

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: P368204

Luminaire Tested: **MSA-SA4A-727-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368204
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-SA4A-727-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13146 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

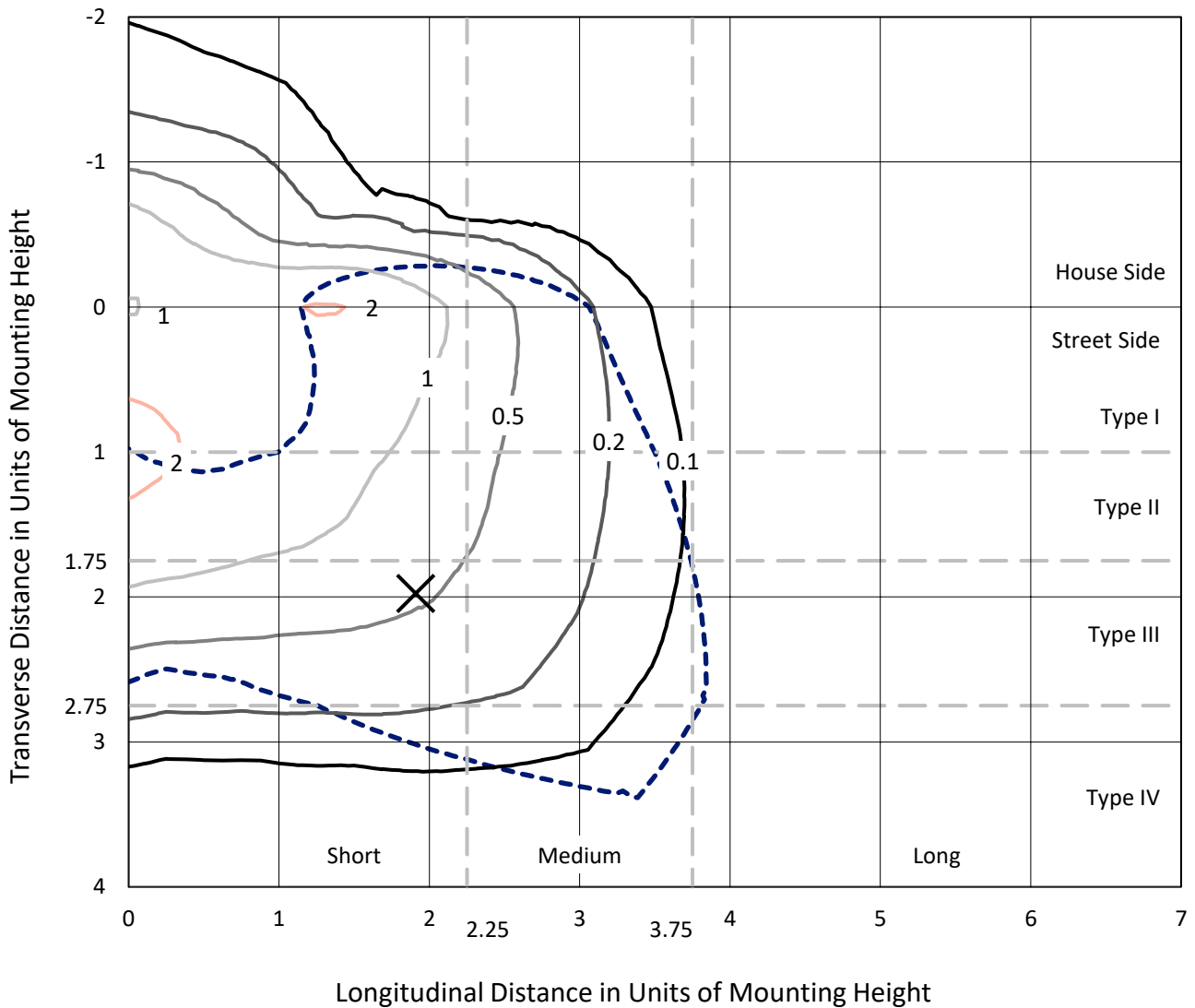
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368204
 CATALOG NUMBER: MSA-SA4A-727-U-T4W

Iso-Footcandle Lines of Horizontal Illumination

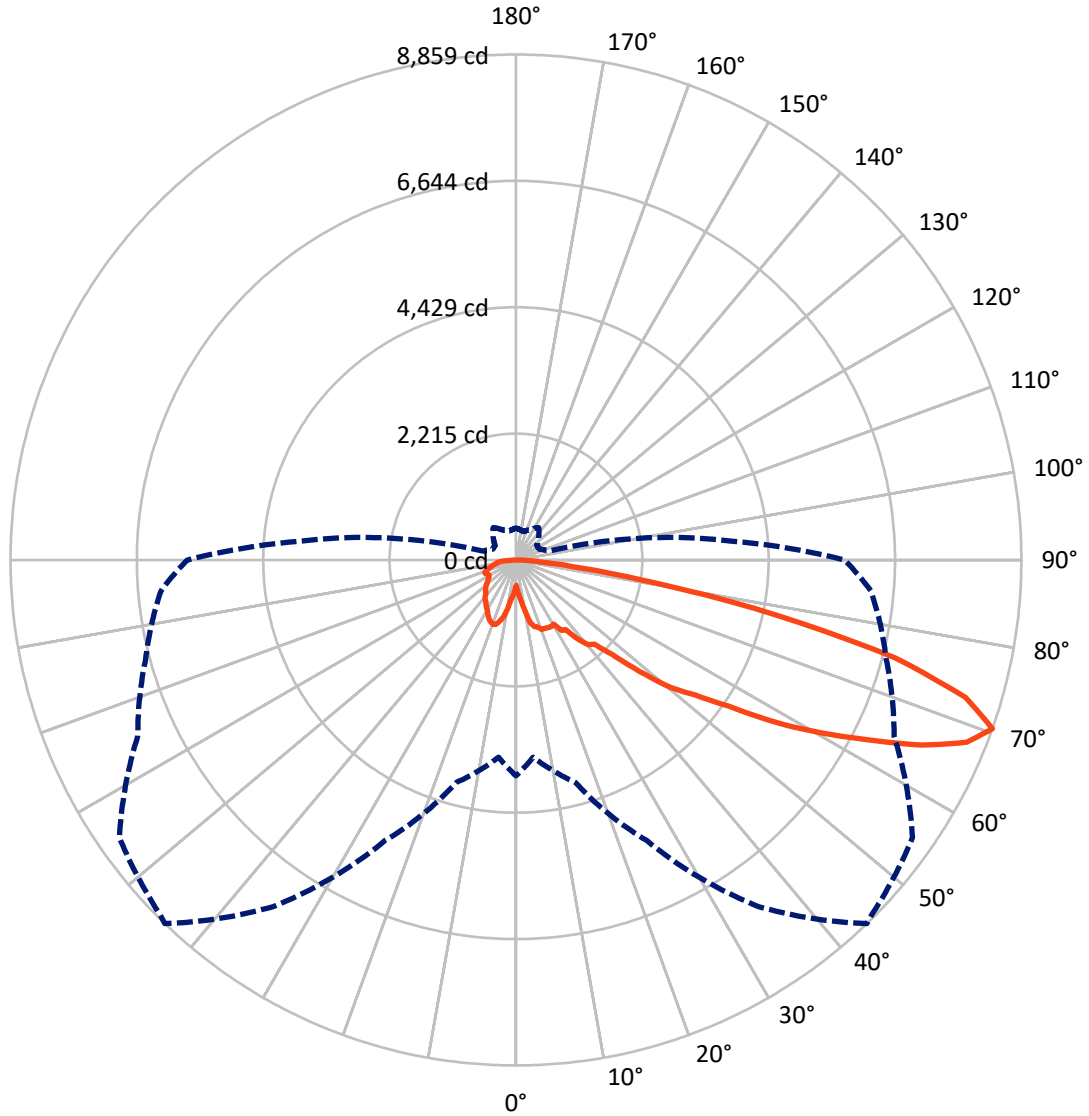
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type IV - Short - N/A

REPORT NUMBER: P368204
CATALOG NUMBER: MSA-SA4A-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	2900.5	0.0	2900.5
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	10245.5	0.0	10245.5
	% Fixture	77.9	0.0	77.9
Total	Lumens	13146.0	0.0	13146.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.1	0.5
10°-20°	322.6	2.5
20°-30°	602.9	4.6
30°-40°	967.8	7.4
40°-50°	1633.5	12.4
50°-60°	2910.8	22.1
60°-70°	3981.6	30.3
70°-80°	2341.4	17.8
80°-90°	315.3	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°	13146.0	100.0
0°-180°	13146.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368204

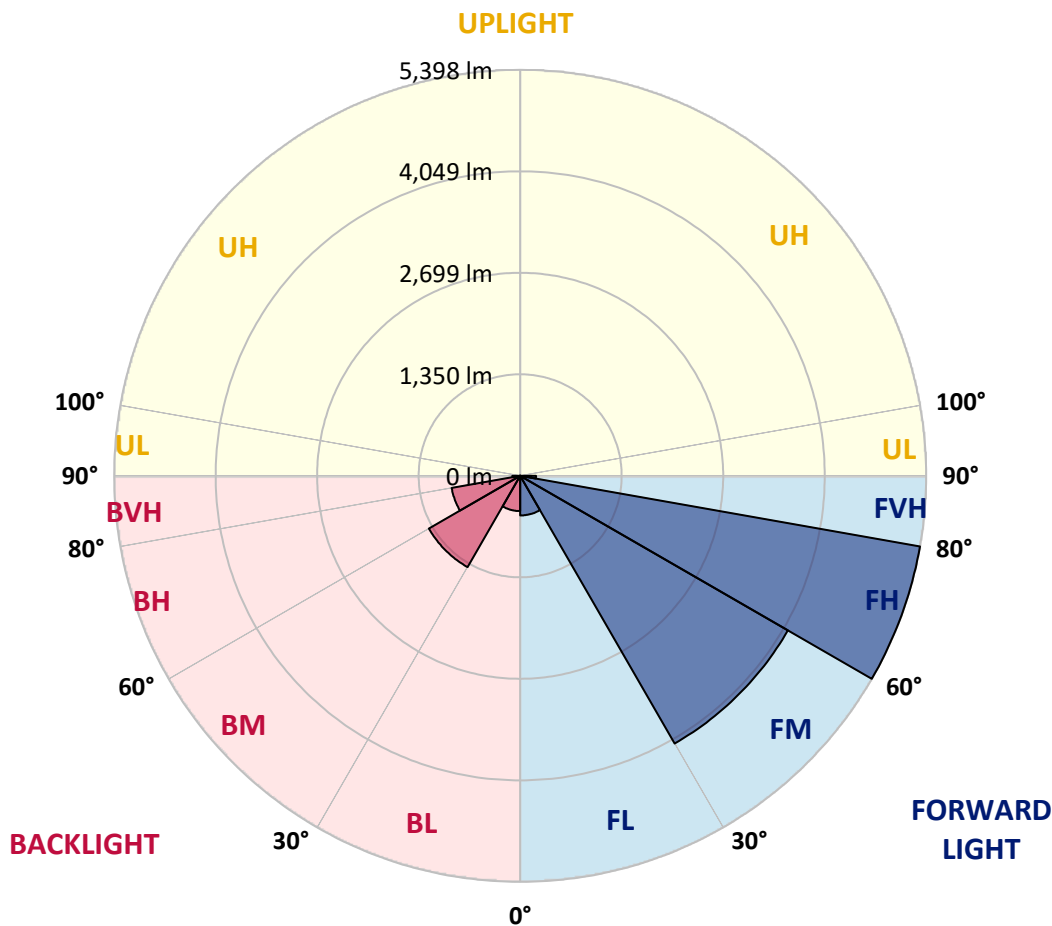
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	526.8	4.0			
FM (30°-60°)	4110.4	31.3			
FH (60°-80°)	5398.1	41.1			G3/7500
FVH (80°-90°)	210.1	1.6			G2/225
BL (0°-30°)	468.8	3.6	B1/500		
BM (30°-60°)	1401.7	10.7	B2/2500		
BH (60°-80°)	924.9	7.0	B2/1000		G2/1000
BVH (80°-90°)	105.1	0.8			G2/225
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: P368204

CATALOG NUMBER: MSA-SA4A-727-U-T4W

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8
2.5°	542.3	531.5	505.6	514.2	525.0	529.3	528.2	527.2	510.5	504.5	534.2
5°	736.8	713.1	694.3	686.7	661.9	642.5	630.7	661.9	657.1	665.2	685.6
7.5°	920.1	905.0	862.4	847.3	796.7	763.3	759.5	784.3	790.7	777.8	812.8
10°	1038.2	1012.3	1003.7	967.5	932.5	927.1	923.9	912.6	896.9	895.9	864.6
12.5°	1129.8	1143.3	1150.3	1108.8	1109.8	1129.3	1119.0	1073.2	1046.8	1000.4	1004.2
15°	1294.2	1313.6	1258.1	1231.7	1181.0	1210.1	1206.3	1168.1	1164.3	1134.1	1099.1
17.5°	1437.6	1446.2	1353.5	1293.1	1275.9	1233.8	1245.1	1246.2	1196.6	1250.5	1219.3
20°	1449.4	1480.2	1373.4	1253.2	1305.0	1299.6	1301.2	1290.4	1225.2	1314.1	1302.3
22.5°	1507.6	1460.8	1364.8	1276.9	1290.4	1298.5	1306.1	1293.1	1289.3	1338.9	1375.0
25°	1496.9	1481.8	1384.7	1310.4	1312.0	1313.6	1317.4	1356.2	1351.9	1419.2	1438.1
27.5°	1597.7	1574.5	1390.7	1372.4	1330.3	1321.1	1295.3	1376.1	1439.2	1437.6	1541.6
30°	1789.6	1765.8	1528.7	1475.3	1399.3	1305.5	1355.1	1462.9	1512.5	1529.2	1661.3
32.5°	2089.3	2128.1	1800.3	1585.3	1490.9	1470.5	1465.1	1454.3	1577.2	1659.7	1779.9
35°	2519.4	2488.7	2120.5	1820.8	1587.4	1499.6	1511.4	1577.2	1723.3	1776.6	1887.7
37.5°	3012.1	2948.5	2530.7	2087.6	1865.6	1755.6	1716.2	1779.9	1812.2	1854.2	2081.2
40°	3512.8	3357.6	2933.4	2438.5	2032.7	1949.6	1915.1	1837.0	1913.0	1998.2	2286.5
42.5°	3996.3	3876.1	3371.6	2857.4	2314.0	2018.1	1999.2	1922.7	2158.2	2248.3	2583.0
45°	4503.0	4224.3	3820.6	3330.1	2725.3	2353.9	2325.9	2188.4	2490.3	2677.9	3001.3
47.5°	4843.7	4585.5	4231.9	3713.9	3069.7	2915.6	2862.2	2627.2	2901.0	3144.7	3647.6
50°	5166.0	4900.3	4528.9	4133.8	3693.4	3516.0	3402.3	3011.0	3412.6	3809.3	4476.0
52.5°	5627.4	5389.7	4873.8	4556.9	4363.4	3927.3	3842.7	3627.6	4010.9	4546.1	5381.6
55°	6120.6	5796.7	5329.3	5153.6	5075.4	4517.0	4448.0	4311.1	4807.5	5300.2	6261.8
57.5°	6338.4	6000.4	5742.7	5637.6	5631.2	5374.1	5294.8	5199.4	5622.0	5947.0	7090.3
60°	6511.4	6148.6	6045.7	6104.4	6317.9	6148.6	6045.7	5961.6	6285.0	6586.3	7766.2
62.5°	6479.6	6115.8	6168.6	6347.5	6892.5	6942.1	6862.8	6659.1	6942.1	7110.2	8153.8
65°	5966.4	5630.1	5937.9	6362.6	7426.7	7822.8	7818.5	7285.4	7383.5	7383.5	8112.8
67.5°	5067.4	4719.1	5223.1	6229.5	7795.9	8520.9	8522.0	7949.5	7424.0	7356.0	7478.9
70°	3783.9	3468.6	4035.1	5425.3	7414.8	8858.8	8809.8	8485.3	7312.9	6719.5	6247.3
72.5°	2260.1	2056.4	2577.6	3949.4	6324.9	8237.3	8367.8	7868.1	6694.7	5588.0	4465.8
75°	1026.3	937.9	1211.2	2268.7	4515.4	6870.9	7012.7	6640.2	5317.5	4019.0	2580.8
77.5°	439.3	415.6	528.8	1006.4	2489.7	4698.7	4989.2	4745.6	3602.8	2335.6	1141.7
80°	282.4	267.4	325.0	484.0	1156.2	2538.8	2788.9	2697.8	1835.4	908.3	402.1
82.5°	168.7	163.9	217.2	304.0	630.7	1117.4	1259.2	1292.6	762.2	407.5	230.2
85°	92.2	93.3	119.1	184.3	378.4	435.0	465.7	506.7	359.0	236.1	111.6
87.5°	30.7	35.6	48.0	74.9	134.8	122.9	123.4	143.4	151.5	98.1	35.6
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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 CATALOG NUMBER: MSA-SA4A-727-U-T4W

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8	446.8
2.5°	539.0	529.3	504.5	506.1	515.3	517.5	520.2	504.5	501.3	530.9	533.6
5°	688.9	657.1	642.5	637.7	623.6	618.8	644.7	656.5	668.4	691.6	702.9
7.5°	809.1	773.5	747.1	722.8	702.3	690.5	734.1	767.6	788.1	835.5	857.0
10°	864.1	833.3	823.6	804.2	819.9	855.4	863.5	864.6	909.9	908.8	918.0
12.5°	973.5	953.5	921.7	928.7	969.7	1006.4	996.1	1011.7	1027.9	1066.7	1048.9
15°	1073.2	1067.8	1038.2	1043.0	1051.1	1096.9	1102.8	1118.5	1143.3	1174.0	1153.0
17.5°	1196.1	1193.9	1121.7	1115.2	1134.1	1178.8	1164.8	1137.3	1219.3	1252.1	1243.5
20°	1279.6	1263.5	1170.8	1143.3	1191.2	1197.2	1181.0	1137.3	1208.5	1280.2	1299.6
22.5°	1349.2	1330.3	1234.9	1181.0	1171.3	1174.0	1174.0	1165.9	1200.9	1259.7	1259.2
25°	1405.2	1423.0	1301.7	1250.0	1198.2	1133.6	1125.5	1132.5	1152.4	1265.6	1261.9
27.5°	1545.9	1496.9	1324.4	1285.6	1179.4	1077.5	1099.6	1110.4	1116.9	1240.8	1261.3
30°	1637.6	1652.6	1405.2	1306.6	1151.9	1015.0	1022.5	1053.8	1091.5	1238.1	1244.1
32.5°	1761.0	1728.6	1531.4	1271.6	1078.6	977.2	963.2	1005.3	1061.3	1194.5	1210.6
35°	1875.8	1914.1	1584.7	1265.1	1027.4	920.7	935.7	950.3	1008.5	1146.0	1164.8
37.5°	2145.3	2058.0	1734.6	1233.8	984.8	892.1	875.9	898.0	947.6	1053.8	1097.5
40°	2350.1	2355.5	1766.9	1194.5	903.4	851.1	816.6	838.7	859.7	944.4	963.2
42.5°	2734.5	2617.0	1846.2	1108.2	852.2	789.7	770.3	780.0	783.2	818.8	850.0
45°	3223.4	2947.9	1877.4	992.3	784.8	764.3	725.0	720.1	702.3	707.2	734.7
47.5°	3899.8	3464.3	1854.8	868.9	725.0	731.5	674.9	652.8	628.0	633.9	659.8
50°	4774.7	4124.1	1853.2	764.3	684.0	688.3	642.0	602.1	577.3	589.7	612.3
52.5°	5756.2	4786.0	1860.7	692.6	639.3	637.1	620.4	571.9	552.0	564.9	590.8
55°	6695.2	5355.2	1916.8	647.4	592.9	596.7	603.2	562.2	540.1	552.0	578.9
57.5°	7512.4	5804.7	1895.7	599.4	549.8	567.1	584.3	548.7	532.0	549.3	576.2
60°	8083.7	6013.3	1729.7	553.6	518.0	541.7	575.1	547.1	545.0	582.1	614.5
62.5°	8292.3	5936.3	1406.3	517.5	499.1	538.5	596.2	582.7	584.8	630.7	675.4
65°	7987.8	5530.9	1048.9	494.3	484.6	554.1	644.7	603.7	574.1	611.8	652.8
67.5°	7121.6	4810.2	766.5	474.3	467.9	578.9	689.4	601.5	546.6	584.8	618.3
70°	5761.6	3796.9	593.5	449.0	445.8	562.2	693.7	585.4	516.9	541.7	560.6
72.5°	3947.8	2599.7	491.6	424.7	407.5	498.1	658.7	549.3	481.3	495.9	511.5
75°	2206.2	1459.1	413.4	394.6	356.8	443.6	617.7	527.7	454.9	459.2	480.8
77.5°	990.2	631.2	350.9	354.7	311.0	392.4	564.4	493.2	414.5	404.8	426.4
80°	374.6	307.8	284.6	299.7	261.4	340.1	508.8	461.9	371.9	359.5	371.9
82.5°	217.2	186.5	211.3	230.7	207.5	312.6	485.7	433.4	327.7	296.5	307.2
85°	100.8	96.5	126.7	149.8	145.0	243.6	415.6	326.1	233.4	197.3	218.3
87.5°	26.4	29.6	44.7	52.8	53.9	83.5	160.1	121.3	91.1	69.0	66.3
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)