

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: McGRAW-EDISON

Report Number: P591282

Luminaire Tested: **CTN-CA8-480-727-U-T3-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591282  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-480-727-U-T3-SSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31078 lumens  
Efficiency: N/A  
Efficacy: 64.6 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G3

Input Watts (W): 480.8  
Input Voltage (V): 120  
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: 24 FT

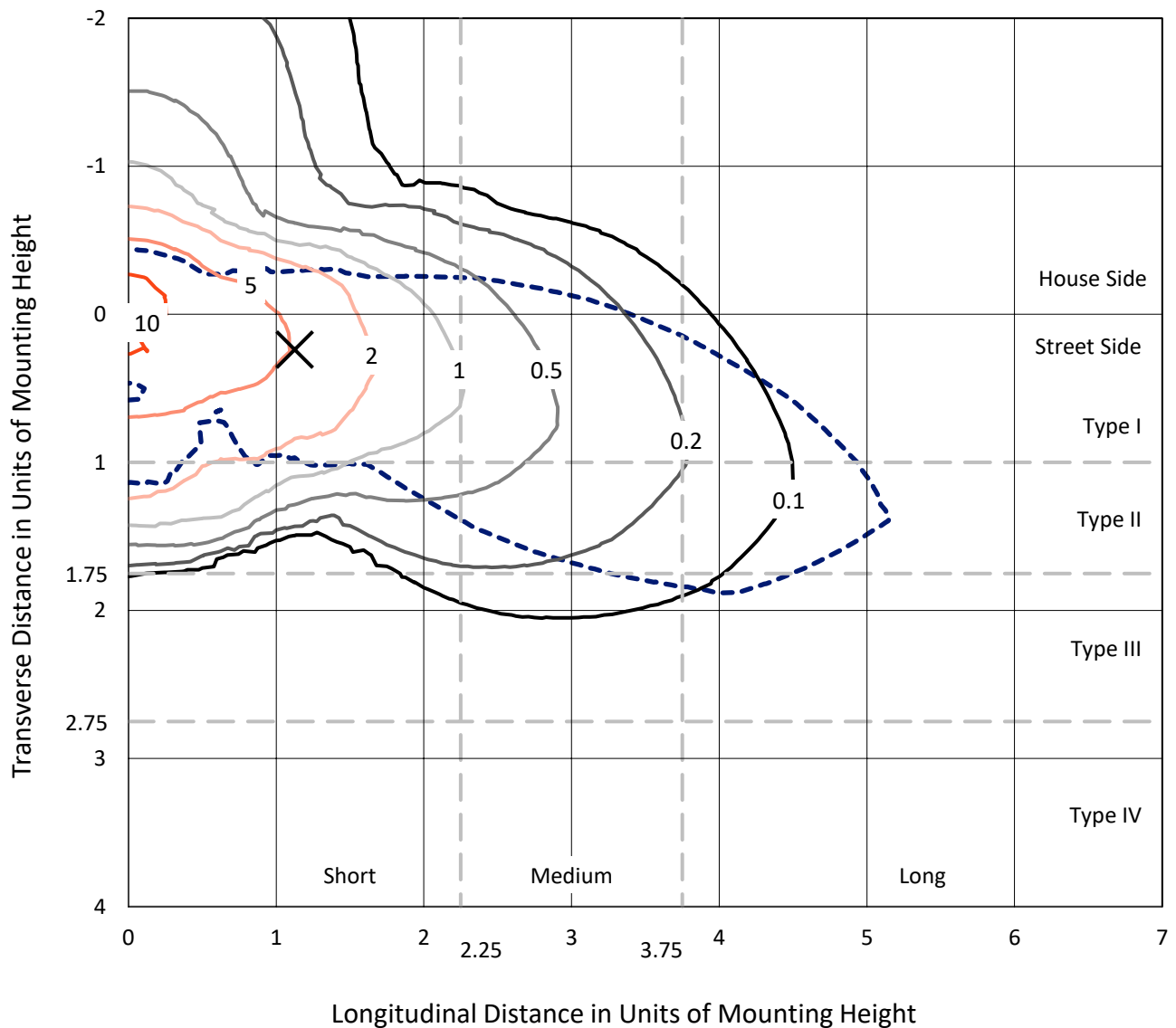




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### Iso-Footcandle Lines of Horizontal Illumination

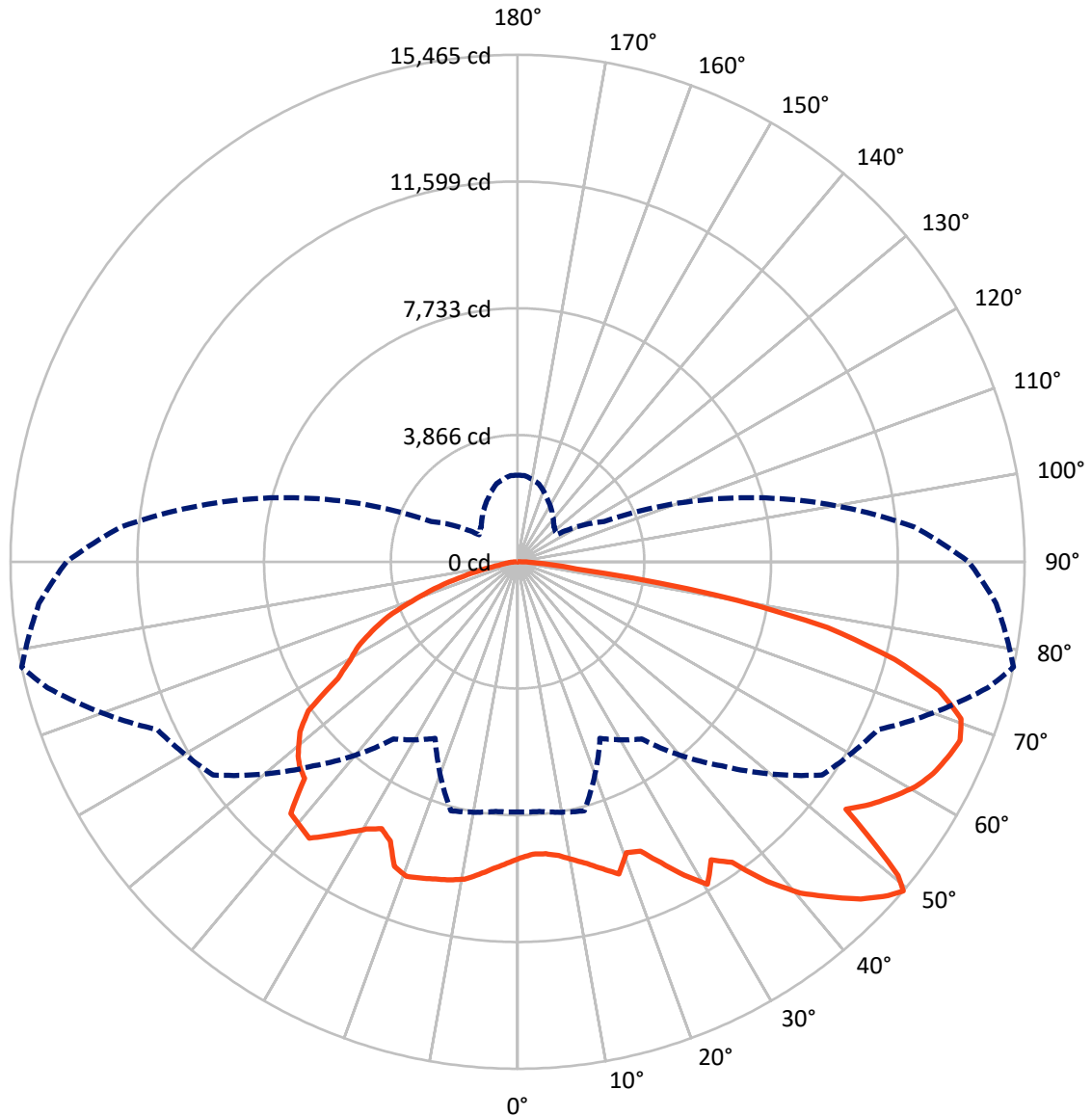
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 49-Deg Vertical

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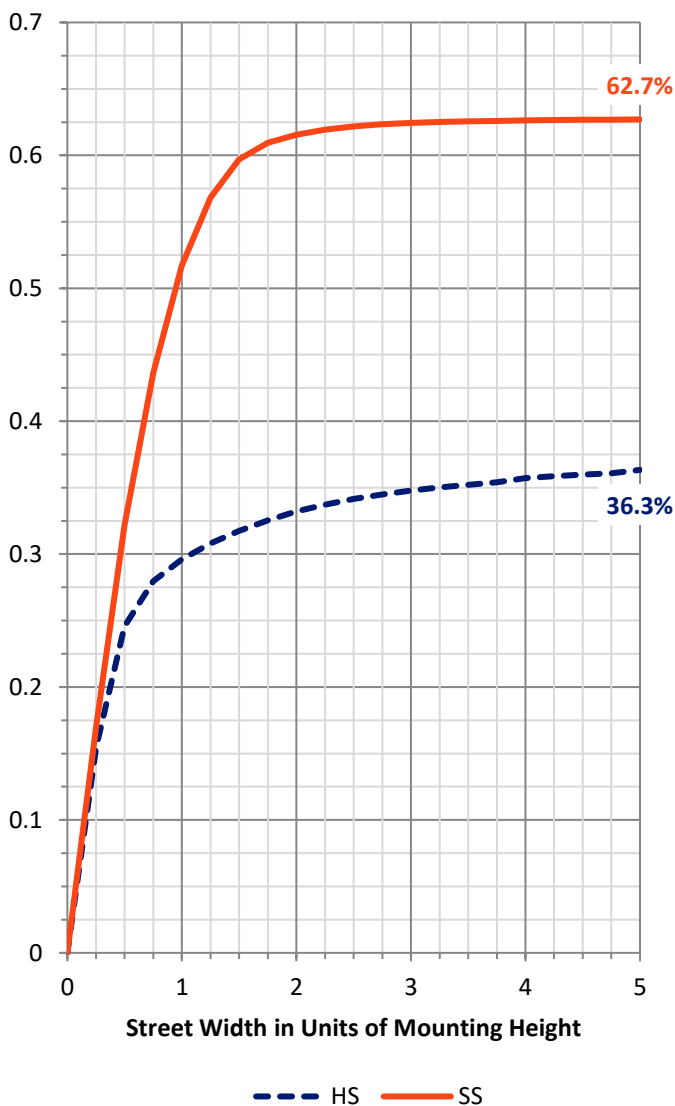
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11623.9	0.0	11623.9
	% Fixture	37.4	0.0	37.4
<b>Street Side</b>	Lumens	19454.1	0.0	19454.1
	% Fixture	62.6	0.0	62.6
<b>Total</b>	Lumens	31078.0	0.0	31078.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	904.6	2.9
10°-20°	2776.8	8.9
20°-30°	4023.9	12.9
30°-40°	4944.5	15.9
40°-50°	5580.6	18.0
50°-60°	5303.0	17.1
60°-70°	3960.6	12.7
70°-80°	2941.4	9.5
80°-90°	642.7	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°	31078.0	100.0
0°-180°	31078.0	100.0

**Coefficient of Utilization**



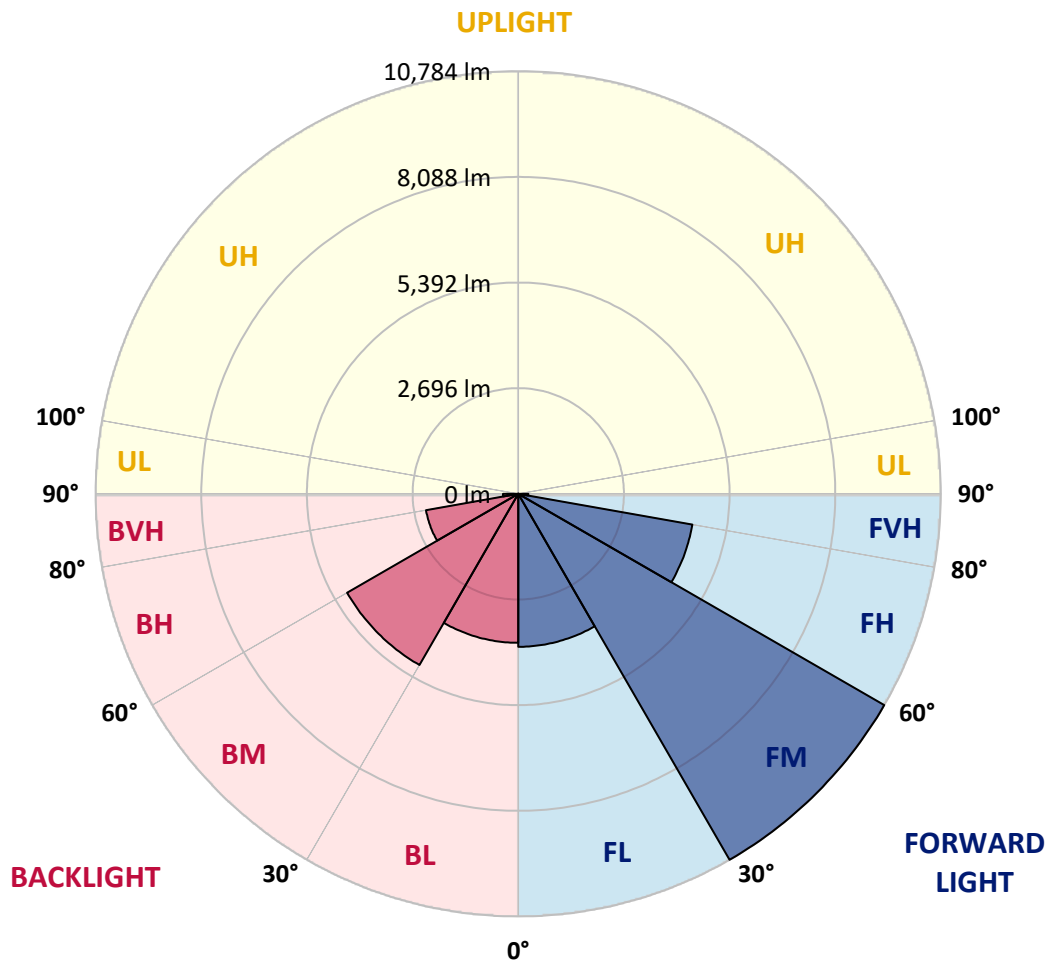
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3903.6	12.6			
FM (30°-60°)	10784.2	34.7			
FH (60°-80°)	4512.3	14.5			G2/5000
FVH (80°-90°)	254.1	0.8			G3/500
BL (0°-30°)	3801.7	12.2	B4/5000		
BM (30°-60°)	5043.9	16.2	B4/8500		
BH (60°-80°)	2389.6	7.7	B3/2500		G3/2500
BVH (80°-90°)	388.7	1.3			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3
2.5°	8842.0	8793.7	8806.7	8881.1	8737.9	8842.0	8799.2	8899.7	8933.2	8929.4	9074.5
5°	8914.6	8851.3	8869.9	8920.1	8763.9	8843.9	8810.4	8918.3	8946.2	8948.0	9145.2
7.5°	9180.5	9108.0	9089.4	9093.1	8946.2	9005.7	8920.1	9003.8	9054.1	9048.5	9267.9
10°	9567.4	9487.4	9446.5	9433.5	9254.9	9228.9	9124.7	9154.5	9228.9	9238.2	9461.4
12.5°	9965.4	9902.2	9842.7	9812.9	9567.4	9509.7	9357.2	9383.3	9439.1	9450.2	9682.7
15°	10316.9	10257.4	10248.1	10214.6	9965.4	9853.8	9669.7	9641.8	9684.6	9719.9	9922.6
17.5°	9972.9	9896.6	9848.2	9859.4	9732.9	9450.2	9336.8	9528.3	9885.4	10010.1	10201.6
20°	9002.0	9095.0	9055.9	8905.3	8769.5	9227.0	9130.3	9089.4	9310.7	9470.7	9933.8
22.5°	7908.4	7908.4	8280.3	8540.7	8592.8	8849.5	9377.7	9561.8	9586.0	9586.0	9452.1
25°	7043.5	7289.0	7919.5	8909.0	8914.6	8862.5	9009.4	10019.4	10186.7	10168.1	9943.1
27.5°	7378.3	7337.4	7761.4	8449.6	9422.3	9362.8	9076.4	9532.1	10912.1	10826.6	10538.3
30°	7674.0	7633.1	7709.3	8563.0	9567.4	9905.9	9660.4	9524.6	10951.2	11416.1	11243.2
32.5°	7951.1	7904.6	7992.0	8122.2	9104.3	10445.3	10272.3	10183.0	10393.2	10845.2	12041.1
35°	8174.3	8181.8	8282.2	8473.8	8923.9	10263.0	10886.1	10919.5	11287.8	11259.9	11864.4
37.5°	8339.9	8354.7	8442.1	8669.1	8836.4	8477.5	11470.1	11856.9	12424.2	12368.4	11923.9
40°	8349.1	8382.6	8557.5	8836.4	9033.6	7549.4	11362.2	12891.1	13452.8	13289.1	12736.7
42.5°	8176.2	8192.9	8484.9	8957.3	6855.6	7852.6	10536.4	13921.4	14172.5	13971.7	13357.9
45°	8021.8	8018.1	8330.6	8754.6	6478.1	8207.8	10514.1	13622.0	14834.7	14678.4	13895.4
47.5°	7804.2	7802.3	8107.4	6587.8	6559.9	8590.9	11068.3	11812.3	15383.3	15215.9	14384.6
49°	7629.4	7648.0	7863.7	5942.4	6597.1	8804.8	11338.0	12121.1	14845.8	15465.2	14656.1
50°	7534.5	7553.1	7026.8	5877.3	6608.3	8927.6	11479.4	12348.0	13361.6	15043.0	14830.9
52.5°	7103.0	6939.3	5447.7	5741.6	6612.0	9072.7	9870.6	12829.7	12734.8	12539.5	14042.3
55°	4279.7	4843.2	4932.5	5587.2	6552.5	6589.7	9641.8	13389.5	13348.6	13064.0	12091.3
57.5°	2594.6	2568.5	3809.1	5157.5	4387.5	5525.8	10019.4	14129.8	13888.0	13508.5	12297.7
60°	915.1	809.1	816.5	879.7	1633.0	4134.6	7992.0	10640.6	13999.6	13940.0	12485.6
62.5°	72.5	68.8	68.8	72.5	104.2	1553.0	6336.7	10674.0	14386.4	14232.1	12528.4
65°	9.3	9.3	9.3	20.5	53.9	1404.2	6346.0	10847.0	14674.7	14410.6	12414.9
67.5°	0.0	0.0	5.6	14.9	42.8	1242.4	6160.0	10949.3	14933.2	14559.4	12310.8
70°	0.0	0.0	3.7	13.0	37.2	1028.5	5933.1	11038.6	14812.3	14349.2	11786.3
72.5°	0.0	0.0	3.7	11.2	31.6	678.9	5259.8	10378.3	13951.2	13449.0	10709.4
75°	0.0	0.0	3.7	9.3	29.8	386.9	4309.4	9169.4	12414.9	11883.0	9024.3
77.5°	0.0	0.0	1.9	7.4	26.0	212.0	2977.7	7590.3	10255.6	9671.5	6760.8
80°	0.0	0.0	1.9	7.4	24.2	145.1	1354.0	4930.6	6835.2	6104.2	3704.9
82.5°	0.0	0.0	1.9	7.4	18.6	98.6	546.8	1381.9	2114.7	1807.8	1179.2
85°	0.0	0.0	1.9	5.6	13.0	63.2	269.7	567.3	853.7	820.2	597.0
87.5°	0.0	0.0	1.9	5.6	9.3	18.6	80.0	186.0	332.9	338.5	254.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3	9037.3
2.5°	9143.3	9160.1	9215.9	9299.6	9312.6	9426.0	9407.4	9619.5	9639.9	9690.1	9745.9
5°	9240.0	9297.7	9424.2	9615.8	9755.2	9926.4	9909.6	10149.5	10173.7	10160.7	10246.3
7.5°	9381.4	9467.0	9664.1	9922.6	9969.1	10181.2	10153.3	10361.6	10365.3	10337.4	10421.1
10°	9587.9	9688.3	9870.6	10017.5	10129.1	10257.4	10238.8	10424.8	10406.2	10374.6	10462.0
12.5°	9786.9	9842.7	9954.3	10127.2	10147.7	10199.8	10168.1	10341.1	10322.5	10277.9	10359.7
15°	9965.4	9993.3	9995.2	10080.7	10034.2	10073.3	9989.6	10114.2	10071.4	10054.7	10112.3
17.5°	10194.2	10142.1	10065.8	10060.3	9902.2	9848.2	9714.3	9747.8	9658.5	9651.1	9682.7
20°	10223.9	10331.8	10112.3	9885.4	9619.5	9483.7	9230.7	9232.6	9132.2	9093.1	9111.7
22.5°	9409.3	9675.3	10166.3	9732.9	9281.0	8975.9	8650.5	8551.9	8362.2	8282.2	8250.6
25°	9727.3	9381.4	9344.2	9476.3	8842.0	8377.0	7904.6	7614.5	7389.4	7207.2	7220.2
27.5°	10220.2	9770.1	8860.6	8914.6	8289.6	7636.8	6924.5	6515.3	6286.5	6109.8	6089.4
30°	10873.1	10307.6	8964.8	7726.1	7655.4	6706.8	5832.7	5380.7	5148.2	5085.0	5045.9
32.5°	11684.0	10947.4	9199.1	7454.5	6334.9	5700.6	4720.5	4355.9	4246.2	4240.6	4196.0
35°	12647.4	11793.7	9414.9	7093.7	5462.6	4642.3	3771.9	3532.0	3548.7	3550.6	3587.8
37.5°	12031.8	12593.5	9684.6	6751.5	4612.6	3450.1	3033.5	2882.9	2931.2	3009.3	3046.5
40°	12041.1	11464.5	9998.9	6180.5	3584.1	2631.8	2373.2	2339.8	2546.2	2704.3	2743.4
42.5°	12524.7	11390.1	9883.6	5529.5	2624.3	2001.3	1977.1	2157.5	2455.1	2631.8	2663.4
45°	13043.6	11743.5	8209.7	4607.0	1902.7	1692.5	1878.5	2129.6	2453.2	2641.1	2659.7
47.5°	13536.4	11966.7	7869.3	3600.8	1528.8	1595.8	1848.8	2129.6	2466.2	2657.8	2669.0
49°	13755.9	12147.1	7553.1	2912.6	1434.0	1558.6	1832.0	2133.3	2470.0	2633.6	2639.2
50°	13886.1	12249.4	7298.3	2700.6	1387.5	1534.4	1824.6	2138.9	2464.4	2605.7	2611.3
52.5°	14088.8	12414.9	6712.4	2151.9	1300.1	1478.6	1813.4	2161.2	2443.9	2527.6	2523.9
55°	11618.9	11604.0	6223.3	1806.0	1233.1	1428.4	1809.7	2179.8	2453.2	2538.8	2535.1
57.5°	11135.3	9528.3	5243.1	1476.8	1177.3	1385.6	1813.4	2207.7	2620.6	2769.4	2750.8
60°	11170.6	9383.3	4461.9	1281.5	1112.2	1350.3	1824.6	2332.3	3027.9	3178.6	3132.1
62.5°	11047.9	9028.0	3993.2	1151.3	1043.4	1318.7	1832.0	2505.3	3080.0	3093.0	3013.1
65°	10755.9	8581.6	3362.7	1008.1	970.9	1288.9	1830.2	2568.5	2841.9	2735.9	2709.9
67.5°	10214.6	8107.4	2661.5	883.5	892.8	1244.3	1872.9	2458.8	2689.4	2603.9	2564.8
70°	9573.0	7095.6	1876.7	768.1	822.1	1194.1	1867.4	2432.8	2609.5	2483.0	2429.0
72.5°	8431.0	5964.7	1262.9	662.1	732.8	1136.4	1772.5	2354.6	2557.4	2473.7	2399.3
75°	6701.3	4463.8	732.8	571.0	645.4	1052.7	1679.5	2306.3	2585.3	2425.3	2271.0
77.5°	4581.0	2542.5	546.8	478.0	556.1	944.8	1523.3	2144.5	2499.7	2362.1	2155.6
80°	2053.3	918.8	418.5	388.7	466.8	766.3	1313.1	1897.1	2367.7	2367.7	2222.6
82.5°	816.5	578.4	290.1	305.0	381.3	584.0	1039.7	1636.7	2086.8	2181.7	2332.3
85°	461.3	338.5	186.0	221.3	292.0	452.0	757.0	1272.2	1700.0	1884.1	2042.2
87.5°	182.3	128.3	74.4	124.6	169.3	232.5	331.1	623.1	915.1	1127.1	1246.1
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)