

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: P367808

Luminaire Tested: **MSA-SA3B-727-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367808
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-727-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12465 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

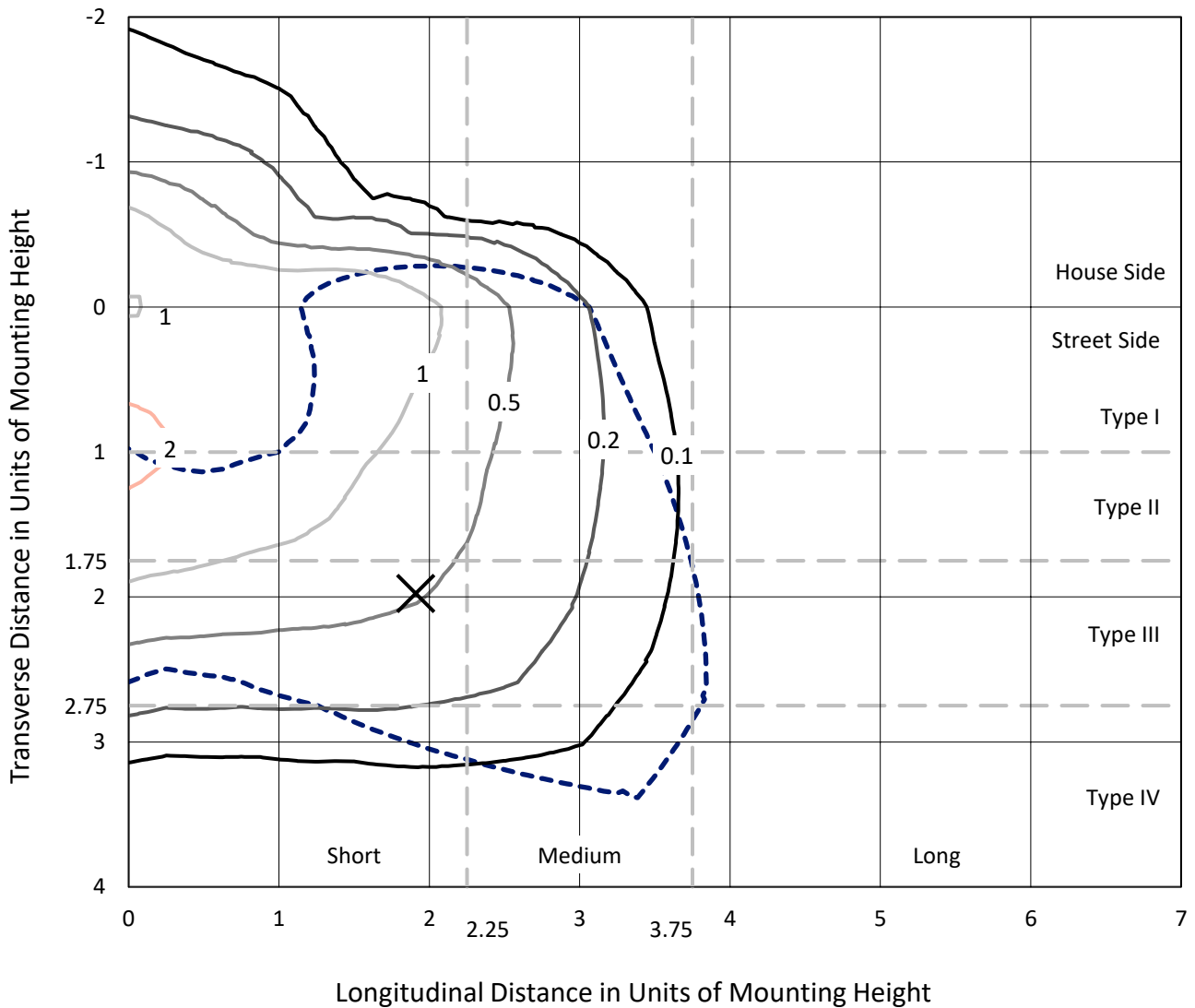
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367808
 CATALOG NUMBER: MSA-SA3B-727-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

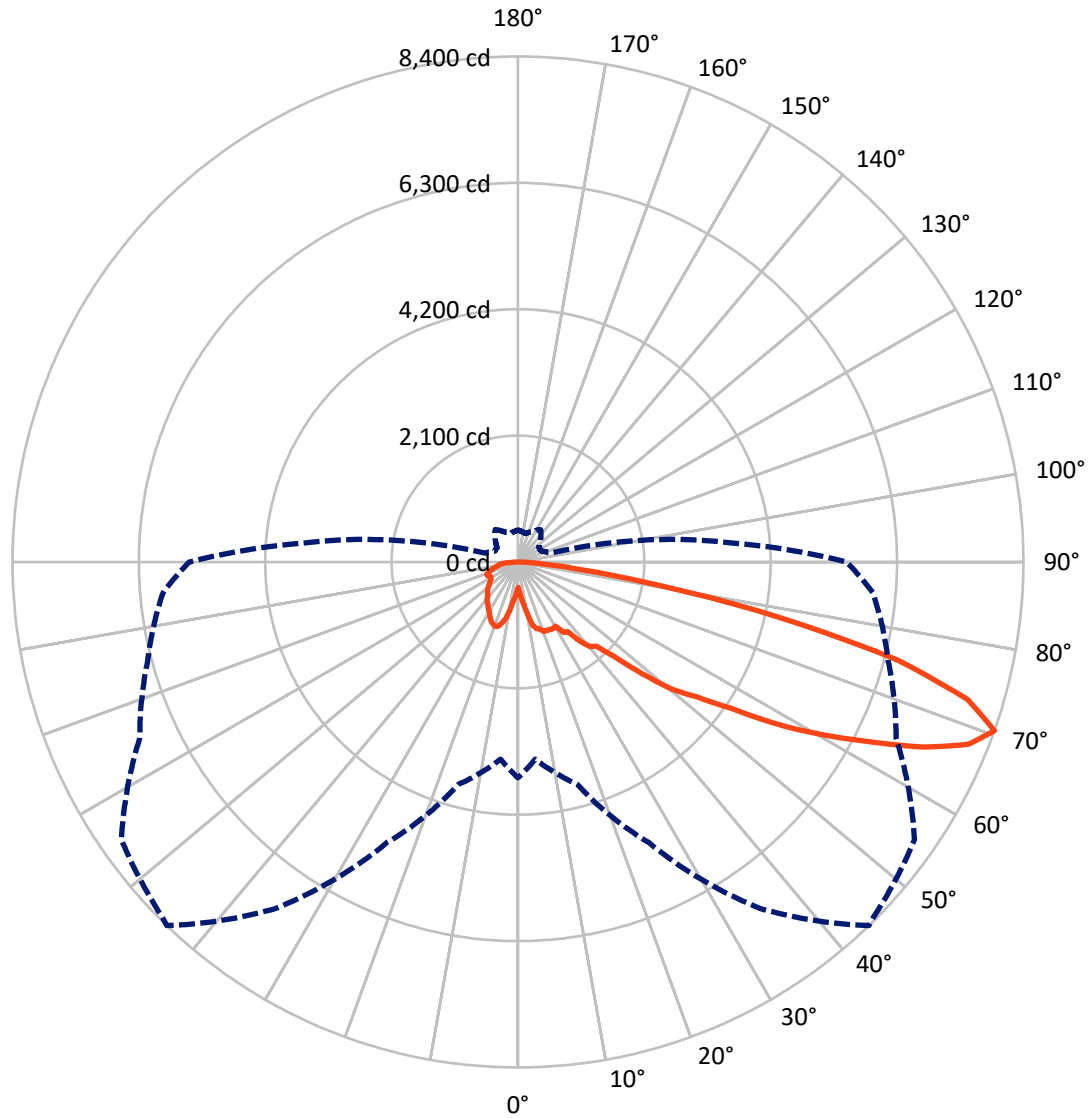
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P367808
CATALOG NUMBER: MSA-SA3B-727-U-T4W

Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2750.3	0.0	2750.3
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	9714.7	0.0	9714.7
	% Fixture	77.9	0.0	77.9
Total	Lumens	12465.0	0.0	12465.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.4	0.5
10°-20°	305.9	2.5
20°-30°	571.7	4.6
30°-40°	917.6	7.4
40°-50°	1548.9	12.4
50°-60°	2760.1	22.1
60°-70°	3775.4	30.3
70°-80°	2220.1	17.8
80°-90°	298.9	2.4
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°	12465.0	100.0
0°-180°	12465.0	100.0

Coefficient of Utilization



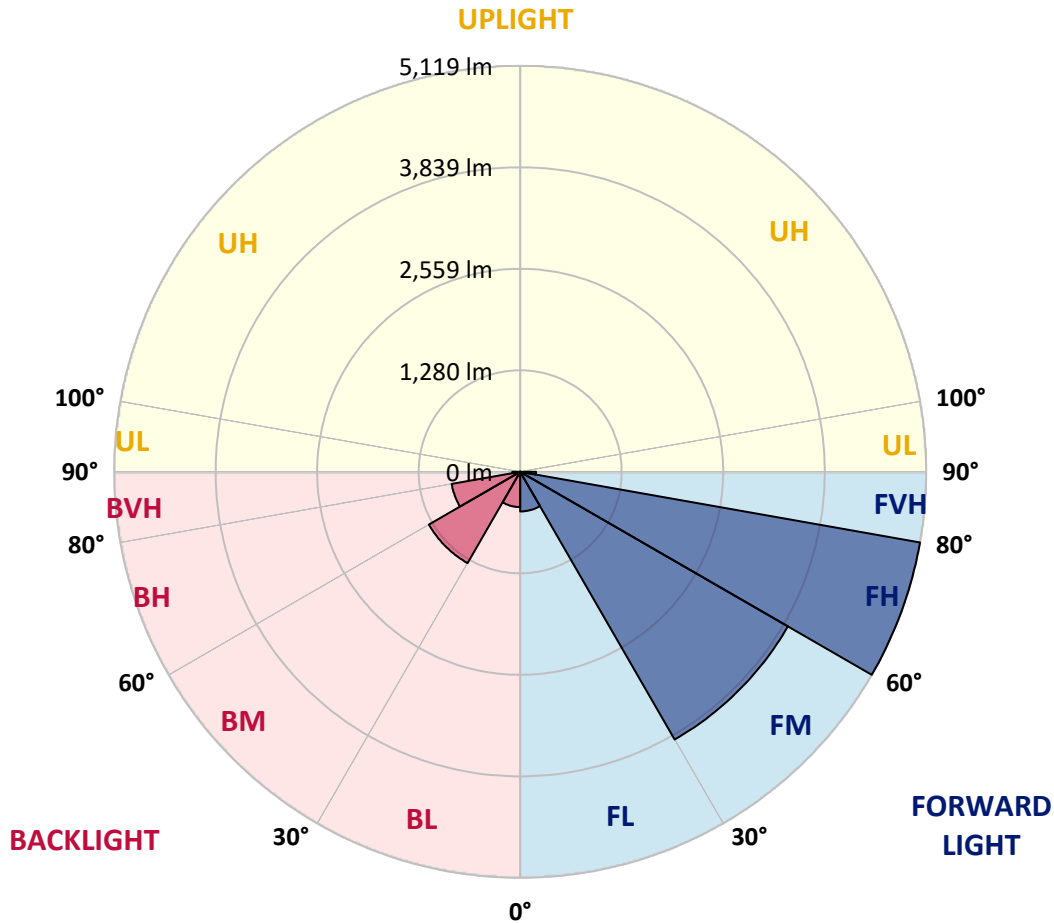
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	499.5	4.0			
FM (30°-60°)	3897.5	31.3			
FH (60°-80°)	5118.5	41.1			G3/7500
FVH (80°-90°)	199.2	1.6			G2/225
BL (0°-30°)	444.5	3.6	B1/500		
BM (30°-60°)	1329.1	10.7	B2/2500		
BH (60°-80°)	877.0	7.0	B2/1000		G2/1000
BVH (80°-90°)	99.7	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





REPORT NUMBER: P367808

CATALOG NUMBER: MSA-SA3B-727-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	423.7	423.7	423.7	423.7	423.7	423.7	423.7	423.7	423.7	423.7	423.7
2.5°	514.2	503.9	479.4	487.6	497.8	501.9	500.9	499.9	484.0	478.4	506.5
5°	698.7	676.2	658.3	651.1	627.6	609.2	598.0	627.6	623.0	630.7	650.1
7.5°	872.4	858.1	817.8	803.4	755.4	723.7	720.1	743.7	749.8	737.5	770.7
10°	984.4	959.8	951.7	917.4	884.2	879.1	876.0	865.3	850.5	849.4	819.8
12.5°	1071.3	1084.0	1090.7	1051.3	1052.4	1070.8	1061.0	1017.6	992.6	948.6	952.2
15°	1227.2	1245.6	1192.9	1167.9	1119.8	1147.4	1143.8	1107.6	1104.0	1075.4	1042.1
17.5°	1363.1	1371.3	1283.4	1226.1	1209.8	1169.9	1180.6	1181.7	1134.6	1185.8	1156.1
20°	1374.3	1403.5	1302.3	1188.3	1237.4	1232.3	1233.8	1223.6	1161.7	1246.1	1234.8
22.5°	1429.5	1385.1	1294.1	1210.8	1223.6	1231.2	1238.4	1226.1	1222.6	1269.6	1303.8
25°	1419.3	1405.0	1313.0	1242.5	1244.0	1245.6	1249.1	1285.9	1281.8	1345.7	1363.6
27.5°	1514.9	1492.9	1318.6	1301.3	1261.4	1252.7	1228.2	1304.8	1364.6	1363.1	1461.7
30°	1696.9	1674.4	1449.5	1398.9	1326.8	1237.9	1284.9	1387.1	1434.1	1450.0	1575.2
32.5°	1981.0	2017.8	1707.1	1503.1	1413.7	1394.3	1389.2	1378.9	1495.5	1573.7	1687.7
35°	2388.9	2359.7	2010.7	1726.5	1505.2	1421.9	1433.1	1495.5	1634.0	1684.6	1789.9
37.5°	2856.0	2795.7	2399.6	1979.5	1768.9	1664.7	1627.3	1687.7	1718.3	1758.2	1973.4
40°	3330.8	3183.6	2781.4	2312.2	1927.4	1848.6	1815.9	1741.8	1813.9	1894.6	2168.1
42.5°	3789.3	3675.3	3196.9	2709.3	2194.2	1913.6	1895.7	1823.1	2046.4	2131.8	2449.2
45°	4269.7	4005.5	3622.7	3157.6	2584.1	2232.0	2205.4	2075.1	2361.3	2539.1	2845.8
47.5°	4592.7	4347.9	4012.6	3521.5	2910.7	2764.5	2713.9	2491.1	2750.7	2981.8	3458.6
50°	4898.4	4646.4	4294.3	3919.6	3502.1	3333.9	3226.1	2855.0	3235.8	3611.9	4244.2
52.5°	5335.9	5110.5	4621.4	4320.8	4137.4	3723.9	3643.6	3439.7	3803.1	4310.6	5102.8
55°	5803.5	5496.4	5053.2	4886.6	4812.5	4283.0	4217.6	4087.8	4558.5	5025.6	5937.4
57.5°	6010.0	5689.6	5445.3	5345.6	5339.5	5095.7	5020.5	4930.1	5330.8	5639.0	6723.0
60°	6174.1	5830.1	5732.5	5788.2	5990.6	5830.1	5732.5	5652.8	5959.4	6245.1	7363.9
62.5°	6143.9	5798.9	5849.0	6018.7	6535.4	6582.5	6507.3	6314.1	6582.5	6741.9	7731.4
65°	5657.4	5338.4	5630.3	6033.0	7041.9	7417.6	7413.5	6908.0	7001.0	7001.0	7692.6
67.5°	4804.8	4474.7	4952.6	5906.8	7392.0	8079.5	8080.5	7537.7	7039.4	6975.0	7091.5
70°	3587.9	3288.9	3826.1	5144.2	7030.7	8399.9	8353.4	8045.7	6934.1	6371.4	5923.6
72.5°	2143.0	1949.8	2444.1	3744.8	5997.2	7810.6	7934.3	7460.5	6347.9	5298.6	4234.5
75°	973.1	889.3	1148.4	2151.2	4281.5	6515.0	6649.4	6296.2	5042.0	3810.8	2447.1
77.5°	416.5	394.1	501.4	954.2	2360.8	4455.3	4730.7	4499.7	3416.2	2214.6	1082.5
80°	267.8	253.5	308.2	459.0	1096.3	2407.3	2644.4	2558.1	1740.3	861.2	381.3
82.5°	160.0	155.4	206.0	288.3	598.0	1059.5	1193.9	1225.6	722.7	386.4	218.2
85°	87.4	88.4	113.0	174.8	358.8	412.5	441.6	480.4	340.4	223.9	105.8
87.5°	29.1	33.7	45.5	71.0	127.8	116.5	117.0	136.0	143.6	93.0	33.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367808
 CATALOG NUMBER: MSA-SA3B-727-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	423.7	423.7	423.7	423.7	423.7	423.7	423.7	423.7	423.7	423.7	423.7
2.5°	511.1	501.9	478.4	479.9	488.6	490.7	493.2	478.4	475.3	503.4	506.0
5°	653.2	623.0	609.2	604.6	591.3	586.7	611.3	622.5	633.8	655.7	666.5
7.5°	767.2	733.4	708.4	685.4	666.0	654.7	696.1	727.8	747.2	792.2	812.6
10°	819.3	790.2	781.0	762.6	777.4	811.1	818.8	819.8	862.7	861.7	870.4
12.5°	923.0	904.1	874.0	880.6	919.5	954.2	944.5	959.3	974.7	1011.5	994.6
15°	1017.6	1012.5	984.4	989.0	996.6	1040.1	1045.7	1060.5	1084.0	1113.2	1093.2
17.5°	1134.1	1132.1	1063.6	1057.5	1075.4	1117.8	1104.5	1078.4	1156.1	1187.3	1179.1
20°	1213.4	1198.0	1110.1	1084.0	1129.5	1135.2	1119.8	1078.4	1145.9	1213.9	1232.3
22.5°	1279.3	1261.4	1170.9	1119.8	1110.6	1113.2	1113.2	1105.5	1138.7	1194.4	1193.9
25°	1332.4	1349.3	1234.3	1185.2	1136.2	1074.8	1067.2	1073.8	1092.7	1200.1	1196.5
27.5°	1465.8	1419.3	1255.8	1219.0	1118.3	1021.7	1042.6	1052.9	1059.0	1176.6	1196.0
30°	1552.7	1567.0	1332.4	1238.9	1092.2	962.4	969.6	999.2	1035.0	1174.0	1179.6
32.5°	1669.8	1639.1	1452.0	1205.7	1022.7	926.6	913.3	953.2	1006.4	1132.6	1147.9
35°	1778.6	1814.9	1502.6	1199.6	974.2	873.0	887.3	901.1	956.3	1086.6	1104.5
37.5°	2034.2	1951.4	1644.7	1169.9	933.8	845.9	830.5	851.5	898.5	999.2	1040.6
40°	2228.4	2233.5	1675.4	1132.6	856.6	807.0	774.3	795.3	815.2	895.4	913.3
42.5°	2592.8	2481.4	1750.5	1050.8	808.0	748.8	730.4	739.6	742.6	776.4	806.0
45°	3056.4	2795.2	1780.2	940.9	744.2	724.7	687.4	682.8	666.0	670.6	696.6
47.5°	3697.8	3284.8	1758.7	823.9	687.4	693.6	639.9	618.9	595.4	601.1	625.6
50°	4527.3	3910.4	1757.2	724.7	648.6	652.7	608.7	570.9	547.4	559.1	580.6
52.5°	5458.0	4538.1	1764.3	656.8	606.2	604.1	588.3	542.3	523.4	535.6	560.2
55°	6348.4	5077.8	1817.5	613.8	562.2	565.8	571.9	533.1	512.1	523.4	548.9
57.5°	7123.2	5504.0	1797.5	568.3	521.3	537.7	554.0	520.3	504.5	520.8	546.4
60°	7665.0	5701.8	1640.1	524.9	491.2	513.7	545.3	518.8	516.7	552.0	582.7
62.5°	7862.8	5628.7	1333.5	490.7	473.3	510.6	565.3	552.5	554.5	598.0	640.4
65°	7574.0	5244.4	994.6	468.7	459.5	525.4	611.3	572.4	544.3	580.1	618.9
67.5°	6752.7	4561.1	726.8	449.8	443.6	548.9	653.7	570.4	518.3	554.5	586.2
70°	5463.1	3600.2	562.7	425.7	422.7	533.1	657.8	555.1	490.1	513.7	531.5
72.5°	3743.3	2465.0	466.1	402.7	386.4	472.3	624.6	520.8	456.4	470.2	485.0
75°	2091.9	1383.5	392.0	374.1	338.3	420.6	585.7	500.4	431.4	435.5	455.9
77.5°	938.9	598.5	332.7	336.3	294.9	372.1	535.1	467.7	393.0	383.8	404.3
80°	355.2	291.8	269.9	284.2	247.9	322.5	482.5	438.0	352.7	340.9	352.7
82.5°	206.0	176.8	200.4	218.8	196.8	296.4	460.5	410.9	310.7	281.1	291.3
85°	95.6	91.5	120.1	142.1	137.5	231.0	394.1	309.2	221.3	187.1	207.0
87.5°	25.0	28.1	42.4	50.1	51.1	79.2	151.8	115.0	86.4	65.4	62.9
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)