

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: P596985

Luminaire Tested: **MSA-SA2D-835-U-SL2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596985
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-835-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9113 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

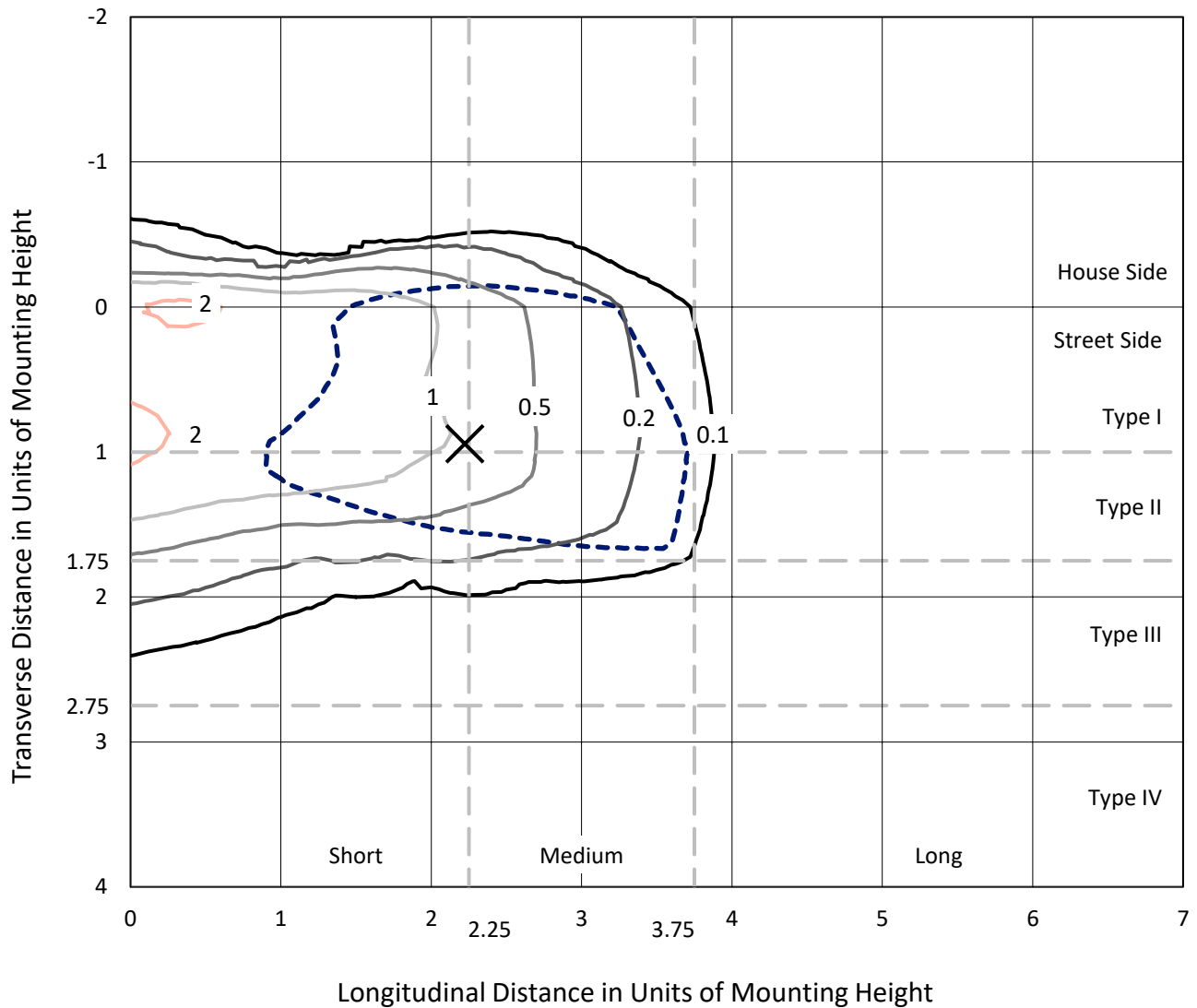
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

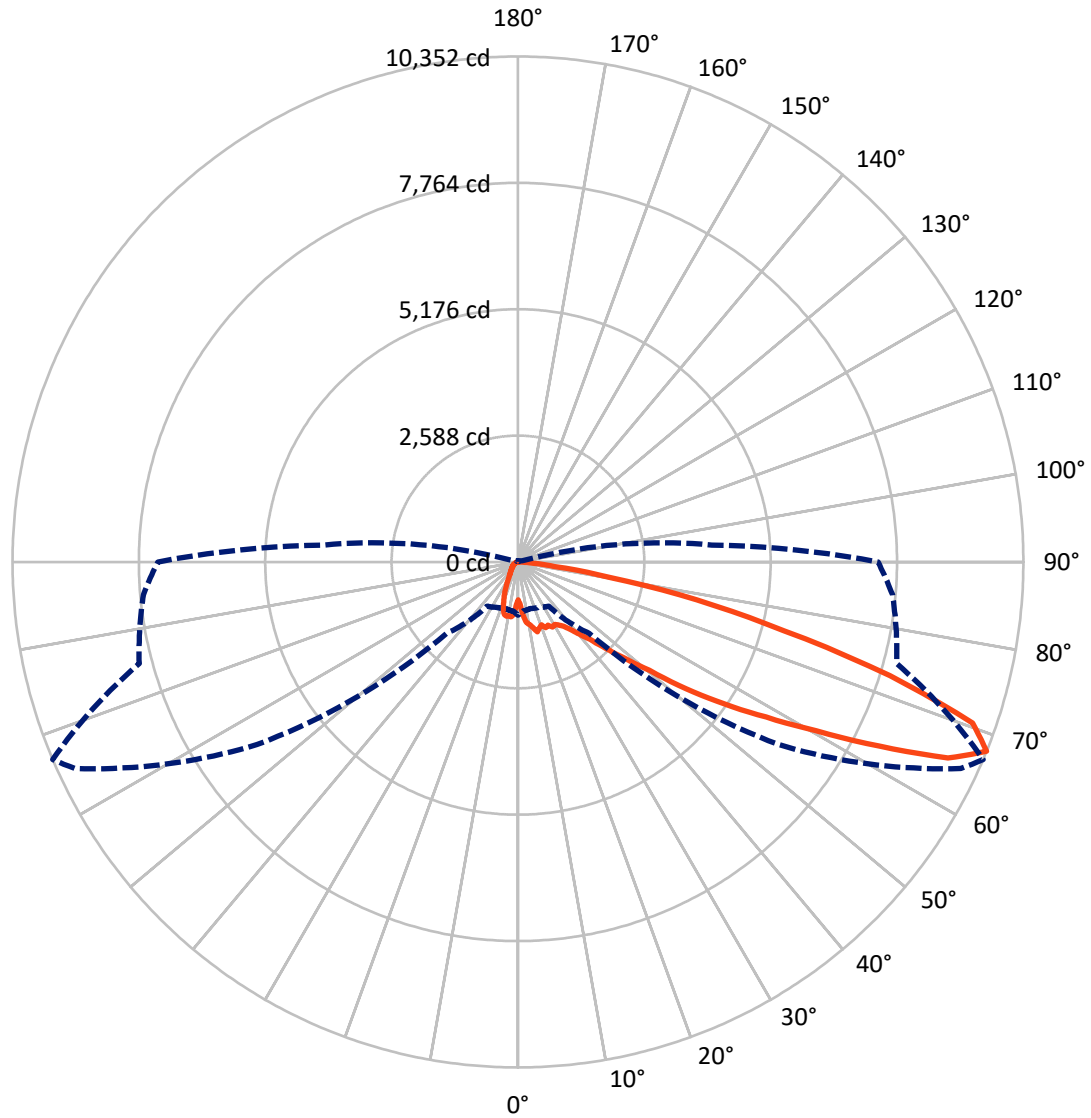
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1127.0	0.0	1127.0
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	7986.0	0.0	7986.0
	% Fixture	87.6	0.0	87.6
Total	Lumens	9113.0	0.0	9113.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.4	1.1
10°-20°	288.3	3.2
20°-30°	451.8	5.0
30°-40°	728.4	8.0
40°-50°	1338.6	14.7
50°-60°	2260.7	24.8
60°-70°	2499.3	27.4
70°-80°	1308.1	14.4
80°-90°	140.5	1.5
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°	9113.0	100.0
0°-180°	9113.0	100.0

Coefficient of Utilization



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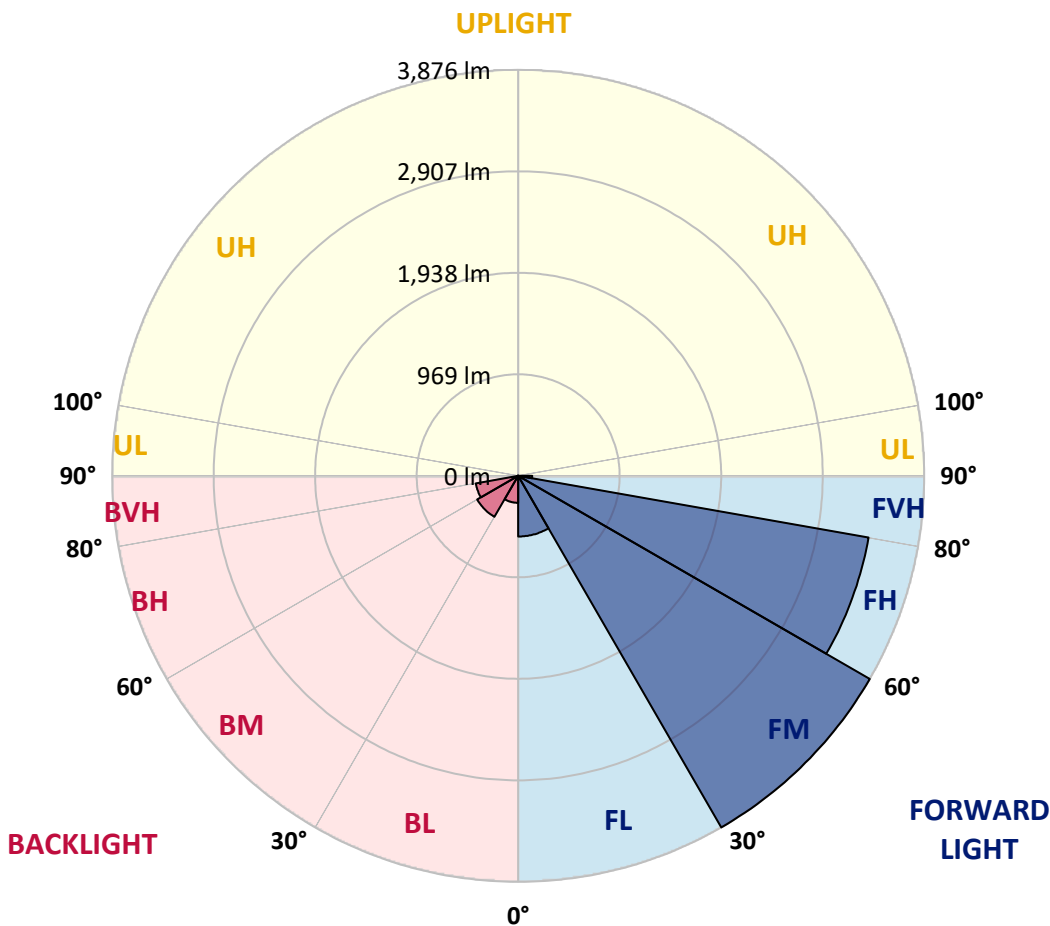
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	579.4	6.4			
FM (30°-60°)	3875.8	42.5			
FH (60°-80°)	3396.3	37.3			G2/5000
FVH (80°-90°)	134.5	1.5			G2/225
BL (0°-30°)	258.0	2.8	B1/500		
BM (30°-60°)	451.9	5.0	B1/1000		
BH (60°-80°)	411.1	4.5	B1/500		G1/500
BVH (80°-90°)	6.0	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.2
2.5°	916.2	885.3	832.6	847.8	878.3	903.8	891.7	868.2	868.6	844.6	931.0
5°	1066.0	1024.4	993.9	1004.5	1003.2	1002.2	1059.1	1080.8	1090.1	1129.8	1188.5
7.5°	1109.0	1094.2	1062.3	1072.0	1040.1	1042.4	1142.3	1236.6	1251.4	1275.9	1380.4
10°	1092.4	1063.7	1075.3	1075.3	1075.7	1127.5	1194.5	1284.7	1302.7	1397.0	1408.1
12.5°	1074.3	1075.7	1121.5	1113.2	1176.0	1269.0	1291.6	1392.9	1384.1	1465.9	1587.5
15°	1141.4	1176.5	1146.9	1158.5	1164.5	1273.6	1310.1	1444.6	1483.5	1587.0	1666.1
17.5°	1256.5	1261.1	1199.6	1183.0	1226.4	1257.4	1330.9	1395.6	1421.5	1693.3	1805.2
20°	1277.3	1306.9	1244.5	1148.3	1240.3	1282.8	1334.1	1365.1	1376.2	1726.2	1883.8
22.5°	1402.6	1369.7	1269.9	1196.8	1223.2	1269.4	1301.3	1394.7	1461.3	1664.2	1959.2
25°	1466.8	1458.0	1362.8	1300.4	1273.6	1269.9	1342.9	1413.7	1434.9	1728.5	1977.6
27.5°	1620.8	1600.9	1416.4	1408.6	1320.3	1242.6	1344.3	1471.4	1511.2	1667.9	2047.0
30°	1830.2	1822.8	1577.3	1572.2	1431.7	1292.1	1419.2	1507.0	1483.0	1698.9	2093.2
32.5°	2041.0	2101.1	1850.1	1706.7	1601.3	1473.8	1397.9	1495.9	1538.9	1774.2	2178.3
35°	2295.7	2339.1	2083.5	1979.5	1745.1	1558.8	1538.9	1601.8	1620.3	1863.9	2274.9
37.5°	2741.3	2675.7	2458.0	2280.9	2157.9	1862.5	1764.5	1714.6	1757.6	1985.5	2472.3
40°	3070.5	3028.9	2760.7	2654.9	2372.0	2199.1	1943.0	1896.3	1944.4	2110.3	2609.6
42.5°	3467.6	3381.1	3128.7	3057.1	2765.8	2432.5	2172.7	2188.9	2158.9	2356.7	2850.4
45°	3826.8	3631.7	3491.2	3507.3	3352.0	2901.7	2556.0	2548.1	2523.1	2713.6	3103.8
47.5°	4068.5	3898.0	3761.1	3716.3	3697.8	3726.9	3109.8	2970.2	2951.7	3088.5	3502.7
50°	4198.4	4011.7	3842.5	3851.7	4227.1	4509.6	3681.2	3482.8	3489.8	3632.6	4048.2
52.5°	4111.1	3899.8	3721.4	3894.7	4637.6	5031.5	4627.0	4152.7	4313.6	4277.0	4780.0
55°	3707.5	3524.0	3397.3	3707.5	4682.5	5593.2	5791.5	5160.9	5124.9	5041.7	5526.1
57.5°	3028.4	2870.3	2792.2	3119.5	4192.0	6045.7	6961.0	6300.4	5993.0	5644.5	6145.6
60°	2256.4	2139.9	2058.5	2231.4	3303.0	5606.1	7727.0	7374.3	7018.4	6225.6	6702.2
62.5°	1671.2	1576.4	1489.9	1505.7	2274.4	4821.6	8021.1	8512.0	8307.7	6839.0	7227.3
65°	1333.7	1247.2	1186.7	1152.0	1408.6	3627.5	7611.9	9444.4	9680.2	7416.9	7606.4
67.5°	1089.1	1016.1	986.0	1025.8	1104.9	2067.8	6519.1	10010.3	10352.3	8029.8	7699.8
70°	886.2	826.1	822.9	930.1	1017.5	1260.6	4795.3	9619.6	9877.1	8134.3	7139.9
72.5°	617.6	591.3	633.3	785.4	1008.2	1049.8	2753.8	7960.5	7969.7	7184.3	5872.8
75°	349.5	345.3	411.9	626.4	981.9	1039.2	1535.2	5625.5	5629.7	5433.7	4068.5
77.5°	192.3	179.8	239.9	423.5	843.2	1015.2	990.2	3841.1	3742.6	3023.8	1858.4
80°	88.8	83.7	129.9	271.4	616.7	960.2	793.7	2111.2	1903.7	985.1	453.5
82.5°	36.5	34.7	59.6	174.3	389.7	773.4	668.9	936.6	751.7	187.2	140.1
85°	6.5	6.9	24.5	105.4	218.2	356.4	542.3	444.7	326.8	51.8	76.7
87.5°	0.0	0.0	5.1	25.4	52.7	97.5	220.0	124.4	85.5	15.3	22.7
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°	776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.2
2.5°	948.1	940.3	860.8	864.5	870.0	864.9	864.0	841.8	821.5	888.5	887.6
5°	1199.2	1143.2	1088.2	1066.9	1021.2	961.1	961.5	942.6	923.2	950.5	950.5
7.5°	1378.1	1300.9	1231.1	1106.7	985.6	876.0	866.3	840.4	810.8	846.4	853.4
10°	1419.7	1352.6	1262.5	1079.9	965.2	858.5	741.0	644.4	599.6	578.8	575.1
12.5°	1547.7	1497.8	1296.2	1094.2	929.2	748.4	556.1	441.5	363.4	357.3	349.0
15°	1633.2	1598.1	1329.5	1058.6	776.6	538.1	349.5	268.1	236.7	233.9	229.8
17.5°	1765.9	1704.9	1297.6	945.4	607.4	355.0	234.8	211.7	215.4	223.7	217.3
20°	1820.0	1700.7	1228.3	781.3	426.7	238.1	203.9	191.4	201.1	209.0	205.3
22.5°	1875.5	1712.8	1166.8	644.0	278.8	196.9	181.7	175.2	176.1	184.0	184.5
25°	1875.0	1746.0	1095.6	501.6	207.6	175.2	164.1	155.8	152.6	158.1	156.7
27.5°	1966.1	1707.7	965.7	372.1	182.6	156.7	146.1	135.9	124.4	129.9	129.9
30°	1966.5	1770.1	875.1	267.2	167.3	139.6	130.4	114.6	101.2	105.9	106.3
32.5°	2018.8	1716.0	791.4	204.3	155.3	129.4	109.1	94.8	86.9	89.7	89.7
35°	2078.4	1762.2	662.9	180.3	143.3	115.1	93.4	81.8	75.8	78.1	78.1
37.5°	2275.4	1752.5	573.7	167.8	135.4	104.0	85.1	72.1	69.3	70.7	72.6
40°	2346.5	1821.4	452.6	160.4	122.5	93.8	74.9	65.2	61.5	62.4	62.9
42.5°	2527.8	1836.6	361.5	154.4	110.9	81.4	66.6	59.6	55.0	55.0	56.4
45°	2727.9	1875.0	287.5	149.3	101.2	73.0	60.1	54.5	47.6	46.7	48.5
47.5°	3017.8	2022.0	234.4	139.1	89.7	68.0	55.5	47.2	41.6	39.8	41.6
50°	3502.7	2271.7	207.1	126.7	81.4	63.8	49.0	40.2	36.1	33.7	35.1
52.5°	4186.9	2703.0	192.8	115.1	74.0	57.3	43.9	35.1	31.0	29.1	30.0
55°	4946.9	3197.6	185.8	103.6	67.5	50.4	38.4	31.0	27.3	25.0	25.4
57.5°	5649.6	3662.7	178.9	92.5	61.0	44.8	33.7	27.3	23.6	21.3	21.7
60°	6342.1	4033.9	162.3	79.5	55.0	40.2	29.6	23.6	21.3	18.5	18.5
62.5°	6954.6	4255.8	138.2	68.9	49.5	35.6	26.4	21.3	19.4	16.6	16.6
65°	7371.6	4265.9	111.4	59.2	43.5	30.5	23.1	19.9	18.0	14.8	14.3
67.5°	7377.6	3988.6	89.2	52.7	38.4	26.8	20.8	19.0	16.6	13.9	12.9
70°	6603.2	3295.1	74.4	46.2	33.3	23.6	18.0	18.0	16.2	13.4	12.0
72.5°	5282.0	2518.1	62.4	40.2	29.6	20.3	16.6	17.1	15.7	13.4	12.0
75°	3550.3	1444.2	51.8	34.2	25.9	17.1	16.2	16.6	16.2	13.4	11.6
77.5°	1635.1	460.0	40.2	28.2	22.2	14.3	15.7	15.7	14.8	12.0	10.2
80°	368.4	113.3	29.1	20.8	18.0	10.6	14.3	12.9	11.6	8.3	6.0
82.5°	134.1	34.7	17.6	12.9	11.1	4.2	9.2	9.2	8.3	6.0	3.7
85°	76.7	18.0	9.7	8.3	6.0	1.8	5.1	5.5	4.6	4.2	1.8
87.5°	25.0	4.2	4.6	5.1	4.6	0.9	1.8	1.8	1.4	0.9	0.0
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)