

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: P591171

Luminaire Tested: **CTN-CA8-330-722-U-T2-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591171  
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-CA8-330-722-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: 21894 lumens  
Efficiency: N/A  
Efficacy: 66.0 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

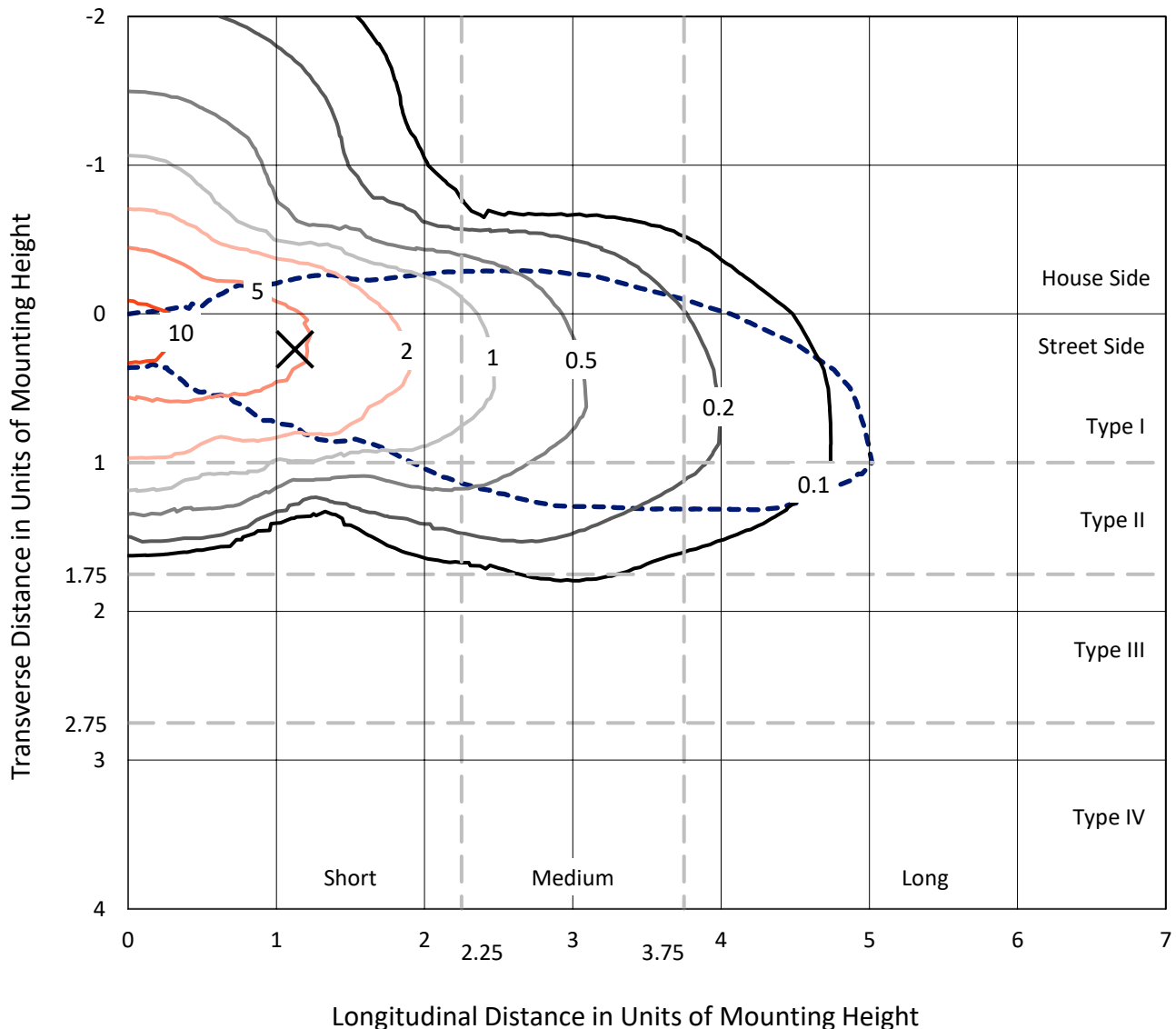
Input Watts (W): 331.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

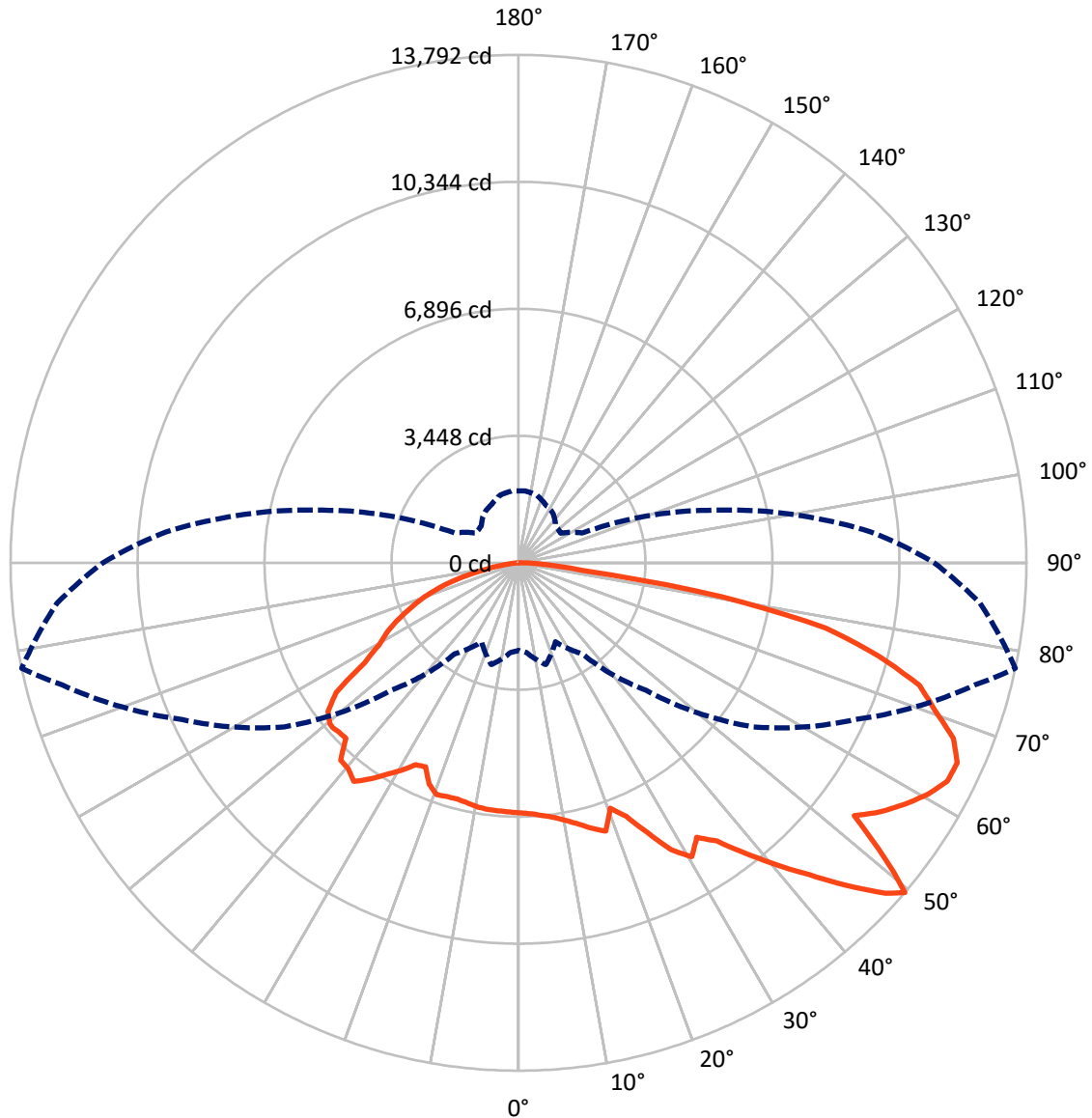
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.5 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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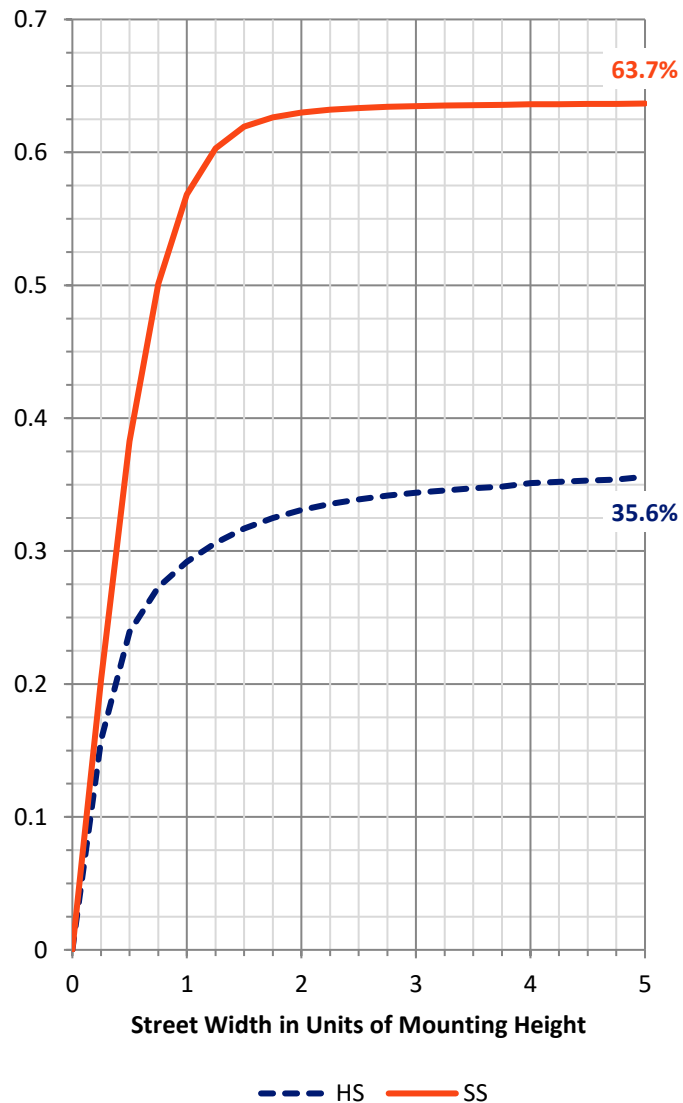
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7998.2	0.0	7998.2
	% Fixture	36.5	0.0	36.5
<b>Street Side</b>	Lumens	13895.8	0.0	13895.8
	% Fixture	63.5	0.0	63.5
<b>Total</b>	Lumens	21894.0	0.0	21894.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	658.0	3.0
10°-20°	1935.2	8.8
20°-30°	2724.7	12.4
30°-40°	3415.5	15.6
40°-50°	3855.2	17.6
50°-60°	3704.3	16.9
60°-70°	3026.2	13.8
70°-80°	2122.9	9.7
80°-90°	451.9	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°	21894.0	100.0
0°-180°	21894.0	100.0

**Coefficient of Utilization**



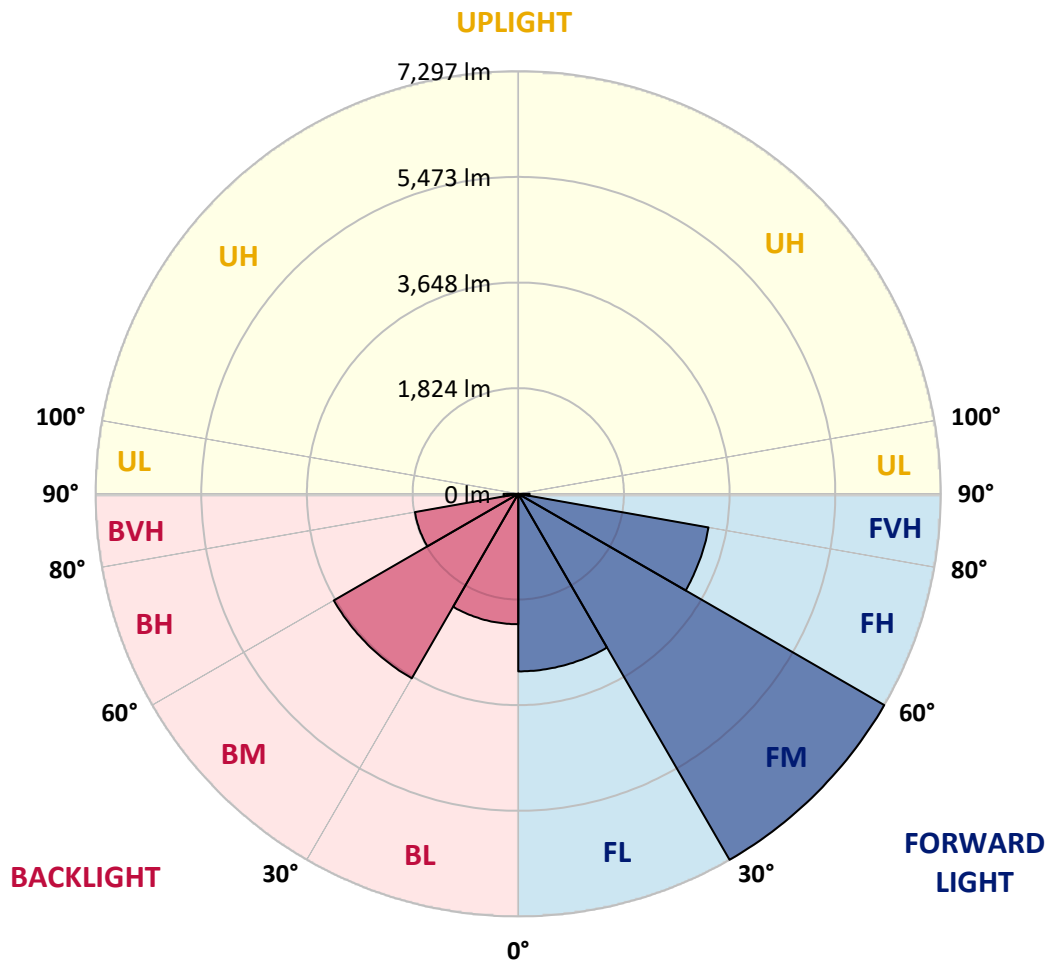
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3065.8	14.0			
FM (30°-60°)	7297.0	33.3			
FH (60°-80°)	3336.2	15.2			G2/5000
FVH (80°-90°)	196.8	0.9			G2/225
BL (0°-30°)	2252.1	10.3	B3/2500		
BM (30°-60°)	3678.0	16.8	B3/5000		
BH (60°-80°)	1812.9	8.3	B3/2500		G3/2500
BVH (80°-90°)	255.1	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°	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0
2.5°	7070.9	7005.5	7020.3	7054.8	6921.7	6958.7	6899.5	6925.4	6855.1	6825.5	6837.9
5°	7575.1	7498.7	7516.0	7533.2	7337.2	7253.4	7088.1	7049.9	6942.7	6893.3	6887.2
7.5°	7815.6	7736.7	7755.2	7755.2	7606.0	7619.5	7451.9	7274.3	7059.8	6982.1	6947.6
10°	8201.5	8112.7	8099.1	8075.7	7880.9	7794.6	7655.3	7551.7	7226.2	7115.3	7020.3
12.5°	8483.8	8414.8	8416.0	8390.1	8170.7	8107.8	7862.4	7740.4	7418.6	7284.2	7131.3
15°	8600.9	8551.6	8583.7	8506.0	8359.3	8265.6	8149.7	7953.7	7620.8	7482.7	7294.0
17.5°	8054.8	7966.0	7730.5	7771.2	7761.3	7789.7	7676.2	7792.1	7739.1	7663.9	7539.4
20°	6820.6	6914.3	7079.5	6932.8	6921.7	7290.3	7554.2	7518.4	7222.5	7112.8	7237.3
22.5°	5796.0	5681.4	6030.3	6551.8	6698.5	7074.6	7523.4	7950.0	7615.8	7475.3	7098.0
25°	4876.3	4992.2	5534.6	6323.7	6784.8	6895.8	7409.9	8212.6	8265.6	8112.7	7623.2
27.5°	4730.8	4729.5	5095.7	5860.1	6909.4	7257.1	7414.9	8081.9	8922.7	8817.9	8255.7
30°	4697.5	4680.2	4819.5	5593.8	6570.3	7581.3	7888.3	8122.6	8917.8	9268.0	8978.2
32.5°	4554.5	4540.9	4683.9	5047.6	6109.2	7890.8	8342.0	8650.3	8695.9	8887.0	9711.8
35°	4325.1	4357.2	4544.6	4946.5	5730.7	7281.7	8801.9	9284.0	9393.7	9281.5	9287.7
37.5°	4105.7	4130.3	4322.7	4766.5	5454.5	5923.0	9117.5	9893.1	10137.2	10009.0	9409.8
40°	3820.9	3855.4	4083.5	4575.4	5273.3	5111.7	8660.1	10608.2	10947.2	10783.2	10103.9
42.5°	3500.3	3516.3	3786.3	4261.0	3781.4	5138.9	8012.8	11264.1	11738.8	11576.0	10756.1
45°	3226.6	3236.5	3457.1	3759.2	3409.1	5095.7	7565.3	10953.4	12663.5	12500.7	11446.6
47.5°	2841.9	2912.2	3151.4	2599.0	3166.2	4989.7	7715.7	9713.1	13530.2	13409.4	12117.3
49°	2380.8	2443.7	2864.1	2367.2	3015.8	4894.7	7767.5	10075.5	12827.4	13791.6	12577.2
50°	2188.5	2234.1	2194.6	2284.6	2906.0	4798.6	7684.9	10367.7	11789.3	13208.4	12873.1
52.5°	1902.4	1770.5	1507.9	2051.6	2653.3	4423.8	6332.4	11153.1	11680.8	11414.5	12061.8
55°	803.9	1145.4	1334.0	1683.0	2398.1	2685.3	5863.8	12008.8	12204.8	11936.0	10838.7
57.5°	628.8	641.1	733.6	1252.7	1326.6	2080.0	5672.7	12376.2	12600.6	12367.6	11259.2
60°	92.5	91.2	120.8	144.3	329.2	956.8	3707.4	8809.3	12161.7	12769.5	11643.8
62.5°	33.3	34.5	34.5	40.7	60.4	419.2	2695.2	8218.7	12455.1	13064.2	11965.6
65°	2.5	3.7	6.2	13.6	32.1	395.8	2390.7	8364.2	12360.2	13092.5	12122.2
67.5°	0.0	1.2	3.7	9.9	25.9	389.6	2223.0	8118.9	11961.9	12732.5	11779.5
70°	0.0	0.0	2.5	8.6	23.4	374.8	1930.8	7286.6	11249.3	11994.0	11155.6
72.5°	0.0	0.0	2.5	8.6	21.0	357.6	1586.8	6415.0	10600.8	11380.0	10250.6
75°	0.0	0.0	2.5	7.4	18.5	325.5	1160.2	4649.4	9496.1	10091.6	8965.9
77.5°	0.0	0.0	2.5	7.4	17.3	281.1	784.1	2664.4	7813.1	8533.1	7533.2
80°	0.0	0.0	2.5	6.2	16.0	213.3	443.9	1330.3	4083.5	5608.6	5384.2
82.5°	0.0	0.0	2.5	6.2	12.3	113.4	207.1	580.7	1505.4	1776.7	2073.8
85°	0.0	0.0	2.5	4.9	9.9	28.4	70.3	276.2	822.4	913.6	891.4
87.5°	0.0	0.0	2.5	4.9	7.4	11.1	23.4	78.9	304.5	340.3	291.0
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°	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0	6791.0
2.5°	6835.4	6797.2	6761.4	6766.3	6681.3	6662.8	6582.6	6632.0	6598.7	6556.7	6583.9
5°	6850.2	6800.9	6738.0	6667.7	6481.5	6415.0	6304.0	6336.0	6291.7	6242.3	6268.2
7.5°	6882.2	6824.3	6720.7	6538.3	6321.3	6204.1	6075.9	6185.6	6172.1	6143.7	6172.1
10°	6895.8	6845.3	6668.9	6456.9	6156.0	6075.9	5978.5	5960.0	5963.7	5969.9	6011.8
12.5°	6931.6	6856.3	6585.1	6333.6	6059.9	5900.8	5804.7	5861.4	5744.2	5692.5	5714.7
15°	7019.1	6876.1	6519.8	6162.2	5889.7	5764.0	5527.2	5527.2	5497.7	5447.1	5461.9
17.5°	7195.4	6955.0	6502.5	6048.8	5699.9	5482.9	5265.9	5151.2	5119.1	5135.2	5145.0
20°	7290.3	7100.5	6493.9	5899.6	5486.6	5235.0	4905.8	4824.5	4717.2	4732.0	4749.3
22.5°	6719.5	6471.7	6480.3	5717.1	5222.7	4903.4	4543.4	4401.6	4336.2	4323.9	4357.2
25°	7126.4	6627.0	5856.4	5617.2	4933.0	4526.1	4161.2	3966.3	3866.5	3860.3	3881.3
27.5°	7666.4	7054.8	5770.1	5148.7	4624.7	4068.7	3665.5	3526.2	3427.6	3422.6	3426.3
30°	8295.2	7625.7	5984.7	4571.7	4206.8	3541.0	3220.4	3121.8	3031.8	2992.3	2993.6
32.5°	8994.3	8142.3	6191.8	4460.8	3372.1	3081.1	2832.1	2755.6	2632.3	2575.6	2559.6
35°	9648.9	8691.0	6450.7	4274.6	2925.8	2671.8	2496.7	2394.4	2298.2	2250.1	2234.1
37.5°	9071.9	9196.5	6680.0	4121.7	2585.5	2214.3	2166.3	2098.5	2049.1	2012.1	2006.0
40°	9203.9	8284.1	6815.7	3833.2	2234.1	1934.5	1856.8	1890.1	1940.6	1909.8	1908.6
42.5°	9644.0	8425.9	6692.4	3433.7	1955.4	1668.2	1690.4	1814.9	1920.9	1901.2	1903.7
45°	10274.0	8868.5	5743.0	2956.6	1685.4	1502.9	1647.2	1792.7	1925.8	1932.0	1932.0
47.5°	10926.3	9366.6	5566.7	2320.4	1486.9	1438.8	1639.8	1765.6	1918.4	1957.9	1953.0
49°	11287.5	9608.3	5517.4	1909.8	1398.1	1425.3	1638.6	1739.7	1903.7	1959.1	1953.0
50°	11498.3	9773.5	5424.9	1745.8	1346.4	1422.8	1639.8	1723.6	1888.9	1950.5	1948.0
52.5°	11941.0	9983.1	5101.9	1437.6	1220.6	1414.2	1659.5	1708.8	1843.2	1908.6	1933.2
55°	9867.2	9629.2	4559.4	1290.9	1163.9	1396.9	1659.5	1717.5	1803.8	1842.0	1865.4
57.5°	9989.2	8233.5	3585.4	1218.1	1125.7	1378.4	1633.6	1716.2	1782.8	1789.0	1781.6
60°	10361.6	8424.6	2673.0	1144.2	1081.3	1355.0	1578.2	1676.8	1727.3	1727.3	1705.1
62.5°	10584.7	8514.6	2137.9	1062.8	1034.4	1306.9	1495.5	1600.3	1638.6	1617.6	1613.9
65°	10640.2	8587.4	1551.0	975.3	981.4	1255.1	1410.5	1501.7	1554.7	1519.0	1526.4
67.5°	10449.1	8068.3	1133.1	885.2	921.0	1184.8	1326.6	1408.0	1446.2	1427.7	1431.4
70°	9742.6	7503.6	797.7	731.1	823.6	1076.4	1220.6	1314.3	1334.0	1302.0	1306.9
72.5°	8607.1	6632.0	503.0	572.1	725.0	976.5	1096.1	1155.3	1159.0	1198.4	1219.4
75°	7496.2	5321.3	363.7	451.3	575.8	834.7	1001.1	1056.6	1097.3	1294.6	1326.6
77.5°	6008.1	3367.1	309.5	356.3	452.5	692.9	892.6	977.7	1343.9	1441.3	1416.6
80°	3640.9	2091.1	233.0	281.1	377.3	532.6	764.4	1007.3	1359.9	1268.7	1216.9
82.5°	1680.5	908.7	157.8	229.3	299.6	397.0	602.9	1176.2	1165.1	971.6	961.7
85°	604.1	268.8	86.3	164.0	209.6	273.7	463.6	1165.1	913.6	816.2	764.4
87.5°	154.1	48.1	35.8	80.1	106.0	145.5	252.8	616.5	474.7	418.0	403.2
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)