

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: P368440

Luminaire Tested: **MSA-SA4B-830-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368440
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-830-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: 15399 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G3

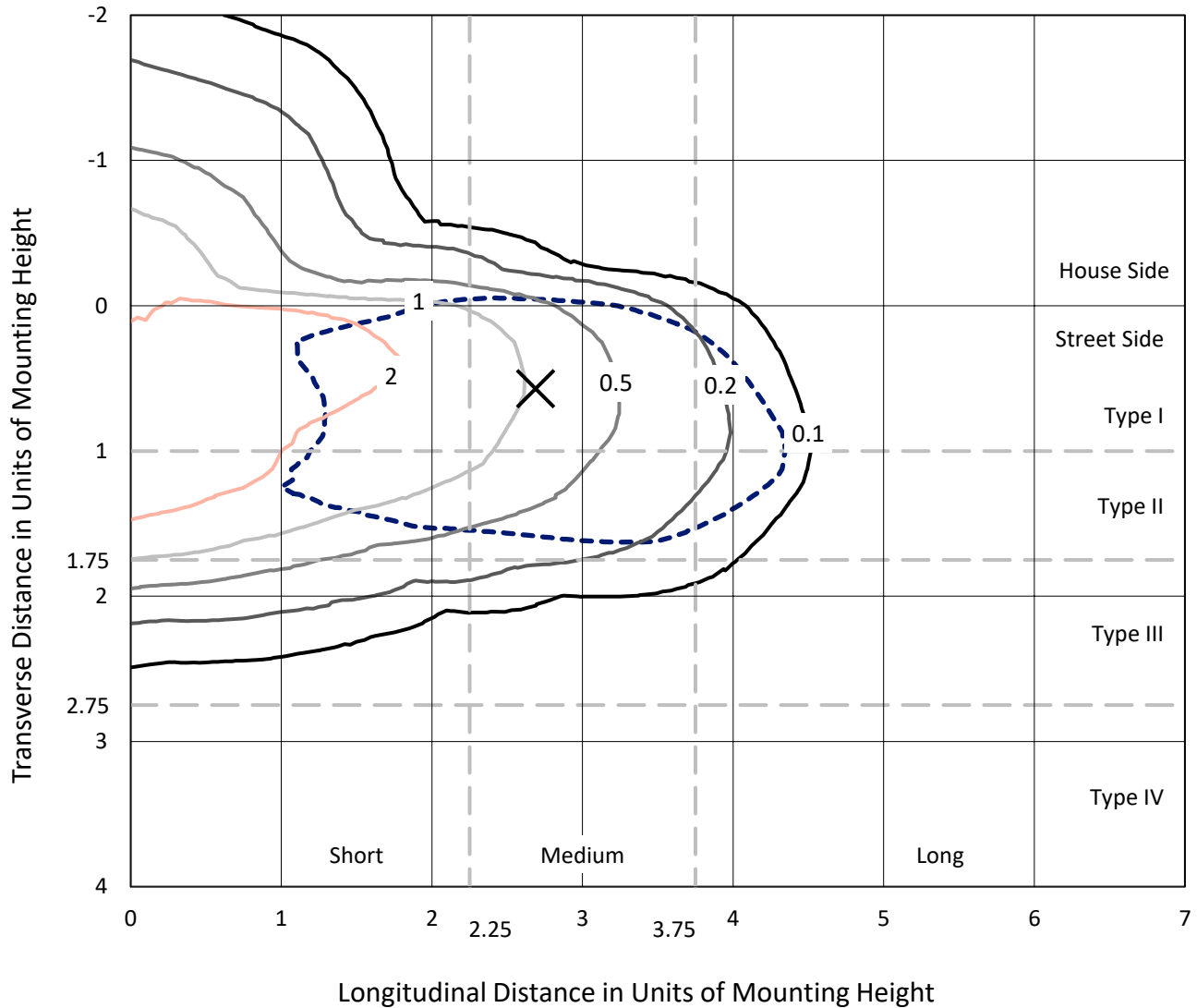
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

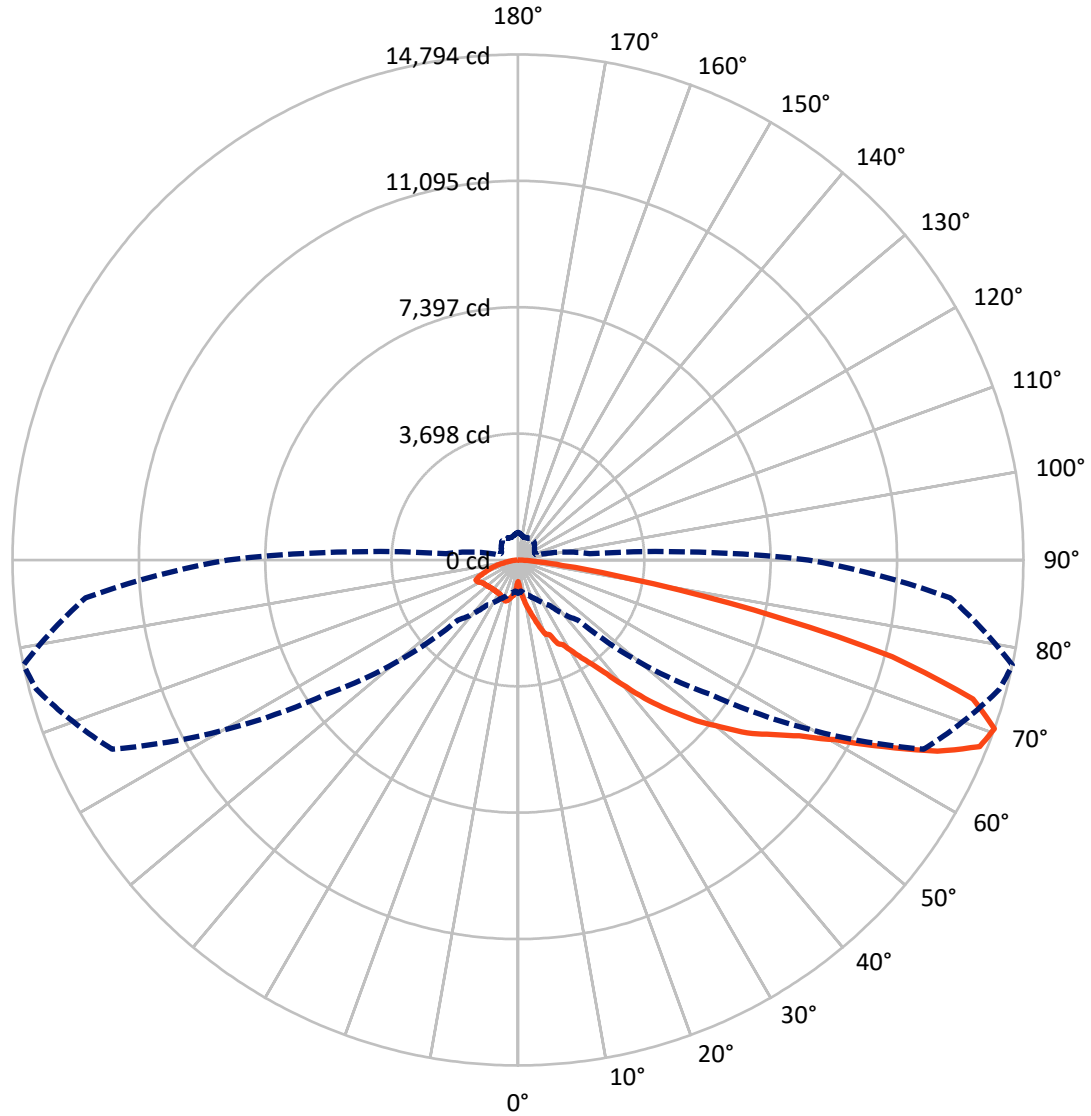
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc
 Type II - Medium - N/A

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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	2748.5	0.0	2748.5
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	12650.5	0.0	12650.5
	% Fixture	82.2	0.0	82.2
Total	Lumens	15399.0	0.0	15399.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.0	0.6
10°-20°	427.5	2.8
20°-30°	822.8	5.3
30°-40°	1385.9	9.0
40°-50°	2398.1	15.6
50°-60°	3620.8	23.5
60°-70°	4010.4	26.0
70°-80°	2312.2	15.0
80°-90°	324.3	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°	15399.0	100.0
0°-180°	15399.0	100.0

Coefficient of Utilization

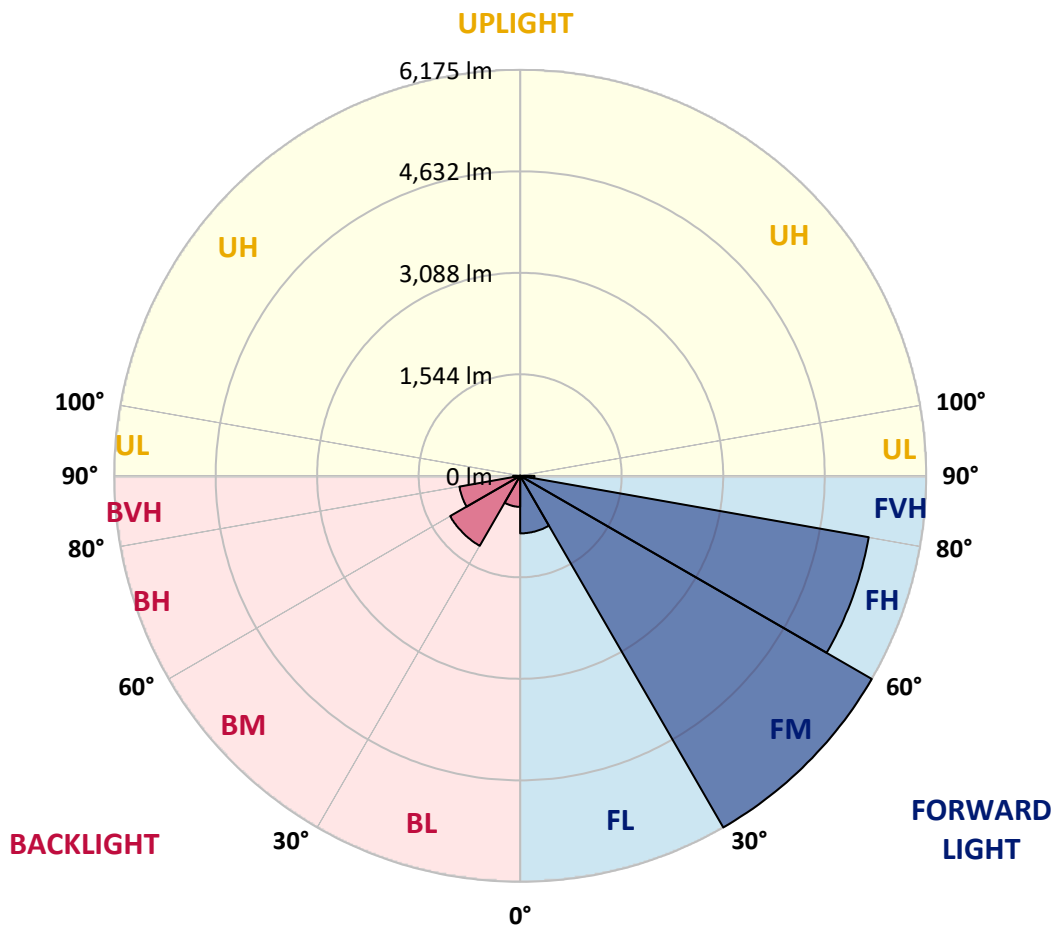


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	875.4	5.7			
FM (30°-60°)	6175.5	40.1			
FH (60°-80°)	5383.3	35.0			G3/7500
FVH (80°-90°)	216.3	1.4			G2/225
BL (0°-30°)	471.9	3.1	B1/500		
BM (30°-60°)	1229.3	8.0	B2/2500		
BH (60°-80°)	939.3	6.1	B2/1000		G2/1000
BVH (80°-90°)	108.0	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	627.8	627.8	627.8	627.8	627.8	627.8	627.8	627.8	627.8	627.8	627.8
2.5°	808.2	779.3	735.7	753.6	775.5	778.0	771.0	731.2	717.7	747.9	756.9
5°	1132.4	1083.6	1054.1	1044.4	1011.7	943.7	992.5	967.4	972.5	957.8	986.7
7.5°	1405.2	1372.5	1328.8	1316.6	1241.5	1188.2	1221.6	1210.7	1158.1	1137.5	1170.3
10°	1543.9	1507.9	1509.9	1483.5	1463.6	1468.8	1452.1	1403.9	1364.8	1337.2	1258.2
12.5°	1627.3	1636.3	1684.5	1671.0	1746.1	1807.7	1760.9	1689.6	1565.7	1540.7	1462.4
15°	1825.7	1859.1	1814.1	1834.7	1866.8	1984.9	1965.6	1950.2	1819.3	1770.5	1626.1
17.5°	2029.8	2036.3	1968.2	1957.3	2034.3	2094.0	2169.1	2082.5	2098.5	2064.5	1830.8
20°	2073.5	2117.8	2020.2	1952.8	2111.4	2229.5	2322.6	2230.8	2315.5	2324.5	1999.7
22.5°	2233.3	2180.1	2051.7	1985.5	2124.2	2269.3	2420.8	2472.1	2445.2	2369.4	2162.7
25°	2344.4	2316.1	2185.2	2112.0	2164.6	2298.2	2563.9	2698.1	2721.9	2711.6	2318.1
27.5°	2550.5	2564.6	2295.0	2315.5	2242.3	2254.5	2650.0	2997.9	2849.6	2808.5	2510.7
30°	2875.9	2813.0	2510.7	2527.3	2406.0	2385.5	2831.6	3256.6	3123.7	3074.3	2669.2
32.5°	3215.5	3221.3	2854.1	2711.6	2646.7	2626.2	2795.7	3392.0	3470.4	3406.2	2908.7
35°	3694.4	3661.0	3226.4	3039.0	2804.7	2768.7	3051.8	3784.9	3928.7	3749.0	3193.0
37.5°	4423.7	4322.9	3817.0	3383.7	3210.4	3169.3	3417.7	4137.3	4460.9	4237.5	3657.8
40°	5009.1	4804.3	4344.7	3817.0	3523.6	3574.4	3677.7	4564.9	5013.0	4887.1	4087.9
42.5°	5475.8	5294.1	4718.3	4347.3	3948.6	3885.7	3998.7	5094.5	5764.0	5640.8	4624.6
45°	5923.2	5553.5	5138.1	4804.3	4421.1	4497.5	4480.8	5635.0	6685.2	6305.8	5099.0
47.5°	6364.9	6017.6	5583.0	5134.3	4748.5	5224.2	5046.3	6036.9	7306.6	7025.5	5598.4
50°	6932.4	6550.4	6055.5	5604.2	5373.1	5721.0	5422.5	6377.1	8002.5	7672.6	6069.6
52.5°	7309.2	6937.5	6503.6	6181.3	6160.1	6026.0	5949.6	6807.8	8612.4	8412.1	6569.0
55°	7264.9	6906.7	6710.3	6745.6	7007.5	6554.9	6492.7	7445.3	9248.5	9016.8	7108.3
57.5°	6709.6	6318.7	6360.4	6569.7	7273.3	7483.8	7377.9	8126.4	9816.0	9710.7	7775.3
60°	5226.7	5025.8	5365.4	5748.0	6917.6	7756.0	8500.7	8957.1	10514.5	10682.6	8822.9
62.5°	3395.3	3126.9	3663.6	4313.2	5856.5	7576.3	9644.0	10532.4	11658.4	12040.4	10414.9
65°	1758.9	1715.9	2091.5	2688.5	4077.0	6459.9	10047.1	12184.8	13048.9	13493.7	11935.7
67.5°	1278.8	1199.2	1373.1	1724.3	2488.8	4405.0	9283.2	13448.8	14165.2	14572.8	12819.7
70°	973.8	914.8	1047.7	1265.3	1625.4	2488.2	6852.8	13104.1	14596.0	14793.7	12702.2
72.5°	729.3	678.5	794.7	997.6	1252.4	1400.7	4050.7	10774.4	13860.9	13928.3	11400.3
75°	582.2	543.1	593.2	787.7	1020.7	953.3	2151.8	7806.1	11261.7	11319.5	8708.0
77.5°	477.6	444.2	464.8	590.6	794.1	717.1	1067.6	4965.5	7150.0	7061.4	4899.3
80°	389.7	360.8	370.4	426.9	604.7	535.4	599.6	2590.3	3410.7	3273.3	2037.5
82.5°	299.8	275.4	294.7	313.9	437.8	384.5	349.9	1178.6	1396.9	1301.2	747.2
85°	200.9	178.5	256.1	235.6	286.3	236.2	191.3	469.3	520.6	485.3	262.6
87.5°	55.2	52.0	86.0	117.5	117.5	89.2	70.0	113.6	145.1	127.1	61.6
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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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	627.8	627.8	627.8	627.8	627.8	627.8	627.8	627.8	627.8	627.8	627.8
2.5°	760.7	746.6	709.4	706.1	715.1	716.4	710.6	697.2	690.1	728.6	722.8
5°	979.6	929.5	899.4	871.8	833.2	805.6	812.7	832.0	838.4	867.3	870.5
7.5°	1149.7	1083.6	1017.5	928.9	870.5	833.2	861.5	882.0	898.1	939.2	955.9
10°	1223.6	1151.7	1057.9	964.8	948.8	955.2	939.2	944.3	969.3	971.3	979.6
12.5°	1360.9	1279.4	1110.6	1026.5	1022.0	1035.5	1029.7	1053.4	1070.8	1117.6	1097.7
15°	1492.5	1388.5	1150.4	1064.3	1045.7	1072.7	1104.1	1143.9	1181.2	1225.5	1203.0
17.5°	1652.4	1495.7	1152.3	1047.0	1050.2	1108.0	1140.7	1162.6	1273.6	1334.6	1303.8
20°	1753.2	1506.6	1109.3	1004.0	1050.2	1102.2	1147.8	1171.6	1296.1	1387.9	1409.1
22.5°	1844.3	1510.5	1075.9	980.9	1010.4	1079.1	1147.8	1200.4	1280.0	1368.0	1371.2
25°	1894.4	1507.3	1032.9	982.8	1009.8	1043.8	1104.8	1152.9	1212.0	1334.6	1337.8
27.5°	2022.8	1465.6	990.5	990.5	1004.6	1005.9	1083.6	1111.9	1120.2	1231.9	1251.8
30°	2060.0	1474.6	985.4	989.2	996.3	983.5	1017.5	1036.1	1048.3	1144.6	1147.8
32.5°	2119.7	1402.7	1000.8	977.7	968.7	966.8	975.1	991.8	996.9	1056.0	1066.9
35°	2192.2	1373.8	1005.9	974.5	956.5	946.9	971.9	951.4	967.4	1036.7	1044.4
37.5°	2428.5	1334.0	1032.3	974.5	951.4	940.5	928.3	937.9	995.0	1061.8	1102.9
40°	2579.3	1346.2	1025.8	984.1	934.0	923.8	903.2	938.5	1027.1	1145.2	1176.0
42.5°	2843.8	1353.2	1033.5	979.6	939.8	900.0	913.5	952.0	1045.1	1112.5	1160.0
45°	3117.3	1375.1	1028.4	966.1	927.0	945.6	927.0	961.6	1005.9	1007.9	1043.8
47.5°	3385.6	1463.0	1017.5	938.5	923.8	972.5	925.0	930.8	934.0	945.6	988.0
50°	3700.8	1556.7	1002.1	900.0	928.3	973.8	932.1	903.9	900.7	938.5	986.0
52.5°	4059.0	1662.6	982.2	862.8	901.9	961.6	956.5	905.8	878.2	914.8	962.3
55°	4480.8	1783.3	959.1	825.5	873.0	962.9	970.0	892.3	878.8	918.6	969.3
57.5°	5041.2	1957.9	914.1	771.6	837.7	943.0	935.3	876.9	864.1	906.4	959.1
60°	5997.7	2293.7	849.9	718.3	799.9	894.2	907.1	849.3	836.5	883.3	938.5
62.5°	7278.4	2697.5	772.3	666.3	753.6	841.6	871.8	809.5	808.2	867.9	925.7
65°	8470.5	2926.6	692.0	618.8	706.1	792.8	832.0	772.3	774.8	849.9	907.7
67.5°	8966.1	2657.0	620.1	576.5	651.6	737.0	799.2	743.4	735.0	825.5	878.8
70°	8500.7	2110.7	557.9	531.5	589.9	676.6	753.6	704.9	685.6	767.8	809.5
72.5°	7521.7	1759.6	499.4	478.9	536.0	613.1	692.0	652.9	627.8	690.7	728.0
75°	5879.6	1443.7	432.7	426.9	474.4	555.3	627.8	600.9	568.8	608.6	645.8
77.5°	3347.8	913.5	363.3	367.2	401.2	486.6	550.8	529.6	496.9	513.6	556.6
80°	1339.7	460.9	292.1	294.7	323.5	399.9	456.4	448.7	414.7	428.2	457.7
82.5°	500.7	252.9	215.7	217.0	245.9	316.5	389.7	385.8	353.7	344.1	360.8
85°	199.0	125.2	132.2	138.0	165.6	227.9	312.6	277.3	239.4	209.9	220.2
87.5°	47.5	39.8	46.2	48.8	53.9	71.3	114.3	91.8	94.4	75.7	56.5
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)