

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: P366834

Luminaire Tested: **MSA-SA1B-760-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366834
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-760-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: 5051 lumens
Efficiency: N/A
Efficacy: 114.8 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

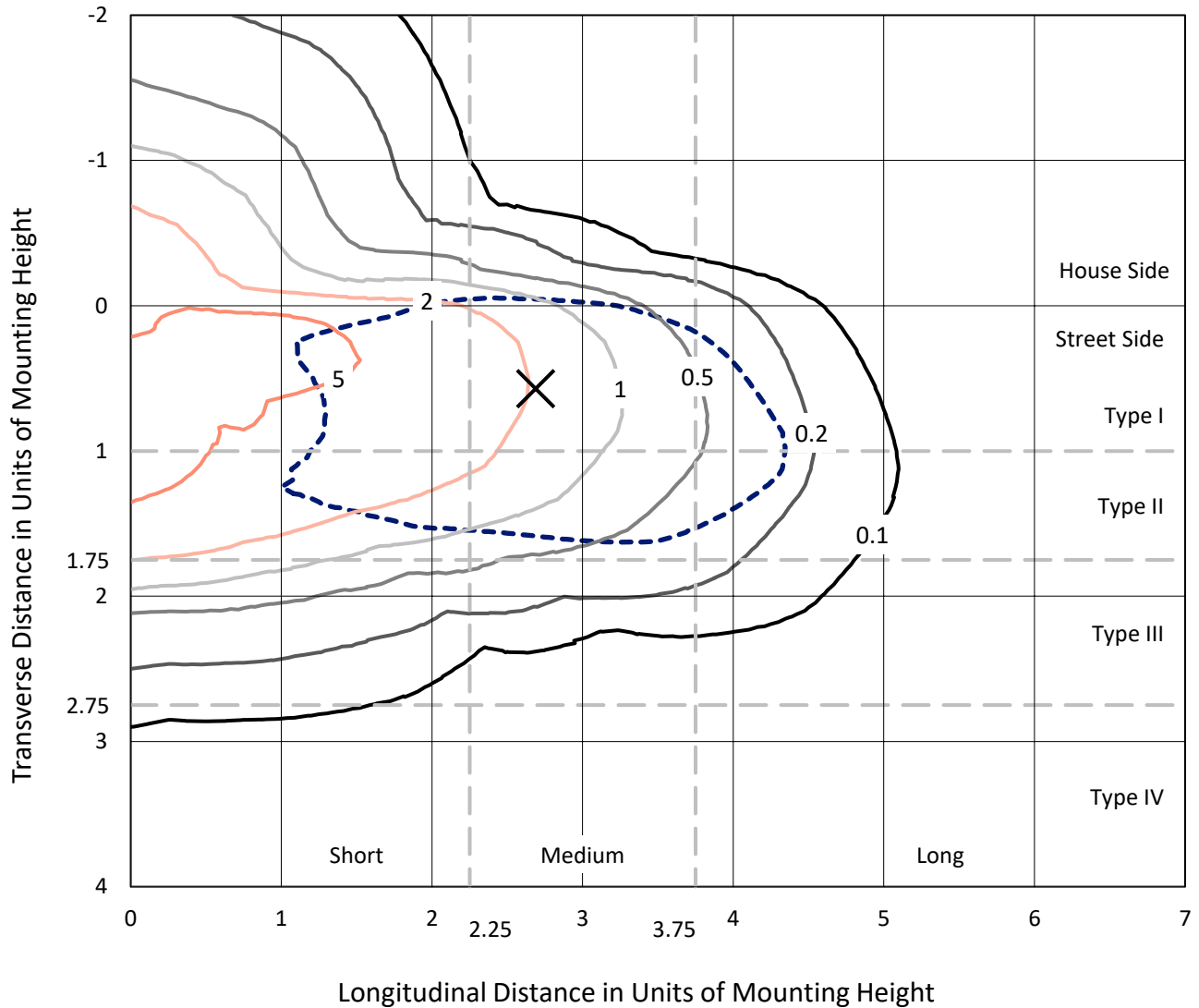
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

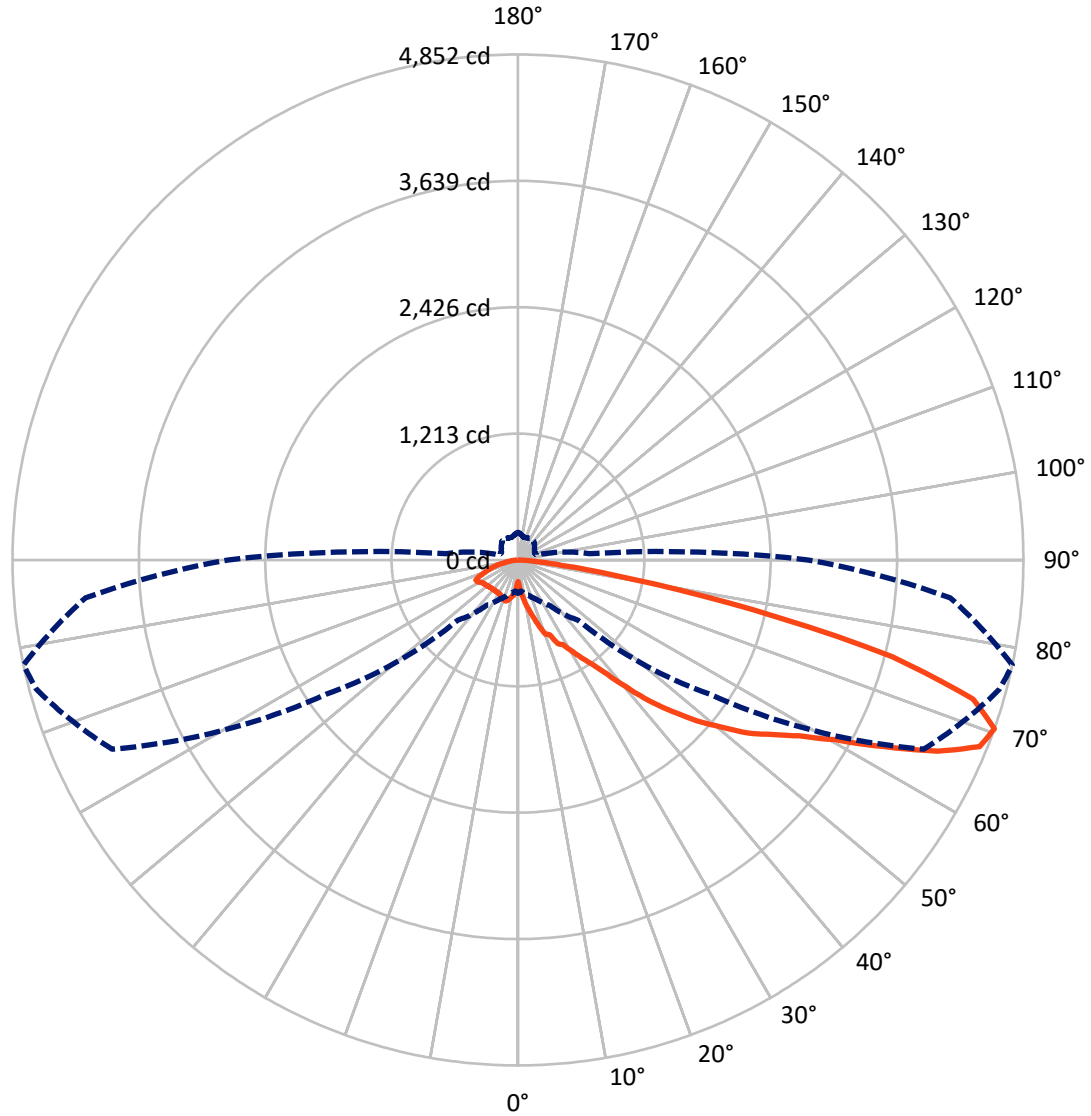
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.5 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	901.5	0.0	901.5
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	4149.5	0.0	4149.5
	% Fixture	82.2	0.0	82.2
Total	Lumens	5051.0	0.0	5051.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.8	0.6
10°-20°	140.2	2.8
20°-30°	269.9	5.3
30°-40°	454.6	9.0
40°-50°	786.6	15.6
50°-60°	1187.6	23.5
60°-70°	1315.5	26.0
70°-80°	758.4	15.0
80°-90°	106.4	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°	5051.0	100.0
0°-180°	5051.0	100.0

Coefficient of Utilization



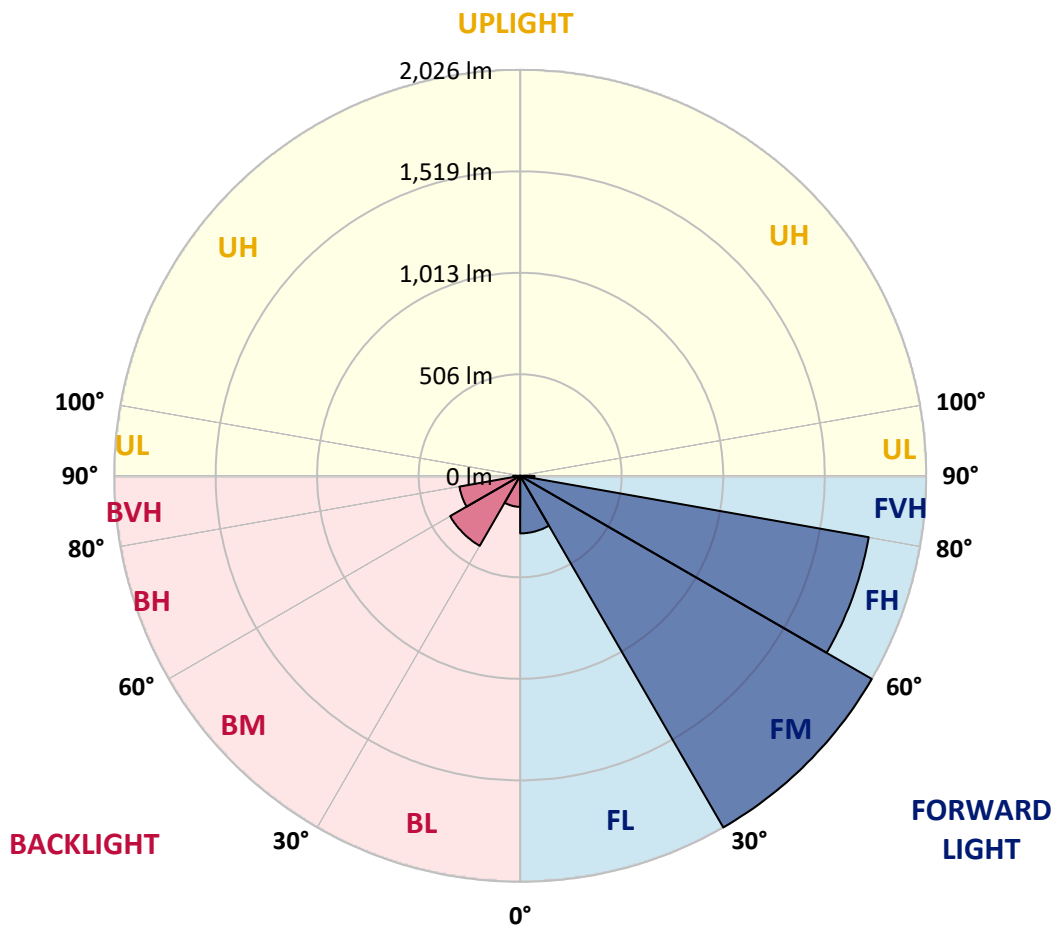
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	287.1	5.7			
FM (30°-60°)	2025.6	40.1			
FH (60°-80°)	1765.8	35.0			G1/1800
FVH (80°-90°)	71.0	1.4			G1/100
BL (0°-30°)	154.8	3.1	B1/500		
BM (30°-60°)	403.2	8.0	B1/1000		
BH (60°-80°)	308.1	6.1	B1/500		G1/500
BVH (80°-90°)	35.4	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°	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9
2.5°	265.1	255.6	241.3	247.2	254.4	255.2	252.9	239.8	235.4	245.3	248.3
5°	371.4	355.4	345.7	342.6	331.8	309.5	325.5	317.3	319.0	314.2	323.6
7.5°	460.9	450.2	435.9	431.9	407.2	389.8	400.7	397.1	379.9	373.1	383.9
10°	506.4	494.6	495.2	486.6	480.1	481.8	476.3	460.5	447.7	438.6	412.7
12.5°	533.8	536.7	552.5	548.1	572.7	592.9	577.6	554.2	513.6	505.4	479.7
15°	598.8	609.8	595.1	601.8	612.3	651.1	644.7	639.7	596.7	580.7	533.4
17.5°	665.8	667.9	645.6	642.0	667.3	686.9	711.5	683.1	688.3	677.2	600.5
20°	680.1	694.7	662.6	640.5	692.5	731.3	761.8	731.7	759.5	762.5	655.9
22.5°	732.6	715.1	673.0	651.3	696.8	744.3	794.0	810.9	802.0	777.2	709.4
25°	769.0	759.7	716.8	692.8	710.0	753.8	841.0	885.0	892.8	889.4	760.3
27.5°	836.6	841.2	752.8	759.5	735.5	739.5	869.2	983.3	934.7	921.2	823.5
30°	943.3	922.7	823.5	829.0	789.2	782.5	928.8	1068.2	1024.6	1008.4	875.5
32.5°	1054.7	1056.6	936.2	889.4	868.2	861.4	917.0	1112.6	1138.3	1117.3	954.1
35°	1211.8	1200.8	1058.3	996.8	920.0	908.2	1001.0	1241.5	1288.7	1229.7	1047.3
37.5°	1451.0	1417.9	1252.0	1109.9	1053.0	1039.6	1121.0	1357.1	1463.2	1389.9	1199.8
40°	1643.0	1575.9	1425.1	1252.0	1155.8	1172.4	1206.3	1497.3	1644.3	1603.0	1340.9
42.5°	1796.1	1736.5	1547.6	1425.9	1295.2	1274.5	1311.6	1671.0	1890.7	1850.2	1516.9
45°	1942.9	1821.6	1685.4	1575.9	1450.2	1475.2	1469.7	1848.3	2192.8	2068.4	1672.5
47.5°	2087.7	1973.8	1831.3	1684.1	1557.5	1713.6	1655.2	1980.1	2396.6	2304.4	1836.3
50°	2273.9	2148.6	1986.3	1838.2	1762.4	1876.5	1778.6	2091.7	2624.9	2516.7	1990.9
52.5°	2397.5	2275.6	2133.2	2027.5	2020.6	1976.6	1951.5	2233.0	2824.9	2759.2	2154.7
55°	2383.0	2265.5	2201.0	2212.6	2298.5	2150.1	2129.6	2442.1	3033.6	2957.6	2331.6
57.5°	2200.8	2072.6	2086.3	2154.9	2385.7	2454.8	2420.0	2665.5	3219.7	3185.2	2550.4
60°	1714.4	1648.5	1759.9	1885.4	2269.0	2544.0	2788.3	2938.0	3448.8	3504.0	2894.0
62.5°	1113.7	1025.7	1201.7	1414.8	1921.0	2485.1	3163.3	3454.7	3824.1	3949.3	3416.2
65°	576.9	562.8	686.0	881.8	1337.3	2118.9	3295.5	3996.7	4280.1	4426.1	3915.0
67.5°	419.4	393.3	450.4	565.6	816.4	1444.9	3045.0	4411.3	4646.3	4780.0	4205.0
70°	319.4	300.1	343.6	415.0	533.1	816.1	2247.8	4298.2	4787.6	4852.4	4166.4
72.5°	239.2	222.6	260.7	327.2	410.8	459.5	1328.7	3534.1	4546.5	4568.6	3739.4
75°	191.0	178.1	194.6	258.4	334.8	312.7	705.8	2560.5	3693.9	3712.9	2856.3
77.5°	156.7	145.7	152.4	193.7	260.5	235.2	350.2	1628.7	2345.3	2316.2	1607.0
80°	127.8	118.3	121.5	140.0	198.4	175.6	196.7	849.6	1118.7	1073.7	668.3
82.5°	98.3	90.3	96.6	103.0	143.6	126.1	114.8	386.6	458.2	426.8	245.1
85°	65.9	58.5	84.0	77.3	93.9	77.5	62.7	153.9	170.8	159.2	86.1
87.5°	18.1	17.1	28.2	38.5	38.5	29.3	23.0	37.3	47.6	41.7	20.2
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°	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9	205.9
2.5°	249.5	244.9	232.7	231.6	234.6	235.0	233.1	228.7	226.4	239.0	237.1
5°	321.3	304.9	295.0	285.9	273.3	264.3	266.6	272.9	275.0	284.5	285.5
7.5°	377.1	355.4	333.7	304.7	285.5	273.3	282.6	289.3	294.6	308.1	313.5
10°	401.3	377.8	347.0	316.5	311.2	313.3	308.1	309.7	318.0	318.6	321.3
12.5°	446.4	419.7	364.3	336.7	335.2	339.6	337.7	345.5	351.2	366.6	360.1
15°	489.6	455.4	377.3	349.1	343.0	351.9	362.2	375.2	387.4	402.0	394.6
17.5°	542.0	490.6	378.0	343.4	344.5	363.4	374.2	381.3	417.8	437.8	427.7
20°	575.1	494.2	363.9	329.3	344.5	361.5	376.5	384.3	425.1	455.2	462.2
22.5°	605.0	495.5	352.9	321.7	331.4	354.0	376.5	393.8	419.9	448.7	449.8
25°	621.4	494.4	338.8	322.4	331.2	342.4	362.4	378.2	397.5	437.8	438.8
27.5°	663.5	480.7	324.9	324.9	329.5	330.0	355.4	364.7	367.4	404.1	410.6
30°	675.7	483.7	323.2	324.5	326.8	322.6	333.7	339.9	343.9	375.4	376.5
32.5°	695.3	460.1	328.3	320.7	317.7	317.1	319.8	325.3	327.0	346.4	350.0
35°	719.1	450.6	330.0	319.6	313.7	310.6	318.8	312.1	317.3	340.1	342.6
37.5°	796.6	437.6	338.6	319.6	312.1	308.5	304.5	307.6	326.4	348.3	361.7
40°	846.0	441.6	336.5	322.8	306.4	303.0	296.3	307.8	336.9	375.6	385.8
42.5°	932.8	443.9	339.0	321.3	308.3	295.2	299.6	312.3	342.8	364.9	380.5
45°	1022.5	451.0	337.3	316.9	304.1	310.2	304.1	315.4	330.0	330.6	342.4
47.5°	1110.5	479.9	333.7	307.8	303.0	319.0	303.4	305.3	306.4	310.2	324.1
50°	1213.9	510.6	328.7	295.2	304.5	319.4	305.7	296.5	295.4	307.8	323.4
52.5°	1331.4	545.4	322.2	283.0	295.8	315.4	313.7	297.1	288.1	300.1	315.6
55°	1469.7	584.9	314.6	270.8	286.4	315.8	318.2	292.7	288.3	301.3	318.0
57.5°	1653.6	642.2	299.8	253.1	274.8	309.3	306.8	287.6	283.4	297.3	314.6
60°	1967.3	752.3	278.8	235.6	262.4	293.3	297.5	278.6	274.4	289.7	307.8
62.5°	2387.4	884.8	253.3	218.6	247.2	276.0	285.9	265.5	265.1	284.7	303.6
65°	2778.4	960.0	227.0	203.0	231.6	260.0	272.9	253.3	254.2	278.8	297.7
67.5°	2940.9	871.5	203.4	189.1	213.7	241.7	262.2	243.8	241.1	270.8	288.3
70°	2788.3	692.3	183.0	174.3	193.5	221.9	247.2	231.2	224.9	251.8	265.5
72.5°	2467.2	577.2	163.8	157.1	175.8	201.1	227.0	214.1	205.9	226.6	238.8
75°	1928.6	473.6	141.9	140.0	155.6	182.1	205.9	197.1	186.6	199.6	211.8
77.5°	1098.1	299.6	119.2	120.4	131.6	159.6	180.7	173.7	163.0	168.5	182.6
80°	439.4	151.2	95.8	96.6	106.1	131.2	149.7	147.2	136.0	140.4	150.1
82.5°	164.2	83.0	70.7	71.2	80.6	103.8	127.8	126.5	116.0	112.9	118.3
85°	65.3	41.1	43.4	45.3	54.3	74.8	102.5	91.0	78.5	68.9	72.2
87.5°	15.6	13.1	15.2	16.0	17.7	23.4	37.5	30.1	31.0	24.8	18.5
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)