

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: P591255

Luminaire Tested: **CTN-CA8-230-727-U-T2-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591255  
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-CA8-230-727-U-T2-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: 16659 lumens  
Efficiency: N/A  
Efficacy: 72.9 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

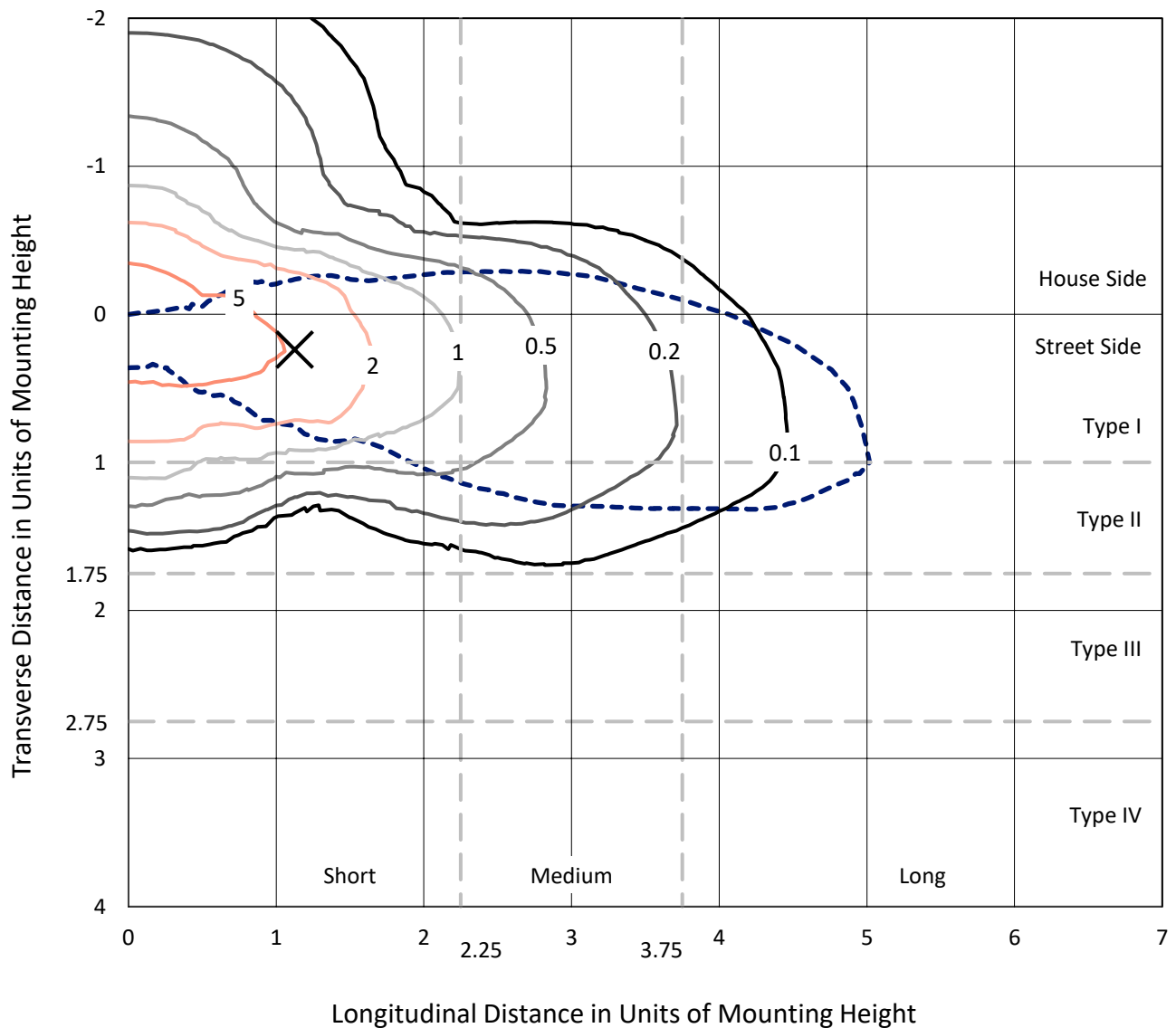
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

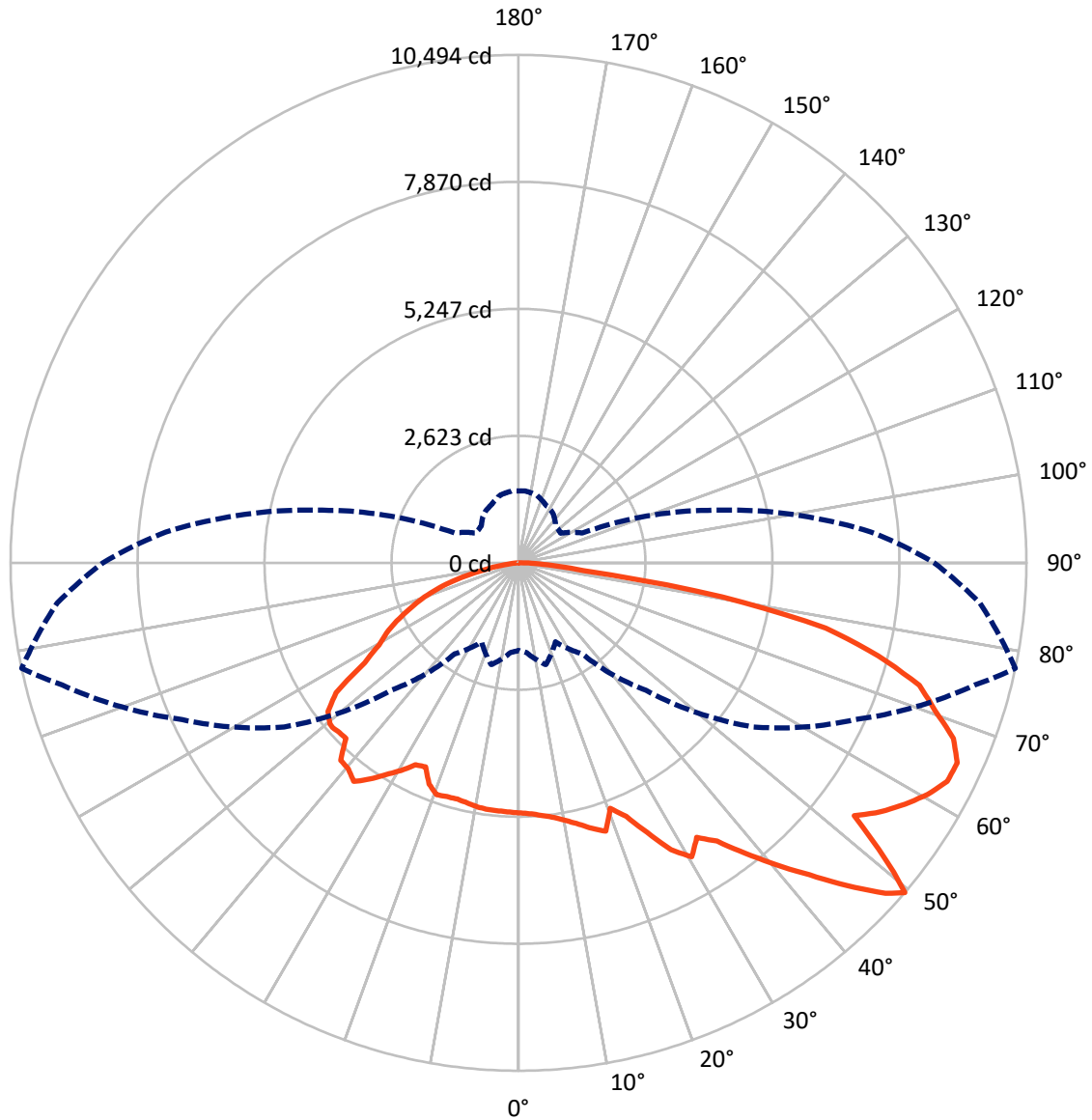
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 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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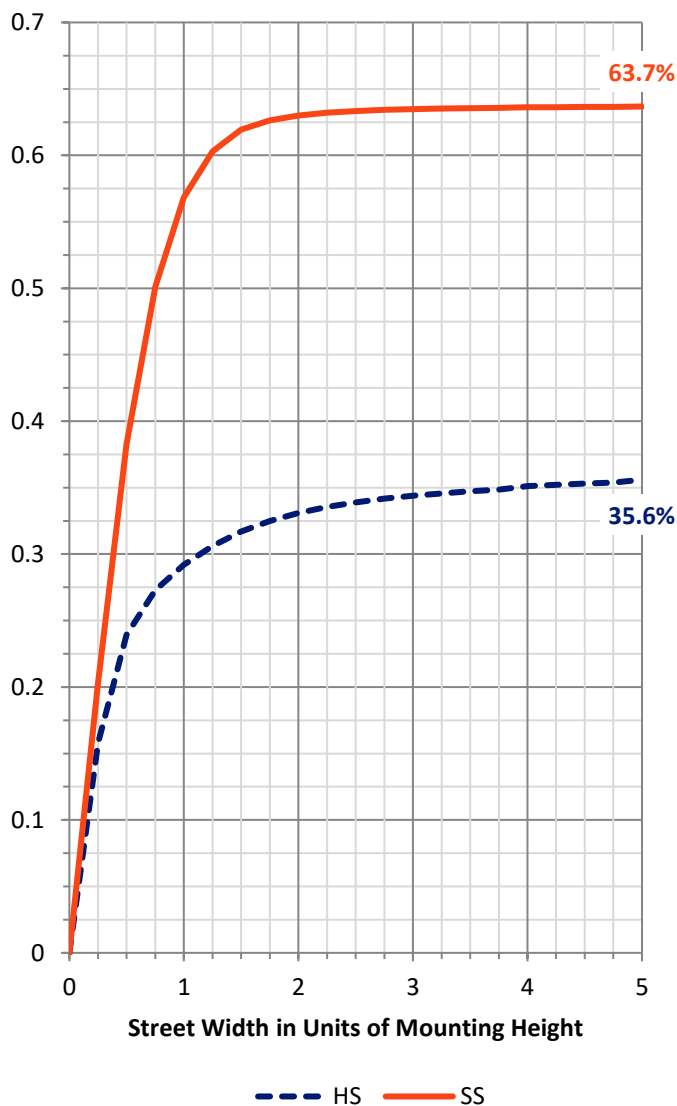
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6085.8	0.0	6085.8
	% Fixture	36.5	0.0	36.5
<b>Street Side</b>	Lumens	10573.2	0.0	10573.2
	% Fixture	63.5	0.0	63.5
<b>Total</b>	Lumens	16659.0	0.0	16659.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	500.7	3.0
10°-20°	1472.5	8.8
20°-30°	2073.2	12.4
30°-40°	2598.8	15.6
40°-50°	2933.4	17.6
50°-60°	2818.6	16.9
60°-70°	2302.6	13.8
70°-80°	1615.3	9.7
80°-90°	343.9	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°	16659.0	100.0
0°-180°	16659.0	100.0

**Coefficient of Utilization**

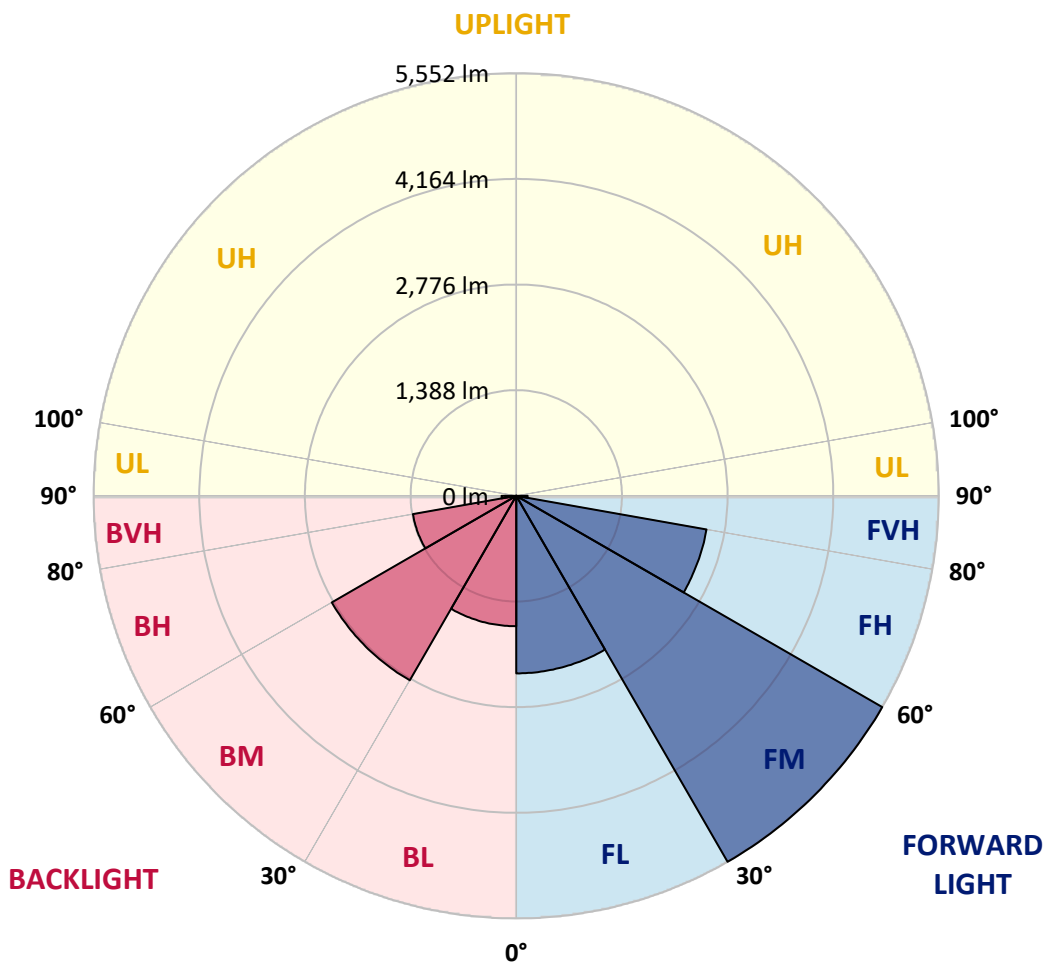


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2332.7	14.0			
FM (30°-60°)	5552.2	33.3			
FH (60°-80°)	2538.5	15.2			G2/5000
FVH (80°-90°)	149.7	0.9			G2/225
BL (0°-30°)	1713.6	10.3	B3/2500		
BM (30°-60°)	2798.6	16.8	B3/5000		
BH (60°-80°)	1379.4	8.3	B3/2500		G3/2500
BVH (80°-90°)	194.1	1.2			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2
2.5°	5380.2	5330.5	5341.7	5368.0	5266.7	5294.8	5249.8	5269.5	5216.0	5193.5	5202.9
5°	5763.9	5705.7	5718.8	5732.0	5582.8	5519.0	5393.3	5364.2	5282.6	5245.1	5240.4
7.5°	5946.8	5886.8	5900.8	5900.8	5787.3	5797.7	5670.1	5535.0	5371.7	5312.6	5286.4
10°	6240.5	6172.9	6162.6	6144.8	5996.5	5930.9	5824.9	5746.1	5498.4	5414.0	5341.7
12.5°	6455.3	6402.7	6403.7	6384.0	6217.0	6169.2	5982.5	5889.6	5644.7	5542.5	5426.2
15°	6544.4	6506.9	6531.3	6472.2	6360.5	6289.2	6201.0	6051.9	5798.6	5693.5	5550.0
17.5°	6128.8	6061.3	5882.1	5913.0	5905.5	5927.1	5840.8	5929.0	5888.7	5831.4	5736.7
20°	5189.7	5261.0	5386.8	5275.1	5266.7	5547.2	5747.9	5720.7	5495.6	5412.1	5506.8
22.5°	4410.2	4322.9	4588.4	4985.2	5096.9	5383.0	5724.5	6049.1	5794.8	5687.9	5400.8
25°	3710.3	3798.5	4211.3	4811.7	5162.5	5247.0	5638.2	6248.9	6289.2	6172.9	5800.5
27.5°	3599.6	3598.7	3877.3	4458.9	5257.3	5521.8	5641.9	6149.5	6789.3	6709.5	6281.7
30°	3574.3	3561.1	3667.2	4256.3	4999.3	5768.6	6002.2	6180.4	6785.5	7051.9	6831.5
32.5°	3465.5	3455.1	3564.0	3840.7	4648.4	6004.0	6347.4	6581.9	6616.6	6762.1	7389.7
35°	3291.0	3315.4	3458.0	3763.8	4360.4	5540.6	6697.3	7064.1	7147.6	7062.3	7066.9
37.5°	3124.0	3142.7	3289.1	3626.8	4150.3	4506.8	6937.5	7527.6	7713.3	7615.8	7159.8
40°	2907.3	2933.5	3107.1	3481.4	4012.4	3889.5	6589.4	8071.7	8329.7	8204.9	7688.0
42.5°	2663.4	2675.6	2881.0	3242.2	2877.2	3910.1	6096.9	8570.8	8932.0	8808.1	8184.3
45°	2455.1	2462.6	2630.5	2860.4	2593.9	3877.3	5756.4	8334.4	9635.5	9511.7	8709.6
47.5°	2162.4	2215.9	2397.9	1977.6	2409.1	3796.6	5870.8	7390.6	10295.1	10203.1	9220.0
49°	1811.5	1859.4	2179.3	1801.2	2294.7	3724.4	5910.2	7666.4	9760.3	10493.9	9569.9
50°	1665.2	1699.9	1669.9	1738.4	2211.2	3651.2	5847.4	7888.7	8970.4	10050.2	9795.0
52.5°	1447.5	1347.2	1147.3	1561.1	2018.9	3366.0	4818.2	8486.3	8887.9	8685.2	9177.7
55°	611.7	871.5	1015.1	1280.5	1824.7	2043.3	4461.8	9137.4	9286.6	9082.1	8247.1
57.5°	478.4	487.8	558.2	953.1	1009.4	1582.6	4316.3	9417.0	9587.7	9410.4	8567.0
60°	70.4	69.4	91.9	109.8	250.5	728.0	2821.0	6702.9	9253.7	9716.2	8859.7
62.5°	25.3	26.3	26.3	31.0	46.0	319.0	2050.8	6253.6	9477.0	9940.4	9104.6
65°	1.9	2.8	4.7	10.3	24.4	301.1	1819.0	6364.3	9404.8	9962.0	9223.7
67.5°	0.0	0.9	2.8	7.5	19.7	296.4	1691.5	6177.6	9101.8	9688.1	8962.9
70°	0.0	0.0	1.9	6.6	17.8	285.2	1469.1	5544.4	8559.5	9126.1	8488.2
72.5°	0.0	0.0	1.9	6.6	15.9	272.1	1207.4	4881.1	8066.1	8659.0	7799.6
75°	0.0	0.0	1.9	5.6	14.1	247.7	882.8	3537.7	7225.5	7678.6	6822.1
77.5°	0.0	0.0	1.9	5.6	13.1	213.9	596.7	2027.3	5944.9	6492.8	5732.0
80°	0.0	0.0	1.9	4.7	12.2	162.3	337.7	1012.2	3107.1	4267.6	4096.8
82.5°	0.0	0.0	1.9	4.7	9.4	86.3	157.6	441.9	1145.5	1351.8	1577.9
85°	0.0	0.0	1.9	3.8	7.5	21.6	53.5	210.1	625.7	695.2	678.3
87.5°	0.0	0.0	1.9	3.8	5.6	8.4	17.8	60.0	231.7	258.9	221.4
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°	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2	5167.2
2.5°	5201.0	5171.9	5144.7	5148.5	5083.7	5069.7	5008.7	5046.2	5020.9	4989.0	5009.6
5°	5212.3	5174.7	5126.9	5073.4	4931.8	4881.1	4796.7	4821.1	4787.3	4749.8	4769.5
7.5°	5236.7	5192.6	5113.8	4974.9	4809.8	4720.7	4623.1	4706.6	4696.3	4674.7	4696.3
10°	5247.0	5208.5	5074.4	4913.0	4684.1	4623.1	4549.0	4534.9	4537.7	4542.4	4574.3
12.5°	5274.2	5216.9	5010.6	4819.2	4610.9	4489.9	4416.7	4459.9	4370.8	4331.4	4348.2
15°	5340.8	5232.0	4960.8	4688.8	4481.5	4385.8	4205.6	4205.6	4183.1	4144.7	4155.9
17.5°	5474.9	5292.0	4947.7	4602.5	4337.0	4171.9	4006.8	3919.5	3895.1	3907.3	3914.8
20°	5547.2	5402.7	4941.1	4489.0	4174.7	3983.3	3732.8	3670.9	3589.3	3600.5	3613.7
22.5°	5112.8	4924.3	4930.8	4350.1	3973.9	3730.9	3457.0	3349.1	3299.4	3290.0	3315.4
25°	5422.4	5042.5	4456.1	4274.1	3753.5	3443.9	3166.2	3018.0	2942.0	2937.3	2953.2
27.5°	5833.3	5368.0	4390.5	3917.6	3518.9	3095.8	2789.1	2683.1	2608.0	2604.3	2607.1
30°	6311.7	5802.3	4553.7	3478.6	3200.9	2694.3	2450.4	2375.3	2306.9	2276.8	2277.8
32.5°	6843.7	6195.4	4711.3	3394.2	2565.8	2344.4	2154.9	2096.7	2002.9	1959.8	1947.6
35°	7341.8	6612.9	4908.3	3252.5	2226.2	2032.9	1899.7	1821.9	1748.7	1712.1	1699.9
37.5°	6902.8	6997.5	5082.8	3136.2	1967.3	1684.9	1648.3	1596.7	1559.2	1531.0	1526.3
40°	7003.2	6303.3	5186.0	2916.7	1699.9	1471.9	1412.8	1438.2	1476.6	1453.2	1452.2
42.5°	7338.1	6411.2	5092.2	2612.7	1487.9	1269.3	1286.2	1380.9	1461.6	1446.6	1448.5
45°	7817.5	6748.0	4369.8	2249.6	1282.4	1143.6	1253.3	1364.0	1465.4	1470.1	1470.1
47.5°	8313.7	7127.0	4235.7	1765.6	1131.4	1094.8	1247.7	1343.4	1459.7	1489.8	1486.0
49°	8588.6	7310.9	4198.1	1453.2	1063.8	1084.5	1246.8	1323.7	1448.5	1490.7	1486.0
50°	8749.0	7436.6	4127.8	1328.4	1024.4	1082.6	1247.7	1311.5	1437.2	1484.1	1482.2
52.5°	9085.8	7596.1	3882.0	1093.9	928.8	1076.0	1262.7	1300.3	1402.5	1452.2	1471.0
55°	7507.9	7326.8	3469.2	982.2	885.6	1062.9	1262.7	1306.8	1372.5	1401.6	1419.4
57.5°	7600.7	6264.8	2728.1	926.9	856.5	1048.8	1243.0	1305.9	1356.5	1361.2	1355.6
60°	7884.1	6410.3	2033.9	870.6	822.7	1031.0	1200.8	1275.9	1314.3	1314.3	1297.4
62.5°	8053.9	6478.7	1626.7	808.7	787.1	994.4	1138.0	1217.7	1246.8	1230.8	1228.0
65°	8096.1	6534.1	1180.2	742.1	746.8	955.0	1073.2	1142.6	1183.0	1155.8	1161.4
67.5°	7950.7	6139.1	862.1	673.6	700.8	901.5	1009.4	1071.3	1100.4	1086.4	1089.2
70°	7413.1	5709.5	607.0	556.3	626.7	819.0	928.8	1000.0	1015.1	990.7	994.4
72.5°	6549.1	5046.2	382.8	435.3	551.6	743.0	834.0	879.0	881.8	911.9	927.8
75°	5703.8	4049.0	276.7	343.4	438.1	635.1	761.8	804.0	834.9	985.0	1009.4
77.5°	4571.5	2562.0	235.5	271.1	344.3	527.2	679.2	743.9	1022.6	1096.7	1077.9
80°	2770.3	1591.1	177.3	213.9	287.1	405.3	581.6	766.5	1034.8	965.3	925.9
82.5°	1278.7	691.4	120.1	174.5	228.0	302.1	458.7	895.0	886.5	739.2	731.7
85°	459.7	204.5	65.7	124.8	159.5	208.3	352.7	886.5	695.2	621.0	581.6
87.5°	117.3	36.6	27.2	61.0	80.7	110.7	192.3	469.1	361.2	318.0	306.8
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)