

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: P591166

Luminaire Tested: **CTN-CA8-230-722-U-T4-SSS-HM-EX90**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591166
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-CA8-230-722-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: 18531 lumens
Efficiency: N/A
Efficacy: 81.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

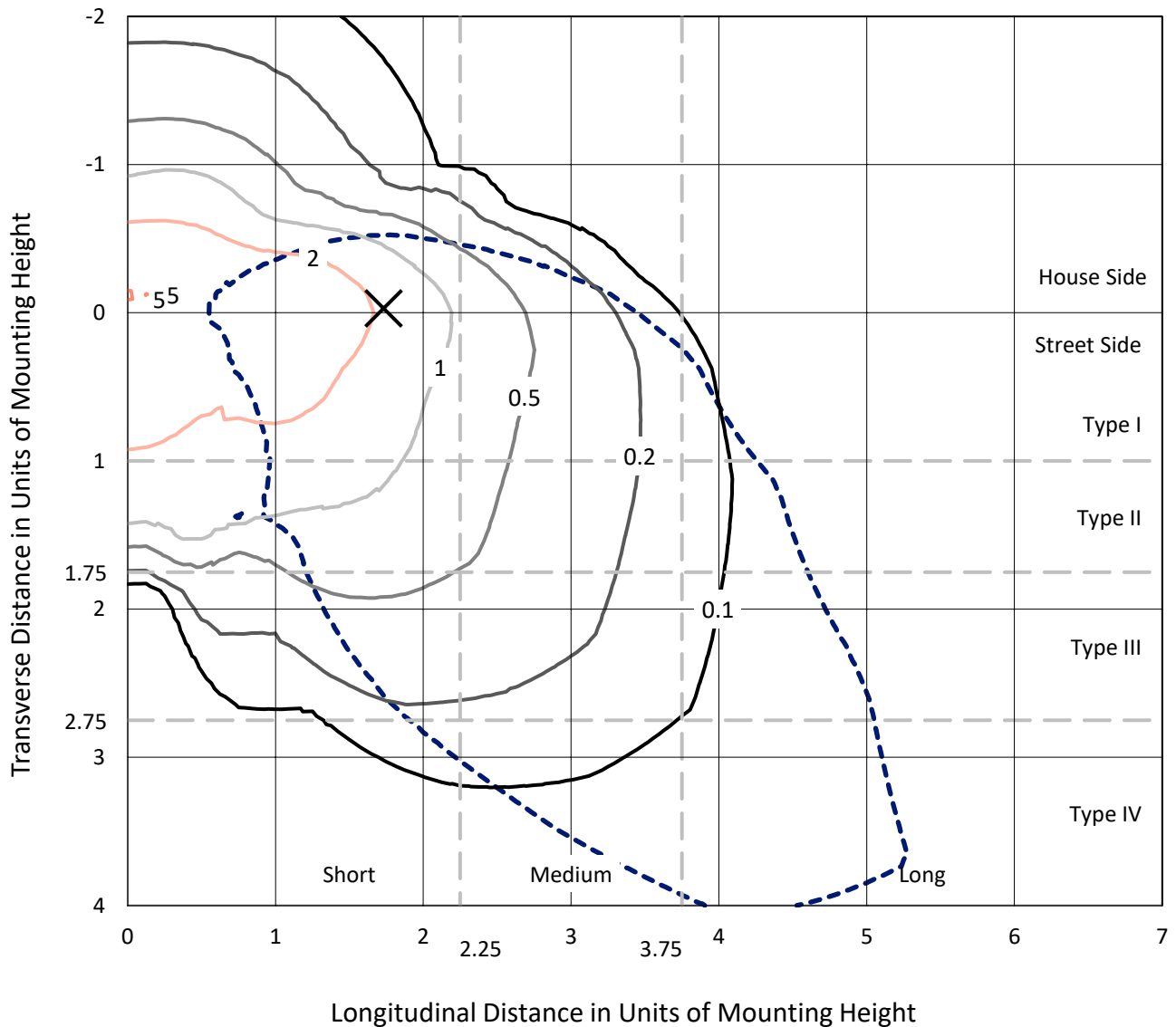
Input Watts (W): 228.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

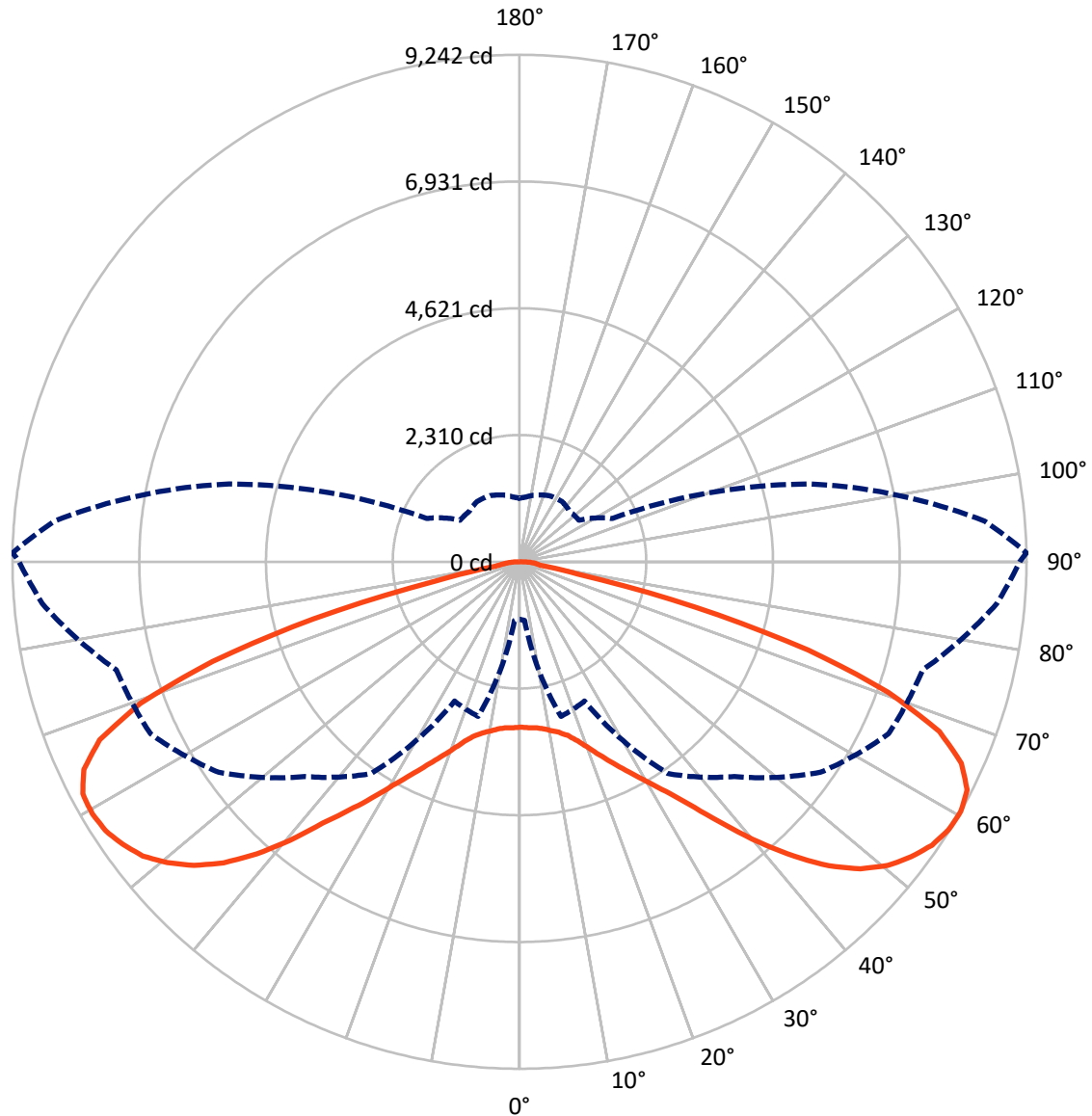
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 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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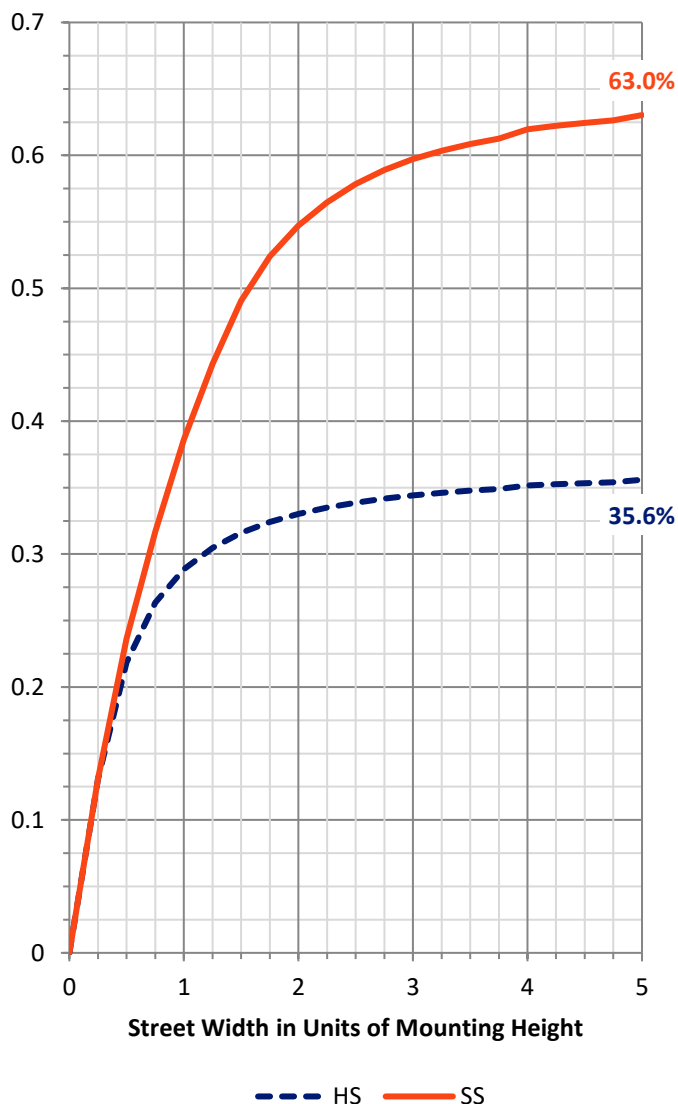
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6729.8	0.0	6729.8
	% Fixture	36.3	0.0	36.3
Street Side	Lumens	11801.2	0.0	11801.2
	% Fixture	63.7	0.0	63.7
Total	Lumens	18531.0	0.0	18531.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.9	1.6
10°-20°	901.2	4.9
20°-30°	1477.3	8.0
30°-40°	2086.4	11.3
40°-50°	2937.0	15.8
50°-60°	3695.6	19.9
60°-70°	3719.9	20.1
70°-80°	2736.7	14.8
80°-90°	683.2	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°	18531.0	100.0
0°-180°	18531.0	100.0

Coefficient of Utilization



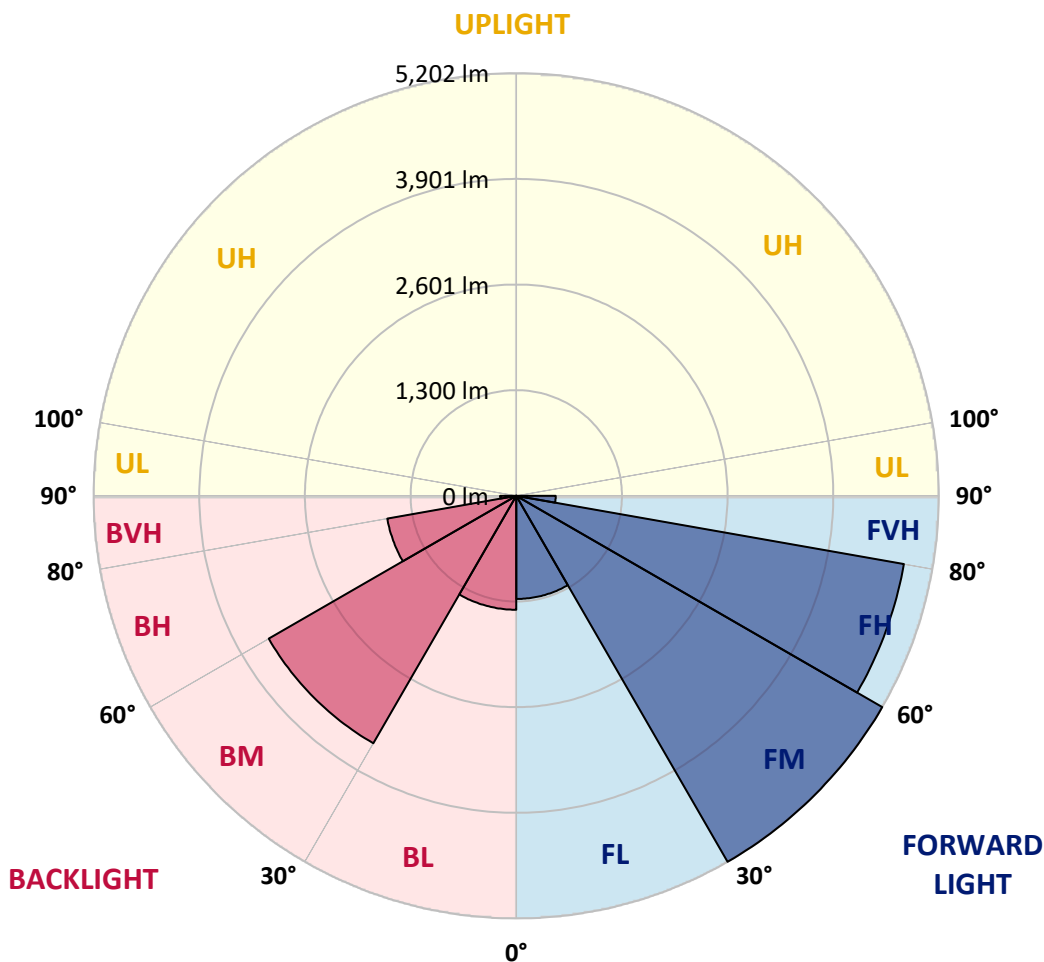
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1269.6	6.9			
FM (30°-60°)	5201.6	28.1			
FH (60°-80°)	4844.8	26.1			G2/5000
FVH (80°-90°)	485.2	2.6			G3/500
BL (0°-30°)	1402.7	7.6	B3/2500		
BM (30°-60°)	3517.3	19.0	B3/5000		
BH (60°-80°)	1611.8	8.7	B3/2500		G3/2500
BVH (80°-90°)	197.9	1.1			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8
2.5°	2984.0	2965.1	2966.0	2994.0	2951.5	2978.6	2972.3	3015.6	3007.5	3022.9	3026.5
5°	2963.3	2947.9	2947.9	2981.3	2952.4	2975.9	2956.0	2994.0	3007.5	3030.1	3034.6
7.5°	2971.4	2955.1	2961.5	2990.4	2957.9	2982.2	2980.4	3013.8	3022.0	3059.9	3065.3
10°	2985.8	2971.4	2973.2	2997.6	2975.9	3021.1	3012.9	3060.8	3059.9	3119.5	3124.0
12.5°	2960.6	2949.7	2949.7	2982.2	2994.9	3042.7	3059.0	3108.6	3114.1	3180.9	3186.3
15°	2920.8	2902.8	2929.9	2978.6	3004.8	3079.7	3107.7	3186.3	3200.7	3263.9	3277.5
17.5°	2837.8	2845.9	2921.7	2887.4	2768.2	2879.3	3187.2	3287.4	3319.0	3393.9	3426.5
20°	2580.4	2480.2	2281.6	2335.8	2581.4	2898.3	3298.2	3415.6	3485.1	3573.6	3628.7
22.5°	1949.3	2012.5	2383.6	2422.4	2433.3	2644.6	3453.5	3572.7	3664.8	3776.8	3849.9
25°	2021.6	2015.2	2142.5	2540.7	2551.6	2672.5	3251.3	3777.7	3860.7	4016.0	4089.2
27.5°	2088.4	2088.4	2081.2	2399.0	2674.3	2793.5	3356.9	3626.9	4118.1	4286.9	4372.7
30°	2199.4	2203.0	2162.4	2161.5	2775.5	2904.6	3561.0	3694.6	4345.6	4665.2	4685.1
32.5°	2419.7	2407.1	2356.5	2278.9	2400.8	3033.7	3760.5	3939.3	4126.2	5090.5	5072.4
35°	2578.6	2568.7	2532.6	2478.4	2422.4	3092.4	3947.4	4195.7	4501.8	5216.0	5562.7
37.5°	2771.0	2754.7	2714.1	2650.0	2613.9	2669.8	4139.7	4485.5	4971.3	5364.9	6116.2
40°	2981.3	2976.8	2914.5	2831.5	2781.8	2823.3	4286.9	4846.7	5553.7	5997.9	6726.5
42.5°	3142.9	3139.3	3087.9	3040.0	3016.5	3100.5	3921.2	5325.2	6220.0	6573.0	7314.3
45°	3288.3	3282.9	3281.1	3264.8	3283.8	3487.8	4322.1	5620.5	6874.6	7067.8	7848.8
47.5°	3398.5	3382.2	3336.2	3340.7	3393.9	3737.9	4739.2	5175.3	7405.5	7503.9	8265.9
50°	3660.3	3644.0	3485.1	3490.6	3593.5	4048.5	5098.6	5690.9	6911.6	7881.3	8585.5
52.5°	3894.1	3759.6	3672.9	3676.6	3817.4	4379.0	5506.7	6224.5	6794.2	8180.1	8843.8
55°	3363.3	3276.6	4119.9	4002.5	4080.1	4739.2	5903.1	6686.8	7116.5	8408.6	8991.8
57.5°	1973.7	1962.9	4534.3	4636.3	4546.0	5128.4	6304.0	7071.4	7399.2	8621.7	9091.2
60°	1047.3	1072.6	2916.3	2802.6	4712.2	5534.7	6692.2	7420.8	7608.6	8731.8	9118.2
62.5°	96.6	85.8	1916.8	2177.8	4223.7	6065.6	7152.7	7776.6	7750.4	8790.5	9070.4
65°	19.0	25.3	1880.7	2151.6	4693.2	6945.9	7904.8	8050.1	7827.1	8720.1	8819.4
67.5°	14.4	21.7	1776.9	2128.1	4981.2	7284.5	8770.6	8146.7	7831.6	8495.3	8266.8
70°	14.4	22.6	1568.3	1989.1	5117.6	7298.9	8975.6	8108.8	7730.5	7986.0	7225.8
72.5°	14.4	22.6	1317.3	1723.6	4885.5	6985.6	8616.2	7898.4	7354.0	6876.4	5635.8
75°	14.4	20.8	1033.8	1400.4	4222.8	6502.6	7999.6	6982.9	6190.2	5031.8	3616.1
77.5°	14.4	19.9	762.0	1096.1	3524.0	5735.1	6956.7	5739.6	4666.1	2634.6	1330.9
80°	13.5	19.9	464.1	772.9	2715.0	4626.4	5467.0	4240.9	2452.2	662.7	384.6
82.5°	13.5	19.0	221.2	494.8	1907.8	3305.5	3567.3	1816.6	521.9	306.1	306.1
85°	11.7	17.2	118.3	269.1	1246.9	2166.9	1720.9	307.9	204.1	206.8	235.7
87.5°	7.2	9.0	56.0	121.0	718.7	1158.4	662.7	112.9	84.9	89.4	133.6
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8	3013.8
2.5°	3029.2	3024.7	3034.6	3066.2	3060.8	3083.4	3065.3	3096.9	3103.2	3094.2	3108.6
5°	3039.1	3045.4	3078.8	3108.6	3092.4	3128.5	3138.4	3182.7	3181.8	3173.6	3191.7
7.5°	3071.6	3088.8	3122.2	3159.2	3167.3	3196.2	3192.6	3248.6	3242.3	3238.7	3256.7
10°	3127.6	3153.8	3185.4	3246.8	3226.9	3275.7	3242.3	3280.2	3276.6	3267.5	3283.8
12.5°	3189.9	3226.0	3263.9	3319.9	3311.8	3310.9	3281.1	3292.8	3282.9	3261.2	3274.8
15°	3283.8	3328.0	3380.4	3416.5	3368.7	3350.6	3303.7	3278.4	3244.1	3193.5	3201.6
17.5°	3430.1	3482.4	3538.4	3544.7	3470.7	3423.7	3310.0	3219.7	3130.3	3062.6	3068.9
20°	3626.9	3674.7	3716.3	3686.5	3586.3	3481.5	3310.0	3167.3	3000.3	2875.7	2866.7
22.5°	3857.1	3871.6	3911.3	3838.2	3665.7	3519.4	3301.0	3088.8	2817.0	2650.9	2631.0
25°	4105.4	4103.6	4086.5	3934.8	3715.4	3498.7	3232.3	2954.2	2607.5	2434.2	2419.7
27.5°	4375.4	4352.8	4235.4	4016.0	3694.6	3423.7	3102.3	2727.6	2417.0	2268.0	2263.5
30°	4679.7	4620.1	4382.6	4024.2	3617.0	3275.7	2891.0	2499.2	2247.3	2114.6	2101.9
32.5°	5034.5	4918.0	4500.0	3998.0	3477.0	3049.9	2633.7	2319.5	2108.2	1962.9	1934.9
35°	5497.7	5293.6	4608.3	3912.2	3269.4	2781.8	2396.3	2159.7	1979.1	1830.2	1800.4
37.5°	6080.0	5780.3	4771.8	3786.7	3031.9	2542.5	2231.9	2054.1	1889.7	1713.7	1677.6
40°	6726.5	6352.7	4963.2	3664.8	2806.2	2364.7	2124.5	2004.4	1832.0	1638.7	1604.4
42.5°	7338.7	6928.7	5250.3	3506.8	2591.3	2222.0	2085.7	1990.0	1804.9	1606.2	1569.2
45°	7903.9	7435.3	5546.4	3347.9	2372.8	2105.5	2053.2	1947.5	1763.3	1568.3	1525.9
47.5°	8365.2	7834.3	5808.3	3183.6	2180.5	2014.3	1990.9	1866.3	1690.2	1506.9	1467.2
50°	8700.2	8140.4	5961.8	3031.0	1995.4	1923.1	1881.6	1750.7	1587.3	1434.7	1405.8
52.5°	8937.7	8405.0	6038.5	3013.8	1827.4	1800.4	1754.3	1631.5	1500.6	1382.3	1348.0
55°	9121.0	8549.4	5972.6	2913.6	1668.5	1646.0	1598.1	1522.3	1443.7	1333.6	1311.0
57.5°	9220.3	8615.3	5821.8	2457.7	1499.7	1460.9	1454.5	1438.3	1369.7	1260.4	1243.3
60°	9241.9	8510.6	5480.5	1869.0	1322.7	1297.4	1345.3	1324.5	1263.1	1181.9	1157.5
62.5°	9157.1	8286.7	4833.1	1397.7	1175.6	1217.1	1265.8	1234.2	1162.9	1083.5	1068.1
65°	8851.0	7772.9	3895.1	1088.0	1107.8	1179.2	1222.5	1184.6	1097.9	1007.6	997.7
67.5°	8252.4	6973.0	2564.2	978.7	1076.2	1147.6	1196.3	1135.8	1048.3	950.7	939.0
70°	7130.1	5512.1	1221.6	912.8	1015.7	1086.2	1125.0	1056.4	971.5	875.8	863.2
72.5°	5506.7	3746.1	674.5	840.6	940.8	1005.8	1033.8	952.5	874.0	834.3	830.7
75°	3314.5	1609.8	609.4	769.3	844.2	904.7	954.4	893.0	824.3	746.7	726.8
77.5°	1094.3	467.7	573.3	684.4	769.3	842.4	865.9	806.3	720.5	654.6	649.2
80°	383.7	391.9	534.5	569.7	669.9	731.3	757.5	688.9	648.3	579.7	566.1
82.5°	312.4	351.2	431.6	429.8	529.1	601.3	641.0	623.9	570.6	515.5	510.1
85°	255.5	321.4	273.6	300.7	379.2	457.8	533.6	535.4	494.8	438.8	401.8
87.5°	151.7	164.3	136.3	153.5	200.4	257.3	298.0	284.4	232.9	196.8	192.3
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)