998.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	1.0
10°-20°	133.4	3.3
20°-30°	203.0	5.1
30°-40°	310.0	7.8
40°-50°	533.1	13.3
50°-60°	882.4	22.1
60°-70°	1087.9	27.2
70°-80°	698.8	17.5
80°-90°	108.4	2.7
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°	3998.0	100.0
0°-180°	3998.0	100.0

Coefficient of Utilization



REPORT NUMBER: P366846

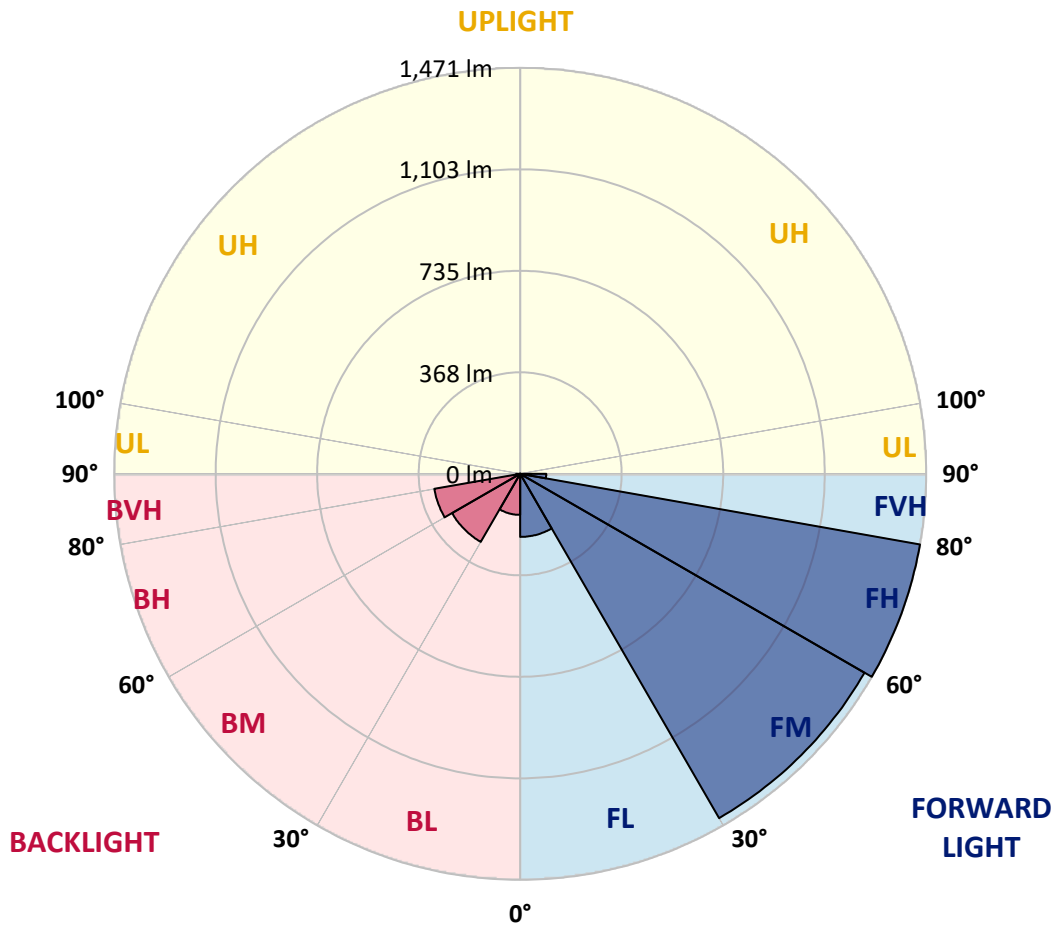
CATALOG NUMBER: MSA-SA1B-830-U-SL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	228.6	5.7			
FM (30°-60°)	1440.6	36.0			
FH (60°-80°)	1471.0	36.8			G1/1800
FVH (80°-90°)	94.5	2.4			G1/100
BL (0°-30°)	148.7	3.7	B1/500		
BM (30°-60°)	284.9	7.1	B1/1000		
BH (60°-80°)	315.8	7.9	B1/500		G1/500
BVH (80°-90°)	13.9	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-G1

Type III Medium





REPORT NUMBER: P366846

CATALOG NUMBER: MSA-SA1B-830-U-SL2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	306.5	306.5	306.5	306.5	306.5	306.5	306.5	306.5	306.5	306.5	306.5
2.5°	352.2	338.0	323.6	330.6	341.8	351.7	349.7	350.9	337.3	335.5	371.1
5°	415.0	390.5	390.0	390.4	391.4	380.0	407.8	422.2	425.3	440.1	475.0
7.5°	436.7	426.8	416.8	421.8	409.1	410.3	444.4	481.9	490.8	501.5	549.3
10°	432.2	422.8	425.8	426.7	429.0	447.9	469.9	505.8	513.4	547.5	559.9
12.5°	432.9	431.2	445.3	445.8	470.9	504.8	513.5	546.7	549.7	574.8	626.5
15°	455.8	467.3	459.5	463.7	468.5	509.2	521.7	569.2	587.3	619.6	658.4
17.5°	500.5	503.8	480.2	474.0	489.9	502.3	530.9	551.5	570.4	660.6	714.1
20°	510.8	519.9	491.8	459.8	493.4	510.7	530.6	540.0	554.7	666.6	742.6
22.5°	555.4	536.6	502.6	474.9	485.9	502.6	517.0	552.3	591.0	649.4	771.0
25°	580.6	569.7	539.5	509.7	500.3	500.8	528.6	560.2	573.6	674.7	776.7
27.5°	641.7	624.3	556.2	550.5	515.2	487.8	530.4	579.6	603.0	654.9	804.5
30°	718.2	704.9	615.6	608.1	554.2	506.3	553.8	594.0	590.7	667.8	823.7
32.5°	780.1	802.2	712.0	652.6	614.3	568.4	546.5	591.5	624.8	697.7	856.4
35°	868.4	889.2	787.1	746.9	663.8	597.2	597.9	626.0	646.5	732.7	892.9
37.5°	1021.4	1003.1	921.0	857.5	804.3	704.9	675.2	665.3	681.9	775.6	964.3
40°	1131.6	1116.2	1019.5	983.4	879.8	822.1	740.4	731.0	760.3	819.7	1022.7
42.5°	1262.3	1234.9	1144.8	1115.1	1006.8	902.7	820.4	825.8	840.0	903.1	1101.7
45°	1395.3	1328.7	1277.7	1275.4	1203.1	1059.3	948.7	944.4	944.9	1025.7	1190.4
47.5°	1500.9	1441.0	1382.6	1354.8	1318.4	1330.2	1135.1	1084.1	1068.7	1149.2	1323.4
50°	1572.4	1503.4	1437.3	1430.8	1528.2	1592.3	1310.2	1255.6	1265.2	1325.9	1500.7
52.5°	1573.9	1492.0	1423.1	1468.8	1698.2	1789.9	1611.7	1459.2	1489.7	1531.0	1732.2
55°	1464.4	1379.6	1334.8	1438.8	1764.6	2024.3	2035.4	1785.5	1750.4	1765.6	2008.7
57.5°	1233.7	1148.0	1121.9	1246.6	1638.6	2250.4	2547.0	2175.4	2072.3	2008.7	2292.2
60°	928.7	854.5	838.3	917.8	1358.5	2183.9	2961.3	2660.6	2450.7	2280.3	2576.5
62.5°	696.4	643.2	618.8	630.1	940.0	1967.9	3233.4	3273.7	2976.4	2576.8	2854.2
65°	565.9	522.9	501.1	486.4	584.6	1521.7	3184.2	3789.8	3590.5	2888.2	3070.4
67.5°	472.7	434.5	424.5	438.9	462.2	882.8	2799.4	4078.4	4092.0	3195.4	3196.8
70°	392.4	364.1	360.4	401.2	431.9	532.8	2022.0	3987.7	4137.3	3425.8	3167.1
72.5°	303.2	288.0	287.5	351.6	429.0	454.1	1204.1	3444.9	3645.9	3352.2	2877.3
75°	210.3	199.8	207.8	289.0	419.2	460.6	687.2	2683.2	2833.7	2852.6	2304.9
77.5°	144.7	135.9	144.6	209.0	374.3	471.7	480.7	1940.1	1956.9	1912.9	1320.2
80°	100.7	94.5	101.2	147.9	291.3	466.8	409.3	1221.5	1120.7	853.7	422.7
82.5°	62.4	60.6	67.9	105.4	205.1	424.7	387.9	630.3	481.2	235.6	150.9
85°	32.8	30.1	39.5	68.8	128.3	333.3	363.4	287.6	185.7	83.7	60.6
87.5°	9.7	8.7	15.2	27.8	54.4	149.4	208.0	122.0	69.3	24.6	18.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P366846
 CATALOG NUMBER: MSA-SA1B-830-U-SL2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	306.5	306.5	306.5	306.5	306.5	306.5	306.5	306.5	306.5	306.5	306.5
2.5°	373.6	371.8	347.0	350.2	355.6	356.9	356.7	347.7	338.2	364.8	363.9
5°	475.9	459.3	446.9	444.2	429.0	413.8	419.2	417.3	415.0	427.0	428.5
7.5°	549.5	526.6	512.2	475.2	440.1	409.6	419.3	422.3	416.3	438.1	444.6
10°	568.9	550.8	535.3	487.8	468.3	450.6	424.3	394.4	390.4	377.8	379.3
12.5°	618.9	616.4	563.4	521.6	496.3	461.0	404.3	367.9	336.8	338.3	329.3
15°	658.4	659.8	596.0	537.5	469.7	415.8	349.0	303.9	271.9	265.5	259.0
17.5°	711.5	708.8	598.7	518.4	432.5	353.6	271.7	226.9	221.5	225.2	219.5
20°	734.6	711.0	581.6	471.0	374.5	268.6	205.3	181.5	191.9	206.6	207.0
22.5°	755.3	715.0	572.8	432.9	297.2	195.3	164.8	160.5	172.7	192.6	194.3
25°	754.5	733.6	556.9	394.4	230.4	152.4	143.2	146.4	161.0	181.7	182.9
27.5°	792.5	719.3	515.5	343.9	173.5	130.5	132.9	138.7	145.6	165.3	169.2
30°	792.1	745.8	494.8	282.4	139.4	119.6	125.7	130.7	136.4	154.4	156.6
32.5°	810.9	728.5	482.2	219.7	125.0	117.0	118.5	123.5	131.7	143.9	145.4
35°	833.4	748.1	442.1	174.5	119.6	114.6	115.8	118.6	126.2	137.4	138.9
37.5°	905.9	751.8	426.2	147.1	119.3	113.6	113.4	115.0	123.5	133.7	138.2
40°	934.2	785.4	379.8	137.4	118.1	113.6	111.3	112.1	119.1	132.2	135.7
42.5°	1001.9	796.6	345.5	134.0	118.1	111.6	107.9	109.3	117.5	129.0	134.5
45°	1071.7	812.5	304.7	133.4	118.0	111.4	104.4	107.4	114.1	123.8	129.8
47.5°	1171.1	869.8	263.9	131.4	116.6	112.3	103.6	103.4	109.3	117.6	123.3
50°	1333.3	959.1	232.2	128.8	116.8	111.6	101.9	99.6	103.4	110.8	116.3
52.5°	1559.0	1111.4	219.9	127.5	115.5	108.9	99.1	95.4	97.6	103.4	108.8
55°	1821.0	1317.0	232.1	127.5	112.8	104.7	95.0	90.7	91.9	95.9	101.1
57.5°	2127.2	1572.5	291.1	125.7	109.4	99.7	90.2	85.2	85.5	89.0	93.7
60°	2447.0	1858.0	423.5	124.2	107.1	94.2	84.5	79.3	78.8	82.2	86.3
62.5°	2767.2	2121.4	562.7	127.7	106.4	89.5	78.5	73.3	73.1	76.1	79.6
65°	3021.9	2301.4	597.4	141.9	110.8	84.2	72.3	67.4	67.1	69.6	73.5
67.5°	3146.9	2327.5	453.8	159.6	120.0	79.1	66.3	61.7	61.4	64.1	67.4
70°	3054.4	2149.1	280.1	161.5	119.5	73.3	60.1	56.2	55.6	58.4	60.9
72.5°	2712.0	1879.9	212.8	142.9	103.4	64.9	53.9	50.5	49.5	52.0	54.4
75°	2176.7	1492.5	170.5	115.3	81.5	54.7	47.7	44.5	43.3	45.7	47.7
77.5°	1268.0	839.6	124.7	90.0	61.6	44.7	40.7	37.8	36.5	39.0	40.5
80°	412.3	279.8	78.3	64.6	45.0	35.0	33.0	31.0	29.6	31.3	31.8
82.5°	148.1	104.1	43.3	39.7	30.0	25.1	24.9	23.8	22.1	22.8	22.8
85°	65.6	47.5	25.8	21.3	17.9	13.4	15.7	14.9	13.2	12.9	12.4
87.5°	18.4	15.7	9.4	7.2	5.9	2.2	5.0	4.5	3.7	3.3	2.3
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)