

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: P591160

Luminaire Tested: **CTN-CA8-230-722-U-T2-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591160  
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-CA8-230-722-U-T2-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: 21227 lumens  
Efficiency: N/A  
Efficacy: 92.9 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

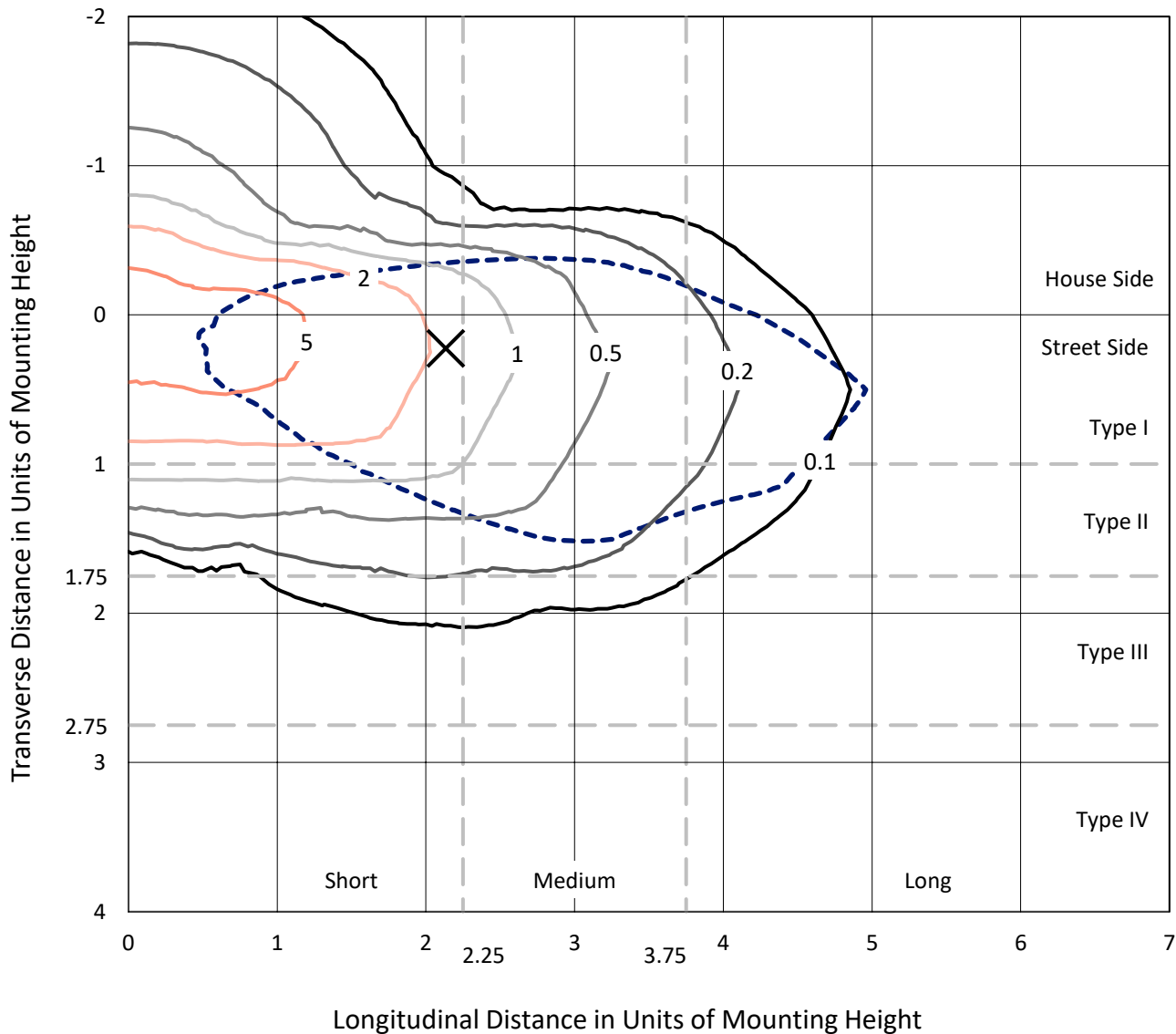
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

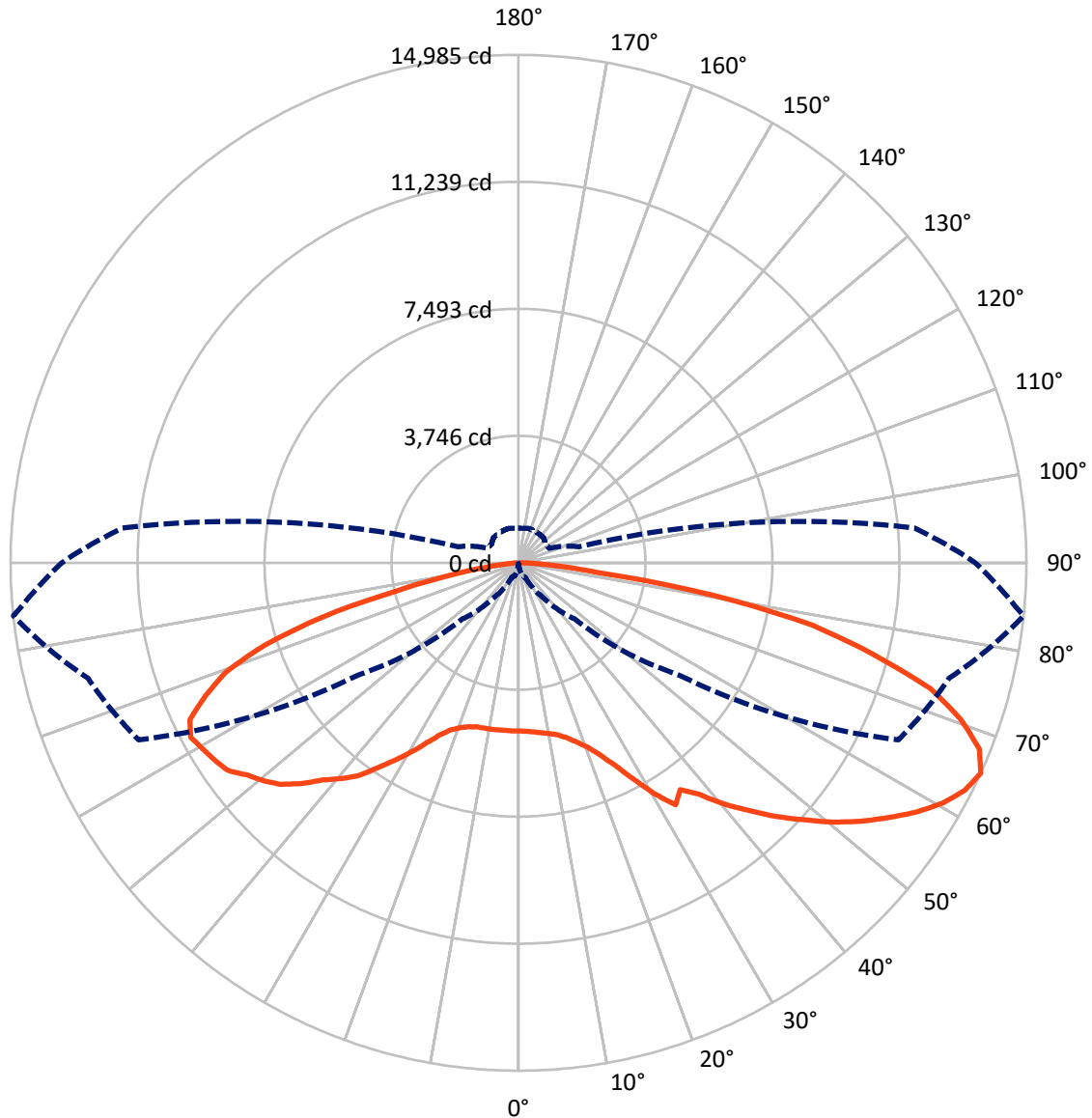
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.2 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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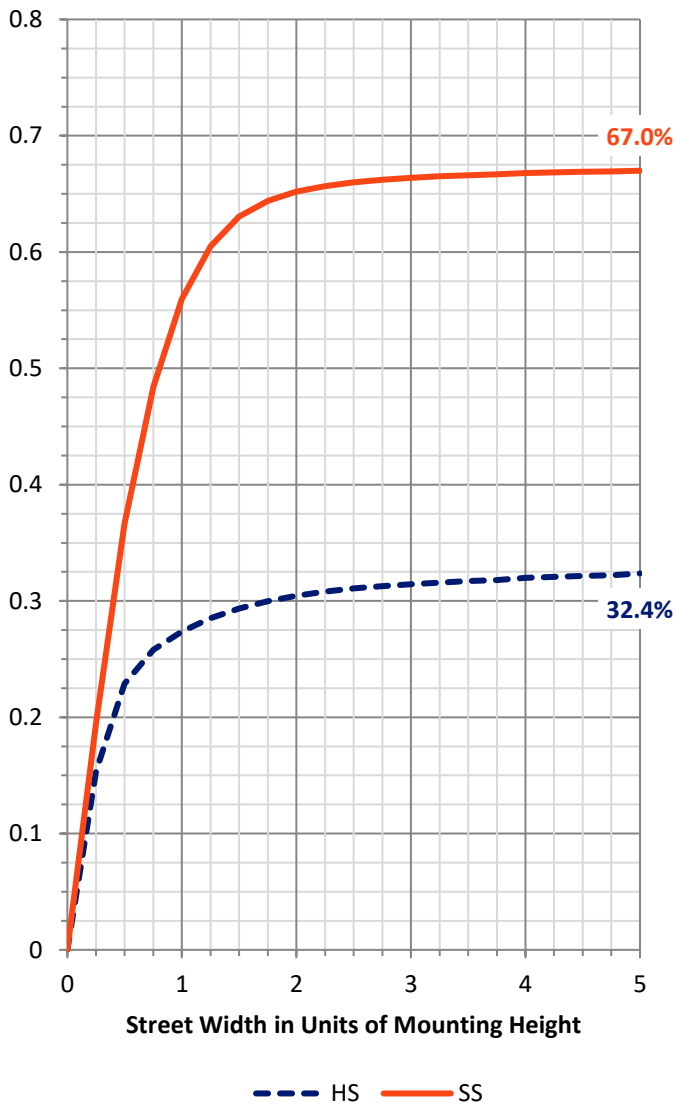
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7027.2	0.0	7027.2
	% Fixture	33.1	0.0	33.1
<b>Street Side</b>	Lumens	14199.8	0.0	14199.8
	% Fixture	66.9	0.0	66.9
<b>Total</b>	Lumens	21227.0	0.0	21227.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	479.0	2.3
10°-20°	1425.9	6.7
20°-30°	2142.4	10.1
30°-40°	2849.0	13.4
40°-50°	3517.6	16.6
50°-60°	3952.8	18.6
60°-70°	3876.8	18.3
70°-80°	2520.8	11.9
80°-90°	462.6	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°	21227.0	100.0
0°-180°	21227.0	100.0

**Coefficient of Utilization**

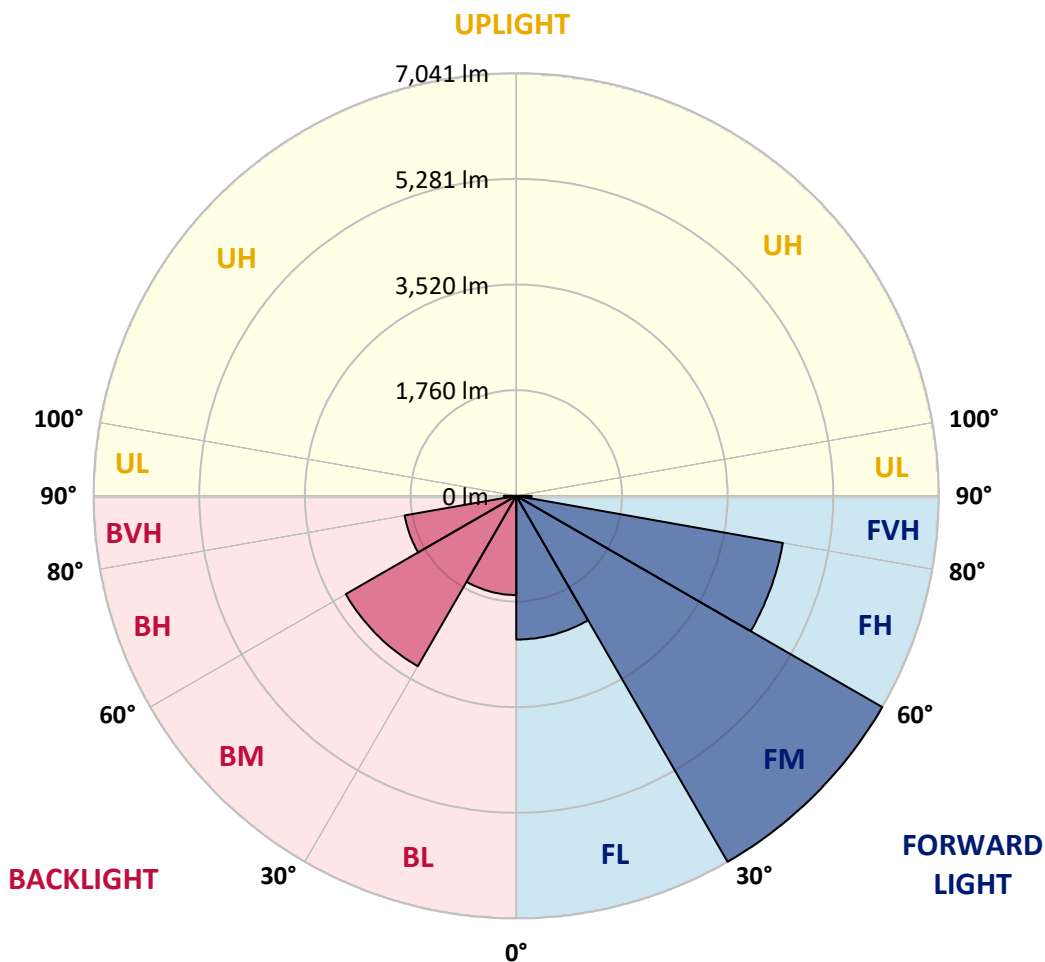


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2394.3	11.3			
FM (30°-60°)	7040.9	33.2			
FH (60°-80°)	4510.5	21.2			G2/5000
FVH (80°-90°)	254.1	1.2			G3/500
BL (0°-30°)	1653.1	7.8	B3/2500		
BM (30°-60°)	3278.5	15.4	B3/5000		
BH (60°-80°)	1887.2	8.9	B3/2500		G3/2500
BVH (80°-90°)	208.5	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°	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2
2.5°	5175.3	5126.6	5132.0	5155.5	5065.2	5095.0	5044.4	5053.4	4992.9	4982.1	4988.4
5°	5539.2	5486.8	5486.8	5501.3	5349.6	5308.9	5168.1	5144.6	5055.2	5015.5	5017.3
7.5°	5727.0	5675.5	5665.6	5679.1	5569.9	5578.9	5434.4	5296.3	5137.4	5067.0	5063.4
10°	6003.3	5945.5	5911.2	5912.1	5764.9	5708.9	5602.4	5505.8	5262.9	5125.7	5108.5
12.5°	6226.3	6182.0	6164.0	6150.4	5987.9	5950.9	5750.5	5671.9	5412.8	5215.0	5192.5
15°	6355.4	6313.9	6287.7	6257.0	6166.7	6106.2	6019.5	5840.7	5590.6	5358.6	5330.6
17.5°	6018.6	5947.3	5823.6	5769.4	5748.7	5836.2	6209.1	6117.9	5820.0	5562.7	5532.9
20°	5130.2	5195.2	5289.1	5076.0	5141.9	5792.9	6492.6	6484.5	6140.5	5807.3	5768.5
22.5°	4364.5	4193.0	4489.1	4814.2	5021.8	5635.8	6602.8	6908.0	6574.8	6151.3	6106.2
25°	3578.1	3675.6	4074.7	4729.3	5020.0	5516.6	6542.3	7233.0	7130.1	6619.9	6566.7
27.5°	3471.6	3473.4	3857.1	4358.2	5119.3	5792.9	6608.2	7245.6	7757.6	7225.8	7122.8
30°	3449.0	3438.2	3542.0	4150.5	4944.2	6051.1	7032.5	7358.5	7910.2	7902.9	7765.7
32.5°	3343.4	3337.1	3445.4	3721.7	4569.5	6324.7	7434.3	7884.9	7855.1	8513.3	8476.3
35°	3192.6	3215.2	3349.7	3636.8	4393.4	6097.2	7846.9	8488.0	8538.6	8217.1	8364.3
37.5°	3035.5	3048.1	3178.1	3524.9	4099.1	5699.0	8161.2	9079.4	9252.7	8672.2	8554.8
40°	2821.5	2847.7	3000.3	3390.3	4039.5	5329.7	7939.0	9752.9	10022.9	9366.5	9185.9
42.5°	2594.9	2607.5	2793.5	3171.8	3940.2	5335.1	7483.1	10334.4	10732.6	10000.3	9817.0
45°	2396.2	2399.9	2574.1	2912.7	3744.3	5301.7	7195.1	10357.9	11582.2	10679.3	10449.1
47.5°	2153.4	2187.7	2360.1	2697.8	3494.2	5189.8	7329.6	9629.2	12434.5	11326.7	11116.3
50°	1651.4	1678.5	2012.5	2487.4	3220.6	5002.9	7421.7	10216.1	11484.7	12029.1	11878.3
52.5°	1420.2	1374.2	1614.4	2250.9	2970.5	4691.4	7460.5	11039.5	11482.9	12664.7	12513.9
55°	607.6	931.8	1454.5	1848.2	2742.1	4276.0	7432.5	11844.9	12042.6	13264.2	13211.9
57.5°	480.3	502.9	1069.0	1495.2	2471.2	3784.9	7306.1	12377.6	12533.8	13864.7	13715.7
60°	88.5	100.2	525.5	632.0	1789.5	3051.7	6845.7	12453.5	12892.3	14387.4	14196.9
62.5°	40.6	47.9	422.5	526.4	1431.1	2510.0	6451.1	12429.1	13223.6	14775.7	14607.7
65°	19.0	24.4	378.3	477.6	1238.8	2342.1	5767.6	12363.2	13150.5	14985.1	14712.5
67.5°	14.4	20.8	347.6	428.9	1030.2	2175.0	5118.4	11671.6	12798.4	14661.0	14282.7
70°	14.4	20.8	317.8	390.0	874.0	1962.9	4155.1	10805.7	11994.8	13842.1	13527.0
72.5°	15.3	20.8	282.6	353.0	757.5	1694.7	3245.9	9423.4	11031.4	12711.7	12380.3
75°	15.3	20.8	243.8	312.4	638.3	1419.3	2173.2	6735.5	9501.9	10819.2	10450.9
77.5°	15.3	20.8	202.2	260.9	520.1	1134.0	1405.8	3631.4	7475.9	8872.6	8400.4
80°	15.3	20.8	150.8	197.7	390.9	800.0	839.7	1831.0	4022.3	5829.0	5911.2
82.5°	15.3	19.9	104.7	144.5	255.5	438.8	464.1	883.9	1484.3	2390.8	2424.2
85°	14.4	17.2	74.9	95.7	139.9	165.2	225.7	439.7	711.5	1020.3	1012.1
87.5°	9.0	9.0	24.4	37.9	56.9	65.0	101.1	162.5	245.6	336.8	317.8
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°	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2	4962.2
2.5°	4987.5	4966.8	4940.6	4933.3	4872.0	4843.1	4784.4	4810.6	4780.8	4756.4	4784.4
5°	4994.7	4964.0	4909.0	4844.0	4713.0	4653.5	4570.4	4579.4	4536.1	4502.7	4521.6
7.5°	5012.8	4974.9	4888.2	4741.9	4585.7	4491.8	4405.2	4472.9	4443.1	4417.8	4436.8
10°	5021.8	4992.0	4838.5	4684.2	4459.3	4407.9	4299.5	4291.4	4294.1	4291.4	4321.2
12.5°	5046.2	5003.8	4780.8	4583.9	4392.5	4256.2	4189.4	4188.5	4102.7	4065.7	4081.9
15°	5118.4	5026.3	4741.9	4464.8	4253.5	4163.2	3951.9	3952.8	3916.7	3874.3	3873.4
17.5°	5262.9	5094.1	4741.9	4384.4	4125.3	3942.9	3758.7	3658.5	3634.1	3639.5	3635.9
20°	5453.4	5207.8	4740.1	4266.1	3944.7	3756.0	3490.5	3405.7	3328.9	3334.3	3334.3
22.5°	5727.0	5375.8	4743.7	4157.8	3772.2	3515.8	3217.0	3109.5	3027.4	3030.1	3030.1
25°	6119.7	5663.8	4786.2	4091.9	3541.1	3233.2	2931.7	2764.6	2680.7	2681.6	2683.4
27.5°	6619.9	6065.6	4933.3	3951.9	3348.8	2899.2	2568.7	2445.9	2361.9	2340.3	2340.3
30°	7186.0	6547.7	5123.9	3860.7	3050.8	2522.7	2248.2	2157.0	2055.9	2026.1	2026.1
32.5°	7813.5	7031.6	5320.7	3748.8	2770.0	2199.4	1971.0	1887.0	1760.6	1723.6	1711.0
35°	8466.3	7531.8	5559.9	3591.7	2417.0	1933.1	1730.8	1628.8	1537.6	1488.9	1477.1
37.5°	8818.5	8101.6	5775.7	3432.8	2144.3	1722.7	1497.0	1417.5	1357.0	1322.7	1316.4
40°	9302.4	8516.0	5887.7	3170.0	1850.9	1508.7	1281.2	1277.6	1285.7	1255.0	1253.2
42.5°	9795.4	8925.0	5857.0	2817.9	1622.5	1290.2	1172.8	1235.1	1280.3	1253.2	1255.0
45°	10412.0	9475.7	5969.0	2447.7	1396.8	1169.2	1150.3	1223.4	1285.7	1279.4	1279.4
47.5°	11035.9	10008.4	5762.2	1994.5	1245.1	1134.0	1153.0	1204.4	1282.1	1302.9	1298.3
50°	11544.3	10373.2	5634.9	1609.8	1159.3	1134.9	1162.0	1181.0	1265.8	1299.2	1298.3
52.5°	11955.1	10720.8	5160.0	1358.8	1110.5	1138.5	1190.9	1177.4	1236.9	1272.2	1292.9
55°	12536.5	11202.1	4619.1	1262.2	1085.3	1134.9	1200.8	1190.0	1214.4	1230.6	1246.0
57.5°	12986.2	11441.3	3895.0	1199.9	1062.7	1129.5	1192.7	1193.6	1205.3	1199.0	1192.7
60°	13363.6	11659.8	3186.3	1139.4	1033.8	1117.8	1158.4	1171.0	1167.4	1159.3	1143.0
62.5°	13547.7	11896.4	2474.8	1075.3	1003.1	1083.5	1102.4	1116.9	1108.7	1081.7	1079.8
65°	13478.2	11726.6	1834.7	1005.8	966.1	1045.5	1044.6	1051.0	1054.6	1020.3	1023.9
67.5°	13088.2	10980.9	1397.7	917.3	923.6	991.4	986.9	990.5	980.5	957.1	960.7
70°	11954.2	10133.9	991.4	768.4	837.0	906.5	912.8	928.2	905.6	864.1	866.8
72.5°	10277.5	8678.5	695.2	612.2	734.9	823.4	819.8	818.9	788.2	804.5	824.3
75°	8766.1	6646.1	528.2	493.0	580.6	708.8	749.4	752.1	756.6	919.1	930.9
77.5°	6748.1	4020.5	449.6	389.1	450.5	587.8	663.6	694.3	953.4	987.8	969.7
80°	4021.4	2322.2	347.6	303.4	363.9	448.7	567.0	733.1	958.0	855.9	818.9
82.5°	1957.4	1077.1	252.8	231.1	268.2	325.9	445.1	854.1	810.8	661.8	652.8
85°	730.4	363.9	151.7	158.0	178.8	214.0	338.6	815.3	622.1	539.0	509.2
87.5°	182.4	66.8	61.4	63.2	80.4	107.4	173.4	392.8	301.6	250.1	244.7
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)