

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: P591183

Luminaire Tested: **CTN-CA8-480-722-U-T2-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591183  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-6)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-480-722-U-T2-SSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31787 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G4

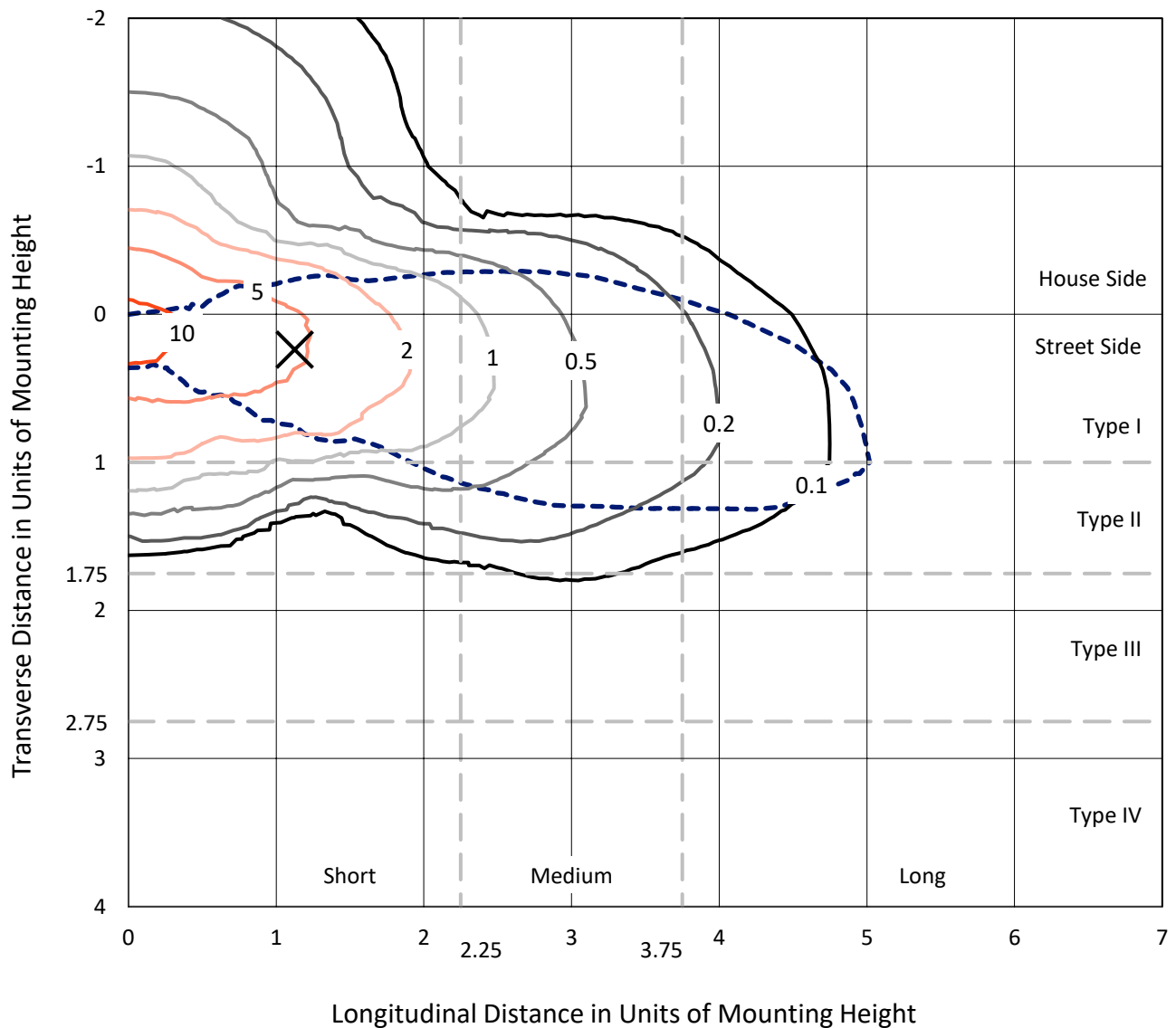
Input Watts (W): 480.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

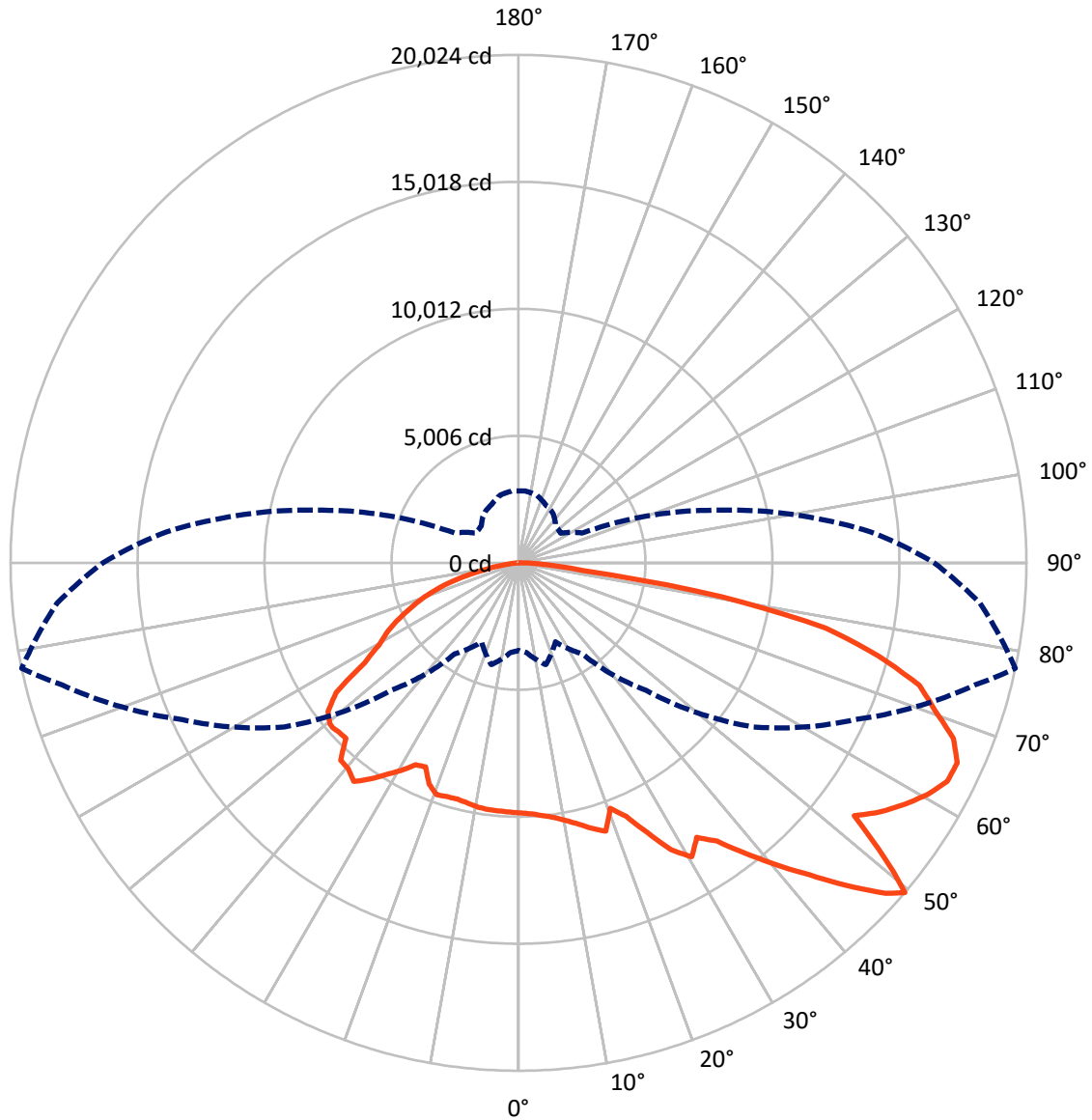
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 12.6 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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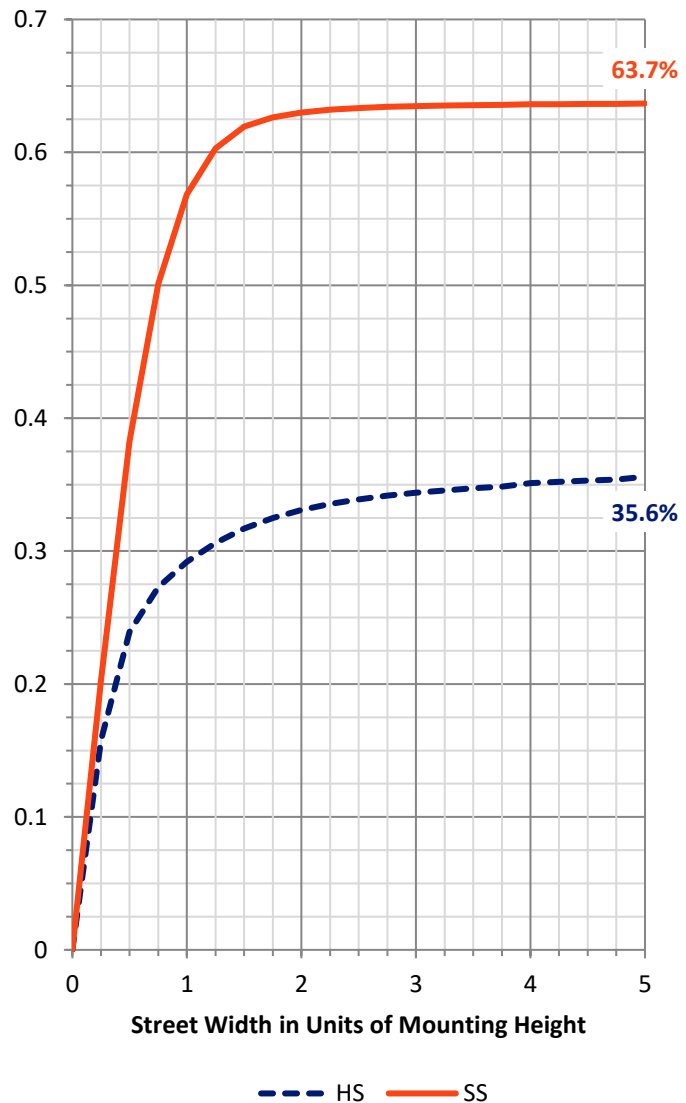
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	11612.3	0.0	11612.3
	% Fixture	36.5	0.0	36.5
<b>Street Side</b>	Lumens	20174.7	0.0	20174.7
	% Fixture	63.5	0.0	63.5
<b>Total</b>	Lumens	31787.0	0.0	31787.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	955.4	3.0
10°-20°	2809.6	8.8
20°-30°	3955.9	12.4
30°-40°	4958.8	15.6
40°-50°	5597.2	17.6
50°-60°	5378.1	16.9
60°-70°	4393.6	13.8
70°-80°	3082.2	9.7
80°-90°	656.2	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°	31787.0	100.0
0°-180°	31787.0	100.0

**Coefficient of Utilization**



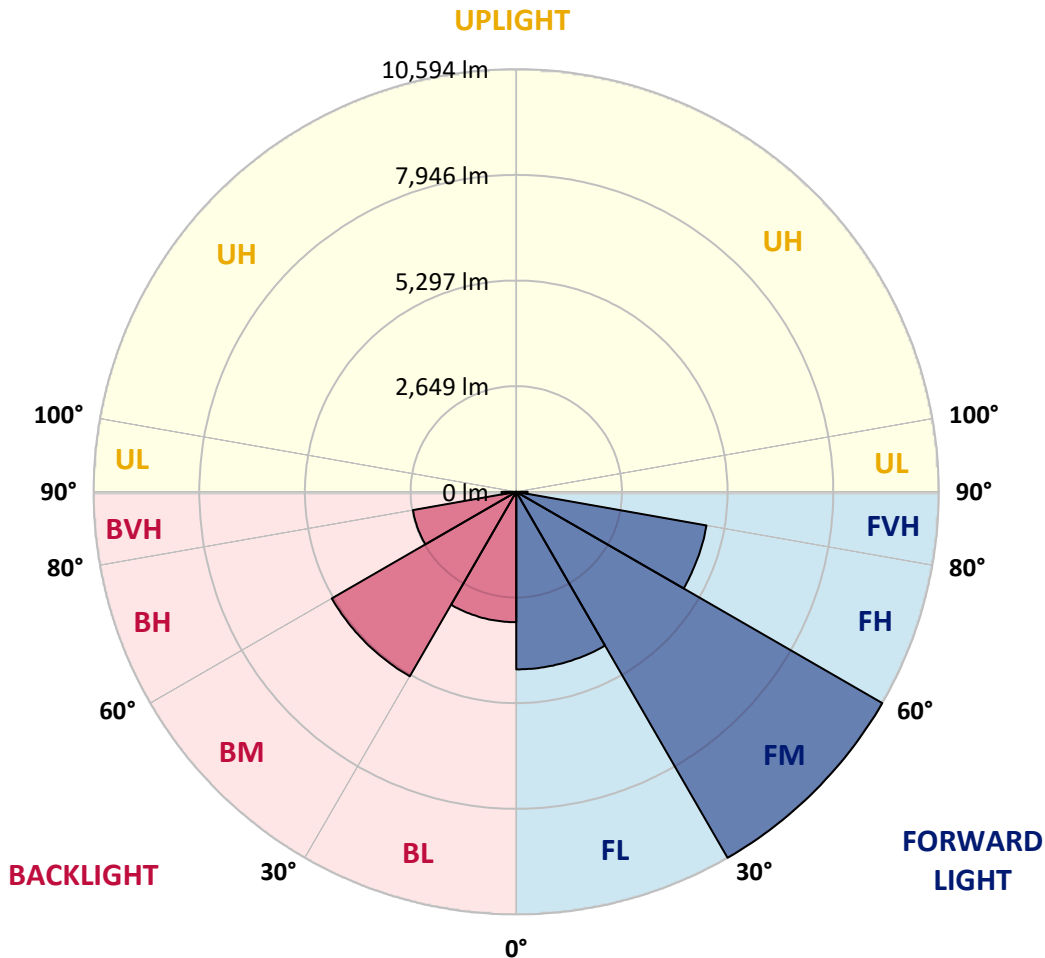
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4451.1	14.0			
FM (30°-60°)	10594.2	33.3			
FH (60°-80°)	4843.7	15.2			G2/5000
FVH (80°-90°)	285.7	0.9			G3/500
BL (0°-30°)	3269.8	10.3	B4/5000		
BM (30°-60°)	5340.0	16.8	B4/8500		
BH (60°-80°)	2632.1	8.3	B4/5000		G4/5000
BVH (80°-90°)	370.4	1.2			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6
2.5°	10265.9	10171.0	10192.5	10242.6	10049.3	10103.0	10017.1	10054.7	9952.7	9909.7	9927.6
5°	10998.0	10887.1	10912.1	10937.2	10652.6	10530.8	10291.0	10235.5	10079.8	10008.2	9999.2
7.5°	11347.1	11232.5	11259.4	11259.4	11042.8	11062.5	10819.0	10561.3	10249.8	10137.0	10086.9
10°	11907.4	11778.5	11758.8	11724.8	11442.0	11316.7	11114.4	10964.0	10491.5	10330.4	10192.5
12.5°	12317.3	12217.1	12218.9	12181.3	11862.6	11771.3	11415.1	11237.9	10770.7	10575.6	10353.6
15°	12487.4	12415.8	12462.3	12349.5	12136.5	12000.5	11832.2	11547.6	11064.3	10863.8	10589.9
17.5°	11694.4	11565.5	11223.6	11282.7	11268.3	11309.5	11144.8	11313.1	11236.1	11126.9	10946.1
20°	9902.5	10038.6	10278.4	10065.4	10049.3	10584.5	10967.6	10915.7	10486.1	10326.8	10507.6
22.5°	8415.0	8248.5	8755.1	9512.3	9725.3	10271.3	10922.9	11542.2	11057.1	10853.1	10305.3
25°	7079.6	7247.9	8035.5	9181.1	9850.6	10011.7	10758.2	11923.5	12000.5	11778.5	11067.9
27.5°	6868.4	6866.6	7398.3	8508.1	10031.4	10536.2	10765.3	11733.8	12954.6	12802.4	11986.2
30°	6820.1	6795.0	6997.3	8121.4	9539.2	11007.0	11452.7	11792.8	12947.4	13455.8	13035.1
32.5°	6612.4	6592.7	6800.4	7328.5	8869.7	11456.3	12111.5	12559.0	12625.2	12902.7	14100.2
35°	6279.5	6326.0	6598.1	7181.7	8320.1	10572.0	12779.1	13479.1	13638.4	13475.5	13484.4
37.5°	5960.9	5996.7	6275.9	6920.3	7919.2	8599.4	13237.4	14363.3	14717.8	14531.6	13661.6
40°	5547.4	5597.5	5928.6	6642.9	7656.0	7421.5	12573.3	15401.6	15893.8	15655.7	14669.4
42.5°	5081.9	5105.2	5497.2	6186.4	5490.1	7460.9	11633.5	16353.9	17043.0	16806.7	15616.4
45°	4684.6	4698.9	5019.3	5457.9	4949.5	7398.3	10983.7	15902.8	18385.6	18149.3	16618.8
47.5°	4126.1	4228.1	4575.4	3773.4	4596.8	7244.3	11202.1	14102.0	19644.0	19468.5	17592.6
49°	3456.6	3547.9	4158.3	3436.9	4378.5	7106.5	11277.3	14628.3	18623.6	20023.5	18260.3
50°	3177.3	3243.6	3186.3	3317.0	4219.1	6966.9	11157.4	15052.5	17116.4	19176.8	18689.9
52.5°	2762.0	2570.5	2189.2	2978.6	3852.2	6422.7	9193.7	16192.8	16958.9	16572.3	17512.0
55°	1167.1	1663.0	1936.8	2443.4	3481.6	3898.7	8513.5	17435.1	17719.7	17329.4	15736.3
57.5°	912.9	930.8	1065.1	1818.7	1926.1	3019.8	8236.0	17968.5	18294.3	17956.0	16346.7
60°	134.3	132.5	175.4	209.4	477.9	1389.1	5382.7	12789.9	17657.0	18539.5	16905.2
62.5°	48.3	50.1	50.1	59.1	87.7	608.6	3913.0	11932.5	18083.1	18967.3	17372.4
65°	3.6	5.4	9.0	19.7	46.5	574.6	3470.9	12143.7	17945.2	19008.5	17599.7
67.5°	0.0	1.8	5.4	14.3	37.6	565.7	3227.5	11787.5	17367.0	18485.8	17102.1
70°	0.0	0.0	3.6	12.5	34.0	544.2	2803.2	10579.2	16332.4	17413.6	16196.3
72.5°	0.0	0.0	3.6	12.5	30.4	519.1	2303.8	9313.6	15390.8	16522.1	14882.4
75°	0.0	0.0	3.6	10.7	26.9	472.6	1684.4	6750.3	13786.9	14651.5	13017.2
77.5°	0.0	0.0	3.6	10.7	25.1	408.1	1138.5	3868.3	11343.5	12388.9	10937.2
80°	0.0	0.0	3.6	9.0	23.3	309.7	644.4	1931.5	5928.6	8142.9	7817.1
82.5°	0.0	0.0	3.6	9.0	17.9	164.7	300.7	843.1	2185.6	2579.5	3010.9
85°	0.0	0.0	3.6	7.2	14.3	41.2	102.0	401.0	1194.0	1326.4	1294.2
87.5°	0.0	0.0	3.6	7.2	10.7	16.1	34.0	114.6	442.1	494.1	422.5
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°	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6	9859.6
2.5°	9924.0	9868.5	9816.6	9823.8	9700.3	9673.4	9557.1	9628.7	9580.3	9519.5	9558.8
5°	9945.5	9873.9	9782.6	9680.6	9410.3	9313.6	9152.5	9199.0	9134.6	9063.0	9100.6
7.5°	9992.0	9907.9	9757.5	9492.6	9177.6	9007.5	8821.4	8980.7	8961.0	8919.8	8961.0
10°	10011.7	9938.3	9682.4	9374.5	8937.7	8821.4	8679.9	8653.1	8658.5	8667.4	8728.3
12.5°	10063.6	9954.4	9560.6	9195.5	8798.1	8567.2	8427.5	8509.9	8339.8	8264.6	8296.9
15°	10190.7	9983.1	9465.8	8946.7	8551.1	8368.5	8024.8	8024.8	7981.8	7908.4	7929.9
17.5°	10446.7	10097.7	9440.7	8782.0	8275.4	7960.3	7645.3	7478.8	7432.3	7455.5	7469.9
20°	10584.5	10308.9	9428.2	8565.4	7965.7	7600.5	7122.6	7004.5	6848.7	6870.2	6895.3
22.5°	9755.8	9396.0	9408.5	8300.4	7582.6	7119.0	6596.3	6390.5	6295.6	6277.7	6326.0
25°	10346.5	9621.5	8502.7	8155.5	7162.0	6571.3	6041.4	5758.6	5613.6	5604.6	5635.1
27.5°	11130.5	10242.6	8377.4	7475.2	6714.5	5907.2	5321.8	5119.5	4976.3	4969.2	4974.5
30°	12043.4	11071.4	8688.9	6637.5	6107.6	5141.0	4675.6	4532.4	4401.7	4344.4	4346.2
32.5°	13058.4	11821.5	8989.6	6476.4	4895.8	4473.3	4111.7	4000.8	3821.7	3739.4	3716.1
35°	14008.9	12618.0	9365.5	6206.1	4247.8	3879.0	3624.8	3476.3	3336.6	3266.8	3243.6
37.5°	13171.2	13352.0	9698.5	5984.1	3753.7	3214.9	3145.1	3046.7	2975.1	2921.4	2912.4
40°	13362.7	12027.3	9895.4	5565.3	3243.6	2808.6	2695.8	2744.1	2817.5	2772.8	2771.0
42.5°	14001.7	12233.2	9716.4	4985.3	2839.0	2421.9	2454.2	2634.9	2788.9	2760.3	2763.8
45°	14916.5	12875.8	8338.0	4292.5	2447.0	2182.1	2391.5	2602.7	2796.1	2805.0	2805.0
47.5°	15863.4	13599.0	8082.1	3368.9	2158.8	2089.0	2380.8	2563.3	2785.3	2842.6	2835.4
49°	16387.9	13949.8	8010.5	2772.8	2029.9	2069.3	2379.0	2525.8	2763.8	2844.4	2835.4
50°	16694.0	14189.7	7876.2	2534.7	1954.7	2065.7	2380.8	2502.5	2742.4	2831.9	2828.3
52.5°	17336.6	14494.0	7407.2	2087.2	1772.1	2053.2	2409.4	2481.0	2676.1	2771.0	2806.8
55°	14325.7	13980.3	6619.6	1874.2	1689.8	2028.1	2409.4	2493.5	2618.8	2674.3	2708.3
57.5°	14503.0	11953.9	5205.5	1768.6	1634.3	2001.3	2371.8	2491.7	2588.4	2597.4	2586.6
60°	15043.6	12231.4	3880.8	1661.2	1569.9	1967.3	2291.3	2434.5	2507.9	2507.9	2475.6
62.5°	15367.6	12362.1	3103.9	1543.0	1501.8	1897.4	2171.3	2323.5	2379.0	2348.5	2343.2
65°	15448.1	12467.7	2251.9	1415.9	1424.9	1822.3	2047.8	2180.3	2257.2	2205.3	2216.1
67.5°	15170.6	11714.1	1645.1	1285.3	1337.2	1720.2	1926.1	2044.2	2099.7	2072.9	2078.2
70°	14144.9	10894.2	1158.2	1061.5	1195.8	1562.7	1772.1	1908.2	1936.8	1890.3	1897.4
72.5°	12496.3	9628.7	730.3	830.6	1052.5	1417.7	1591.4	1677.3	1682.6	1739.9	1770.4
75°	10883.5	7725.8	528.1	655.2	836.0	1211.9	1453.5	1534.1	1593.1	1879.5	1926.1
77.5°	8722.9	4888.6	449.3	517.3	656.9	1006.0	1296.0	1419.5	1951.2	2092.6	2056.8
80°	5286.0	3035.9	338.3	408.1	547.8	773.3	1109.8	1462.5	1974.4	1842.0	1766.8
82.5°	2439.8	1319.3	229.1	332.9	435.0	576.4	875.3	1707.7	1691.6	1410.6	1396.2
85°	877.1	390.2	125.3	238.1	304.3	397.4	673.1	1691.6	1326.4	1185.0	1109.8
87.5°	223.8	69.8	51.9	116.4	153.9	211.2	367.0	895.0	689.2	606.8	585.3
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)