

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: P368022

Luminaire Tested: **MSA-SA3C-760-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368022  
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-SA3C-760-U-T2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18158 lumens  
Efficiency: N/A  
Efficacy: 109.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3

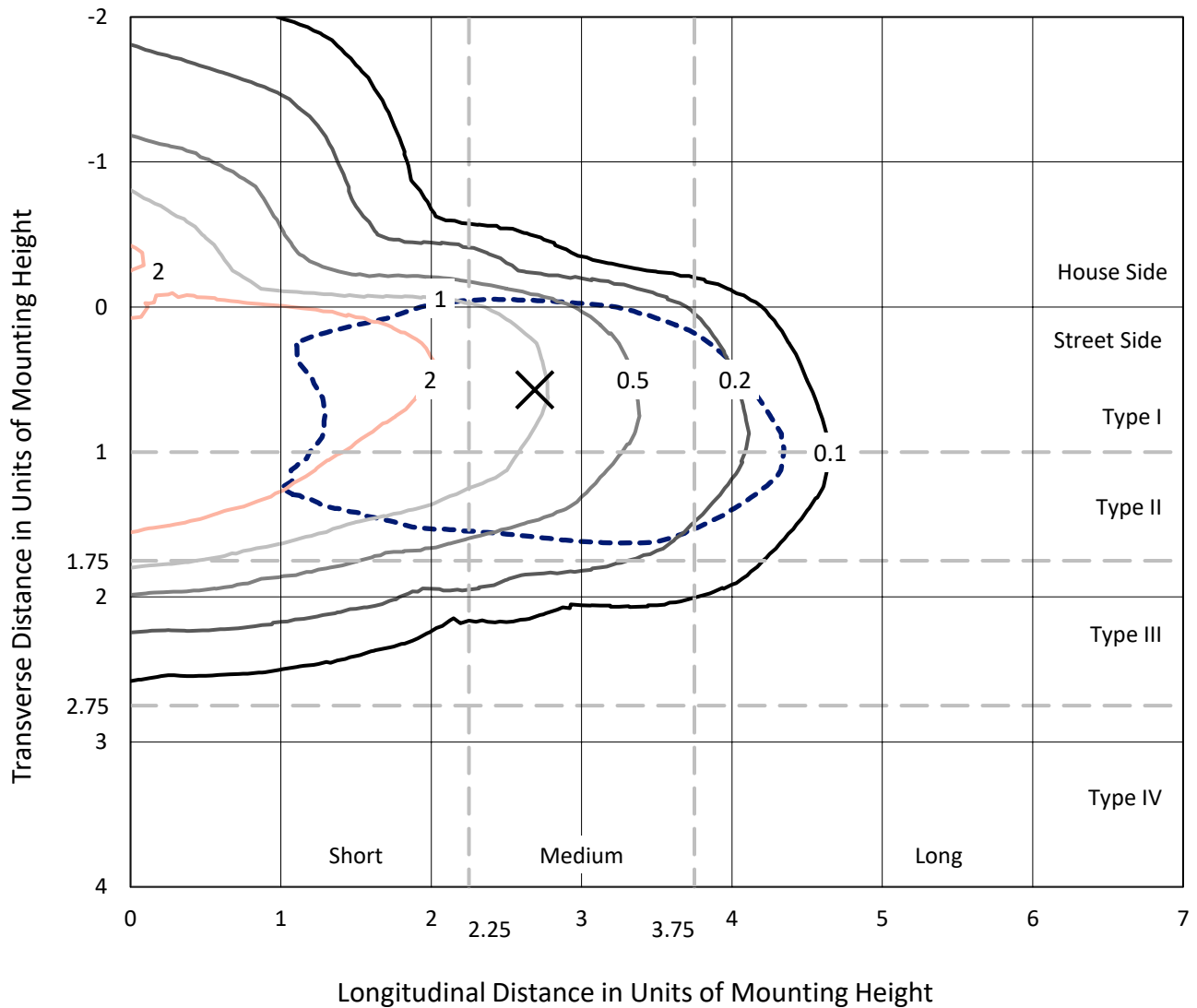
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P368022  
 CATALOG NUMBER: MSA-SA3C-760-U-T2

### Iso-Footcandle Lines of Horizontal Illumination

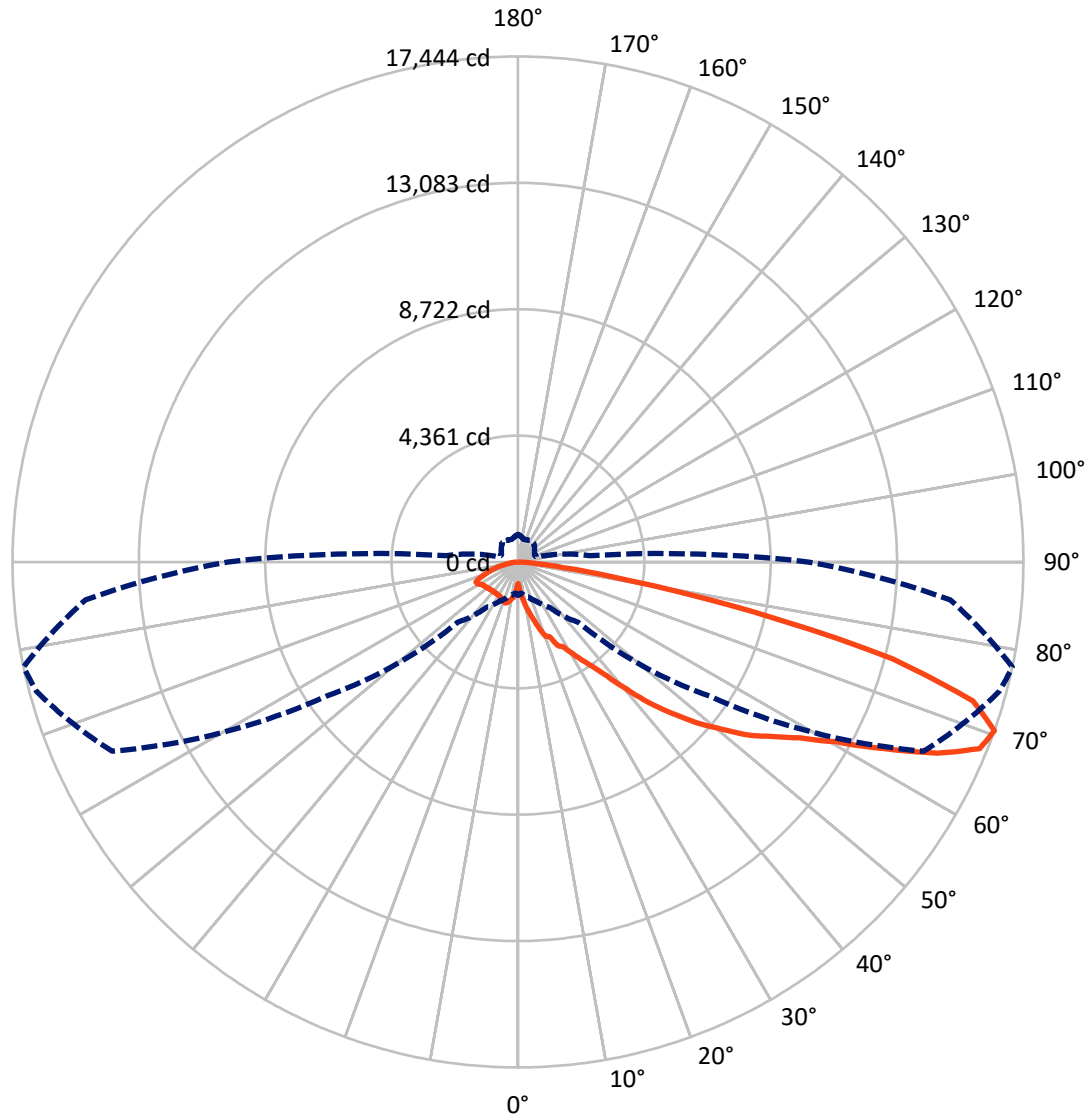
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc  
 Type II - Medium - N/A

REPORT NUMBER: P368022  
CATALOG NUMBER: MSA-SA3C-760-U-T2

### Luminous Intensity Polar Plot



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

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 CATALOG NUMBER: MSA-SA3C-760-U-T2

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3240.9	0.0	3240.9
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	14917.1	0.0	14917.1
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	18158.0	0.0	18158.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.4	0.6
10°-20°	504.1	2.8
20°-30°	970.3	5.3
30°-40°	1634.3	9.0
40°-50°	2827.7	15.6
50°-60°	4269.5	23.5
60°-70°	4729.0	26.0
70°-80°	2726.4	15.0
80°-90°	382.4	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°	18158.0	100.0
0°-180°	18158.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P368022

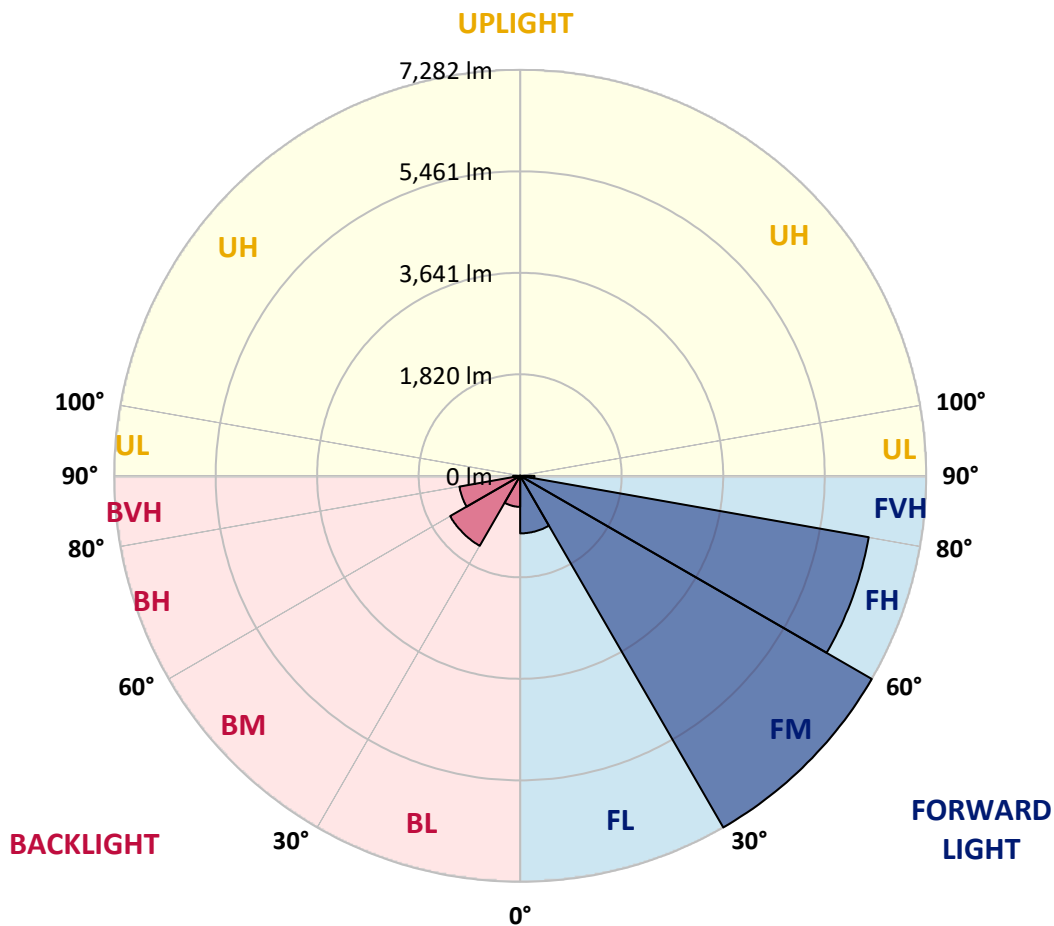
CATALOG NUMBER: MSA-SA3C-760-U-T2

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1032.2	5.7			
FM (30°-60°)	7281.9	40.1			
FH (60°-80°)	6347.8	35.0			G3/7500
FVH (80°-90°)	255.1	1.4			G3/500
BL (0°-30°)	556.5	3.1	B2/1000		
BM (30°-60°)	1449.6	8.0	B2/2500		
BH (60°-80°)	1107.6	6.1	B3/2500		G3/2500
BVH (80°-90°)	127.3	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: P368022

CATALOG NUMBER: MSA-SA3C-760-U-T2

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3
2.5°	953.0	919.0	867.5	888.7	914.4	917.4	909.1	862.2	846.3	881.9	892.5
5°	1335.3	1277.8	1242.9	1231.6	1193.0	1112.7	1170.3	1140.7	1146.8	1129.4	1163.5
7.5°	1657.0	1618.4	1566.9	1552.5	1464.0	1401.1	1440.5	1427.6	1365.6	1341.3	1379.9
10°	1820.5	1778.1	1780.4	1749.3	1725.9	1731.9	1712.3	1655.5	1609.3	1576.8	1483.6
12.5°	1918.9	1929.5	1986.3	1970.4	2058.9	2131.6	2076.3	1992.3	1846.2	1816.7	1724.4
15°	2152.8	2192.2	2139.2	2163.4	2201.2	2340.5	2317.8	2299.7	2145.2	2087.7	1917.4
17.5°	2393.5	2401.1	2320.8	2308.0	2398.8	2469.2	2557.8	2455.6	2474.5	2434.4	2158.9
20°	2445.0	2497.2	2382.2	2302.7	2489.7	2628.9	2738.7	2630.4	2730.4	2741.0	2357.9
22.5°	2633.5	2570.6	2419.3	2341.3	2504.8	2675.9	2854.5	2915.1	2883.3	2794.0	2550.2
25°	2764.4	2731.1	2576.7	2490.4	2552.5	2709.9	3023.3	3181.5	3209.5	3197.4	2733.4
27.5°	3007.4	3024.1	2706.1	2730.4	2644.1	2658.5	3124.7	3535.0	3360.2	3311.7	2960.5
30°	3391.2	3317.0	2960.5	2980.2	2837.1	2812.9	3339.0	3840.1	3683.4	3625.1	3147.5
32.5°	3791.6	3798.4	3365.5	3197.4	3121.0	3096.7	3296.6	3999.8	4092.1	4016.4	3429.8
35°	4356.3	4317.0	3804.5	3583.5	3307.2	3264.8	3598.6	4463.1	4632.6	4420.7	3765.1
37.5°	5216.2	5097.4	4500.9	3990.0	3785.6	3737.1	4030.1	4878.6	5260.1	4996.7	4313.2
40°	5906.6	5665.1	5123.1	4500.9	4155.0	4214.8	4336.6	5382.8	5911.1	5762.8	4820.3
42.5°	6456.9	6242.7	5563.7	5126.2	4656.1	4581.9	4715.1	6007.3	6796.8	6651.4	5453.2
45°	6984.5	6548.5	6058.7	5665.1	5213.2	5303.3	5283.6	6644.6	7883.0	7435.6	6012.6
47.5°	7505.3	7095.8	6583.3	6054.2	5599.3	6160.2	5950.5	7118.5	8615.8	8284.2	6601.5
50°	8174.4	7724.1	7140.4	6608.3	6335.8	6746.1	6394.1	7519.7	9436.3	9047.2	7157.1
52.5°	8618.8	8180.5	7668.8	7288.8	7263.8	7105.6	7015.5	8027.6	10155.4	9919.2	7746.0
55°	8566.6	8144.2	7912.5	7954.2	8263.0	7729.4	7655.9	8779.3	10905.6	10632.3	8381.9
57.5°	7911.8	7450.8	7500.0	7746.8	8576.4	8824.7	8699.8	9582.4	11574.7	11450.6	9168.3
60°	6163.2	5926.3	6326.7	6777.8	8157.0	9145.6	10023.7	10561.9	12398.3	12596.6	10403.7
62.5°	4003.6	3687.2	4320.0	5086.0	6905.8	8933.7	11371.9	12419.5	13747.2	14197.6	12281.0
65°	2074.1	2023.4	2466.2	3170.2	4807.5	7617.3	11847.2	14367.9	15386.8	15911.4	14074.2
67.5°	1507.9	1414.0	1619.1	2033.2	2934.7	5194.3	10946.4	15858.4	16703.1	17183.8	15116.6
70°	1148.3	1078.7	1235.4	1492.0	1916.6	2934.0	8080.6	15451.9	17211.1	17444.2	14978.0
72.5°	859.9	800.1	937.1	1176.3	1476.8	1651.7	4776.4	12704.9	16344.3	16423.8	13442.9
75°	686.6	640.4	699.4	928.8	1203.6	1124.1	2537.3	9204.7	13279.4	13347.5	10268.2
77.5°	563.2	523.8	548.0	696.4	936.4	845.5	1258.8	5855.1	8431.1	8326.6	5777.1
80°	459.5	425.4	436.8	503.4	713.1	631.3	707.0	3054.3	4021.7	3859.8	2402.6
82.5°	353.5	324.7	347.4	370.2	516.2	453.4	412.5	1389.8	1647.2	1534.4	881.1
85°	236.9	210.4	302.0	277.8	337.6	278.6	225.6	553.3	613.9	572.3	309.6
87.5°	65.1	61.3	101.4	138.5	138.5	105.2	82.5	134.0	171.1	149.9	72.7
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: P368022

CATALOG NUMBER: MSA-SA3C-760-U-T2

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3	740.3
2.5°	897.0	880.3	836.4	832.7	843.3	844.8	838.0	822.1	813.7	859.2	852.3
5°	1155.1	1096.1	1060.5	1028.0	982.5	950.0	958.3	981.0	988.6	1022.7	1026.4
7.5°	1355.7	1277.8	1199.8	1095.3	1026.4	982.5	1015.8	1040.1	1059.0	1107.4	1127.1
10°	1442.8	1358.0	1247.5	1137.7	1118.8	1126.4	1107.4	1113.5	1143.0	1145.3	1155.1
12.5°	1604.8	1508.6	1309.5	1210.4	1205.1	1221.0	1214.2	1242.2	1262.6	1317.9	1294.4
15°	1759.9	1637.3	1356.5	1255.0	1233.1	1264.9	1302.0	1348.9	1392.8	1445.0	1418.5
17.5°	1948.4	1763.7	1358.7	1234.6	1238.4	1306.5	1345.1	1370.9	1501.8	1573.7	1537.4
20°	2067.3	1776.6	1308.0	1183.9	1238.4	1299.7	1353.5	1381.5	1528.3	1636.6	1661.5
22.5°	2174.8	1781.1	1268.7	1156.6	1191.5	1272.5	1353.5	1415.5	1509.4	1613.1	1616.9
25°	2233.8	1777.3	1218.0	1158.9	1190.7	1230.8	1302.7	1359.5	1429.1	1573.7	1577.5
27.5°	2385.2	1728.1	1168.0	1168.0	1184.6	1186.2	1277.8	1311.1	1320.9	1452.6	1476.1
30°	2429.1	1738.7	1161.9	1166.5	1174.8	1159.7	1199.8	1221.7	1236.1	1349.7	1353.5
32.5°	2499.5	1654.0	1180.1	1152.9	1142.3	1140.0	1149.8	1169.5	1175.6	1245.2	1258.1
35°	2585.0	1619.9	1186.2	1149.1	1127.9	1116.5	1146.0	1121.8	1140.7	1222.5	1231.6
37.5°	2863.6	1573.0	1217.2	1149.1	1121.8	1109.0	1094.6	1105.9	1173.3	1252.0	1300.5
40°	3041.5	1587.4	1209.6	1160.4	1101.4	1089.3	1065.0	1106.7	1211.1	1350.4	1386.8
42.5°	3353.3	1595.7	1218.7	1155.1	1108.2	1061.3	1077.2	1122.6	1232.3	1311.8	1367.8
45°	3675.8	1621.4	1212.7	1139.2	1093.1	1115.0	1093.1	1133.9	1186.2	1188.4	1230.8
47.5°	3992.2	1725.1	1199.8	1106.7	1089.3	1146.8	1090.8	1097.6	1101.4	1115.0	1165.0
50°	4363.9	1835.6	1181.6	1061.3	1094.6	1148.3	1099.1	1065.8	1062.0	1106.7	1162.7
52.5°	4786.3	1960.5	1158.2	1017.4	1063.5	1133.9	1127.9	1068.1	1035.5	1078.7	1134.7
55°	5283.6	2102.8	1130.9	973.5	1029.5	1135.4	1143.8	1052.2	1036.3	1083.2	1143.0
57.5°	5944.4	2308.7	1077.9	909.9	987.8	1112.0	1102.9	1034.0	1018.9	1068.8	1130.9
60°	7072.3	2704.6	1002.2	847.0	943.2	1054.4	1069.6	1001.5	986.3	1041.6	1106.7
62.5°	8582.4	3180.8	910.6	785.7	888.7	992.4	1028.0	954.5	953.0	1023.4	1091.5
65°	9988.1	3451.0	816.0	729.7	832.7	934.8	981.0	910.6	913.7	1002.2	1070.3
67.5°	10572.5	3133.1	731.2	679.8	768.3	869.0	942.4	876.6	866.7	973.5	1036.3
70°	10023.7	2488.9	657.8	626.8	695.6	797.8	888.7	831.1	808.4	905.3	954.5
72.5°	8869.3	2074.8	588.9	564.7	632.1	722.9	816.0	769.8	740.3	814.5	858.4
75°	6933.0	1702.4	510.2	503.4	559.4	654.8	740.3	708.5	670.7	717.6	761.5
77.5°	3947.6	1077.2	428.4	433.0	473.1	573.8	649.5	624.5	585.9	605.6	656.3
80°	1579.8	543.5	344.4	347.4	381.5	471.6	538.2	529.1	489.0	504.9	539.7
82.5°	590.4	298.2	254.3	255.9	289.9	373.2	459.5	454.9	417.1	405.7	425.4
85°	234.7	147.6	155.9	162.7	195.3	268.7	368.6	327.0	282.3	247.5	259.6
87.5°	56.0	46.9	54.5	57.5	63.6	84.0	134.7	108.2	111.3	89.3	66.6
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)