

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: P366894

Luminaire Tested: **MSA-SA1C-730-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366894
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-SA1C-730-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: 5564 lumens
Efficiency: N/A
Efficacy: 94.3 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

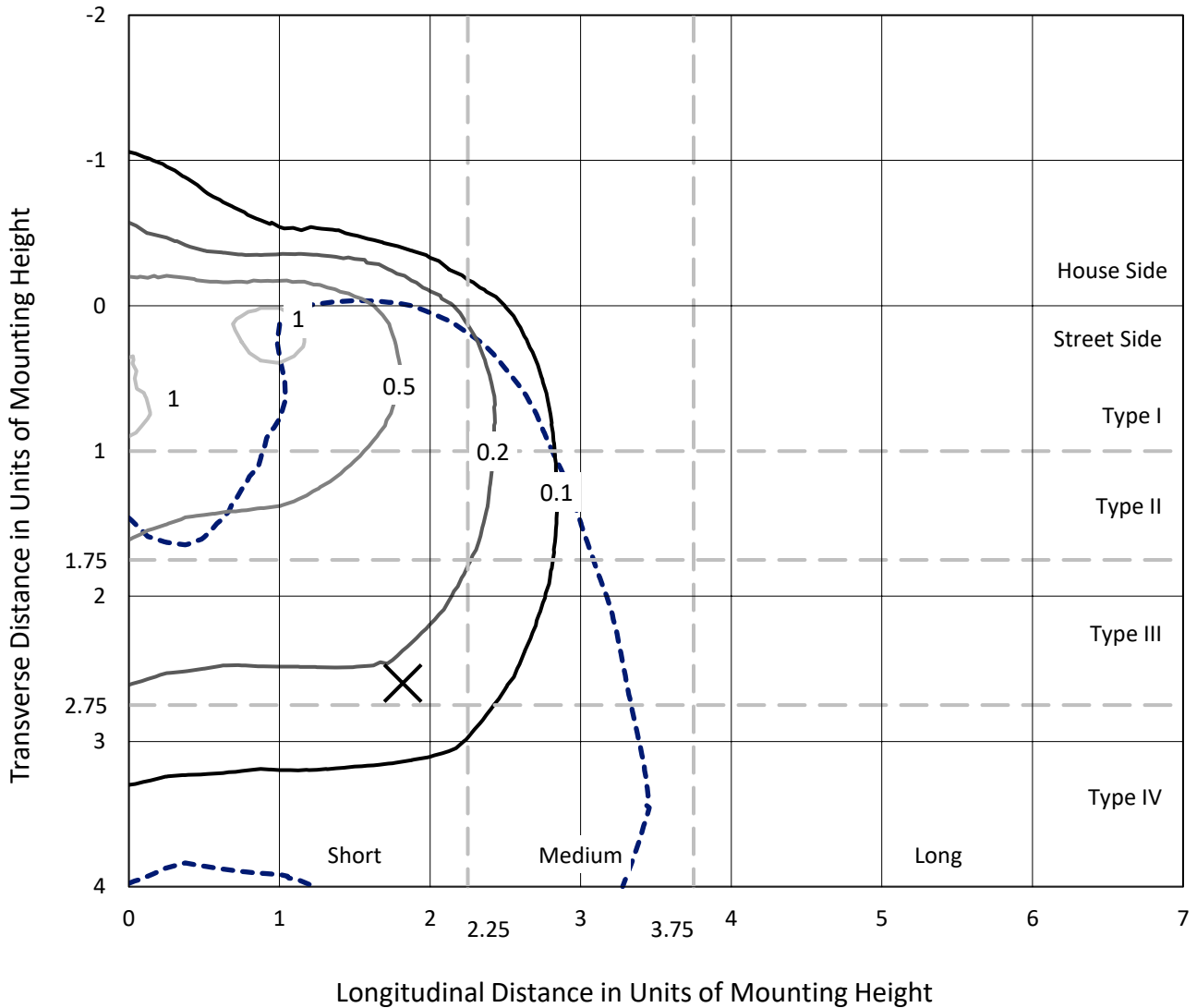
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

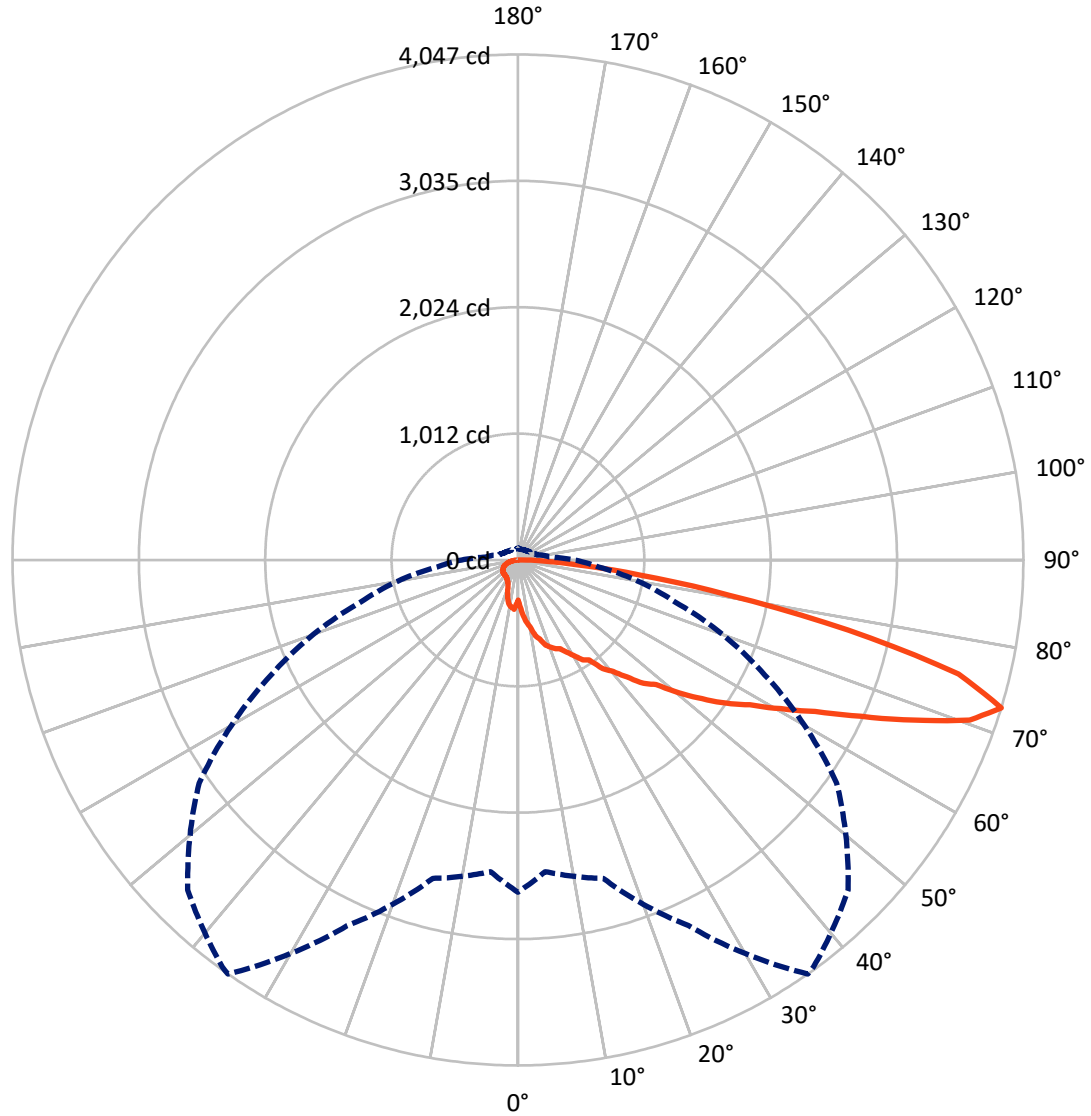
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	746.7	0.0	746.7
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	4817.3	0.0	4817.3
	% Fixture	86.6	0.0	86.6
Total	Lumens	5564.0	0.0	5564.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.7	0.8
10°-20°	150.5	2.7
20°-30°	261.6	4.7
30°-40°	437.2	7.9
40°-50°	758.7	13.6
50°-60°	1147.0	20.6
60°-70°	1486.0	26.7
70°-80°	1096.5	19.7
80°-90°	183.8	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°	5564.0	100.0
0°-180°	5564.0	100.0

Coefficient of Utilization



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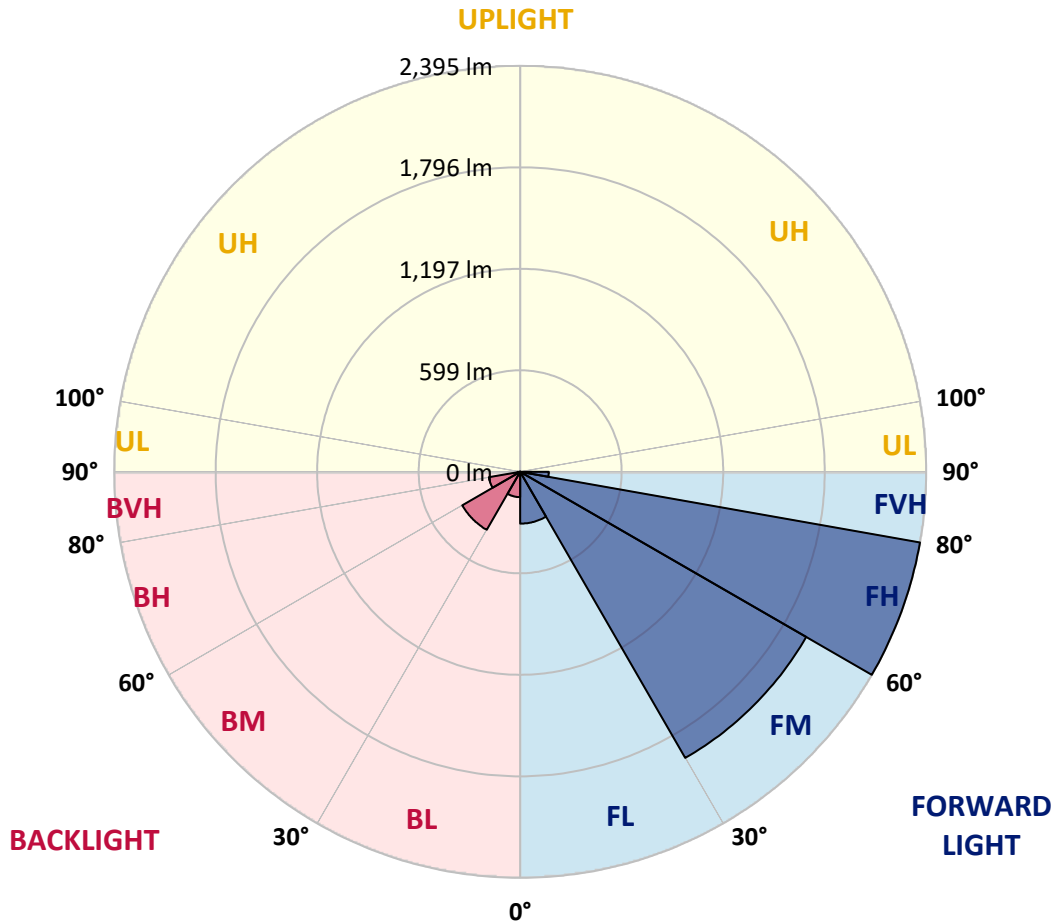
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	305.6	5.5			
FM (30°-60°)	1948.3	35.0			
FH (60°-80°)	2394.7	43.0			G2/5000
FVH (80°-90°)	168.7	3.0			G2/225
BL (0°-30°)	149.2	2.7	B1/500		
BM (30°-60°)	394.6	7.1	B1/1000		
BH (60°-80°)	187.8	3.4	B1/500		G1/500
BVH (80°-90°)	15.0	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5
2.5°	401.1	381.9	365.2	364.5	380.0	385.9	383.5	378.3	372.1	359.1	387.6
5°	502.5	475.0	469.7	463.6	449.5	453.3	430.5	447.9	453.3	465.9	484.9
7.5°	562.3	546.2	533.6	528.4	504.2	501.3	484.5	509.2	519.6	517.9	546.2
10°	585.9	571.1	572.1	555.0	547.2	550.5	552.4	552.9	559.3	564.5	550.2
12.5°	598.0	603.7	624.6	612.9	622.9	626.9	646.9	626.5	627.2	600.3	615.1
15°	659.0	673.3	661.1	660.7	657.6	664.2	681.3	667.6	678.2	669.7	650.7
17.5°	732.6	736.9	713.6	704.1	716.5	714.3	710.1	712.2	685.6	735.0	711.7
20°	755.2	772.0	741.4	704.1	745.0	750.4	749.5	740.2	694.6	765.9	743.3
22.5°	820.7	797.9	773.7	750.0	770.9	773.9	768.7	746.6	731.4	758.5	776.3
25°	850.4	844.9	814.1	811.2	788.2	777.3	786.3	779.9	764.9	813.1	793.4
27.5°	918.3	911.9	840.9	870.1	836.6	833.8	786.1	807.4	822.4	818.8	848.3
30°	995.3	1002.6	898.9	928.1	889.4	884.1	836.2	863.2	873.4	876.8	913.6
32.5°	1080.8	1101.0	997.9	973.9	953.2	956.8	916.2	866.8	906.5	984.1	1000.0
35°	1173.4	1181.7	1073.6	1037.5	983.6	979.8	980.5	986.7	1026.9	1115.4	1127.8
37.5°	1344.6	1306.1	1211.4	1119.9	1101.9	1066.5	1090.5	1109.5	1149.6	1285.5	1337.2
40°	1450.0	1421.5	1277.2	1224.2	1174.3	1177.7	1222.5	1222.3	1317.1	1457.2	1536.2
42.5°	1547.6	1516.5	1380.5	1327.3	1280.0	1291.6	1304.5	1327.0	1508.7	1734.5	1770.6
45°	1626.3	1558.1	1460.3	1448.4	1409.4	1394.0	1448.4	1484.5	1737.9	1959.0	1979.9
47.5°	1679.7	1623.6	1527.9	1517.5	1488.8	1526.5	1674.9	1698.2	1915.5	2184.3	2182.7
50°	1760.9	1684.2	1597.8	1592.3	1673.3	1693.5	1874.4	1872.0	2088.4	2371.5	2332.3
52.5°	1854.5	1757.8	1664.0	1722.7	1846.2	1856.1	2013.1	2077.0	2277.2	2551.9	2449.6
55°	1962.0	1854.0	1763.3	1841.6	2025.5	1996.0	2154.9	2310.9	2513.5	2742.2	2534.4
57.5°	2095.3	1964.2	1890.8	2010.0	2189.1	2215.2	2357.9	2554.3	2703.7	2860.4	2596.1
60°	2235.9	2082.0	2014.8	2128.3	2418.2	2448.2	2587.8	2756.7	2916.9	2971.8	2584.5
62.5°	2370.0	2203.6	2142.8	2282.9	2672.3	2746.4	2849.5	2957.1	3094.3	2998.9	2443.7
65°	2519.4	2352.7	2314.5	2524.6	3016.9	3090.5	3225.2	3192.9	3155.1	2902.9	2210.7
67.5°	2677.6	2508.2	2515.4	2805.1	3423.3	3435.8	3642.7	3428.0	3083.7	2648.8	1819.6
70°	2762.6	2589.2	2662.6	3104.1	3836.7	3818.7	3860.9	3491.2	2792.3	2093.8	1254.1
72.5°	2659.5	2504.9	2639.3	3229.9	4047.1	4027.6	3738.4	3116.2	2183.1	1302.1	650.2
75°	2251.8	2102.6	2308.3	2879.2	3643.4	3661.4	3181.5	2317.3	1249.8	523.6	270.0
77.5°	1530.1	1453.1	1629.3	2146.1	2706.3	2768.8	2360.5	1355.1	524.8	216.8	163.4
80°	808.6	772.0	902.2	1236.3	1713.6	1760.2	1388.1	674.9	268.8	140.3	116.6
82.5°	439.3	423.9	493.7	635.7	973.7	1014.3	719.8	448.4	181.2	87.9	71.2
85°	295.2	289.2	335.6	341.5	460.5	473.8	377.1	345.3	108.8	43.0	47.0
87.5°	147.7	141.8	176.7	156.0	175.7	176.0	172.9	220.4	27.5	14.2	8.5
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°	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5	321.5
2.5°	388.0	379.7	351.0	350.8	355.0	352.2	354.3	342.7	337.7	360.5	359.3
5°	482.3	457.4	433.4	425.1	415.4	394.2	395.4	395.6	392.1	405.6	406.6
7.5°	537.7	507.7	485.6	441.5	406.8	379.7	383.3	387.3	383.3	401.3	408.0
10°	545.7	522.0	495.6	446.5	423.4	399.0	374.3	352.4	349.8	341.5	344.1
12.5°	593.7	574.0	518.9	465.0	438.1	400.6	355.5	330.6	309.7	313.2	306.6
15°	633.1	619.1	553.1	482.6	418.4	371.9	323.9	289.7	271.0	268.8	262.2
17.5°	686.6	666.6	556.2	470.4	393.0	337.2	283.1	244.4	236.3	233.0	229.6
20°	712.2	676.3	545.0	432.4	363.3	295.9	242.7	209.5	207.1	213.0	211.8
22.5°	734.5	684.4	535.0	409.4	317.0	254.1	215.2	193.3	190.7	198.3	199.7
25°	747.6	707.4	524.1	385.9	288.3	223.0	194.5	182.1	182.6	192.6	191.4
27.5°	806.5	715.5	496.6	358.1	255.3	200.0	184.5	178.1	175.5	189.3	190.5
30°	843.5	768.2	490.4	328.7	230.8	183.1	175.5	172.9	172.4	189.0	190.2
32.5°	912.4	785.8	493.2	296.6	208.7	177.9	168.8	168.6	173.4	189.3	191.2
35°	1007.9	859.9	479.5	278.3	196.6	169.8	163.6	165.5	173.6	190.9	193.5
37.5°	1194.0	929.7	483.7	261.2	192.6	167.2	162.2	163.4	176.4	195.2	202.3
40°	1341.5	1056.3	477.1	252.7	187.1	166.7	159.1	163.9	176.2	197.6	204.0
42.5°	1555.2	1157.2	477.8	244.1	186.9	164.8	158.6	164.3	175.7	195.4	204.2
45°	1738.6	1247.7	488.0	239.1	184.5	167.9	157.9	165.0	172.6	187.8	197.6
47.5°	1888.9	1348.6	498.5	234.4	183.6	170.7	157.2	160.1	167.4	179.3	188.1
50°	2011.4	1419.6	511.8	233.4	183.6	169.3	155.3	155.1	161.2	170.7	179.1
52.5°	2106.9	1469.8	520.8	234.6	183.6	163.9	152.9	151.0	154.8	161.7	170.0
55°	2176.0	1485.2	513.4	237.7	183.3	158.9	148.7	147.0	148.9	153.6	161.5
57.5°	2203.8	1444.6	469.5	232.3	183.3	155.3	143.4	141.5	143.4	147.0	154.8
60°	2134.2	1314.0	406.1	218.2	179.8	150.6	137.5	136.3	139.2	142.2	149.8
62.5°	1959.7	1140.4	338.4	201.6	172.4	146.5	131.8	132.0	136.6	140.8	148.4
65°	1688.5	930.4	282.1	184.8	163.1	140.1	125.9	127.5	133.9	139.6	147.2
67.5°	1328.7	689.4	237.5	168.4	150.1	129.7	119.2	119.7	124.2	129.7	137.0
70°	888.2	438.6	195.2	149.1	133.0	116.1	109.0	107.3	106.2	110.9	117.3
72.5°	450.5	259.1	160.3	127.5	114.5	101.4	95.9	91.7	88.3	91.2	96.2
75°	236.1	181.2	129.4	105.9	94.5	86.2	82.2	76.5	74.1	75.8	79.3
77.5°	166.9	141.8	104.7	83.8	76.9	68.4	69.1	63.2	61.3	62.2	66.0
80°	128.2	112.3	80.5	63.4	59.4	51.1	53.4	49.9	47.5	47.0	49.9
82.5°	87.4	84.5	57.2	44.4	41.6	35.6	38.9	37.5	34.4	32.5	34.0
85°	58.9	56.0	34.9	25.6	24.5	18.5	23.7	22.8	20.2	17.3	17.6
87.5°	10.2	18.8	10.0	6.4	5.9	2.1	5.5	5.2	4.7	2.4	1.9
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)