

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: P591190

Luminaire Tested: **CTN-CA8-480-722-U-T4-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591190  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-10)  
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-T4-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D 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: 36740 lumens  
Efficiency: N/A  
Efficacy: 76.4 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type IV - Short  
BUG Rating: B4 - U0 - G5

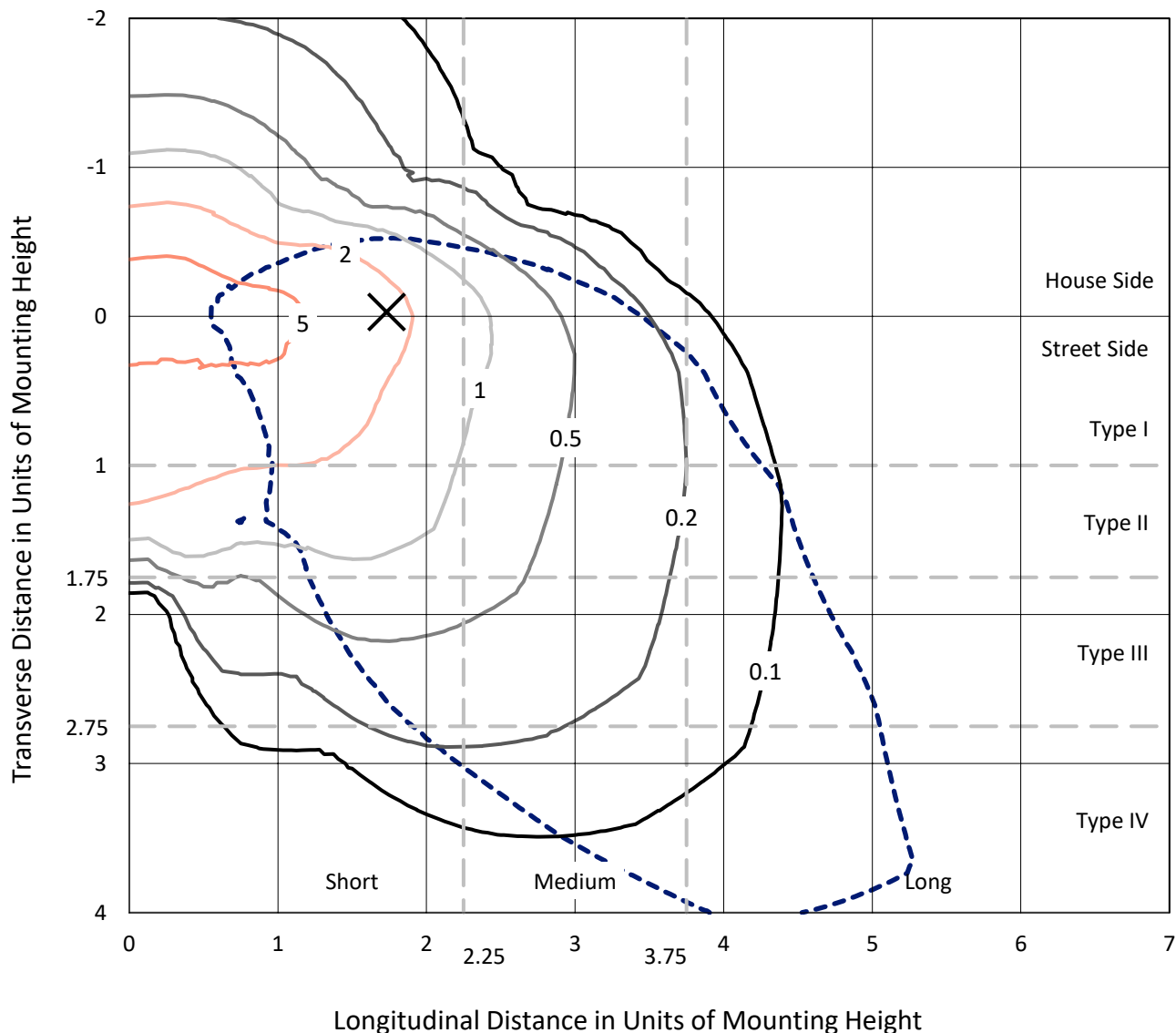
Input Watts (W): 480.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

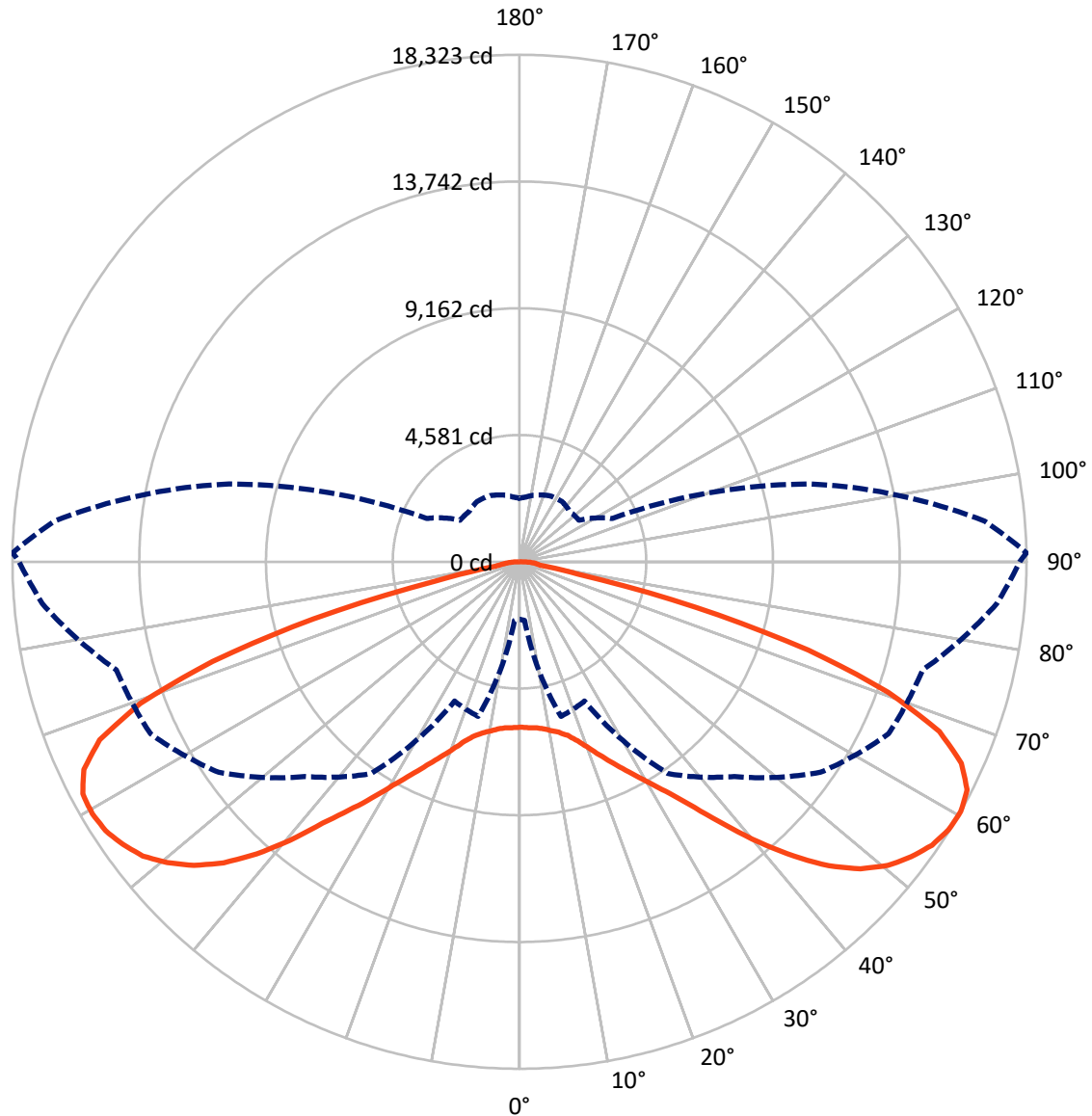
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 91-Deg Lateral      - - - Horizontal Cone Through 60-Deg Vertical

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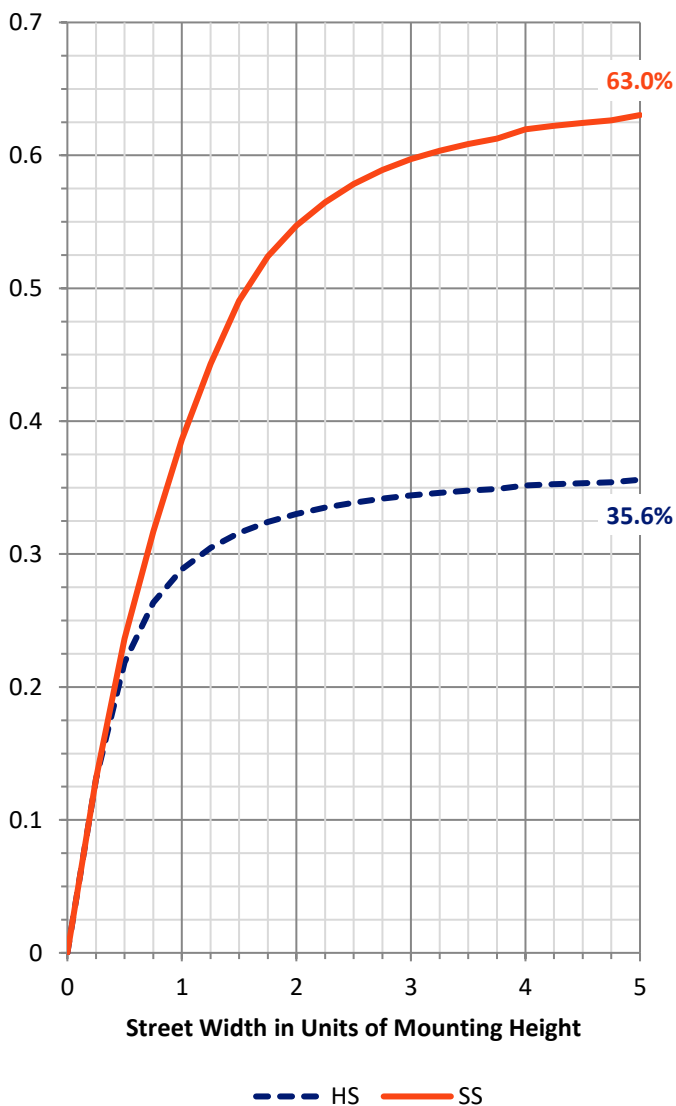
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	13342.6	0.0	13342.6
	% Fixture	36.3	0.0	36.3
<b>Street Side</b>	Lumens	23397.4	0.0	23397.4
	% Fixture	63.7	0.0	63.7
<b>Total</b>	Lumens	36740.0	0.0	36740.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	582.6	1.6
10°-20°	1786.7	4.9
20°-30°	2928.9	8.0
30°-40°	4136.5	11.3
40°-50°	5823.0	15.8
50°-60°	7327.0	19.9
60°-70°	7375.2	20.1
70°-80°	5425.8	14.8
80°-90°	1354.5	3.7
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°	36740.0	100.0
0°-180°	36740.0	100.0

**Coefficient of Utilization**

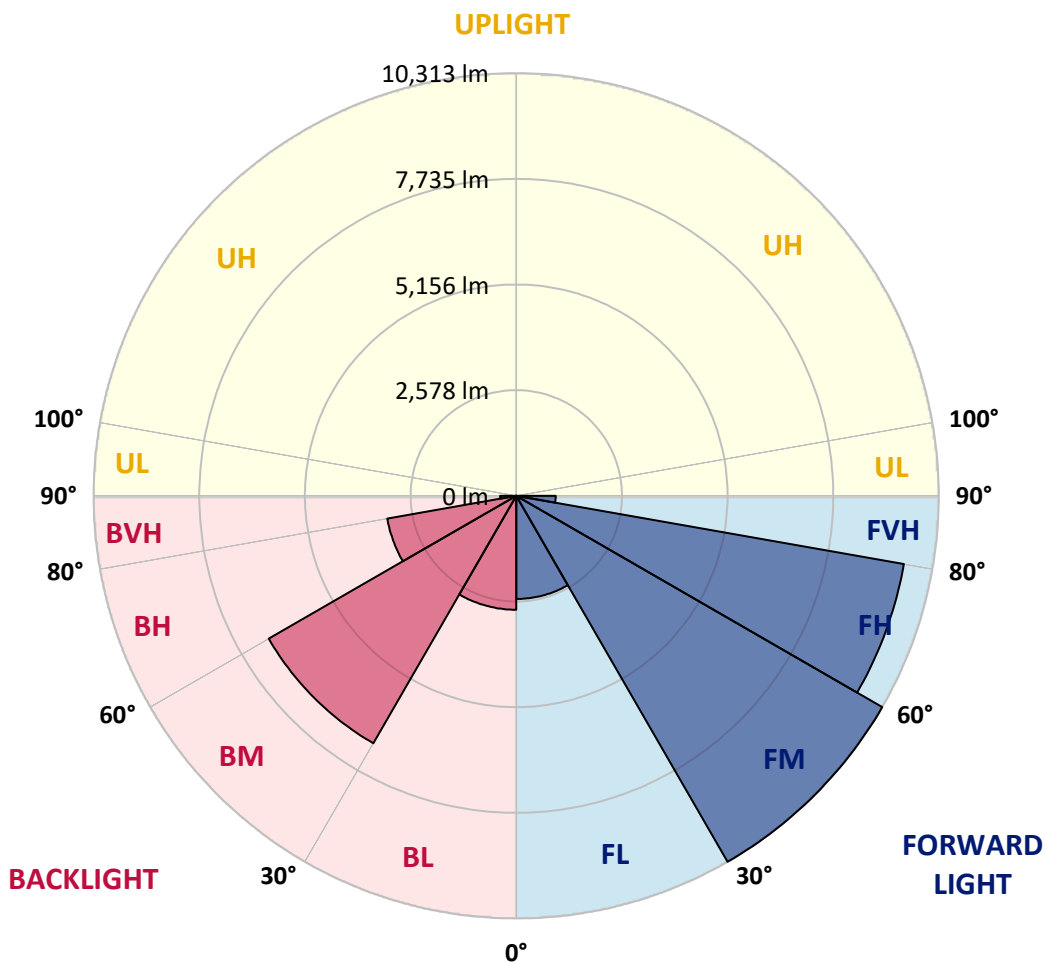


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2517.1	6.9			
FM	(30°-60°)	10312.9	28.1			
FH	(60°-80°)	9605.4	26.1			G4/12000
FVH	(80°-90°)	962.0	2.6			G5
BL	(0°-30°)	2781.1	7.6	B4/5000		
BM	(30°-60°)	6973.6	19.0	B4/8500		
BH	(60°-80°)	3195.5	8.7	B4/5000		G4/5000
BVH	(80°-90°)	392.4	1.1			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G5**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3
2.5°	5916.2	5878.6	5880.4	5935.9	5851.8	5905.5	5893.0	5978.9	5962.8	5993.2	6000.4
5°	5875.1	5844.6	5844.6	5910.9	5853.6	5900.1	5860.7	5935.9	5962.8	6007.5	6016.5
7.5°	5891.2	5858.9	5871.5	5928.8	5864.3	5912.6	5909.1	5975.3	5991.4	6066.6	6077.3
10°	5919.8	5891.2	5894.7	5943.1	5900.1	5989.6	5973.5	6068.4	6066.6	6184.7	6193.7
12.5°	5869.7	5848.2	5848.2	5912.6	5937.7	6032.6	6064.8	6163.3	6174.0	6306.5	6317.2
15°	5790.9	5755.1	5808.8	5905.5	5957.4	6106.0	6161.5	6317.2	6345.8	6471.2	6498.0
17.5°	5626.2	5642.3	5792.7	5724.7	5488.4	5708.6	6319.0	6517.7	6580.3	6728.9	6793.4
20°	5116.1	4917.4	4523.5	4630.9	5117.8	5746.2	6539.2	6771.9	6909.7	7085.1	7194.3
22.5°	3864.8	3990.1	4725.8	4802.8	4824.3	5243.2	6847.1	7083.4	7265.9	7487.9	7632.9
25°	4008.0	3995.5	4247.9	5037.3	5058.8	5298.6	6446.1	7489.7	7654.4	7962.3	8107.3
27.5°	4140.5	4140.5	4126.1	4756.3	5302.2	5538.5	6655.5	7190.8	8164.6	8499.3	8669.4
30°	4360.6	4367.8	4287.2	4285.5	5502.7	5758.7	7060.1	7325.0	8615.7	9249.4	9288.7
32.5°	4797.4	4772.4	4672.1	4518.2	4759.8	6014.7	7455.7	7810.1	8180.7	10092.5	10056.7
35°	5112.5	5092.8	5021.2	4913.8	4802.8	6131.0	7826.2	8318.5	8925.4	10341.3	11028.7
37.5°	5493.8	5461.5	5381.0	5253.9	5182.3	5293.3	8207.5	8893.1	9856.2	10636.7	12126.0
40°	5910.9	5901.9	5778.4	5613.7	5515.2	5597.6	8499.3	9609.2	11010.8	11891.5	13336.1
42.5°	6231.3	6224.1	6122.1	6027.2	5980.7	6147.1	7774.3	10557.9	12331.9	13031.8	14501.5
45°	6519.5	6508.7	6505.2	6472.9	6510.5	6915.1	8569.1	11143.3	13629.7	14012.8	15561.2
47.5°	6737.9	6705.7	6614.4	6623.3	6728.9	7410.9	9396.1	10260.8	14682.3	14877.4	16388.2
50°	7257.0	7224.8	6909.7	6920.5	7124.5	8026.7	10108.6	11282.9	13703.1	15625.6	17021.9
52.5°	7720.6	7453.9	7282.1	7289.2	7568.5	8681.9	10917.7	12340.8	13470.4	16218.2	17533.9
55°	6668.1	6496.2	8168.2	7935.4	8089.4	9396.1	11703.6	13257.4	14109.4	16671.0	17827.4
57.5°	3913.1	3891.6	8989.8	9192.1	9013.1	10167.7	12498.4	14019.9	14669.7	17093.5	18024.3
60°	2076.5	2126.6	5782.0	5556.4	9342.4	10973.2	13268.1	14712.7	15085.0	17311.9	18078.1
62.5°	191.5	170.1	3800.3	4317.7	8374.0	12025.8	14181.0	15418.0	15366.1	17428.3	17983.2
65°	37.6	50.1	3728.7	4265.8	9304.9	13771.1	15672.2	15960.4	15518.2	17288.6	17485.5
67.5°	28.6	43.0	3522.9	4219.2	9875.9	14442.4	17388.9	16151.9	15527.2	16842.9	16390.0
70°	28.6	44.8	3109.4	3943.6	10146.2	14471.0	17795.2	16076.7	15326.7	15833.3	14326.0
72.5°	28.6	44.8	2611.7	3417.3	9686.1	13849.9	17082.8	15659.6	14580.2	13633.3	11173.7
75°	28.6	41.2	2049.6	2776.4	8372.2	12892.2	15860.1	13844.5	12272.8	9976.1	7169.3
77.5°	28.6	39.4	1510.8	2173.2	6986.7	11370.6	13792.6	11379.6	9251.2	5223.5	2638.6
80°	26.9	39.4	920.1	1532.3	5382.8	9172.4	10839.0	8408.0	4861.9	1313.9	762.6
82.5°	26.9	37.6	438.6	981.0	3782.4	6553.5	7072.6	3601.6	1034.7	606.8	606.8
85°	23.3	34.0	234.5	533.4	2472.1	4296.2	3411.9	610.4	404.6	409.9	467.2
87.5°	14.3	17.9	111.0	239.9	1424.9	2296.7	1313.9	223.8	168.3	177.2	264.9
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):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3	5975.3
2.5°	6005.7	5996.8	6016.5	6079.1	6068.4	6113.1	6077.3	6140.0	6152.5	6134.6	6163.3
5°	6025.4	6038.0	6104.2	6163.3	6131.0	6202.6	6222.3	6310.0	6308.3	6292.1	6327.9
7.5°	6089.9	6123.9	6190.1	6263.5	6279.6	6336.9	6329.7	6440.7	6428.2	6421.0	6456.8
10°	6200.8	6252.8	6315.4	6437.1	6397.8	6494.4	6428.2	6503.4	6496.2	6478.3	6510.5
12.5°	6324.4	6396.0	6471.2	6582.1	6566.0	6564.2	6505.2	6528.4	6508.7	6465.8	6492.6
15°	6510.5	6598.2	6702.1	6773.7	6678.8	6643.0	6549.9	6499.8	6431.8	6331.5	6347.6
17.5°	6800.5	6904.4	7015.3	7027.9	6881.1	6788.0	6562.4	6383.4	6206.2	6072.0	6084.5
20°	7190.8	7285.6	7368.0	7308.9	7110.2	6902.6	6562.4	6279.6	5948.4	5701.4	5683.5
22.5°	7647.2	7675.9	7754.6	7609.6	7267.7	6977.7	6544.5	6123.9	5585.1	5255.7	5216.3
25°	8139.5	8135.9	8101.9	7801.2	7366.2	6936.6	6408.5	5857.2	5169.8	4826.1	4797.4
27.5°	8674.7	8630.0	8397.3	7962.3	7325.0	6788.0	6150.7	5407.8	4792.1	4496.7	4487.7
30°	9278.0	9159.9	8689.1	7978.4	7171.1	6494.4	5731.8	4955.0	4455.5	4192.4	4167.3
32.5°	9981.5	9750.6	8921.8	7926.5	6893.6	6046.9	5221.7	4598.7	4179.8	3891.6	3836.1
35°	10899.8	10495.3	9136.6	7756.4	6481.9	5515.2	4750.9	4281.9	3923.9	3628.5	3569.4
37.5°	12054.4	11460.1	9460.6	7507.6	6011.1	5040.9	4425.1	4072.4	3746.6	3397.6	3326.0
40°	13336.1	12595.0	9840.1	7265.9	5563.6	4688.2	4212.1	3974.0	3632.1	3249.0	3181.0
42.5°	14549.8	13737.1	10409.3	6952.7	5137.5	4405.4	4135.1	3945.3	3578.4	3184.6	3111.2
45°	15670.4	14741.3	10996.5	6637.6	4704.3	4174.5	4070.6	3861.2	3496.0	3109.4	3025.2
47.5°	16585.1	15532.6	11515.6	6311.8	4323.1	3993.7	3947.1	3700.1	3351.0	2987.6	2908.9
50°	17249.2	16139.4	11819.9	6009.3	3956.1	3812.9	3730.5	3471.0	3147.0	2844.4	2787.2
52.5°	17720.0	16663.9	11972.1	5975.3	3623.1	3569.4	3478.1	3234.7	2975.1	2740.6	2672.6
55°	18083.4	16950.3	11841.4	5776.6	3308.1	3263.3	3168.4	3018.1	2862.3	2644.0	2599.2
57.5°	18280.3	17081.0	11542.5	4872.6	2973.3	2896.4	2883.8	2851.6	2715.6	2499.0	2464.9
60°	18323.3	16873.3	10865.8	3705.5	2622.5	2572.3	2667.2	2626.1	2504.3	2343.2	2294.9
62.5°	18155.0	16429.4	9582.3	2771.0	2330.7	2413.0	2509.7	2447.0	2305.6	2148.1	2117.7
65°	17548.2	15410.8	7722.4	2157.1	2196.4	2337.8	2423.8	2348.6	2176.7	1997.7	1978.0
67.5°	16361.4	13824.8	5083.8	1940.5	2133.8	2275.2	2371.9	2251.9	2078.3	1885.0	1861.7
70°	14136.3	10928.5	2422.0	1809.8	2013.8	2153.5	2230.4	2094.4	1926.1	1736.4	1711.3
72.5°	10917.7	7427.1	1337.2	1666.6	1865.3	1994.2	2049.6	1888.5	1732.8	1654.0	1646.9
75°	6571.4	3191.7	1208.3	1525.2	1673.7	1793.7	1892.1	1770.4	1634.3	1480.4	1441.0
77.5°	2169.6	927.3	1136.7	1356.9	1525.2	1670.1	1716.7	1598.5	1428.5	1297.8	1287.1
80°	760.8	776.9	1059.7	1129.5	1328.2	1450.0	1501.9	1365.8	1285.3	1149.2	1122.4
82.5°	619.4	696.3	855.7	852.1	1049.0	1192.2	1271.0	1236.9	1131.3	1022.1	1011.4
85°	506.6	637.3	542.4	596.1	751.8	907.6	1057.9	1061.5	981.0	870.0	796.6
87.5°	300.7	325.8	270.3	304.3	397.4	510.2	590.7	563.9	461.8	390.2	381.3
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)