

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: P591301

Luminaire Tested: **CTN-CA10-310-730-U-T1-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591301  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-310-730-U-T1-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 40438 lumens  
Efficiency: N/A  
Efficacy: 129.4 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

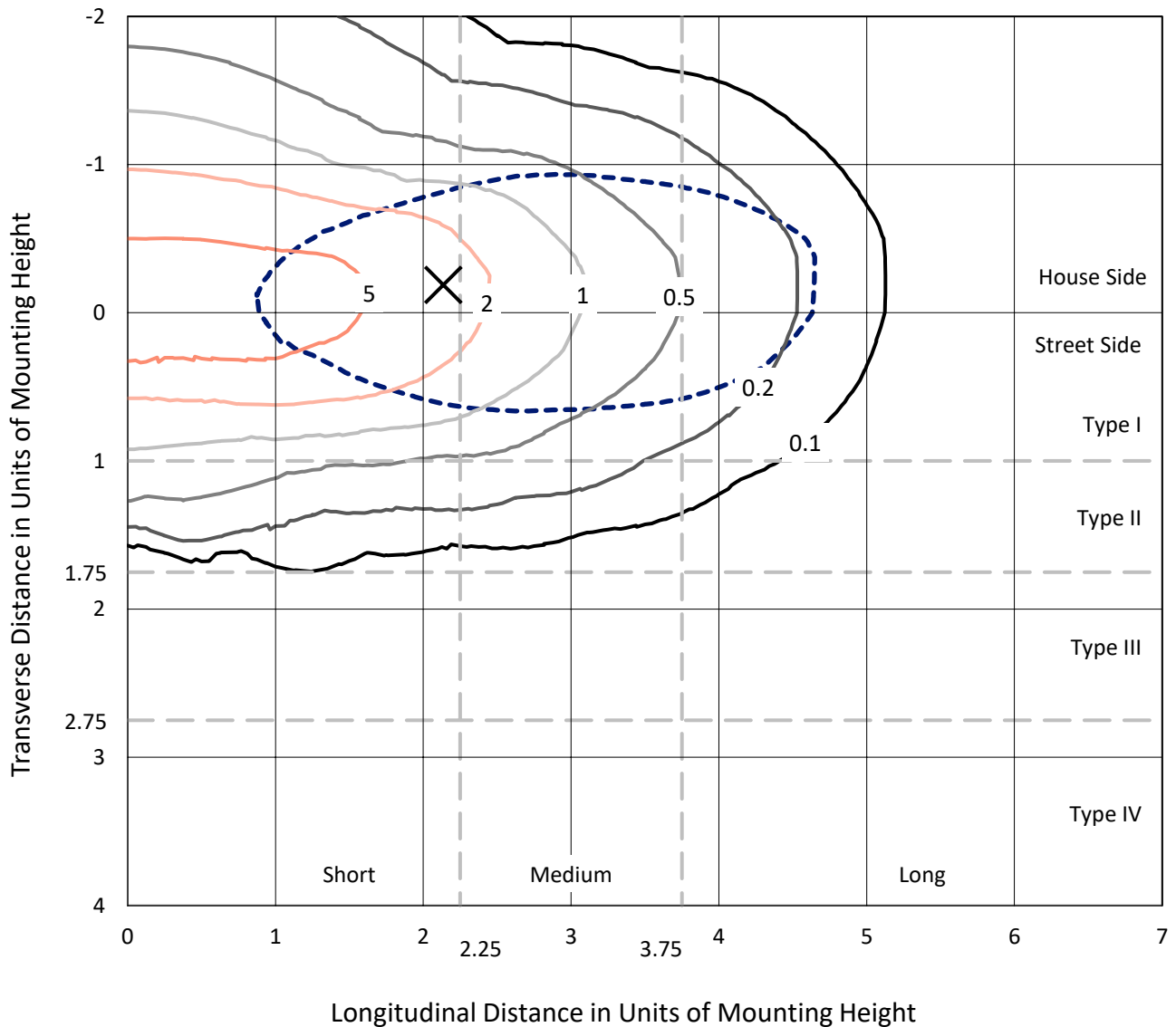
Input Watts (W): 312.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

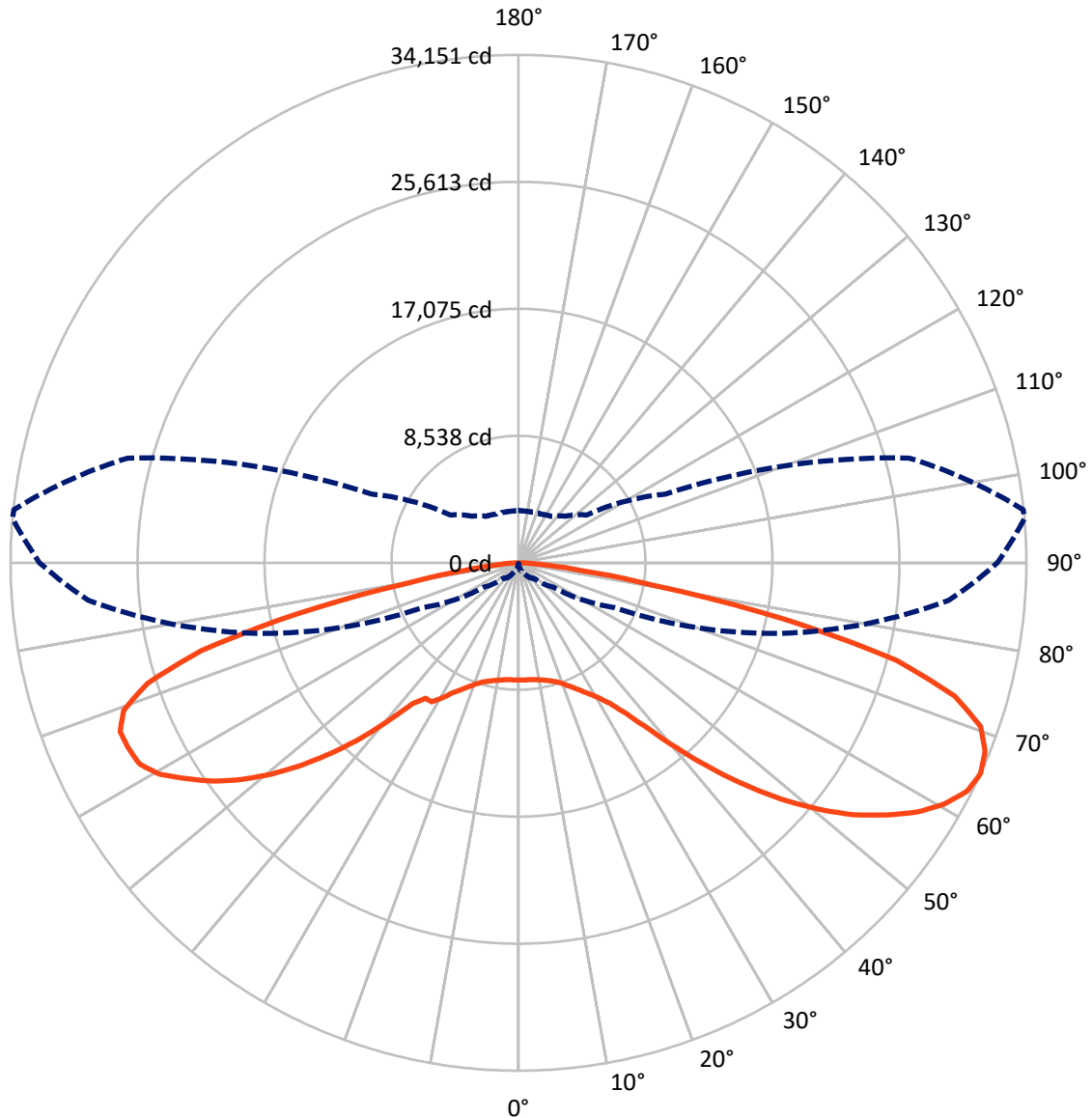
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.8 fc  
 Type I - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 95-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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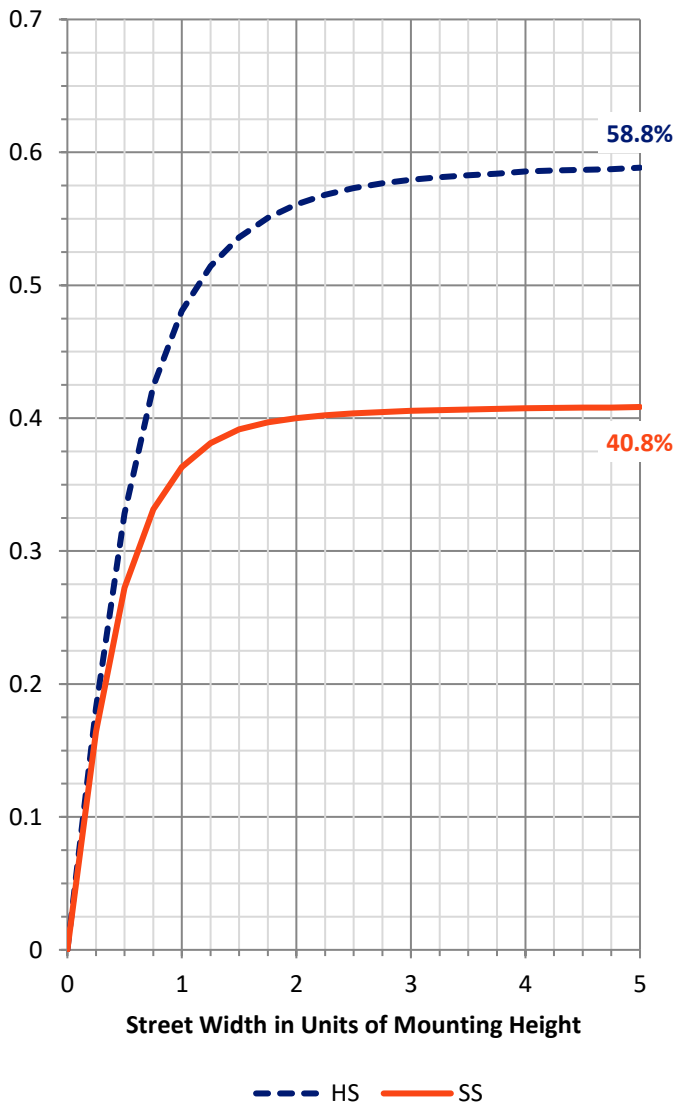
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	23977.4	0.0	23977.4
	% Fixture	59.3	0.0	59.3
<b>Street Side</b>	Lumens	16460.6	0.0	16460.6
	% Fixture	40.7	0.0	40.7
<b>Total</b>	Lumens	40438.0	0.0	40438.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	750.3	1.9
10°-20°	2160.5	5.3
20°-30°	3247.3	8.0
30°-40°	4527.6	11.2
40°-50°	6500.3	16.1
50°-60°	8286.2	20.5
60°-70°	8627.6	21.3
70°-80°	5555.7	13.7
80°-90°	782.4	1.9
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°	40438.0	100.0
0°-180°	40438.0	100.0

**Coefficient of Utilization**

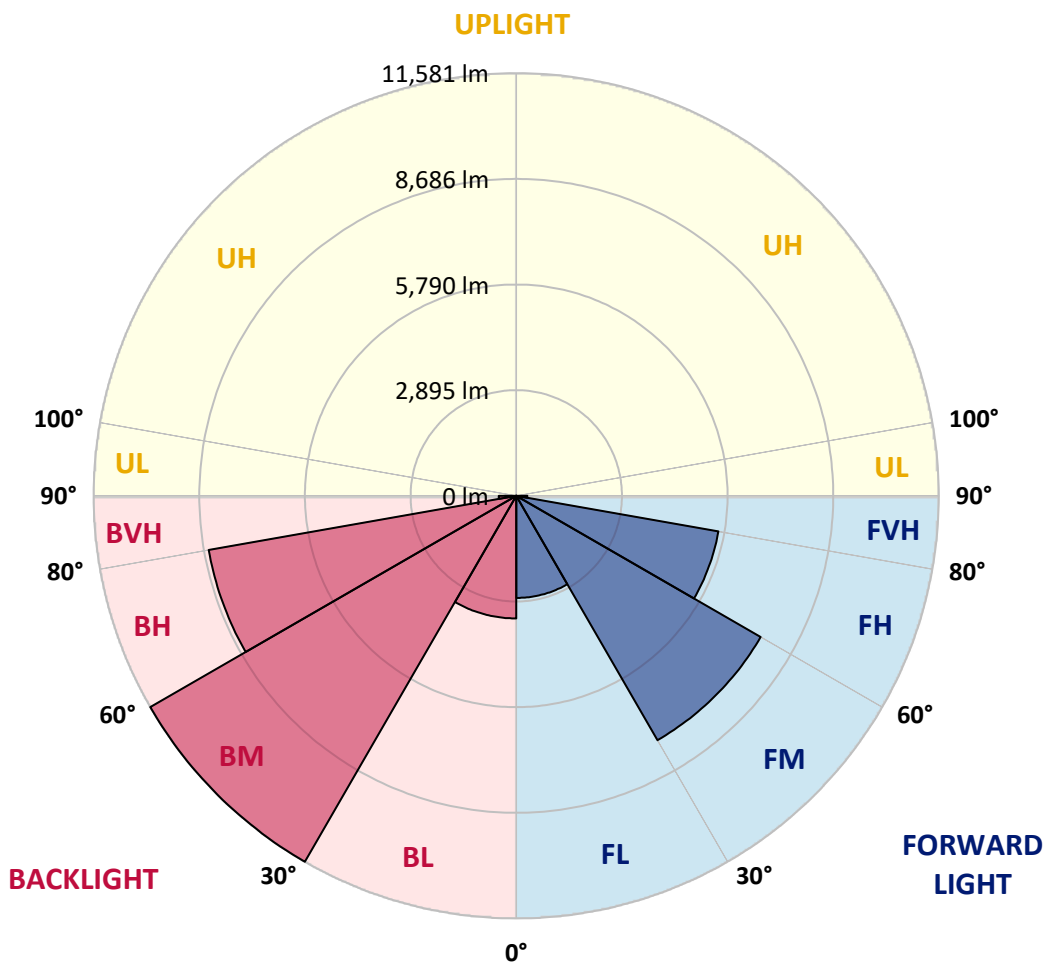


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2798.3	6.9			
FM (30°-60°)	7733.2	19.1			
FH (60°-80°)	5624.8	13.9			G3/7500
FVH (80°-90°)	304.3	0.8			G3/500
BL (0°-30°)	3359.8	8.3	B4/5000		
BM (30°-60°)	11580.8	28.6	B5		
BH (60°-80°)	8558.6	21.2	B5		G5
BVH (80°-90°)	478.2	1.2			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**  
 Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2
2.5°	7904.7	7840.0	7853.3	7916.5	7800.3	7863.6	7816.5	7893.0	7873.9	7879.7	7916.5
5°	7838.6	7772.4	7797.4	7875.3	7766.5	7843.0	7807.7	7870.9	7865.0	7887.1	7910.6
7.5°	7778.3	7707.7	7740.0	7797.4	7738.6	7804.7	7785.6	7865.0	7862.1	7926.8	7943.0
10°	7710.6	7645.9	7673.9	7744.5	7695.9	7775.3	7791.5	7885.6	7916.5	8004.7	8012.1
12.5°	7591.5	7528.3	7541.5	7631.2	7638.6	7759.2	7815.0	7963.5	7995.9	8097.3	8101.8
15°	7165.1	7150.4	7275.4	7419.5	7478.3	7657.7	7844.4	8047.4	8095.9	8223.8	8237.0
17.5°	5965.3	5818.3	5597.7	5772.7	6157.9	6653.4	7773.9	8172.3	8262.0	8390.0	8429.7
20°	4000.9	4134.7	4633.1	4856.6	5199.2	6034.4	7756.2	8307.6	8501.7	8656.1	8731.1
22.5°	3305.4	3298.0	3895.0	4647.9	4916.9	5300.7	7129.8	8467.9	8789.9	8991.3	9085.4
25°	3070.1	3073.1	3181.9	4133.2	4799.3	5205.1	6549.0	8257.6	9106.0	9394.2	9506.0
27.5°	2883.4	2895.2	2987.8	3309.8	4699.3	5184.5	6565.2	7656.2	9439.8	9825.0	9954.4
30°	2734.9	2729.0	2840.8	3109.8	3911.2	5191.9	6641.7	7776.8	9129.6	10436.7	10508.8
32.5°	2611.4	2595.2	2708.4	2979.0	3415.7	5134.5	6756.4	8115.0	8910.5	11024.9	11305.7
35°	2492.3	2486.4	2586.4	2852.5	3298.0	4264.1	6890.2	8534.1	9622.1	11044.0	12399.7
37.5°	2399.7	2395.2	2474.6	2726.1	3192.2	3884.7	7000.5	9061.9	10548.5	11860.0	13305.4
40°	2324.7	2312.9	2376.1	2614.3	3071.6	3821.5	6097.6	9613.3	11679.2	13764.2	15499.2
42.5°	2261.4	2245.3	2307.0	2504.0	2955.5	3750.9	5662.4	10169.1	13008.4	15884.4	17632.7
45°	2174.7	2173.2	2236.4	2420.2	2831.9	3648.0	5703.6	9241.3	14502.3	17913.6	19873.6
47.5°	2130.6	2120.3	2167.3	2342.3	2715.8	3492.1	5663.9	8844.3	15646.2	19950.0	22057.1
50°	2061.5	2052.6	2098.2	2252.6	2601.1	3295.1	5519.8	9088.4	14703.7	21879.2	24109.7
52.5°	1938.0	1595.4	2030.6	2177.6	2477.6	3081.9	5246.3	9223.7	15069.9	23667.1	26021.2
55°	761.7	1021.9	1943.8	2083.5	2351.1	2881.9	4831.6	9185.4	16281.5	25268.4	27668.0
57.5°	663.1	666.1	1291.0	1739.5	2201.1	2673.1	4325.8	8967.8	17350.4	26638.8	29272.2
60°	94.1	95.6	654.3	732.2	1443.9	1899.7	3811.2	8578.2	17984.1	28009.2	30655.8
62.5°	63.2	66.2	595.5	664.6	1317.5	1685.0	3333.3	7885.6	18290.0	28841.4	31652.7
65°	45.6	47.1	539.6	601.4	1173.4	1495.4	2889.3	7132.8	18317.9	29034.0	32199.7
67.5°	42.6	44.1	497.0	554.3	1067.5	1327.7	2505.5	6469.6	17546.0	29091.3	32177.7
70°	44.1	44.1	452.9	501.4	946.9	1151.3	2079.1	5809.4	15599.2	28341.5	31454.2
72.5°	44.1	45.6	395.5	441.1	816.1	974.9	1704.2	4722.8	12633.5	26218.2	29707.4
75°	44.1	45.6	311.7	364.7	677.8	782.2	1398.3	3808.3	9729.5	22126.2	25991.8
77.5°	45.6	45.6	229.4	279.4	523.5	588.1	1061.6	2926.0	7169.5	15337.5	18095.9
80°	45.6	48.5	161.7	205.9	386.7	424.9	770.5	1867.4	3861.2	7778.3	8984.0
82.5°	47.1	48.5	120.6	154.4	267.6	305.8	470.5	919.0	1785.0	3599.5	4077.3
85°	44.1	45.6	98.5	107.3	152.9	183.8	292.6	455.8	627.8	1416.0	1471.8
87.5°	30.9	29.4	30.9	35.3	50.0	80.9	138.2	154.4	151.4	380.8	442.6
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):**

	95°	96°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2	7881.2
2.5°	7894.4	7897.4	7885.6	7931.2	7885.6	7910.6	7844.4	7947.4	7937.1	7909.1	7944.4
5°	7893.0	7900.3	7897.4	7938.5	7881.2	7901.8	7835.6	7944.4	7907.7	7882.7	7925.3
7.5°	7928.3	7938.5	7934.1	7962.1	7895.9	7894.4	7829.7	7910.6	7875.3	7822.4	7875.3
10°	8006.2	8006.2	7993.0	8009.1	7913.6	7903.3	7794.5	7887.1	7826.8	7779.7	7844.4
12.5°	8106.2	8115.0	8081.2	8078.2	7945.9	7915.0	7778.3	7823.9	7737.1	7693.0	7756.2
15°	8253.2	8259.1	8215.0	8187.0	8025.3	7957.7	7737.1	7728.3	7607.7	7565.1	7610.7
17.5°	8423.8	8422.3	8360.5	8348.8	8159.1	8001.8	7703.3	7612.1	7457.7	7409.2	7448.9
20°	8697.3	8681.1	8613.5	8545.8	8269.4	8029.7	7654.8	7463.6	7248.9	7179.8	7212.2
22.5°	9064.9	9059.0	8953.1	8757.5	8387.0	8056.2	7572.4	7282.8	6997.5	6872.5	6893.1
25°	9467.7	9463.3	9311.9	9019.3	8489.9	8075.3	7476.9	7079.9	6694.6	6504.9	6500.5
27.5°	9935.3	9923.6	9719.2	9301.6	8632.6	8081.2	7373.9	6865.2	6394.7	6157.9	6168.2
30°	10504.4	10483.8	10204.4	9614.8	8813.4	8098.8	7285.7	6624.0	6115.3	5863.9	5858.0
32.5°	11258.7	11229.2	10795.5	10026.5	9047.2	8142.9	7179.8	6385.8	5855.0	5602.1	5580.1
35°	12407.0	12346.7	11629.2	10552.9	9307.5	8172.3	7010.7	6159.4	5603.6	5365.4	5347.7
37.5°	14106.8	14005.3	12679.0	11105.7	9566.3	8166.5	6818.1	5915.3	5399.2	5168.4	5164.0
40°	16347.6	16188.8	13939.1	11698.3	9814.7	8134.1	6610.8	5697.7	5228.6	5030.1	5044.9
42.5°	18798.7	18631.1	15433.0	12301.1	10001.5	8034.1	6388.8	5491.8	5071.3	4912.5	4914.0
45°	21269.0	21113.1	17151.9	12868.7	10094.1	7845.9	6157.9	5296.3	4905.2	4767.0	4783.1
47.5°	23728.9	23614.2	18854.6	13348.1	10048.5	7550.4	5880.0	5111.0	4740.5	4627.3	4664.0
50°	26016.8	25894.8	20669.0	13745.1	9819.2	7138.7	5594.8	4928.7	4606.7	4508.2	4539.0
52.5°	28137.1	27973.9	22612.9	13974.4	9406.0	6704.9	5343.3	4768.4	4477.3	4378.8	4411.1
55°	29938.3	29930.9	24392.0	13993.5	8760.5	6260.9	5100.7	4583.2	4350.8	4270.0	4277.3
57.5°	31624.8	31691.0	25922.7	13761.2	7995.9	5849.1	4822.8	4392.0	4205.3	4121.5	4128.8
60°	32912.8	32995.2	26960.8	13084.9	7181.3	5394.8	4524.3	4189.1	4024.4	3945.0	3968.5
62.5°	33837.7	33731.8	27510.7	12114.4	6365.2	4906.6	4200.9	3930.3	3799.4	3750.9	3752.4
65°	34150.9	34117.1	27188.7	10919.0	5594.8	4425.8	3818.6	3608.3	3527.4	3493.6	3518.6
67.5°	33830.4	33850.9	25934.5	9903.0	4862.5	3883.3	3389.2	3253.9	3212.8	3211.3	3237.8
70°	32952.6	32790.8	23333.4	9091.3	4175.9	3280.4	2927.5	2862.8	2849.6	2881.9	2904.0
72.5°	30658.8	30423.5	19350.1	7798.9	3205.4	2412.9	2217.3	2305.5	2302.6	2320.3	2340.8
75°	26265.3	25646.3	15156.6	6209.4	2374.7	1707.1	1479.2	1476.3	1471.8	1621.8	1676.2
77.5°	18409.1	17995.9	11189.5	4728.7	1579.2	1021.9	1014.6	1094.0	1107.2	1008.7	1027.8
80°	9235.4	9416.3	6457.9	2921.6	1049.8	720.5	755.8	744.0	754.3	766.1	773.4
82.5°	4256.7	4347.9	3090.7	1423.3	676.4	547.0	517.6	563.2	583.7	582.3	577.9
85°	1510.1	1518.9	977.8	610.2	414.6	355.8	361.7	420.5	444.1	423.5	413.2
87.5°	438.2	416.1	200.0	180.9	191.1	189.7	195.6	207.3	223.5	220.6	204.4
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)