

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: P591148

Luminaire Tested: **CTN-CA6-230-722-U-T2-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591148  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-4)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA6-230-722-U-T2-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (6) 2200K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20404 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

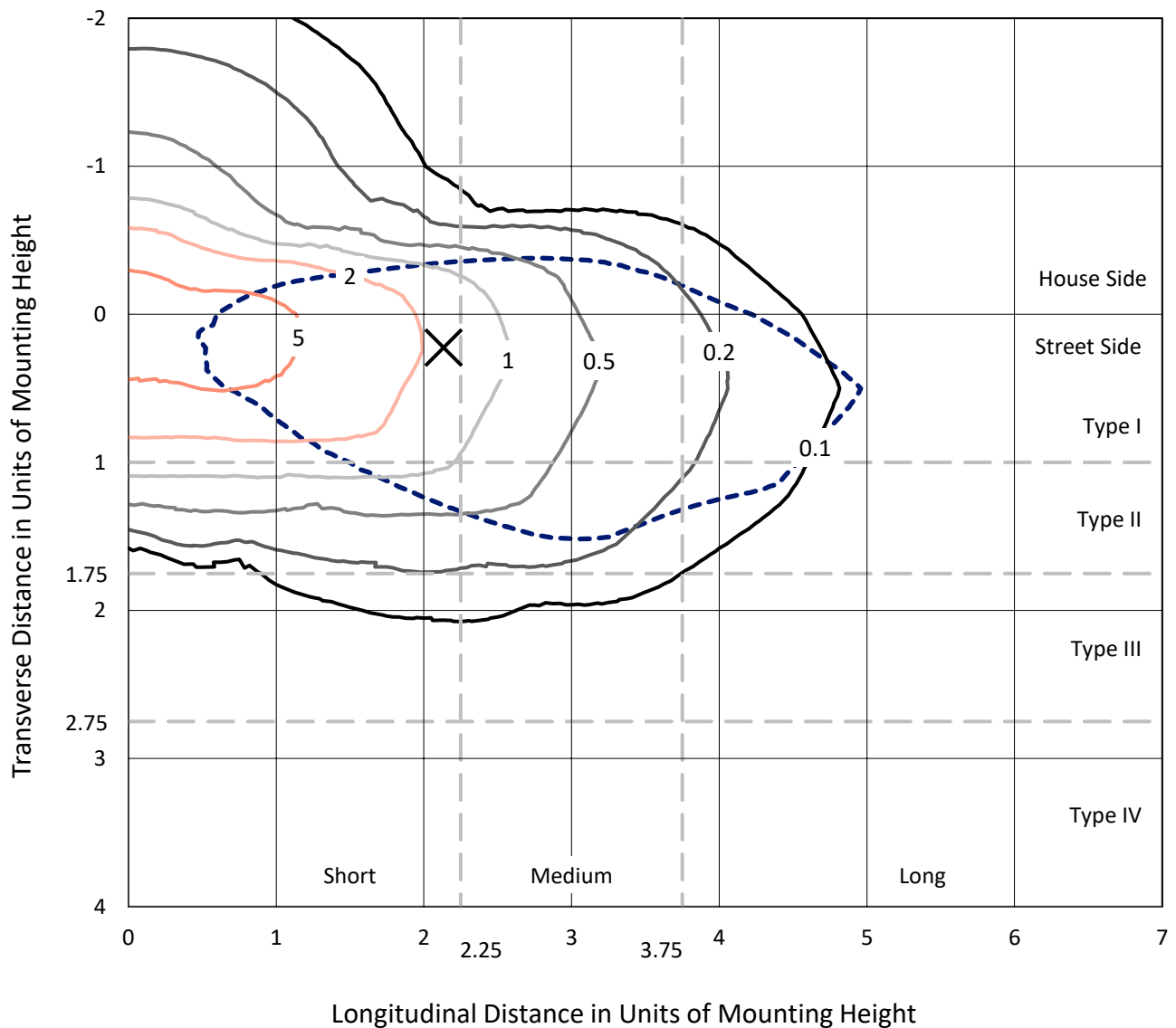
Input Watts (W): 227.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

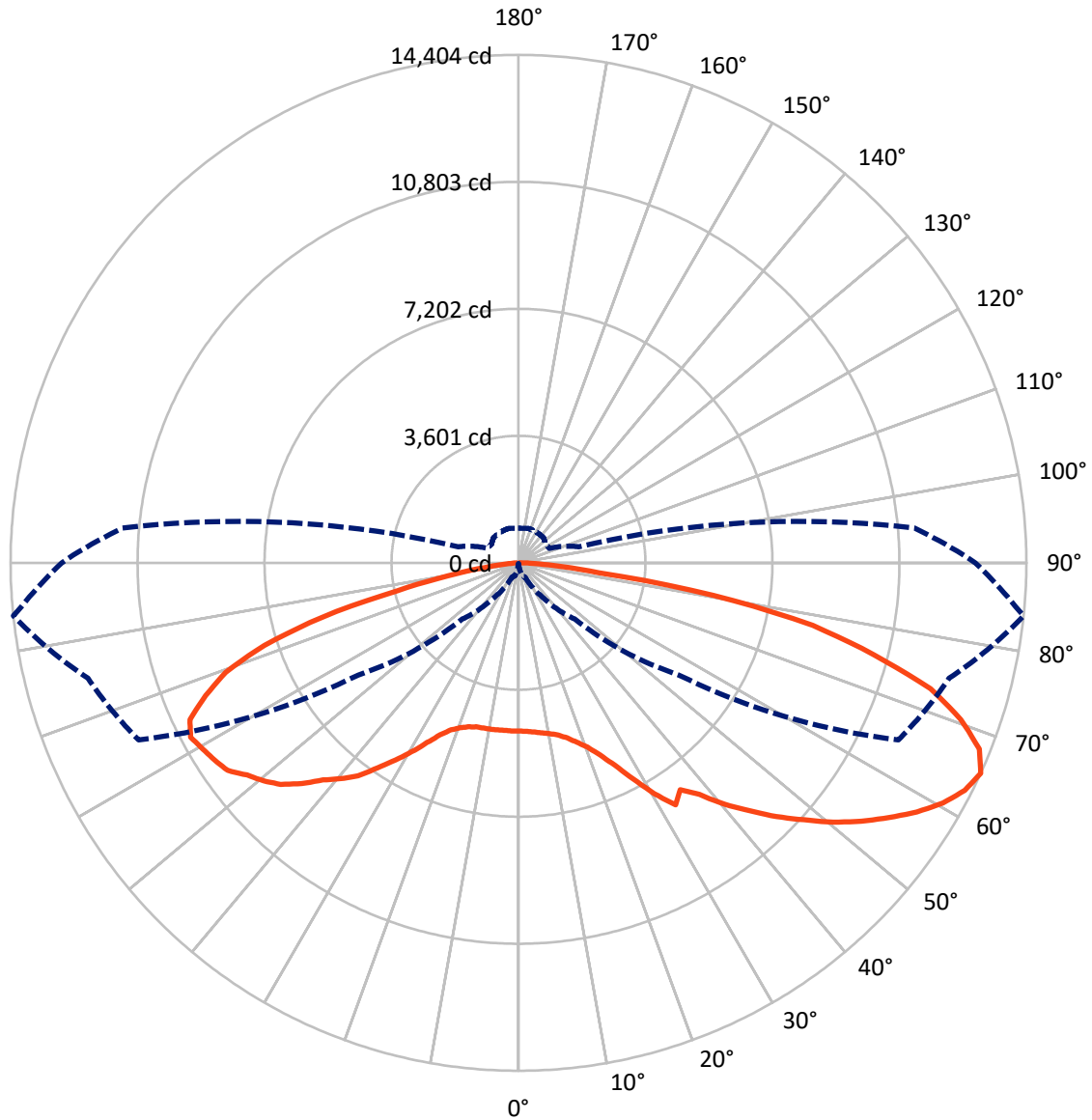
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 84-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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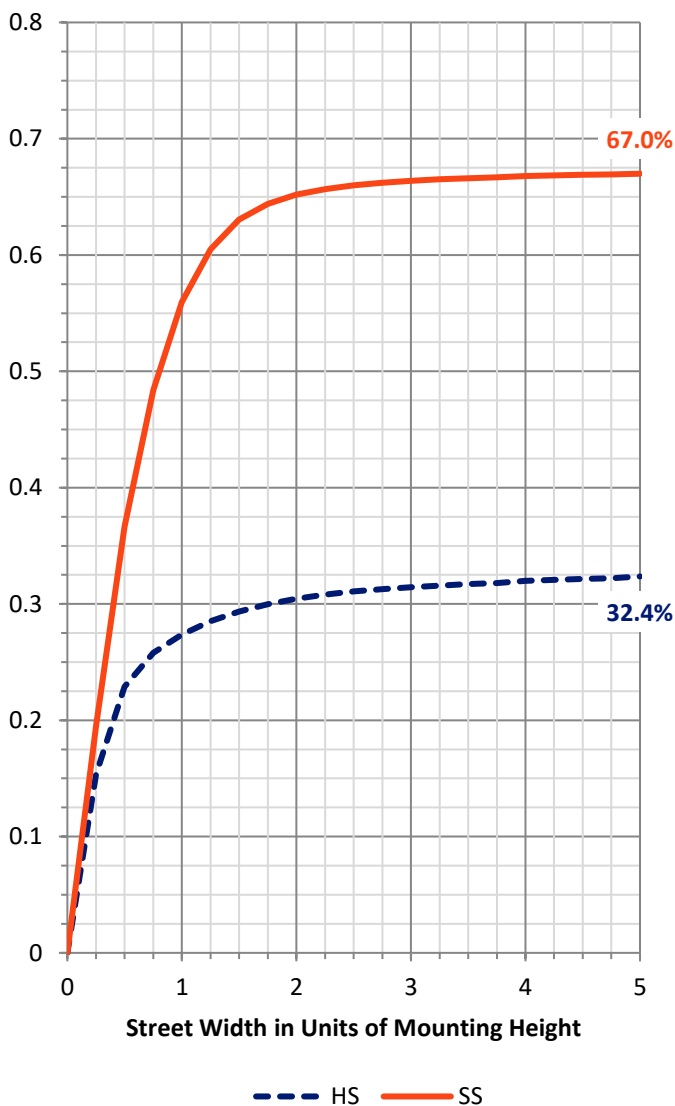
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6754.7	0.0	6754.7
	% Fixture	33.1	0.0	33.1
<b>Street Side</b>	Lumens	13649.3	0.0	13649.3
	% Fixture	66.9	0.0	66.9
<b>Total</b>	Lumens	20404.0	0.0	20404.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	460.5	2.3
10°-20°	1370.6	6.7
20°-30°	2059.3	10.1
30°-40°	2738.5	13.4
40°-50°	3381.2	16.6
50°-60°	3799.6	18.6
60°-70°	3726.5	18.3
70°-80°	2423.1	11.9
80°-90°	444.7	2.2
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°	20404.0	100.0
0°-180°	20404.0	100.0

**Coefficient of Utilization**



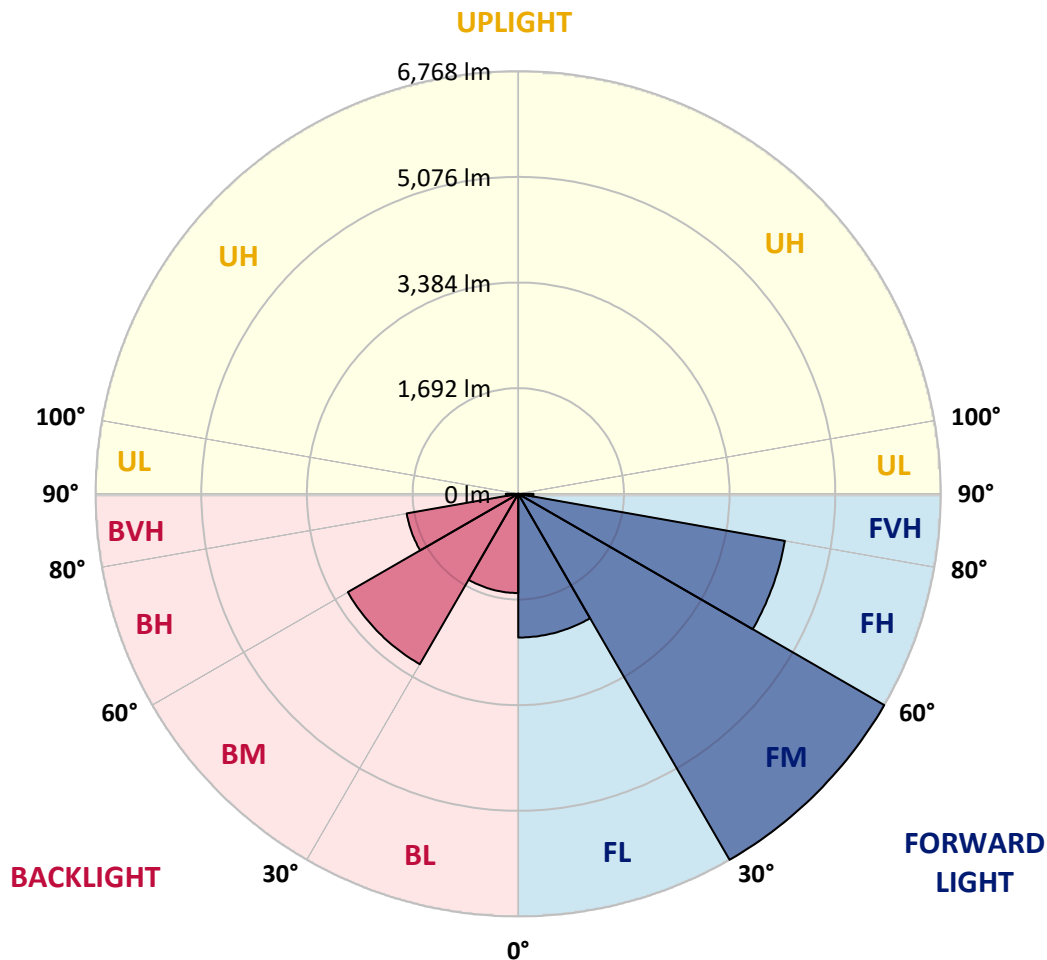
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2301.5	11.3			
FM	(30°-60°)	6767.9	33.2			
FH	(60°-80°)	4335.6	21.2			G2/5000
FVH	(80°-90°)	244.3	1.2			G3/500
BL	(0°-30°)	1589.0	7.8	B3/2500		
BM	(30°-60°)	3151.3	15.4	B3/5000		
BH	(60°-80°)	1814.0	8.9	B3/2500		G3/2500
BVH	(80°-90°)	200.4	1.0			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°	84°	85°
0°	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8
2.5°	4974.7	4927.8	4933.0	4955.6	4868.8	4897.4	4848.8	4857.5	4799.4	4788.9	4795.0
5°	5324.4	5274.1	5274.1	5288.0	5142.2	5103.1	4967.7	4945.2	4859.2	4821.1	4822.8
7.5°	5504.9	5455.5	5445.9	5458.9	5353.9	5362.6	5223.7	5091.0	4938.2	4870.5	4867.0
10°	5770.5	5715.0	5682.0	5682.9	5541.4	5487.6	5385.2	5292.3	5058.9	4926.9	4910.4
12.5°	5984.9	5942.3	5925.0	5912.0	5755.8	5720.2	5527.5	5452.0	5202.9	5012.9	4991.2
15°	6109.0	6069.1	6043.9	6014.4	5927.6	5869.4	5786.1	5614.3	5373.9	5150.8	5123.9
17.5°	5785.3	5716.7	5597.8	5545.7	5525.8	5610.0	5968.4	5880.7	5594.3	5347.0	5318.3
20°	4931.3	4993.8	5084.0	4879.2	4942.6	5568.3	6240.9	6233.1	5902.4	5582.2	5544.9
22.5°	4195.3	4030.4	4315.1	4627.5	4827.1	5417.3	6346.8	6640.1	6319.9	5912.8	5869.4
25°	3439.4	3533.1	3916.7	4545.9	4825.4	5302.7	6288.6	6952.6	6853.6	6363.3	6312.1
27.5°	3337.0	3338.7	3707.6	4189.2	4920.9	5568.3	6352.0	6964.7	7456.8	6945.6	6846.7
30°	3315.3	3304.9	3404.7	3989.6	4752.5	5816.5	6759.9	7073.2	7603.5	7596.5	7464.6
32.5°	3213.7	3207.7	3311.8	3577.4	4392.3	6079.5	7146.1	7579.2	7550.5	8183.2	8147.6
35°	3068.8	3090.5	3219.8	3495.8	4223.1	5860.8	7542.7	8158.9	8207.5	7898.5	8040.0
37.5°	2917.8	2930.0	3054.9	3388.2	3940.2	5478.0	7844.7	8727.4	8894.0	8336.0	8223.1
40°	2712.1	2737.3	2884.0	3258.9	3882.9	5123.1	7631.2	9374.8	9634.3	9003.3	8829.8
42.5°	2494.3	2506.4	2685.2	3048.8	3787.4	5128.3	7193.0	9933.7	10316.4	9612.6	9436.4
45°	2303.3	2306.8	2474.3	2799.8	3599.1	5096.2	6916.1	9956.3	11133.1	10265.2	10043.9
47.5°	2069.9	2102.9	2268.6	2593.2	3358.7	4988.6	7045.4	9255.9	11952.4	10887.5	10685.3
50°	1587.3	1613.4	1934.5	2391.0	3095.7	4808.9	7133.9	9820.0	11039.4	11562.7	11417.8
52.5°	1365.2	1320.9	1551.8	2163.6	2855.3	4509.5	7171.3	10611.5	11037.6	12173.7	12028.8
55°	584.1	895.6	1398.1	1776.5	2635.7	4110.3	7144.4	11385.7	11575.7	12750.0	12699.6
57.5°	461.7	483.4	1027.6	1437.2	2375.4	3638.1	7022.9	11897.7	12047.9	13327.1	13183.9
60°	85.1	96.3	505.1	607.5	1720.1	2933.4	6580.2	11970.6	12392.4	13829.6	13646.5
62.5°	39.1	46.0	406.2	506.0	1375.6	2412.7	6201.0	11947.2	12710.9	14202.8	14041.4
65°	18.2	23.4	363.6	459.1	1190.7	2251.3	5544.0	11883.8	12640.6	14404.1	14142.0
67.5°	13.9	20.0	334.1	412.2	990.2	2090.7	4920.0	11219.0	12302.1	14092.6	13728.9
70°	13.9	20.0	305.5	374.9	840.1	1886.8	3994.0	10386.7	11529.7	13305.4	13002.5
72.5°	14.8	20.0	271.6	339.3	728.1	1629.0	3120.0	9058.0	10603.7	12218.8	11900.3
75°	14.8	20.0	234.3	300.3	613.6	1364.3	2089.0	6474.4	9133.5	10399.8	10045.7
77.5°	14.8	20.0	194.4	250.8	499.9	1090.1	1351.3	3490.6	7186.0	8528.6	8074.7
80°	14.8	20.0	144.9	190.1	375.8	768.9	807.1	1760.1	3866.4	5603.0	5682.0
82.5°	14.8	19.1	100.7	138.9	245.6	421.8	446.1	849.7	1426.8	2298.1	2330.2
85°	13.9	16.5	72.0	92.0	134.5	158.8	217.0	422.7	683.9	980.7	972.9
87.5°	8.7	8.7	23.4	36.5	54.7	62.5	97.2	156.2	236.1	323.7	305.5
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°	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8	4769.8
2.5°	4794.1	4774.2	4749.0	4742.1	4683.1	4655.3	4598.9	4624.0	4595.4	4572.0	4598.9
5°	4801.1	4771.6	4718.6	4656.2	4530.3	4473.0	4393.2	4401.9	4360.2	4328.1	4346.3
7.5°	4818.4	4782.0	4698.7	4558.1	4407.9	4317.7	4234.4	4299.5	4270.8	4246.5	4264.7
10°	4827.1	4798.5	4650.9	4502.5	4286.4	4237.0	4132.8	4125.0	4127.6	4125.0	4153.7
12.5°	4850.6	4809.8	4595.4	4406.2	4222.2	4091.2	4026.9	4026.1	3943.6	3908.0	3923.7
15°	4920.0	4831.5	4558.1	4291.6	4088.6	4001.8	3798.7	3799.6	3764.8	3724.1	3723.2
17.5°	5058.9	4896.6	4558.1	4214.4	3965.3	3790.0	3613.0	3516.6	3493.2	3498.4	3494.9
20°	5242.0	5005.9	4556.3	4100.7	3791.8	3610.4	3355.2	3273.6	3199.9	3205.1	3205.1
22.5°	5504.9	5167.3	4559.8	3996.6	3626.0	3379.5	3092.2	2989.0	2910.0	2912.6	2912.6
25°	5882.5	5444.2	4600.6	3933.2	3403.8	3107.9	2818.0	2657.4	2576.7	2577.6	2579.3
27.5°	6363.3	5830.4	4742.1	3798.7	3219.0	2786.8	2469.1	2351.1	2270.4	2249.5	2249.5
30°	6907.4	6293.8	4925.2	3711.0	2932.6	2424.8	2161.0	2073.4	1976.2	1947.5	1947.5
32.5°	7510.6	6759.0	5114.4	3603.4	2662.6	2114.1	1894.6	1813.9	1692.4	1656.8	1644.6
35°	8138.1	7239.8	5344.4	3452.4	2323.3	1858.1	1663.7	1565.6	1478.0	1431.1	1419.8
37.5°	8476.5	7787.5	5551.8	3299.7	2061.2	1655.9	1438.9	1362.6	1304.4	1271.4	1265.4
40°	8941.7	8185.8	5659.4	3047.1	1779.1	1450.2	1231.5	1228.0	1235.9	1206.3	1204.6
42.5°	9415.6	8579.0	5629.9	2708.6	1559.6	1240.2	1127.4	1187.3	1230.6	1204.6	1206.3
45°	10008.3	9108.4	5737.5	2352.8	1342.6	1123.9	1105.7	1176.0	1235.9	1229.8	1229.8
47.5°	10608.1	9620.4	5538.8	1917.1	1196.8	1090.1	1108.3	1157.7	1232.4	1252.3	1248.0
50°	11096.7	9971.0	5416.4	1547.4	1114.4	1090.9	1117.0	1135.2	1216.8	1248.9	1248.0
52.5°	11491.5	10305.2	4959.9	1306.2	1067.5	1094.4	1144.7	1131.7	1189.0	1222.8	1242.8
55°	12050.5	10767.7	4440.1	1213.3	1043.2	1090.9	1154.3	1143.9	1167.3	1182.9	1197.7
57.5°	12482.7	10997.7	3744.0	1153.4	1021.5	1085.7	1146.5	1147.3	1158.6	1152.5	1146.5
60°	12845.4	11207.8	3062.7	1095.3	993.7	1074.4	1113.5	1125.6	1122.2	1114.4	1098.7
62.5°	13022.5	11435.1	2378.8	1033.6	964.2	1041.5	1059.7	1073.6	1065.8	1039.7	1038.0
65°	12955.7	11272.0	1763.5	966.8	928.6	1005.0	1004.1	1010.2	1013.7	980.7	984.2
67.5°	12580.7	10555.1	1343.5	881.8	887.8	952.9	948.6	952.1	942.5	919.9	923.4
70°	11490.7	9741.0	952.9	738.6	804.5	871.3	877.4	892.2	870.5	830.6	833.2
72.5°	9879.0	8342.0	668.3	588.4	706.5	791.5	788.0	787.2	757.7	773.3	792.4
75°	8426.2	6388.4	507.7	473.9	558.0	681.3	720.3	722.9	727.3	883.5	894.8
77.5°	6486.5	3864.7	432.2	374.1	433.1	565.0	637.9	667.4	916.5	949.5	932.1
80°	3865.5	2232.2	334.1	291.6	349.8	431.3	545.0	704.7	920.8	822.7	787.2
82.5°	1881.6	1035.4	243.0	222.2	257.8	313.3	427.9	821.0	779.4	636.2	627.5
85°	702.1	349.8	145.8	151.9	171.8	205.7	325.5	783.7	598.0	518.1	489.5
87.5°	175.3	64.2	59.0	60.8	77.2	103.3	166.6	377.5	289.9	240.4	235.2
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)