

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: P366768

Luminaire Tested: **MSA-SA1B-730-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366768
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-730-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4600 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G1

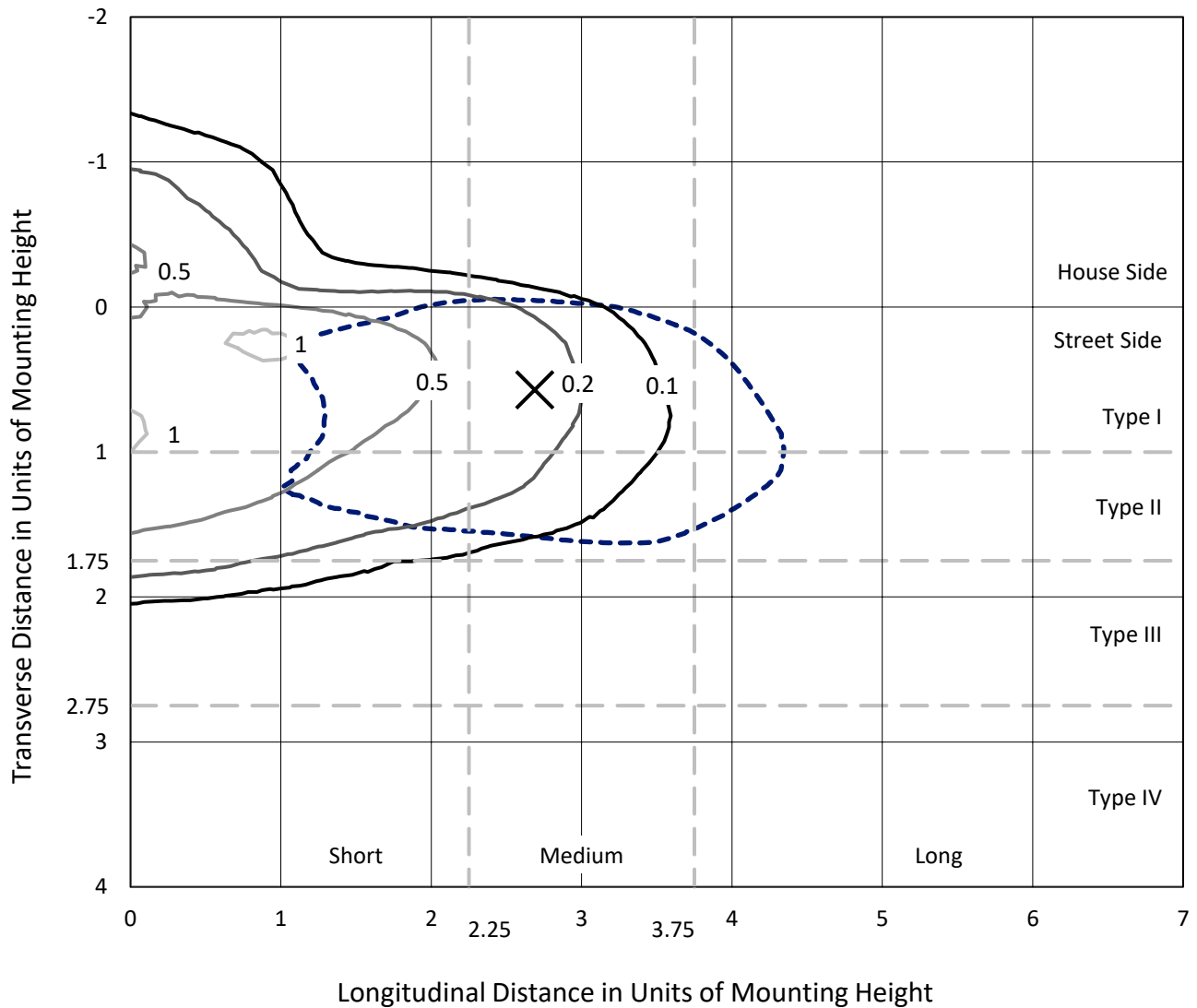
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

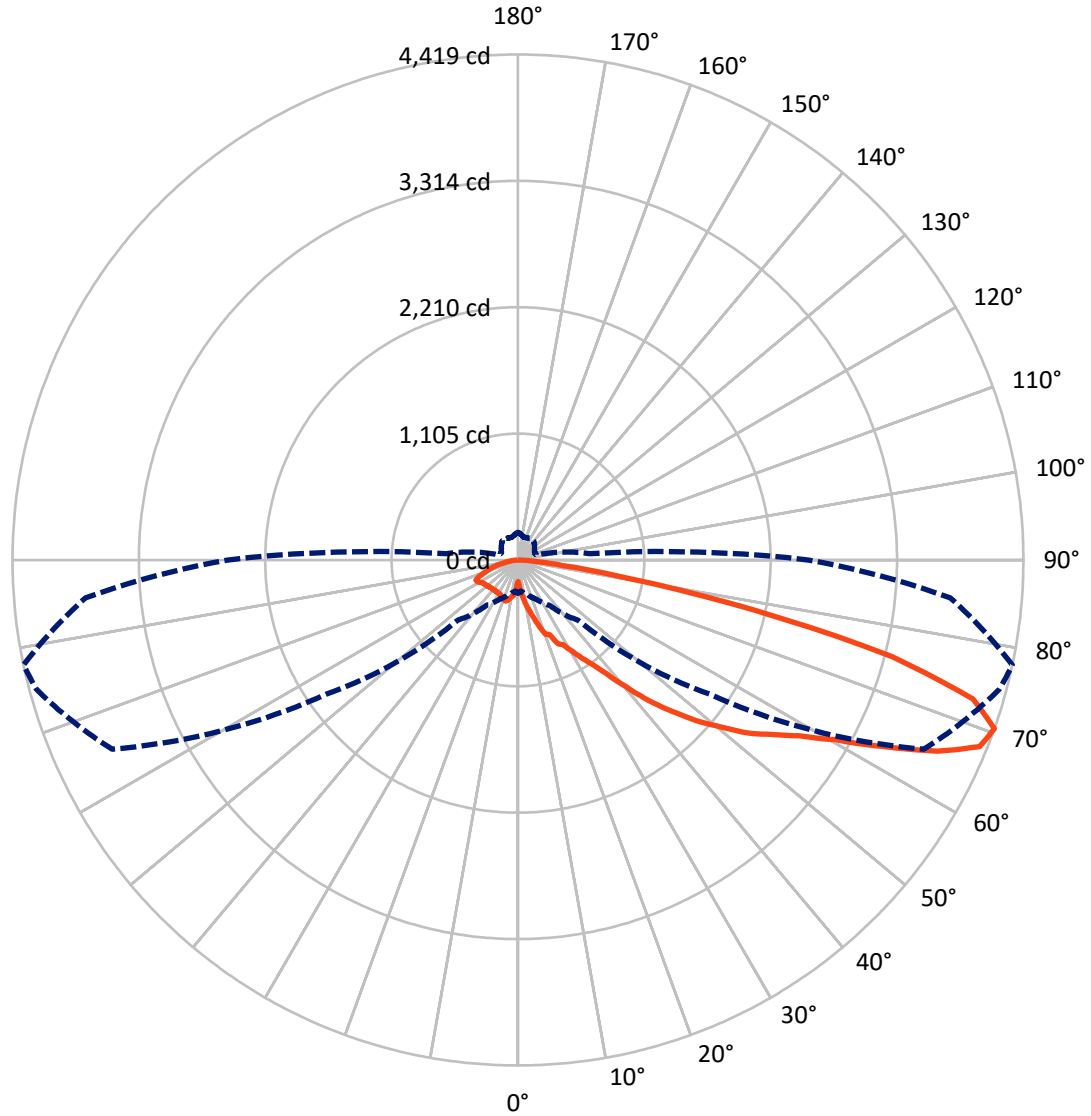
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	821.0	0.0	821.0
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	3779.0	0.0	3779.0
	% Fixture	82.2	0.0	82.2
Total	Lumens	4600.0	0.0	4600.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.0	0.6
10°-20°	127.7	2.8
20°-30°	245.8	5.3
30°-40°	414.0	9.0
40°-50°	716.4	15.6
50°-60°	1081.6	23.5
60°-70°	1198.0	26.0
70°-80°	690.7	15.0
80°-90°	96.9	2.1
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°	4600.0	100.0
0°-180°	4600.0	100.0

Coefficient of Utilization

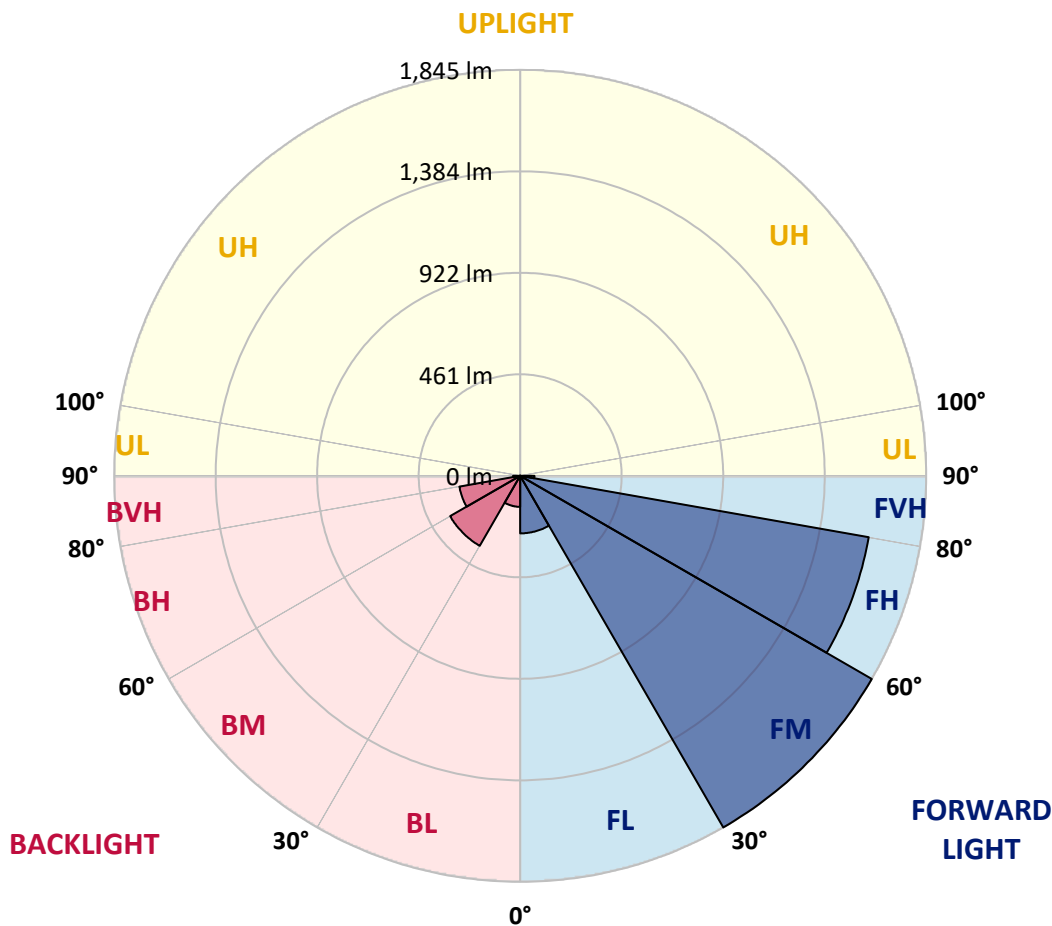


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	261.5	5.7			
FM (30°-60°)	1844.7	40.1			
FH (60°-80°)	1608.1	35.0			G1/1800
FVH (80°-90°)	64.6	1.4			G1/100
BL (0°-30°)	141.0	3.1	B1/500		
BM (30°-60°)	367.2	8.0	B1/1000		
BH (60°-80°)	280.6	6.1	B1/500		G1/500
BVH (80°-90°)	32.2	0.7			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5
2.5°	241.4	232.8	219.8	225.1	231.6	232.4	230.3	218.4	214.4	223.4	226.1
5°	338.3	323.7	314.9	312.0	302.2	281.9	296.5	289.0	290.5	286.1	294.7
7.5°	419.8	410.0	396.9	393.3	370.9	355.0	364.9	361.7	345.9	339.8	349.6
10°	461.2	450.5	451.0	443.2	437.2	438.8	433.8	419.4	407.7	399.4	375.9
12.5°	486.1	488.8	503.2	499.2	521.6	540.0	526.0	504.7	467.7	460.2	436.8
15°	545.4	555.3	541.9	548.1	557.6	592.9	587.2	582.6	543.5	528.9	485.7
17.5°	606.4	608.3	587.9	584.7	607.7	625.5	648.0	622.1	626.9	616.7	546.9
20°	619.4	632.6	603.5	583.3	630.7	666.0	693.8	666.4	691.7	694.4	597.3
22.5°	667.1	651.2	612.9	593.1	634.5	677.9	723.1	738.5	730.4	707.8	646.0
25°	700.3	691.9	652.8	630.9	646.6	686.5	765.9	806.0	813.1	810.0	692.5
27.5°	761.9	766.1	685.6	691.7	669.8	673.5	791.6	895.5	851.2	839.0	750.0
30°	859.1	840.3	750.0	755.0	718.7	712.6	845.9	972.8	933.1	918.4	797.4
32.5°	960.5	962.3	852.6	810.0	790.6	784.5	835.1	1013.3	1036.7	1017.5	868.9
35°	1103.6	1093.6	963.8	907.8	837.8	827.1	911.6	1130.6	1173.6	1119.9	953.8
37.5°	1321.4	1291.3	1140.2	1010.8	959.0	946.7	1020.9	1235.9	1332.6	1265.8	1092.7
40°	1496.3	1435.2	1297.9	1140.2	1052.6	1067.7	1098.6	1363.6	1497.5	1459.9	1221.1
42.5°	1635.7	1581.5	1409.5	1298.6	1179.5	1160.7	1194.5	1521.8	1721.8	1685.0	1381.5
45°	1769.4	1658.9	1534.9	1435.2	1320.7	1343.5	1338.5	1683.3	1997.0	1883.7	1523.2
47.5°	1901.3	1797.6	1667.8	1533.7	1418.5	1560.6	1507.4	1803.3	2182.6	2098.7	1672.4
50°	2070.8	1956.7	1808.9	1674.1	1605.1	1709.0	1619.8	1905.0	2390.5	2291.9	1813.1
52.5°	2183.4	2072.4	1942.7	1846.5	1840.2	1800.1	1777.3	2033.6	2572.7	2512.9	1962.3
55°	2170.2	2063.2	2004.5	2015.0	2093.3	1958.1	1939.5	2224.1	2762.7	2693.5	2123.4
57.5°	2004.3	1887.5	1900.0	1962.5	2172.7	2235.6	2203.9	2427.5	2932.2	2900.8	2322.6
60°	1561.3	1501.3	1602.8	1717.0	2066.4	2316.9	2539.3	2675.7	3140.9	3191.1	2635.6
62.5°	1014.2	934.1	1094.4	1288.5	1749.5	2263.2	2880.9	3146.3	3482.6	3596.7	3111.2
65°	525.4	512.6	624.8	803.1	1217.9	1929.7	3001.3	3639.9	3898.0	4030.9	3565.4
67.5°	382.0	358.2	410.2	515.1	743.5	1315.9	2773.1	4017.4	4231.4	4353.2	3829.5
70°	290.9	273.3	313.0	378.0	485.5	743.3	2047.1	3914.5	4360.1	4419.2	3794.4
72.5°	217.8	202.7	237.4	298.0	374.1	418.4	1210.0	3218.5	4140.5	4160.7	3405.5
75°	173.9	162.2	177.2	235.3	304.9	284.8	642.8	2331.8	3364.1	3381.4	2601.3
77.5°	142.7	132.7	138.8	176.4	237.2	214.2	318.9	1483.3	2135.9	2109.4	1463.5
80°	116.4	107.8	110.6	127.5	180.6	159.9	179.1	773.8	1018.8	977.8	608.7
82.5°	89.6	82.3	88.0	93.8	130.8	114.9	104.5	352.1	417.3	388.7	223.2
85°	60.0	53.3	76.5	70.4	85.5	70.6	57.1	140.2	155.5	145.0	78.4
87.5°	16.5	15.5	25.7	35.1	35.1	26.7	20.9	33.9	43.3	38.0	18.4
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°	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5	187.5
2.5°	227.2	223.0	211.9	210.9	213.6	214.0	212.3	208.3	206.1	217.7	215.9
5°	292.6	277.7	268.7	260.4	248.9	240.7	242.8	248.5	250.4	259.1	260.0
7.5°	343.4	323.7	303.9	277.5	260.0	248.9	257.3	263.5	268.3	280.5	285.5
10°	365.5	344.0	316.0	288.2	283.4	285.3	280.5	282.1	289.6	290.1	292.6
12.5°	406.5	382.2	331.7	306.6	305.3	309.3	307.6	314.7	319.9	333.9	327.9
15°	445.8	414.8	343.6	317.9	312.4	320.4	329.8	341.7	352.8	366.1	359.4
17.5°	493.6	446.8	344.2	312.8	313.7	331.0	340.8	347.3	380.5	398.7	389.5
20°	523.7	450.1	331.4	299.9	313.7	329.3	342.9	350.0	387.2	414.6	420.9
22.5°	550.9	451.2	321.4	293.0	301.8	322.4	342.9	358.6	382.4	408.6	409.6
25°	565.9	450.3	308.5	293.6	301.6	311.8	330.0	344.4	362.0	398.7	399.6
27.5°	604.2	437.8	295.9	295.9	300.1	300.5	323.7	332.1	334.6	368.0	373.9
30°	615.4	440.5	294.4	295.5	297.6	293.8	303.9	309.5	313.1	341.9	342.9
32.5°	633.2	419.0	299.0	292.1	289.4	288.8	291.3	296.3	297.8	315.4	318.7
35°	654.9	410.4	300.5	291.1	285.7	282.9	290.3	284.2	289.0	309.7	312.0
37.5°	725.4	398.5	308.4	291.1	284.2	280.9	277.3	280.2	297.2	317.2	329.4
40°	770.5	402.1	306.4	294.0	279.0	275.9	269.8	280.4	306.8	342.1	351.3
42.5°	849.5	404.2	308.7	292.6	280.7	268.9	272.9	284.4	312.2	332.3	346.5
45°	931.2	410.8	307.2	288.6	276.9	282.5	276.9	287.3	300.5	301.1	311.8
47.5°	1011.4	437.0	303.9	280.4	275.9	290.5	276.3	278.1	279.0	282.5	295.1
50°	1105.5	465.0	299.3	268.9	277.3	290.9	278.4	270.0	269.0	280.4	294.5
52.5°	1212.5	496.7	293.4	257.7	269.4	287.3	285.7	270.6	262.3	273.3	287.5
55°	1338.5	532.7	286.5	246.6	260.8	287.6	289.8	266.6	262.5	274.4	289.6
57.5°	1505.9	584.9	273.1	230.5	250.3	281.7	279.4	261.9	258.1	270.8	286.5
60°	1791.6	685.2	253.9	214.6	238.9	267.1	271.0	253.7	249.9	263.9	280.4
62.5°	2174.2	805.8	230.7	199.0	225.1	251.4	260.4	241.8	241.4	259.3	276.5
65°	2530.3	874.2	206.7	184.9	210.9	236.8	248.5	230.7	231.5	253.9	271.2
67.5°	2678.4	793.7	185.2	172.2	194.6	220.1	238.7	222.1	219.6	246.6	262.5
70°	2539.3	630.5	166.6	158.8	176.2	202.1	225.1	210.6	204.8	229.3	241.8
72.5°	2246.9	525.6	149.2	143.1	160.1	183.1	206.7	195.0	187.5	206.3	217.5
75°	1756.4	431.3	129.2	127.5	141.7	165.9	187.5	179.5	169.9	181.8	192.9
77.5°	1000.0	272.9	108.5	109.7	119.9	145.4	164.5	158.2	148.4	153.4	166.3
80°	400.2	137.7	87.3	88.0	96.6	119.5	136.3	134.0	123.9	127.9	136.7
82.5°	149.6	75.6	64.4	64.8	73.4	94.5	116.4	115.2	105.7	102.8	107.8
85°	59.4	37.4	39.5	41.2	49.5	68.1	93.4	82.8	71.5	62.7	65.8
87.5°	14.2	11.9	13.8	14.6	16.1	21.3	34.1	27.4	28.2	22.6	16.9
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)