

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: P591250

Luminaire Tested: **CTN-CA6-230-727-U-T4-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591250  
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-CA6-230-727-U-T4-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (6) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18507 lumens  
Efficiency: N/A  
Efficacy: 81.2 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

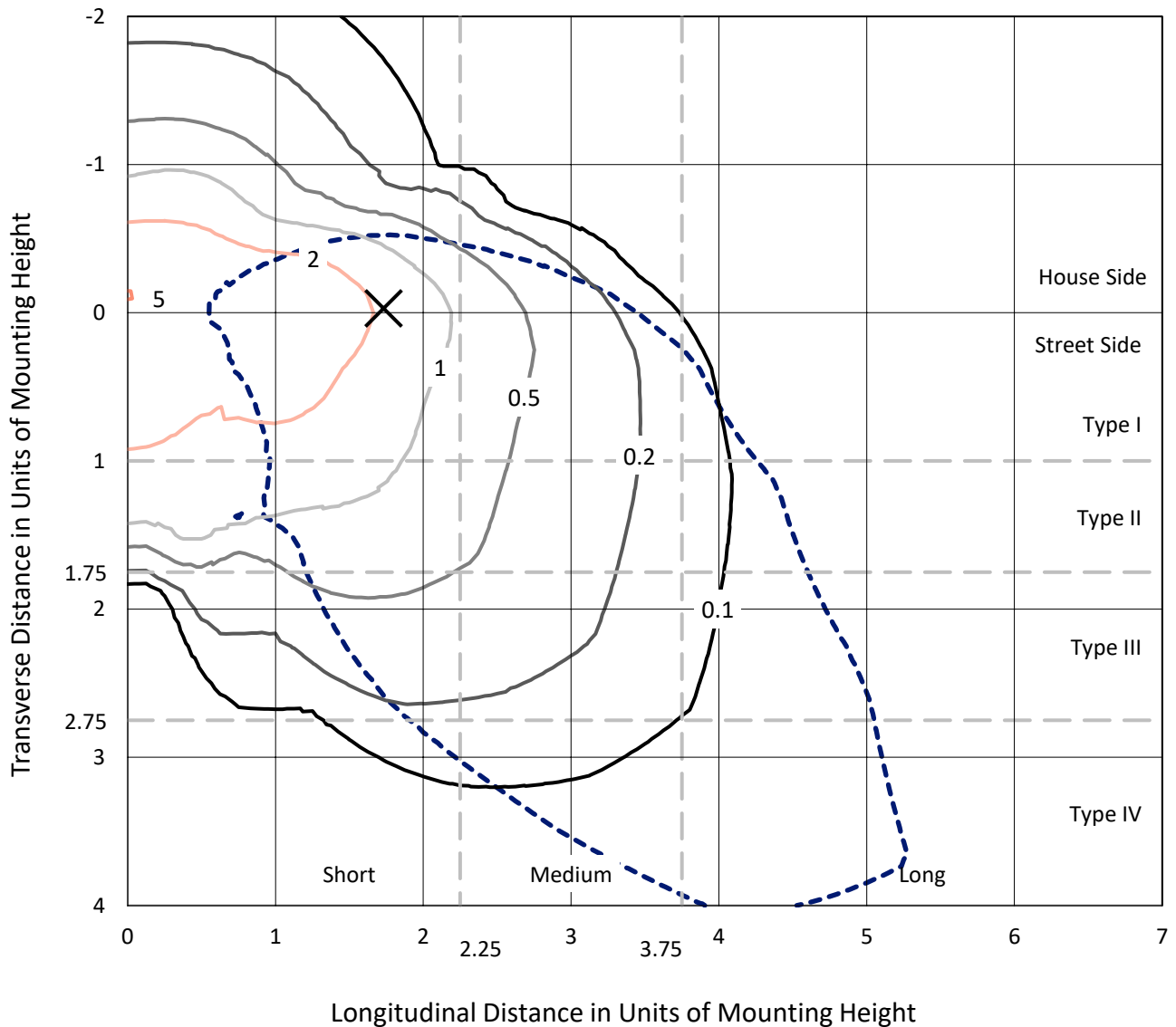
Input Watts (W): 227.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

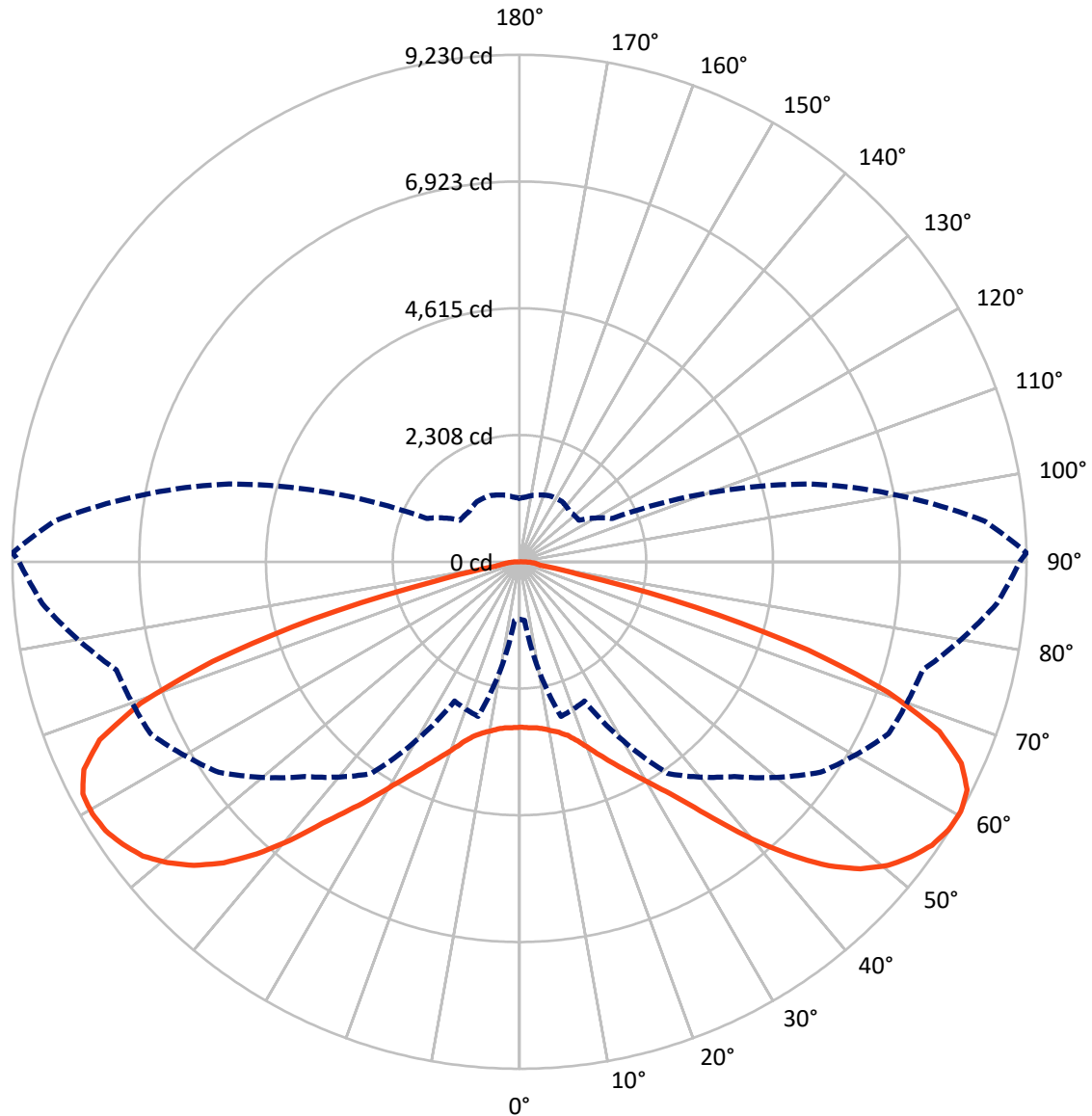
✕ Max cd  
 - - - 1/2 Max cd



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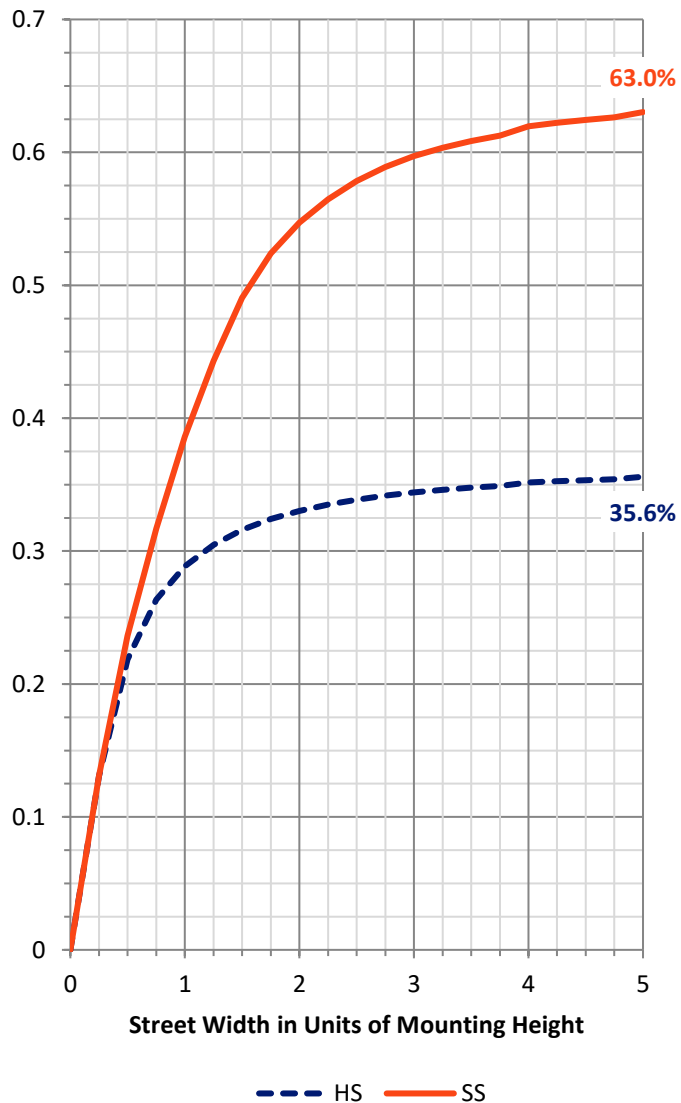
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6721.1	0.0	6721.1
	% Fixture	36.3	0.0	36.3
<b>Street Side</b>	Lumens	11785.9	0.0	11785.9
	% Fixture	63.7	0.0	63.7
<b>Total</b>	Lumens	18507.0	0.0	18507.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	293.5	1.6
10°-20°	900.0	4.9
20°-30°	1475.4	8.0
30°-40°	2083.7	11.3
40°-50°	2933.2	15.8
50°-60°	3690.8	19.9
60°-70°	3715.1	20.1
70°-80°	2733.1	14.8
80°-90°	682.3	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°	18507.0	100.0
0°-180°	18507.0	100.0

**Coefficient of Utilization**



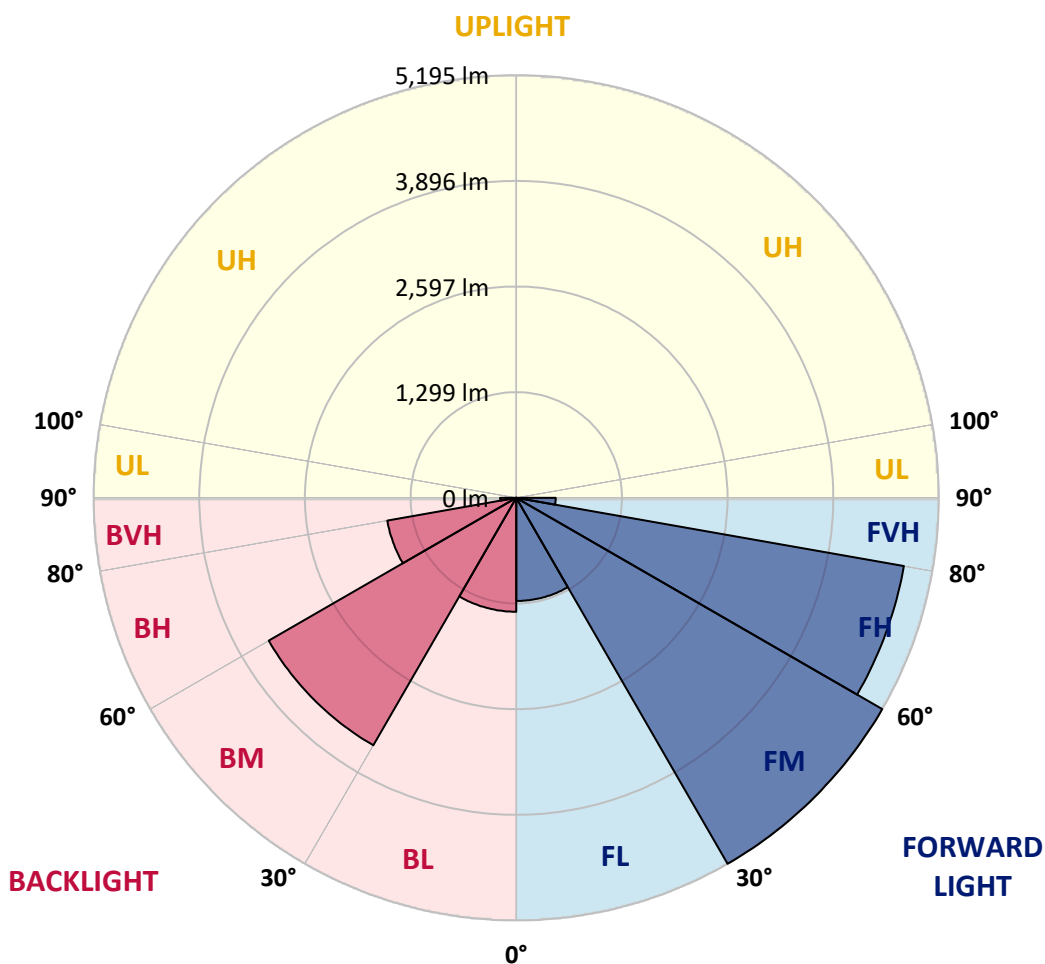
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1267.9	6.9			
FM	(30°-60°)	5194.9	28.1			
FH	(60°-80°)	4838.5	26.1			G2/5000
FVH	(80°-90°)	484.6	2.6			G3/500
BL	(0°-30°)	1400.9	7.6	B3/2500		
BM	(30°-60°)	3512.8	19.0	B3/5000		
BH	(60°-80°)	1609.7	8.7	B3/2500		G3/2500
BVH	(80°-90°)	197.7	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°	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9
2.5°	2980.2	2961.2	2962.1	2990.1	2947.7	2974.8	2968.5	3011.7	3003.6	3018.9	3022.6
5°	2959.4	2944.1	2944.1	2977.5	2948.6	2972.1	2952.2	2990.1	3003.6	3026.2	3030.7
7.5°	2967.5	2951.3	2957.6	2986.5	2954.0	2978.4	2976.6	3009.9	3018.0	3055.9	3061.3
10°	2982.0	2967.5	2969.4	2993.7	2972.1	3017.1	3009.0	3056.8	3055.9	3115.4	3119.9
12.5°	2956.7	2945.9	2945.9	2978.4	2991.0	3038.8	3055.0	3104.6	3110.0	3176.7	3182.2
15°	2917.1	2899.0	2926.1	2974.8	3000.9	3075.8	3103.7	3182.2	3196.6	3259.7	3273.2
17.5°	2834.1	2842.2	2918.0	2883.7	2764.7	2875.6	3183.1	3283.2	3314.7	3389.6	3422.0
20°	2577.1	2477.0	2278.6	2332.7	2578.0	2894.5	3294.0	3411.2	3480.6	3569.0	3624.0
22.5°	1946.8	2009.9	2380.5	2419.3	2430.1	2641.1	3449.1	3568.1	3660.1	3771.9	3844.9
25°	2018.9	2012.6	2139.8	2537.4	2548.3	2669.1	3247.1	3772.8	3855.7	4010.8	4083.9
27.5°	2085.7	2085.7	2078.5	2395.9	2670.9	2789.9	3352.6	3622.2	4112.7	4281.4	4367.0
30°	2196.6	2200.2	2159.6	2158.7	2771.9	2900.8	3556.4	3689.8	4340.0	4659.2	4679.0
32.5°	2416.6	2404.0	2353.5	2275.9	2397.7	3029.8	3755.7	3934.2	4120.8	5083.9	5065.8
35°	2575.3	2565.4	2529.3	2475.2	2419.3	3088.4	3942.3	4190.3	4496.0	5209.2	5555.5
37.5°	2767.4	2751.1	2710.6	2646.5	2610.5	2666.4	4134.4	4479.7	4964.9	5358.0	6108.2
40°	2977.5	2973.0	2910.7	2827.8	2778.2	2819.7	4281.4	4840.4	5546.5	5990.1	6717.8
42.5°	3138.9	3135.3	3083.9	3036.1	3012.6	3096.5	3916.2	5318.3	6211.9	6564.5	7304.8
45°	3284.1	3278.6	3276.8	3260.6	3279.5	3483.3	4316.5	5613.2	6865.7	7058.6	7838.6
47.5°	3394.1	3377.8	3331.8	3336.4	3389.6	3733.1	4733.1	5168.6	7395.9	7494.2	8255.2
50°	3655.6	3639.3	3480.6	3486.0	3588.8	4043.3	5092.0	5683.5	6902.6	7871.1	8574.4
52.5°	3889.1	3754.7	3668.2	3671.8	3812.5	4373.3	5499.6	6216.4	6785.4	8169.6	8832.3
55°	3358.9	3272.3	4114.5	3997.3	4074.9	4733.1	5895.4	6678.1	7107.3	8397.7	8980.2
57.5°	1971.2	1960.3	4528.4	4630.3	4540.1	5121.8	6295.8	7062.2	7389.6	8610.5	9079.4
60°	1046.0	1071.2	2912.5	2798.9	4706.1	5527.5	6683.5	7411.2	7598.8	8720.5	9106.4
62.5°	96.5	85.7	1914.3	2174.9	4218.2	6057.7	7143.4	7766.5	7740.3	8779.1	9058.6
65°	18.9	25.2	1878.3	2148.8	4687.1	6936.9	7894.5	8039.7	7817.0	8708.8	8808.0
67.5°	14.4	21.6	1774.6	2125.3	4974.8	7275.1	8759.3	8136.2	7821.5	8484.3	8256.1
70°	14.4	22.5	1566.3	1986.5	5110.9	7289.5	8964.0	8098.3	7720.5	7975.7	7216.4
72.5°	14.4	22.5	1315.6	1721.4	4879.2	6976.6	8605.1	7888.2	7344.5	6867.5	5628.5
75°	14.4	20.7	1032.5	1398.6	4217.3	6494.2	7989.2	6973.9	6182.2	5025.3	3611.4
77.5°	14.4	19.8	761.0	1094.7	3519.4	5727.7	6947.7	5732.2	4660.1	2631.2	1329.1
80°	13.5	19.8	463.5	771.9	2711.5	4620.4	5459.9	4235.4	2449.1	661.9	384.1
82.5°	13.5	18.9	220.9	494.1	1905.3	3301.2	3562.7	1814.3	521.2	305.7	305.7
85°	11.7	17.1	118.1	268.7	1245.3	2164.1	1718.7	307.5	203.8	206.5	235.3
87.5°	7.2	9.0	55.9	120.8	717.8	1156.9	661.9	112.7	84.8	89.3	133.5
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):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9	3009.9
2.5°	3025.3	3020.8	3030.7	3062.2	3056.8	3079.4	3061.3	3092.9	3099.2	3090.2	3104.6
5°	3035.2	3041.5	3074.9	3104.6	3088.4	3124.4	3134.4	3178.6	3177.6	3169.5	3187.6
7.5°	3067.6	3084.8	3118.1	3155.1	3163.2	3192.1	3188.5	3244.4	3238.1	3234.5	3252.5
10°	3123.5	3149.7	3181.3	3242.6	3222.7	3271.4	3238.1	3275.9	3272.3	3263.3	3279.5
12.5°	3185.8	3221.8	3259.7	3315.6	3307.5	3306.6	3276.8	3288.6	3278.6	3257.0	3270.5
15°	3279.5	3323.7	3376.0	3412.1	3364.3	3346.3	3299.4	3274.1	3239.9	3189.4	3197.5
17.5°	3425.6	3477.9	3533.8	3540.1	3466.2	3419.3	3305.7	3215.5	3126.3	3058.6	3064.9
20°	3622.2	3670.0	3711.5	3681.7	3581.6	3477.0	3305.7	3163.2	2996.4	2872.0	2863.0
22.5°	3852.1	3866.6	3906.2	3833.2	3661.0	3514.9	3296.7	3084.8	2813.4	2647.4	2627.6
25°	4100.1	4098.3	4081.2	3929.7	3710.6	3494.2	3228.1	2950.4	2604.2	2431.0	2416.6
27.5°	4369.7	4347.2	4230.0	4010.8	3689.8	3419.3	3098.3	2724.1	2413.9	2265.1	2260.6
30°	4673.6	4614.1	4376.9	4019.0	3612.3	3271.4	2887.3	2496.0	2244.4	2111.8	2099.2
32.5°	5028.0	4911.7	4494.2	3992.8	3472.5	3046.0	2630.3	2316.5	2105.5	1960.3	1932.4
35°	5490.6	5286.8	4602.4	3907.1	3265.1	2778.2	2393.2	2156.9	1976.6	1827.8	1798.0
37.5°	6072.2	5772.8	4765.6	3781.8	3028.0	2539.2	2229.0	2051.4	1887.3	1711.5	1675.4
40°	6717.8	6344.5	4956.7	3660.1	2802.5	2361.6	2121.7	2001.8	1829.6	1636.6	1602.4
42.5°	7329.2	6919.8	5243.5	3502.3	2587.9	2219.1	2083.0	1987.4	1802.5	1604.2	1567.2
45°	7893.6	7425.6	5539.2	3343.6	2369.7	2102.8	2050.5	1945.0	1761.1	1566.3	1523.9
47.5°	8354.4	7824.2	5800.7	3179.5	2177.6	2011.7	1988.3	1863.8	1688.0	1505.0	1465.3
50°	8688.9	8129.9	5954.0	3027.1	1992.8	1920.7	1879.2	1748.4	1585.2	1432.8	1404.0
52.5°	8926.1	8394.1	6030.7	3009.9	1825.1	1798.0	1752.0	1629.4	1498.7	1380.5	1346.3
55°	9109.1	8538.4	5964.9	2909.8	1666.4	1643.8	1596.0	1520.3	1441.8	1331.8	1309.3
57.5°	9208.3	8604.2	5814.3	2454.5	1497.8	1459.0	1452.7	1436.4	1367.9	1258.8	1241.7
60°	9230.0	8499.6	5473.4	1866.6	1321.0	1295.8	1343.6	1322.8	1261.5	1180.3	1156.0
62.5°	9145.2	8276.0	4826.9	1395.9	1174.0	1215.5	1264.2	1232.6	1161.4	1082.1	1066.7
65°	8839.5	7762.9	3890.0	1086.6	1106.4	1177.6	1220.9	1183.1	1096.5	1006.3	996.4
67.5°	8241.7	6964.0	2560.9	977.5	1074.8	1146.1	1194.8	1134.4	1046.9	949.5	937.8
70°	7120.9	5505.0	1220.0	911.6	1014.4	1084.8	1123.5	1055.0	970.2	874.7	862.0
72.5°	5499.6	3741.2	673.6	839.5	939.6	1004.5	1032.5	951.3	872.9	833.2	829.6
75°	3310.2	1607.8	608.7	768.3	843.1	903.5	953.1	891.8	823.3	745.7	725.9
77.5°	1092.9	467.1	572.6	683.5	768.3	841.3	864.7	805.2	719.6	653.7	648.3
80°	383.2	391.3	533.8	569.0	669.1	730.4	756.5	688.0	647.4	578.9	565.4
82.5°	312.0	350.8	431.0	429.2	528.4	600.5	640.2	623.1	569.9	514.9	509.5
85°	255.2	321.0	273.2	300.3	378.7	457.2	532.9	534.7	494.1	438.2	401.3
87.5°	151.5	164.1	136.2	153.3	200.2	257.0	297.6	284.0	232.6	196.6	192.1
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)