

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: P596778

Luminaire Tested: **MSA-SA4B-827-U-T3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596778  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-827-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14262 lumens  
Efficiency: N/A  
Efficacy: 83.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

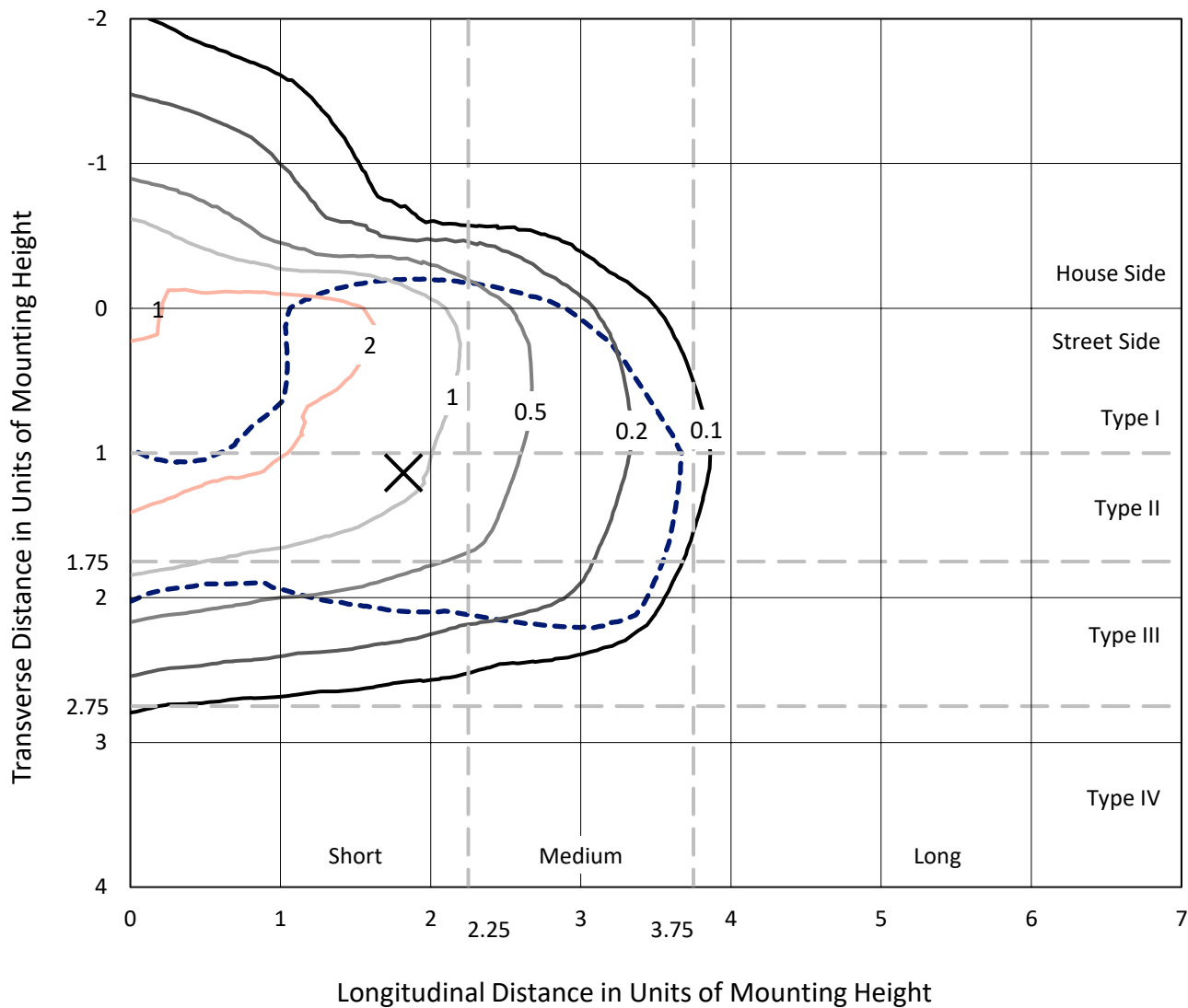
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P596778  
 CATALOG NUMBER: MSA-SA4B-827-U-T3

### Iso-Footcandle Lines of Horizontal Illumination

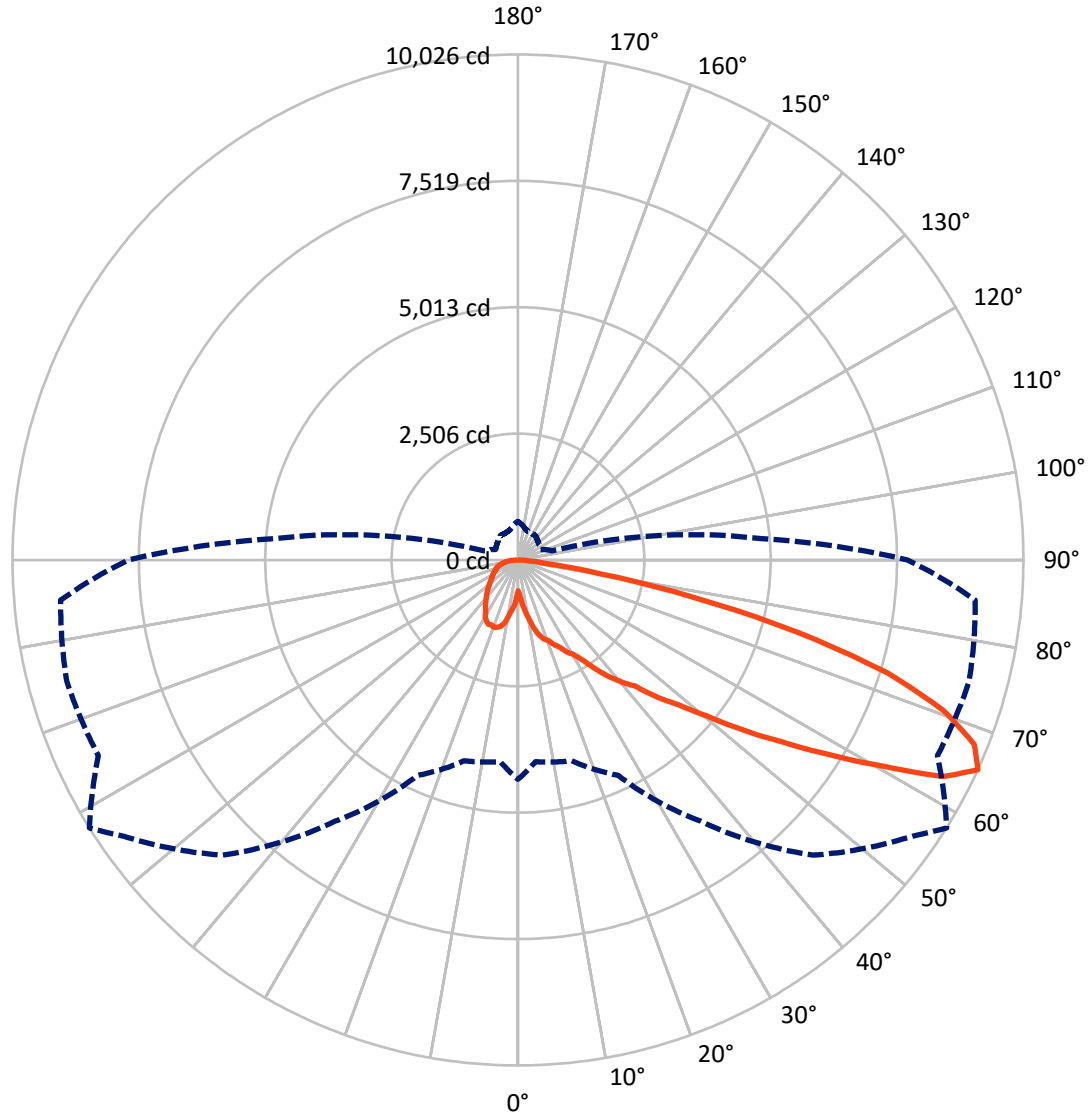
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 fc  
 Type III - Short - N/A

REPORT NUMBER: P596778  
CATALOG NUMBER: MSA-SA4B-827-U-T3

### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P596778  
 CATALOG NUMBER: MSA-SA4B-827-U-T3

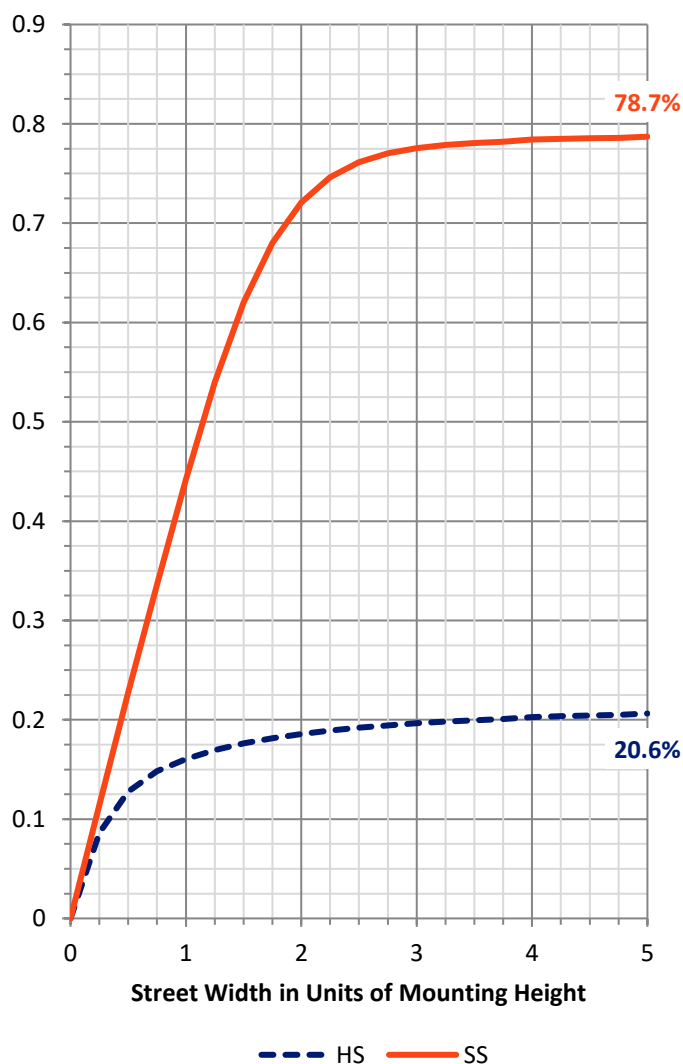
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3004.0	0.0	3004.0
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	11258.0	0.0	11258.0
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	14262.0	0.0	14262.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.3	0.7
10°-20°	407.0	2.9
20°-30°	781.0	5.5
30°-40°	1289.4	9.0
40°-50°	2143.2	15.0
50°-60°	3539.4	24.8
60°-70°	3970.6	27.8
70°-80°	1805.3	12.7
80°-90°	232.8	1.6
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°	14262.0	100.0
0°-180°	14262.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P596778

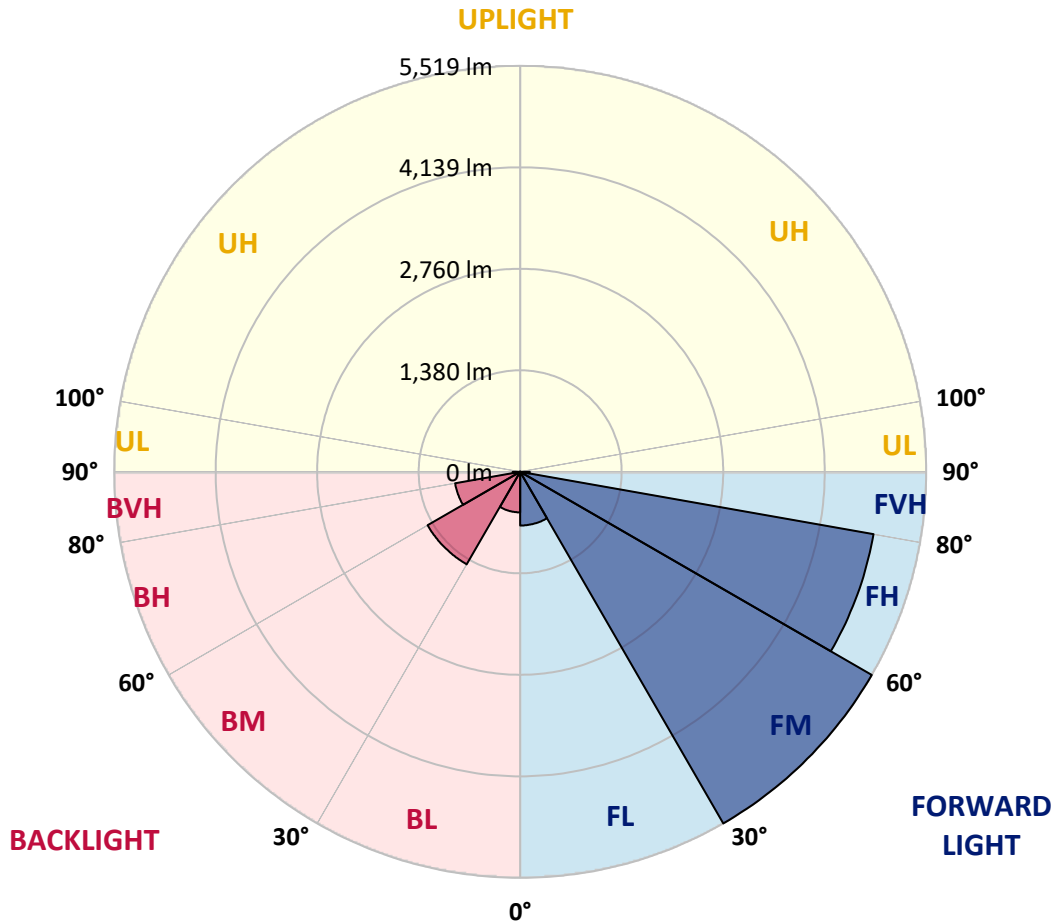
CATALOG NUMBER: MSA-SA4B-827-U-T3

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	729.8	5.1			
FM (30°-60°)	5519.2	38.7			
FH (60°-80°)	4877.9	34.2			G2/5000
FVH (80°-90°)	131.1	0.9			G2/225
BL (0°-30°)	551.5	3.9	B2/1000		
BM (30°-60°)	1452.8	10.2	B2/2500		
BH (60°-80°)	898.0	6.3	B2/1000		G2/1000
BVH (80°-90°)	101.7	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Short





REPORT NUMBER: P596778

CATALOG NUMBER: MSA-SA4B-827-U-T3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	612.3	612.3	612.3	612.3	612.3	612.3	612.3	612.3	612.3	612.3	612.3
2.5°	731.1	709.2	672.3	681.2	702.6	714.5	707.4	697.9	685.4	683.0	737.7
5°	946.7	904.6	887.3	880.2	854.1	838.6	865.4	861.8	876.1	902.2	955.6
7.5°	1104.1	1074.4	1045.9	1042.9	992.5	974.6	1010.3	1029.3	1054.8	1055.4	1127.9
10°	1188.5	1162.9	1162.3	1135.6	1131.4	1165.3	1165.9	1180.1	1183.1	1213.4	1199.2
12.5°	1279.9	1278.1	1310.8	1310.2	1348.2	1404.1	1376.1	1376.1	1384.5	1347.6	1392.8
15°	1497.9	1516.9	1455.7	1465.8	1465.8	1520.5	1518.7	1529.4	1554.9	1545.4	1525.2
17.5°	1724.8	1736.7	1669.0	1606.0	1610.7	1598.9	1641.6	1645.8	1621.4	1731.9	1707.6
20°	1870.9	1917.2	1774.7	1695.7	1711.1	1724.8	1726.6	1701.0	1688.6	1858.4	1825.2
22.5°	2051.4	2012.2	1881.6	1794.3	1817.4	1799.0	1795.5	1815.1	1832.3	1896.4	1950.5
25°	2172.0	2169.0	2012.2	1916.6	1891.1	1885.7	1922.0	1914.2	1955.2	2071.6	2037.8
27.5°	2347.2	2401.9	2123.9	2147.7	2035.4	1917.2	2033.6	2068.7	2142.3	2123.3	2198.7
30°	2687.0	2646.0	2355.5	2349.0	2221.9	2122.7	2203.5	2173.8	2306.2	2302.1	2357.9
32.5°	2964.3	2992.8	2627.6	2559.3	2464.8	2345.4	2292.0	2374.5	2445.8	2562.8	2594.3
35°	3257.7	3251.2	2906.1	2768.3	2612.1	2562.8	2628.7	2663.2	2814.6	2922.2	2847.3
37.5°	3713.9	3662.2	3267.2	3006.5	2889.5	2871.7	2984.5	2934.6	3098.6	3124.1	3166.3
40°	4137.9	3982.3	3597.5	3298.7	3112.8	3179.3	3182.9	3189.4	3277.3	3346.8	3555.3
42.5°	4541.2	4431.9	3933.0	3708.5	3434.7	3370.0	3410.4	3424.0	3646.2	3788.1	4076.8
45°	5092.4	4799.6	4415.3	4184.9	3878.4	3795.8	3767.3	3884.9	4099.3	4422.4	4670.1
47.5°	5558.6	5294.3	4927.9	4624.4	4281.7	4517.5	4355.9	4290.0	4578.0	4978.3	5372.7
50°	5945.3	5654.2	5294.9	5119.7	5065.1	5275.3	4856.0	4863.7	5127.4	5692.3	6144.2
52.5°	6244.6	5934.0	5615.6	5526.5	5831.8	5953.0	5650.1	5604.4	5796.8	6464.4	7007.2
55°	6524.4	6194.7	5948.8	6130.6	6644.9	6658.6	6637.2	6383.6	6615.2	7291.7	7900.5
57.5°	6596.2	6241.1	6077.7	6338.5	7034.0	7575.0	7787.7	7289.9	7525.7	8044.2	8665.5
60°	6226.2	5922.1	5856.8	6210.8	7244.2	8035.3	8590.7	8293.1	8204.6	8648.3	9201.2
62.5°	5468.3	5115.5	5168.4	5660.2	7022.7	8217.7	9225.0	9457.2	8921.5	9128.8	9435.2
65°	4352.3	4015.6	4122.5	4714.0	6327.2	8278.2	9549.3	10025.6	9180.4	9264.8	9103.8
67.5°	3069.4	2763.6	2898.4	3663.4	5263.4	7502.6	9605.1	9760.7	8904.8	8876.9	8198.7
70°	1739.0	1547.2	1693.3	2331.2	3715.1	5976.8	9167.4	8962.5	8410.7	8015.1	6859.9
72.5°	797.7	731.7	801.8	1186.7	2138.8	3977.0	7484.2	7670.1	7247.2	6752.4	5218.9
75°	424.1	400.9	430.6	592.7	1000.8	2163.7	5317.5	5735.6	5510.5	5121.5	3404.4
77.5°	315.4	297.6	311.8	384.3	534.5	846.4	3021.3	3548.8	3634.3	3276.1	1890.5
80°	241.7	227.5	241.7	290.4	370.0	402.1	1291.8	1654.1	1884.0	1522.3	751.3
82.5°	179.4	169.9	191.8	218.0	260.1	251.2	458.5	570.8	735.9	503.1	292.8
85°	142.5	130.7	139.0	147.9	166.3	137.8	209.7	234.6	248.3	207.9	108.1
87.5°	55.8	51.7	101.0	79.6	67.7	41.6	63.0	71.3	73.1	70.1	31.5
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: P596778  
 CATALOG NUMBER: MSA-SA4B-827-U-T3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	612.3	612.3	612.3	612.3	612.3	612.3	612.3	612.3	612.3	612.3	612.3
2.5°	743.6	737.7	702.6	713.9	732.3	735.9	743.6	722.2	711.5	750.7	752.5
5°	960.4	928.3	911.7	913.5	901.6	883.2	911.1	929.5	936.6	965.7	976.4
7.5°	1128.5	1089.9	1062.0	1029.9	984.7	955.6	1004.3	1040.0	1059.0	1119.6	1143.3
10°	1203.3	1172.4	1166.5	1126.1	1124.9	1124.3	1121.9	1109.5	1150.4	1144.5	1161.1
12.5°	1357.7	1351.2	1294.8	1278.7	1280.5	1278.7	1228.8	1226.5	1227.1	1281.7	1262.1
15°	1501.5	1502.7	1451.0	1392.8	1340.5	1324.5	1304.9	1296.0	1309.0	1339.9	1320.9
17.5°	1679.0	1685.0	1537.1	1445.0	1376.1	1374.4	1327.4	1272.2	1351.8	1370.8	1350.0
20°	1793.7	1768.7	1587.0	1432.6	1413.0	1359.5	1301.3	1225.3	1294.2	1340.5	1353.6
22.5°	1902.4	1859.0	1633.3	1454.5	1360.7	1297.2	1240.7	1191.4	1213.4	1265.1	1256.8
25°	1976.0	1964.1	1697.5	1507.4	1358.9	1217.6	1141.5	1110.1	1121.3	1201.5	1193.8
27.5°	2151.8	2023.5	1686.2	1521.1	1301.9	1108.9	1070.9	1037.0	1025.7	1112.4	1136.2
30°	2269.4	2216.6	1761.6	1499.7	1230.0	1019.8	964.0	956.8	960.4	1059.0	1065.5
32.5°	2469.0	2331.8	1885.1	1417.7	1125.5	953.9	889.7	892.7	908.7	980.6	995.4
35°	2676.9	2594.9	1901.8	1358.9	1040.6	883.8	857.6	836.9	845.8	908.7	911.7
37.5°	3062.9	2779.6	2003.9	1268.0	978.2	857.0	807.2	788.7	793.5	829.1	854.7
40°	3402.6	3150.8	1956.4	1180.1	901.0	821.4	759.0	745.4	731.1	766.2	782.2
42.5°	3947.3	3415.7	1940.4	1083.3	864.8	773.3	730.5	694.3	680.6	710.3	739.4
45°	4491.9	3696.6	1853.1	985.3	813.7	769.7	689.0	654.5	658.1	684.8	714.5
47.5°	5098.9	4073.8	1705.2	890.3	757.9	752.5	647.4	632.5	643.2	672.9	702.6
50°	5816.4	4474.1	1582.8	804.8	718.1	700.8	642.0	624.2	634.3	669.4	698.5
52.5°	6601.0	4913.0	1493.7	725.8	672.9	659.9	649.2	631.9	643.8	674.1	704.4
55°	7380.8	5313.9	1433.2	671.7	634.3	642.6	664.0	651.5	657.5	680.1	710.3
57.5°	7959.3	5525.4	1311.4	614.1	602.8	632.5	665.8	645.0	648.6	680.1	712.7
60°	8295.5	5565.7	1111.2	567.2	577.9	612.3	647.4	620.7	618.3	670.0	710.9
62.5°	8258.6	5331.1	881.4	524.4	549.4	582.1	619.5	593.9	600.5	671.1	714.5
65°	7731.2	4851.8	700.8	488.2	514.9	548.8	596.3	586.2	617.7	718.7	765.6
67.5°	6804.7	4151.6	563.0	454.4	482.9	526.2	612.3	639.1	652.7	767.4	815.5
70°	5514.7	3225.7	469.2	424.7	457.3	536.9	658.7	653.3	642.0	744.2	782.2
72.5°	3984.1	2211.2	412.8	395.6	425.9	504.8	659.9	631.4	617.1	679.5	706.8
75°	2492.7	1319.1	360.5	358.7	377.7	452.6	630.2	604.6	566.0	596.9	632.5
77.5°	1423.7	675.3	303.5	319.5	330.8	392.6	564.2	541.1	506.6	519.7	554.7
80°	543.4	326.7	256.0	283.9	280.9	332.6	478.1	472.8	433.6	437.7	459.1
82.5°	256.0	182.9	212.6	244.1	228.1	264.9	388.4	386.7	352.2	318.9	336.2
85°	95.0	97.4	155.6	185.9	158.6	171.1	280.9	273.2	239.9	202.5	223.9
87.5°	21.4	35.0	76.6	96.8	55.2	52.9	113.4	98.6	95.0	56.4	59.4
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)