

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: P366738

Luminaire Tested: **MSA-SA1B-727-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366738
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-727-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4156 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

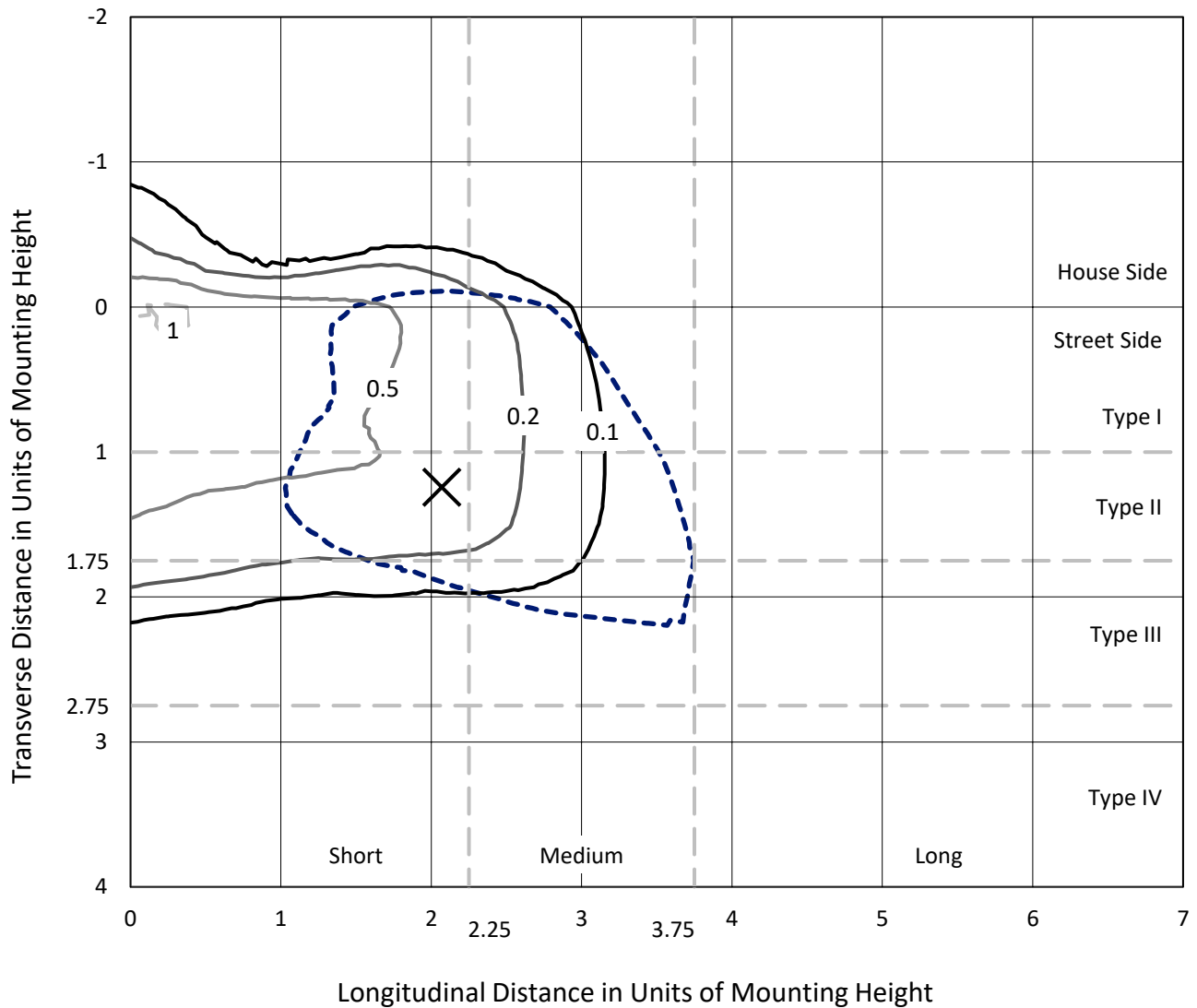
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

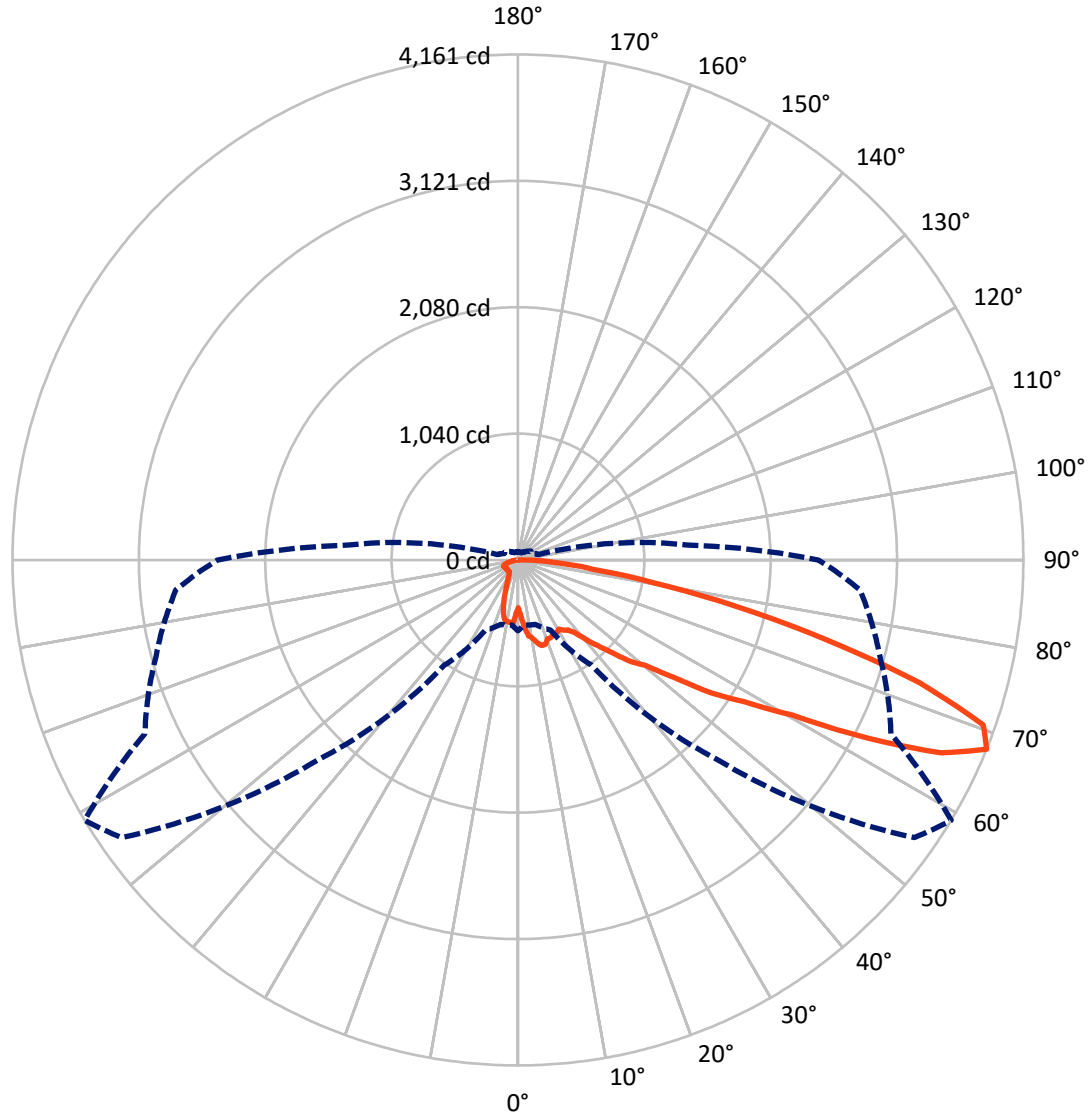
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	625.6	0.0	625.6
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	3530.4	0.0	3530.4
	% Fixture	84.9	0.0	84.9
Total	Lumens	4156.0	0.0	4156.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.4	1.2
10°-20°	152.0	3.7
20°-30°	217.1	5.2
30°-40°	319.9	7.7
40°-50°	540.4	13.0
50°-60°	940.4	22.6
60°-70°	1198.3	28.8
70°-80°	634.5	15.3
80°-90°	102.1	2.5
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°	4156.0	100.0
0°-180°	4156.0	100.0

Coefficient of Utilization



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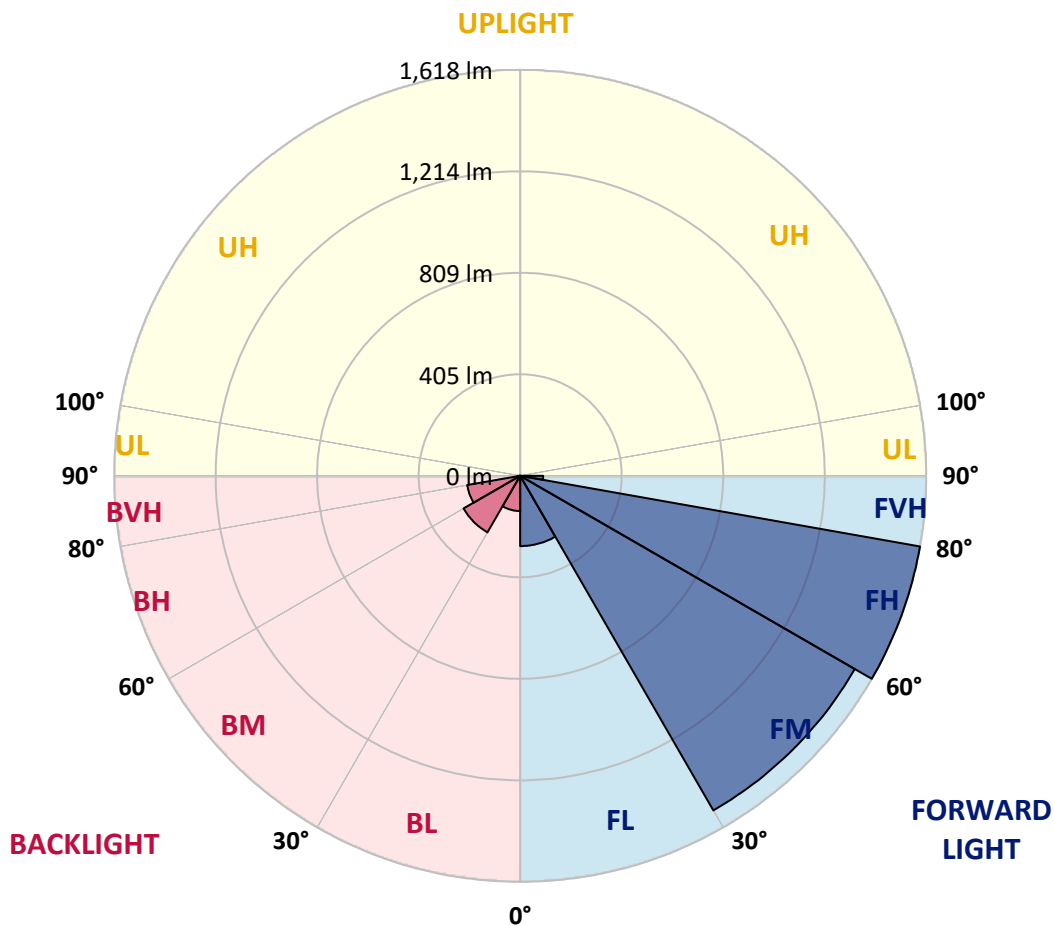
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	280.1	6.7			
FM (30°-60°)	1540.2	37.1			
FH (60°-80°)	1618.5	38.9			G1/1800
FVH (80°-90°)	91.7	2.2			G1/100
BL (0°-30°)	140.3	3.4	B1/500		
BM (30°-60°)	260.5	6.3	B1/1000		
BH (60°-80°)	214.4	5.2	B1/500		G1/500
BVH (80°-90°)	10.4	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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	393.3	393.3	393.3	393.3	393.3	393.3	393.3	393.3	393.3	393.3	393.3
2.5°	491.0	468.1	443.8	450.7	464.6	470.9	464.1	457.4	448.7	438.5	473.4
5°	595.4	561.5	556.5	556.4	551.4	531.7	557.1	555.3	565.5	576.1	603.2
7.5°	625.2	612.5	598.8	605.3	580.5	579.4	618.9	630.1	649.9	643.4	679.8
10°	609.9	595.6	602.8	600.2	602.5	628.6	652.7	653.4	674.5	695.3	671.9
12.5°	582.9	584.0	612.7	611.7	648.6	697.1	704.3	698.7	733.2	719.1	739.2
15°	602.1	615.0	607.8	613.9	628.6	690.2	710.3	730.7	763.5	776.1	756.1
17.5°	632.8	639.7	607.2	603.9	634.0	663.3	713.1	730.5	735.6	826.0	797.6
20°	619.8	633.7	602.0	561.3	611.3	650.0	699.2	693.9	718.7	829.9	806.3
22.5°	656.7	633.7	593.3	564.5	582.1	617.6	659.4	694.1	723.5	807.1	818.8
25°	663.8	652.9	615.2	586.5	580.5	593.2	652.7	675.4	725.1	838.1	812.1
27.5°	706.8	690.4	613.6	614.5	584.7	562.3	631.6	679.3	743.0	818.9	828.4
30°	760.1	747.6	651.3	654.8	613.6	572.4	646.0	660.4	753.4	848.9	849.1
32.5°	800.1	822.1	725.4	677.5	662.9	632.1	623.8	688.8	741.3	903.1	884.3
35°	872.1	889.2	782.5	744.1	694.6	659.9	684.0	707.5	791.8	974.5	936.6
37.5°	1005.4	985.7	888.5	828.1	809.6	759.6	773.0	756.6	846.8	1054.6	1039.1
40°	1082.6	1065.5	963.2	929.7	856.5	862.8	846.1	858.0	920.2	1139.8	1134.9
42.5°	1158.7	1135.8	1049.3	1026.1	953.0	922.0	925.0	963.7	1033.4	1277.5	1261.2
45°	1233.9	1175.2	1137.4	1143.5	1108.3	1044.7	1049.1	1085.6	1157.1	1435.0	1397.3
47.5°	1291.5	1243.0	1213.4	1205.9	1188.4	1273.5	1235.5	1250.2	1281.8	1575.2	1560.9
50°	1400.5	1343.9	1305.4	1294.5	1353.6	1472.0	1394.5	1362.6	1429.7	1756.4	1749.0
52.5°	1575.0	1504.6	1440.3	1439.6	1525.2	1602.0	1656.5	1601.6	1626.3	1942.0	1963.2
55°	1727.3	1645.8	1588.0	1619.9	1741.8	1788.8	1974.3	1931.3	1910.5	2129.4	2189.8
57.5°	1784.2	1689.0	1651.3	1698.3	1877.9	2119.6	2315.6	2202.5	2182.3	2341.5	2468.1
60°	1659.4	1558.6	1560.9	1649.5	1960.7	2362.4	2688.8	2592.8	2474.1	2605.5	2729.1
62.5°	1303.6	1212.6	1271.9	1406.6	1891.3	2598.4	3188.9	3229.4	2807.5	2824.4	2873.9
65°	886.0	823.0	876.5	1008.4	1534.0	2727.2	3665.3	3827.7	3111.1	2967.7	2936.4
67.5°	583.1	538.6	549.0	636.7	1056.0	2324.9	3983.9	4160.9	3388.6	3085.4	2826.1
70°	451.6	415.6	411.1	457.0	626.3	1615.2	3795.1	4064.2	3557.7	2975.1	2463.3
72.5°	354.3	327.0	329.5	373.7	485.0	896.1	2936.7	3456.1	3303.1	2565.8	1892.5
75°	276.3	254.0	266.5	317.0	448.6	556.9	2026.2	2623.1	2553.7	1899.9	1079.4
77.5°	200.6	186.2	203.9	270.0	421.6	477.8	1261.3	1830.0	1635.9	975.5	370.4
80°	131.6	123.5	138.1	220.1	382.3	459.8	779.5	1121.3	808.4	274.0	140.2
82.5°	77.5	74.0	86.1	149.0	307.3	431.0	519.9	623.1	330.7	115.9	74.5
85°	40.7	38.0	51.1	85.6	211.9	393.4	409.3	373.0	159.7	50.4	35.6
87.5°	13.6	13.2	21.7	33.1	80.1	208.9	218.4	177.2	65.9	14.6	7.7
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°	393.3	393.3	393.3	393.3	393.3	393.3	393.3	393.3	393.3	393.3	393.3
2.5°	478.2	471.1	430.6	436.2	441.5	438.9	437.3	419.0	417.2	443.3	441.2
5°	602.5	573.3	538.7	537.2	514.4	491.2	495.8	488.4	490.5	501.2	502.3
7.5°	668.2	631.7	598.8	545.3	499.8	463.0	468.8	467.1	462.3	486.6	493.1
10°	667.0	634.5	597.4	532.6	501.9	472.0	436.1	402.1	392.0	380.1	381.1
12.5°	711.0	682.3	601.3	535.2	493.7	442.1	374.8	337.6	302.0	301.3	292.4
15°	724.7	703.6	609.5	520.1	435.7	361.7	292.2	251.8	226.1	221.0	213.5
17.5°	759.4	726.3	584.4	471.1	368.4	282.8	219.6	191.4	189.3	192.8	189.0
20°	761.7	708.0	538.9	398.7	296.1	214.3	179.1	165.0	172.6	181.2	180.9
22.5°	759.8	684.9	499.6	337.1	222.4	172.2	156.9	153.7	160.8	173.7	175.2
25°	740.0	677.3	450.5	276.9	180.5	147.6	143.4	145.3	154.1	169.2	169.2
27.5°	760.6	646.5	388.9	225.3	151.8	131.4	134.4	139.3	145.8	163.1	166.3
30°	754.0	656.7	339.2	181.4	133.8	120.1	126.8	131.7	139.1	157.1	158.7
32.5°	771.9	629.4	297.5	152.5	122.0	115.7	117.3	124.0	133.7	147.8	150.6
35°	799.4	639.5	249.6	137.2	116.2	110.6	113.6	118.9	128.6	142.3	144.6
37.5°	887.1	638.9	216.4	128.7	115.2	109.5	111.0	114.7	125.9	138.4	143.7
40°	943.5	675.6	186.3	126.8	113.9	109.0	107.8	111.8	120.8	135.6	139.3
42.5°	1049.3	697.9	173.3	126.1	113.8	106.0	104.8	109.5	118.3	132.1	137.7
45°	1161.1	729.8	162.9	125.7	113.2	105.5	101.8	107.8	115.2	128.4	134.9
47.5°	1292.7	797.3	157.1	124.5	112.2	106.2	100.7	103.7	112.0	125.2	131.7
50°	1464.9	886.6	158.3	122.8	113.8	106.4	99.2	100.6	108.1	121.0	127.7
52.5°	1674.3	1024.8	166.3	123.5	114.8	105.5	98.4	97.7	104.3	115.5	122.2
55°	1926.7	1221.0	190.0	126.8	114.8	105.3	97.4	94.2	99.2	108.3	114.8
57.5°	2231.2	1448.2	236.5	128.4	113.9	104.3	95.1	89.5	92.5	100.0	106.2
60°	2492.7	1631.5	284.4	129.4	115.7	101.8	90.5	83.5	85.4	91.2	96.7
62.5°	2626.1	1683.0	298.9	128.6	120.5	100.2	85.1	77.1	77.3	82.2	87.2
65°	2651.1	1614.5	240.9	127.7	126.6	100.0	81.2	71.7	70.4	74.0	78.2
67.5°	2472.8	1401.4	173.8	125.7	127.3	99.0	78.5	67.3	64.1	66.6	70.1
70°	2099.7	1128.6	146.0	121.9	118.9	93.7	74.0	62.7	58.5	60.2	62.9
72.5°	1565.3	835.0	127.3	113.6	103.6	80.1	66.9	57.6	53.2	54.4	56.4
75°	869.7	445.4	106.6	98.8	84.5	64.8	57.1	51.1	47.2	47.7	49.8
77.5°	288.8	164.3	78.2	78.4	63.9	50.0	47.0	43.7	40.7	40.9	42.6
80°	130.9	90.9	56.0	56.4	44.6	36.3	36.1	35.0	33.1	32.6	33.8
82.5°	75.9	55.1	38.4	36.6	28.7	23.6	26.2	25.7	25.2	23.2	23.6
85°	37.3	29.6	20.1	19.0	15.9	11.8	14.1	14.6	14.1	12.0	11.8
87.5°	9.2	9.7	4.9	4.6	2.6	1.2	2.1	2.1	2.6	1.8	0.9
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)