

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: P591174

Luminaire Tested: **CTN-CA8-330-722-U-T3-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591174  
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-CA8-330-722-U-T3-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: 20602 lumens  
Efficiency: N/A  
Efficacy: 62.1 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G3

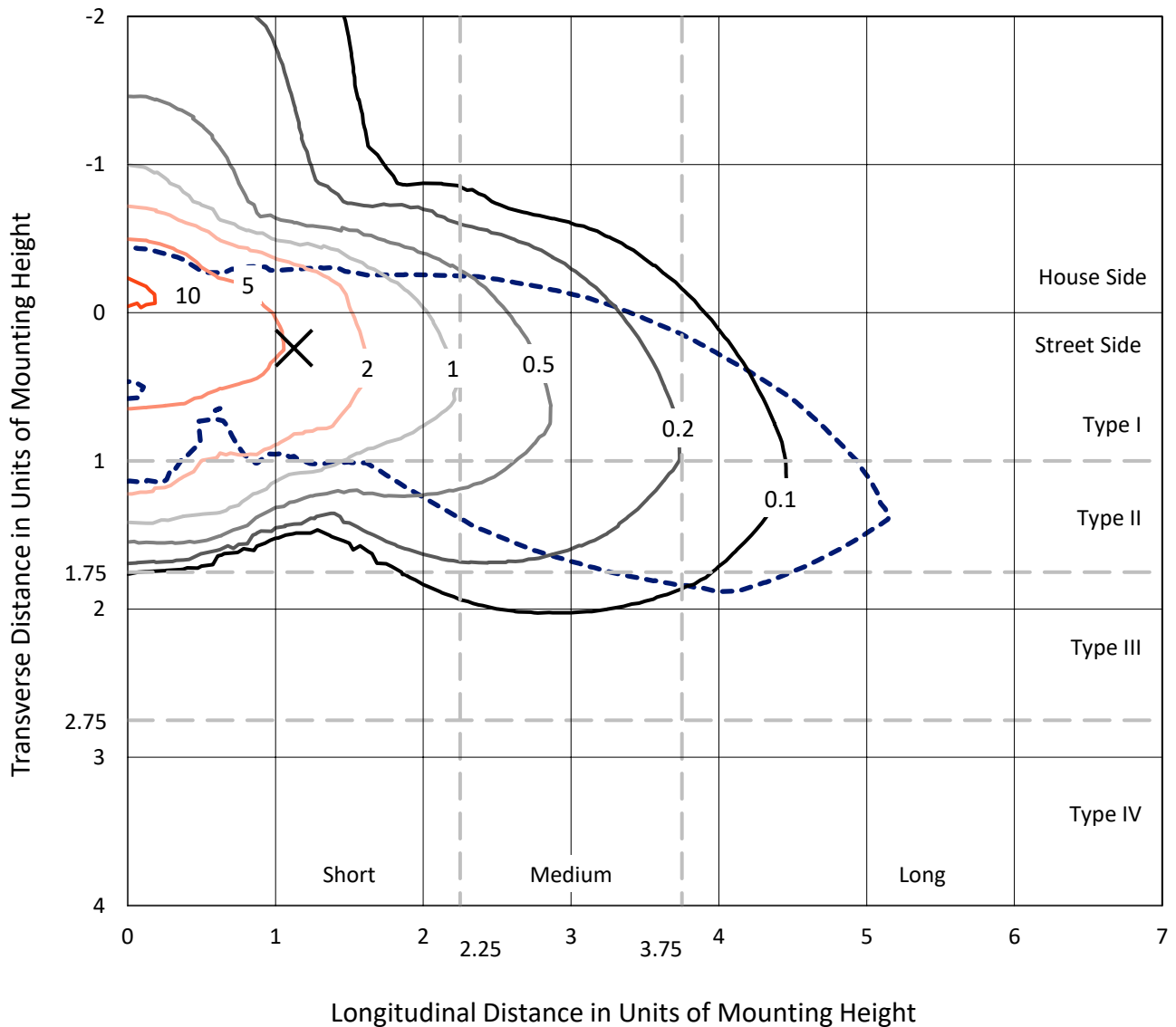
Input Watts (W): 331.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

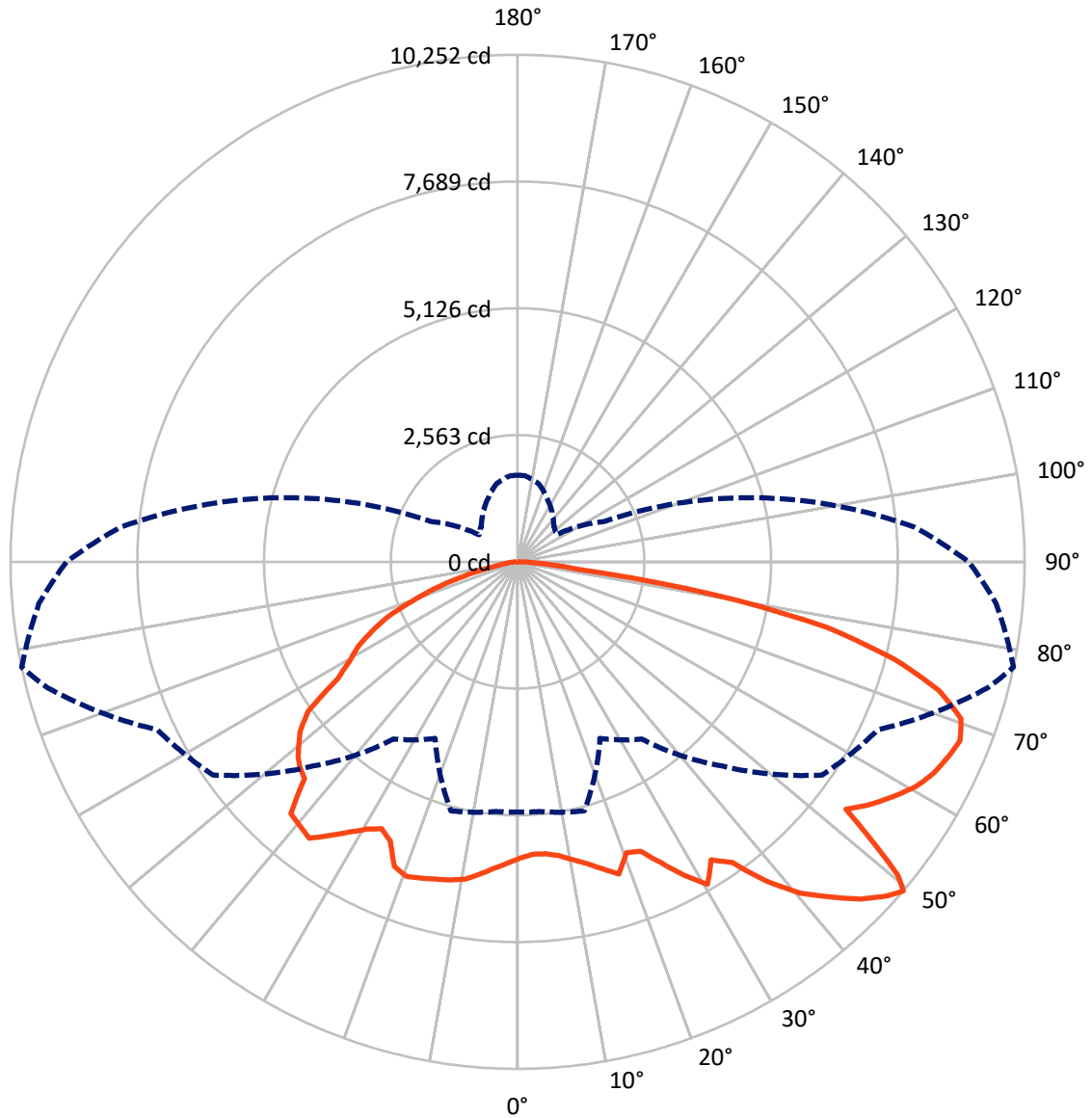
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.8 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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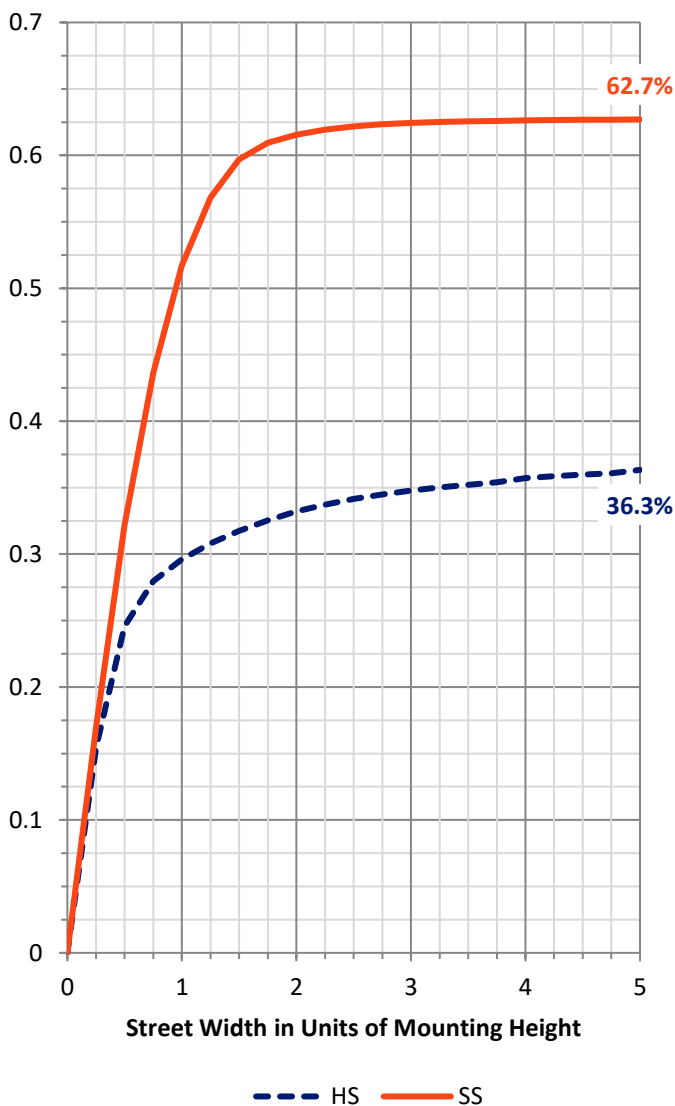
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7705.6	0.0	7705.6
	% Fixture	37.4	0.0	37.4
<b>Street Side</b>	Lumens	12896.4	0.0	12896.4
	% Fixture	62.6	0.0	62.6
<b>Total</b>	Lumens	20602.0	0.0	20602.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	599.7	2.9
10°-20°	1840.8	8.9
20°-30°	2667.5	12.9
30°-40°	3277.7	15.9
40°-50°	3699.5	18.0
50°-60°	3515.4	17.1
60°-70°	2625.5	12.7
70°-80°	1949.9	9.5
80°-90°	426.1	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°	20602.0	100.0
0°-180°	20602.0	100.0

**Coefficient of Utilization**

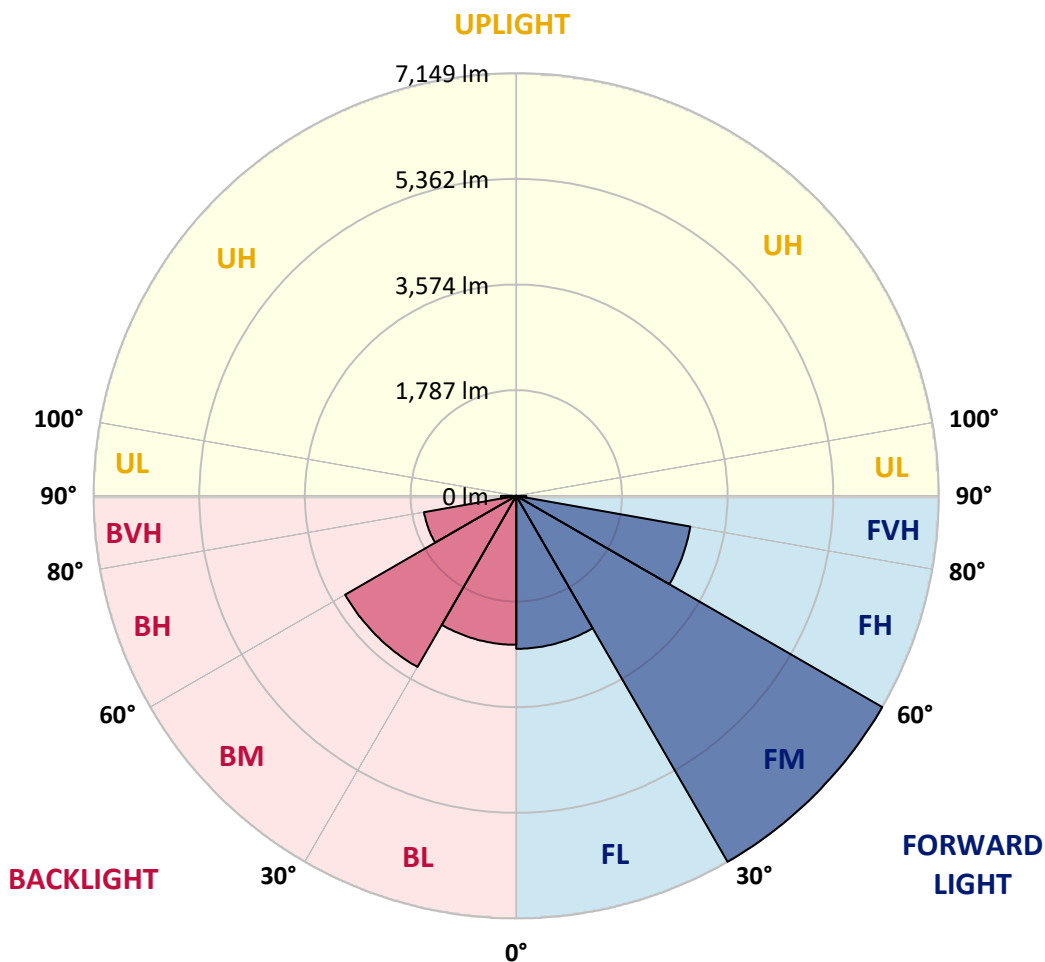


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2587.7	12.6			
FM (30°-60°)	7149.0	34.7			
FH (60°-80°)	2991.3	14.5			G2/5000
FVH (80°-90°)	168.4	0.8			G2/225
BL (0°-30°)	2520.2	12.2	B4/5000		
BM (30°-60°)	3343.7	16.2	B3/5000		
BH (60°-80°)	1584.1	7.7	B3/2500		G3/2500
BVH (80°-90°)	257.6	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°	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0
2.5°	5861.5	5829.4	5838.1	5887.4	5792.4	5861.5	5833.1	5899.7	5921.9	5919.4	6015.6
5°	5909.6	5867.7	5880.0	5913.3	5809.7	5862.7	5840.5	5912.0	5930.5	5931.8	6062.5
7.5°	6085.9	6037.8	6025.5	6027.9	5930.5	5970.0	5913.3	5968.8	6002.0	5998.4	6143.8
10°	6342.3	6289.3	6262.2	6253.6	6135.2	6117.9	6048.9	6068.6	6117.9	6124.1	6272.1
12.5°	6606.2	6564.3	6524.8	6505.1	6342.3	6304.1	6203.0	6220.3	6257.3	6264.7	6418.8
15°	6839.2	6799.8	6793.6	6771.4	6606.2	6532.2	6410.2	6391.7	6420.0	6443.4	6577.8
17.5°	6611.1	6560.6	6528.5	6535.9	6452.1	6264.7	6189.5	6316.5	6553.2	6635.8	6762.8
20°	5967.5	6029.2	6003.3	5903.4	5813.4	6116.7	6052.6	6025.5	6172.2	6278.2	6585.2
22.5°	5242.5	5242.5	5489.1	5661.8	5696.3	5866.4	6216.6	6338.6	6354.7	6354.7	6265.9
25°	4669.2	4832.0	5249.9	5905.9	5909.6	5875.1	5972.5	6642.0	6752.9	6740.6	6591.4
27.5°	4891.2	4864.0	5145.1	5601.3	6246.2	6206.7	6016.8	6318.9	7233.8	7177.1	6986.0
30°	5087.2	5060.1	5110.6	5676.5	6342.3	6566.7	6404.0	6314.0	7259.7	7567.9	7453.2
32.5°	5270.9	5240.1	5298.0	5384.3	6035.3	6924.3	6809.6	6750.5	6889.8	7189.4	7982.2
35°	5418.9	5423.8	5490.4	5617.4	5915.7	6803.5	7216.5	7238.7	7482.8	7464.3	7865.1
37.5°	5528.6	5538.5	5596.4	5746.8	5857.8	5619.8	7603.7	7860.1	8236.2	8199.2	7904.5
40°	5534.8	5557.0	5672.8	5857.8	5988.5	5004.6	7532.2	8545.6	8918.0	8809.5	8443.3
42.5°	5420.1	5431.2	5624.8	5937.9	4544.7	5205.6	6984.7	9228.7	9395.2	9262.0	8855.1
45°	5317.8	5315.3	5522.4	5803.5	4294.4	5441.1	6969.9	9030.2	9834.1	9730.5	9211.4
47.5°	5173.5	5172.3	5374.5	4367.1	4348.6	5695.0	7337.3	7830.5	10197.8	10086.8	9535.7
49°	5057.6	5069.9	5213.0	3939.3	4373.3	5836.8	7516.1	8035.2	9841.5	10252.1	9715.7
50°	4994.7	5007.1	4658.1	3896.2	4380.7	5918.2	7609.8	8185.6	8857.6	9972.2	9831.6
52.5°	4708.7	4600.2	3611.3	3806.1	4383.2	6014.4	6543.3	8505.0	8442.1	8312.6	9308.8
55°	2837.0	3210.6	3269.8	3703.8	4343.7	4368.4	6391.7	8876.1	8849.0	8660.3	8015.5
57.5°	1720.0	1702.7	2525.1	3419.0	2908.6	3663.1	6642.0	9366.8	9206.5	8955.0	8152.3
60°	606.6	536.3	541.3	583.2	1082.5	2740.9	5298.0	7053.8	9280.5	9241.0	8276.9
62.5°	48.1	45.6	45.6	48.1	69.0	1029.5	4200.7	7076.0	9536.9	9434.6	8305.2
65°	6.2	6.2	6.2	13.6	35.8	930.9	4206.9	7190.6	9728.1	9553.0	8230.0
67.5°	0.0	0.0	3.7	9.9	28.4	823.6	4083.6	7258.4	9899.4	9651.6	8161.0
70°	0.0	0.0	2.5	8.6	24.7	681.8	3933.1	7317.6	9819.3	9512.3	7813.3
72.5°	0.0	0.0	2.5	7.4	21.0	450.0	3486.8	6879.9	9248.4	8915.5	7099.4
75°	0.0	0.0	2.5	6.2	19.7	256.5	2856.8	6078.5	8230.0	7877.4	5982.3
77.5°	0.0	0.0	1.2	4.9	17.3	140.6	1974.0	5031.7	6798.5	6411.4	4481.8
80°	0.0	0.0	1.2	4.9	16.0	96.2	897.6	3268.6	4531.1	4046.6	2456.1
82.5°	0.0	0.0	1.2	4.9	12.3	65.3	362.5	916.1	1401.9	1198.4	781.7
85°	0.0	0.0	1.2	3.7	8.6	41.9	178.8	376.1	565.9	543.7	395.8
87.5°	0.0	0.0	1.2	3.7	6.2	12.3	53.0	123.3	220.7	224.4	168.9
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°	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0	5991.0
2.5°	6061.2	6072.3	6109.3	6164.8	6173.4	6248.6	6236.3	6376.9	6390.4	6423.7	6460.7
5°	6125.3	6163.6	6247.4	6374.4	6466.9	6580.3	6569.2	6728.3	6744.3	6735.7	6792.4
7.5°	6219.1	6275.8	6406.5	6577.8	6608.7	6749.2	6730.7	6868.8	6871.3	6852.8	6908.3
10°	6355.9	6422.5	6543.3	6640.7	6714.7	6799.8	6787.4	6910.7	6898.4	6877.5	6935.4
12.5°	6487.8	6524.8	6598.8	6713.5	6727.0	6761.6	6740.6	6855.3	6842.9	6813.3	6867.6
15°	6606.2	6624.7	6625.9	6682.6	6651.8	6677.7	6622.2	6704.8	6676.5	6665.4	6703.6
17.5°	6757.9	6723.3	6672.8	6669.1	6564.3	6528.5	6439.7	6461.9	6402.8	6397.8	6418.8
20°	6777.6	6849.1	6703.6	6553.2	6376.9	6286.9	6119.2	6120.4	6053.8	6027.9	6040.3
22.5°	6237.5	6413.9	6739.4	6452.1	6152.5	5950.3	5734.5	5669.1	5543.4	5490.4	5469.4
25°	6448.4	6219.1	6194.4	6281.9	5861.5	5553.3	5240.1	5047.7	4898.5	4777.7	4786.4
27.5°	6775.1	6476.7	5873.8	5909.6	5495.3	5062.5	4590.3	4319.1	4167.4	4050.3	4036.7
30°	7207.9	6833.1	5942.9	5121.7	5074.9	4446.1	3866.6	3567.0	3412.8	3370.9	3345.0
32.5°	7745.5	7257.2	6098.2	4941.7	4199.5	3779.0	3129.3	2887.6	2814.8	2811.1	2781.6
35°	8384.1	7818.2	6241.2	4702.5	3621.2	3077.5	2500.4	2341.4	2352.5	2353.7	2378.4
37.5°	7976.0	8348.4	6420.0	4475.6	3057.7	2287.1	2011.0	1911.1	1943.1	1994.9	2019.6
40°	7982.2	7600.0	6628.4	4097.1	2375.9	1744.6	1573.3	1551.1	1687.9	1792.7	1818.6
42.5°	8302.8	7550.6	6551.9	3665.6	1739.7	1326.7	1310.6	1430.2	1627.5	1744.6	1765.6
45°	8646.7	7784.9	5442.3	3054.0	1261.3	1122.0	1245.3	1411.7	1626.3	1750.8	1763.1
47.5°	8973.5	7932.9	5216.7	2387.0	1013.5	1057.9	1225.6	1411.7	1634.9	1761.9	1769.3
49°	9119.0	8052.5	5007.1	1930.8	950.6	1033.2	1214.5	1414.2	1637.4	1745.9	1749.6
50°	9205.3	8120.3	4838.1	1790.3	919.8	1017.2	1209.5	1417.9	1633.7	1727.4	1731.1
52.5°	9339.7	8230.0	4449.8	1426.5	861.8	980.2	1202.1	1432.7	1620.1	1675.6	1673.1
55°	7702.3	7692.4	4125.5	1197.2	817.5	946.9	1199.7	1445.0	1626.3	1683.0	1680.5
57.5°	7381.7	6316.5	3475.7	979.0	780.5	918.6	1202.1	1463.5	1737.2	1835.9	1823.5
60°	7405.2	6220.3	2957.9	849.5	737.3	895.1	1209.5	1546.1	2007.3	2107.1	2076.3
62.5°	7323.8	5984.8	2647.2	763.2	691.7	874.2	1214.5	1660.8	2041.8	2050.4	1997.4
65°	7130.2	5688.9	2229.2	668.3	643.6	854.4	1213.2	1702.7	1884.0	1813.7	1796.4
67.5°	6771.4	5374.5	1764.4	585.7	591.8	824.9	1241.6	1630.0	1782.9	1726.1	1700.3
70°	6346.0	4703.7	1244.1	509.2	545.0	791.6	1237.9	1612.7	1729.8	1646.0	1610.2
72.5°	5589.0	3954.1	837.2	438.9	485.8	753.3	1175.0	1560.9	1695.3	1639.8	1590.5
75°	4442.4	2959.1	485.8	378.5	427.8	697.9	1113.4	1528.9	1713.8	1607.8	1505.4
77.5°	3036.8	1685.5	362.5	316.9	368.7	626.3	1009.8	1421.6	1657.1	1565.9	1429.0
80°	1361.2	609.1	277.4	257.7	309.5	508.0	870.5	1257.6	1569.6	1569.6	1473.4
82.5°	541.3	383.5	192.3	202.2	252.8	387.1	689.2	1085.0	1383.4	1446.3	1546.1
85°	305.8	224.4	123.3	146.7	193.6	299.6	501.8	843.3	1126.9	1249.0	1353.8
87.5°	120.8	85.1	49.3	82.6	112.2	154.1	219.5	413.0	606.6	747.2	826.1
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)