

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: P367002

Luminaire Tested: **MSA-SA1D-727-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367002
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-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: 5627 lumens
Efficiency: N/A
Efficacy: 84.0 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

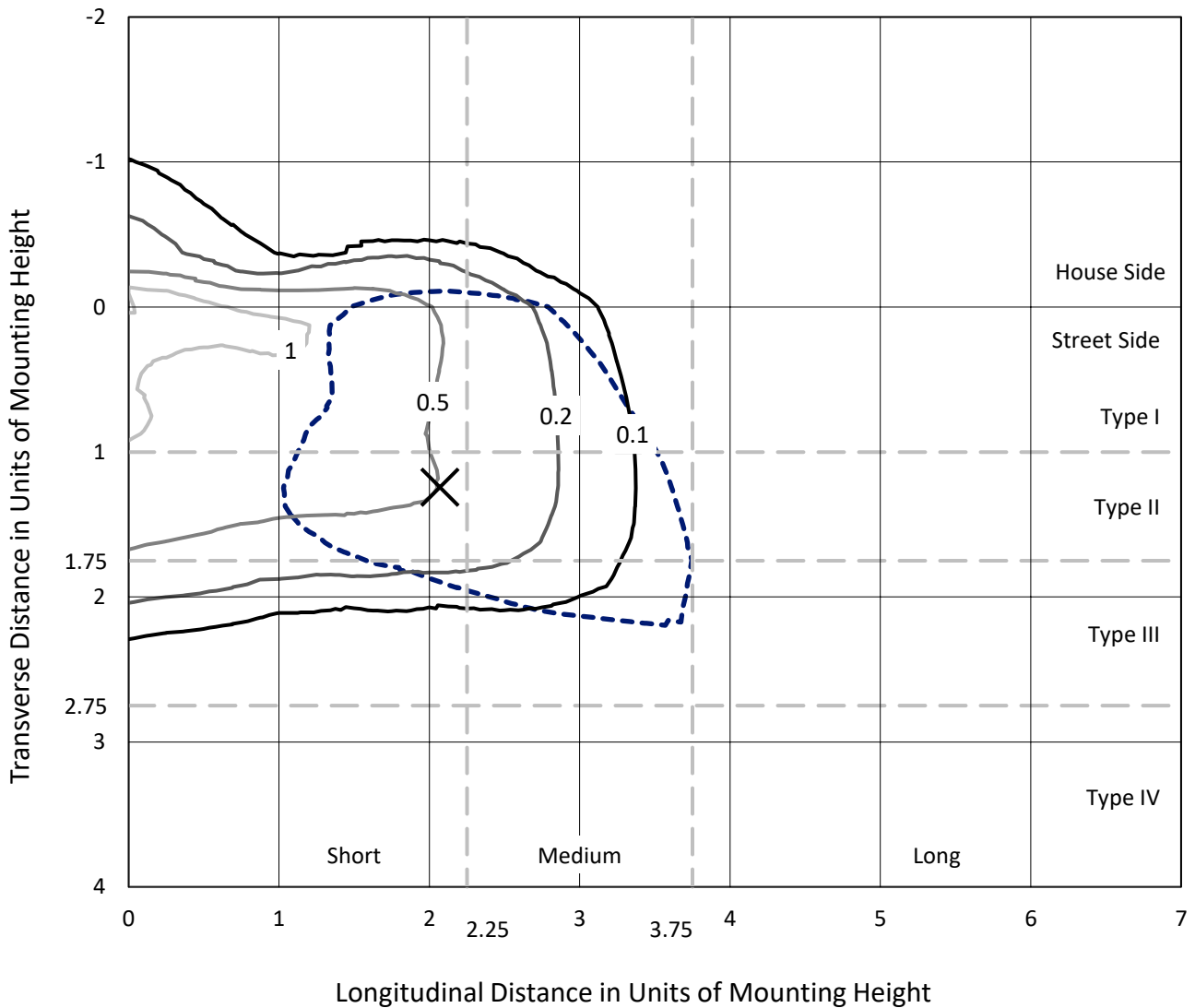
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

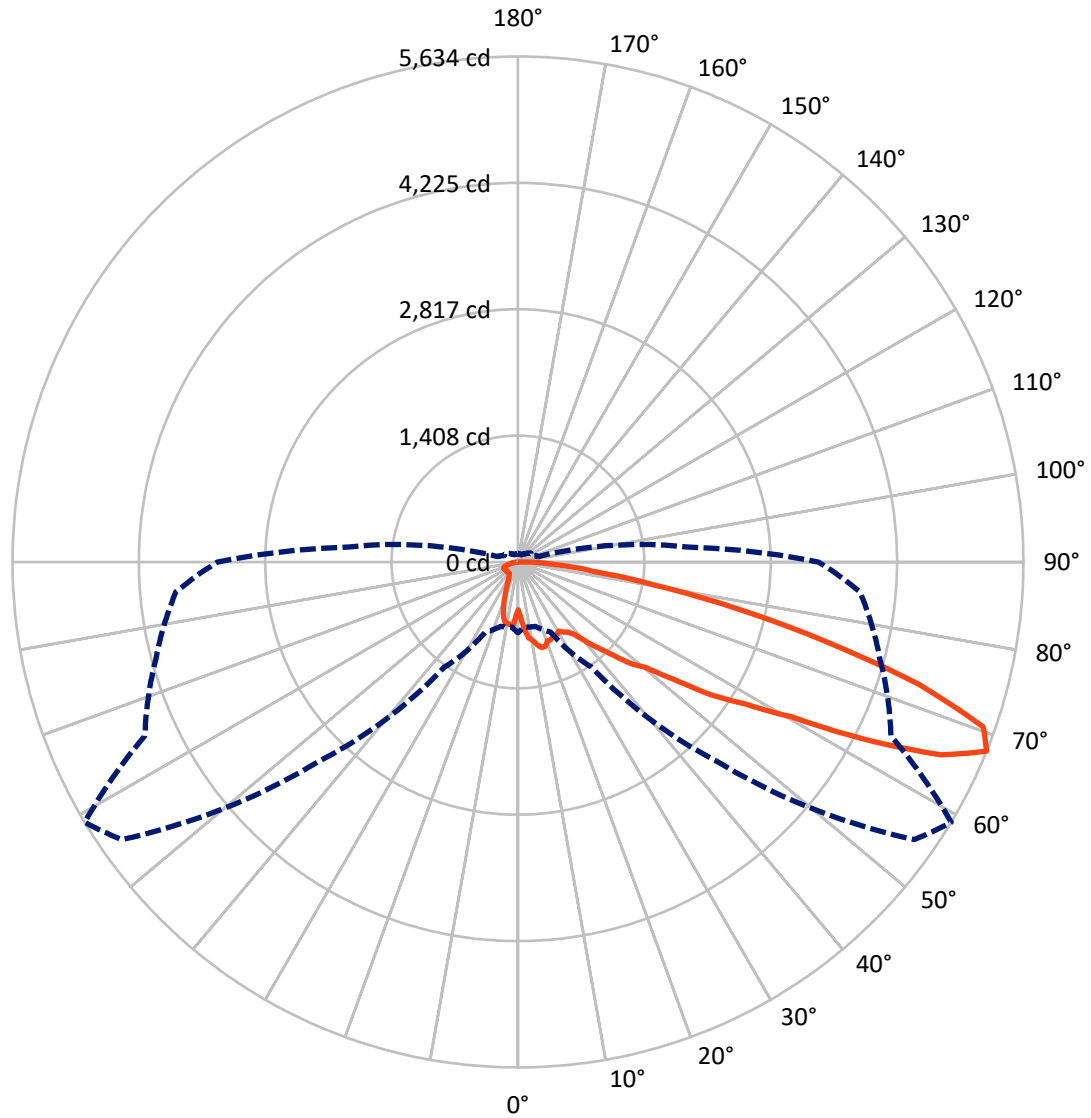
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 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	847.0	0.0	847.0
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	4780.0	0.0	4780.0
	% Fixture	84.9	0.0	84.9
Total	Lumens	5627.0	0.0	5627.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.5	1.2
10°-20°	205.8	3.7
20°-30°	293.9	5.2
30°-40°	433.1	7.7
40°-50°	731.7	13.0
50°-60°	1273.2	22.6
60°-70°	1622.5	28.8
70°-80°	859.1	15.3
80°-90°	138.2	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°	5627.0	100.0
0°-180°	5627.0	100.0

Coefficient of Utilization



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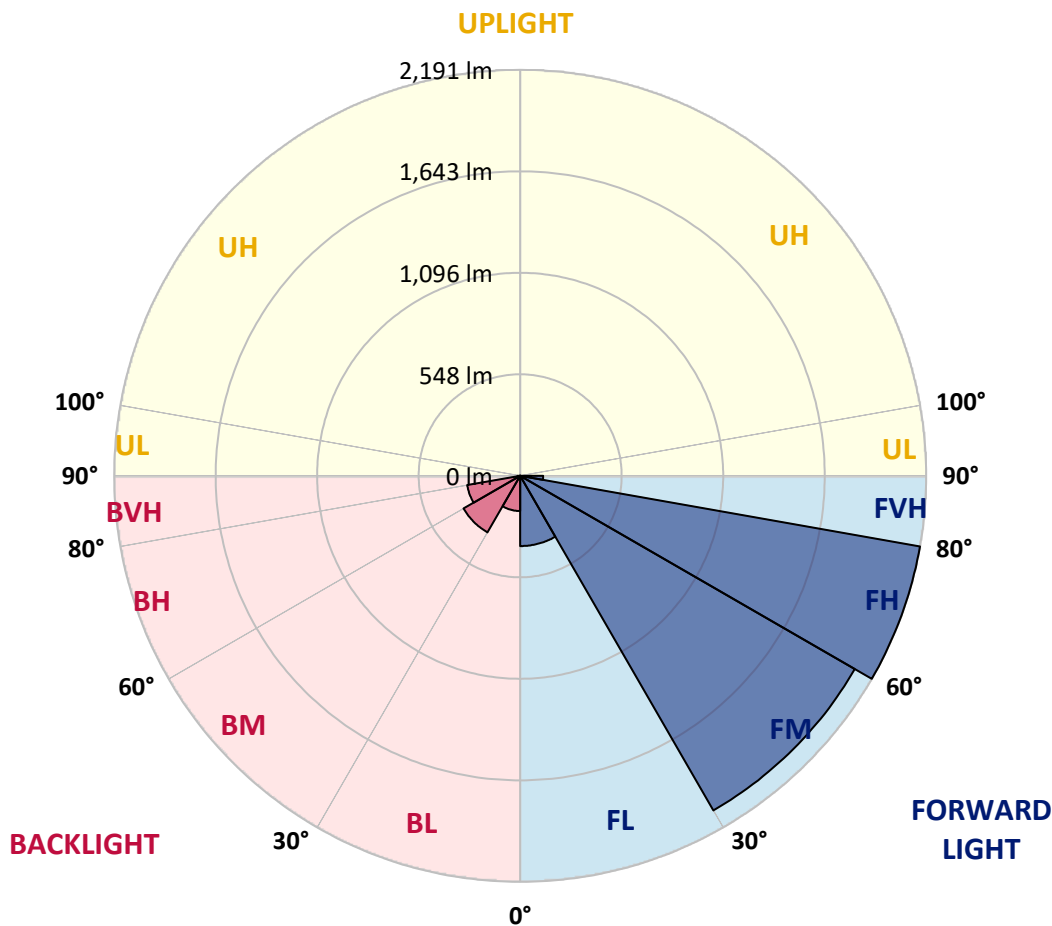
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	379.3	6.7			
FM (30°-60°)	2085.3	37.1			
FH (60°-80°)	2191.3	38.9			G2/5000
FVH (80°-90°)	124.1	2.2			G2/225
BL (0°-30°)	189.9	3.4	B1/500		
BM (30°-60°)	352.7	6.3	B1/1000		
BH (60°-80°)	290.3	5.2	B1/500		G1/500
BVH (80°-90°)	14.1	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°	532.5	532.5	532.5	532.5	532.5	532.5	532.5	532.5	532.5	532.5	532.5
2.5°	664.8	633.8	600.9	610.2	629.0	637.6	628.3	619.3	607.6	593.7	641.0
5°	806.2	760.2	753.5	753.3	746.6	719.9	754.2	751.8	765.7	780.0	816.7
7.5°	846.5	829.3	810.7	819.6	785.9	784.5	837.9	853.2	879.9	871.1	920.4
10°	825.8	806.4	816.2	812.6	815.7	851.0	883.7	884.7	913.3	941.4	909.7
12.5°	789.3	790.7	829.6	828.1	878.2	943.8	953.6	945.9	992.7	973.6	1000.8
15°	815.3	832.7	822.9	831.2	851.0	934.5	961.7	989.3	1033.7	1050.9	1023.7
17.5°	856.8	866.1	822.2	817.7	858.4	898.0	965.5	989.1	996.0	1118.3	1079.9
20°	839.1	857.9	815.0	759.9	827.7	880.1	946.7	939.5	973.1	1123.6	1091.6
22.5°	889.2	857.9	803.3	764.2	788.1	836.2	892.8	939.7	979.6	1092.8	1108.6
25°	898.7	883.9	832.9	794.0	785.9	803.1	883.7	914.5	981.7	1134.8	1099.5
27.5°	956.9	934.7	830.8	832.0	791.7	761.4	855.1	919.7	1006.0	1108.8	1121.7
30°	1029.2	1012.2	881.8	886.6	830.8	775.0	874.6	894.2	1020.1	1149.3	1149.6
32.5°	1083.3	1113.1	982.2	917.3	897.5	855.8	844.6	932.6	1003.6	1222.8	1197.3
35°	1180.8	1203.9	1059.4	1007.5	940.5	893.5	926.1	957.9	1072.1	1319.4	1268.1
37.5°	1361.3	1334.6	1203.0	1121.2	1096.2	1028.4	1046.6	1024.4	1146.5	1427.8	1406.9
40°	1465.8	1442.6	1304.1	1258.8	1159.6	1168.2	1145.5	1161.7	1245.9	1543.3	1536.6
42.5°	1568.8	1537.8	1420.7	1389.2	1290.3	1248.3	1252.3	1304.8	1399.2	1729.7	1707.6
45°	1670.6	1591.2	1539.9	1548.3	1500.6	1414.5	1420.5	1469.8	1566.6	1942.9	1891.9
47.5°	1748.6	1683.0	1642.9	1632.7	1609.1	1724.2	1672.7	1692.8	1735.5	2132.7	2113.4
50°	1896.2	1819.6	1767.4	1752.6	1832.7	1993.0	1888.1	1844.9	1935.8	2378.1	2368.1
52.5°	2132.5	2037.1	1950.1	1949.1	2065.0	2169.0	2242.9	2168.5	2201.9	2629.4	2658.0
55°	2338.7	2228.3	2150.1	2193.3	2358.3	2422.0	2673.0	2614.9	2586.7	2883.1	2964.9
57.5°	2415.8	2286.8	2235.7	2299.4	2542.6	2869.8	3135.2	2982.1	2954.7	3170.2	3341.7
60°	2246.7	2110.3	2113.4	2233.3	2654.7	3198.6	3640.4	3510.5	3349.8	3527.7	3695.0
62.5°	1765.0	1641.7	1722.1	1904.5	2560.7	3518.1	4317.6	4372.5	3801.2	3824.0	3891.1
65°	1199.7	1114.3	1186.8	1365.4	2076.9	3692.4	4962.7	5182.5	4212.2	4018.1	3975.7
67.5°	789.5	729.2	743.3	862.0	1429.8	3147.8	5394.0	5633.7	4588.0	4177.4	3826.4
70°	611.4	562.7	556.5	618.8	847.9	2186.8	5138.4	5502.7	4817.0	4028.2	3335.2
72.5°	479.8	442.8	446.1	506.0	656.7	1213.2	3976.2	4679.4	4472.2	3474.0	2562.4
75°	374.1	343.8	360.8	429.2	607.3	754.0	2743.4	3551.5	3457.5	2572.4	1461.5
77.5°	271.6	252.0	276.1	365.5	570.9	646.9	1707.8	2477.8	2215.0	1320.8	501.5
80°	178.1	167.2	186.9	298.1	517.7	622.6	1055.4	1518.2	1094.5	371.0	189.8
82.5°	104.9	100.1	116.6	201.7	416.1	583.5	703.9	843.6	447.8	156.9	100.9
85°	55.1	51.5	69.2	115.9	286.9	532.7	554.2	505.0	216.3	68.2	48.2
87.5°	18.4	17.9	29.3	44.8	108.5	282.8	295.7	239.9	89.2	19.8	10.5
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°	532.5	532.5	532.5	532.5	532.5	532.5	532.5	532.5	532.5	532.5	532.5
2.5°	647.4	637.9	583.0	590.6	597.8	594.2	592.1	567.3	564.9	600.2	597.3
5°	815.7	776.2	729.4	727.3	696.5	665.0	671.2	661.2	664.1	678.6	680.1
7.5°	904.7	855.3	810.7	738.2	676.7	626.9	634.8	632.4	625.9	658.8	667.7
10°	903.0	859.1	808.8	721.1	679.6	639.1	590.4	544.4	530.8	514.6	516.0
12.5°	962.6	923.8	814.1	724.7	668.4	598.5	507.4	457.1	408.9	408.0	395.8
15°	981.2	952.6	825.3	704.1	589.9	489.8	395.6	341.0	306.2	299.3	289.0
17.5°	1028.2	983.4	791.2	637.9	498.8	383.0	297.3	259.2	256.3	261.1	255.9
20°	1031.3	958.6	729.7	539.9	400.8	290.2	242.5	223.4	233.7	245.4	244.9
22.5°	1028.7	927.3	676.5	456.4	301.2	233.2	212.5	208.2	217.7	235.1	237.3
25°	1002.0	917.1	610.0	374.8	244.4	199.8	194.1	196.7	208.6	229.2	229.2
27.5°	1029.9	875.4	526.5	305.0	205.5	177.9	181.9	188.6	197.4	220.8	225.1
30°	1020.8	889.2	459.3	245.6	181.2	162.6	171.7	178.4	188.4	212.7	214.8
32.5°	1045.1	852.2	402.7	206.5	165.2	156.7	158.8	167.9	181.0	200.1	203.9
35°	1082.3	865.8	337.9	185.8	157.4	149.7	153.8	161.0	174.1	192.7	195.8
37.5°	1201.1	865.1	293.1	174.3	155.9	148.3	150.2	155.2	170.5	187.4	194.6
40°	1277.4	914.7	252.3	171.7	154.3	147.6	145.9	151.4	163.6	183.6	188.6
42.5°	1420.7	945.0	234.6	170.7	154.0	143.5	141.9	148.3	160.2	178.8	186.5
45°	1572.1	988.1	220.6	170.3	153.3	142.8	137.8	145.9	155.9	173.8	182.7
47.5°	1750.2	1079.5	212.7	168.6	151.9	143.8	136.4	140.4	151.7	169.5	178.4
50°	1983.4	1200.4	214.4	166.2	154.0	144.0	134.2	136.2	146.4	163.8	172.9
52.5°	2267.0	1387.6	225.1	167.2	155.5	142.8	133.3	132.3	141.2	156.4	165.5
55°	2608.7	1653.2	257.3	171.7	155.5	142.6	131.9	127.6	134.2	146.6	155.5
57.5°	3020.9	1960.8	320.2	173.8	154.3	141.2	128.8	121.1	125.2	135.4	143.8
60°	3375.0	2209.0	385.1	175.3	156.7	137.8	122.6	113.0	115.6	123.5	130.9
62.5°	3555.6	2278.6	404.7	174.1	163.1	135.7	115.2	104.4	104.7	111.4	118.0
65°	3589.4	2185.9	326.2	172.9	171.4	135.4	109.9	97.0	95.4	100.1	105.9
67.5°	3348.1	1897.4	235.4	170.3	172.4	134.0	106.3	91.1	86.8	90.1	94.9
70°	2842.8	1528.0	197.7	165.0	161.0	126.9	100.1	84.9	79.2	81.6	85.1
72.5°	2119.4	1130.5	172.4	153.8	140.2	108.5	90.6	78.0	72.0	73.7	76.3
75°	1177.5	603.0	144.3	133.8	114.5	87.8	77.3	69.2	63.9	64.6	67.5
77.5°	391.1	222.5	105.9	106.1	86.6	67.7	63.7	59.1	55.1	55.3	57.7
80°	177.2	123.0	75.8	76.3	60.3	49.1	48.9	47.5	44.8	44.1	45.8
82.5°	102.8	74.6	52.0	49.6	38.9	32.0	35.5	34.8	34.1	31.5	32.0
85°	50.6	40.1	27.2	25.8	21.5	16.0	19.1	19.8	19.1	16.2	16.0
87.5°	12.4	13.1	6.7	6.2	3.6	1.7	2.9	2.9	3.6	2.4	1.2
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)