

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: P591267

Luminaire Tested: **CTN-CA8-330-727-U-T2-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591267  
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-CA8-330-727-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: 22748 lumens  
Efficiency: N/A  
Efficacy: 68.6 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

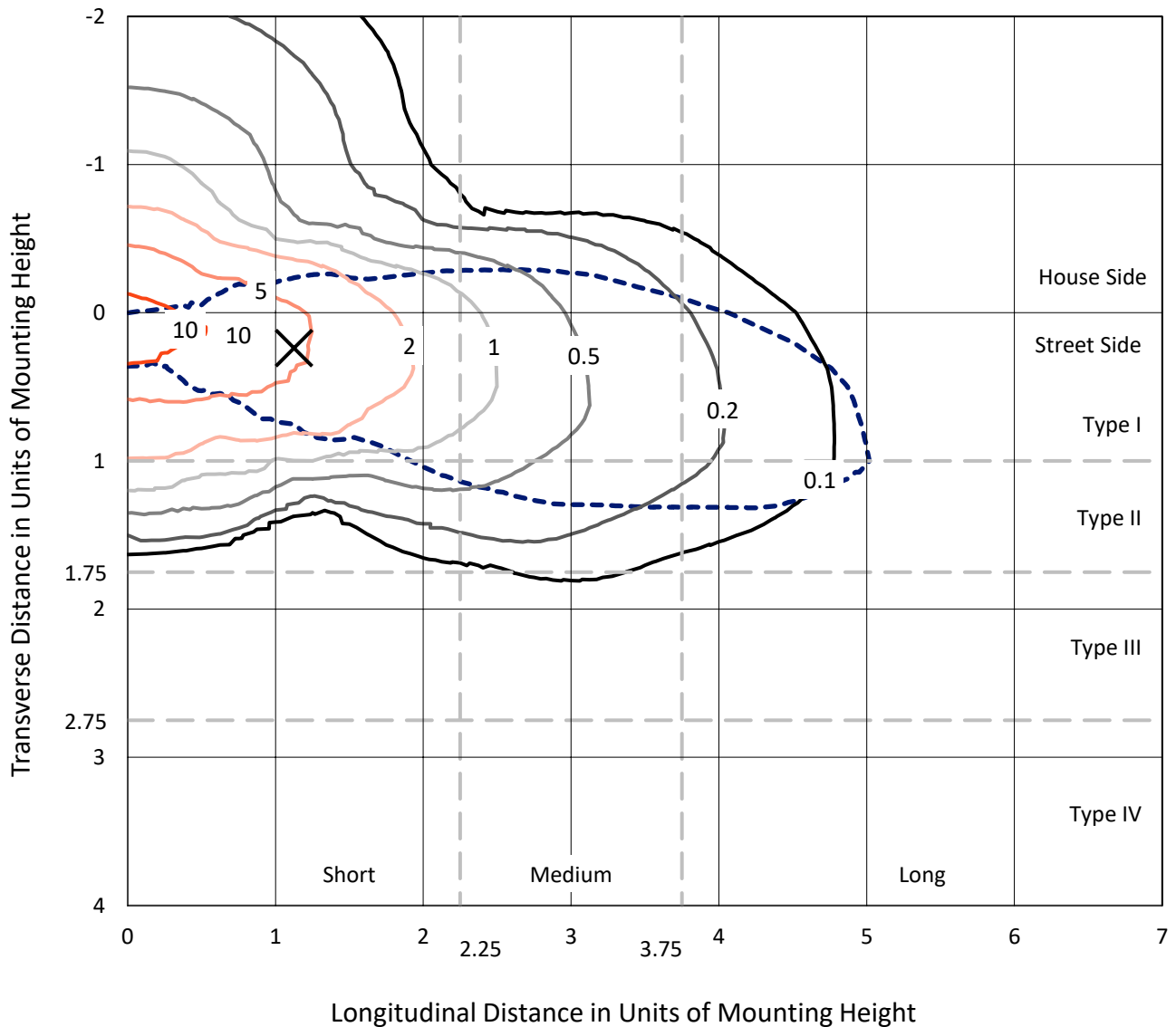
Input Watts (W): 331.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

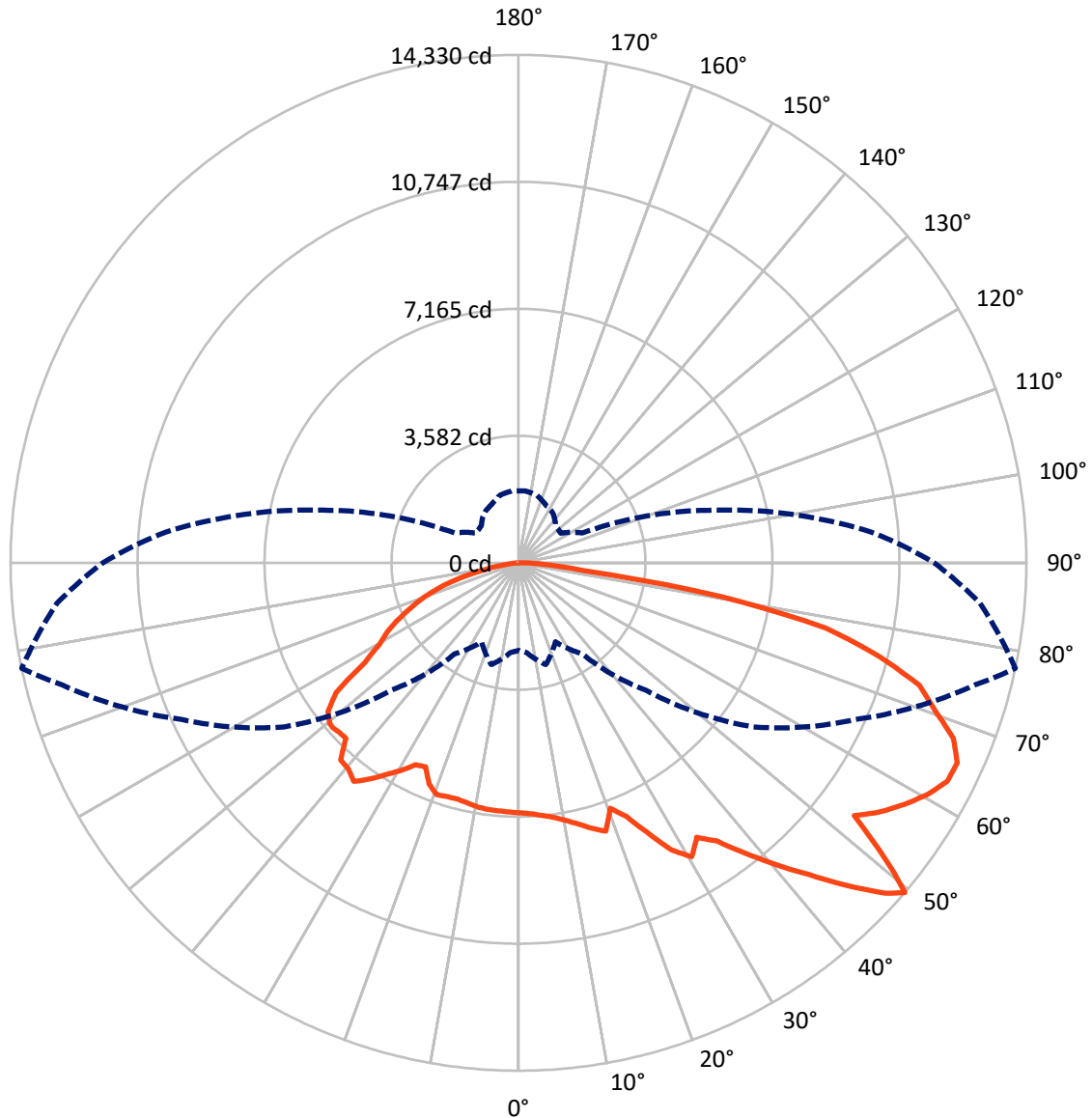
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13 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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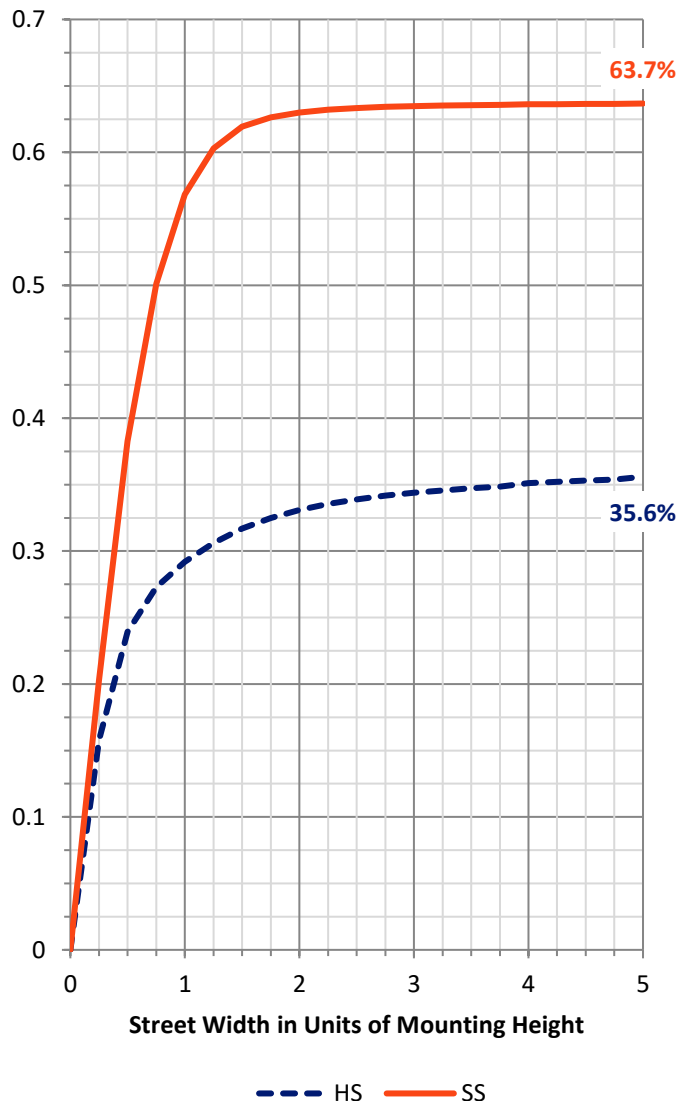
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8310.2	0.0	8310.2
	% Fixture	36.5	0.0	36.5
<b>Street Side</b>	Lumens	14437.8	0.0	14437.8
	% Fixture	63.5	0.0	63.5
<b>Total</b>	Lumens	22748.0	0.0	22748.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	683.7	3.0
10°-20°	2010.7	8.8
20°-30°	2831.0	12.4
30°-40°	3548.7	15.6
40°-50°	4005.6	17.6
50°-60°	3848.8	16.9
60°-70°	3144.2	13.8
70°-80°	2205.8	9.7
80°-90°	469.6	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°	22748.0	100.0
0°-180°	22748.0	100.0

**Coefficient of Utilization**



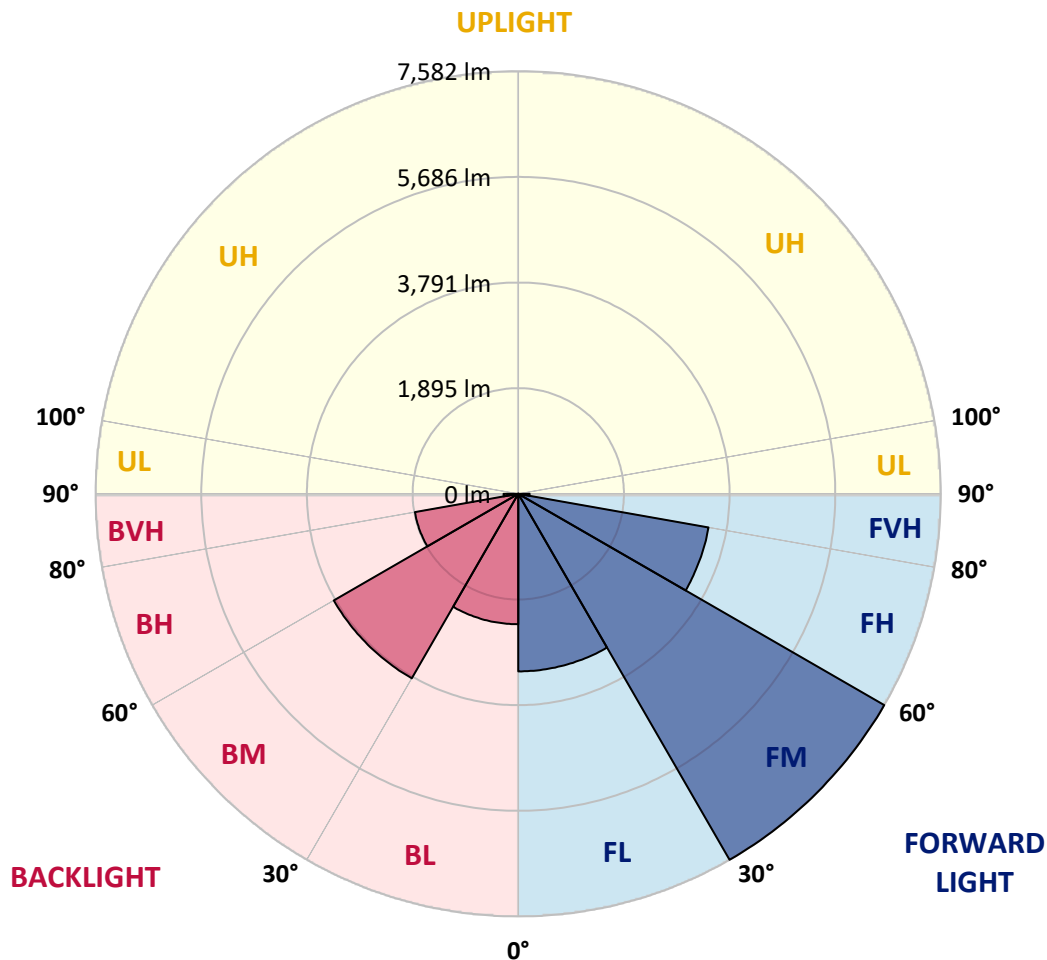
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3185.4	14.0			
FM (30°-60°)	7581.6	33.3			
FH (60°-80°)	3466.3	15.2			G2/5000
FVH (80°-90°)	204.5	0.9			G2/225
BL (0°-30°)	2340.0	10.3	B3/2500		
BM (30°-60°)	3821.5	16.8	B3/5000		
BH (60°-80°)	1883.6	8.3	B3/2500		G3/2500
BVH (80°-90°)	265.1	1.2			G3/500
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°	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9
2.5°	7346.7	7278.8	7294.2	7330.0	7191.7	7230.1	7168.6	7195.5	7122.5	7091.8	7104.6
5°	7870.6	7791.2	7809.1	7827.1	7623.4	7536.3	7364.6	7324.9	7213.5	7162.2	7155.8
7.5°	8120.4	8038.4	8057.7	8057.7	7902.7	7916.7	7742.5	7558.1	7335.2	7254.5	7218.6
10°	8521.4	8429.2	8415.1	8390.7	8188.3	8098.6	7953.9	7846.3	7508.1	7392.8	7294.2
12.5°	8814.7	8743.0	8744.3	8717.4	8489.4	8424.0	8169.1	8042.3	7707.9	7568.3	7409.5
15°	8936.4	8885.2	8918.5	8837.8	8685.4	8588.0	8467.6	8263.9	7918.0	7774.5	7578.6
17.5°	8368.9	8276.7	8032.0	8074.3	8064.1	8093.5	7975.7	8096.1	8041.0	7962.9	7833.5
20°	7086.6	7184.0	7355.7	7203.2	7191.7	7574.7	7848.8	7811.7	7504.3	7390.2	7519.6
22.5°	6022.1	5903.0	6265.5	6807.4	6959.8	7350.5	7816.8	8260.1	7912.9	7766.9	7374.9
25°	5066.5	5186.9	5750.5	6570.4	7049.5	7164.8	7699.0	8532.9	8588.0	8429.2	7920.6
27.5°	4915.3	4914.0	5294.5	6088.7	7178.9	7540.1	7704.1	8397.1	9270.8	9161.9	8577.8
30°	4880.7	4862.8	5007.5	5812.0	6826.6	7877.0	8196.0	8439.4	9265.7	9629.5	9328.4
32.5°	4732.1	4718.0	4866.6	5244.5	6347.5	8198.6	8667.4	8987.7	9035.1	9233.6	10090.6
35°	4493.8	4527.1	4721.9	5139.5	5954.2	7565.7	9145.2	9646.1	9760.1	9643.6	9650.0
37.5°	4265.8	4291.4	4491.3	4952.4	5667.3	6154.1	9473.2	10279.0	10532.6	10399.4	9776.8
40°	3969.9	4005.8	4242.8	4753.9	5478.9	5311.1	8997.9	11021.9	11374.2	11203.9	10498.0
42.5°	3636.8	3653.5	3934.0	4427.2	3928.9	5339.3	8325.4	11703.5	12196.7	12027.6	11175.7
45°	3352.4	3362.7	3592.0	3905.8	3542.0	5294.5	7860.4	11380.6	13157.4	12988.3	11893.0
47.5°	2952.8	3025.8	3274.3	2700.4	3289.7	5184.3	8016.7	10091.9	14058.0	13932.4	12589.9
49°	2473.7	2539.0	2975.8	2459.6	3133.4	5085.7	8070.5	10468.5	13327.8	14329.6	13067.7
50°	2273.8	2321.2	2280.2	2373.7	3019.4	4985.8	7984.6	10772.1	12249.2	13723.6	13375.2
52.5°	1976.6	1839.6	1566.7	2131.6	2756.8	4596.3	6579.4	11588.2	12136.4	11859.7	12532.3
55°	835.2	1190.1	1386.1	1748.6	2491.6	2790.1	6092.6	12477.2	12680.9	12401.6	11261.5
57.5°	653.3	666.1	762.2	1301.5	1378.4	2161.1	5894.0	12858.9	13092.1	12850.0	11698.3
60°	96.1	94.8	125.5	149.9	342.0	994.1	3852.0	9152.9	12636.0	13267.6	12098.0
62.5°	34.6	35.9	35.9	42.3	62.8	435.5	2800.3	8539.3	12940.9	13573.8	12432.4
65°	2.6	3.8	6.4	14.1	33.3	411.2	2483.9	8690.5	12842.3	13603.2	12595.1
67.5°	0.0	1.3	3.8	10.2	26.9	404.8	2309.7	8435.6	12428.5	13229.2	12238.9
70°	0.0	0.0	2.6	9.0	24.3	389.4	2006.1	7570.9	11688.1	12461.8	11590.7
72.5°	0.0	0.0	2.6	9.0	21.8	371.5	1648.7	6665.2	11014.3	11823.9	10650.5
75°	0.0	0.0	2.6	7.7	19.2	338.2	1205.4	4830.8	9866.5	10485.2	9315.6
77.5°	0.0	0.0	2.6	7.7	17.9	292.1	814.7	2768.3	8117.9	8866.0	7827.1
80°	0.0	0.0	2.6	6.4	16.7	221.6	461.2	1382.2	4242.8	5827.4	5594.2
82.5°	0.0	0.0	2.6	6.4	12.8	117.9	215.2	603.4	1564.1	1846.0	2154.7
85°	0.0	0.0	2.6	5.1	10.2	29.5	73.0	286.9	854.4	949.2	926.2
87.5°	0.0	0.0	2.6	5.1	7.7	11.5	24.3	82.0	316.4	353.6	302.3
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°	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9	7055.9
2.5°	7102.0	7062.3	7025.1	7030.3	6941.9	6922.7	6839.4	6890.6	6856.1	6812.5	6840.7
5°	7117.4	7066.1	7000.8	6927.8	6734.4	6665.2	6549.9	6583.2	6537.1	6485.8	6512.7
7.5°	7150.7	7090.5	6982.9	6793.3	6567.8	6446.1	6312.9	6426.9	6412.8	6383.4	6412.8
10°	7164.8	7112.3	6929.1	6708.7	6396.2	6312.9	6211.7	6192.5	6196.3	6202.7	6246.3
12.5°	7201.9	7123.8	6842.0	6580.6	6296.2	6131.0	6031.1	6090.0	5968.3	5914.5	5937.6
15°	7292.9	7144.3	6774.1	6402.6	6119.5	5988.8	5742.8	5742.8	5712.1	5659.6	5674.9
17.5°	7476.1	7226.3	6756.1	6284.7	5922.2	5696.7	5471.3	5352.1	5318.8	5335.5	5345.7
20°	7574.7	7377.4	6747.2	6129.7	5700.6	5439.2	5097.2	5012.7	4901.2	4916.6	4934.5
22.5°	6981.6	6724.1	6733.1	5940.1	5426.4	5094.6	4720.6	4573.3	4505.4	4492.6	4527.1
25°	7404.3	6885.5	6084.9	5836.4	5125.4	4702.6	4323.5	4121.1	4017.3	4010.9	4032.7
27.5°	7965.4	7330.0	5995.2	5349.6	4805.1	4227.4	3808.5	3663.7	3561.3	3556.1	3560.0
30°	8618.7	7923.1	6218.1	4750.0	4370.9	3679.1	3346.0	3243.6	3150.0	3109.1	3110.3
32.5°	9345.1	8459.9	6433.3	4634.8	3503.6	3201.3	2942.5	2863.1	2735.0	2676.1	2659.4
35°	10025.3	9030.0	6702.3	4441.3	3039.9	2776.0	2594.1	2487.8	2387.8	2337.9	2321.2
37.5°	9425.8	9555.2	6940.6	4282.5	2686.3	2300.7	2250.8	2180.3	2129.1	2090.6	2084.2
40°	9562.9	8607.2	7081.5	3982.7	2321.2	2009.9	1929.2	1963.8	2016.3	1984.3	1983.0
42.5°	10020.2	8754.5	6953.4	3567.7	2031.7	1733.2	1756.3	1885.7	1995.8	1975.3	1977.9
45°	10674.8	9214.4	5967.0	3071.9	1751.2	1561.6	1711.5	1862.6	2001.0	2007.4	2007.4
47.5°	11352.5	9732.0	5783.8	2410.9	1544.9	1495.0	1703.8	1834.4	1993.3	2034.3	2029.1
49°	11727.8	9983.0	5732.6	1984.3	1452.7	1480.9	1702.5	1807.5	1977.9	2035.6	2029.1
50°	11946.9	10154.7	5636.5	1813.9	1398.9	1478.3	1703.8	1790.9	1962.5	2026.6	2024.0
52.5°	12406.7	10372.5	5300.9	1493.7	1268.2	1469.3	1724.3	1775.5	1915.1	1983.0	2008.6
55°	10252.1	10004.8	4737.2	1341.2	1209.3	1451.4	1724.3	1784.5	1874.1	1913.9	1938.2
57.5°	10378.9	8554.7	3725.2	1265.7	1169.6	1432.2	1697.4	1783.2	1852.4	1858.8	1851.1
60°	10765.7	8753.3	2777.3	1188.8	1123.5	1407.8	1639.7	1742.2	1794.7	1794.7	1771.7
62.5°	10997.6	8846.8	2221.3	1104.2	1074.8	1357.9	1553.9	1662.8	1702.5	1680.7	1676.9
65°	11055.3	8922.3	1611.5	1013.3	1019.7	1304.1	1465.5	1560.3	1615.4	1578.2	1585.9
67.5°	10856.7	8383.0	1177.3	919.8	956.9	1231.1	1378.4	1462.9	1502.6	1483.4	1487.3
70°	10122.7	7796.3	828.8	759.6	855.7	1118.3	1268.2	1365.6	1386.1	1352.8	1357.9
72.5°	8942.8	6890.6	522.7	594.4	753.2	1014.6	1138.8	1200.3	1204.2	1245.2	1266.9
75°	7788.6	5528.9	377.9	468.9	598.2	867.3	1040.2	1097.8	1140.1	1345.1	1378.4
77.5°	6242.4	3498.5	321.5	370.2	470.1	719.9	927.5	1015.9	1396.3	1497.5	1471.9
80°	3782.9	2172.6	242.1	292.1	392.0	553.4	794.2	1046.6	1413.0	1318.2	1264.4
82.5°	1746.0	944.1	164.0	238.3	311.3	412.5	626.4	1222.1	1210.6	1009.4	999.2
85°	627.7	279.3	89.7	170.4	217.8	284.4	481.7	1210.6	949.2	848.0	794.2
87.5°	160.1	50.0	37.1	83.3	110.2	151.2	262.6	640.5	493.2	434.3	418.9
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)