

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: P366828

Luminaire Tested: **MSA-SA1B-760-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366828
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-760-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4933 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

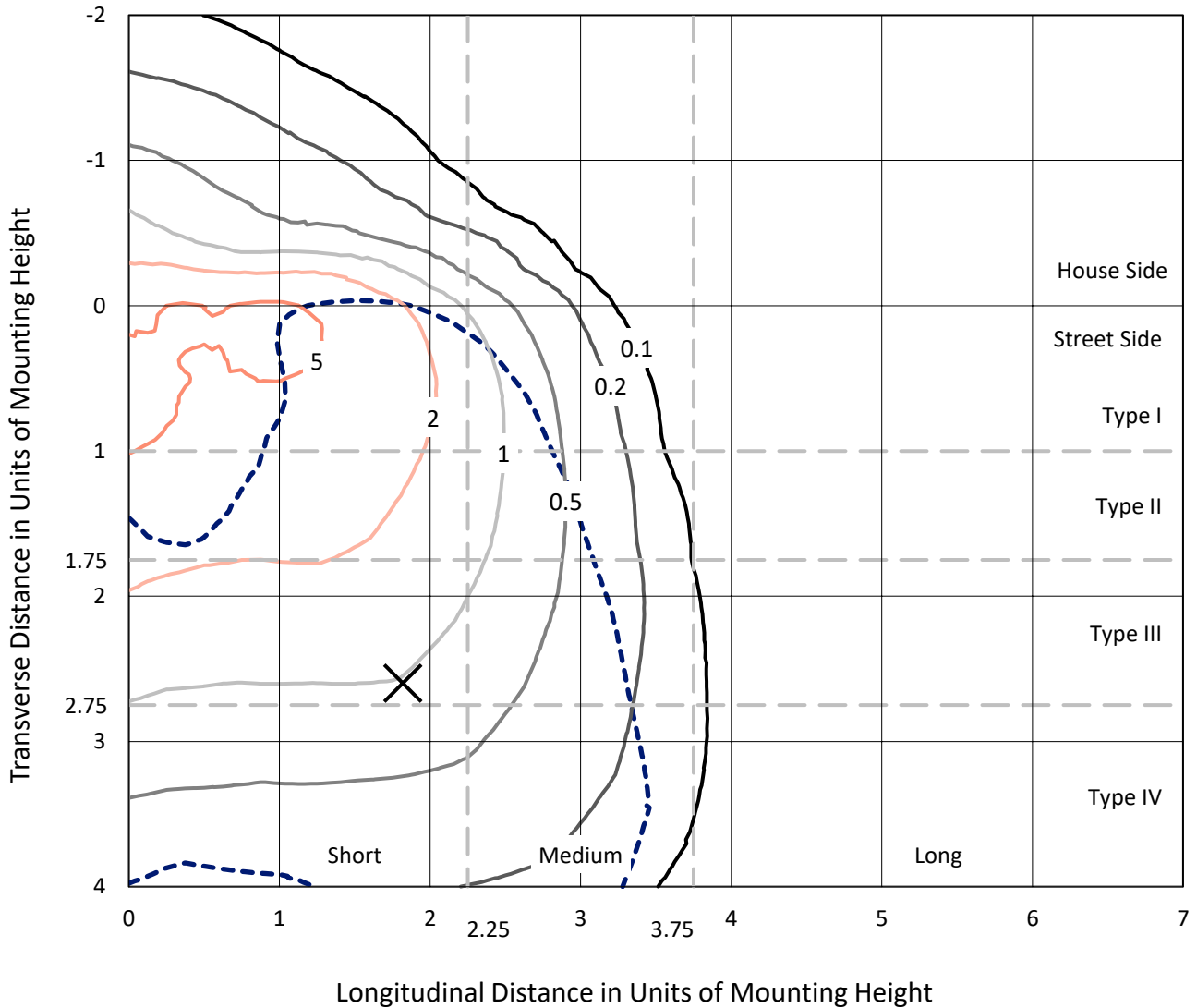
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P366828
 CATALOG NUMBER: MSA-SA1B-760-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

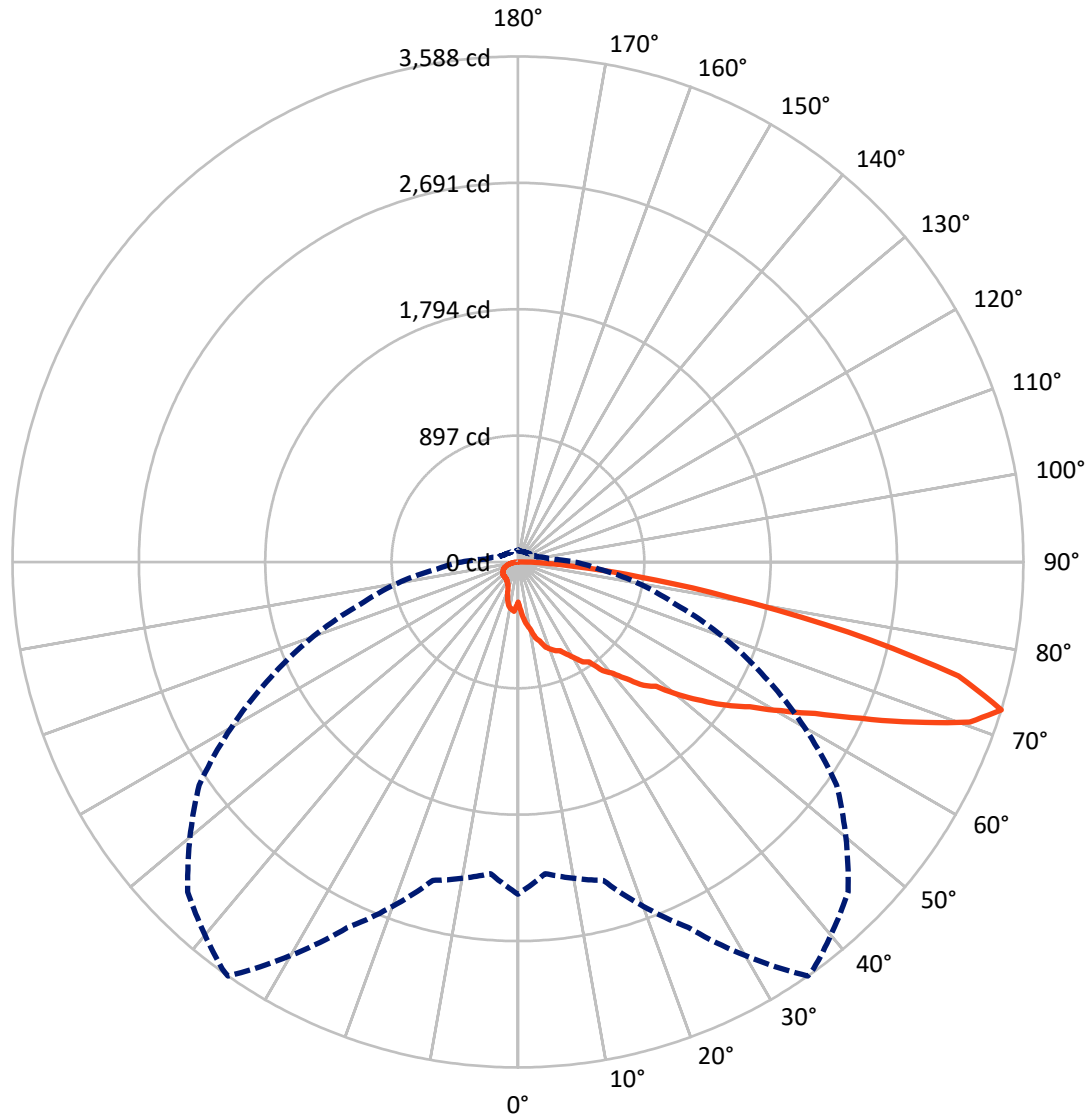
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.2 fc
 Type IV - Short - N/A

REPORT NUMBER: P366828
CATALOG NUMBER: MSA-SA1B-760-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P366828

CATALOG NUMBER: MSA-SA1B-760-U-SL4

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	662.0	0.0	662.0
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	4271.0	0.0	4271.0
	% Fixture	86.6	0.0	86.6
Total	Lumens	4933.0	0.0	4933.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.9	0.8
10°-20°	133.5	2.7
20°-30°	231.9	4.7
30°-40°	387.6	7.9
40°-50°	672.7	13.6
50°-60°	1017.0	20.6
60°-70°	1317.4	26.7
70°-80°	972.1	19.7
80°-90°	162.9	3.3
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°	4933.0	100.0
0°-180°	4933.0	100.0

Coefficient of Utilization



REPORT NUMBER: P366828

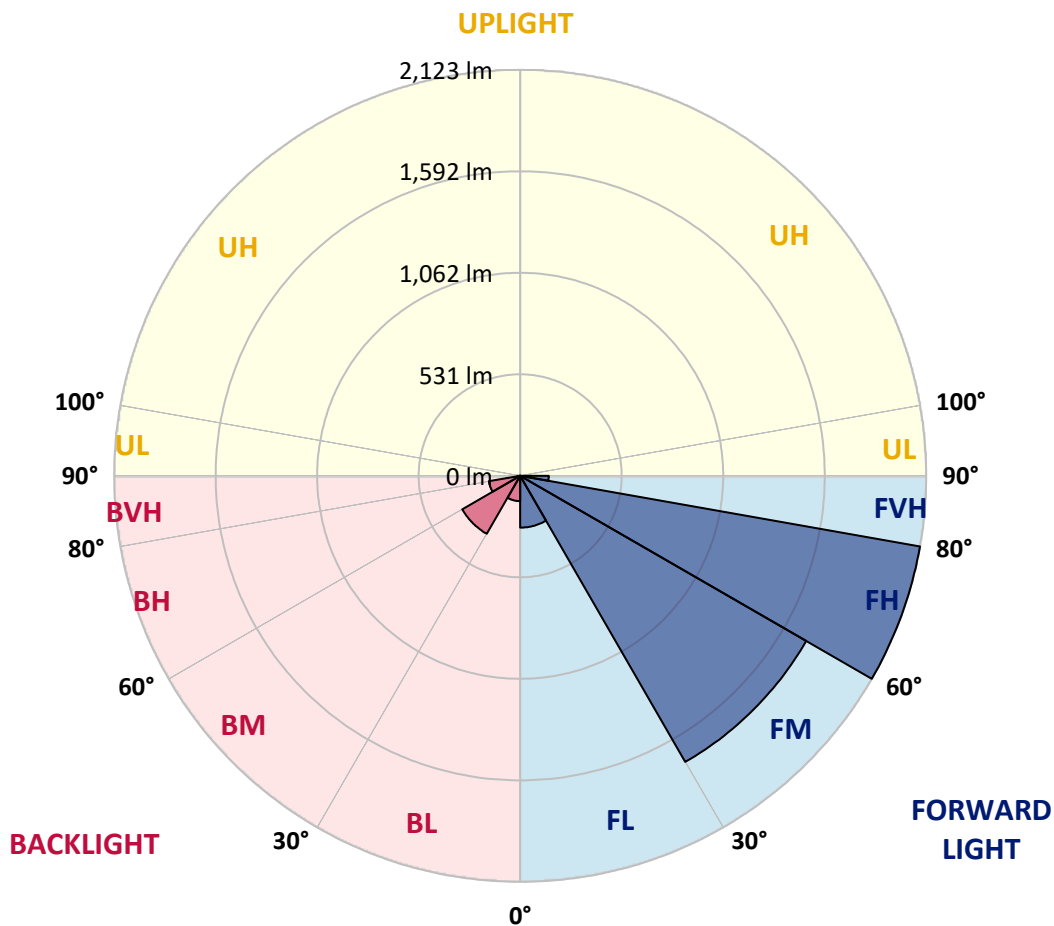
CATALOG NUMBER: MSA-SA1B-760-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	270.9	5.5			
FM (30°-60°)	1727.4	35.0			
FH (60°-80°)	2123.1	43.0			G2/5000
FVH (80°-90°)	149.6	3.0			G2/225
BL (0°-30°)	132.3	2.7	B1/500		
BM (30°-60°)	349.9	7.1	B1/1000		
BH (60°-80°)	166.5	3.4	B1/500		G1/500
BVH (80°-90°)	13.3	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 IV Short





REPORT NUMBER: P366828

CATALOG NUMBER: MSA-SA1B-760-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1
2.5°	355.6	338.6	323.8	323.2	336.9	342.1	340.0	335.4	329.9	318.3	343.6
5°	445.5	421.1	416.5	411.0	398.6	401.9	381.7	397.1	401.9	413.1	429.9
7.5°	498.6	484.3	473.1	468.5	447.0	444.5	429.5	451.4	460.7	459.2	484.3
10°	519.4	506.4	507.2	492.0	485.1	488.0	489.7	490.2	495.8	500.5	487.8
12.5°	530.2	535.2	553.7	543.4	552.3	555.8	573.5	555.4	556.1	532.3	545.3
15°	584.3	596.9	586.2	585.7	583.0	588.9	604.1	591.8	601.3	593.7	576.9
17.5°	649.5	653.3	632.7	624.3	635.2	633.3	629.5	631.4	607.8	651.6	631.0
20°	669.5	684.5	657.3	624.3	660.5	665.3	664.5	656.3	615.8	679.0	659.0
22.5°	727.6	707.4	686.0	664.9	683.4	686.2	681.5	662.0	648.5	672.5	688.3
25°	754.0	749.1	721.8	719.2	698.8	689.1	697.1	691.4	678.2	720.9	703.4
27.5°	814.2	808.5	745.5	771.4	741.8	739.2	696.9	715.9	729.1	726.0	752.1
30°	882.4	888.9	796.9	822.8	788.5	783.9	741.3	765.3	774.4	777.3	810.0
32.5°	958.2	976.1	884.7	863.5	845.1	848.3	812.3	768.5	803.7	872.5	886.6
35°	1040.3	1047.7	951.9	919.9	872.1	868.7	869.3	874.8	910.4	988.9	999.9
37.5°	1192.1	1158.0	1074.0	992.9	976.9	945.6	966.8	983.7	1019.3	1139.7	1185.6
40°	1285.6	1260.3	1132.3	1085.4	1041.2	1044.1	1083.9	1083.7	1167.7	1291.9	1362.0
42.5°	1372.1	1344.6	1223.9	1176.7	1134.8	1145.2	1156.5	1176.5	1337.6	1537.8	1569.8
45°	1441.8	1381.4	1294.7	1284.1	1249.6	1235.9	1284.1	1316.1	1540.8	1736.8	1755.3
47.5°	1489.2	1439.5	1354.7	1345.4	1319.9	1353.4	1485.0	1505.6	1698.3	1936.6	1935.1
50°	1561.2	1493.2	1416.6	1411.7	1483.5	1501.4	1661.8	1659.7	1851.5	2102.5	2067.8
52.5°	1644.2	1558.5	1475.3	1527.3	1636.8	1645.6	1784.8	1841.4	2018.9	2262.5	2171.8
55°	1739.5	1643.7	1563.3	1632.8	1795.8	1769.6	1910.5	2048.8	2228.4	2431.2	2247.0
57.5°	1857.7	1741.4	1676.4	1782.1	1940.8	1964.0	2090.5	2264.6	2397.1	2536.0	2301.7
60°	1982.3	1845.9	1786.3	1886.9	2144.0	2170.5	2294.3	2444.0	2586.1	2634.8	2291.4
62.5°	2101.3	1953.7	1899.8	2024.0	2369.3	2435.0	2526.3	2621.7	2743.4	2658.8	2166.5
65°	2233.7	2085.9	2052.0	2238.3	2674.8	2740.1	2859.4	2830.8	2797.3	2573.7	1960.0
67.5°	2373.9	2223.8	2230.1	2487.0	3035.0	3046.2	3229.6	3039.2	2733.9	2348.4	1613.2
70°	2449.3	2295.6	2360.6	2752.1	3401.6	3385.6	3423.1	3095.2	2475.6	1856.4	1111.9
72.5°	2357.9	2220.8	2340.0	2863.6	3588.1	3570.9	3314.4	2762.8	1935.6	1154.4	576.5
75°	1996.4	1864.2	2046.5	2552.7	3230.2	3246.2	2820.7	2054.5	1108.1	464.3	239.4
77.5°	1356.6	1288.3	1444.6	1902.7	2399.4	2454.8	2092.8	1201.4	465.3	192.2	144.9
80°	716.9	684.5	799.9	1096.1	1519.3	1560.6	1230.6	598.4	238.3	124.4	103.4
82.5°	389.5	375.8	437.7	563.6	863.2	899.2	638.2	397.5	160.6	77.9	63.2
85°	261.7	256.4	297.5	302.8	408.3	420.0	334.3	306.1	96.4	38.1	41.7
87.5°	131.0	125.7	156.6	138.3	155.8	156.0	153.3	195.4	24.4	12.6	7.6
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: P366828
 CATALOG NUMBER: MSA-SA1B-760-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1	285.1
2.5°	344.0	336.7	311.2	311.0	314.8	312.2	314.1	303.8	299.4	319.6	318.6
5°	427.6	405.5	384.2	376.9	368.2	349.5	350.6	350.8	347.6	359.6	360.5
7.5°	476.7	450.1	430.6	391.4	360.7	336.7	339.8	343.4	339.8	355.8	361.7
10°	483.8	462.8	439.4	395.8	375.4	353.7	331.8	312.5	310.1	302.8	305.1
12.5°	526.4	508.9	460.0	412.3	388.5	355.2	315.2	293.1	274.6	277.7	271.8
15°	561.3	548.9	490.4	427.8	371.0	329.7	287.2	256.9	240.2	238.3	232.4
17.5°	608.7	591.0	493.1	417.1	348.5	299.0	251.0	216.7	209.5	206.5	203.6
20°	631.4	599.6	483.2	383.4	322.1	262.3	215.2	185.7	183.6	188.9	187.8
22.5°	651.2	606.8	474.4	363.0	281.1	225.3	190.8	171.4	169.1	175.8	177.1
25°	662.8	627.2	464.7	342.1	255.6	197.7	172.4	161.5	161.9	170.8	169.7
27.5°	715.0	634.4	440.3	317.5	226.3	177.3	163.6	157.9	155.6	167.8	168.9
30°	747.9	681.1	434.8	291.4	204.7	162.3	155.6	153.3	152.9	167.6	168.6
32.5°	808.9	696.7	437.3	263.0	185.1	157.7	149.7	149.5	153.7	167.8	169.5
35°	893.6	762.4	425.1	246.8	174.3	150.5	145.1	146.8	153.9	169.3	171.6
37.5°	1058.6	824.3	428.9	231.6	170.8	148.2	143.8	144.9	156.4	173.1	179.4
40°	1189.4	936.5	423.0	224.0	165.9	147.8	141.1	145.3	156.2	175.2	180.9
42.5°	1378.9	1026.0	423.6	216.4	165.7	146.1	140.6	145.7	155.8	173.3	181.1
45°	1541.4	1106.2	432.7	212.0	163.6	148.9	140.0	146.3	153.1	166.5	175.2
47.5°	1674.7	1195.7	441.9	207.8	162.8	151.4	139.4	141.9	148.4	159.0	166.8
50°	1783.3	1258.6	453.7	207.0	162.8	150.1	137.7	137.5	143.0	151.4	158.8
52.5°	1868.0	1303.1	461.7	208.0	162.8	145.3	135.6	133.9	137.3	143.4	150.8
55°	1929.2	1316.8	455.2	210.8	162.5	140.9	131.8	130.3	132.0	136.2	143.2
57.5°	1953.9	1280.8	416.3	205.9	162.5	137.7	127.2	125.5	127.2	130.3	137.3
60°	1892.2	1165.0	360.0	193.5	159.4	133.5	121.9	120.9	123.4	126.1	132.9
62.5°	1737.4	1011.0	300.0	178.8	152.9	129.9	116.9	117.1	121.1	124.9	131.6
65°	1497.0	824.9	250.1	163.8	144.6	124.2	111.6	113.1	118.7	123.8	130.5
67.5°	1178.0	611.2	210.5	149.3	133.1	115.0	105.7	106.1	110.1	115.0	121.5
70°	787.4	388.9	173.1	132.2	117.9	103.0	96.6	95.2	94.1	98.3	104.0
72.5°	399.4	229.7	142.1	113.1	101.5	89.9	85.1	81.3	78.3	80.8	85.3
75°	209.3	160.6	114.7	93.9	83.8	76.4	72.8	67.8	65.7	67.2	70.3
77.5°	148.0	125.7	92.9	74.3	68.2	60.6	61.3	56.0	54.3	55.2	58.5
80°	113.7	99.6	71.4	56.2	52.6	45.3	47.4	44.2	42.1	41.7	44.2
82.5°	77.5	75.0	50.7	39.4	36.8	31.6	34.5	33.3	30.5	28.8	30.1
85°	52.2	49.7	31.0	22.7	21.7	16.4	21.1	20.2	17.9	15.4	15.6
87.5°	9.1	16.6	8.8	5.7	5.3	1.9	4.8	4.6	4.2	2.1	1.7
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)