

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: P368330

Luminaire Tested: **MSA-SA4B-727-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368330
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-727-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16206 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G3

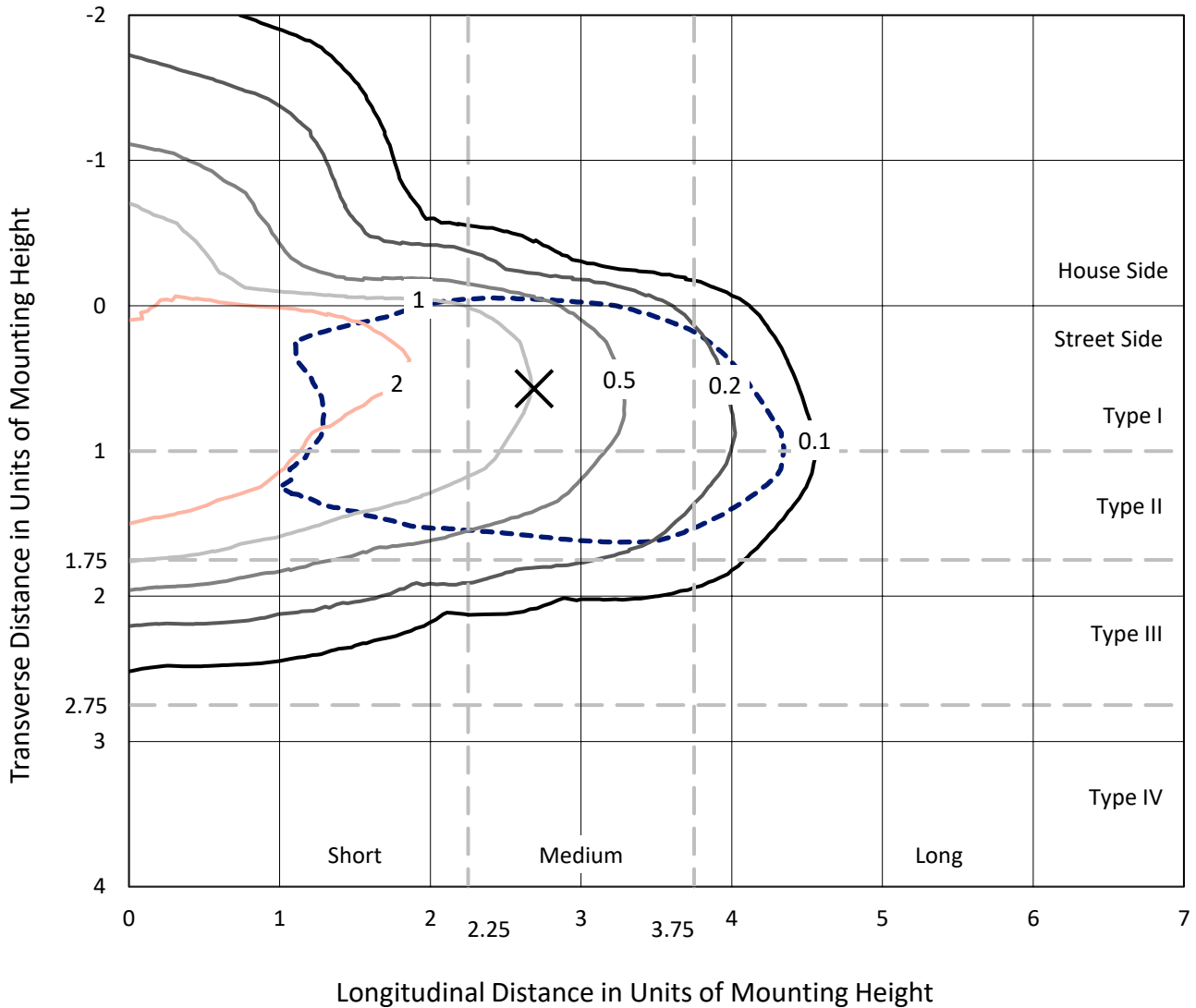
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368330
 CATALOG NUMBER: MSA-SA4B-727-U-T2

Iso-Footcandle Lines of Horizontal Illumination

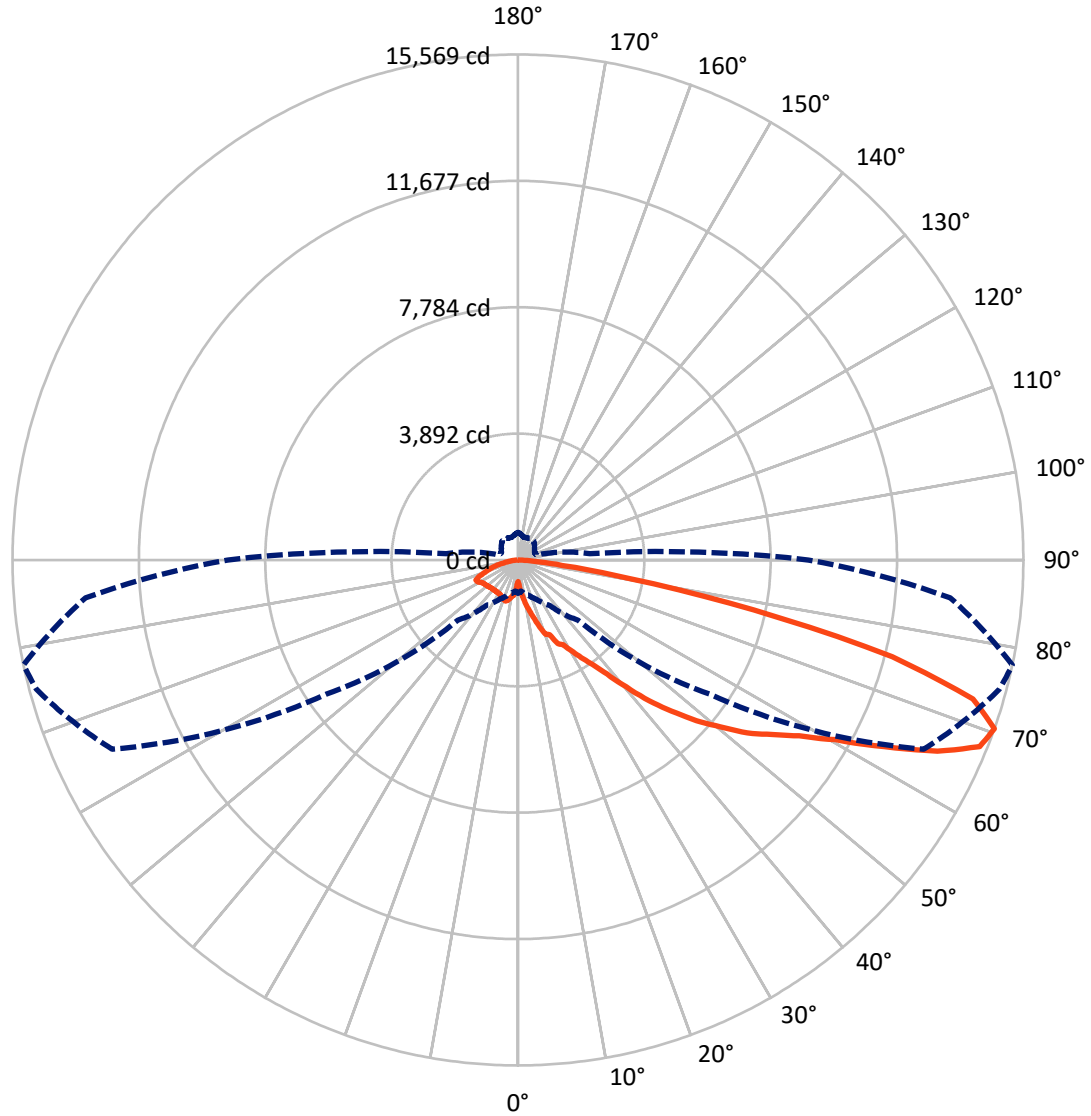
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type II - Medium - N/A

REPORT NUMBER: P368330
CATALOG NUMBER: MSA-SA4B-727-U-T2

Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2892.5	0.0	2892.5
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	13313.5	0.0	13313.5
	% Fixture	82.2	0.0	82.2
Total	Lumens	16206.0	0.0	16206.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.1	0.6
10°-20°	449.9	2.8
20°-30°	866.0	5.3
30°-40°	1458.6	9.0
40°-50°	2523.7	15.6
50°-60°	3810.5	23.5
60°-70°	4220.6	26.0
70°-80°	2433.3	15.0
80°-90°	341.3	2.1
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°	16206.0	100.0
0°-180°	16206.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368330

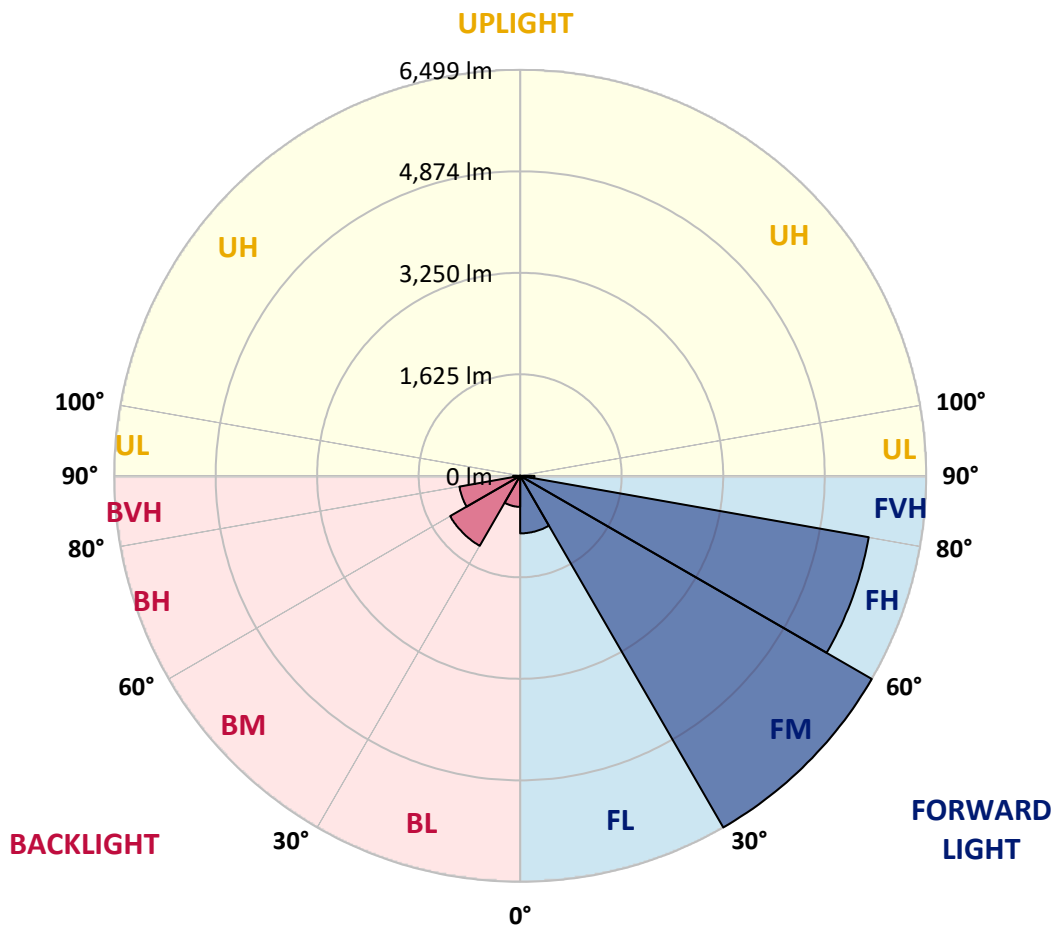
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	921.3	5.7			
FM (30°-60°)	6499.1	40.1			
FH (60°-80°)	5665.4	35.0			G3/7500
FVH (80°-90°)	227.7	1.4			G3/500
BL (0°-30°)	496.7	3.1	B1/500		
BM (30°-60°)	1293.7	8.0	B2/2500		
BH (60°-80°)	988.5	6.1	B2/1000		G2/1000
BVH (80°-90°)	113.6	0.7			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 II Medium





REPORT NUMBER: P368330

CATALOG NUMBER: MSA-SA4B-727-U-T2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	660.7	660.7	660.7	660.7	660.7	660.7	660.7	660.7	660.7	660.7	660.7
2.5°	850.6	820.2	774.2	793.1	816.1	818.8	811.4	769.5	755.3	787.1	796.5
5°	1191.7	1140.4	1109.3	1099.2	1064.7	993.1	1044.5	1018.1	1023.5	1008.0	1038.4
7.5°	1478.9	1444.4	1398.5	1385.6	1306.6	1250.5	1285.6	1274.2	1218.8	1197.1	1231.6
10°	1624.8	1587.0	1589.0	1561.3	1540.3	1545.7	1528.2	1477.5	1436.3	1407.3	1324.2
12.5°	1712.6	1722.1	1772.7	1758.6	1837.6	1902.5	1853.1	1778.2	1647.8	1621.4	1539.0
15°	1921.4	1956.5	1909.2	1930.8	1964.6	2088.9	2068.7	2052.4	1914.6	1863.3	1711.3
17.5°	2136.2	2143.0	2071.4	2059.9	2140.9	2203.8	2282.8	2191.6	2208.5	2172.7	1926.8
20°	2182.2	2228.8	2126.1	2055.1	2222.0	2346.3	2444.3	2347.7	2436.8	2446.3	2104.5
22.5°	2350.4	2294.3	2159.2	2089.6	2235.5	2388.2	2547.6	2601.7	2573.3	2493.6	2276.1
25°	2467.3	2437.5	2299.7	2222.7	2278.1	2418.6	2698.3	2839.5	2864.5	2853.7	2439.6
27.5°	2684.1	2699.0	2415.2	2436.8	2359.8	2372.7	2788.8	3155.0	2998.9	2955.7	2642.2
30°	3026.6	2960.4	2642.2	2659.8	2532.1	2510.5	2980.0	3427.3	3287.4	3235.4	2809.1
32.5°	3384.0	3390.1	3003.7	2853.7	2785.5	2763.8	2942.2	3569.8	3652.2	3584.7	3061.1
35°	3888.0	3852.9	3395.5	3198.2	2951.6	2913.8	3211.7	3983.3	4134.6	3945.4	3360.4
37.5°	4655.5	4549.4	4017.1	3561.0	3378.6	3335.4	3596.8	4354.2	4694.7	4459.6	3849.5
40°	5271.6	5056.1	4572.4	4017.1	3708.3	3761.7	3870.4	4804.1	5275.7	5143.3	4302.2
42.5°	5762.8	5571.6	4965.6	4575.1	4155.5	4089.3	4208.2	5361.5	6066.1	5936.4	4866.9
45°	6233.7	5844.5	5407.4	5056.1	4652.8	4733.2	4715.6	5930.3	7035.6	6636.3	5366.2
47.5°	6698.5	6333.0	5875.6	5403.4	4997.3	5497.9	5310.8	6353.2	7689.6	7393.6	5891.8
50°	7295.7	6893.7	6372.8	5897.9	5654.7	6020.8	5706.7	6711.3	8421.9	8074.6	6387.7
52.5°	7692.3	7301.1	6844.4	6505.2	6483.0	6341.8	6261.4	7164.6	9063.7	8852.9	6913.3
55°	7645.6	7268.7	7061.9	7099.1	7374.7	6898.4	6832.9	7835.5	9733.2	9489.3	7480.8
57.5°	7061.3	6649.8	6693.7	6914.0	7654.4	7876.0	7764.5	8552.3	10330.4	10219.6	8182.7
60°	5500.6	5289.2	5646.6	6049.2	7280.1	8162.5	8946.1	9426.5	11065.5	11242.5	9285.3
62.5°	3573.2	3290.8	3855.6	4539.3	6163.4	7973.3	10149.4	11084.4	12269.4	12671.3	10960.8
65°	1851.1	1805.8	2201.1	2829.4	4290.7	6798.5	10573.6	12823.4	13732.7	14200.9	12561.2
67.5°	1345.8	1262.0	1445.1	1814.6	2619.3	4635.9	9769.7	14153.6	14907.5	15336.5	13491.5
70°	1024.9	962.7	1102.6	1331.6	1710.6	2618.6	7211.9	13790.8	15360.9	15568.9	13367.9
72.5°	767.5	714.1	836.4	1049.9	1318.1	1474.1	4263.0	11339.1	14587.3	14658.3	11997.8
75°	612.8	571.5	624.2	828.9	1074.2	1003.2	2264.6	8215.2	11851.9	11912.7	9164.4
77.5°	502.6	467.5	489.1	621.5	835.7	754.6	1123.5	5225.7	7524.7	7431.5	5156.1
80°	410.1	379.7	389.8	449.3	636.4	563.4	631.0	2726.0	3589.4	3444.8	2144.3
82.5°	315.5	289.8	310.1	330.4	460.8	404.7	368.2	1240.4	1470.1	1369.4	786.4
85°	211.5	187.8	269.6	247.9	301.3	248.6	201.3	493.9	547.9	510.7	276.3
87.5°	58.1	54.7	90.5	123.6	123.6	93.9	73.6	119.6	152.7	133.8	64.9
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: P368330
 CATALOG NUMBER: MSA-SA4B-727-U-T2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	660.7	660.7	660.7	660.7	660.7	660.7	660.7	660.7	660.7	660.7	660.7
2.5°	800.6	785.7	746.5	743.1	752.6	754.0	747.9	733.7	726.3	766.8	760.7
5°	1030.9	978.3	946.5	917.4	876.9	847.9	855.3	875.6	882.3	912.7	916.1
7.5°	1210.0	1140.4	1070.8	977.6	916.1	876.9	906.6	928.3	945.1	988.4	1006.0
10°	1287.7	1212.0	1113.4	1015.4	998.5	1005.3	988.4	993.8	1020.1	1022.2	1030.9
12.5°	1432.2	1346.4	1168.8	1080.3	1075.5	1089.7	1083.6	1108.6	1126.9	1176.2	1155.3
15°	1570.7	1461.3	1210.7	1120.1	1100.5	1128.9	1162.0	1203.9	1243.1	1289.7	1266.1
17.5°	1739.0	1574.1	1212.7	1101.9	1105.3	1166.1	1200.5	1223.5	1340.4	1404.5	1372.1
20°	1845.0	1585.6	1167.4	1056.6	1105.3	1160.0	1208.0	1232.9	1364.0	1460.6	1482.9
22.5°	1941.0	1589.7	1132.3	1032.3	1063.4	1135.7	1208.0	1263.4	1347.1	1439.7	1443.1
25°	1993.7	1586.3	1087.0	1034.3	1062.7	1098.5	1162.7	1213.4	1275.5	1404.5	1407.9
27.5°	2128.8	1542.4	1042.4	1042.4	1057.3	1058.6	1140.4	1170.1	1178.9	1296.5	1317.4
30°	2168.0	1551.8	1037.0	1041.1	1048.5	1035.0	1070.8	1090.4	1103.2	1204.6	1208.0
32.5°	2230.8	1476.2	1053.2	1028.9	1019.5	1017.4	1026.2	1043.8	1049.2	1111.3	1122.8
35°	2307.1	1445.8	1058.6	1025.5	1006.6	996.5	1022.8	1001.2	1018.1	1091.1	1099.2
37.5°	2555.8	1403.9	1086.3	1025.5	1001.2	989.7	976.9	987.0	1047.2	1117.4	1160.7
40°	2714.5	1416.7	1079.6	1035.7	983.0	972.2	950.6	987.7	1080.9	1205.3	1237.7
42.5°	2992.9	1424.1	1087.7	1030.9	989.1	947.2	961.4	1001.9	1099.9	1170.8	1220.8
45°	3280.7	1447.1	1082.3	1016.8	975.6	995.1	975.6	1012.0	1058.6	1060.7	1098.5
47.5°	3563.1	1539.7	1070.8	987.7	972.2	1023.5	973.5	979.6	983.0	995.1	1039.7
50°	3894.8	1638.3	1054.6	947.2	976.9	1024.9	981.0	951.2	947.9	987.7	1037.7
52.5°	4271.7	1749.8	1033.7	908.0	949.2	1012.0	1006.6	953.3	924.2	962.7	1012.7
55°	4715.6	1876.8	1009.3	868.8	918.8	1013.4	1020.8	939.1	924.9	966.8	1020.1
57.5°	5305.4	2060.5	962.0	812.1	881.6	992.4	984.3	922.9	909.3	953.9	1009.3
60°	6312.0	2413.9	894.5	756.0	841.8	941.1	954.6	893.8	880.3	929.6	987.7
62.5°	7659.8	2838.8	812.7	701.3	793.1	885.7	917.4	851.9	850.6	913.4	974.2
65°	8914.4	3080.0	728.3	651.3	743.1	834.4	875.6	812.7	815.4	894.5	955.3
67.5°	9436.0	2796.3	652.6	606.7	685.7	775.6	841.1	782.3	773.5	868.8	924.9
70°	8946.1	2221.3	587.1	559.4	620.9	712.1	793.1	741.8	721.5	808.0	851.9
72.5°	7915.9	1851.8	525.6	504.0	564.1	645.2	728.3	687.1	660.7	726.9	766.1
75°	6187.7	1519.4	455.3	449.3	499.3	584.4	660.7	632.4	598.6	640.5	679.6
77.5°	3523.2	961.4	382.4	386.4	422.2	512.1	579.7	557.4	522.9	540.5	585.7
80°	1410.0	485.1	307.4	310.1	340.5	420.9	480.3	472.2	436.4	450.6	481.7
82.5°	527.0	266.2	227.0	228.3	258.8	333.1	410.1	406.0	372.2	362.1	379.7
85°	209.4	131.7	139.2	145.3	174.3	239.8	329.0	291.9	252.0	220.9	231.7
87.5°	50.0	41.9	48.6	51.3	56.7	75.0	120.3	96.6	99.3	79.7	59.5
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)