

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: P368572

Luminaire Tested: **MSA-SA4C-830-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368572  
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-SA4C-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: 19071 lumens  
Efficiency: N/A  
Efficacy: 84.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3

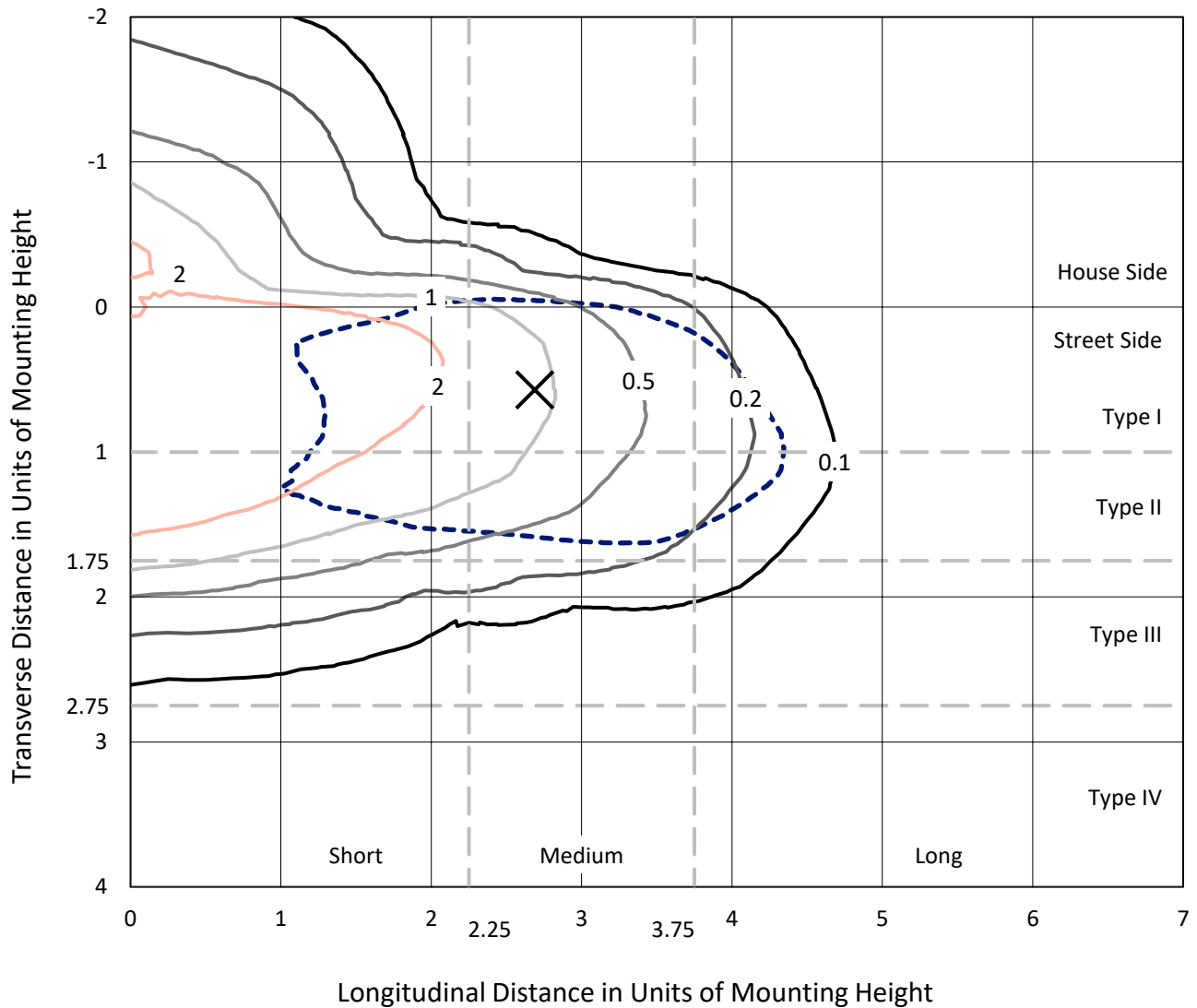
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P368572  
 CATALOG NUMBER: MSA-SA4C-830-U-T2

### Iso-Footcandle Lines of Horizontal Illumination

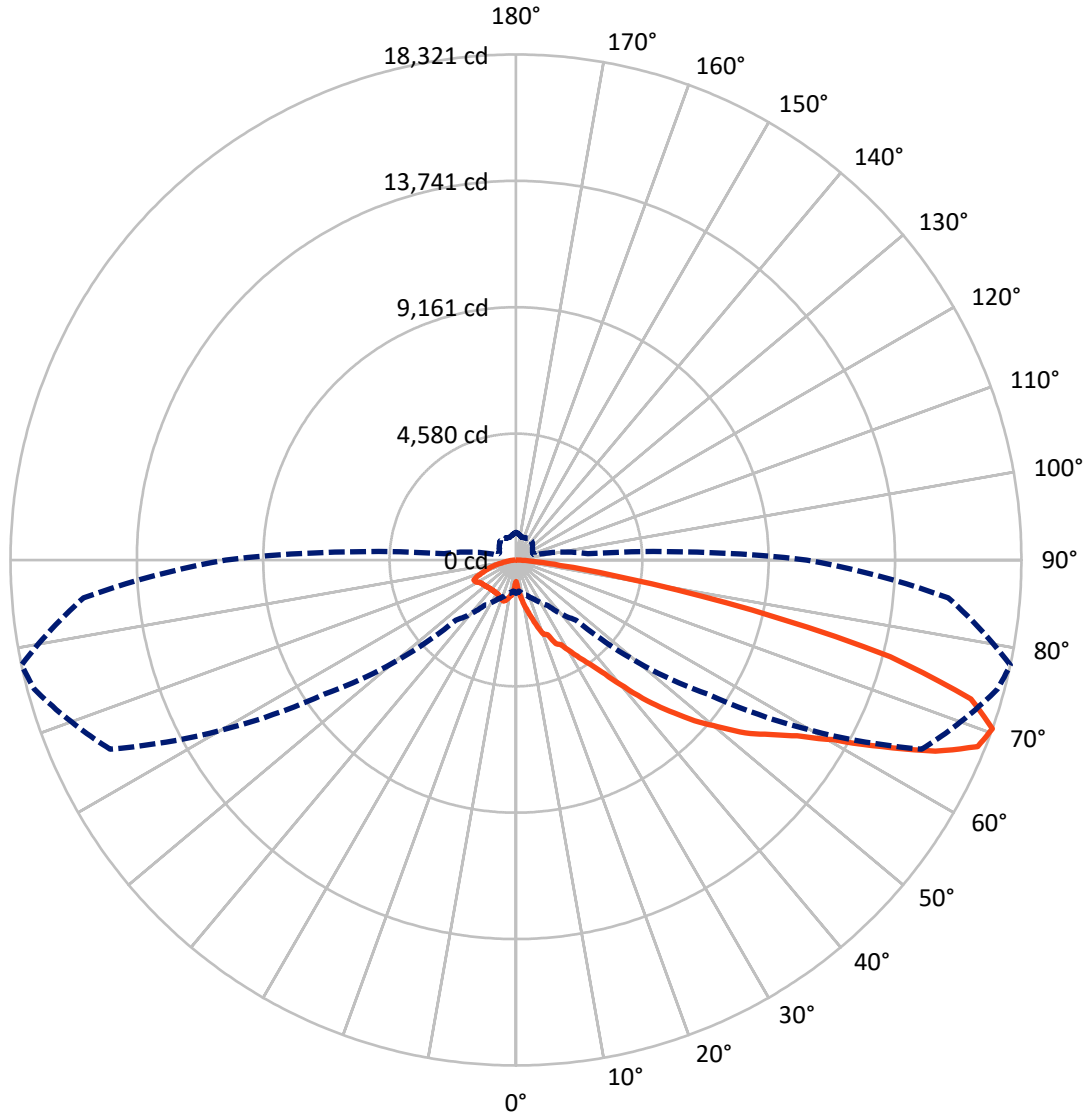
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc  
 Type II - Medium - N/A

REPORT NUMBER: P368572  
CATALOG NUMBER: MSA-SA4C-830-U-T2

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P368572  
 CATALOG NUMBER: MSA-SA4C-830-U-T2

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3403.9	0.0	3403.9
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	15667.1	0.0	15667.1
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	19071.0	0.0	19071.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.2	0.6
10°-20°	529.4	2.8
20°-30°	1019.0	5.3
30°-40°	1716.4	9.0
40°-50°	2969.9	15.6
50°-60°	4484.2	23.5
60°-70°	4966.8	26.0
70°-80°	2863.5	15.0
80°-90°	401.6	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°	19071.0	100.0
0°-180°	19071.0	100.0

**Coefficient of Utilization**



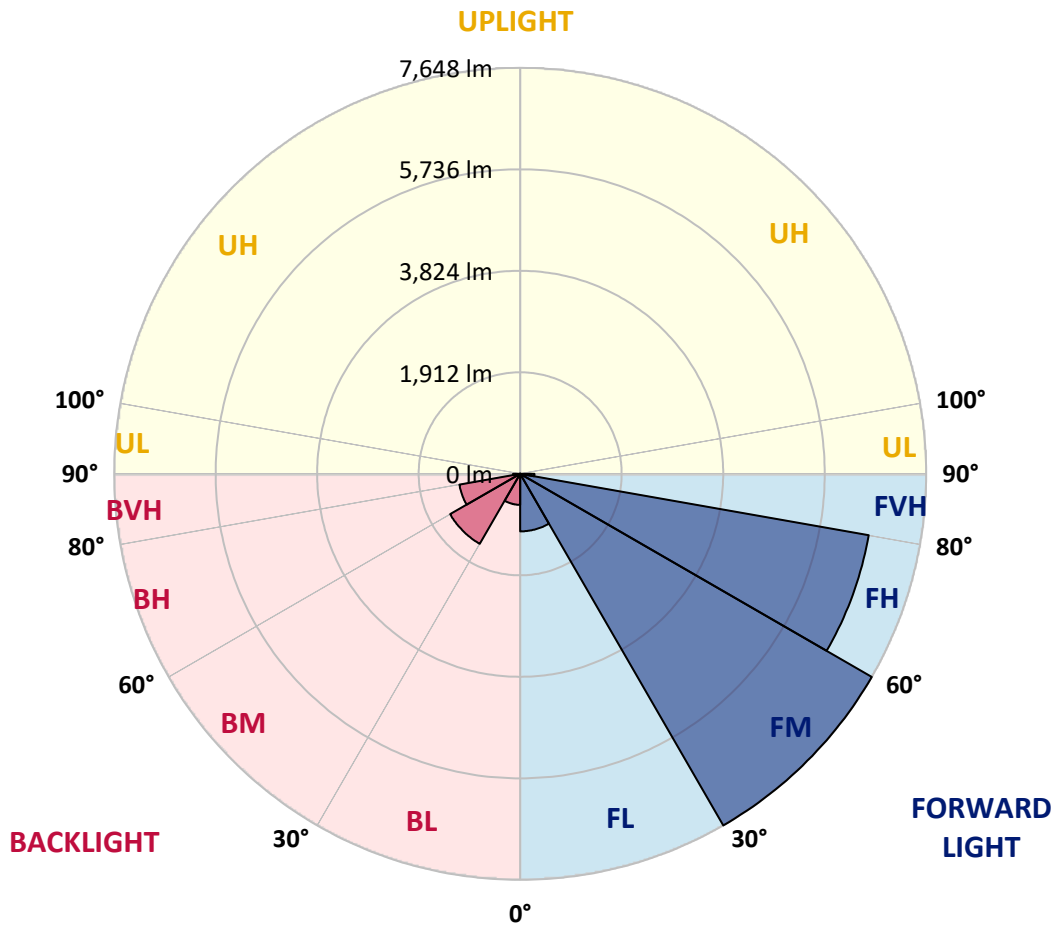
REPORT NUMBER: P368572  
 CATALOG NUMBER: MSA-SA4C-830-U-T2

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1084.1	5.7			
FM (30°-60°)	7648.0	40.1			
FH (60°-80°)	6667.0	35.0			G3/7500
FVH (80°-90°)	267.9	1.4			G3/500
BL (0°-30°)	584.5	3.1	B2/1000		
BM (30°-60°)	1522.4	8.0	B2/2500		
BH (60°-80°)	1163.3	6.1	B3/2500		G3/2500
BVH (80°-90°)	133.7	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





REPORT NUMBER: P368572

CATALOG NUMBER: MSA-SA4C-830-U-T2

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	777.5	777.5	777.5	777.5	777.5	777.5	777.5	777.5	777.5	777.5	777.5
2.5°	1000.9	965.2	911.1	933.4	960.4	963.6	954.8	905.5	888.8	926.2	937.3
5°	1402.4	1342.0	1305.4	1293.5	1253.0	1168.7	1229.1	1198.1	1204.5	1186.2	1222.0
7.5°	1740.3	1699.8	1645.7	1630.6	1537.6	1471.6	1512.9	1499.4	1434.2	1408.8	1449.3
10°	1912.0	1867.5	1869.9	1837.3	1812.7	1819.0	1798.3	1738.7	1690.2	1656.0	1558.2
12.5°	2015.4	2026.5	2086.1	2069.4	2162.5	2238.8	2180.8	2092.5	1939.1	1908.1	1811.1
15°	2261.0	2302.4	2246.7	2272.2	2311.9	2458.2	2434.4	2415.3	2253.1	2192.7	2013.8
17.5°	2513.9	2521.8	2437.5	2424.0	2519.4	2593.4	2686.4	2579.1	2598.9	2556.8	2267.4
20°	2567.9	2622.8	2501.9	2418.5	2614.8	2761.1	2876.4	2762.7	2867.7	2878.8	2476.5
22.5°	2765.9	2699.9	2540.9	2459.0	2630.7	2810.4	2998.0	3061.6	3028.2	2934.4	2678.4
25°	2903.4	2868.4	2706.3	2615.6	2680.8	2846.2	3175.3	3341.5	3370.9	3358.2	2870.8
27.5°	3158.6	3176.1	2842.2	2867.7	2777.0	2792.1	3281.9	3712.8	3529.1	3478.2	3109.3
30°	3561.7	3483.8	3109.3	3130.0	2979.7	2954.3	3506.9	4033.2	3868.6	3807.4	3305.7
32.5°	3982.3	3989.4	3534.7	3358.2	3277.9	3252.4	3462.3	4200.9	4297.9	4218.4	3602.3
35°	4575.4	4534.0	3995.8	3763.6	3473.5	3428.9	3779.5	4687.5	4865.5	4642.9	3954.4
37.5°	5478.5	5353.7	4727.2	4190.6	3975.9	3925.0	4232.7	5123.9	5524.6	5248.0	4530.0
40°	6203.6	5950.0	5380.7	4727.2	4363.9	4426.7	4554.7	5653.4	6208.3	6052.5	5062.7
42.5°	6781.6	6556.6	5843.4	5383.9	4890.2	4812.3	4952.2	6309.3	7138.5	6985.9	5727.4
45°	7335.7	6877.8	6363.4	5950.0	5475.3	5569.9	5549.3	6978.7	8279.4	7809.5	6314.9
47.5°	7882.7	7452.6	6914.3	6358.6	5880.8	6469.9	6249.7	7476.4	9049.0	8700.7	6933.4
50°	8585.5	8112.4	7499.5	6940.6	6654.4	7085.3	6715.6	7897.8	9910.8	9502.1	7517.0
52.5°	9052.1	8591.8	8054.4	7655.3	7629.0	7462.9	7368.3	8431.2	10666.0	10418.0	8135.5
55°	8997.3	8553.7	8310.4	8354.1	8678.5	8118.0	8040.9	9220.7	11453.9	11166.9	8803.3
57.5°	8309.6	7825.4	7877.1	8136.3	9007.6	9268.4	9137.2	10064.2	12156.7	12026.3	9629.3
60°	6473.1	6224.2	6644.8	7118.6	8567.2	9605.5	10527.7	11093.0	13021.7	13230.0	10926.8
62.5°	4204.9	3872.6	4537.2	5341.8	7253.0	9382.9	11943.6	13044.0	14438.4	14911.5	12898.5
65°	2178.4	2125.1	2590.2	3329.6	5049.2	8000.3	12442.9	15090.3	16160.5	16711.4	14781.9
67.5°	1583.7	1485.1	1700.6	2135.4	3082.3	5455.5	11496.8	16655.8	17543.0	18047.8	15876.6
70°	1206.1	1132.9	1297.5	1567.0	2013.0	3081.5	8486.9	16228.8	18076.5	18321.3	15731.1
72.5°	903.1	840.3	984.2	1235.5	1551.1	1734.7	5016.6	13343.7	17166.2	17249.6	14118.8
75°	721.1	672.6	734.6	975.5	1264.1	1180.6	2664.9	9667.5	13947.1	14018.7	10784.5
77.5°	591.5	550.2	575.6	731.4	983.4	888.0	1322.1	6149.5	8855.0	8745.3	6067.6
80°	482.6	446.8	458.7	528.7	748.9	663.0	742.6	3207.9	4224.0	4053.8	2523.4
82.5°	371.3	341.1	364.9	388.8	542.2	476.2	433.3	1459.7	1730.0	1611.5	925.4
85°	248.8	221.0	317.2	291.8	354.6	292.6	236.9	581.2	644.8	601.0	325.2
87.5°	68.4	64.4	106.5	145.5	145.5	110.5	86.7	140.7	179.7	157.4	76.3
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: P368572  
 CATALOG NUMBER: MSA-SA4C-830-U-T2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	777.5	777.5	777.5	777.5	777.5	777.5	777.5	777.5	777.5	777.5	777.5
2.5°	942.1	924.6	878.5	874.5	885.7	887.2	880.1	863.4	854.7	902.4	895.2
5°	1213.2	1151.2	1113.8	1079.6	1031.9	997.8	1006.5	1030.4	1038.3	1074.1	1078.1
7.5°	1423.9	1342.0	1260.1	1150.4	1078.1	1031.9	1066.9	1092.4	1112.2	1163.1	1183.8
10°	1515.3	1426.3	1310.2	1194.9	1175.0	1183.0	1163.1	1169.5	1200.5	1202.9	1213.2
12.5°	1685.5	1584.5	1375.4	1271.2	1265.7	1282.4	1275.2	1304.6	1326.1	1384.1	1359.5
15°	1848.4	1719.6	1424.7	1318.1	1295.1	1328.5	1367.4	1416.7	1462.8	1517.7	1489.9
17.5°	2046.4	1852.4	1427.1	1296.7	1300.7	1372.2	1412.8	1439.8	1577.3	1652.9	1614.7
20°	2171.2	1865.9	1373.8	1243.4	1300.7	1365.1	1421.5	1450.9	1605.2	1718.8	1745.1
22.5°	2284.1	1870.7	1332.5	1214.8	1251.4	1336.4	1421.5	1486.7	1585.3	1694.2	1698.2
25°	2346.1	1866.7	1279.2	1217.2	1250.6	1292.7	1368.2	1427.9	1501.0	1652.9	1656.8
27.5°	2505.1	1815.0	1226.7	1226.7	1244.2	1245.8	1342.0	1377.0	1387.3	1525.7	1550.3
30°	2551.2	1826.2	1220.4	1225.1	1233.9	1218.0	1260.1	1283.2	1298.3	1417.5	1421.5
32.5°	2625.2	1737.1	1239.4	1210.8	1199.7	1197.3	1207.6	1228.3	1234.7	1307.8	1321.3
35°	2715.0	1701.4	1245.8	1206.8	1184.6	1172.7	1203.7	1178.2	1198.1	1284.0	1293.5
37.5°	3007.6	1652.1	1278.4	1206.8	1178.2	1164.7	1149.6	1161.5	1232.3	1315.0	1365.9
40°	3194.4	1667.2	1270.4	1218.8	1156.8	1144.0	1118.6	1162.3	1272.0	1418.3	1456.5
42.5°	3522.0	1675.9	1280.0	1213.2	1163.9	1114.6	1131.3	1179.0	1294.3	1377.8	1436.6
45°	3860.6	1702.9	1273.6	1196.5	1148.0	1171.1	1148.0	1190.9	1245.8	1248.2	1292.7
47.5°	4193.0	1811.9	1260.1	1162.3	1144.0	1204.5	1145.6	1152.8	1156.8	1171.1	1223.5
50°	4583.3	1927.9	1241.0	1114.6	1149.6	1206.1	1154.4	1119.4	1115.4	1162.3	1221.2
52.5°	5026.9	2059.1	1216.4	1068.5	1117.0	1190.9	1184.6	1121.8	1087.6	1132.9	1191.7
55°	5549.3	2208.6	1187.8	1022.4	1081.2	1192.5	1201.3	1105.1	1088.4	1137.7	1200.5
57.5°	6243.3	2424.8	1132.1	955.6	1037.5	1167.9	1158.3	1086.0	1070.1	1122.6	1187.8
60°	7427.9	2840.6	1052.6	889.6	990.6	1107.5	1123.4	1051.8	1035.9	1094.0	1162.3
62.5°	9014.0	3340.7	956.4	825.2	933.4	1042.3	1079.6	1002.5	1000.9	1074.9	1146.4
65°	10490.3	3624.5	857.0	766.4	874.5	981.9	1030.4	956.4	959.6	1052.6	1124.2
67.5°	11104.1	3290.6	768.0	713.9	806.9	912.7	989.8	920.6	910.3	1022.4	1088.4
70°	10527.7	2614.0	690.9	658.3	730.6	838.0	933.4	872.9	849.1	950.8	1002.5
72.5°	9315.3	2179.2	618.5	593.1	663.8	759.2	857.0	808.5	777.5	855.4	901.6
75°	7281.6	1788.0	535.8	528.7	587.5	687.7	777.5	744.1	704.4	753.7	799.8
77.5°	4146.0	1131.3	450.0	454.8	496.9	602.6	682.1	655.9	615.3	636.0	689.3
80°	1659.2	570.8	361.7	364.9	400.7	495.3	565.3	555.7	513.6	530.3	566.9
82.5°	620.1	313.2	267.1	268.7	304.5	391.9	482.6	477.8	438.1	426.1	446.8
85°	246.5	155.0	163.8	170.9	205.1	282.2	387.2	343.5	296.5	260.0	272.7
87.5°	58.8	49.3	57.2	60.4	66.8	88.2	141.5	113.7	116.9	93.8	70.0
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)