

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: P366636

Luminaire Tested: **MSA-SA1A-730-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366636  
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-SA1A-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: 3671 lumens  
Efficiency: N/A  
Efficacy: 108.0 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

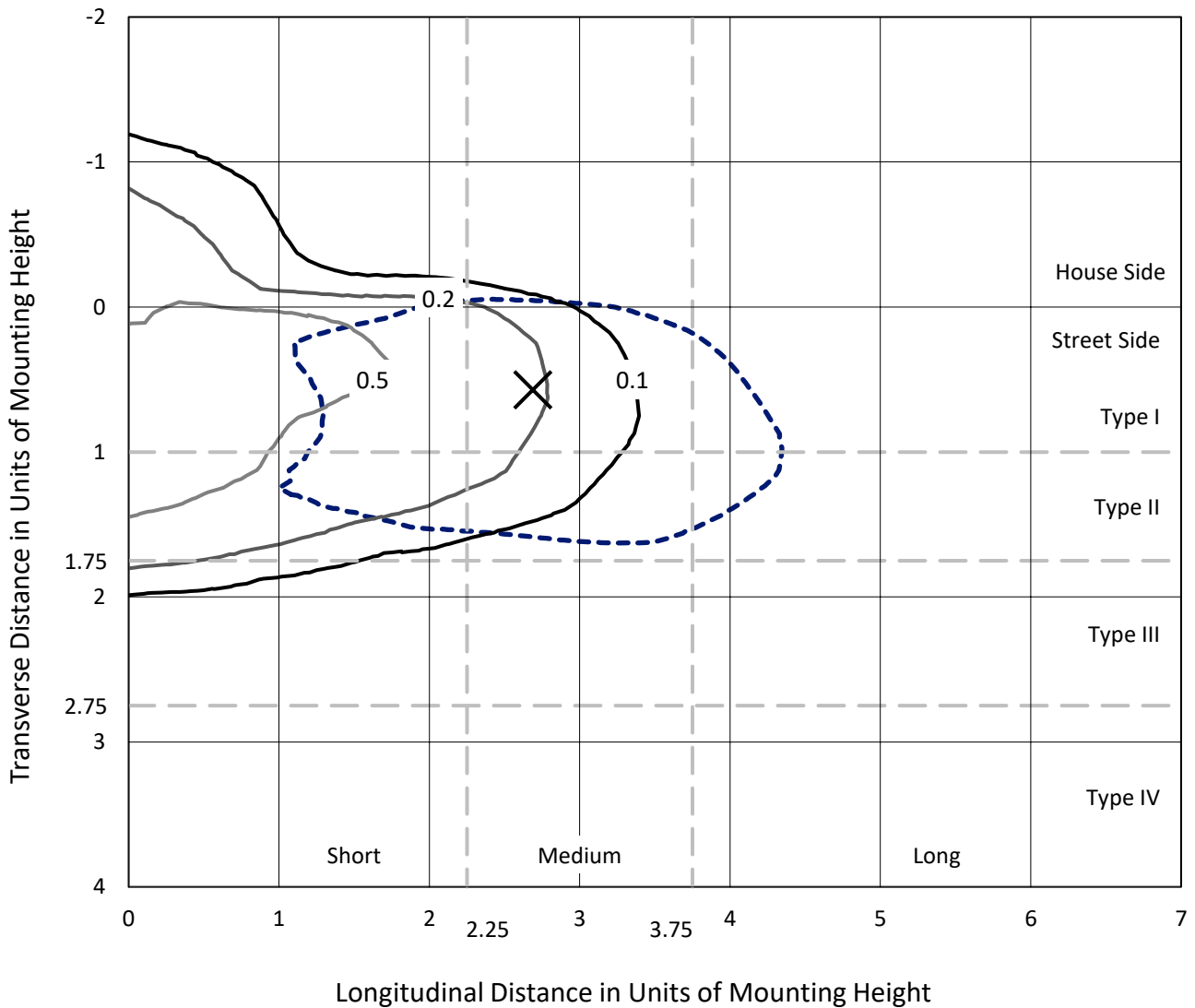
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

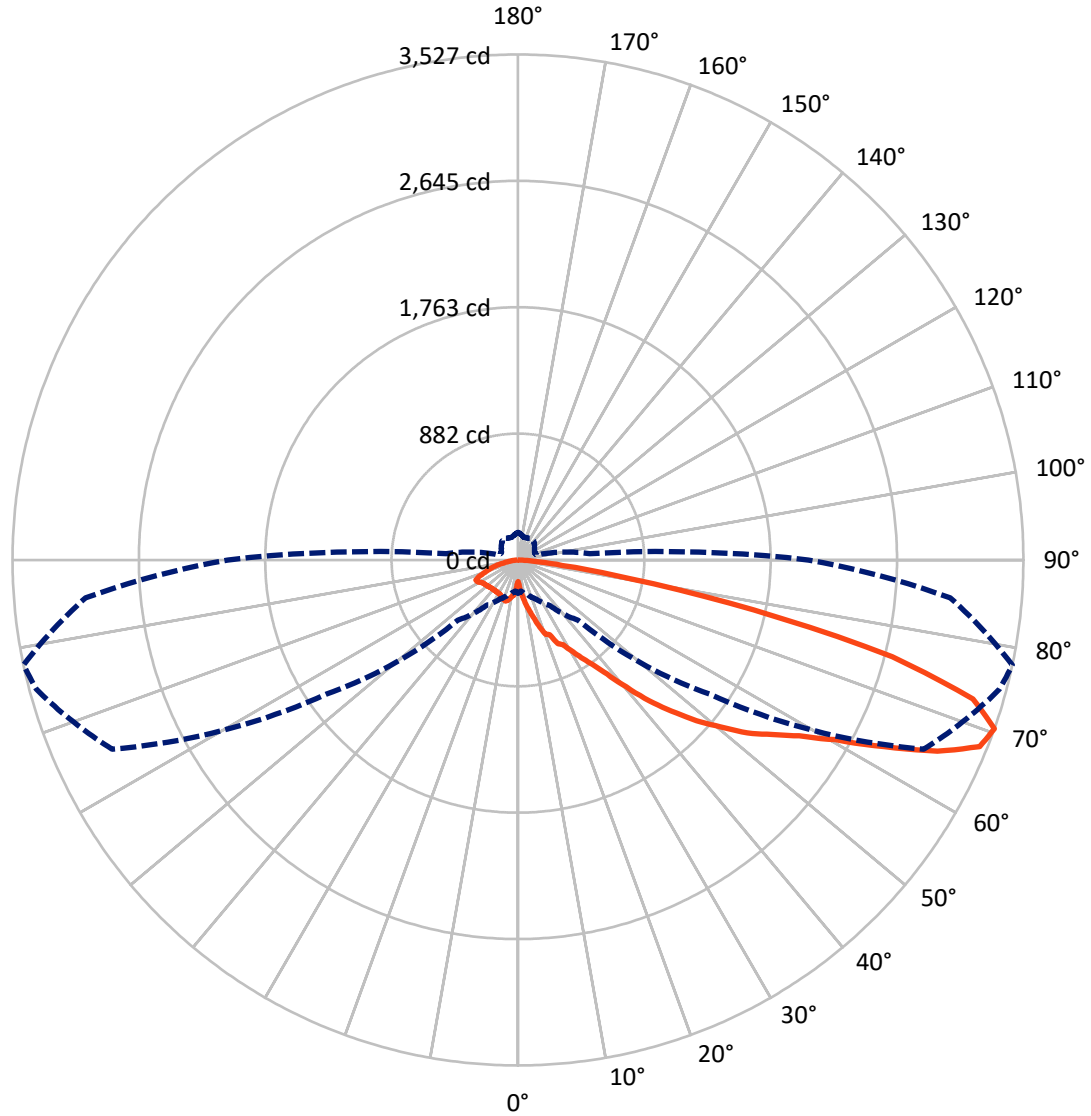
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 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
<b>House Side</b>	Lumens	655.2	0.0	655.2
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	3015.8	0.0	3015.8
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	3671.0	0.0	3671.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.1	0.6
10°-20°	101.9	2.8
20°-30°	196.2	5.3
30°-40°	330.4	9.0
40°-50°	571.7	15.6
50°-60°	863.2	23.5
60°-70°	956.1	26.0
70°-80°	551.2	15.0
80°-90°	77.3	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°	3671.0	100.0
0°-180°	3671.0	100.0

**Coefficient of Utilization**

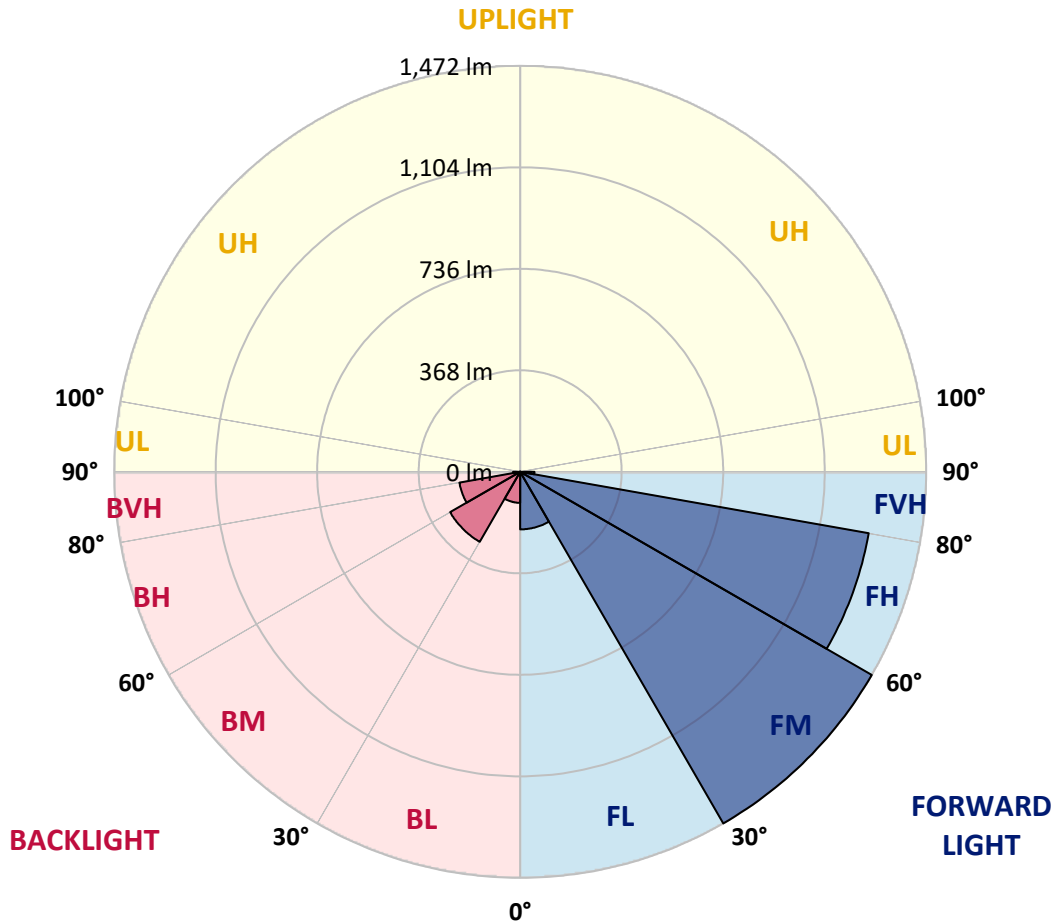


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	208.7	5.7			
FM (30°-60°)	1472.2	40.1			
FH (60°-80°)	1283.3	35.0			G1/1800
FVH (80°-90°)	51.6	1.4			G1/100
BL (0°-30°)	112.5	3.1	B1/500		
BM (30°-60°)	293.1	8.0	B1/1000		
BH (60°-80°)	223.9	6.1	B1/500		G1/500
BVH (80°-90°)	25.7	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°	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7
2.5°	192.7	185.8	175.4	179.7	184.9	185.5	183.8	174.3	171.1	178.3	180.4
5°	270.0	258.3	251.3	249.0	241.2	225.0	236.6	230.6	231.8	228.3	235.2
7.5°	335.0	327.2	316.8	313.9	296.0	283.3	291.2	288.6	276.1	271.2	279.0
10°	368.0	359.5	359.9	353.7	348.9	350.1	346.2	334.7	325.4	318.8	299.9
12.5°	387.9	390.1	401.6	398.4	416.3	430.9	419.8	402.8	373.3	367.3	348.6
15°	435.2	443.2	432.5	437.4	445.0	473.2	468.6	464.9	433.7	422.1	387.6
17.5°	483.9	485.4	469.2	466.6	485.0	499.2	517.1	496.4	500.3	492.2	436.5
20°	494.3	504.9	481.6	465.5	503.3	531.5	553.7	531.8	552.0	554.1	476.7
22.5°	532.4	519.7	489.1	473.3	506.4	541.0	577.1	589.3	582.9	564.9	515.6
25°	558.9	552.2	520.9	503.5	516.0	547.9	611.2	643.2	648.9	646.4	552.6
27.5°	608.0	611.4	547.1	552.0	534.6	537.5	631.7	714.7	679.3	669.5	598.5
30°	685.6	670.6	598.5	602.5	573.6	568.7	675.0	776.3	744.7	732.9	636.3
32.5°	766.6	767.9	680.4	646.4	631.0	626.1	666.5	808.6	827.3	812.0	693.4
35°	880.7	872.8	769.2	724.5	668.6	660.0	727.5	902.3	936.6	893.7	761.2
37.5°	1054.6	1030.5	909.9	806.6	765.3	755.5	814.8	986.3	1063.4	1010.2	872.0
40°	1194.1	1145.3	1035.7	909.9	840.0	852.1	876.7	1088.2	1195.1	1165.1	974.5
42.5°	1305.4	1262.1	1124.8	1036.4	941.3	926.3	953.3	1214.5	1374.1	1344.7	1102.5
45°	1412.1	1323.9	1224.9	1145.3	1054.0	1072.2	1068.2	1343.3	1593.7	1503.3	1215.6
47.5°	1517.3	1434.6	1330.9	1224.0	1132.0	1245.4	1203.0	1439.1	1741.8	1674.8	1334.6
50°	1652.6	1561.6	1443.6	1336.0	1280.9	1363.8	1292.7	1520.3	1907.7	1829.1	1446.9
52.5°	1742.5	1653.9	1550.4	1473.6	1468.5	1436.5	1418.3	1622.9	2053.1	2005.4	1566.0
55°	1731.9	1646.5	1599.7	1608.1	1670.5	1562.6	1547.8	1774.9	2204.8	2149.5	1694.6
57.5°	1599.5	1506.3	1516.3	1566.2	1733.9	1784.1	1758.8	1937.3	2340.1	2315.0	1853.6
60°	1246.0	1198.1	1279.1	1370.3	1649.1	1849.0	2026.5	2135.3	2506.6	2546.7	2103.3
62.5°	809.4	745.4	873.4	1028.2	1396.1	1806.1	2299.0	2510.8	2779.3	2870.3	2482.8
65°	419.3	409.1	498.6	640.9	971.9	1540.0	2395.2	2904.8	3110.7	3216.8	2845.4
67.5°	304.8	285.9	327.3	411.1	593.3	1050.1	2213.0	3206.1	3376.9	3474.1	3056.1
70°	232.2	218.1	249.8	301.6	387.5	593.2	1633.6	3123.9	3479.6	3526.7	3028.1
72.5°	173.8	161.8	189.5	237.8	298.6	333.9	965.7	2568.5	3304.3	3320.4	2717.8
75°	138.8	129.5	141.4	187.8	243.3	227.3	513.0	1860.9	2684.7	2698.5	2075.9
77.5°	113.9	105.9	110.8	140.8	189.3	170.9	254.5	1183.7	1704.5	1683.4	1168.0
80°	92.9	86.0	88.3	101.8	144.2	127.6	142.9	617.5	813.1	780.3	485.7
82.5°	71.5	65.7	70.2	74.8	104.4	91.7	83.4	281.0	333.0	310.2	178.1
85°	47.9	42.5	61.1	56.2	68.3	56.3	45.6	111.9	124.1	115.7	62.6
87.5°	13.2	12.4	20.5	28.0	28.0	21.3	16.7	27.1	34.6	30.3	14.7
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°	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7	149.7
2.5°	181.3	178.0	169.1	168.3	170.5	170.8	169.4	166.2	164.5	173.7	172.3
5°	233.5	221.6	214.4	207.8	198.6	192.1	193.7	198.3	199.9	206.8	207.5
7.5°	274.1	258.3	242.6	221.4	207.5	198.6	205.4	210.3	214.1	223.9	227.9
10°	291.7	274.5	252.2	230.0	226.2	227.7	223.9	225.1	231.1	231.5	233.5
12.5°	324.4	305.0	264.8	244.7	243.6	246.8	245.5	251.1	255.3	266.4	261.7
15°	355.8	331.0	274.2	253.7	249.3	255.7	263.2	272.7	281.6	292.1	286.8
17.5°	393.9	356.6	274.7	249.6	250.4	264.1	271.9	277.1	303.6	318.2	310.8
20°	417.9	359.2	264.4	239.3	250.4	262.8	273.6	279.3	309.0	330.9	335.9
22.5°	439.7	360.1	256.5	233.8	240.9	257.3	273.6	286.2	305.2	326.1	326.9
25°	451.6	359.3	246.2	234.3	240.7	248.8	263.4	274.9	288.9	318.2	318.9
27.5°	482.2	349.4	236.1	236.1	239.5	239.8	258.3	265.1	267.0	293.7	298.4
30°	491.1	351.5	234.9	235.8	237.5	234.4	242.6	247.0	249.9	272.9	273.6
32.5°	505.3	334.4	238.6	233.1	230.9	230.5	232.5	236.4	237.7	251.7	254.3
35°	522.6	327.5	239.8	232.3	228.0	225.7	231.7	226.8	230.6	247.2	249.0
37.5°	578.9	318.0	246.1	232.3	226.8	224.2	221.3	223.6	237.2	253.1	262.9
40°	614.9	320.9	244.6	234.6	222.7	220.2	215.3	223.7	244.9	273.0	280.4
42.5°	677.9	322.6	246.4	233.5	224.0	214.6	217.8	227.0	249.1	265.2	276.5
45°	743.1	327.8	245.2	230.3	221.0	225.4	221.0	229.2	239.8	240.3	248.8
47.5°	807.1	348.8	242.6	223.7	220.2	231.8	220.5	221.9	222.7	225.4	235.5
50°	882.2	371.1	238.9	214.6	221.3	232.2	222.2	215.5	214.7	223.7	235.1
52.5°	967.6	396.4	234.1	205.7	215.0	229.2	228.0	215.9	209.4	218.1	229.4
55°	1068.2	425.1	228.6	196.8	208.1	229.6	231.2	212.7	209.5	219.0	231.1
57.5°	1201.8	466.8	217.9	183.9	199.7	224.8	223.0	209.0	206.0	216.1	228.6
60°	1429.8	546.8	202.6	171.2	190.7	213.2	216.2	202.5	199.4	210.6	223.7
62.5°	1735.1	643.1	184.1	158.9	179.7	200.6	207.8	193.0	192.7	206.9	220.7
65°	2019.3	697.7	165.0	147.5	168.3	189.0	198.3	184.1	184.7	202.6	216.4
67.5°	2137.4	633.4	147.8	137.4	155.3	175.7	190.5	177.2	175.2	196.8	209.5
70°	2026.5	503.2	133.0	126.7	140.6	161.3	179.7	168.0	163.4	183.0	193.0
72.5°	1793.1	419.5	119.1	114.2	127.8	146.1	165.0	155.6	149.7	164.7	173.5
75°	1401.6	344.2	103.1	101.8	113.1	132.4	149.7	143.2	135.6	145.1	154.0
77.5°	798.1	217.8	86.6	87.5	95.6	116.0	131.3	126.3	118.4	122.4	132.7
80°	319.4	109.9	69.6	70.2	77.1	95.3	108.8	107.0	98.9	102.1	109.1
82.5°	119.4	60.3	51.4	51.7	58.6	75.4	92.9	92.0	84.3	82.0	86.0
85°	47.4	29.8	31.5	32.9	39.5	54.3	74.5	66.1	57.1	50.0	52.5
87.5°	11.3	9.5	11.0	11.6	12.9	17.0	27.2	21.9	22.5	18.1	13.5
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)