

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: P366866

Luminaire Tested: **MSA-SA1C-727-U-RW**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366866  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-727-U-RW  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5387 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

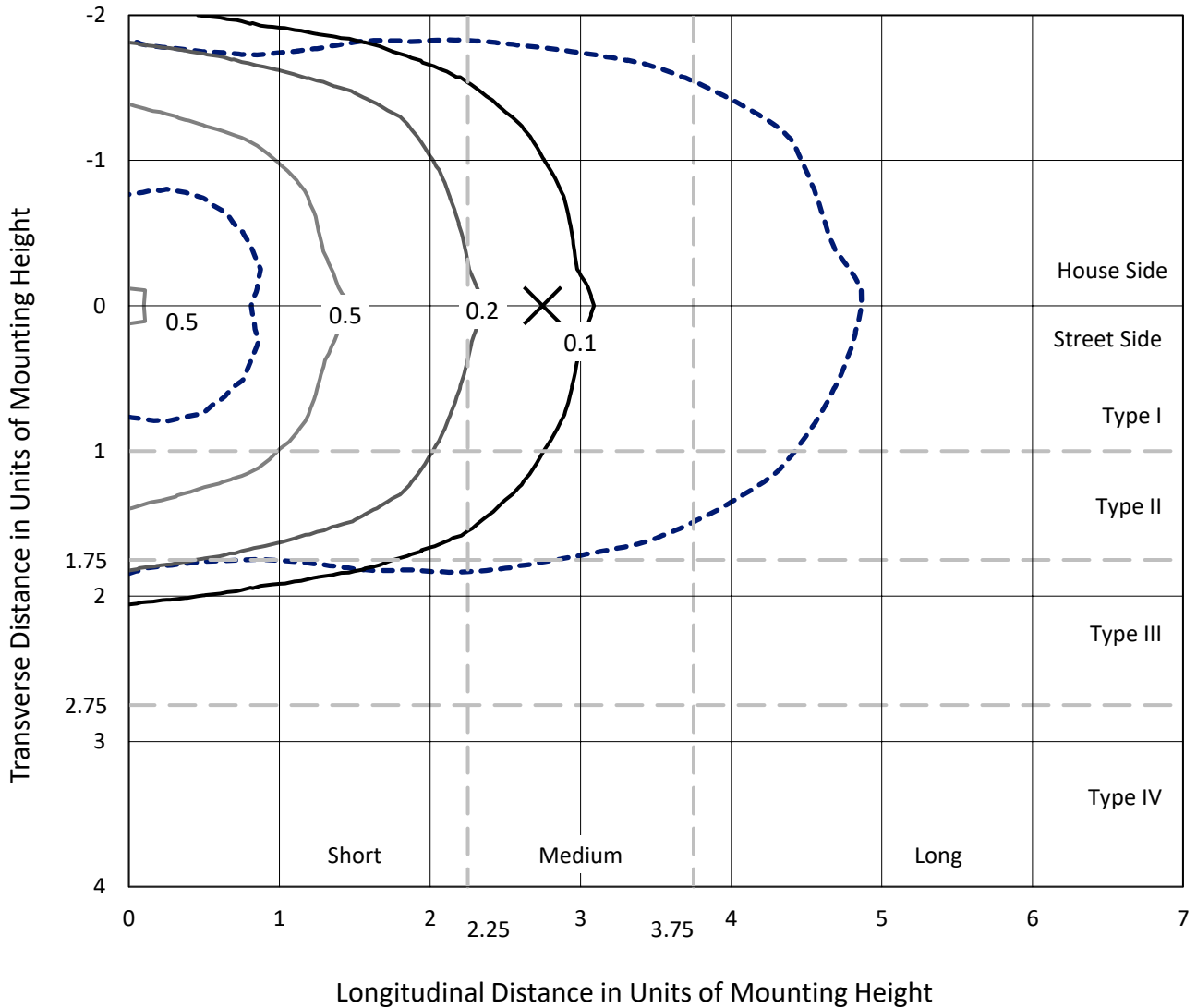
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P366866  
 CATALOG NUMBER: MSA-SA1C-727-U-RW

### Iso-Footcandle Lines of Horizontal Illumination

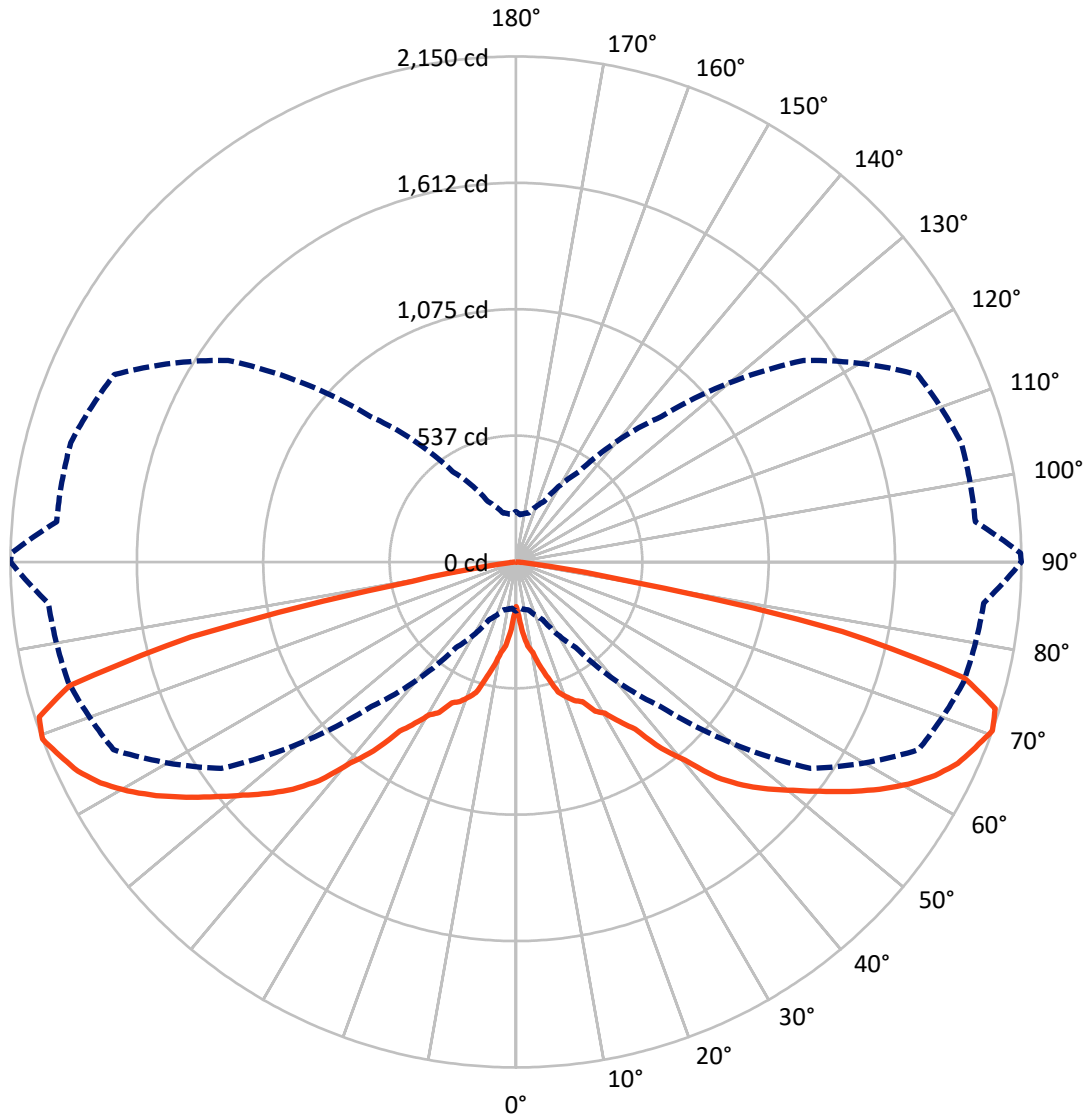
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc  
 Type III - Short - N/A

REPORT NUMBER: P366866  
CATALOG NUMBER: MSA-SA1C-727-U-RW

### Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P366866

CATALOG NUMBER: MSA-SA1C-727-U-RW

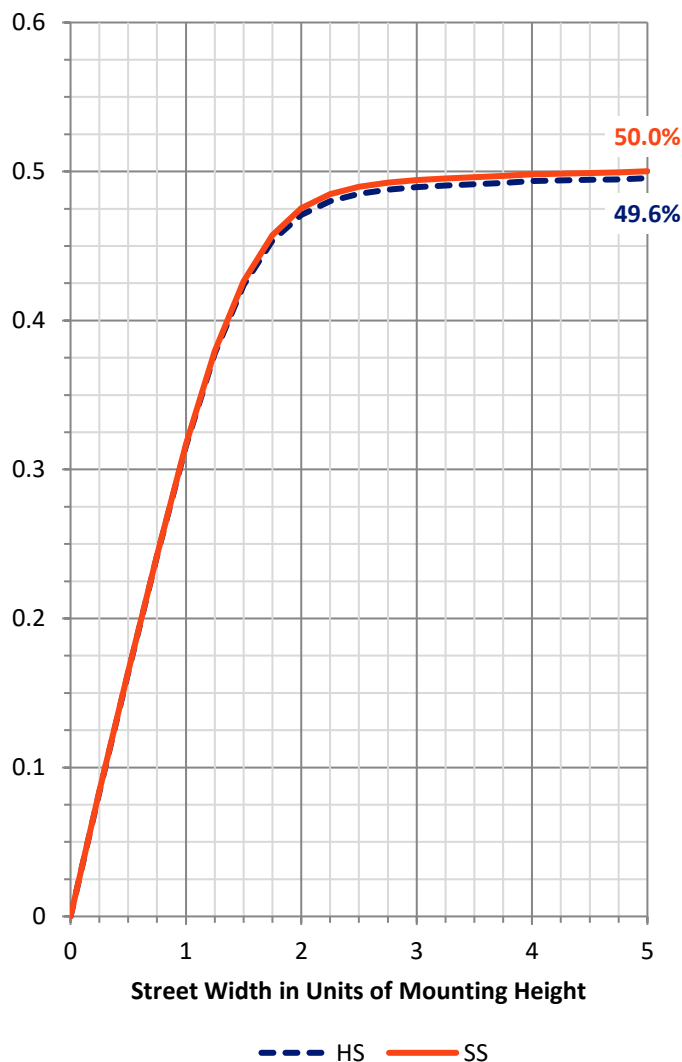
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2683.5	0.0	2683.5
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	2703.5	0.0	2703.5
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	5387.0	0.0	5387.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	28.5	0.5
10°-20°	130.7	2.4
20°-30°	282.6	5.2
30°-40°	539.2	10.0
40°-50°	979.6	18.2
50°-60°	1376.1	25.5
60°-70°	1313.9	24.4
70°-80°	674.3	12.5
80°-90°	61.8	1.1
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°	5387.0	100.0
0°-180°	5387.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P366866

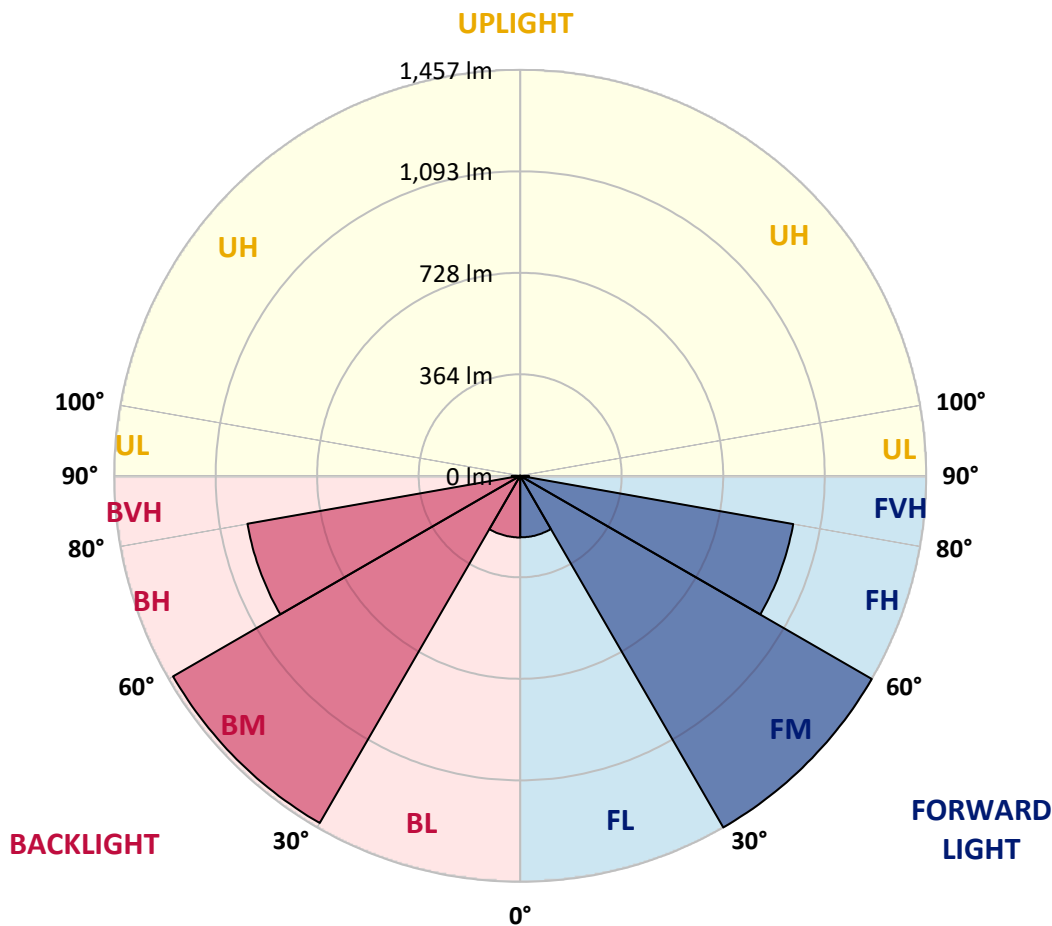
CATALOG NUMBER: MSA-SA1C-727-U-RW

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	220.7	4.1			
FM (30°-60°)	1456.7	27.0			
FH (60°-80°)	994.7	18.5			G1/1800
FVH (80°-90°)	31.4	0.6			G1/100
BL (0°-30°)	221.2	4.1	B1/500		
BM (30°-60°)	1438.3	26.7	B2/2500		
BH (60°-80°)	993.6	18.4	B2/1000		G2/1000
BVH (80°-90°)	30.4	0.6			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 III Short





REPORT NUMBER: P366866

CATALOG NUMBER: MSA-SA1C-727-U-RW

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1
2.5°	229.0	220.5	209.8	216.1	218.8	223.3	222.7	220.5	211.1	226.8	228.6
5°	286.7	273.1	268.1	267.2	268.5	264.2	278.4	274.2	281.9	296.1	299.3
7.5°	326.4	316.4	305.7	308.9	295.4	293.4	311.8	328.1	332.3	358.3	360.0
10°	345.2	335.4	338.2	336.2	334.7	347.4	355.9	367.9	385.1	387.5	391.2
12.5°	361.1	365.0	377.5	377.1	397.6	420.1	416.8	429.2	432.1	462.2	453.0
15°	401.5	409.6	408.7	416.4	425.3	462.2	462.4	483.6	503.0	514.8	511.8
17.5°	460.7	463.5	451.7	452.2	478.1	493.2	510.0	506.3	557.0	580.1	581.6
20°	496.0	503.2	489.7	471.8	517.9	538.6	548.0	526.4	580.5	611.8	611.8
22.5°	557.8	539.3	518.7	506.7	547.3	569.4	568.3	562.2	591.0	646.2	641.0
25°	591.9	581.4	571.1	574.2	594.7	606.1	621.1	607.0	634.0	675.1	657.8
27.5°	656.5	637.1	586.6	626.8	626.8	618.3	650.2	656.9	639.3	706.1	719.0
30°	729.7	722.9	651.5	694.1	681.0	656.9	718.1	713.7	684.0	752.1	746.2
32.5°	798.9	821.1	753.4	730.1	749.7	758.9	726.8	739.9	745.6	811.3	808.5
35°	905.0	923.7	834.0	828.1	795.4	786.9	811.3	815.7	816.1	885.3	872.7
37.5°	1088.6	1061.5	972.9	931.2	934.9	924.6	929.4	894.9	899.7	1000.2	1006.5
40°	1222.9	1192.3	1093.6	1063.7	990.3	1034.2	995.4	991.9	982.3	1112.4	1108.9
42.5°	1371.1	1329.2	1220.0	1180.1	1102.1	1084.2	1066.3	1106.7	1104.1	1224.6	1251.2
45°	1483.1	1398.4	1341.4	1316.5	1269.8	1225.9	1208.9	1227.0	1218.7	1308.2	1354.7
47.5°	1553.8	1480.3	1414.8	1362.4	1317.6	1425.2	1339.0	1314.8	1298.0	1398.2	1442.9
50°	1610.2	1525.2	1447.9	1430.5	1465.8	1561.0	1425.0	1371.5	1392.1	1465.8	1526.8
52.5°	1625.4	1535.5	1466.1	1454.9	1550.6	1567.8	1545.8	1455.8	1450.3	1547.1	1620.6
55°	1578.7	1492.5	1459.5	1520.4	1626.1	1611.7	1645.3	1587.9	1549.3	1630.0	1722.6
57.5°	1458.4	1372.8	1365.0	1452.8	1585.9	1708.6	1725.2	1679.8	1629.2	1714.7	1823.9
60°	1260.8	1182.7	1202.5	1299.5	1500.3	1675.0	1763.2	1721.7	1706.0	1791.2	1917.8
62.5°	953.2	892.3	945.4	1080.5	1344.0	1631.6	1815.6	1809.1	1786.4	1872.4	2000.8
65°	607.8	575.7	629.9	767.2	1101.5	1552.5	1840.7	1849.5	1870.4	1935.0	2064.9
67.5°	353.3	336.2	369.2	481.6	784.5	1274.8	1794.0	1919.3	1930.2	1967.3	2107.1
70°	208.9	197.8	211.3	270.5	444.1	868.5	1530.3	1888.8	1971.3	1997.0	2149.7
72.5°	159.4	148.9	143.0	160.0	231.9	448.7	1034.7	1601.0	1938.3	1977.4	2131.7
75°	137.8	127.7	120.7	122.3	138.0	213.1	560.9	1145.1	1651.6	1800.5	1969.1
77.5°	118.3	109.4	104.4	103.9	105.9	117.0	234.5	620.9	1034.4	1294.2	1419.6
80°	94.8	87.8	86.7	86.7	83.8	83.0	116.6	236.2	393.6	466.8	447.6
82.5°	69.2	62.2	69.2	68.3	64.0	60.5	74.2	102.2	121.4	95.8	75.8
85°	46.7	40.4	45.6	46.5	42.4	31.4	44.5	51.1	52.4	32.7	27.1
87.5°	16.4	15.9	25.8	22.5	18.3	10.7	16.4	17.7	18.6	11.6	7.9
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: P366866  
 CATALOG NUMBER: MSA-SA1C-727-U-RW

**CANDELA DISTRIBUTION (continued):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1	189.1
2.5°	229.2	226.6	213.5	215.5	220.5	222.9	225.3	215.5	210.7	226.0	224.4
5°	300.2	290.6	279.9	278.4	279.0	269.6	275.1	272.7	273.8	283.6	285.6
7.5°	359.6	348.0	333.8	322.7	303.5	288.2	301.1	307.6	309.6	327.1	333.6
10°	391.7	381.9	377.7	356.7	350.4	348.5	345.4	334.9	346.5	342.3	345.6
12.5°	454.6	452.6	431.0	417.2	418.5	422.2	403.0	392.6	377.5	401.1	392.6
15°	508.0	516.6	494.9	469.8	457.4	463.7	449.1	433.8	420.3	427.5	418.3
17.5°	576.4	576.2	534.0	507.2	506.1	505.6	484.0	450.4	466.6	461.5	462.0
20°	612.6	606.7	554.3	523.3	549.7	540.4	520.9	477.7	496.5	502.6	506.5
22.5°	643.0	639.7	576.2	553.5	570.5	570.7	551.3	528.6	526.2	545.2	534.9
25°	664.2	677.3	617.4	612.0	619.4	612.0	593.0	578.1	568.5	596.9	568.5
27.5°	714.4	695.8	623.8	654.8	659.3	622.0	645.8	628.3	601.7	636.9	648.4
30°	750.2	761.1	668.3	715.0	709.6	675.1	684.9	684.2	652.4	720.9	712.8
32.5°	811.7	798.6	741.0	737.3	750.4	748.9	732.3	740.3	748.2	798.0	810.0
35°	874.8	888.8	787.5	812.6	808.9	785.3	828.8	823.7	847.1	949.3	915.4
37.5°	1017.2	950.6	891.9	888.6	913.5	917.2	903.2	925.3	975.7	1054.3	1090.5
40°	1110.4	1080.1	980.3	984.2	949.7	1009.1	969.8	1040.8	1079.2	1211.7	1198.8
42.5°	1251.5	1177.4	1081.6	1094.7	1087.7	1059.1	1110.8	1147.3	1202.3	1303.4	1368.7
45°	1356.5	1254.9	1209.5	1201.5	1200.6	1250.4	1243.8	1302.1	1321.8	1397.7	1451.9
47.5°	1436.2	1349.9	1282.7	1291.8	1265.2	1407.3	1331.6	1349.7	1389.4	1461.0	1524.1
50°	1530.7	1434.6	1358.2	1380.9	1445.8	1500.3	1431.8	1400.8	1420.2	1504.7	1575.0
52.5°	1618.2	1517.2	1433.1	1452.1	1558.0	1533.1	1525.7	1447.3	1444.9	1512.8	1592.7
55°	1720.6	1606.7	1532.4	1592.7	1630.3	1599.5	1587.7	1492.3	1433.3	1471.1	1546.4
57.5°	1821.1	1695.3	1621.5	1634.0	1681.6	1651.0	1562.6	1415.6	1342.1	1349.5	1425.7
60°	1915.2	1776.7	1715.8	1703.8	1741.8	1622.0	1467.2	1275.3	1177.7	1159.8	1225.7
62.5°	1995.7	1844.9	1787.2	1754.5	1790.7	1623.0	1318.5	1049.9	942.7	882.0	933.3
65°	2059.7	1901.4	1860.4	1843.3	1856.4	1524.4	1086.8	770.9	639.5	572.2	602.1
67.5°	2102.3	1933.1	1914.3	1936.6	1761.9	1269.6	805.2	493.4	371.8	335.1	353.9
70°	2146.4	1961.0	1960.4	1884.6	1494.0	875.3	470.3	284.5	216.4	202.2	214.0
72.5°	2131.5	1927.8	1937.7	1648.2	1035.3	467.9	248.2	160.9	146.5	151.5	162.0
75°	1973.9	1752.7	1705.4	1184.9	587.3	217.5	143.0	121.8	121.0	128.6	138.9
77.5°	1431.8	1220.7	1095.3	671.6	251.7	117.7	105.2	101.7	101.7	107.9	117.0
80°	472.0	408.5	425.7	259.8	119.0	81.2	82.1	83.6	83.2	84.7	92.4
82.5°	77.5	80.3	124.2	106.1	71.8	55.5	62.0	65.1	65.9	58.9	67.0
85°	27.5	31.0	52.8	49.1	41.5	27.9	40.8	45.6	45.0	39.3	43.4
87.5°	8.5	10.9	19.2	14.8	12.4	7.6	15.3	17.9	22.5	9.2	8.3
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)