

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: P596760

Luminaire Tested: **MSA-SA4A-827-U-T4W**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596760
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-827-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: 11556 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

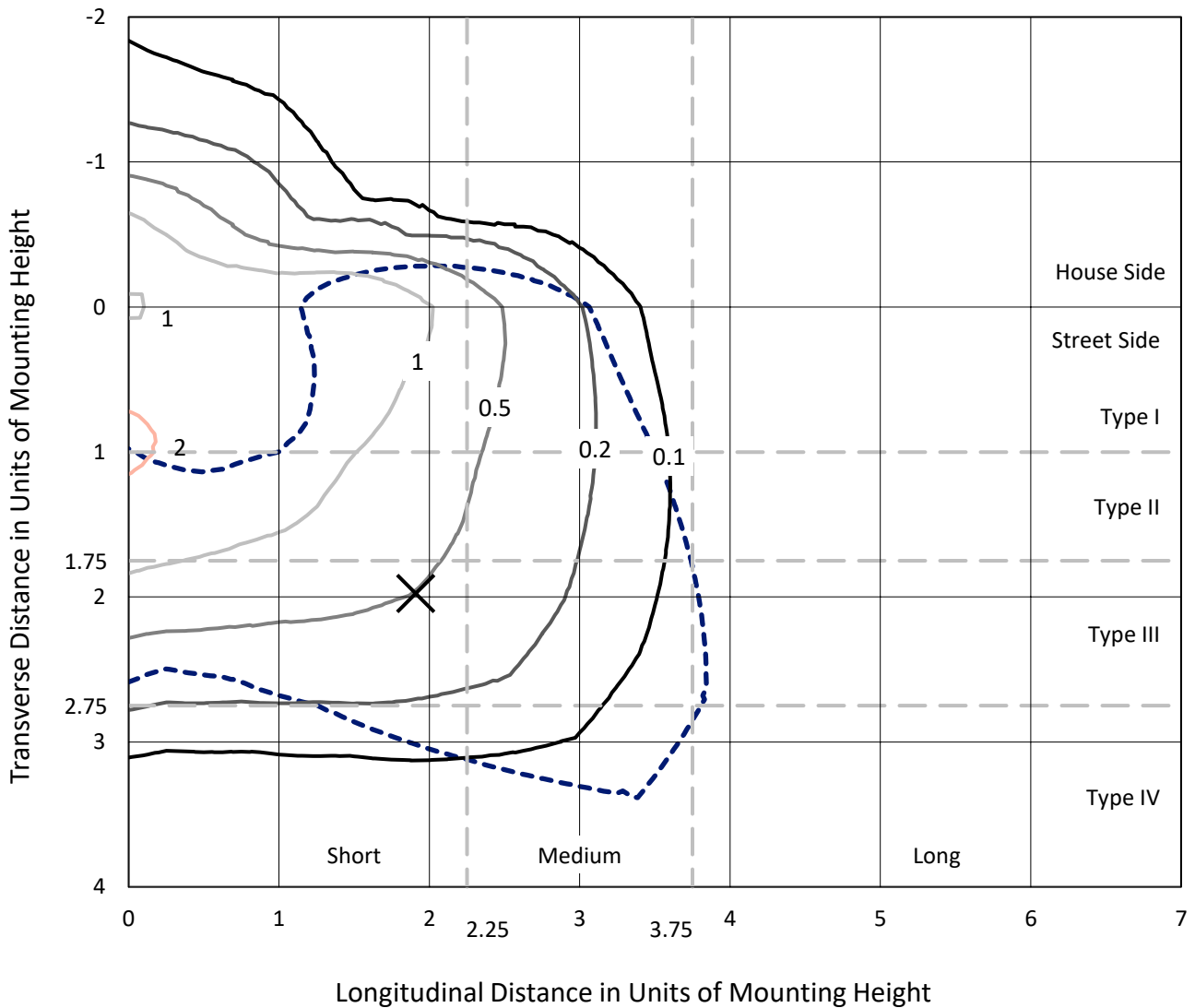
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

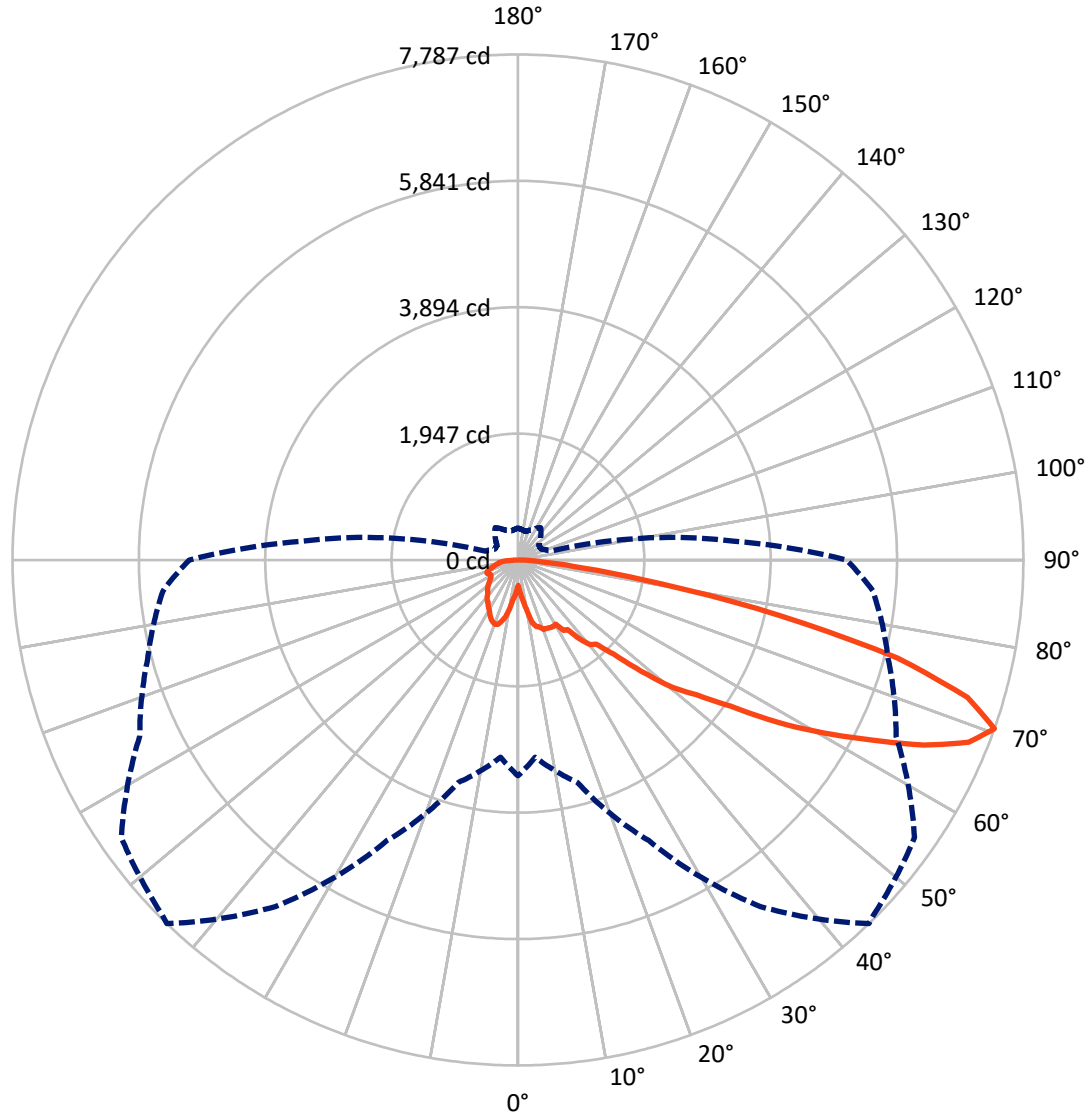
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc
 Type IV - Short - N/A

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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	2549.7	0.0	2549.7
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	9006.3	0.0	9006.3
	% Fixture	77.9	0.0	77.9
Total	Lumens	11556.0	0.0	11556.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.6	0.5
10°-20°	283.6	2.5
20°-30°	530.0	4.6
30°-40°	850.7	7.4
40°-50°	1435.9	12.4
50°-60°	2558.8	22.1
60°-70°	3500.1	30.3
70°-80°	2058.2	17.8
80°-90°	277.1	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°	11556.0	100.0
0°-180°	11556.0	100.0

Coefficient of Utilization

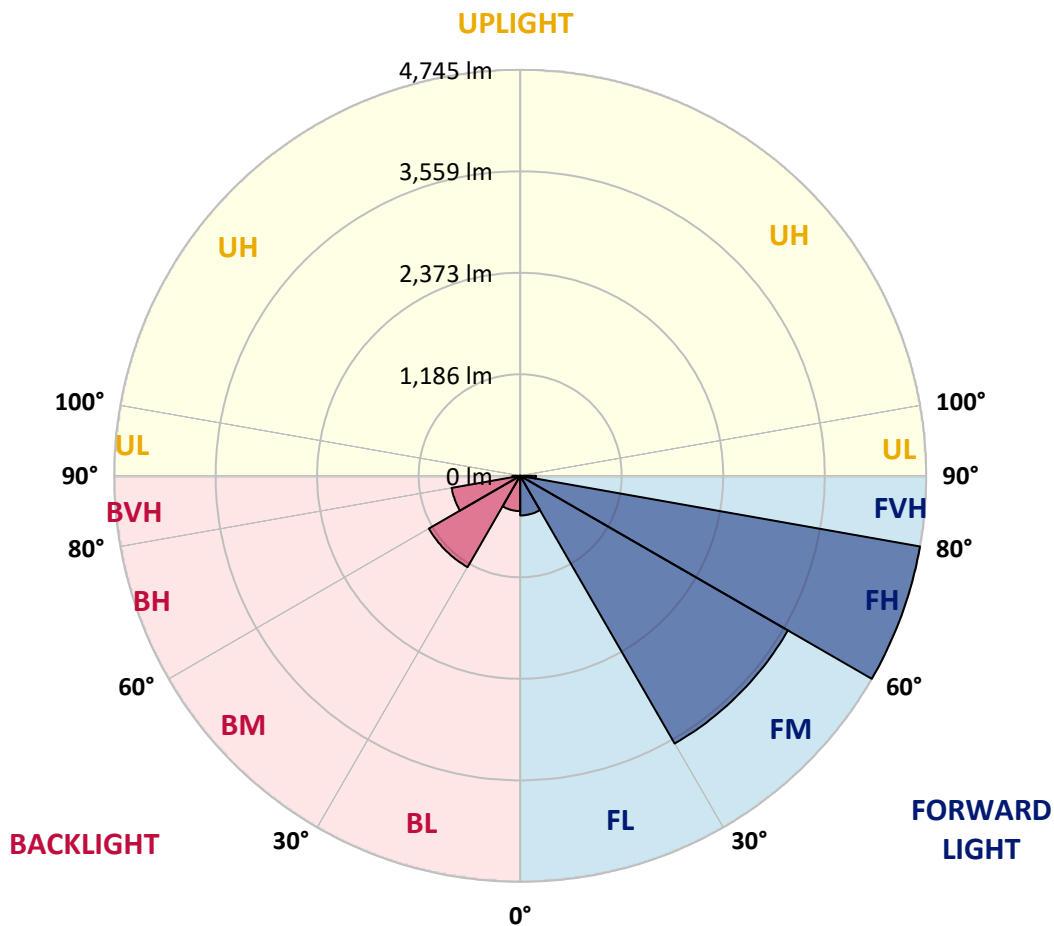


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	463.1	4.0			
FM (30°-60°)	3613.2	31.3			
FH (60°-80°)	4745.2	41.1			G2/5000
FVH (80°-90°)	184.7	1.6			G2/225
BL (0°-30°)	412.1	3.6	B1/500		
BM (30°-60°)	1232.1	10.7	B2/2500		
BH (60°-80°)	813.1	7.0	B2/1000		G2/1000
BVH (80°-90°)	92.4	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8
2.5°	476.7	467.2	444.5	452.0	461.5	465.3	464.4	463.4	448.7	443.5	469.6
5°	647.7	626.9	610.3	603.7	581.9	564.8	554.4	581.9	577.6	584.7	602.7
7.5°	808.8	795.6	758.1	744.9	700.3	670.9	667.6	689.4	695.1	683.7	714.5
10°	912.6	889.8	882.3	850.5	819.7	815.0	812.1	802.2	788.5	787.5	760.0
12.5°	993.1	1005.0	1011.1	974.7	975.6	992.7	983.7	943.4	920.2	879.4	882.7
15°	1137.7	1154.7	1105.9	1082.7	1038.2	1063.7	1060.4	1026.8	1023.5	996.9	966.1
17.5°	1263.7	1271.3	1189.8	1136.7	1121.6	1084.6	1094.5	1095.5	1051.9	1099.3	1071.8
20°	1274.1	1301.1	1207.3	1101.7	1147.1	1142.4	1143.8	1134.3	1077.0	1155.2	1144.8
22.5°	1325.3	1284.1	1199.7	1122.5	1134.3	1141.5	1148.1	1136.7	1133.4	1177.0	1208.7
25°	1315.8	1302.6	1217.3	1151.9	1153.3	1154.7	1158.0	1192.2	1188.4	1247.6	1264.2
27.5°	1404.4	1384.1	1222.5	1206.4	1169.4	1161.4	1138.6	1209.7	1265.1	1263.7	1355.1
30°	1573.1	1552.3	1343.8	1296.9	1230.1	1147.6	1191.2	1286.0	1329.6	1344.3	1460.3
32.5°	1836.6	1870.7	1582.6	1393.5	1310.6	1292.6	1287.9	1278.4	1386.4	1458.9	1564.6
35°	2214.7	2187.7	1864.0	1600.6	1395.4	1318.2	1328.6	1386.4	1514.8	1561.7	1659.3
37.5°	2647.8	2591.8	2224.6	1835.1	1639.9	1543.3	1508.7	1564.6	1593.0	1630.0	1829.5
40°	3087.9	2951.5	2578.6	2143.6	1786.8	1713.8	1683.5	1614.8	1681.6	1756.5	2010.0
42.5°	3513.0	3407.3	2963.8	2511.8	2034.1	1774.0	1757.4	1690.1	1897.2	1976.3	2270.6
45°	3958.4	3713.4	3358.5	2927.3	2395.7	2069.2	2044.6	1923.7	2189.1	2354.0	2638.3
47.5°	4257.8	4030.9	3720.0	3264.7	2698.5	2562.9	2516.0	2309.4	2550.1	2764.3	3206.4
50°	4541.2	4307.6	3981.1	3633.8	3246.7	3090.8	2990.8	2646.8	2999.8	3348.5	3934.7
52.5°	4946.8	4737.8	4284.4	4005.7	3835.6	3452.3	3377.9	3188.9	3525.8	3996.3	4730.7
55°	5380.3	5095.5	4684.7	4530.3	4461.6	3970.7	3910.0	3789.7	4226.1	4659.2	5504.5
57.5°	5571.7	5274.7	5048.2	4955.8	4950.1	4724.1	4654.4	4570.5	4942.0	5227.7	6232.7
60°	5723.8	5405.0	5314.5	5366.1	5553.7	5405.0	5314.5	5240.5	5524.8	5789.7	6826.9
62.5°	5695.9	5376.1	5422.5	5579.8	6058.8	6102.4	6032.8	5853.7	6102.4	6250.3	7167.6
65°	5244.8	4949.1	5219.7	5593.1	6528.4	6876.7	6872.9	6404.3	6490.5	6490.5	7131.6
67.5°	4454.5	4148.4	4591.4	5476.0	6853.0	7490.3	7491.2	6988.0	6526.0	6466.3	6574.4
70°	3326.3	3049.1	3547.1	4769.1	6518.0	7787.4	7744.3	7459.0	6428.4	5906.7	5491.7
72.5°	1986.8	1807.7	2265.8	3471.7	5559.9	7241.0	7355.7	6916.5	5884.9	4912.2	3925.7
75°	902.2	824.5	1064.7	1994.3	3969.3	6039.9	6164.5	5837.1	4674.3	3532.9	2268.7
77.5°	386.2	365.3	464.8	884.6	2188.6	4130.4	4385.8	4171.6	3167.1	2053.1	1003.6
80°	248.3	235.0	285.7	425.5	1016.4	2231.7	2451.6	2371.5	1613.4	798.4	353.5
82.5°	148.3	144.0	191.0	267.2	554.4	982.2	1106.9	1136.2	670.0	358.2	202.3
85°	81.0	82.0	104.7	162.0	332.6	382.4	409.4	445.4	315.6	207.5	98.1
87.5°	27.0	31.3	42.2	65.9	118.5	108.0	108.5	126.0	133.1	86.2	31.3
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°	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8	392.8
2.5°	473.8	465.3	443.5	444.9	453.0	454.9	457.2	443.5	440.7	466.7	469.1
5°	605.6	577.6	564.8	560.5	548.2	544.0	566.7	577.1	587.5	607.9	617.9
7.5°	711.2	679.9	656.7	635.4	617.4	607.0	645.4	674.7	692.7	734.4	753.4
10°	759.5	732.5	724.0	707.0	720.7	752.0	759.1	760.0	799.8	798.9	806.9
12.5°	855.7	838.2	810.2	816.4	852.4	884.6	875.6	889.4	903.6	937.7	922.1
15°	943.4	938.7	912.6	916.9	924.0	964.2	969.5	983.2	1005.0	1032.0	1013.5
17.5°	1051.4	1049.5	986.0	980.4	996.9	1036.3	1023.9	999.8	1071.8	1100.7	1093.1
20°	1124.9	1110.7	1029.2	1005.0	1047.2	1052.4	1038.2	999.8	1062.3	1125.3	1142.4
22.5°	1186.0	1169.4	1085.5	1038.2	1029.6	1032.0	1032.0	1024.9	1055.7	1107.3	1106.9
25°	1235.3	1250.9	1144.3	1098.8	1053.3	996.5	989.4	995.5	1013.0	1112.5	1109.2
27.5°	1358.9	1315.8	1164.2	1130.1	1036.7	947.2	966.6	976.1	981.8	1090.8	1108.8
30°	1439.5	1452.8	1235.3	1148.6	1012.6	892.2	898.9	926.3	959.5	1088.4	1093.6
32.5°	1548.0	1519.6	1346.1	1117.8	948.1	859.1	846.7	883.7	933.0	1050.0	1064.2
35°	1648.9	1682.6	1393.1	1112.1	903.1	809.3	822.6	835.4	886.5	1007.4	1023.9
37.5°	1885.8	1809.1	1524.8	1084.6	865.7	784.2	770.0	789.4	833.0	926.3	964.7
40°	2065.9	2070.6	1553.2	1050.0	794.1	748.2	717.8	737.3	755.8	830.1	846.7
42.5°	2403.7	2300.4	1622.9	974.2	749.1	694.2	677.1	685.6	688.5	719.7	747.2
45°	2833.5	2591.4	1650.3	872.3	689.9	671.9	637.3	633.0	617.4	621.7	645.8
47.5°	3428.1	3045.3	1630.4	763.8	637.3	643.0	593.2	573.8	552.0	557.2	580.0
50°	4197.2	3625.3	1629.0	671.9	601.3	605.1	564.3	529.3	507.5	518.4	538.3
52.5°	5060.0	4207.1	1635.7	608.9	562.0	560.1	545.4	502.7	485.2	496.6	519.3
55°	5885.4	4707.5	1684.9	569.1	521.2	524.5	530.2	494.2	474.8	485.2	508.9
57.5°	6603.7	5102.7	1666.5	526.9	483.3	498.5	513.6	482.4	467.7	482.8	506.5
60°	7106.0	5286.0	1520.5	486.6	455.3	476.2	505.6	480.9	479.0	511.7	540.2
62.5°	7289.4	5218.3	1236.2	454.9	438.8	473.4	524.1	512.2	514.1	554.4	593.7
65°	7021.7	4862.0	922.1	434.5	426.0	487.1	566.7	530.7	504.6	537.8	573.8
67.5°	6260.2	4228.4	673.8	417.0	411.3	508.9	606.0	528.8	480.5	514.1	543.5
70°	5064.8	3337.6	521.7	394.7	391.9	494.2	609.8	514.6	454.4	476.2	492.8
72.5°	3470.3	2285.3	432.1	373.4	358.2	437.8	579.0	482.8	423.1	435.9	449.7
75°	1939.4	1282.7	363.4	346.8	313.7	390.0	543.0	463.9	399.9	403.7	422.7
77.5°	870.4	554.9	308.5	311.8	273.4	344.9	496.1	433.6	364.4	355.8	374.8
80°	329.3	270.6	250.2	263.4	229.8	299.0	447.3	406.1	326.9	316.0	326.9
82.5°	191.0	163.9	185.7	202.8	182.4	274.8	426.9	381.0	288.1	260.6	270.1
85°	88.6	84.8	111.3	131.7	127.5	214.2	365.3	286.7	205.2	173.4	191.9
87.5°	23.2	26.1	39.3	46.4	47.4	73.4	140.7	106.6	80.1	60.7	58.3
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)