

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: P367394

Luminaire Tested: **MSA-SA2C-727-U-RW**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367394  
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-SA2C-727-U-RW  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10595 lumens  
Efficiency: N/A  
Efficacy: 93.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3

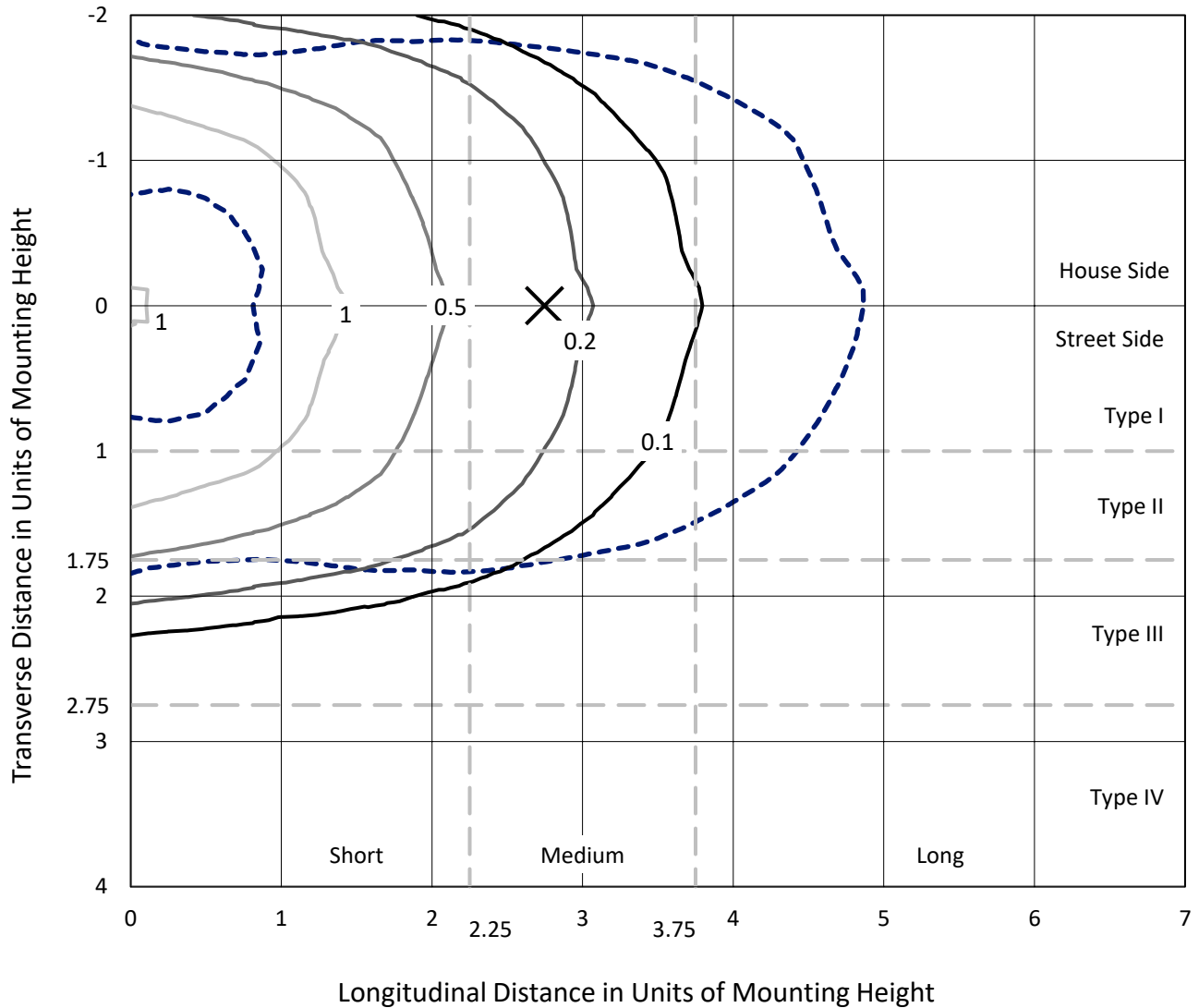
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P367394  
 CATALOG NUMBER: MSA-SA2C-727-U-RW

### Iso-Footcandle Lines of Horizontal Illumination

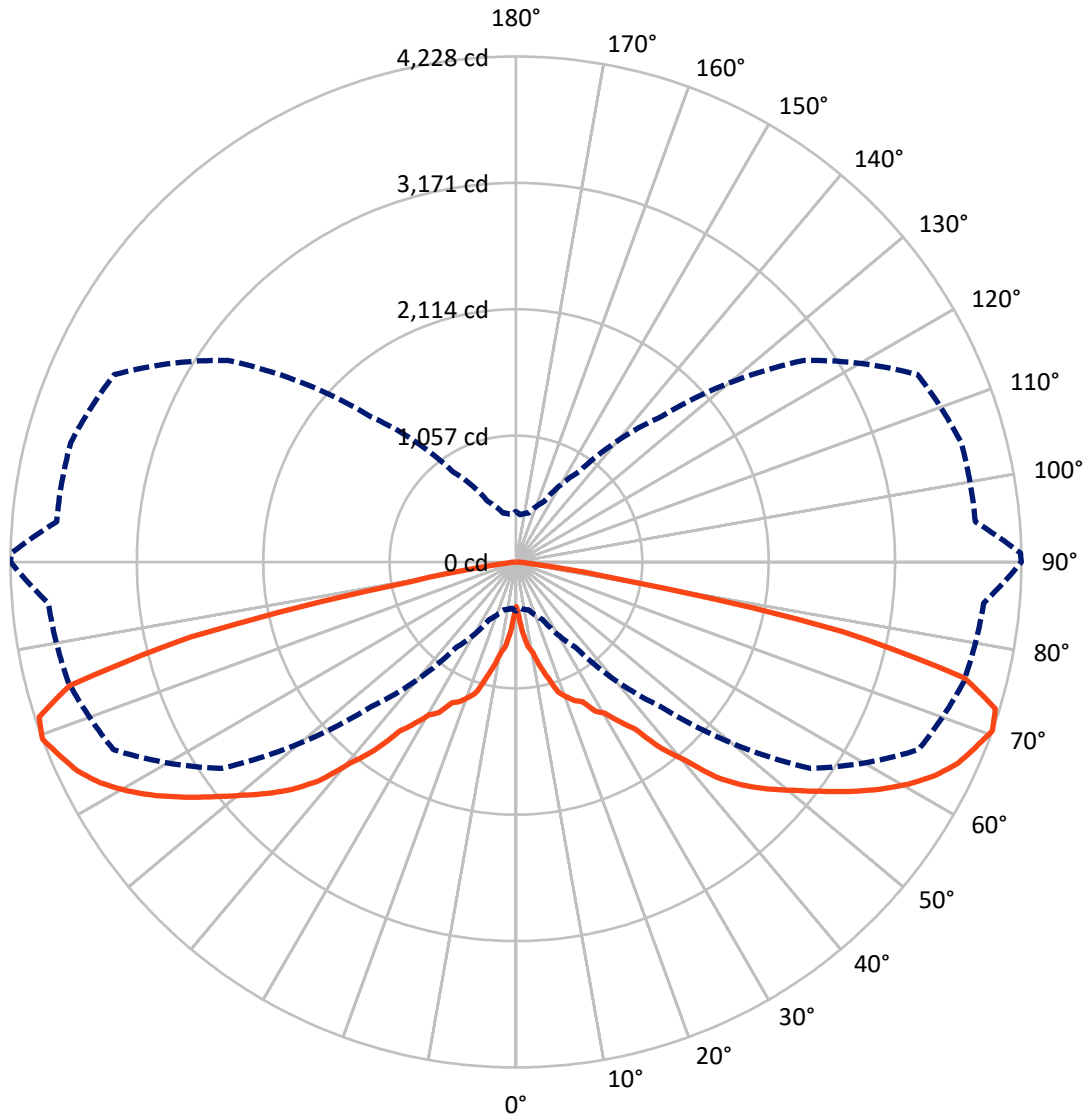
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc  
 Type III - Short - N/A

REPORT NUMBER: P367394  
CATALOG NUMBER: MSA-SA2C-727-U-RW

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P367394

CATALOG NUMBER: MSA-SA2C-727-U-RW

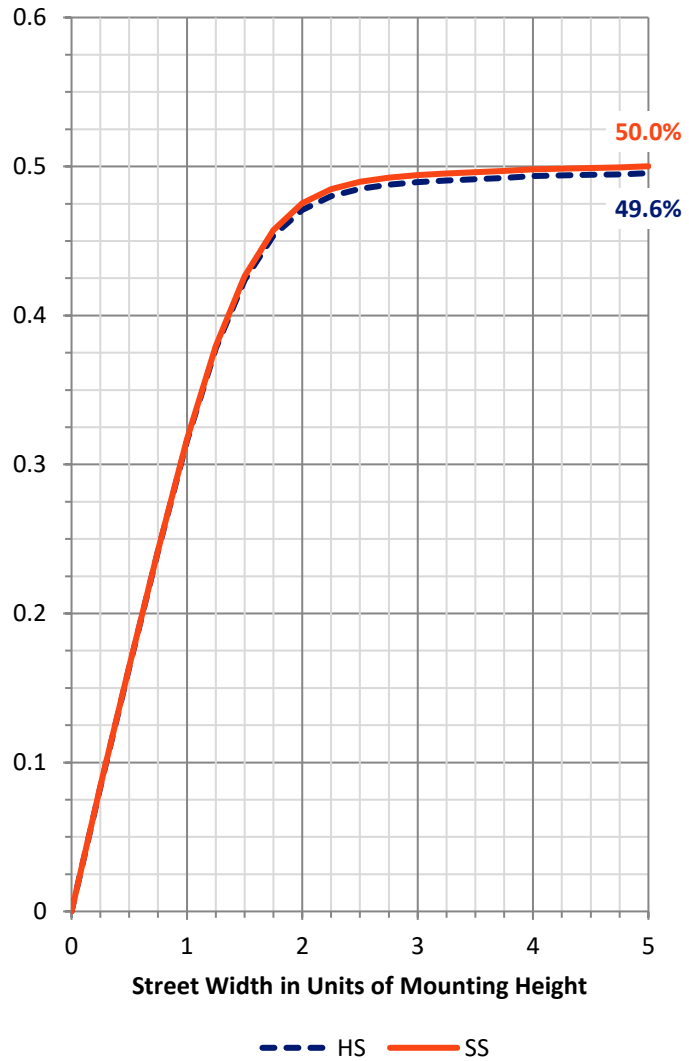
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5277.9	0.0	5277.9
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	5317.1	0.0	5317.1
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	10595.0	0.0	10595.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.1	0.5
10°-20°	257.1	2.4
20°-30°	555.9	5.2
30°-40°	1060.6	10.0
40°-50°	1926.7	18.2
50°-60°	2706.6	25.5
60°-70°	2584.2	24.4
70°-80°	1326.2	12.5
80°-90°	121.6	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°	10595.0	100.0
0°-180°	10595.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P367394

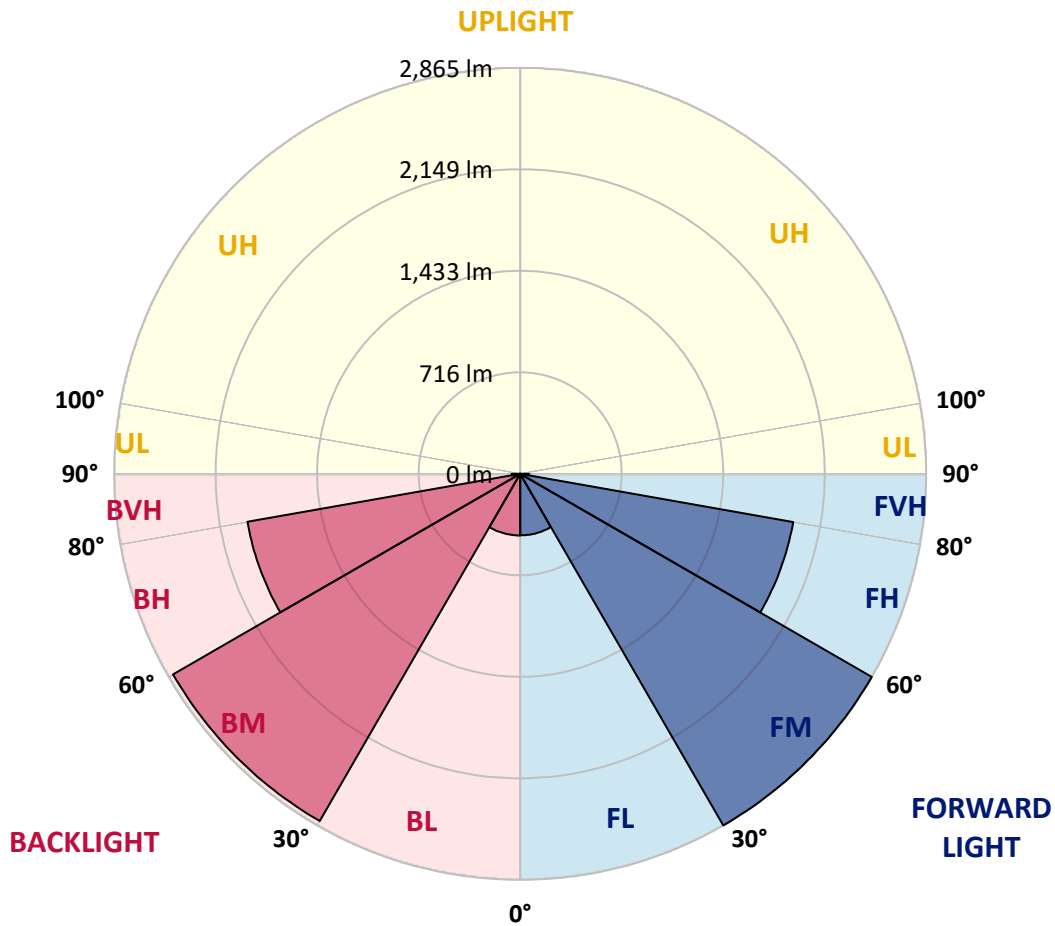
CATALOG NUMBER: MSA-SA2C-727-U-RW

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	434.1	4.1			
FM (30°-60°)	2865.0	27.0			
FH (60°-80°)	1956.3	18.5			G2/5000
FVH (80°-90°)	61.7	0.6			G1/100
BL (0°-30°)	435.0	4.1	B1/500		
BM (30°-60°)	2828.8	26.7	B3/5000		
BH (60°-80°)	1954.2	18.4	B3/2500		G3/2500
BVH (80°-90°)	59.9	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

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

Type III Short





REPORT NUMBER: P367394

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	371.9	371.9	371.9	371.9	371.9	371.9	371.9	371.9	371.9	371.9	371.9
2.5°	450.4	433.7	412.7	425.1	430.3	439.3	438.0	433.7	415.2	446.1	449.6
5°	563.8	537.2	527.3	525.6	528.2	519.6	547.5	539.3	554.4	582.3	588.7
7.5°	642.0	622.2	601.2	607.6	581.0	577.1	613.2	645.4	653.5	704.6	708.1
10°	678.9	659.6	665.1	661.3	658.3	683.2	699.9	723.5	757.5	762.2	769.5
12.5°	710.2	718.0	742.4	741.6	781.9	826.2	819.7	844.2	849.8	909.0	891.0
15°	789.7	805.6	803.8	818.9	836.5	909.0	909.5	951.1	989.3	1012.5	1006.5
17.5°	906.0	911.6	888.4	889.3	940.4	970.0	1003.1	995.8	1095.4	1140.9	1143.9
20°	975.6	989.8	963.1	927.9	1018.5	1059.3	1077.8	1035.3	1141.8	1203.2	1203.2
22.5°	1097.1	1060.6	1020.3	996.6	1076.5	1119.9	1117.7	1105.7	1162.4	1271.0	1260.7
25°	1164.1	1143.5	1123.3	1129.3	1169.7	1192.0	1221.6	1193.7	1247.0	1327.7	1293.8
27.5°	1291.2	1253.0	1153.8	1232.8	1232.8	1216.1	1278.8	1292.1	1257.3	1388.7	1414.0
30°	1435.1	1421.7	1281.3	1365.1	1339.3	1292.1	1412.3	1403.7	1345.3	1479.3	1467.7
32.5°	1571.2	1615.0	1481.9	1435.9	1474.6	1492.6	1429.5	1455.2	1466.4	1595.7	1590.1
35°	1779.9	1816.8	1640.3	1628.7	1564.3	1547.6	1595.7	1604.2	1605.1	1741.2	1716.3
37.5°	2141.0	2087.7	1913.4	1831.4	1838.7	1818.5	1828.0	1760.1	1769.6	1967.1	1979.5
40°	2405.1	2345.0	2150.9	2092.0	1947.8	2034.1	1957.6	1950.8	1931.9	2187.8	2180.9
42.5°	2696.6	2614.2	2399.5	2320.9	2167.6	2132.4	2097.2	2176.6	2171.5	2408.5	2460.9
45°	2916.9	2750.3	2638.2	2589.3	2497.4	2411.1	2377.6	2413.2	2396.9	2573.0	2664.4
47.5°	3056.0	2911.3	2782.5	2679.5	2591.4	2803.1	2633.5	2585.8	2552.8	2749.9	2837.9
50°	3166.8	2999.8	2847.8	2813.4	2883.0	3070.2	2802.7	2697.5	2737.9	2883.0	3002.8
52.5°	3196.9	3020.0	2883.4	2861.5	3049.6	3083.5	3040.2	2863.2	2852.5	3042.7	3187.4
55°	3105.0	2935.4	2870.5	2990.3	3198.2	3169.8	3236.0	3123.0	3047.0	3205.9	3388.0
57.5°	2868.4	2700.1	2684.6	2857.2	3119.2	3360.5	3393.1	3303.8	3204.2	3372.5	3587.2
60°	2479.8	2326.1	2365.1	2555.8	2950.8	3294.4	3467.8	3386.2	3355.3	3522.8	3771.9
62.5°	1874.8	1755.0	1859.3	2125.1	2643.4	3208.9	3570.9	3558.0	3513.4	3682.5	3935.0
65°	1195.4	1132.3	1238.8	1508.9	2166.3	3053.5	3620.3	3637.4	3678.7	3805.8	4061.3
67.5°	694.8	661.3	726.1	947.3	1542.8	2507.3	3528.4	3774.9	3796.3	3869.3	4144.1
70°	410.9	389.0	415.7	532.0	873.4	1708.2	3009.7	3714.7	3877.1	3927.7	4227.9
72.5°	313.5	292.9	281.3	314.8	456.0	882.4	2034.9	3148.8	3812.2	3889.1	4192.7
75°	271.0	251.2	237.5	240.5	271.4	419.1	1103.1	2252.2	3248.4	3541.3	3872.8
77.5°	232.7	215.1	205.3	204.4	208.3	230.2	461.2	1221.2	2034.5	2545.5	2792.0
80°	186.4	172.6	170.5	170.5	164.9	163.2	229.3	464.6	774.2	918.1	880.3
82.5°	136.1	122.4	136.1	134.4	125.8	118.9	146.0	201.0	238.7	188.5	149.0
85°	91.9	79.4	89.7	91.5	83.3	61.8	87.6	100.5	103.1	64.4	53.2
87.5°	32.2	31.3	50.7	44.2	36.1	21.0	32.2	34.8	36.5	22.8	15.5
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: P367394  
 CATALOG NUMBER: MSA-SA2C-727-U-RW

**CANDELA DISTRIBUTION (continued):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	371.9	371.9	371.9	371.9	371.9	371.9	371.9	371.9	371.9	371.9	371.9
2.5°	450.9	445.7	420.0	423.8	433.7	438.4	443.1	423.8	414.4	444.4	441.4
5°	590.4	571.5	550.5	547.5	548.8	530.3	541.0	536.3	538.5	557.8	561.7
7.5°	707.2	684.5	656.6	634.7	596.9	566.8	592.1	605.0	608.9	643.2	656.1
10°	770.3	751.0	742.9	701.6	689.2	685.3	679.3	658.7	681.5	673.3	679.7
12.5°	894.0	890.1	847.6	820.6	823.2	830.5	792.7	772.1	742.4	788.8	772.1
15°	999.2	1016.0	973.5	924.1	899.6	912.0	883.3	853.2	826.6	840.8	822.7
17.5°	1133.6	1133.2	1050.3	997.5	995.3	994.5	952.0	885.9	917.6	907.8	908.6
20°	1204.9	1193.3	1090.2	1029.3	1081.2	1062.8	1024.5	939.5	976.5	988.5	996.2
22.5°	1264.6	1258.1	1133.2	1088.5	1122.0	1122.5	1084.2	1039.6	1034.9	1072.2	1052.0
25°	1306.2	1332.0	1214.3	1203.6	1218.2	1203.6	1166.3	1137.1	1118.2	1174.0	1118.2
27.5°	1405.0	1368.5	1226.8	1287.8	1296.8	1223.4	1270.2	1235.8	1183.4	1252.6	1275.3
30°	1475.4	1496.9	1314.4	1406.3	1395.6	1327.7	1347.0	1345.7	1283.0	1417.9	1402.0
32.5°	1596.5	1570.7	1457.4	1450.1	1475.8	1472.8	1440.2	1456.1	1471.6	1569.5	1593.1
35°	1720.6	1748.1	1548.8	1598.2	1590.9	1544.6	1630.0	1620.1	1666.1	1867.0	1800.5
37.5°	2000.6	1869.6	1754.1	1747.7	1796.6	1803.9	1776.4	1819.8	1919.0	2073.6	2144.9
40°	2183.9	2124.2	1928.0	1935.7	1867.9	1984.7	1907.4	2047.0	2122.5	2383.2	2357.8
42.5°	2461.3	2315.8	2127.2	2153.0	2139.3	2083.0	2184.8	2256.5	2364.7	2563.5	2691.9
45°	2667.9	2468.2	2378.9	2363.0	2361.3	2459.2	2446.3	2560.9	2599.6	2749.0	2855.5
47.5°	2824.6	2655.0	2522.7	2540.8	2488.4	2767.9	2618.9	2654.6	2732.7	2873.5	2997.6
50°	3010.5	2821.6	2671.3	2716.0	2843.5	2950.8	2816.0	2755.0	2793.2	2959.4	3097.7
52.5°	3182.7	2983.9	2818.6	2855.9	3064.2	3015.2	3000.6	2846.5	2841.8	2975.3	3132.5
55°	3384.1	3160.0	3014.0	3132.5	3206.3	3145.8	3122.6	2934.9	2819.0	2893.3	3041.4
57.5°	3581.6	3334.3	3189.2	3213.6	3307.2	3247.1	3073.2	2784.2	2639.5	2654.1	2804.0
60°	3766.7	3494.5	3374.7	3351.0	3425.8	3190.0	2885.6	2508.1	2316.2	2281.0	2410.7
62.5°	3925.1	3628.4	3515.1	3450.7	3521.9	3192.2	2593.1	2065.0	1854.1	1734.8	1835.7
65°	4051.0	3739.6	3658.9	3625.4	3651.2	2998.1	2137.6	1516.2	1257.7	1125.5	1184.3
67.5°	4134.7	3801.9	3765.0	3808.8	3465.3	2497.0	1583.6	970.4	731.3	659.1	696.1
70°	4221.4	3856.9	3855.6	3706.6	2938.4	1721.5	924.9	559.5	425.5	397.6	420.8
72.5°	4192.2	3791.6	3810.9	3241.5	2036.2	920.2	488.2	316.5	288.1	298.0	318.6
75°	3882.2	3447.2	3354.0	2330.4	1155.1	427.7	281.3	239.6	237.9	252.9	273.1
77.5°	2816.0	2400.8	2154.3	1320.8	495.1	231.4	207.0	200.1	200.1	212.1	230.2
80°	928.4	803.4	837.3	511.0	234.0	159.7	161.5	164.5	163.6	166.6	181.6
82.5°	152.4	158.0	244.3	208.7	141.3	109.1	121.9	128.0	129.7	115.9	131.8
85°	54.1	61.0	103.9	96.6	81.6	55.0	80.3	89.7	88.5	77.3	85.5
87.5°	16.7	21.5	37.8	29.2	24.5	15.0	30.1	35.2	44.2	18.0	16.3
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)