

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: LUMARK

Report Number: P1449921

Luminaire Tested: **TWC60\_T4\_60W\_4000K**

Issue Date: 5/19/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449921  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( )  
Test Lab: INNOVATION CENTER  
Issue Date: 5/19/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: TWC60\_T4\_60W\_4000K  
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T4 distribution, 60W  
4000K settings  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8995 lumens  
Efficiency: N/A  
Efficacy: 154.3 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.42' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G2

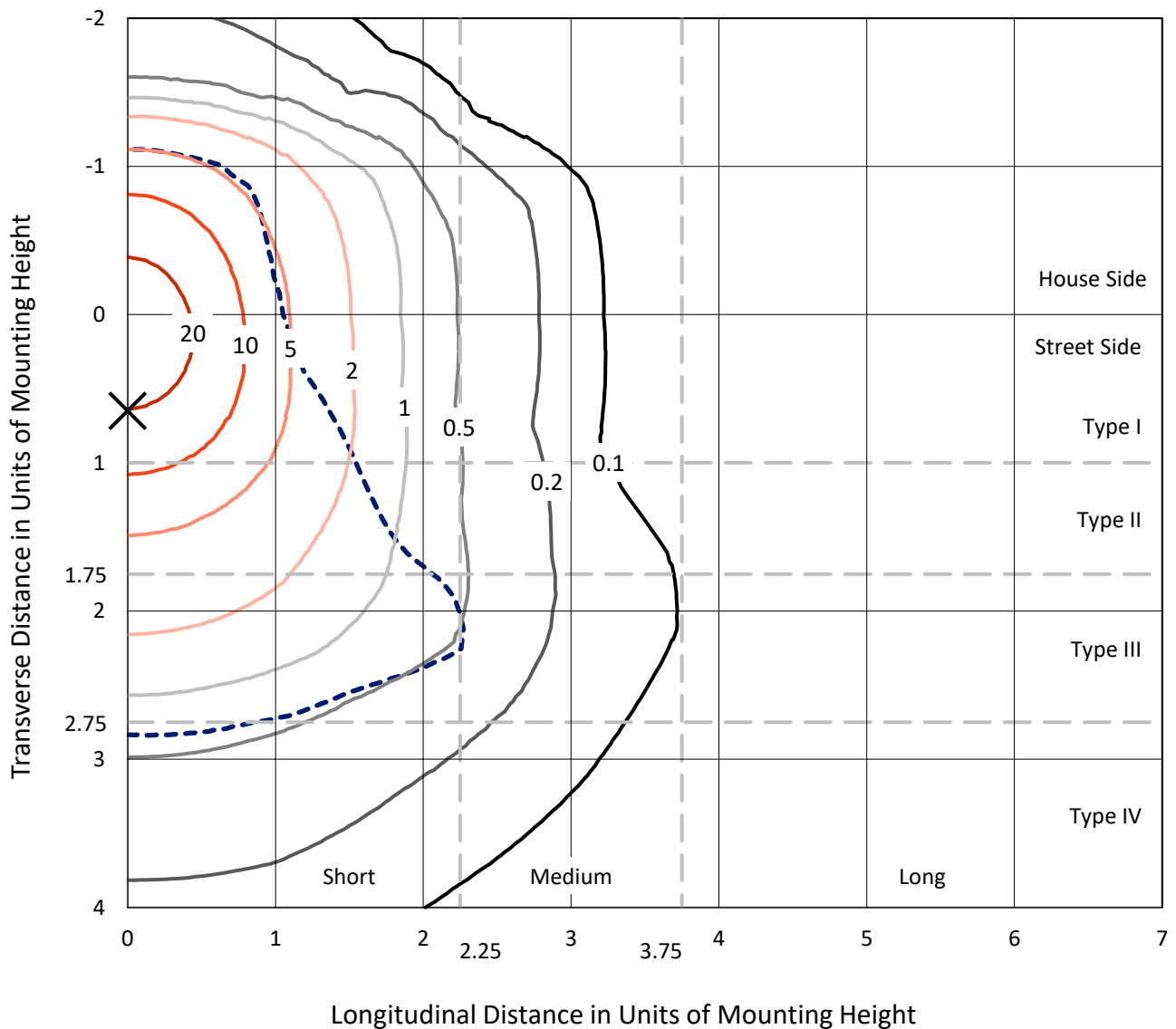
Input Watts (W): 58.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

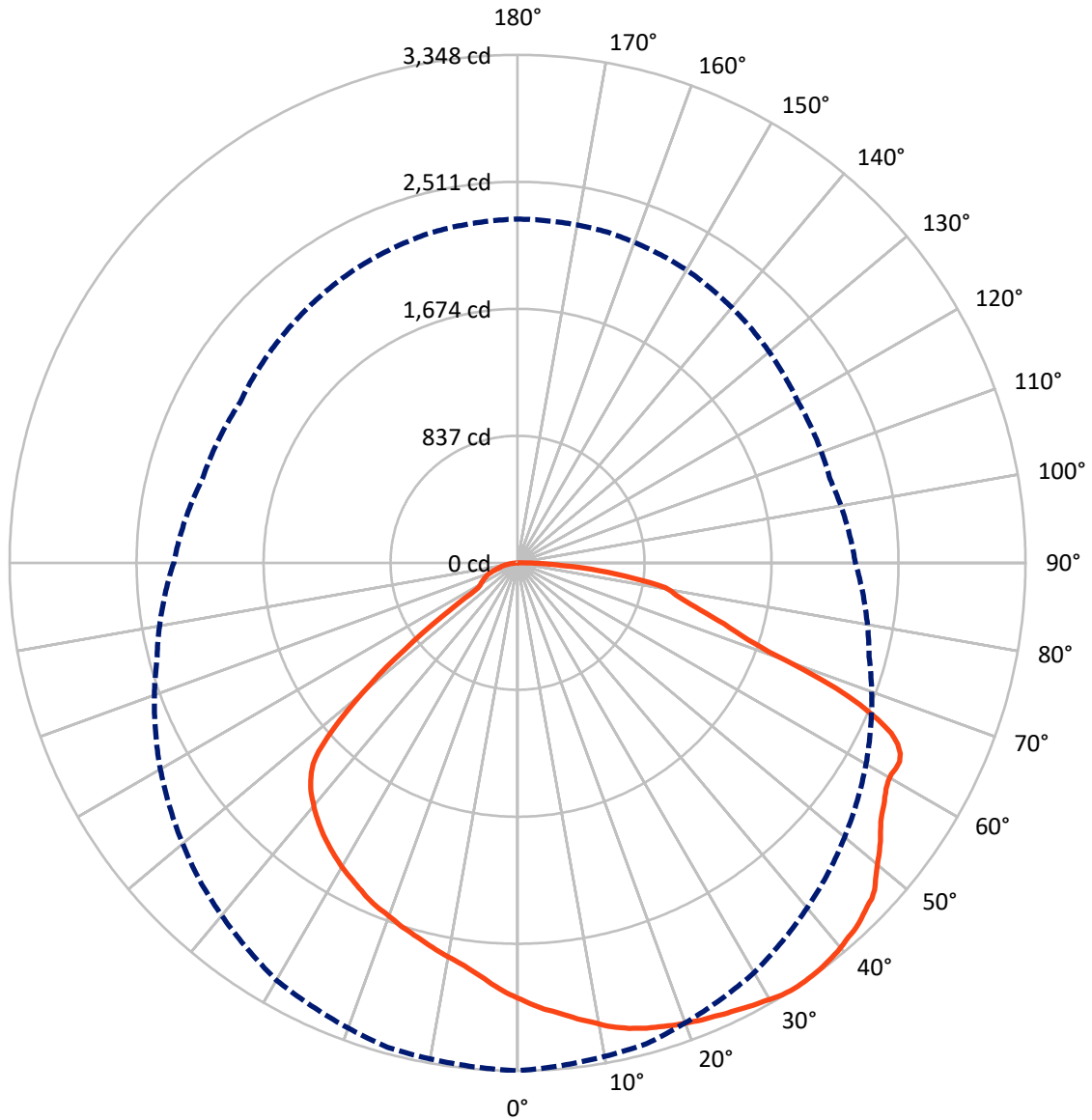
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 29.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 33-Deg Vertical

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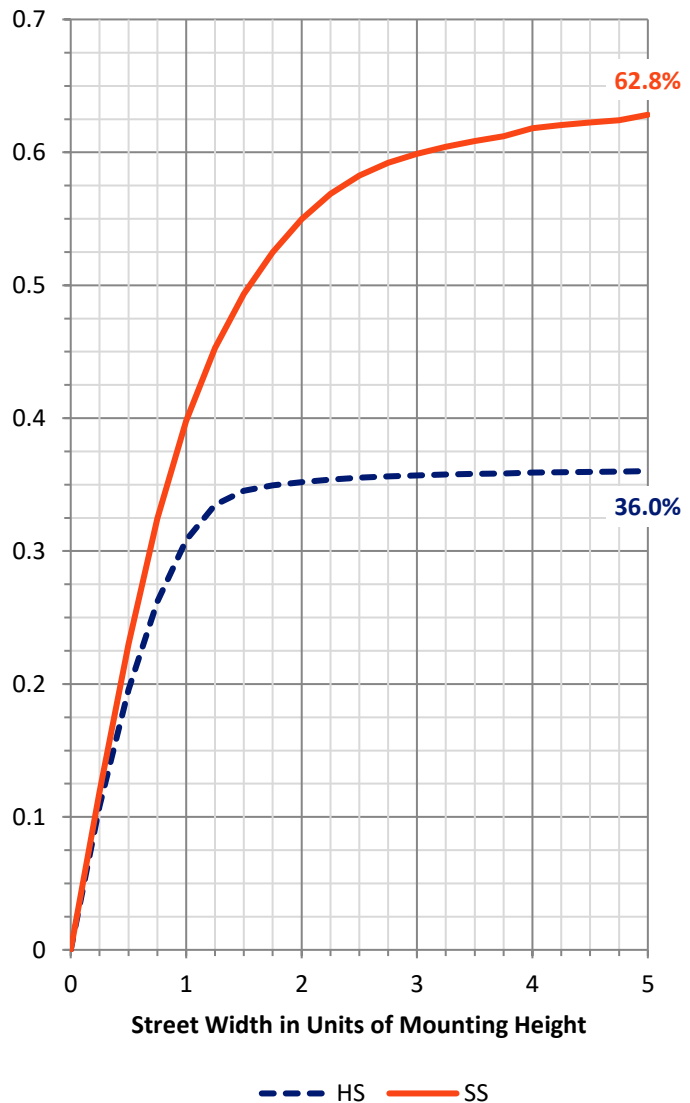
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3261.4	0.0	3261.4
	% Fixture	36.3	0.0	36.3
<b>Street Side</b>	Lumens	5733.6	0.0	5733.6
	% Fixture	63.7	0.0	63.7
<b>Total</b>	Lumens	8995.0	0.0	8995.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	272.8	3.0
10°-20°	793.4	8.8
20°-30°	1237.1	13.8
30°-40°	1561.3	17.4
40°-50°	1707.2	19.0
50°-60°	1511.9	16.8
60°-70°	1144.4	12.7
70°-80°	597.2	6.6
80°-90°	169.5	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°	8995.0	100.0
0°-180°	8995.0	100.0

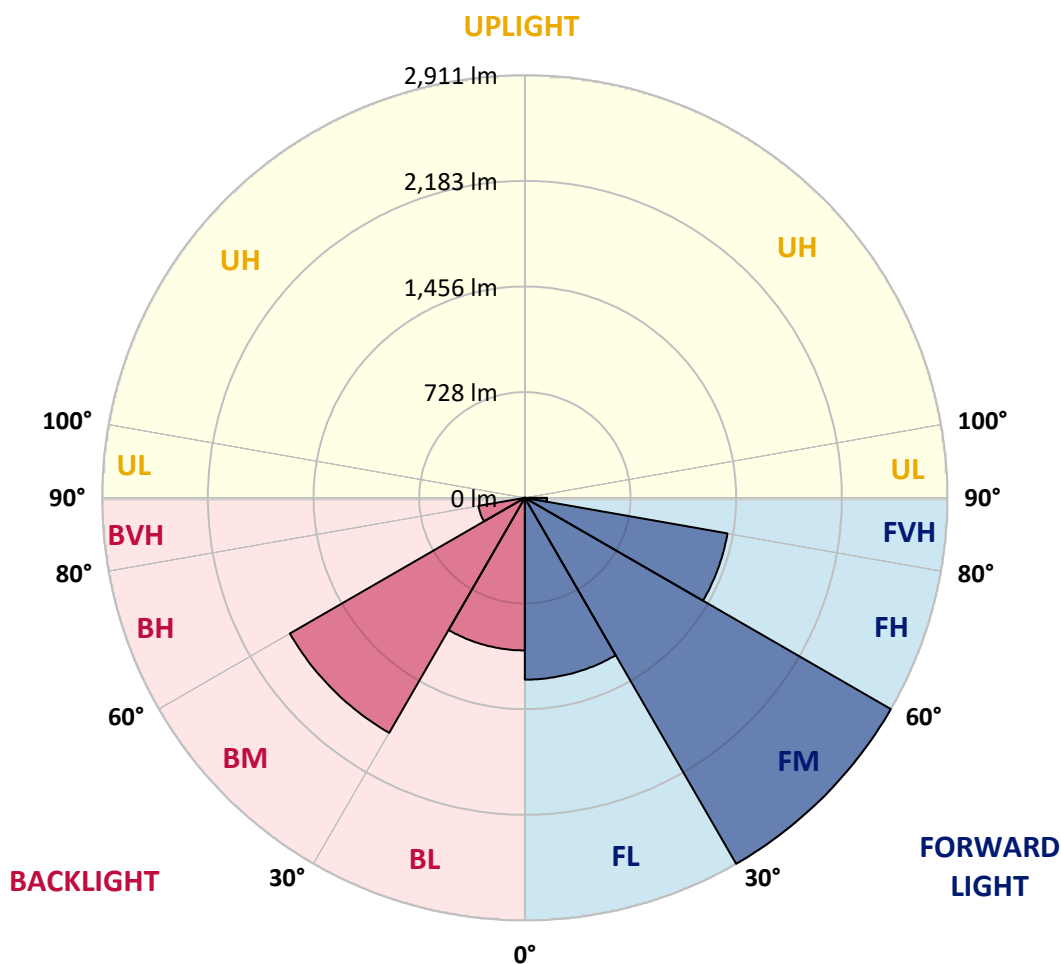


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1252.3	13.9			
FM (30°-60°)	2911.1	32.4			
FH (60°-80°)	1417.1	15.8			G1/1800
FVH (80°-90°)	153.1	1.7			G2/225
BL (0°-30°)	1051.2	11.7	B3/2500		
BM (30°-60°)	1869.4	20.8	B2/2500		
BH (60°-80°)	324.5	3.6	B1/500		G1/500
BVH (80°-90°)	16.4	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3
1°	2903.4	2901.0	2897.1	2893.0	2888.1	2882.5	2876.7	2870.5	2865.0	2860.7	2857.5
2°	2926.7	2924.4	2918.9	2909.9	2895.8	2885.2	2873.9	2862.4	2851.9	2843.2	2837.2
3°	2948.8	2944.4	2937.1	2925.2	2908.2	2887.6	2869.5	2853.4	2838.7	2825.8	2816.6
4°	2965.6	2963.1	2952.5	2936.8	2916.0	2888.0	2863.9	2843.5	2823.5	2805.6	2792.6
5°	2987.0	2981.9	2968.4	2947.9	2922.0	2888.7	2857.6	2831.7	2806.2	2782.6	2764.6
6°	3007.6	3000.9	2984.4	2958.3	2927.1	2887.6	2850.6	2819.0	2787.6	2758.1	2738.0
7°	3032.3	3020.9	2999.7	2967.5	2930.4	2885.6	2842.2	2804.8	2767.6	2733.6	2713.3
8°	3051.7	3039.4	3014.2	2977.7	2933.0	2881.1	2831.5	2788.9	2745.8	2710.0	2691.2
9°	3073.1	3059.7	3030.4	2988.3	2935.4	2875.9	2819.7	2771.7	2724.2	2688.0	2672.3
10°	3098.6	3083.0	3048.5	2998.5	2936.5	2870.6	2807.8	2754.0	2702.5	2666.9	2653.9
11°	3121.5	3104.3	3066.3	3007.8	2937.5	2864.2	2794.6	2735.6	2681.5	2647.9	2637.5
12°	3138.1	3121.4	3081.7	3017.1	2938.8	2855.9	2778.8	2715.4	2659.2	2629.1	2619.8
13°	3156.7	3135.7	3094.0	3025.9	2939.7	2847.0	2763.1	2694.1	2636.1	2609.8	2601.9
14°	3169.1	3148.7	3102.7	3031.2	2940.2	2839.2	2747.7	2672.7	2613.4	2591.3	2584.8
15°	3182.9	3159.1	3108.0	3033.1	2938.1	2830.0	2729.2	2650.1	2591.1	2572.7	2566.7
16°	3193.5	3167.2	3114.0	3034.3	2933.1	2819.6	2711.1	2628.2	2568.1	2553.1	2548.3
17°	3203.4	3175.0	3116.5	3031.8	2925.6	2806.4	2690.9	2604.2	2545.1	2532.7	2530.5
18°	3215.0	3183.5	3116.0	3025.3	2916.1	2792.8	2670.8	2579.6	2522.7	2511.7	2513.3
19°	3225.1	3192.2	3118.0	3019.9	2904.3	2777.1	2649.6	2554.5	2500.5	2491.5	2497.7
20°	3234.0	3201.2	3122.4	3013.8	2891.0	2759.0	2627.3	2529.1	2477.3	2472.8	2481.3
21°	3244.7	3208.4	3125.4	3007.6	2877.3	2738.1	2604.4	2503.0	2454.1	2452.7	2461.4
22°	3253.2	3216.1	3127.2	3001.4	2862.4	2715.7	2578.3	2476.0	2430.1	2431.9	2443.3
23°	3259.4	3221.0	3128.7	2995.9	2846.9	2692.0	2553.2	2448.1	2404.6	2410.5	2425.6
24°	3270.2	3227.4	3129.2	2990.6	2831.1	2667.1	2524.6	2419.6	2379.2	2388.9	2409.2
25°	3278.2	3232.4	3128.2	2983.3	2814.5	2642.1	2494.8	2390.8	2354.2	2367.7	2392.9
26°	3288.0	3237.1	3127.0	2974.9	2795.6	2615.9	2465.1	2360.5	2329.2	2344.9	2374.7
27°	3299.0	3242.4	3127.6	2965.8	2776.7	2588.2	2435.1	2331.0	2303.3	2322.2	2354.7
28°	3308.5	3250.3	3126.8	2955.9	2758.5	2559.7	2403.8	2299.7	2275.8	2300.5	2333.8
29°	3317.0	3257.7	3123.3	2945.1	2738.6	2529.4	2370.8	2267.9	2247.6	2280.0	2312.2
30°	3329.7	3264.6	3122.2	2932.9	2719.0	2497.8	2336.0	2234.2	2219.1	2257.4	2291.8
31°	3339.1	3270.3	3121.2	2920.3	2698.3	2465.6	2299.8	2201.5	2189.5	2232.1	2272.8
32°	3345.0	3277.4	3120.2	2906.8	2676.2	2433.5	2265.2	2167.3	2160.3	2206.3	2251.4
33°	3348.2	3282.2	3119.2	2894.1	2652.9	2399.2	2226.6	2132.4	2131.7	2180.7	2228.9
34°	3346.2	3281.1	3118.2	2881.1	2627.7	2365.2	2190.0	2097.5	2102.0	2154.5	2206.1
35°	3343.7	3280.6	3117.6	2866.7	2601.1	2329.1	2151.3	2062.3	2071.8	2127.5	2183.1
36°	3341.4	3275.5	3113.5	2851.4	2573.4	2292.3	2110.2	2027.6	2041.2	2100.0	2159.0
37°	3333.3	3269.0	3105.9	2837.0	2544.4	2252.1	2070.8	1992.6	2010.8	2072.1	2134.9
38°	3327.4	3261.9	3097.3	2822.1	2513.5	2214.3	2031.1	1959.0	1980.6	2043.8	2110.7
39°	3318.0	3250.3	3086.3	2804.7	2480.9	2175.8	1992.5	1923.3	1950.1	2016.3	2083.5
40°	3305.6	3237.5	3073.9	2784.2	2448.3	2134.5	1953.4	1886.0	1919.8	1991.1	2056.7
41°	3292.4	3221.6	3059.9	2763.2	2415.3	2092.4	1914.3	1848.8	1886.5	1966.6	2029.5
42°	3285.5	3209.7	3047.3	2741.3	2381.1	2048.0	1869.9	1810.4	1850.8	1939.6	2003.2
43°	3270.6	3196.2	3029.7	2720.9	2346.0	2002.5	1826.0	1773.4	1815.6	1909.5	1977.2
44°	3251.3	3180.1	3009.7	2700.9	2310.8	1956.0	1780.4	1735.3	1779.7	1876.9	1950.3



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**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	3230.9	3158.8	2991.4	2679.7	2276.3	1907.6	1735.1	1694.8	1744.0	1844.7	1920.7
46°	3218.2	3139.1	2972.5	2658.3	2240.1	1860.2	1688.9	1653.9	1708.8	1811.6	1888.4
47°	3192.0	3120.2	2950.1	2634.6	2202.4	1811.2	1641.5	1611.9	1673.6	1777.8	1852.7
48°	3151.5	3094.6	2923.2	2609.5	2165.6	1760.4	1595.5	1572.6	1638.0	1743.3	1807.2
49°	3112.7	3054.3	2899.0	2583.0	2129.8	1709.7	1549.4	1533.0	1602.0	1706.7	1749.4
50°	3080.1	3016.1	2870.4	2556.4	2093.3	1657.3	1502.1	1491.6	1565.9	1668.2	1672.4
51°	3048.9	2982.7	2833.1	2528.7	2056.9	1606.7	1455.6	1449.5	1529.9	1627.6	1571.8
52°	3014.2	2950.7	2793.5	2498.9	2018.6	1557.5	1407.4	1407.2	1494.1	1582.7	1445.0
53°	2976.7	2916.9	2753.9	2469.3	1979.7	1506.8	1357.5	1364.1	1455.4	1532.1	1305.1
54°	2940.8	2878.8	2717.9	2435.8	1939.1	1458.1	1308.8	1323.1	1414.8	1470.2	1155.5
55°	2915.8	2845.1	2680.3	2395.6	1892.1	1410.4	1259.1	1281.4	1373.2	1388.9	1006.6
56°	2895.4	2818.5	2639.7	2352.4	1843.9	1359.3	1210.1	1238.3	1329.9	1286.5	852.5
57°	2871.4	2796.7	2597.8	2307.2	1796.7	1307.2	1154.2	1195.0	1285.0	1163.2	696.1
58°	2849.8	2775.0	2562.4	2264.4	1750.3	1253.8	1099.8	1149.6	1236.4	1029.6	549.3
59°	2834.3	2755.5	2534.4	2217.1	1702.9	1201.0	1047.2	1103.8	1187.6	894.3	421.5
60°	2831.1	2743.9	2512.4	2165.2	1652.8	1145.0	996.8	1056.4	1132.2	752.5	330.8
61°	2838.8	2740.9	2495.4	2115.1	1598.7	1088.4	945.7	1007.6	1071.4	611.1	281.9
62°	2838.9	2744.0	2477.6	2066.6	1541.7	1033.4	897.6	957.3	998.7	477.8	264.8
63°	2819.3	2737.8	2472.4	2021.4	1484.6	975.9	851.4	906.5	911.6	357.5	253.7
64°	2776.9	2710.6	2479.2	1980.9	1429.3	916.8	808.3	854.8	803.9	275.2	243.9
65°	2707.5	2653.5	2497.2	1945.9	1369.5	856.6	765.0	802.3	695.1	244.3	233.8
66°	2591.6	2562.8	2491.9	1917.2	1299.7	796.7	720.8	749.5	578.8	229.5	223.6
67°	2442.8	2430.9	2454.1	1899.5	1226.0	735.3	675.1	699.2	462.7	213.9	213.2
68°	2258.9	2264.9	2370.1	1905.4	1149.2	675.1	627.5	650.4	369.2	200.9	203.1
69°	2009.4	2057.0	2208.5	1940.0	1075.6	619.8	578.8	600.9	294.3	189.9	193.8
70°	1757.9	1820.2	1999.4	1983.6	1002.9	568.3	526.9	549.1	222.2	179.1	184.8
71°	1603.2	1626.2	1741.0	1973.9	942.0	515.6	474.1	496.7	180.5	168.5	174.6
72°	1507.3	1503.4	1485.4	1830.3	887.7	465.2	421.0	438.5	166.4	159.1	162.2
73°	1419.1	1424.7	1304.1	1566.0	830.6	414.9	369.8	379.5	155.6	150.4	148.6
74°	1329.4	1351.2	1204.3	1266.9	823.3	370.1	322.3	316.3	143.6	141.3	134.7
75°	1245.9	1269.2	1120.9	1080.8	924.0	325.4	279.3	255.6	131.5	129.5	121.2
76°	1174.9	1179.6	1045.8	997.4	995.3	284.5	242.1	194.3	120.4	116.6	107.5
77°	1115.7	1081.3	975.4	929.6	835.1	248.1	204.9	145.5	110.0	104.0	95.3
78°	1066.2	991.2	899.1	858.5	588.3	211.4	168.6	123.1	100.5	91.9	86.7
79°	1033.3	926.1	822.0	779.1	437.8	184.2	139.6	108.8	91.0	79.9	79.7
80°	989.2	865.9	747.8	669.4	378.1	160.5	113.1	95.5	80.4	65.3	72.2
81°	877.7	806.5	690.0	552.2	385.6	136.6	88.2	82.0	69.1	52.9	63.3
82°	765.7	747.6	635.2	470.0	343.0	114.6	66.2	68.8	57.8	44.3	53.5
83°	653.7	678.5	574.8	408.1	236.0	95.3	50.1	56.7	46.4	37.6	43.5
84°	540.2	605.1	493.6	355.0	159.0	77.5	37.7	45.3	35.6	29.9	32.7
85°	430.1	527.3	388.6	307.6	123.9	59.9	28.7	34.6	26.2	21.5	21.7
86°	301.8	424.6	298.2	248.7	98.8	43.8	19.7	24.7	18.1	13.2	11.1
87°	209.4	309.6	219.5	154.1	72.2	28.8	10.8	14.7	10.0	6.3	4.5
88°	113.9	184.3	144.4	68.6	46.4	15.2	5.0	6.0	3.6	2.3	1.8
89°	57.9	81.7	77.5	44.4	28.3	7.2	1.4	1.2	0.7	0.5	0.3



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**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
121°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
124°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
126°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
128°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
129°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
133°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449921  
 CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
139°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
141°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
143°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
148°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
149°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
151°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
156°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
163°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
164°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
168°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
169°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
171°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
174°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
176°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
178°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179°	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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CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449921

CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3	2879.3
1°	2856.7	2857.3	2858.0	2860.0	2863.9	2868.7	2874.7	2881.3	2886.6	2891.5	2895.3
2°	2834.5	2835.0	2837.1	2840.9	2848.0	2857.8	2868.8	2880.5	2891.2	2899.6	2910.7
3°	2811.0	2808.4	2812.1	2819.7	2831.2	2845.7	2860.7	2877.9	2893.0	2910.2	2926.3
4°	2783.9	2781.6	2785.7	2795.9	2811.4	2830.5	2850.6	2873.1	2895.0	2919.2	2939.6
5°	2754.9	2751.1	2757.8	2770.6	2791.4	2815.4	2840.4	2868.3	2897.7	2927.7	2951.7
6°	2728.7	2726.6	2731.1	2744.3	2767.8	2798.1	2829.5	2861.5	2897.3	2934.0	2963.1
7°	2704.6	2701.5	2707.1	2719.4	2744.1	2779.2	2817.9	2856.4	2896.2	2938.8	2975.1
8°	2682.8	2679.4	2685.1	2695.5	2720.6	2760.1	2804.5	2848.9	2894.5	2943.3	2987.5
9°	2664.8	2660.8	2666.4	2674.8	2697.7	2739.9	2789.0	2838.1	2891.0	2947.1	2999.8
10°	2647.7	2644.5	2649.1	2655.8	2676.2	2719.0	2773.3	2828.0	2887.0	2950.8	3011.8
11°	2631.3	2629.7	2632.5	2638.3	2655.3	2697.5	2755.5	2815.7	2881.7	2954.4	3023.8
12°	2614.8	2613.2	2614.6	2620.2	2634.1	2674.9	2736.7	2801.6	2875.5	2958.5	3035.6
13°	2597.9	2596.2	2598.0	2602.1	2612.9	2651.5	2717.7	2787.2	2869.4	2962.6	3045.6
14°	2581.9	2579.4	2582.6	2583.8	2593.0	2628.5	2697.2	2772.8	2864.7	2964.3	3053.0
15°	2564.4	2561.9	2564.0	2564.6	2572.4	2604.7	2675.6	2756.1	2857.3	2963.6	3056.2
16°	2547.9	2548.5	2545.5	2546.2	2552.5	2580.0	2653.5	2739.8	2848.8	2960.8	3057.7
17°	2532.1	2531.4	2528.8	2528.1	2532.3	2555.3	2630.5	2722.6	2838.7	2955.3	3056.1
18°	2517.9	2519.3	2514.3	2509.1	2510.2	2530.7	2605.5	2703.2	2824.5	2946.5	3051.9
19°	2501.4	2502.2	2498.1	2490.8	2489.7	2506.4	2581.5	2681.5	2808.2	2936.4	3048.1
20°	2484.5	2485.2	2481.9	2472.3	2468.6	2481.3	2556.0	2662.6	2791.8	2925.3	3044.3
21°	2468.2	2470.6	2465.0	2452.8	2447.2	2456.7	2529.5	2641.5	2773.0	2912.7	3040.2
22°	2454.9	2458.4	2449.1	2433.7	2425.1	2430.7	2502.7	2616.4	2752.0	2899.7	3036.9
23°	2442.3	2445.5	2433.6	2414.7	2401.5	2403.9	2475.0	2590.2	2730.5	2886.8	3035.2
24°	2427.6	2430.6	2418.7	2396.2	2378.5	2377.6	2445.5	2562.8	2708.9	2874.1	3033.2
25°	2409.9	2413.5	2402.6	2377.6	2355.6	2351.6	2416.7	2534.9	2685.6	2861.0	3027.6
26°	2392.3	2393.1	2384.0	2360.9	2331.2	2324.3	2387.1	2503.5	2661.0	2846.5	3021.0
27°	2372.2	2375.1	2363.0	2340.9	2307.7	2295.7	2354.6	2471.3	2635.1	2830.8	3013.7
28°	2353.8	2357.8	2343.6	2320.0	2284.1	2266.9	2322.9	2439.3	2608.6	2814.7	3007.1
29°	2336.3	2341.3	2324.9	2298.2	2260.8	2238.1	2289.6	2407.0	2580.9	2798.4	2999.8
30°	2319.1	2323.9	2306.7	2275.2	2236.9	2207.3	2254.7	2373.5	2551.6	2779.9	2991.2
31°	2299.0	2304.6	2288.1	2253.0	2212.5	2176.4	2221.2	2339.9	2522.6	2759.9	2980.4
32°	2278.9	2284.9	2268.5	2230.5	2185.2	2145.2	2185.6	2303.3	2492.9	2740.0	2971.7
33°	2258.5	2265.6	2249.0	2208.3	2157.5	2113.0	2149.3	2266.6	2461.0	2719.4	2962.7
34°	2238.7	2244.9	2227.5	2185.4	2129.5	2081.1	2112.7	2230.2	2429.2	2696.9	2952.6
35°	2219.1	2224.4	2205.9	2160.9	2100.2	2050.1	2075.6	2192.6	2396.7	2673.0	2942.7
36°	2196.0	2202.7	2182.8	2137.4	2071.6	2019.4	2039.6	2153.2	2362.4	2648.6	2932.7
37°	2172.5	2179.6	2159.6	2113.0	2043.7	1988.9	2003.8	2113.7	2327.4	2622.5	2922.2
38°	2147.4	2155.5	2135.2	2086.2	2016.4	1957.8	1969.4	2074.1	2291.2	2595.8	2909.8
39°	2122.4	2130.2	2108.1	2058.7	1989.6	1924.3	1932.6	2029.3	2253.7	2570.2	2895.1
40°	2095.7	2103.5	2083.3	2031.2	1962.4	1889.7	1892.7	1987.4	2214.5	2541.9	2878.9
41°	2069.4	2075.5	2055.4	2005.5	1933.2	1855.1	1851.8	1942.1	2173.2	2512.2	2860.2
42°	2042.3	2048.7	2028.5	1980.7	1903.7	1820.9	1810.8	1897.5	2131.0	2483.7	2842.1
43°	2014.2	2018.2	2001.1	1955.2	1873.9	1785.3	1771.0	1850.0	2087.8	2454.0	2824.4
44°	1987.3	1980.3	1973.8	1925.5	1843.7	1748.6	1730.5	1801.6	2041.5	2423.2	2806.4



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**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	1959.4	1938.9	1946.1	1894.5	1811.8	1712.1	1690.5	1753.2	1993.3	2390.6	2785.5
46°	1909.4	1889.2	1904.4	1863.3	1778.7	1675.2	1649.8	1705.1	1947.4	2357.9	2762.1
47°	1840.2	1808.5	1849.3	1829.8	1744.9	1637.2	1608.7	1653.5	1898.3	2326.4	2738.4
48°	1748.2	1697.4	1773.9	1792.1	1711.6	1598.8	1566.8	1605.7	1849.6	2295.9	2713.4
49°	1629.5	1562.0	1670.6	1749.7	1676.3	1562.3	1523.2	1557.0	1801.2	2265.4	2688.7
50°	1486.2	1411.9	1543.7	1698.1	1638.7	1525.6	1478.2	1509.3	1752.8	2235.1	2660.9
51°	1335.4	1258.1	1400.7	1627.0	1600.0	1488.3	1434.7	1460.9	1705.4	2201.7	2630.2
52°	1181.8	1100.8	1249.1	1531.4	1559.2	1450.1	1390.0	1410.1	1658.6	2165.0	2597.9
53°	1024.2	936.7	1096.9	1418.9	1516.1	1411.8	1344.6	1359.1	1609.1	2123.8	2562.5
54°	859.7	773.3	938.1	1281.2	1469.8	1371.7	1300.3	1304.5	1560.6	2083.0	2521.3
55°	701.2	616.5	776.1	1138.6	1419.0	1331.1	1254.4	1250.2	1511.3	2045.4	2478.7
56°	550.6	477.3	621.9	993.7	1357.5	1289.2	1208.2	1197.6	1459.5	2007.2	2437.5
57°	418.6	372.5	475.6	841.1	1278.7	1243.7	1160.9	1143.4	1407.0	1966.1	2394.2
58°	340.1	315.3	373.3	688.0	1178.8	1195.4	1111.9	1090.5	1353.6	1920.8	2349.0
59°	300.9	294.0	313.3	542.7	1059.5	1146.3	1063.7	1040.5	1301.7	1871.6	2302.5
60°	285.3	284.8	286.2	413.5	931.4	1095.5	1013.8	990.8	1244.5	1819.1	2256.4
61°	277.1	277.0	275.4	317.0	800.8	1044.8	964.7	942.8	1184.7	1765.4	2216.5
62°	268.8	268.7	266.7	268.3	664.9	991.1	915.9	894.8	1124.2	1712.2	2182.4
63°	260.0	260.1	257.7	249.1	531.0	937.0	866.3	846.8	1060.0	1653.6	2153.1
64°	251.4	251.7	248.9	239.5	405.9	875.6	815.5	799.4	995.0	1585.8	2128.7
65°	242.7	243.7	239.4	227.5	306.1	808.1	764.2	750.5	932.0	1515.9	2107.6
66°	234.3	235.9	230.1	216.9	254.2	722.1	712.7	701.3	873.6	1449.1	2098.8
67°	225.9	227.2	221.0	205.9	223.8	626.7	662.5	649.4	813.4	1384.2	2114.8
68°	217.5	218.3	212.0	195.4	205.7	525.0	614.0	596.9	748.3	1321.1	2148.9
69°	208.3	209.0	203.0	185.3	194.8	424.2	565.6	542.9	686.2	1266.2	2159.1
70°	195.9	195.1	192.4	175.7	182.8	337.8	516.6	490.0	633.9	1214.7	2112.5
71°	181.6	180.8	179.1	167.2	170.8	269.1	470.1	437.4	582.7	1176.3	1966.2
72°	167.2	166.2	165.0	157.1	159.9	200.8	424.0	385.4	534.1	1171.4	1705.6
73°	152.6	151.7	150.7	144.8	148.8	161.9	381.6	336.6	484.2	1249.9	1420.8
74°	138.2	138.3	136.8	131.7	139.0	149.3	336.1	292.8	437.0	1338.1	1215.3
75°	125.7	127.5	123.4	118.4	129.9	136.7	288.9	251.2	385.0	1240.2	1100.0
76°	116.8	120.3	112.8	105.9	119.4	125.3	242.6	214.2	334.2	1026.1	1012.3
77°	110.5	114.9	105.5	93.4	107.2	114.0	196.5	180.3	294.0	835.5	931.6
78°	103.8	107.2	99.1	81.4	94.7	103.3	154.1	148.8	271.0	646.3	856.3
79°	93.3	94.9	90.7	72.5	82.3	92.9	122.5	122.5	244.9	543.3	769.1
80°	83.0	85.1	80.1	65.7	70.5	82.7	103.6	99.1	222.5	536.6	660.8
81°	72.3	73.8	69.4	58.5	57.3	72.4	88.2	81.7	210.8	477.5	564.4
82°	59.9	60.0	58.4	50.1	44.7	61.3	73.8	64.3	197.0	345.1	491.3
83°	45.0	43.0	45.2	40.7	35.7	49.5	59.7	47.0	165.6	247.4	435.3
84°	32.1	30.9	32.5	30.6	28.1	38.6	46.1	34.6	119.7	199.1	383.8
85°	20.2	19.4	20.5	20.5	20.3	28.8	34.0	24.7	85.2	165.1	320.4
86°	9.4	8.2	9.5	10.7	12.5	19.1	24.0	16.4	58.9	134.3	228.3
87°	3.8	3.2	3.9	4.1	6.0	10.4	13.9	9.4	34.2	106.2	141.4
88°	1.5	1.4	1.5	1.6	2.1	3.8	5.4	5.1	16.3	81.3	105.5
89°	0.1	0.0	0.1	0.3	0.4	0.5	1.0	0.9	7.3	58.4	76.8



REPORT NUMBER: P1449921  
 CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
121°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
124°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
126°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
128°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
129°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
133°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449921  
 CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
139°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
141°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
143°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
148°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
149°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
151°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
156°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
163°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
164°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
168°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
169°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
171°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
174°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
176°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
178°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449921  
CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P1449921  
 CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
0°	2879.3	2879.3	2879.3
1°	2898.5	2901.5	2903.4
2°	2918.1	2923.3	2926.7
3°	2937.7	2944.3	2948.8
4°	2954.8	2964.2	2965.6
5°	2971.2	2983.4	2987.0
6°	2987.5	3003.0	3007.6
7°	3004.0	3022.4	3032.3
8°	3022.5	3043.0	3051.7
9°	3041.1	3065.5	3073.1
10°	3059.0	3089.1	3098.6
11°	3077.8	3111.2	3121.5
12°	3094.8	3129.8	3138.1
13°	3107.9	3144.1	3156.7
14°	3117.1	3157.3	3169.1
15°	3123.2	3166.3	3182.9
16°	3129.0	3174.9	3193.5
17°	3133.7	3184.0	3203.4
18°	3137.6	3194.6	3215.0
19°	3141.1	3203.9	3225.1
20°	3145.9	3212.7	3234.0
21°	3150.2	3220.2	3244.7
22°	3154.6	3227.4	3253.2
23°	3158.2	3234.7	3259.4
24°	3161.0	3243.9	3270.2
25°	3161.6	3250.4	3278.2
26°	3164.1	3257.9	3288.0
27°	3164.1	3266.2	3299.0
28°	3166.6	3275.5	3308.5
29°	3169.8	3282.8	3317.0
30°	3170.5	3291.8	3329.7
31°	3172.1	3301.2	3339.1
32°	3174.8	3304.5	3345.0
33°	3177.2	3306.8	3348.2
34°	3176.9	3306.9	3346.2
35°	3173.2	3305.9	3343.7
36°	3167.7	3300.3	3341.4
37°	3162.4	3295.7	3333.3
38°	3154.2	3287.4	3327.4
39°	3144.2	3277.2	3318.0
40°	3133.5	3266.2	3305.6
41°	3118.5	3249.9	3292.4
42°	3103.0	3240.5	3285.5
43°	3086.7	3226.5	3270.6
44°	3069.6	3209.0	3251.3



REPORT NUMBER: P1449921  
CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
45°	3052.3	3189.5	3230.9
46°	3032.6	3169.1	3218.2
47°	3010.2	3149.7	3192.0
48°	2986.3	3117.3	3151.5
49°	2960.8	3074.0	3112.7
50°	2925.7	3040.5	3080.1
51°	2885.9	3007.6	3048.9
52°	2848.2	2974.7	3014.2
53°	2814.7	2939.0	2976.7
54°	2775.0	2901.7	2940.8
55°	2734.2	2871.0	2915.8
56°	2694.3	2849.1	2895.4
57°	2658.8	2830.3	2871.4
58°	2632.6	2806.7	2849.8
59°	2611.6	2788.8	2834.3
60°	2592.0	2779.5	2831.1
61°	2574.6	2780.2	2838.8
62°	2566.2	2781.2	2838.9
63°	2571.5	2768.7	2819.3
64°	2584.4	2733.7	2776.9
65°	2577.8	2669.7	2707.5
66°	2538.3	2569.5	2591.6
67°	2459.5	2429.9	2442.8
68°	2321.6	2250.9	2258.9
69°	2126.0	2029.2	2009.4
70°	1889.9	1796.3	1757.9
71°	1639.0	1620.9	1603.2
72°	1435.9	1507.5	1507.3
73°	1311.2	1422.8	1419.1
74°	1238.4	1339.9	1329.4
75°	1173.3	1251.2	1245.9
76°	1110.3	1161.4	1174.9
77°	1041.6	1076.1	1115.7
78°	962.6	1003.7	1066.2
79°	886.8	956.7	1033.3
80°	811.5	914.4	989.2
81°	737.9	865.1	877.7
82°	666.0	790.5	765.7
83°	579.8	696.6	653.7
84°	479.1	602.3	540.2
85°	385.6	501.4	430.1
86°	317.2	382.4	301.8
87°	237.5	265.5	209.4
88°	155.2	153.5	113.9
89°	88.7	73.4	57.9



REPORT NUMBER: P1449921  
CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
90°	0.0	0.0	0.0
91°	0.0	0.0	0.0
92°	0.0	0.0	0.0
93°	0.0	0.0	0.0
94°	0.0	0.0	0.0
95°	0.0	0.0	0.0
96°	0.0	0.0	0.0
97°	0.0	0.0	0.0
98°	0.0	0.0	0.0
99°	0.0	0.0	0.0
100°	0.0	0.0	0.0
101°	0.0	0.0	0.0
102°	0.0	0.0	0.0
103°	0.0	0.0	0.0
104°	0.0	0.0	0.0
105°	0.0	0.0	0.0
106°	0.0	0.0	0.0
107°	0.0	0.0	0.0
108°	0.0	0.0	0.0
109°	0.0	0.0	0.0
110°	0.0	0.0	0.0
111°	0.0	0.0	0.0
112°	0.0	0.0	0.0
113°	0.0	0.0	0.0
114°	0.0	0.0	0.0
115°	0.0	0.0	0.0
116°	0.0	0.0	0.0
117°	0.0	0.0	0.0
118°	0.0	0.0	0.0
119°	0.0	0.0	0.0
120°	0.0	0.0	0.0
121°	0.0	0.0	0.0
122°	0.0	0.0	0.0
123°	0.0	0.0	0.0
124°	0.0	0.0	0.0
125°	0.0	0.0	0.0
126°	0.0	0.0	0.0
127°	0.0	0.0	0.0
128°	0.0	0.0	0.0
129°	0.0	0.0	0.0
130°	0.0	0.0	0.0
131°	0.0	0.0	0.0
132°	0.0	0.0	0.0
133°	0.0	0.0	0.0
134°	0.0	0.0	0.0



REPORT NUMBER: P1449921  
CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
135°	0.0	0.0	0.0
136°	0.0	0.0	0.0
137°	0.0	0.0	0.0
138°	0.0	0.0	0.0
139°	0.0	0.0	0.0
140°	0.0	0.0	0.0
141°	0.0	0.0	0.0
142°	0.0	0.0	0.0
143°	0.0	0.0	0.0
144°	0.0	0.0	0.0
145°	0.0	0.0	0.0
146°	0.0	0.0	0.0
147°	0.0	0.0	0.0
148°	0.0	0.0	0.0
149°	0.0	0.0	0.0
150°	0.0	0.0	0.0
151°	0.0	0.0	0.0
152°	0.0	0.0	0.0
153°	0.0	0.0	0.0
154°	0.0	0.0	0.0
155°	0.0	0.0	0.0
156°	0.0	0.0	0.0
157°	0.0	0.0	0.0
158°	0.0	0.0	0.0
159°	0.0	0.0	0.0
160°	0.0	0.0	0.0
161°	0.0	0.0	0.0
162°	0.0	0.0	0.0
163°	0.0	0.0	0.0
164°	0.0	0.0	0.0
165°	0.0	0.0	0.0
166°	0.0	0.0	0.0
167°	0.0	0.0	0.0
168°	0.0	0.0	0.0
169°	0.0	0.0	0.0
170°	0.0	0.0	0.0
171°	0.0	0.0	0.0
172°	0.0	0.0	0.0
173°	0.0	0.0	0.0
174°	0.0	0.0	0.0
175°	0.0	0.0	0.0
176°	0.0	0.0	0.0
177°	0.0	0.0	0.0
178°	0.0	0.0	0.0
179°	0.0	0.0	0.0

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



REPORT NUMBER: P1449921  
CATALOG NUMBER: TWC60\_T4\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
180°	0.0	0.0	0.0

LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

Lumark

Report Number: SP1-2601-659-2

Test Date: 02/12/2026

Luminaire Tested: MWP2460W34VDDKYYAD-T4-24W-4000K

Data in this report applies to families of products including ;MWP2460W34VDDKYYAD

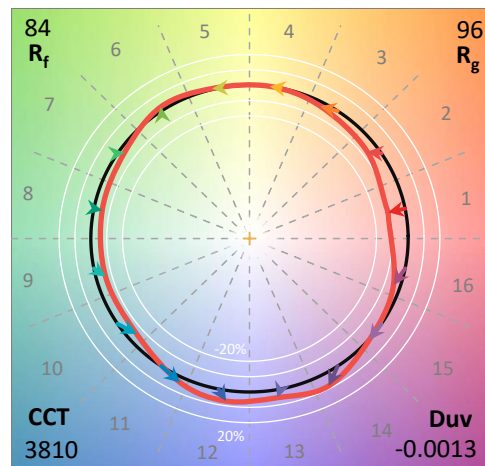
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2601-659-2  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry: 4π  
 Issue Date: 02/16/2026  
 Manufacturer: COOPER LIGHTING SOLUTIONS  
 Product Line: Lumark  
 Catalog Number: **MWP2460W34VDDKYYAD-T4-24W-4000K**  
 Description: Mester Wedge, at T4 beam setting, 24W output, 4000K

**Spectral Parameters**

CCT (K): 3810  
 CIE u': 0.2295  
 CIE v': 0.5035  
 Duv: -0.0013  
 CIE x: 0.3881  
 CIE y: 0.3785  
 CIE z: 0.2334  
 Peak Wavelength (nm): 453  
 Dominant Wavelength (nm): 580  
 Purity: 30.07368  
 Rf: 84.4  
 Rg: 96.5

CRI (Ra):	84.5		
R1:	83.7	R9:	15.9
R2:	90.7	R10:	77.2
R3:	95.1	R11:	83.0
R4:	83.6	R12:	62.4
R5:	83.4	R13:	85.6
R6:	86.7	R14:	97.4
R7:	86.3	R15:	77.9
R8:	66.5		



**Test Conditions**

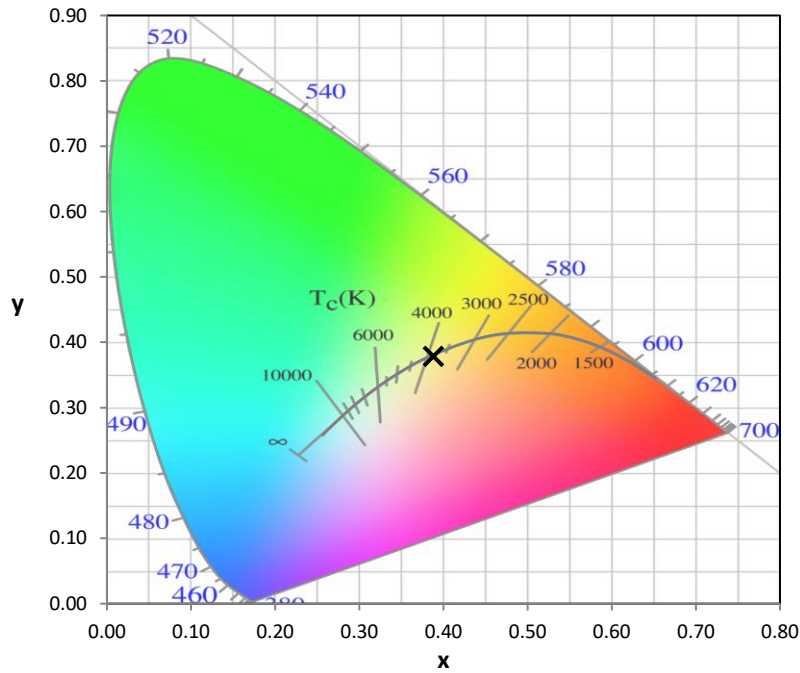
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-2

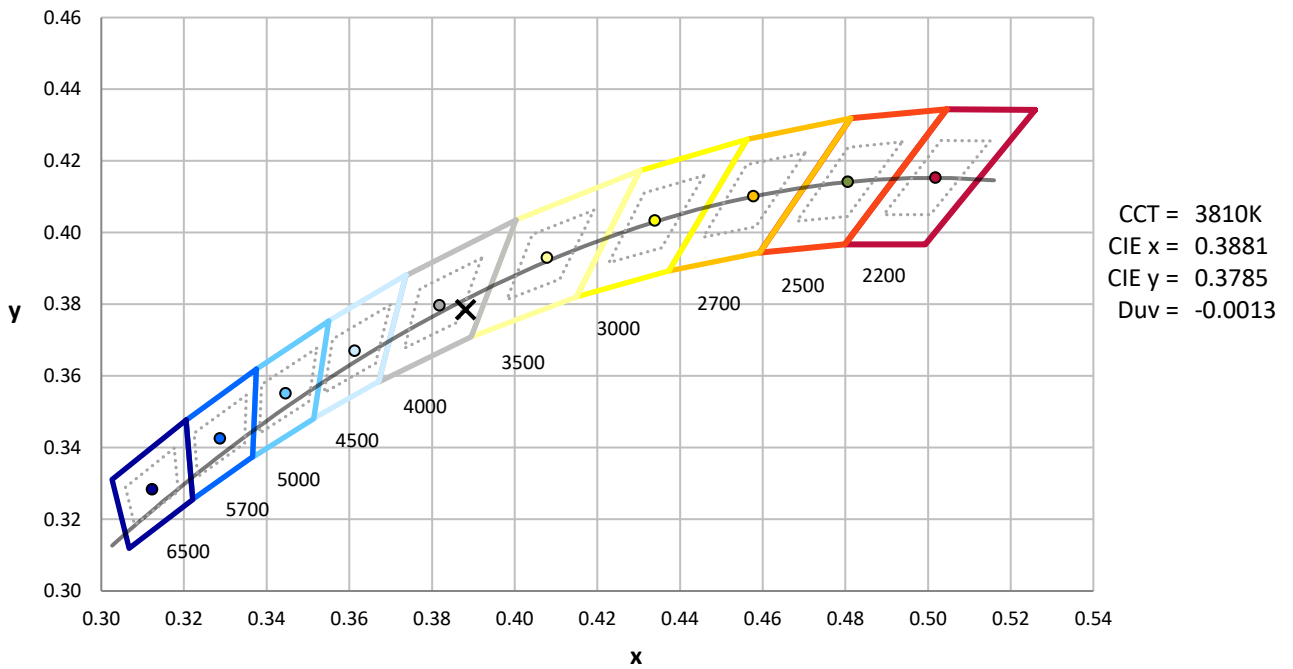
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	10/21/2025	10/21/2026
Sphere Thermometer	ONSET IN0085	10/21/2025	10/21/2026
Room Thermometer	ONSET IN0046	10/21/2025	10/21/2026

REPORT NUMBER: SP1-2601-659-2

**CIE 1931 Chromaticity Diagram**



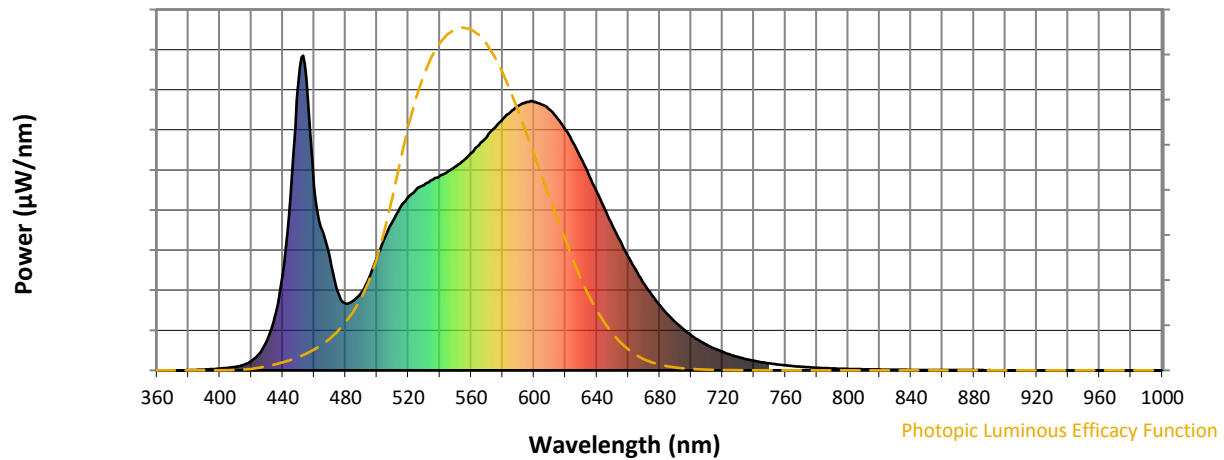
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2601-659-2

**Photopic Flux vs. Wavelength**

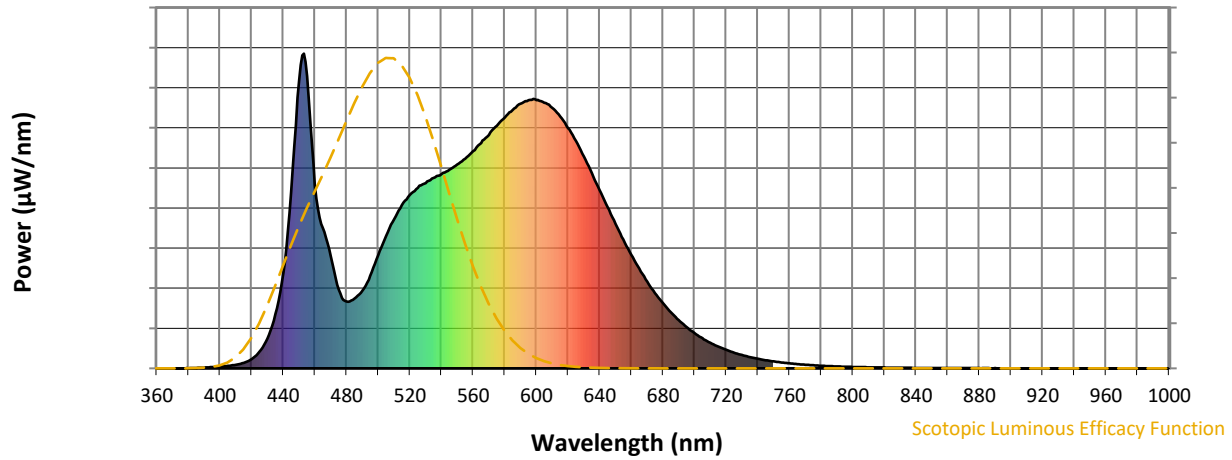


**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	NR	630	674	NR	760	16	NR	890	1	NR
375	0	NR	505	421	NR	635	620	NR	765	14	NR	895	0	NR
380	1	NR	510	474	NR	640	566	NR	770	12	NR	900	0	NR
385	1	NR	515	518	NR	645	512	NR	775	10	NR	905	0	NR
390	3	NR	520	552	NR	650	459	NR	780	8	NR	910	0	NR
395	4	NR	525	574	NR	655	410	NR	785	7	NR	915	0	NR
400	6	NR	530	589	NR	660	361	NR	790	6	NR	920	0	NR
405	8	NR	535	605	NR	665	317	NR	795	5	NR	925	0	NR
410	11	NR	540	617	NR	670	276	NR	800	5	NR	930	0	NR
415	18	NR	545	632	NR	675	239	NR	805	4	NR	935	0	NR
420	30	NR	550	648	NR	680	207	NR	810	3	NR	940	0	NR
425	53	NR	555	666	NR	685	178	NR	815	3	NR	945	0	NR
430	95	NR	560	690	NR	690	153	NR	820	3	NR	950	0	NR
435	173	NR	565	716	NR	695	131	NR	825	2	NR	955	0	NR
440	304	NR	570	742	NR	700	112	NR	830	2	NR	960	0	NR
445	559	NR	575	771	NR	705	95	NR	835	2	NR	965	0	NR
450	915	NR	580	798	NR	710	81	NR	840	1	NR	970	0	NR
455	929	NR	585	820	NR	715	69	NR	845	1	NR	975	0	NR
460	582	NR	590	841	NR	720	59	NR	850	1	NR	980	0	NR
465	446	NR	595	852	NR	725	50	NR	855	1	NR	985	0	NR
470	356	NR	600	852	NR	730	42	NR	860	1	NR	990	0	NR
475	250	NR	605	845	NR	735	36	NR	865	1	NR	995	0	NR
480	212	NR	610	827	NR	740	30	NR	870	1	NR	1000	0	NR
485	221	NR	615	801	NR	745	26	NR	875	1	NR			

REPORT NUMBER: SP1-2601-659-2

**Scotopic Flux vs. Wavelength**



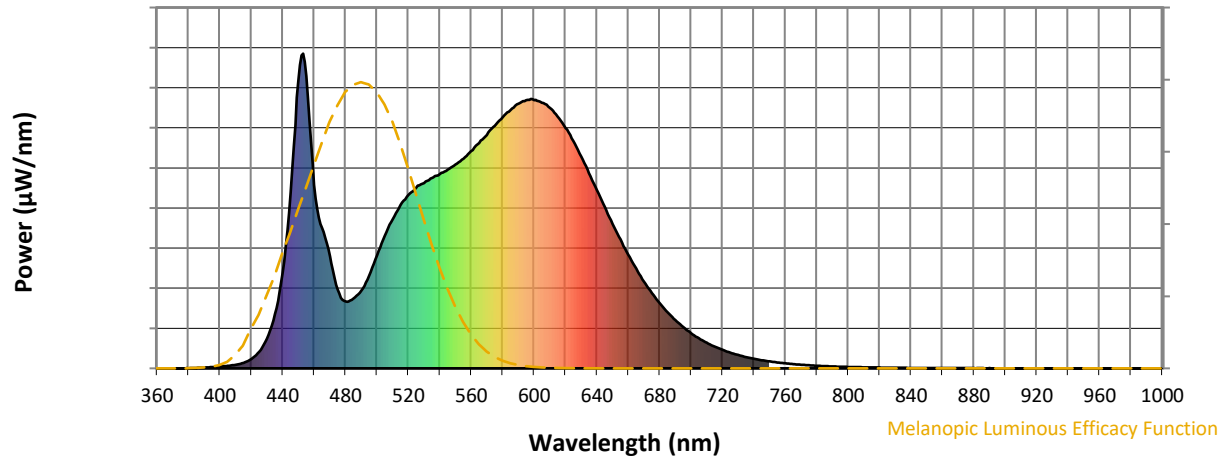
**Scotopic Lumens: NR**

**S/P: 1.64**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	NR	630	674	NR	760	16	NR	890	1	NR
375	0	NR	505	421	NR	635	620	NR	765	14	NR	895	0	NR
380	1	NR	510	474	NR	640	566	NR	770	12	NR	900	0	NR
385	1	NR	515	518	NR	645	512	NR	775	10	NR	905	0	NR
390	3	NR	520	552	NR	650	459	NR	780	8	NR	910	0	NR
395	4	NR	525	574	NR	655	410	NR	785	7	NR	915	0	NR
400	6	NR	530	589	NR	660	361	NR	790	6	NR	920	0	NR
405	8	NR	535	605	NR	665	317	NR	795	5	NR	925	0	NR
410	11	NR	540	617	NR	670	276	NR	800	5	NR	930	0	NR
415	18	NR	545	632	NR	675	239	NR	805	4	NR	935	0	NR
420	30	NR	550	648	NR	680	207	NR	810	3	NR	940	0	NR
425	53	NR	555	666	NR	685	178	NR	815	3	NR	945	0	NR
430	95	NR	560	690	NR	690	153	NR	820	3	NR	950	0	NR
435	173	NR	565	716	NR	695	131	NR	825	2	NR	955	0	NR
440	304	NR	570	742	NR	700	112	NR	830	2	NR	960	0	NR
445	559	NR	575	771	NR	705	95	NR	835	2	NR	965	0	NR
450	915	NR	580	798	NR	710	81	NR	840	1	NR	970	0	NR
455	929	NR	585	820	NR	715	69	NR	845	1	NR	975	0	NR
460	582	NR	590	841	NR	720	59	NR	850	1	NR	980	0	NR
465	446	NR	595	852	NR	725	50	NR	855	1	NR	985	0	NR
470	356	NR	600	852	NR	730	42	NR	860	1	NR	990	0	NR
475	250	NR	605	845	NR	735	36	NR	865	1	NR	995	0	NR
480	212	NR	610	827	NR	740	30	NR	870	1	NR	1000	0	NR
485	221	NR	615	801	NR	745	26	NR	875	1	NR			

REPORT NUMBER: SP1-2601-659-2

Melanopic Flux vs. Wavelength



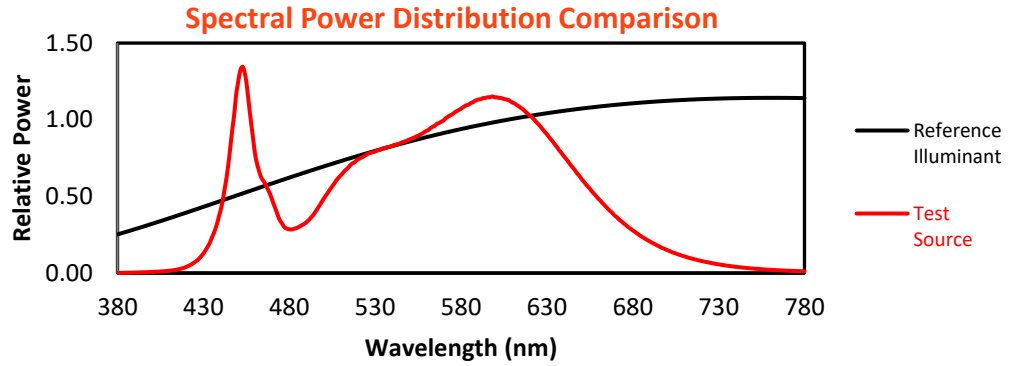
Melanopic Lumens: NR

M/P: 3.35

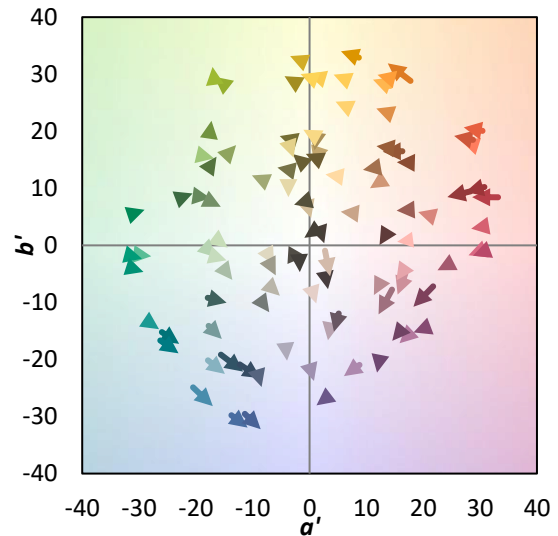
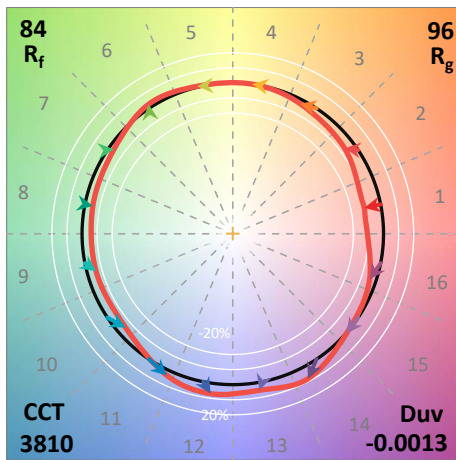
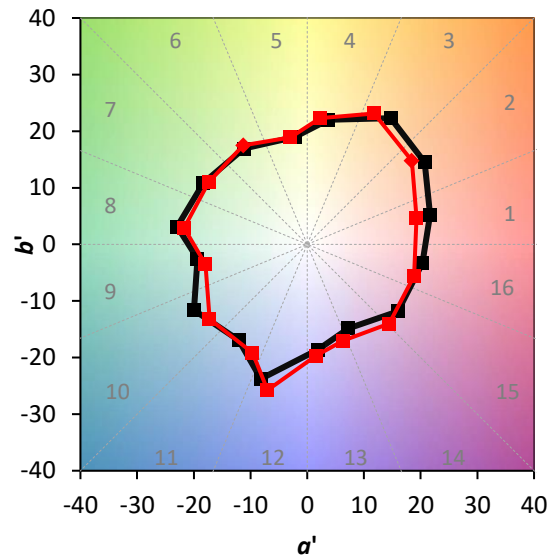
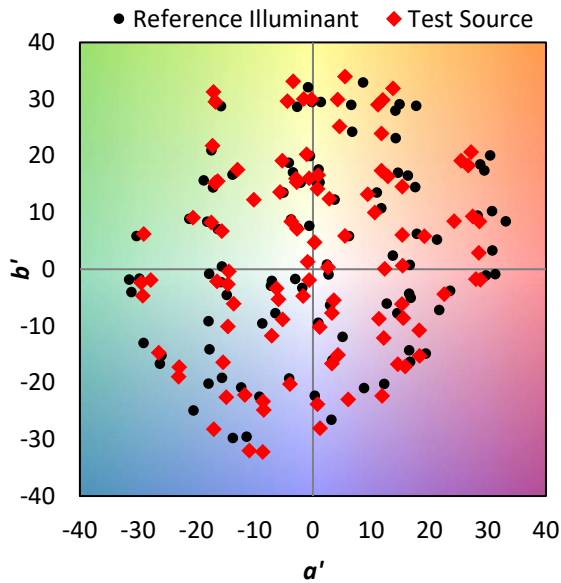
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	NR	630	674	NR	760	16	NR	890	1	NR
375	0	NR	505	421	NR	635	620	NR	765	14	NR	895	0	NR
380	1	NR	510	474	NR	640	566	NR	770	12	NR	900	0	NR
385	1	NR	515	518	NR	645	512	NR	775	10	NR	905	0	NR
390	3	NR	520	552	NR	650	459	NR	780	8	NR	910	0	NR
395	4	NR	525	574	NR	655	410	NR	785	7	NR	915	0	NR
400	6	NR	530	589	NR	660	361	NR	790	6	NR	920	0	NR
405	8	NR	535	605	NR	665	317	NR	795	5	NR	925	0	NR
410	11	NR	540	617	NR	670	276	NR	800	5	NR	930	0	NR
415	18	NR	545	632	NR	675	239	NR	805	4	NR	935	0	NR
420	30	NR	550	648	NR	680	207	NR	810	3	NR	940	0	NR
425	53	NR	555	666	NR	685	178	NR	815	3	NR	945	0	NR
430	95	NR	560	690	NR	690	153	NR	820	3	NR	950	0	NR
435	173	NR	565	716	NR	695	131	NR	825	2	NR	955	0	NR
440	304	NR	570	742	NR	700	112	NR	830	2	NR	960	0	NR
445	559	NR	575	771	NR	705	95	NR	835	2	NR	965	0	NR
450	915	NR	580	798	NR	710	81	NR	840	1	NR	970	0	NR
455	929	NR	585	820	NR	715	69	NR	845	1	NR	975	0	NR
460	582	NR	590	841	NR	720	59	NR	850	1	NR	980	0	NR
465	446	NR	595	852	NR	725	50	NR	855	1	NR	985	0	NR
470	356	NR	600	852	NR	730	42	NR	860	1	NR	990	0	NR
475	250	NR	605	845	NR	735	36	NR	865	1	NR	995	0	NR
480	212	NR	610	827	NR	740	30	NR	870	1	NR	1000	0	NR
485	221	NR	615	801	NR	745	26	NR	875	1	NR			

**Summary**

$R_f = 84.4$   
 $R_g = 96.5$   
 $CIE R_a = 84.5$   
 $R_9 = 15.9$

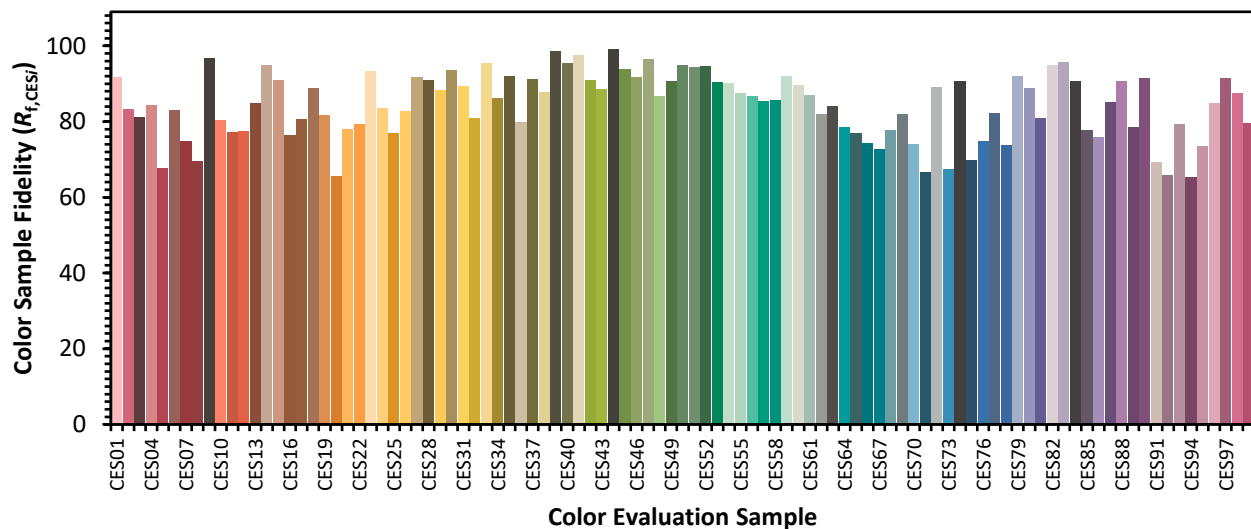


**Color Vector Graphics**

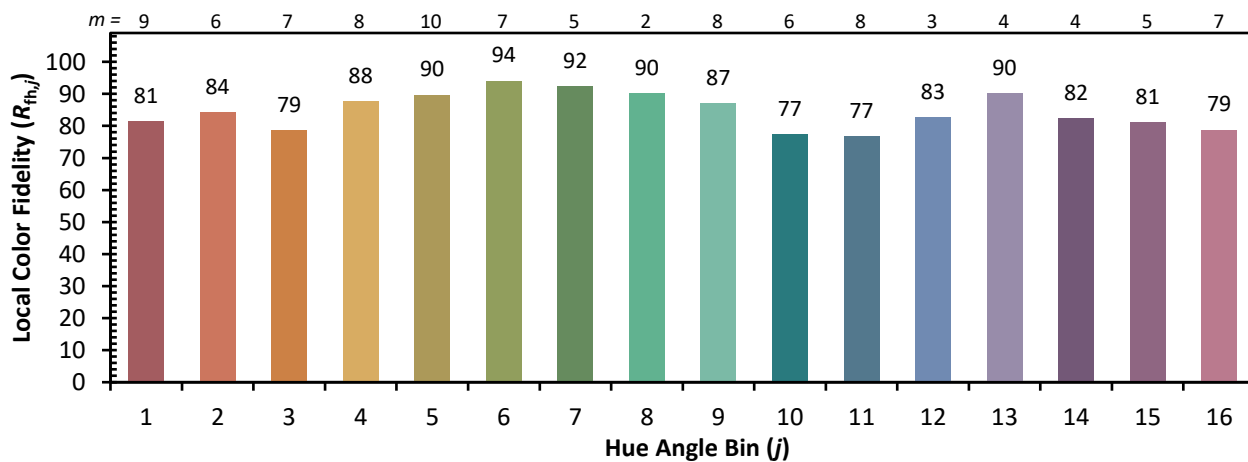
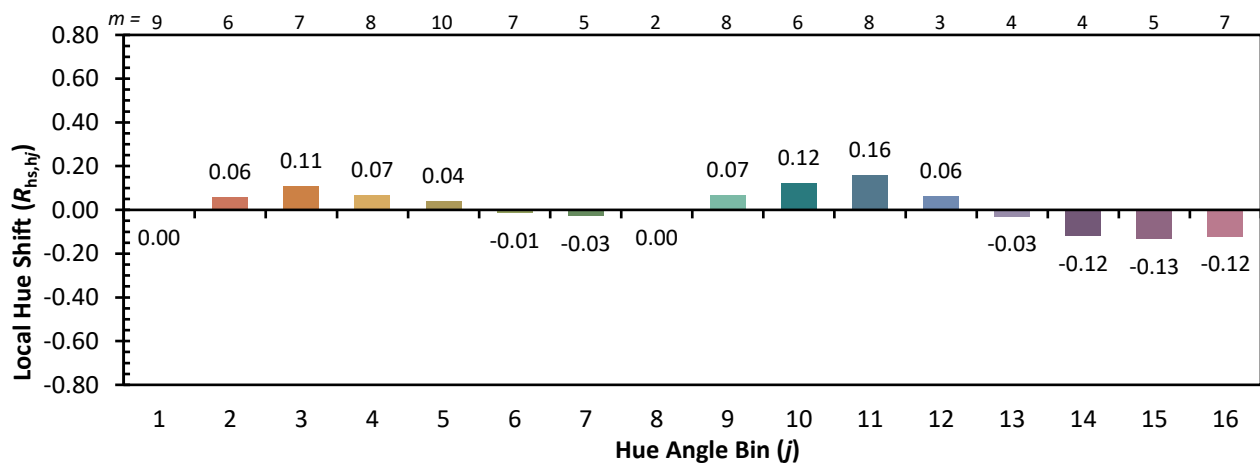
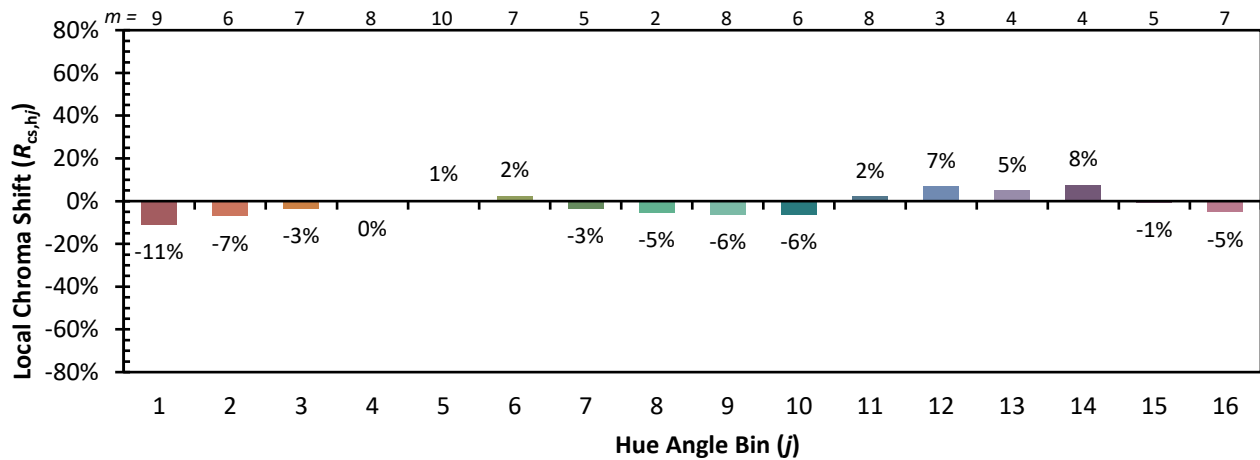


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

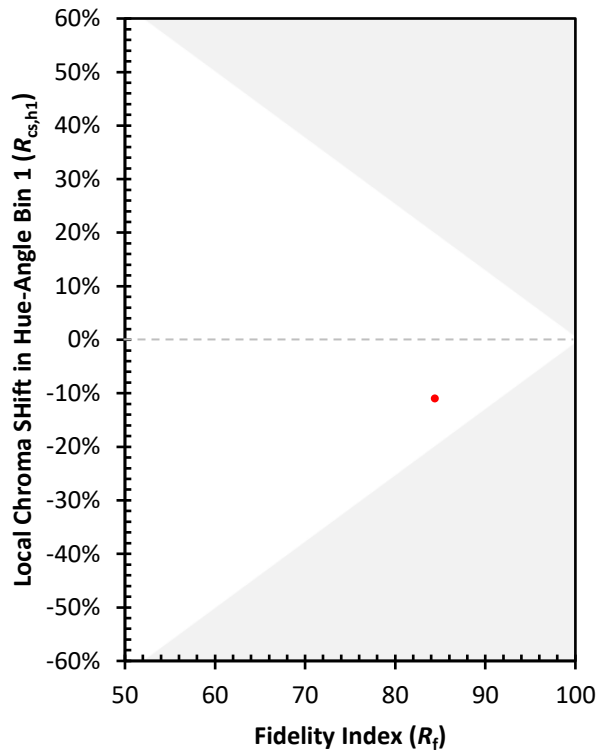
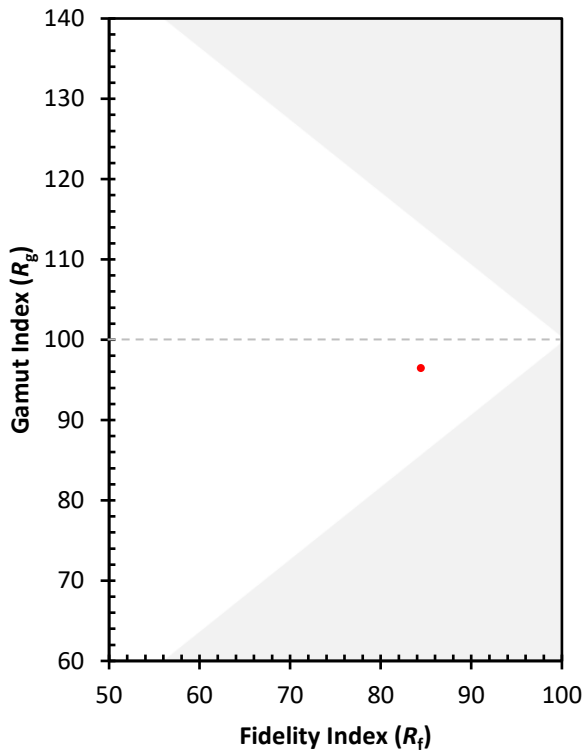
CES01 = 86	CES26 = 83	CES51 = 94	CES76 = 75
CES02 = 62	CES27 = 92	CES52 = 95	CES77 = 82
CES03 = 31	CES28 = 91	CES53 = 90	CES78 = 74
CES04 = 70	CES29 = 88	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 94	CES55 = 88	CES80 = 89
CES06 = 51	CES31 = 89	CES56 = 87	CES81 = 81
CES07 = 41	CES32 = 81	CES57 = 86	CES82 = 95
CES08 = 40	CES33 = 95	CES58 = 86	CES83 = 96
CES09 = 29	CES34 = 86	CES59 = 92	CES84 = 91
CES10 = 75	CES35 = 92	CES60 = 90	CES85 = 78
CES11 = 57	CES36 = 80	CES61 = 87	CES86 = 76
CES12 = 63	CES37 = 91	CES62 = 82	CES87 = 85
CES13 = 43	CES38 = 88	CES63 = 84	CES88 = 91
CES14 = 74	CES39 = 98	CES64 = 79	CES89 = 78
CES15 = 71	CES40 = 96	CES65 = 77	CES90 = 92
CES16 = 47	CES41 = 98	CES66 = 74	CES91 = 69
CES17 = 49	CES42 = 91	CES67 = 73	CES92 = 66
CES18 = 56	CES43 = 89	CES68 = 78	CES93 = 79
CES19 = 71	CES44 = 99	CES69 = 82	CES94 = 65
CES20 = 65	CES45 = 94	CES70 = 74	CES95 = 74
CES21 = 86	CES46 = 92	CES71 = 67	CES96 = 85
CES22 = 78	CES47 = 97	CES72 = 89	CES97 = 91
CES23 = 91	CES48 = 87	CES73 = 68	CES98 = 87
CES24 = 90	CES49 = 91	CES74 = 91	CES99 = 80
CES25 = 71	CES50 = 95	CES75 = 70	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)