

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: P367112

Luminaire Tested: **MSA-SA1D-830-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367112
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-SA1D-830-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: 5347 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

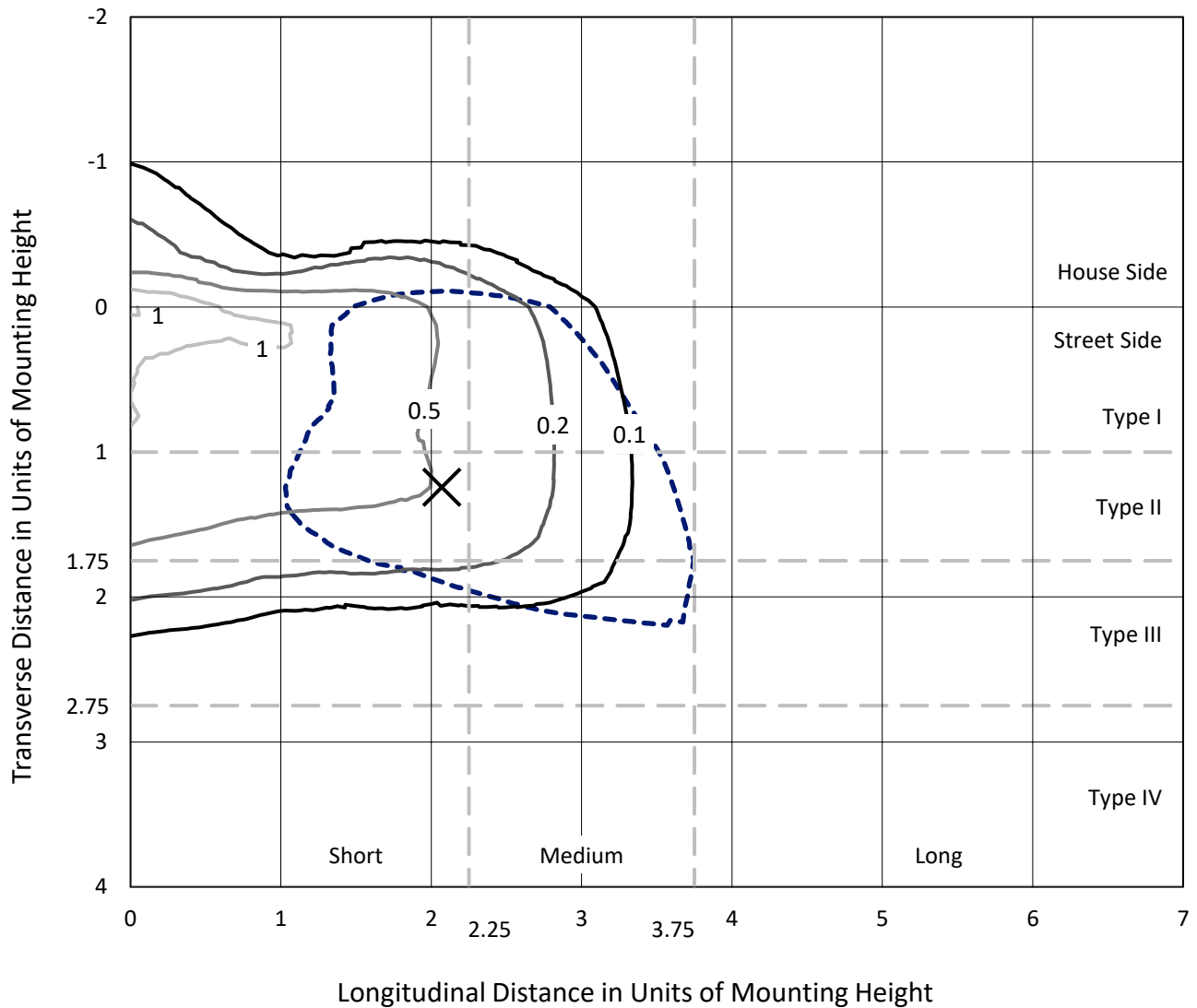
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

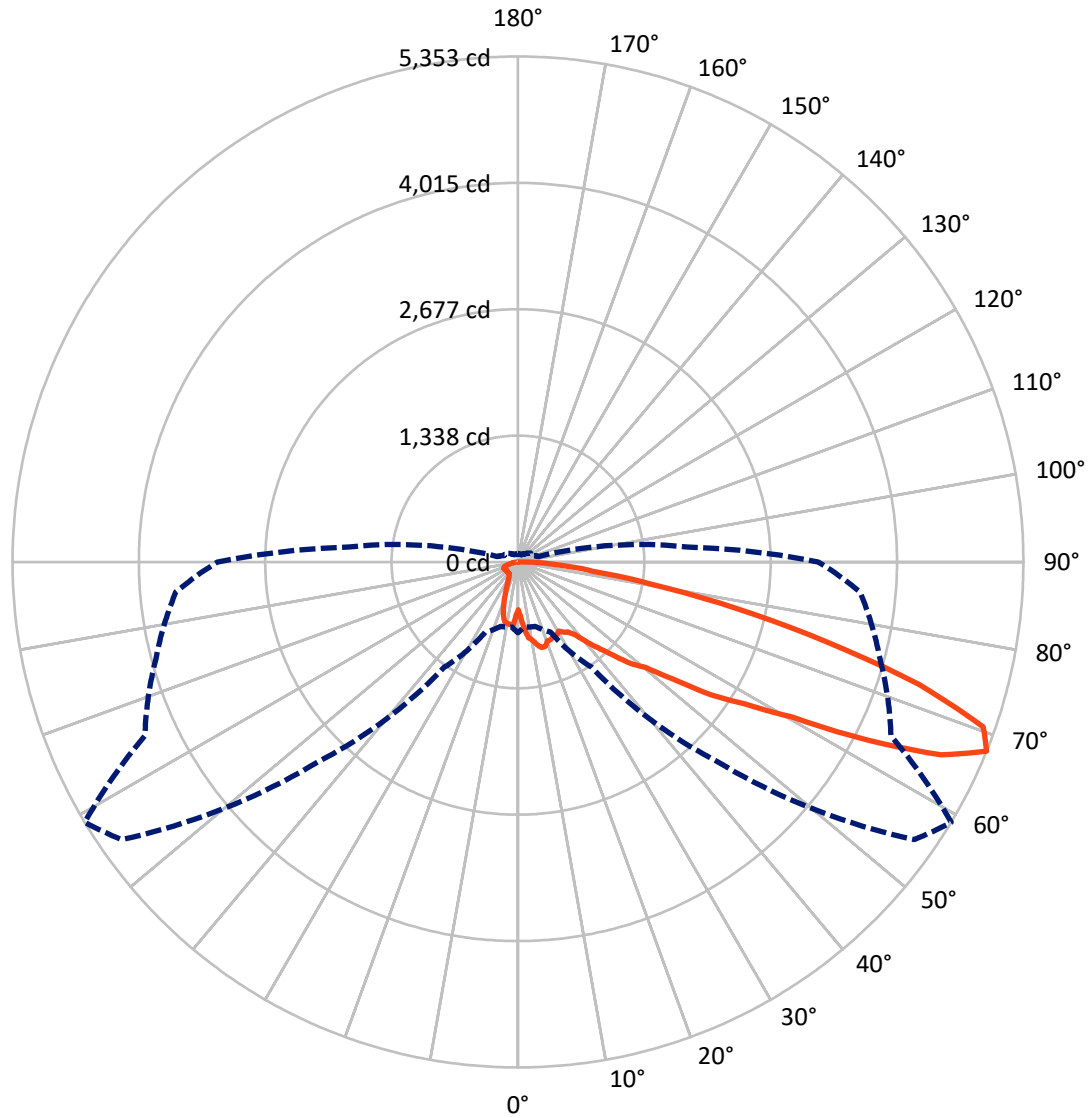
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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	804.8	0.0	804.8
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	4542.2	0.0	4542.2
	% Fixture	84.9	0.0	84.9
Total	Lumens	5347.0	0.0	5347.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.1	1.2
10°-20°	195.5	3.7
20°-30°	279.3	5.2
30°-40°	411.5	7.7
40°-50°	695.3	13.0
50°-60°	1209.9	22.6
60°-70°	1541.8	28.8
70°-80°	816.4	15.3
80°-90°	131.3	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°	5347.0	100.0
0°-180°	5347.0	100.0

Coefficient of Utilization



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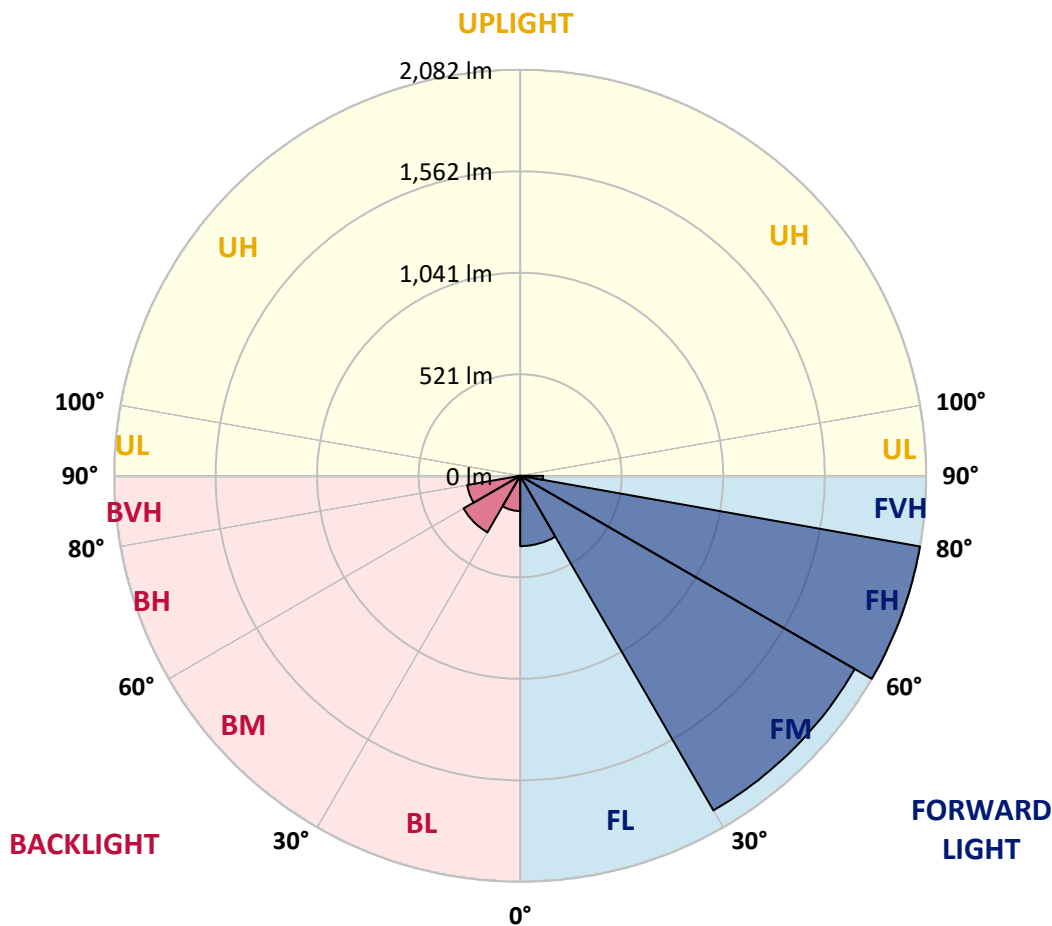
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	360.4	6.7			
FM (30°-60°)	1981.5	37.1			
FH (60°-80°)	2082.3	38.9			G2/5000
FVH (80°-90°)	118.0	2.2			G2/225
BL (0°-30°)	180.5	3.4	B1/500		
BM (30°-60°)	335.1	6.3	B1/1000		
BH (60°-80°)	275.8	5.2	B1/500		G1/500
BVH (80°-90°)	13.4	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	506.0	506.0	506.0	506.0	506.0	506.0	506.0	506.0	506.0	506.0	506.0
2.5°	631.7	602.3	571.0	579.8	597.7	605.9	597.1	588.4	577.3	564.2	609.1
5°	766.1	722.4	716.0	715.8	709.4	684.1	716.7	714.4	727.6	741.2	776.1
7.5°	804.4	788.1	770.4	778.8	746.8	745.5	796.2	810.7	836.1	827.7	874.6
10°	784.7	766.3	775.6	772.2	775.2	808.7	839.7	840.6	867.8	894.6	864.4
12.5°	750.0	751.4	788.3	786.9	834.5	896.8	906.1	898.9	943.3	925.2	951.0
15°	774.7	791.2	781.9	789.9	808.7	888.0	913.8	940.1	982.3	998.6	972.7
17.5°	814.1	823.0	781.3	777.0	815.7	853.3	917.4	939.9	946.5	1062.7	1026.2
20°	797.4	815.3	774.5	722.1	786.5	836.3	899.5	892.7	924.7	1067.7	1037.3
22.5°	844.9	815.3	763.4	726.2	748.9	794.6	848.3	893.0	930.8	1038.4	1053.4
25°	854.0	840.0	791.5	754.5	746.8	763.1	839.7	869.0	932.9	1078.3	1044.8
27.5°	909.3	888.2	789.4	790.6	752.3	723.5	812.5	873.9	956.0	1053.6	1065.9
30°	977.9	961.9	837.9	842.4	789.4	736.4	831.1	849.7	969.3	1092.1	1092.4
32.5°	1029.4	1057.7	933.3	871.7	852.9	813.2	802.6	886.2	953.7	1161.9	1137.7
35°	1122.1	1144.0	1006.7	957.3	893.7	849.0	880.1	910.2	1018.7	1253.7	1205.0
37.5°	1293.6	1268.2	1143.1	1065.4	1041.6	977.3	994.5	973.4	1089.4	1356.8	1336.9
40°	1392.8	1370.8	1239.2	1196.1	1101.9	1110.0	1088.5	1103.9	1183.9	1466.5	1460.1
42.5°	1490.7	1461.3	1350.0	1320.1	1226.1	1186.2	1190.0	1239.9	1329.6	1643.7	1622.6
45°	1587.5	1512.0	1463.3	1471.2	1425.9	1344.1	1349.8	1396.7	1488.7	1846.2	1797.7
47.5°	1661.6	1599.2	1561.2	1551.4	1529.0	1638.4	1589.5	1608.5	1649.1	2026.6	2008.2
50°	1801.8	1729.1	1679.5	1665.4	1741.5	1893.8	1794.1	1753.1	1839.4	2259.7	2250.2
52.5°	2026.4	1935.7	1853.0	1852.1	1962.2	2061.0	2131.3	2060.6	2092.3	2498.6	2525.8
55°	2222.4	2117.4	2043.1	2084.1	2240.9	2301.4	2540.0	2484.7	2458.0	2739.7	2817.4
57.5°	2295.5	2173.0	2124.5	2185.0	2416.1	2727.0	2979.2	2833.7	2807.6	3012.5	3175.4
60°	2134.9	2005.3	2008.2	2122.2	2522.6	3039.4	3459.3	3335.8	3183.1	3352.1	3511.2
62.5°	1677.2	1560.0	1636.4	1809.7	2433.3	3343.1	4102.8	4154.9	3612.0	3633.8	3697.4
65°	1140.0	1058.8	1127.7	1297.4	1973.6	3508.7	4715.7	4924.6	4002.6	3818.2	3777.9
67.5°	750.2	692.9	706.3	819.1	1358.6	2991.2	5125.6	5353.3	4359.7	3969.6	3636.0
70°	581.0	534.7	528.9	588.0	805.7	2078.0	4882.7	5228.9	4577.3	3827.7	3169.3
72.5°	455.9	420.8	423.9	480.8	624.0	1152.9	3778.3	4446.5	4249.6	3301.1	2434.9
75°	355.5	326.7	342.8	407.9	577.1	716.5	2606.9	3374.8	3285.5	2444.4	1388.7
77.5°	258.1	239.5	262.4	347.4	542.4	614.7	1622.8	2354.5	2104.8	1255.1	476.5
80°	169.3	158.8	177.6	283.2	491.9	591.6	1002.9	1442.7	1040.0	352.6	180.4
82.5°	99.7	95.2	110.8	191.7	395.4	554.5	668.9	801.7	425.5	149.1	95.8
85°	52.3	48.9	65.7	110.1	272.6	506.2	526.6	479.9	205.5	64.8	45.8
87.5°	17.4	17.0	27.9	42.6	103.1	268.7	281.0	227.9	84.7	18.8	10.0
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°	506.0	506.0	506.0	506.0	506.0	506.0	506.0	506.0	506.0	506.0	506.0
2.5°	615.2	606.1	554.0	561.3	568.1	564.7	562.6	539.0	536.8	570.3	567.6
5°	775.2	737.5	693.1	691.1	661.9	631.9	637.8	628.3	631.0	644.9	646.2
7.5°	859.7	812.8	770.4	701.5	643.1	595.7	603.2	600.9	594.8	626.1	634.4
10°	858.1	816.4	768.6	685.2	645.8	607.3	561.0	517.3	504.4	489.0	490.3
12.5°	914.7	877.8	773.6	688.6	635.1	568.7	482.2	434.4	388.6	387.7	376.1
15°	932.4	905.2	784.2	669.1	560.6	465.4	375.9	324.0	290.9	284.4	274.6
17.5°	977.0	934.4	751.8	606.1	474.0	363.9	282.6	246.3	243.6	248.1	243.1
20°	980.0	910.9	693.4	513.0	380.9	275.8	230.4	212.3	222.1	233.2	232.7
22.5°	977.5	881.2	642.8	433.7	286.2	221.6	201.9	197.8	206.9	223.4	225.5
25°	952.1	871.5	579.6	356.2	232.3	189.9	184.4	186.9	198.3	217.7	217.7
27.5°	978.6	831.8	500.3	289.8	195.3	169.0	172.9	179.2	187.6	209.8	213.9
30°	970.0	844.9	436.4	233.4	172.2	154.5	163.1	169.5	179.0	202.1	204.2
32.5°	993.1	809.8	382.7	196.2	157.0	148.9	150.9	159.5	172.0	190.1	193.7
35°	1028.5	822.7	321.1	176.5	149.5	142.3	146.1	152.9	165.4	183.1	186.0
37.5°	1141.3	822.1	278.5	165.6	148.2	140.9	142.7	147.5	162.0	178.1	184.9
40°	1213.8	869.2	239.7	163.1	146.6	140.3	138.7	143.9	155.4	174.5	179.2
42.5°	1350.0	898.0	223.0	162.2	146.4	136.4	134.8	140.9	152.3	169.9	177.2
45°	1493.9	939.0	209.6	161.8	145.7	135.7	131.0	138.7	148.2	165.2	173.6
47.5°	1663.1	1025.8	202.1	160.2	144.3	136.6	129.6	133.5	144.1	161.1	169.5
50°	1884.7	1140.6	203.7	157.9	146.4	136.9	127.6	129.4	139.1	155.7	164.3
52.5°	2154.2	1318.5	213.9	158.8	147.7	135.7	126.7	125.8	134.1	148.6	157.3
55°	2478.9	1570.9	244.5	163.1	147.7	135.5	125.3	121.2	127.6	139.4	147.7
57.5°	2870.6	1863.2	304.3	165.2	146.6	134.1	122.4	115.1	119.0	128.7	136.6
60°	3207.1	2099.1	365.9	166.5	148.9	131.0	116.5	107.4	109.9	117.4	124.4
62.5°	3378.6	2165.3	384.5	165.4	155.0	128.9	109.4	99.2	99.5	105.8	112.2
65°	3410.8	2077.1	310.0	164.3	162.9	128.7	104.5	92.2	90.6	95.2	100.6
67.5°	3181.5	1802.9	223.6	161.8	163.8	127.3	101.1	86.6	82.5	85.6	90.2
70°	2701.4	1452.0	187.8	156.8	152.9	120.5	95.2	80.7	75.2	77.5	80.9
72.5°	2013.9	1074.2	163.8	146.1	133.2	103.1	86.1	74.1	68.4	70.0	72.5
75°	1118.9	573.0	137.1	127.1	108.8	83.4	73.4	65.7	60.7	61.4	64.1
77.5°	371.6	211.4	100.6	100.8	82.3	64.4	60.5	56.2	52.3	52.6	54.8
80°	168.4	116.9	72.1	72.5	57.3	46.7	46.5	45.1	42.6	41.9	43.5
82.5°	97.7	70.9	49.4	47.1	36.9	30.4	33.8	33.1	32.4	29.9	30.4
85°	48.0	38.1	25.8	24.5	20.4	15.2	18.1	18.8	18.1	15.4	15.2
87.5°	11.8	12.5	6.3	5.9	3.4	1.6	2.7	2.7	3.4	2.3	1.1
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)