

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: P366606

Luminaire Tested: **MSA-SA1A-727-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366606
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-SA1A-727-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: 3316 lumens
Efficiency: N/A
Efficacy: 97.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

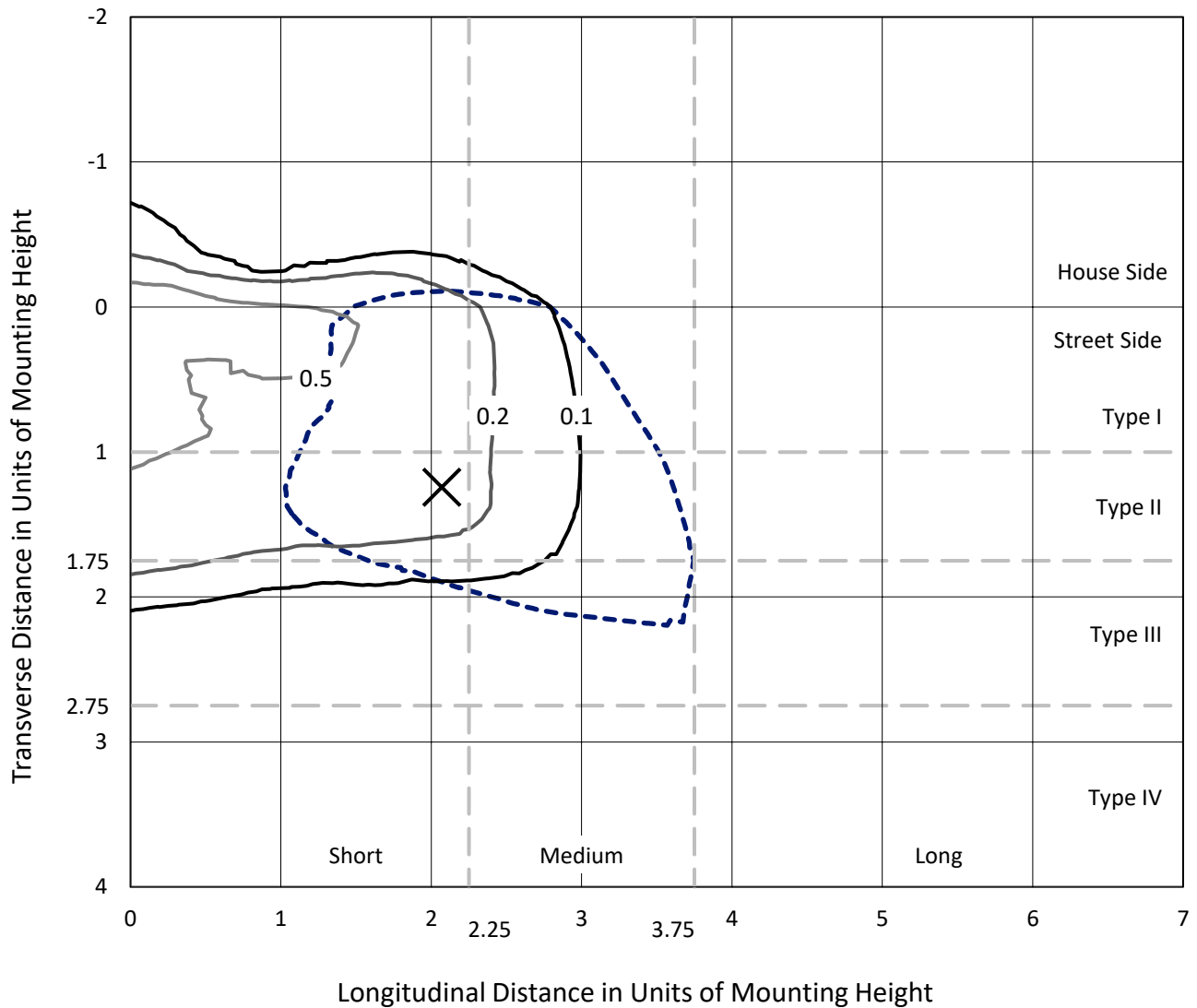
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P366606
 CATALOG NUMBER: MSA-SA1A-727-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

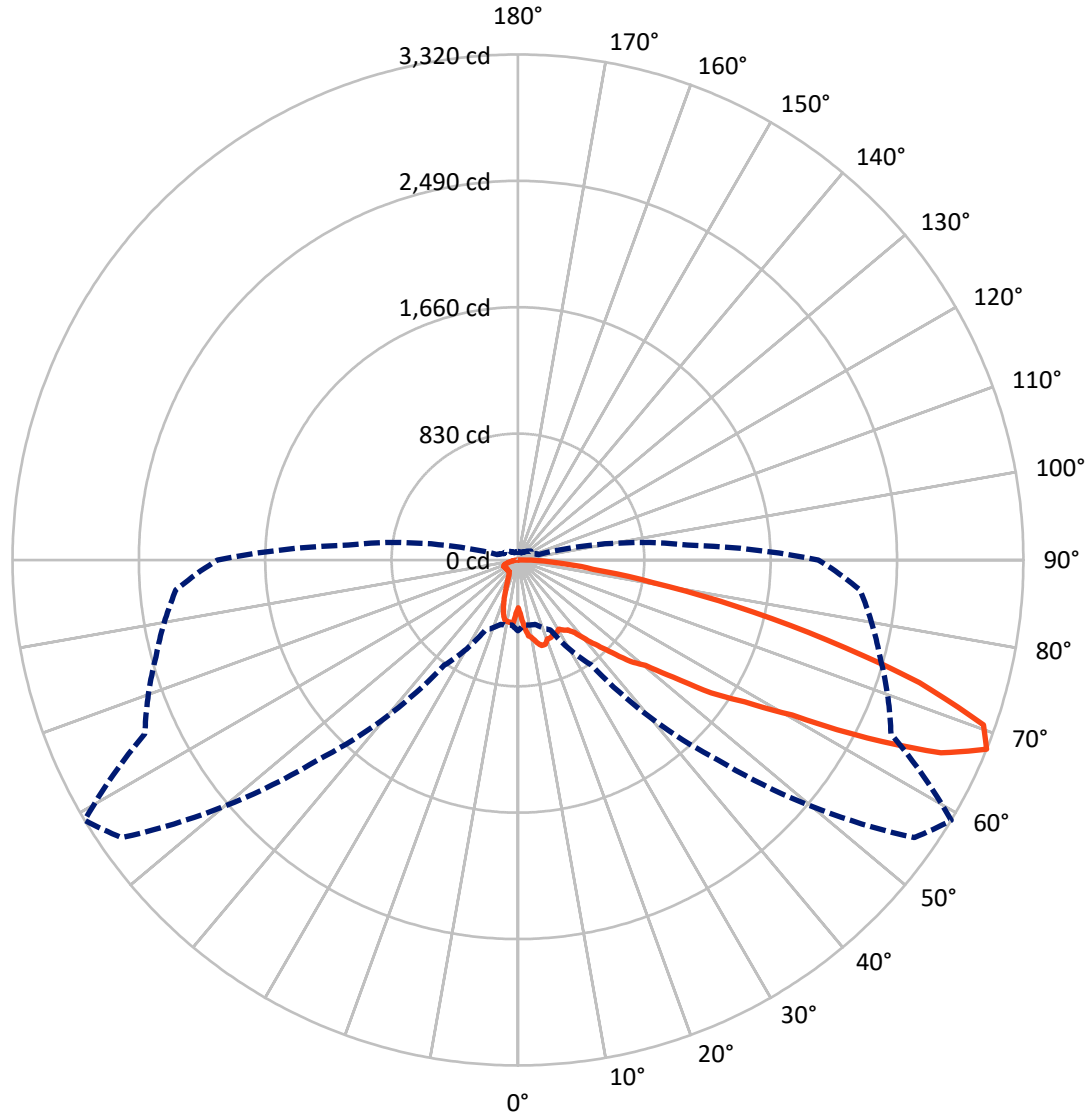
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type III - Short - N/A

REPORT NUMBER: P366606
CATALOG NUMBER: MSA-SA1A-727-U-SL3

Luminous Intensity Polar Plot



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

REPORT NUMBER: P366606

CATALOG NUMBER: MSA-SA1A-727-U-SL3

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	499.1	0.0	499.1
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	2816.9	0.0	2816.9
	% Fixture	84.9	0.0	84.9
Total	Lumens	3316.0	0.0	3316.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.0	1.2
10°-20°	121.3	3.7
20°-30°	173.2	5.2
30°-40°	255.2	7.7
40°-50°	431.2	13.0
50°-60°	750.3	22.6
60°-70°	956.1	28.8
70°-80°	506.3	15.3
80°-90°	81.4	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°	3316.0	100.0
0°-180°	3316.0	100.0

Coefficient of Utilization



REPORT NUMBER: P366606

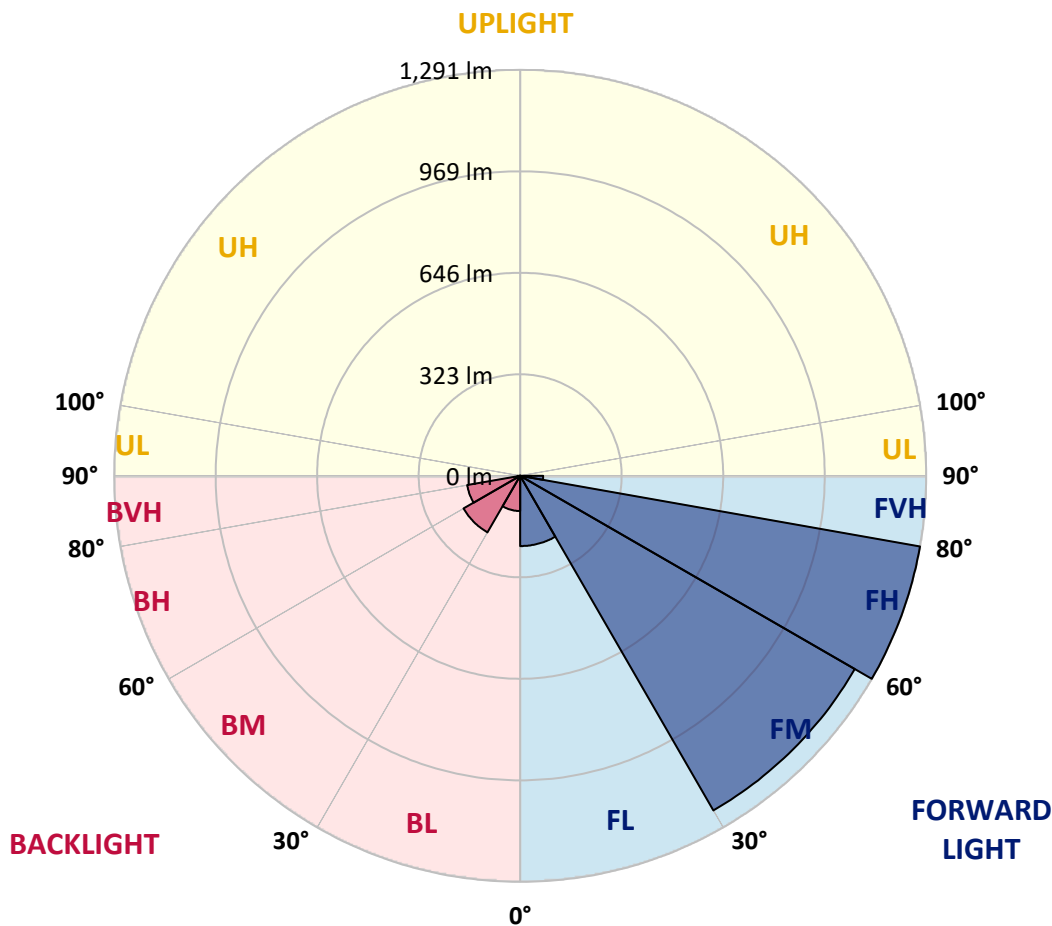
CATALOG NUMBER: MSA-SA1A-727-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	223.5	6.7			
FM (30°-60°)	1228.9	37.1			
FH (60°-80°)	1291.3	38.9			G1/1800
FVH (80°-90°)	73.2	2.2			G1/100
BL (0°-30°)	111.9	3.4	B1/500		
BM (30°-60°)	207.8	6.3	B0/220		
BH (60°-80°)	171.1	5.2	B1/500		G1/500
BVH (80°-90°)	8.3	0.2			G0/10
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 Short





REPORT NUMBER: P366606

CATALOG NUMBER: MSA-SA1A-727-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	313.8	313.8	313.8	313.8	313.8	313.8	313.8	313.8	313.8	313.8	313.8
2.5°	391.8	373.5	354.1	359.6	370.7	375.8	370.3	364.9	358.0	349.9	377.7
5°	475.1	448.0	444.0	443.9	440.0	424.2	444.5	443.1	451.2	459.6	481.3
7.5°	498.8	488.7	477.8	483.0	463.2	462.3	493.8	502.8	518.5	513.3	542.4
10°	486.6	475.2	481.0	478.9	480.7	501.5	520.8	521.3	538.2	554.8	536.1
12.5°	465.1	466.0	488.9	488.0	517.5	556.2	561.9	557.4	585.0	573.7	589.8
15°	480.4	490.7	484.9	489.9	501.5	550.7	566.7	583.0	609.2	619.3	603.3
17.5°	504.9	510.4	484.5	481.8	505.9	529.2	569.0	582.9	587.0	659.0	636.4
20°	494.5	505.6	480.3	447.8	487.7	518.7	557.9	553.6	573.5	662.1	643.3
22.5°	524.0	505.6	473.4	450.4	464.4	492.8	526.1	553.8	577.3	644.0	653.3
25°	529.6	520.9	490.8	467.9	463.2	473.3	520.8	538.9	578.5	668.7	647.9
27.5°	563.9	550.8	489.6	490.3	466.5	448.7	503.9	542.0	592.9	653.4	661.0
30°	606.5	596.5	519.6	522.5	489.6	456.7	515.4	526.9	601.1	677.3	677.4
32.5°	638.4	655.9	578.8	540.6	528.9	504.3	497.7	549.6	591.4	720.6	705.6
35°	695.9	709.5	624.3	593.7	554.2	526.5	545.8	564.5	631.8	777.5	747.3
37.5°	802.2	786.5	708.9	660.7	646.0	606.1	616.7	603.7	675.6	841.4	829.1
40°	863.8	850.1	768.5	741.8	683.3	688.4	675.1	684.6	734.2	909.4	905.5
42.5°	924.5	906.2	837.2	818.7	760.4	735.6	738.0	768.9	824.6	1019.3	1006.3
45°	984.5	937.7	907.5	912.4	884.3	833.6	837.1	866.2	923.2	1145.0	1114.9
47.5°	1030.4	991.8	968.2	962.1	948.2	1016.1	985.7	997.6	1022.7	1256.8	1245.4
50°	1117.4	1072.3	1041.5	1032.8	1080.0	1174.5	1112.6	1087.2	1140.7	1401.4	1395.5
52.5°	1256.7	1200.5	1149.2	1148.6	1216.9	1278.2	1321.7	1277.9	1297.6	1549.5	1566.4
55°	1378.2	1313.2	1267.1	1292.5	1389.7	1427.3	1575.2	1540.9	1524.4	1699.0	1747.2
57.5°	1423.6	1347.6	1317.5	1355.0	1498.4	1691.2	1847.6	1757.3	1741.2	1868.2	1969.2
60°	1324.0	1243.6	1245.4	1316.1	1564.4	1884.9	2145.3	2068.7	1974.0	2078.9	2177.5
62.5°	1040.1	967.5	1014.8	1122.3	1509.0	2073.2	2544.4	2576.7	2240.0	2253.5	2293.0
65°	707.0	656.6	699.4	804.6	1223.9	2176.0	2924.5	3054.1	2482.3	2367.9	2342.9
67.5°	465.3	429.7	438.0	508.0	842.6	1855.0	3178.7	3319.9	2703.7	2461.8	2254.9
70°	360.3	331.6	328.0	364.6	499.7	1288.7	3028.1	3242.8	2838.6	2373.8	1965.5
72.5°	282.7	260.9	262.9	298.2	387.0	715.0	2343.2	2757.6	2635.5	2047.2	1510.0
75°	220.5	202.6	212.6	252.9	357.9	444.3	1616.7	2092.9	2037.5	1515.9	861.2
77.5°	160.1	148.5	162.7	215.4	336.4	381.2	1006.4	1460.1	1305.3	778.3	295.5
80°	105.0	98.5	110.2	175.6	305.1	366.9	621.9	894.7	645.0	218.6	111.9
82.5°	61.8	59.0	68.7	118.9	245.2	343.9	414.8	497.2	263.9	92.5	59.4
85°	32.5	30.4	40.8	68.3	169.0	313.9	326.6	297.6	127.5	40.2	28.4
87.5°	10.8	10.5	17.3	26.4	63.9	166.7	174.2	141.4	52.6	11.7	6.2
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: P366606
 CATALOG NUMBER: MSA-SA1A-727-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	313.8	313.8	313.8	313.8	313.8	313.8	313.8	313.8	313.8	313.8	313.8
2.5°	381.5	375.9	343.6	348.1	352.3	350.2	348.9	334.3	332.9	353.7	352.0
5°	480.7	457.4	429.9	428.6	410.5	391.9	395.6	389.7	391.3	399.9	400.8
7.5°	533.1	504.0	477.8	435.0	398.8	369.4	374.1	372.7	368.9	388.3	393.5
10°	532.1	506.3	476.6	424.9	400.5	376.6	347.9	320.8	312.8	303.2	304.1
12.5°	567.3	544.4	479.7	427.0	393.9	352.7	299.0	269.4	241.0	240.4	233.3
15°	578.2	561.4	486.3	415.0	347.6	288.6	233.1	200.9	180.4	176.4	170.3
17.5°	605.9	579.5	466.2	375.9	294.0	225.7	175.2	152.7	151.1	153.9	150.8
20°	607.7	564.9	430.0	318.1	236.2	171.0	142.9	131.7	137.7	144.6	144.3
22.5°	606.2	546.5	398.7	269.0	177.5	137.4	125.2	122.7	128.3	138.6	139.8
25°	590.5	540.4	359.4	220.9	144.0	117.8	114.4	115.9	123.0	135.0	135.0
27.5°	606.9	515.8	310.3	179.7	121.1	104.8	107.2	111.2	116.4	130.1	132.7
30°	601.6	524.0	270.6	144.7	106.8	95.8	101.2	105.1	111.0	125.3	126.6
32.5°	615.9	502.2	237.3	121.7	97.4	92.3	93.6	98.9	106.7	117.9	120.1
35°	637.8	510.2	199.1	109.5	92.7	88.2	90.6	94.9	102.6	113.5	115.4
37.5°	707.8	509.8	172.7	102.7	91.9	87.4	88.5	91.5	100.5	110.4	114.7
40°	752.8	539.0	148.7	101.2	90.9	87.0	86.0	89.2	96.4	108.2	111.2
42.5°	837.2	556.9	138.3	100.6	90.8	84.6	83.6	87.4	94.4	105.4	109.9
45°	926.4	582.3	130.0	100.3	90.4	84.2	81.2	86.0	91.9	102.4	107.6
47.5°	1031.4	636.1	125.3	99.3	89.5	84.7	80.4	82.8	89.4	99.9	105.1
50°	1168.8	707.4	126.3	97.9	90.8	84.9	79.1	80.2	86.3	96.5	101.9
52.5°	1335.9	817.7	132.7	98.5	91.6	84.2	78.6	78.0	83.2	92.2	97.5
55°	1537.3	974.2	151.6	101.2	91.6	84.0	77.7	75.2	79.1	86.4	91.6
57.5°	1780.2	1155.5	188.7	102.4	90.9	83.2	75.9	71.4	73.8	79.8	84.7
60°	1988.9	1301.8	226.9	103.3	92.3	81.2	72.2	66.6	68.2	72.8	77.1
62.5°	2095.3	1342.8	238.5	102.6	96.1	80.0	67.9	61.5	61.7	65.6	69.6
65°	2115.2	1288.1	192.2	101.9	101.0	79.8	64.8	57.2	56.2	59.0	62.4
67.5°	1973.0	1118.1	138.7	100.3	101.6	79.0	62.7	53.7	51.1	53.1	55.9
70°	1675.3	900.5	116.5	97.2	94.9	74.8	59.0	50.0	46.7	48.1	50.2
72.5°	1248.9	666.2	101.6	90.6	82.6	63.9	53.4	46.0	42.4	43.4	45.0
75°	693.9	355.4	85.0	78.8	67.4	51.7	45.5	40.8	37.7	38.1	39.8
77.5°	230.5	131.1	62.4	62.5	51.0	39.9	37.5	34.8	32.5	32.6	34.0
80°	104.4	72.5	44.7	45.0	35.6	28.9	28.8	28.0	26.4	26.0	27.0
82.5°	60.6	44.0	30.6	29.2	22.9	18.8	20.9	20.5	20.1	18.5	18.8
85°	29.8	23.6	16.0	15.2	12.6	9.4	11.2	11.7	11.2	9.6	9.4
87.5°	7.3	7.7	3.9	3.7	2.1	1.0	1.7	1.7	2.1	1.4	0.7
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)