

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: P1449858

Luminaire Tested: **TWC150\_T2\_60W\_4000K**

Issue Date: 5/19/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449858  
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: TWC150\_T2\_60W\_4000K  
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T2 distribution, 60W  
4000K settings  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10095 lumens  
Efficiency: N/A  
Efficacy: 177.1 lumens/watt  
Luminous Opening: Rectangular (W 1.33' x L: 0.42' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

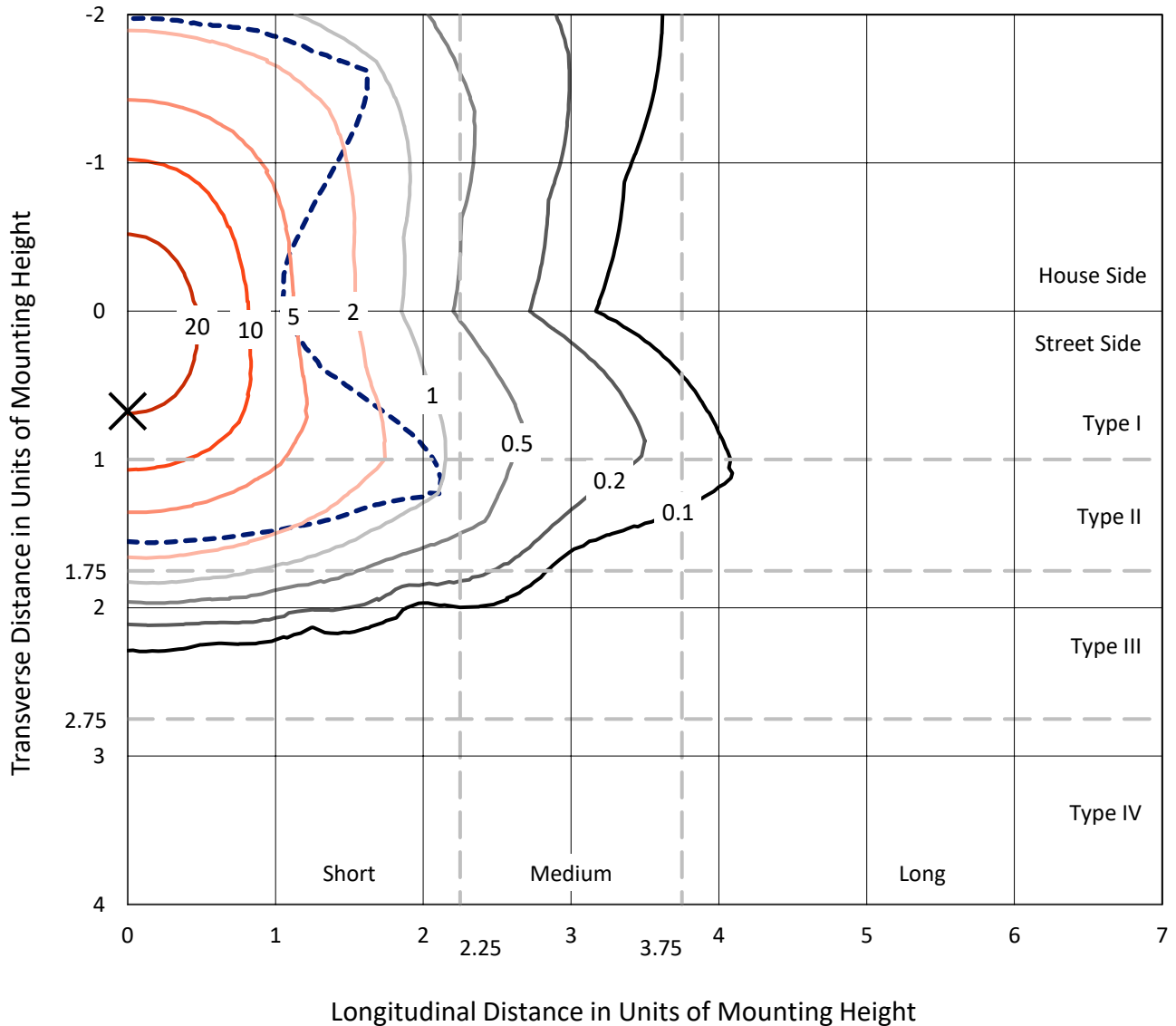
Input Watts (W): 57  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

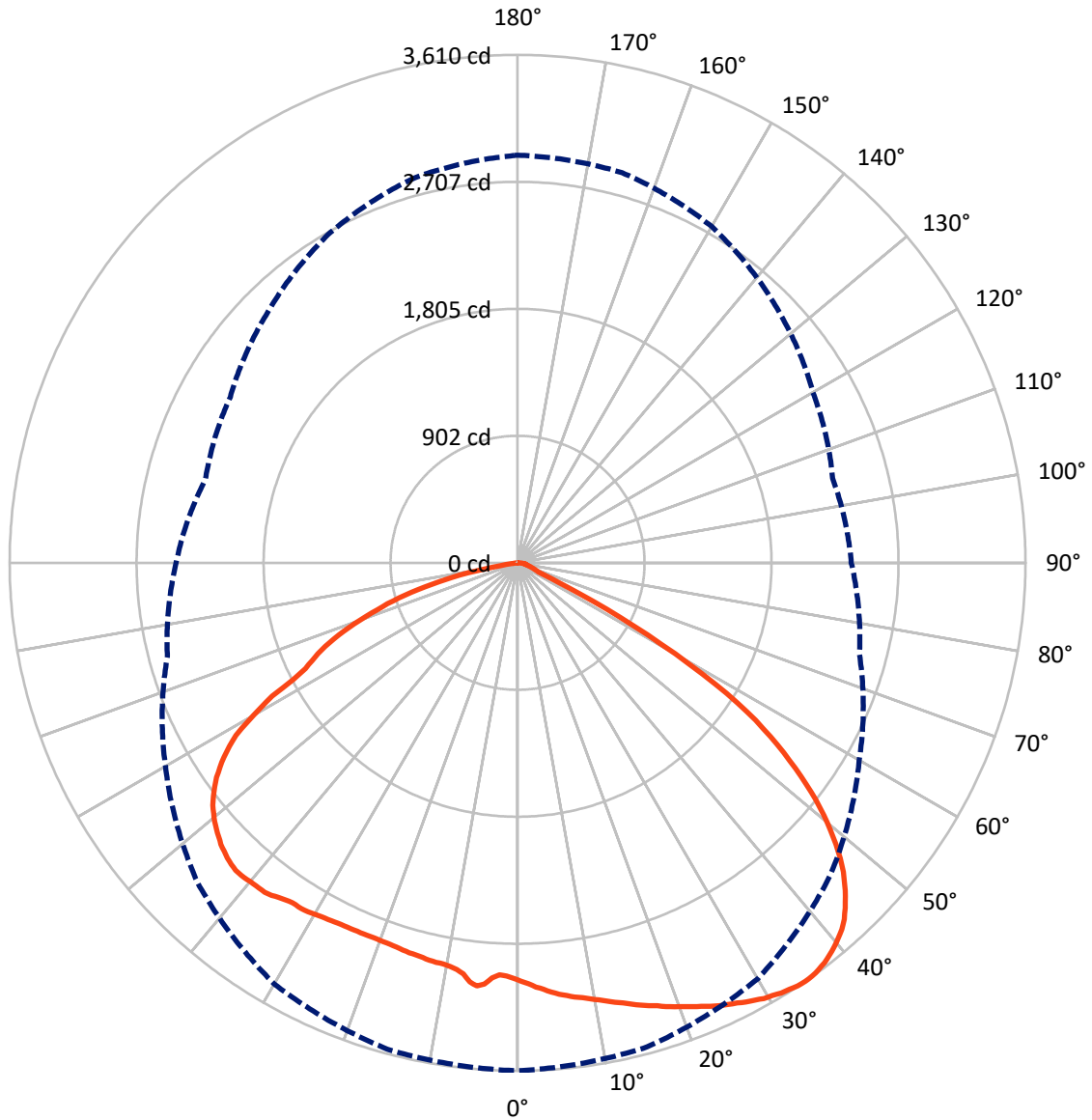
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 30.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral      - - - Horizontal Cone Through 34-Deg Vertical

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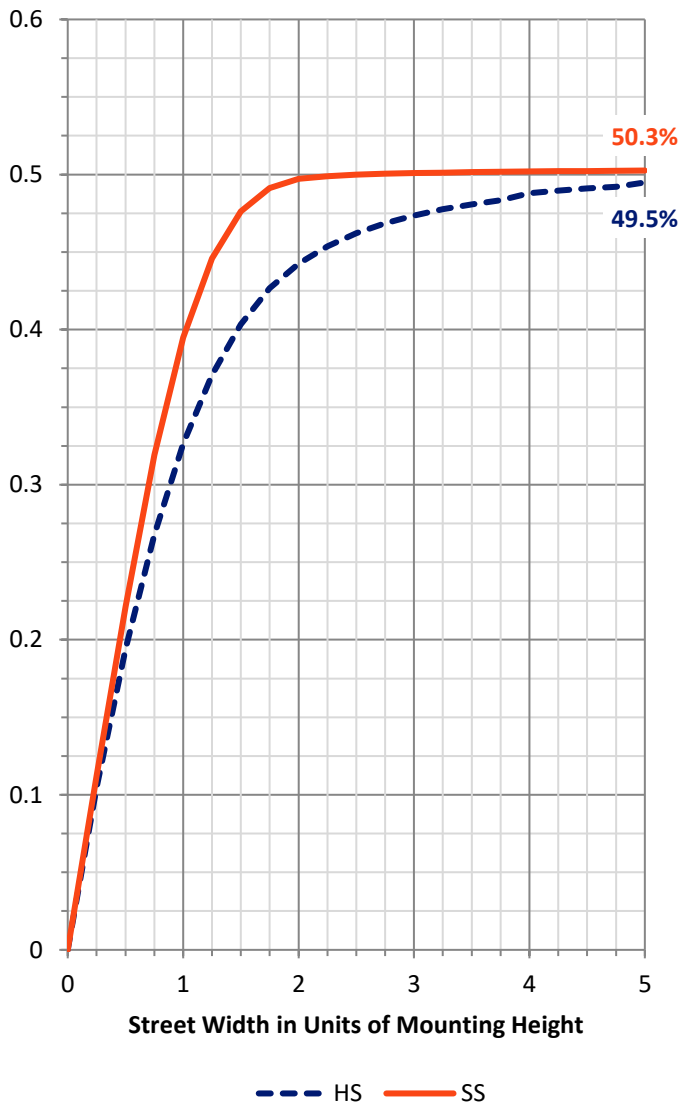
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5022.7	0.0	5022.7
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	5072.3	0.0	5072.3
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	10095.0	0.0	10095.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	286.0	2.8
10°-20°	843.0	8.4
20°-30°	1352.5	13.4
30°-40°	1769.9	17.5
40°-50°	2016.8	20.0
50°-60°	1920.4	19.0
60°-70°	1246.7	12.3
70°-80°	552.6	5.5
80°-90°	107.2	1.1
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°	10095.0	100.0
0°-180°	10095.0	100.0

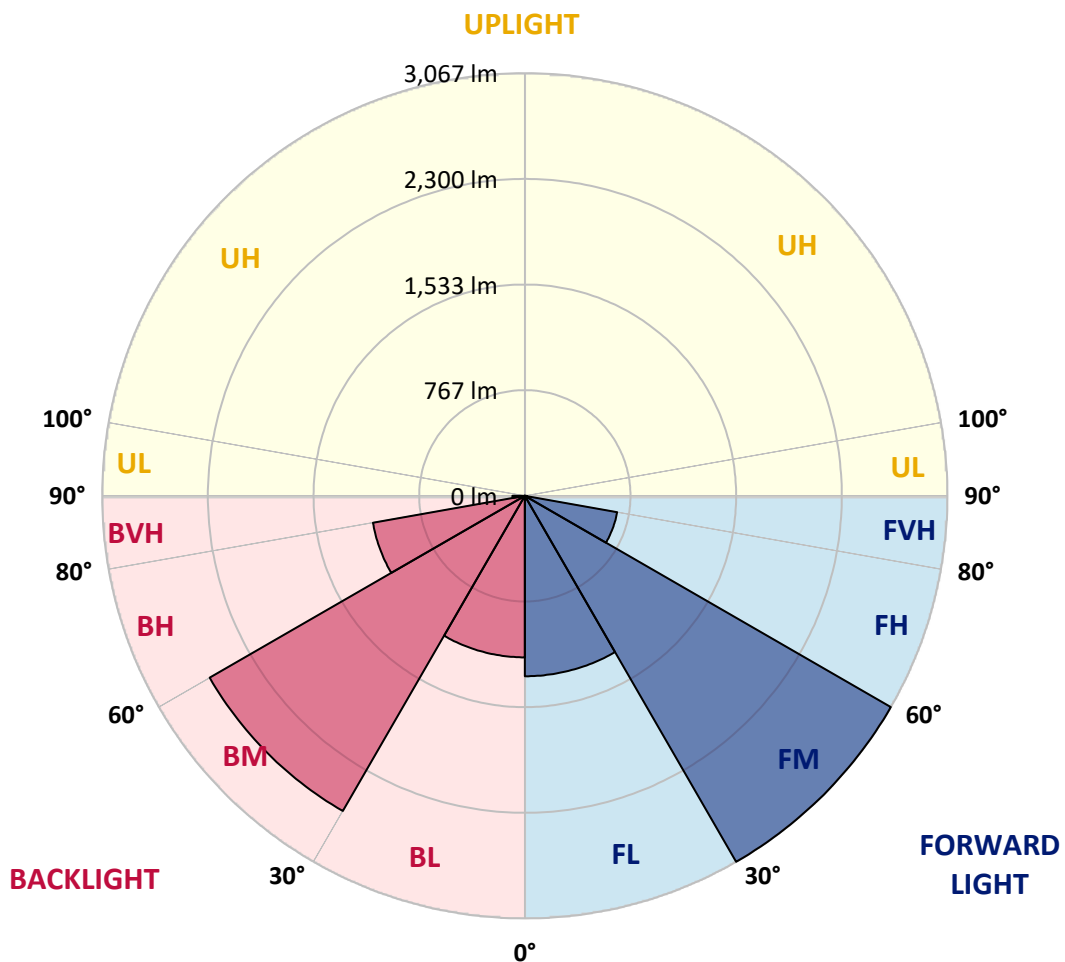


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1309.2	13.0			
FM (30°-60°)	3066.5	30.4			
FH (60°-80°)	680.1	6.7			G1/1800
FVH (80°-90°)	16.4	0.2			G1/100
BL (0°-30°)	1172.2	11.6	B3/2500		
BM (30°-60°)	2640.6	26.2	B3/5000		
BH (60°-80°)	1119.2	11.1	B3/2500		G3/2500
BVH (80°-90°)	90.8	0.9			G1/100
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°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0
1°	2992.0	2990.2	2991.3	2984.0	2978.5	2976.2	2973.6	2968.0	2963.0	2959.3	2956.4
2°	3017.5	3012.6	3007.4	2999.0	2988.7	2978.9	2970.9	2960.7	2952.3	2948.1	2942.9
3°	3037.5	3035.2	3025.7	3012.4	2998.7	2979.7	2967.5	2952.6	2940.7	2932.8	2928.7
4°	3060.4	3053.8	3043.4	3026.6	3003.7	2980.4	2961.6	2944.0	2930.4	2929.4	2941.1
5°	3079.4	3073.1	3058.8	3038.8	3009.9	2981.6	2958.1	2935.2	2922.7	2943.6	2979.5
6°	3095.8	3088.0	3073.6	3049.3	3016.0	2978.2	2945.5	2921.0	2925.6	2978.5	3012.4
7°	3111.8	3101.6	3081.8	3056.3	3018.6	2977.4	2939.4	2912.3	2943.0	3005.9	3016.8
8°	3125.6	3115.6	3095.0	3061.8	3022.7	2975.2	2930.5	2904.9	2966.0	3008.8	2978.3
9°	3142.7	3131.5	3103.1	3071.3	3021.7	2969.7	2919.2	2898.0	2987.5	2985.6	2933.5
10°	3158.9	3143.7	3116.9	3075.6	3024.3	2961.5	2908.2	2901.8	2986.5	2937.2	2913.0
11°	3178.0	3163.2	3125.5	3080.1	3020.6	2957.2	2897.7	2910.4	2973.7	2902.6	2898.1
12°	3198.2	3181.4	3138.3	3087.6	3021.3	2950.4	2880.8	2919.3	2932.3	2885.1	2887.3
13°	3216.1	3197.9	3152.0	3090.3	3020.2	2940.8	2865.7	2925.3	2892.1	2869.4	2879.8
14°	3239.2	3217.6	3166.4	3096.1	3018.0	2931.0	2851.4	2929.2	2860.8	2856.1	2874.7
15°	3262.4	3239.5	3179.9	3102.5	3012.4	2919.0	2834.9	2917.0	2837.8	2845.0	2861.7
16°	3281.6	3258.1	3198.4	3107.6	3013.0	2911.5	2818.9	2895.8	2820.2	2832.9	2853.5
17°	3301.2	3278.1	3211.0	3117.4	3011.6	2901.3	2803.4	2862.5	2799.5	2820.2	2846.5
18°	3325.3	3294.4	3224.9	3125.1	3009.7	2889.9	2789.9	2816.9	2783.8	2804.4	2839.4
19°	3347.1	3315.8	3240.4	3133.0	3004.9	2875.8	2775.6	2775.5	2767.4	2792.7	2828.0
20°	3367.0	3331.2	3251.1	3137.9	3004.8	2865.7	2765.0	2740.3	2747.3	2778.4	2816.5
21°	3389.6	3351.7	3267.2	3142.0	2996.8	2855.2	2759.3	2713.6	2724.4	2762.8	2810.3
22°	3412.6	3369.0	3276.1	3146.8	2989.2	2842.8	2753.0	2687.3	2701.6	2749.1	2803.4
23°	3436.3	3392.3	3287.6	3147.7	2980.4	2825.0	2746.2	2660.8	2682.4	2735.1	2791.9
24°	3459.1	3412.1	3300.0	3150.6	2973.1	2809.6	2735.8	2637.1	2661.0	2722.2	2785.3
25°	3477.8	3430.5	3313.3	3148.8	2962.0	2784.5	2722.4	2613.3	2639.8	2708.1	2782.4
26°	3495.9	3449.3	3325.8	3147.4	2947.2	2760.8	2699.7	2580.9	2614.0	2690.7	2777.0
27°	3518.4	3466.5	3343.0	3150.0	2935.6	2738.7	2672.3	2553.5	2590.9	2676.8	2770.3
28°	3535.8	3482.3	3351.4	3144.7	2919.0	2711.2	2634.8	2521.2	2568.3	2664.9	2768.5
29°	3557.4	3502.2	3363.9	3145.8	2900.2	2684.9	2595.5	2489.7	2547.6	2649.7	2767.1
30°	3568.7	3520.3	3371.1	3142.9	2884.1	2652.1	2546.6	2457.3	2523.2	2636.4	2761.8
31°	3585.1	3532.1	3385.1	3146.2	2865.0	2620.4	2500.8	2424.8	2496.8	2624.7	2761.3
32°	3594.9	3546.3	3392.4	3144.4	2843.9	2588.3	2455.6	2389.0	2474.3	2612.1	2758.4
33°	3605.8	3553.5	3404.3	3142.5	2823.8	2552.2	2411.0	2354.1	2446.9	2600.3	2760.2
34°	3609.8	3561.6	3413.1	3142.1	2804.0	2515.5	2371.6	2317.9	2423.8	2589.0	2759.4
35°	3607.5	3563.3	3422.1	3140.5	2784.3	2480.1	2328.8	2281.8	2394.9	2575.3	2756.7
36°	3596.1	3561.9	3421.9	3135.0	2763.9	2439.9	2285.4	2245.7	2369.9	2567.2	2744.5
37°	3583.7	3550.4	3427.4	3136.4	2744.0	2400.0	2240.8	2208.5	2344.2	2552.1	2743.4
38°	3562.6	3535.3	3423.5	3138.6	2727.7	2362.7	2196.4	2171.7	2320.4	2535.8	2744.3
39°	3537.3	3516.9	3414.3	3138.0	2709.9	2322.7	2150.3	2137.3	2294.9	2515.3	2750.2
40°	3509.6	3491.3	3406.2	3139.4	2693.5	2281.7	2104.1	2102.8	2269.9	2501.0	2756.8
41°	3478.8	3462.6	3389.4	3139.4	2678.2	2244.3	2057.8	2068.4	2243.5	2496.4	2754.2
42°	3436.3	3427.3	3369.4	3137.6	2662.8	2205.1	2012.5	2028.7	2213.8	2488.6	2753.1
43°	3381.9	3386.5	3342.1	3136.1	2650.4	2168.2	1961.7	1988.9	2178.8	2472.4	2752.8
44°	3323.8	3335.7	3310.8	3133.1	2638.0	2133.3	1909.5	1949.8	2154.0	2454.5	2754.6



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**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	3260.1	3281.5	3277.8	3124.7	2627.1	2099.7	1858.0	1907.3	2129.2	2435.7	2754.5
46°	3191.9	3218.2	3235.4	3114.2	2617.3	2067.7	1808.8	1865.6	2104.4	2430.0	2747.9
47°	3109.6	3148.6	3192.8	3097.3	2611.0	2033.8	1753.7	1823.8	2077.0	2421.5	2732.9
48°	3020.6	3070.4	3136.3	3080.9	2601.3	1995.6	1701.5	1778.2	2044.6	2409.2	2715.4
49°	2925.3	2981.6	3074.7	3052.4	2594.6	1955.3	1646.3	1728.8	2012.6	2393.8	2695.7
50°	2821.6	2880.6	3007.1	3022.7	2590.0	1911.6	1592.5	1674.9	1987.6	2376.7	2672.8
51°	2707.9	2780.2	2930.5	2990.9	2584.4	1866.9	1537.3	1622.7	1960.6	2355.0	2648.0
52°	2587.9	2664.6	2846.0	2955.3	2581.8	1820.0	1480.2	1578.2	1927.5	2335.9	2624.4
53°	2458.0	2544.3	2749.0	2908.9	2575.4	1765.2	1425.7	1536.0	1891.7	2318.0	2597.4
54°	2323.7	2414.6	2639.0	2854.9	2567.5	1718.0	1371.7	1484.3	1854.4	2296.8	2568.2
55°	2181.2	2276.8	2522.2	2790.9	2561.6	1669.5	1313.1	1431.3	1813.5	2272.8	2536.5
56°	2028.4	2131.2	2396.9	2722.0	2551.3	1622.3	1255.5	1382.5	1779.5	2245.0	2501.8
57°	1855.5	1973.3	2258.8	2642.7	2535.8	1576.7	1198.5	1334.2	1740.3	2216.5	2463.7
58°	1647.9	1801.1	2112.9	2546.5	2511.2	1531.4	1139.3	1283.7	1703.1	2187.4	2419.8
59°	1414.3	1596.9	1956.0	2439.0	2483.7	1486.6	1080.3	1229.0	1662.6	2158.1	2367.9
60°	1172.4	1361.9	1785.5	2314.1	2447.0	1441.9	1019.2	1173.1	1621.0	2128.7	2310.3
61°	944.5	1119.5	1597.7	2174.3	2407.6	1400.3	960.9	1117.2	1578.7	2099.2	2240.7
62°	716.9	892.3	1372.1	2009.6	2358.3	1364.3	906.5	1064.7	1539.0	2059.0	2136.3
63°	489.2	665.2	1137.0	1832.6	2300.4	1332.1	847.8	1008.8	1501.8	2015.1	2031.9
64°	317.2	438.2	902.5	1648.5	2231.1	1305.8	790.0	956.8	1462.3	1965.3	1925.3
65°	208.5	273.7	667.9	1432.9	2150.5	1287.7	734.8	905.5	1421.8	1914.3	1744.5
66°	160.5	180.2	433.3	1193.1	2054.0	1279.3	680.3	854.2	1378.2	1846.0	1613.1
67°	145.6	141.5	264.9	946.9	1935.3	1274.7	628.2	802.9	1335.5	1736.2	1536.0
68°	135.3	128.6	167.7	700.6	1788.6	1272.3	575.6	753.5	1285.1	1600.1	1471.6
69°	125.3	118.4	131.2	454.2	1623.8	1268.3	525.0	705.2	1235.4	1494.5	1408.2
70°	115.4	108.7	118.1	264.6	1414.1	1267.4	475.8	658.9	1187.8	1428.1	1347.3
71°	106.2	100.5	108.4	156.2	1137.5	1274.0	428.2	612.1	1134.1	1363.7	1291.2
72°	98.8	92.3	98.8	113.3	842.1	1275.2	385.1	566.2	1048.3	1293.0	1232.2
73°	91.4	84.1	89.2	100.5	546.4	1245.3	342.4	519.0	967.6	1219.7	1169.7
74°	84.1	76.9	79.5	88.3	250.8	1158.4	301.5	473.2	914.3	1150.6	1099.5
75°	76.5	69.1	70.4	76.1	139.1	1047.4	263.0	430.2	869.5	1085.3	1026.1
76°	70.2	62.1	60.1	67.8	117.2	928.0	224.5	387.4	820.3	1021.6	937.6
77°	65.4	56.6	52.2	61.3	96.7	808.5	186.2	347.0	771.5	962.4	835.7
78°	62.3	52.0	45.7	53.9	76.1	689.0	154.1	298.4	726.5	905.3	743.6
79°	59.8	49.1	41.1	44.8	69.0	525.6	125.2	260.2	678.5	850.5	658.3
80°	56.5	46.7	37.4	36.5	68.9	397.2	99.3	222.0	631.6	779.5	592.1
81°	52.7	43.6	34.5	30.9	64.1	277.8	77.7	183.9	586.8	705.2	524.0
82°	48.1	40.2	31.9	27.0	54.8	180.7	59.0	154.4	538.2	629.3	373.5
83°	39.8	34.9	29.1	23.6	45.4	106.5	42.7	126.5	489.9	571.5	223.0
84°	31.4	28.6	24.6	20.5	31.2	79.5	32.7	99.3	423.4	519.1	75.2
85°	22.6	21.2	18.5	17.5	18.4	52.8	22.6	75.0	340.9	414.8	43.3
86°	15.8	16.0	13.5	13.0	11.8	26.0	12.7	52.3	272.8	310.4	11.9
87°	10.8	10.9	9.2	8.9	8.0	14.3	7.2	35.4	204.7	206.1	5.8
88°	5.8	5.9	5.0	4.9	4.2	9.5	3.3	18.5	136.6	101.7	2.0
89°	0.8	0.8	0.8	0.8	0.9	4.9	1.1	2.0	68.5	0.7	0.5



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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: P1449858  
 CATALOG NUMBER: TWC150\_T2\_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



REPORT NUMBER: P1449858  
CATALOG NUMBER: TWC150\_T2\_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: P1449858

CATALOG NUMBER: TWC150\_T2\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0	2973.0
1°	2953.6	2953.4	2955.8	2953.7	2958.2	2961.6	2965.4	2974.0	2978.8	2981.8	2985.7
2°	2936.0	2937.6	2936.6	2938.6	2948.8	2953.8	2961.1	2971.5	2983.8	2990.6	3000.4
3°	2927.5	2931.0	2926.1	2926.8	2931.1	2944.0	2952.1	2967.3	2983.0	2999.0	3017.1
4°	2955.2	2954.5	2945.2	2929.8	2920.4	2931.0	2944.3	2965.4	2989.4	3007.9	3030.1
5°	2999.6	3001.9	2988.0	2963.0	2925.6	2918.6	2936.0	2959.1	2988.0	3017.7	3043.3
6°	3020.7	3021.3	3020.5	2994.9	2949.8	2911.4	2925.6	2952.1	2987.5	3024.5	3053.1
7°	3003.7	2997.9	3006.7	3009.8	2979.3	2914.2	2914.8	2946.7	2988.0	3029.5	3063.8
8°	2951.0	2945.4	2955.4	2990.3	2996.8	2925.7	2902.7	2939.7	2988.6	3033.2	3071.0
9°	2922.2	2922.2	2922.5	2939.1	2991.9	2946.7	2888.0	2927.9	2982.0	3034.4	3078.6
10°	2909.4	2908.5	2907.7	2907.2	2955.8	2961.0	2878.9	2919.1	2979.7	3037.4	3087.0
11°	2898.5	2899.7	2896.6	2892.0	2913.1	2963.4	2870.5	2908.4	2971.2	3036.0	3090.6
12°	2896.4	2897.1	2889.1	2876.3	2882.6	2950.4	2865.7	2892.7	2967.3	3035.9	3098.7
13°	2889.9	2892.8	2885.5	2867.5	2864.9	2918.2	2868.8	2878.2	2960.0	3035.5	3106.3
14°	2882.8	2885.3	2873.5	2860.3	2846.5	2876.4	2876.1	2866.4	2953.8	3035.9	3113.7
15°	2875.8	2878.0	2866.7	2850.6	2829.8	2840.3	2875.4	2854.0	2944.5	3038.8	3124.4
16°	2870.7	2875.6	2862.9	2836.7	2817.6	2812.6	2877.8	2833.7	2936.0	3041.1	3132.8
17°	2865.9	2870.0	2856.5	2828.2	2800.6	2792.8	2866.2	2818.4	2926.1	3040.0	3143.5
18°	2857.9	2862.2	2846.1	2816.4	2783.4	2769.8	2846.1	2799.5	2921.2	3040.0	3154.6
19°	2849.8	2859.3	2841.1	2808.2	2764.8	2748.9	2818.0	2784.7	2912.0	3038.2	3164.3
20°	2848.3	2857.0	2833.3	2794.5	2753.0	2728.6	2780.2	2762.8	2902.0	3037.1	3166.8
21°	2845.8	2854.0	2829.2	2782.7	2737.6	2708.6	2737.6	2745.4	2894.6	3037.4	3174.4
22°	2842.8	2853.3	2826.3	2773.2	2719.2	2684.0	2695.5	2726.5	2880.8	3031.2	3179.5
23°	2843.1	2856.2	2823.2	2765.8	2701.2	2654.4	2659.7	2710.6	2867.2	3027.0	3185.9
24°	2840.5	2856.2	2822.1	2752.3	2683.3	2629.7	2628.0	2694.1	2848.5	3018.4	3191.1
25°	2839.1	2857.4	2821.0	2746.8	2668.5	2608.3	2596.8	2684.7	2828.4	3009.2	3193.4
26°	2842.8	2859.3	2816.9	2738.1	2651.7	2580.8	2567.0	2675.7	2809.6	2999.0	3197.1
27°	2841.6	2861.3	2818.0	2732.7	2634.9	2552.4	2535.3	2662.7	2784.4	2991.7	3199.8
28°	2844.0	2866.9	2818.0	2723.8	2616.1	2523.5	2507.7	2649.8	2758.6	2975.5	3201.7
29°	2850.3	2872.4	2819.2	2714.0	2600.6	2499.7	2477.1	2631.6	2731.6	2964.1	3205.7
30°	2851.5	2878.6	2823.7	2707.7	2583.1	2470.4	2441.9	2602.4	2701.6	2947.9	3211.7
31°	2863.4	2888.3	2825.4	2705.3	2566.7	2444.7	2404.7	2569.6	2670.0	2934.5	3214.5
32°	2867.9	2896.4	2833.3	2697.9	2548.3	2414.8	2370.9	2528.7	2641.4	2922.3	3212.2
33°	2870.5	2898.5	2834.5	2696.0	2526.8	2386.3	2331.0	2479.2	2608.8	2904.9	3218.6
34°	2870.1	2896.7	2832.6	2693.0	2513.2	2357.5	2296.5	2426.4	2576.5	2890.1	3215.6
35°	2870.7	2907.3	2829.6	2688.2	2493.0	2330.1	2258.7	2372.7	2542.8	2875.0	3220.1
36°	2882.2	2921.3	2832.0	2678.6	2476.6	2300.7	2219.1	2318.0	2509.2	2866.1	3222.3
37°	2896.9	2939.3	2843.7	2665.6	2460.3	2271.3	2178.0	2271.3	2475.8	2849.5	3227.1
38°	2907.4	2950.5	2855.8	2662.7	2442.9	2240.4	2139.8	2221.9	2443.9	2841.4	3227.2
39°	2912.1	2952.3	2863.8	2660.8	2421.1	2207.8	2101.7	2175.0	2410.6	2829.3	3228.3
40°	2914.5	2955.1	2862.2	2656.3	2396.8	2178.1	2063.6	2125.7	2374.8	2818.2	3225.7
41°	2918.6	2959.8	2861.2	2651.9	2377.8	2149.3	2016.5	2080.0	2339.7	2805.5	3229.1
42°	2922.7	2965.4	2870.6	2645.1	2361.1	2120.4	1970.8	2032.4	2304.8	2798.9	3222.0
43°	2927.0	2964.7	2872.4	2644.7	2348.3	2091.5	1922.7	1981.9	2271.3	2794.9	3216.4
44°	2920.7	2954.9	2871.9	2644.6	2334.3	2053.8	1876.5	1931.4	2234.0	2792.8	3203.5



REPORT NUMBER: P1449858

CATALOG NUMBER: TWC150\_T2\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	2908.9	2942.1	2862.3	2641.7	2309.3	2013.1	1830.1	1880.3	2196.7	2790.3	3187.6
46°	2891.1	2923.6	2845.9	2637.3	2287.5	1973.0	1783.8	1829.1	2162.8	2785.4	3166.2
47°	2873.0	2906.6	2826.3	2628.0	2268.0	1934.5	1738.1	1774.9	2126.7	2780.3	3139.9
48°	2852.8	2881.3	2807.1	2615.7	2250.7	1904.3	1691.1	1723.4	2093.8	2777.6	3107.2
49°	2828.7	2857.5	2783.3	2599.0	2229.5	1867.5	1643.5	1666.9	2059.5	2773.4	3075.9
50°	2803.1	2830.7	2761.8	2580.0	2206.6	1829.5	1594.3	1611.1	2023.9	2767.5	3037.5
51°	2774.4	2799.9	2736.3	2553.3	2180.4	1792.5	1544.4	1557.4	1991.7	2760.8	2993.5
52°	2746.3	2767.7	2706.9	2530.9	2156.3	1756.4	1489.9	1501.9	1958.3	2753.0	2936.1
53°	2708.1	2723.3	2674.8	2503.4	2137.5	1723.8	1434.5	1446.7	1928.0	2739.7	2875.4
54°	2667.4	2678.0	2641.4	2476.7	2118.8	1685.2	1379.0	1389.0	1901.7	2719.9	2802.8
55°	2620.8	2626.8	2597.1	2446.5	2100.0	1644.4	1329.6	1330.6	1876.6	2696.6	2722.7
56°	2567.7	2566.7	2549.1	2416.9	2074.9	1597.1	1277.0	1271.3	1857.2	2661.2	2633.5
57°	2506.8	2503.0	2492.9	2380.2	2047.3	1551.7	1221.3	1211.9	1844.2	2627.0	2526.6
58°	2438.9	2427.0	2430.1	2346.2	2021.4	1504.2	1165.5	1152.4	1828.2	2585.1	2412.2
59°	2365.8	2348.4	2362.3	2304.2	1996.7	1459.9	1111.6	1094.2	1815.1	2535.7	2278.4
60°	2285.6	2227.0	2287.7	2260.7	1963.8	1414.7	1058.3	1037.4	1798.9	2480.3	2132.7
61°	2140.5	2105.6	2160.4	2206.8	1929.7	1371.3	1005.2	980.8	1783.2	2412.3	1973.2
62°	1995.6	1983.9	2033.1	2136.4	1893.7	1325.0	950.2	924.3	1776.5	2337.0	1798.3
63°	1850.6	1795.0	1905.5	2065.9	1849.1	1276.0	892.7	866.1	1769.4	2241.8	1607.9
64°	1702.9	1683.8	1731.1	1994.0	1805.8	1231.3	835.6	807.6	1766.0	2135.4	1397.5
65°	1624.0	1619.1	1627.6	1854.8	1755.9	1184.7	778.7	753.1	1758.4	2008.1	1159.8
66°	1564.4	1558.8	1558.8	1686.3	1705.2	1136.2	723.7	699.4	1753.9	1858.2	919.8
67°	1504.7	1491.5	1503.1	1568.2	1646.5	1087.9	670.0	645.7	1750.6	1688.1	679.9
68°	1435.4	1413.4	1444.2	1490.7	1573.6	1038.3	617.0	588.4	1731.0	1478.6	439.9
69°	1360.0	1326.2	1376.1	1415.8	1463.3	986.7	565.3	533.0	1688.1	1235.0	264.4
70°	1281.2	1239.6	1308.1	1345.6	1363.2	937.5	515.4	479.5	1613.4	953.4	161.4
71°	1192.0	1141.5	1229.1	1280.5	1302.8	887.6	469.5	426.5	1504.8	670.7	120.2
72°	1101.3	1052.5	1146.7	1225.7	1251.8	839.4	426.8	377.5	1403.2	388.0	107.0
73°	1014.7	969.5	1058.1	1174.3	1191.4	787.1	382.7	330.6	1320.5	212.1	96.7
74°	923.5	877.0	966.8	1121.6	1132.5	711.4	342.5	289.0	1188.3	125.9	86.5
75°	833.5	782.7	874.7	1066.8	1072.8	649.4	303.9	248.2	1035.9	107.4	76.2
76°	737.1	676.5	785.8	1006.0	1013.4	603.7	270.3	211.2	823.8	90.1	65.3
77°	638.9	575.1	693.7	929.4	952.0	559.7	236.7	180.5	609.6	72.8	56.0
78°	549.5	477.6	610.8	836.2	886.0	513.8	203.3	154.8	395.5	66.6	47.3
79°	452.9	359.5	524.4	736.3	822.2	470.7	175.1	133.1	221.0	63.5	39.4
80°	327.1	241.3	431.3	645.0	754.7	430.3	143.7	110.8	119.5	58.0	33.6
81°	201.3	124.0	283.9	580.7	681.1	388.8	116.7	90.3	97.0	47.3	29.8
82°	78.2	40.6	137.1	529.9	612.2	347.9	94.9	69.8	75.7	37.5	26.5
83°	57.2	32.0	96.7	372.1	535.5	305.5	74.4	49.4	54.3	27.1	23.6
84°	36.2	23.4	56.3	214.3	476.7	259.1	56.9	35.4	52.5	19.0	20.8
85°	15.5	14.9	16.2	56.8	421.0	212.7	41.4	24.6	45.6	14.8	17.2
86°	9.4	8.8	10.2	31.5	263.4	166.4	30.0	15.9	33.7	11.6	11.9
87°	4.5	4.4	4.7	6.2	107.7	124.1	18.5	10.8	20.0	7.8	7.4
88°	1.7	1.7	1.8	1.8	53.3	82.6	7.1	5.8	13.3	3.9	2.9
89°	0.4	0.4	0.4	0.4	0.7	41.0	1.0	0.7	6.8	0.8	0.8



REPORT NUMBER: P1449858  
 CATALOG NUMBER: TWC150\_T2\_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: P1449858  
 CATALOG NUMBER: TWC150\_T2\_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: P1449858  
CATALOG NUMBER: TWC150\_T2\_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: P1449858  
 CATALOG NUMBER: TWC150\_T2\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
0°	2973.0	2973.0	2973.0
1°	2990.4	2992.6	2992.0
2°	3009.2	3012.1	3017.5
3°	3025.3	3033.8	3037.5
4°	3045.6	3054.2	3060.4
5°	3061.2	3072.6	3079.4
6°	3074.9	3089.7	3095.8
7°	3088.1	3108.2	3111.8
8°	3101.5	3122.7	3125.6
9°	3112.9	3134.8	3142.7
10°	3123.5	3148.3	3158.9
11°	3136.2	3166.9	3178.0
12°	3149.7	3188.2	3198.2
13°	3167.0	3206.5	3216.1
14°	3182.2	3229.7	3239.2
15°	3199.8	3247.1	3262.4
16°	3216.2	3268.1	3281.6
17°	3229.9	3283.8	3301.2
18°	3245.0	3306.5	3325.3
19°	3260.5	3326.6	3347.1
20°	3276.5	3345.6	3367.0
21°	3293.2	3363.9	3389.6
22°	3306.2	3388.6	3412.6
23°	3318.3	3409.4	3436.3
24°	3336.9	3429.9	3459.1
25°	3349.7	3453.7	3477.8
26°	3366.3	3470.5	3495.9
27°	3381.5	3485.2	3518.4
28°	3394.6	3506.2	3535.8
29°	3402.9	3526.1	3557.4
30°	3420.7	3541.5	3568.7
31°	3432.3	3554.8	3585.1
32°	3443.1	3566.3	3594.9
33°	3453.6	3574.2	3605.8
34°	3456.4	3578.2	3609.8
35°	3466.1	3579.0	3607.5
36°	3469.8	3574.2	3596.1
37°	3464.8	3563.8	3583.7
38°	3462.0	3548.8	3562.6
39°	3451.3	3523.6	3537.3
40°	3435.1	3496.0	3509.6
41°	3411.5	3467.7	3478.8
42°	3386.8	3427.5	3436.3
43°	3355.6	3386.4	3381.9
44°	3320.5	3333.3	3323.8



REPORT NUMBER: P1449858  
 CATALOG NUMBER: TWC150\_T2\_60W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
45°	3280.5	3270.2	3260.1
46°	3233.1	3203.4	3191.9
47°	3174.0	3131.1	3109.6
48°	3112.9	3046.5	3020.6
49°	3039.8	2950.4	2925.3
50°	2960.0	2851.4	2821.6
51°	2871.6	2746.7	2707.9
52°	2773.9	2629.0	2587.9
53°	2672.6	2501.9	2458.0
54°	2554.4	2371.3	2323.7
55°	2428.3	2231.9	2181.2
56°	2292.9	2079.0	2028.4
57°	2148.7	1918.7	1855.5
58°	1992.3	1731.3	1647.9
59°	1828.6	1510.9	1414.3
60°	1639.9	1272.2	1172.4
61°	1426.5	1021.5	944.5
62°	1184.1	792.8	716.9
63°	950.4	564.3	489.2
64°	716.7	374.5	317.2
65°	483.0	235.7	208.5
66°	304.6	166.5	160.5
67°	188.6	141.5	145.6
68°	138.7	130.4	135.3
69°	122.5	120.7	125.3
70°	112.0	111.1	115.4
71°	103.2	102.8	106.2
72°	93.9	94.5	98.8
73°	84.6	86.3	91.4
74°	77.4	79.1	84.1
75°	68.9	71.5	76.5
76°	59.6	64.7	70.2
77°	51.8	59.4	65.4
78°	46.3	55.5	62.3
79°	42.1	52.7	59.8
80°	38.9	50.1	56.5
81°	36.2	46.7	52.7
82°	33.3	42.8	48.1
83°	30.0	36.6	39.8
84°	24.1	29.7	31.4
85°	19.0	22.0	22.6
86°	12.3	15.9	15.8
87°	8.5	10.8	10.8
88°	4.6	5.8	5.8
89°	0.8	0.7	0.8



REPORT NUMBER: P1449858  
CATALOG NUMBER: TWC150\_T2\_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: P1449858  
CATALOG NUMBER: TWC150\_T2\_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



REPORT NUMBER: P1449858  
CATALOG NUMBER: TWC150\_T2\_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

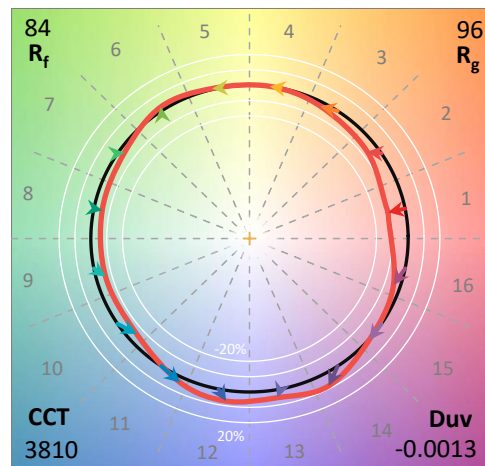
**Test Information**

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**

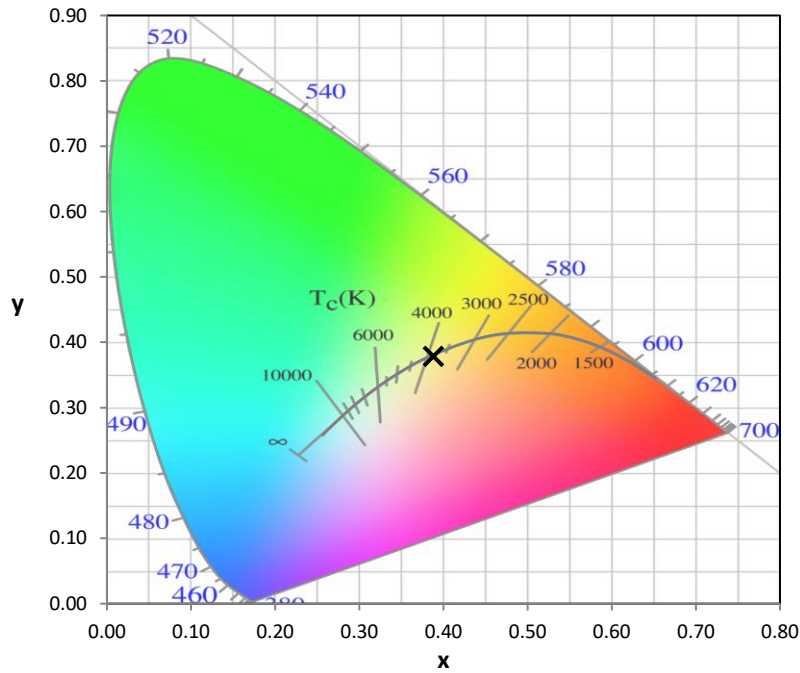
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-2

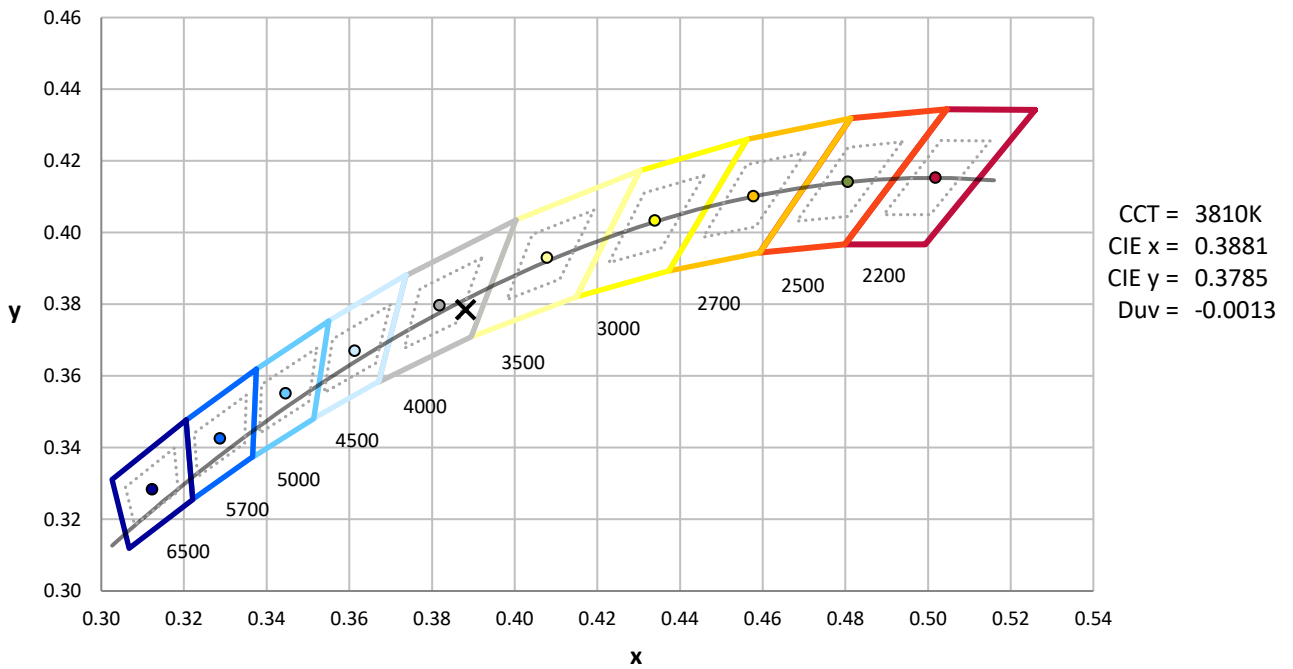
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



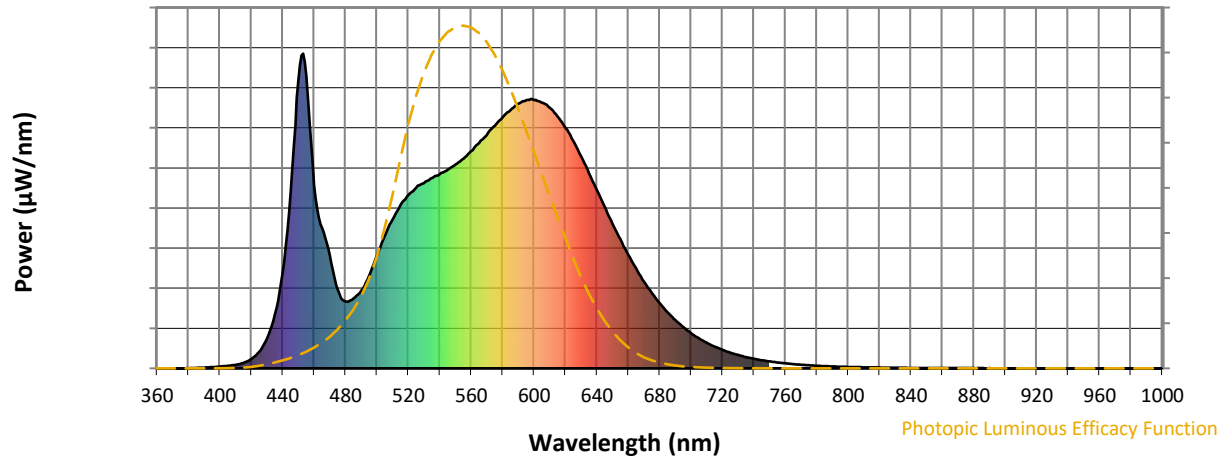
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2601-659-2

**Photopic Flux vs. Wavelength**

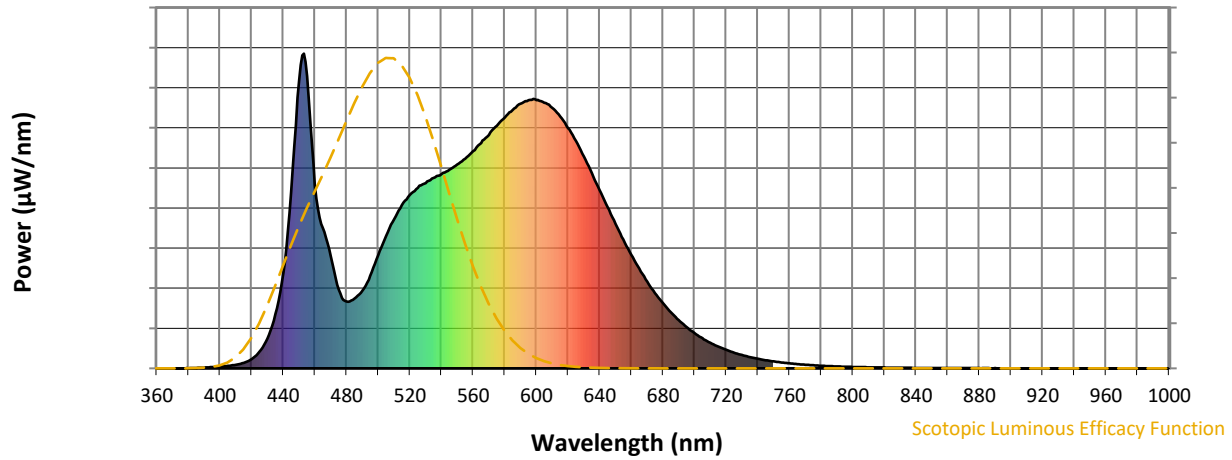


**Photopic Lumens: NR**

$\lambda$ (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**



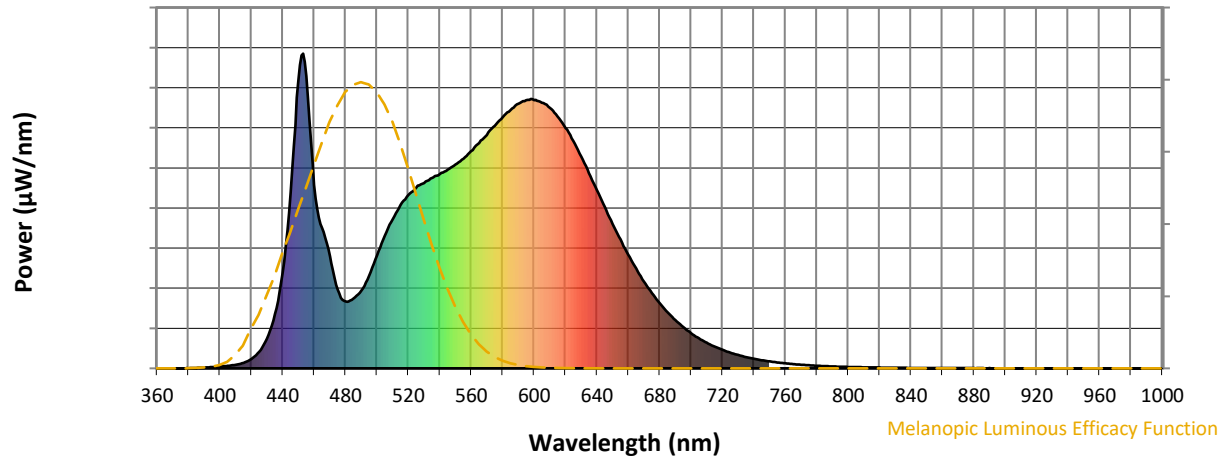
**Scotopic Lumens: NR**

**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**



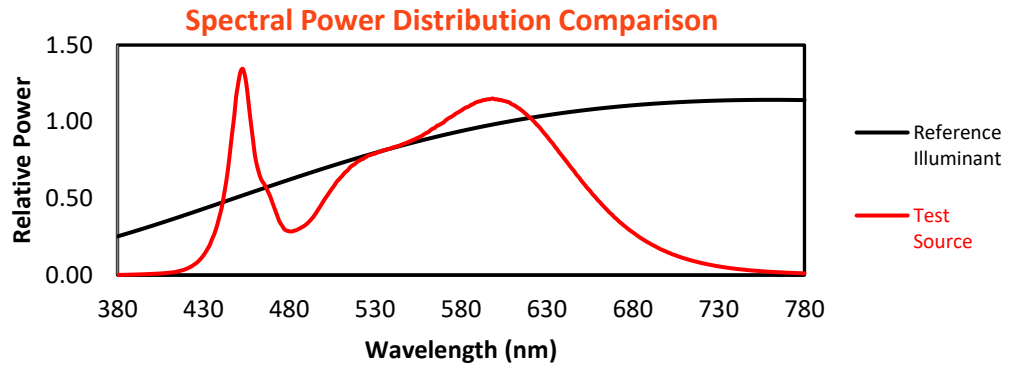
**Melanopic Lumens: NR**

**M/P: 3.35**

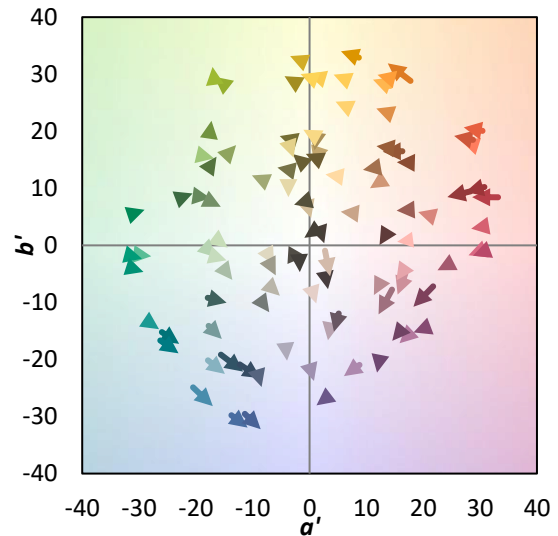
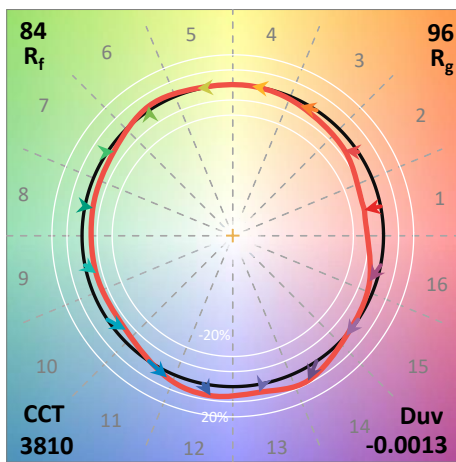
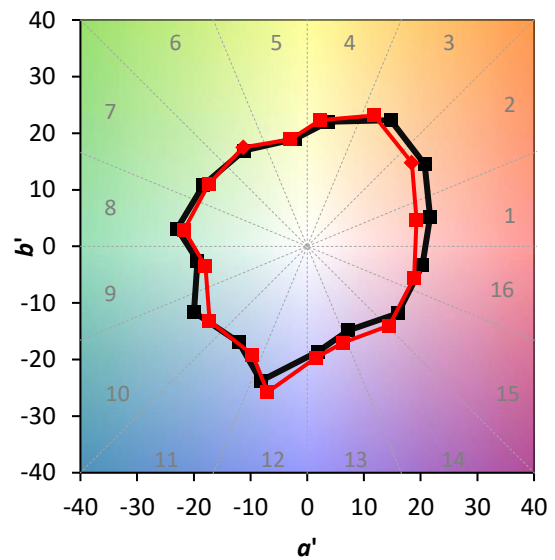
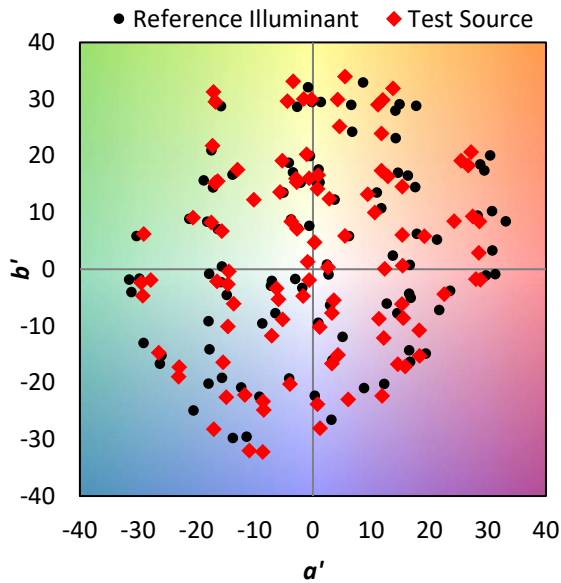
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	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**

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

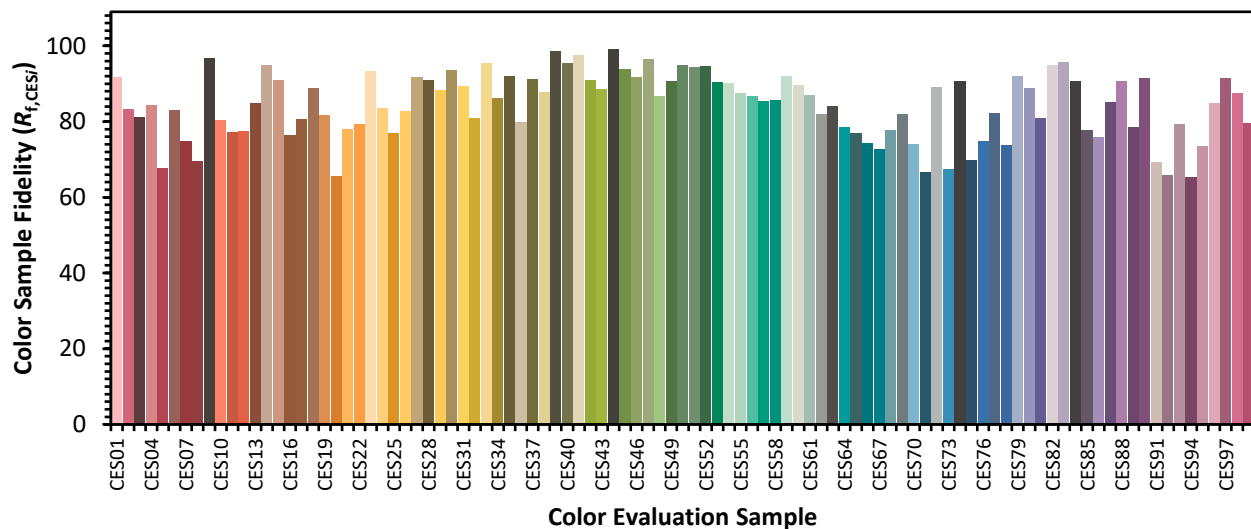


**Color Vector Graphics**

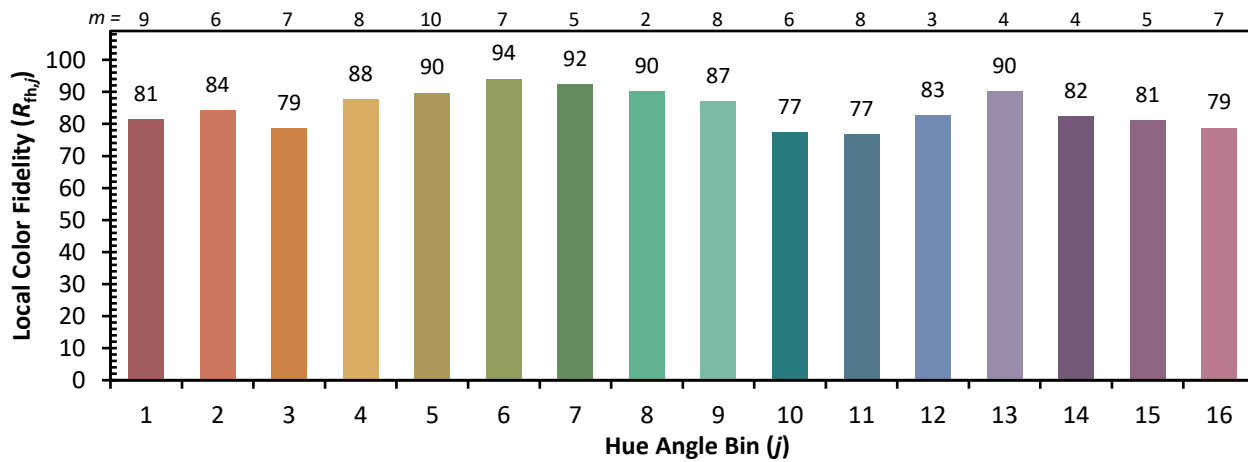
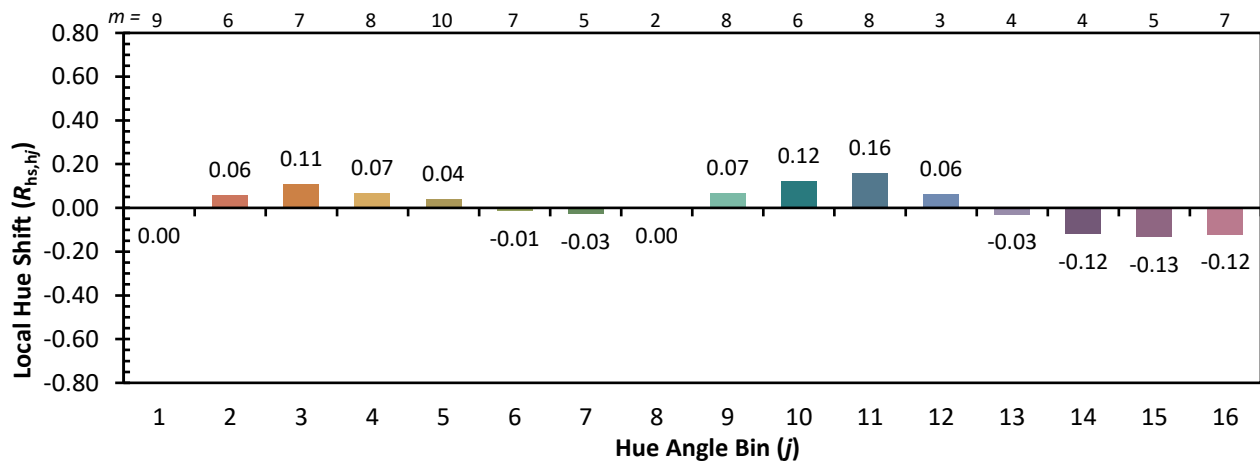
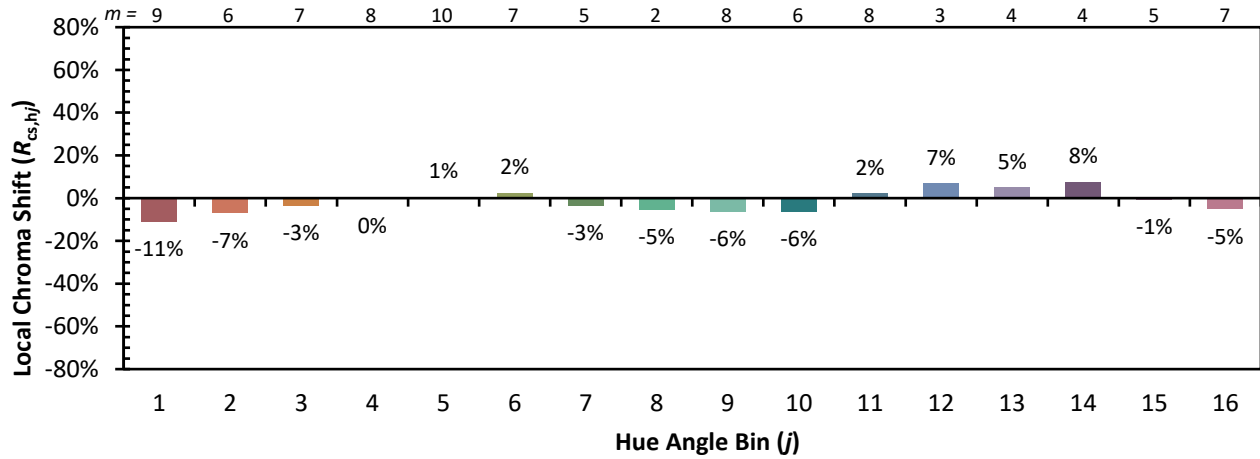


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

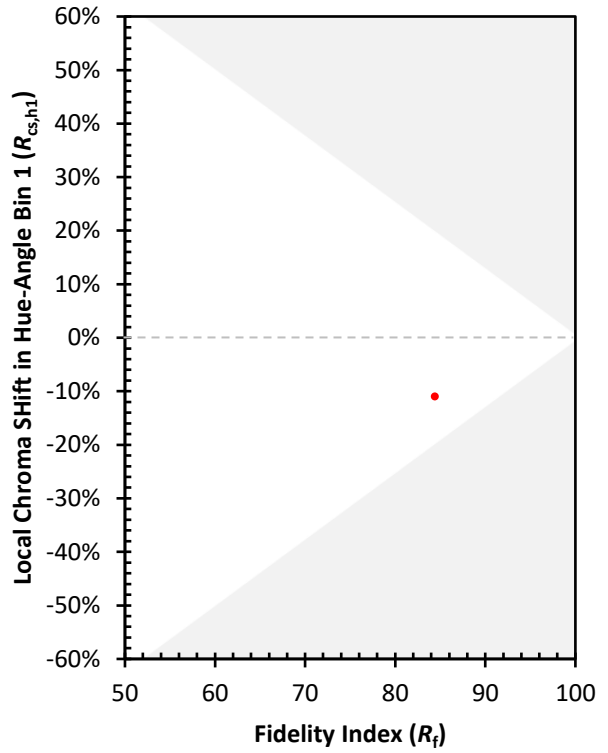
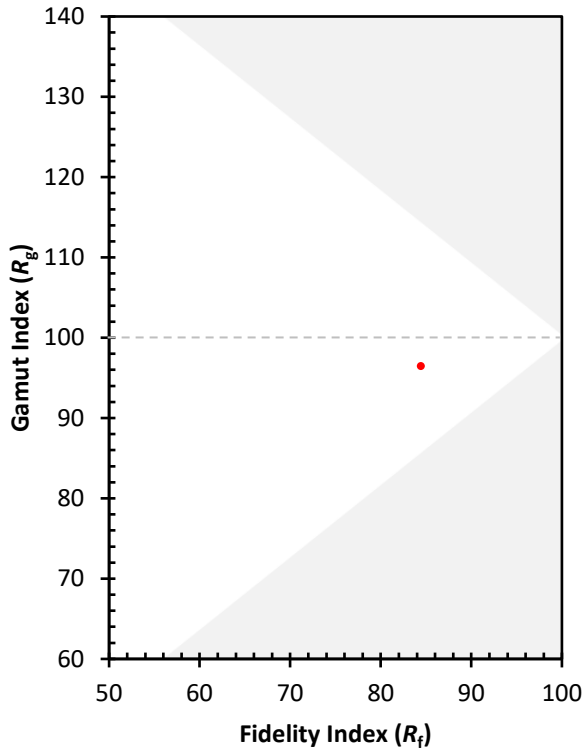
CES01 = 86	CES26 = 83	CES51 = 94	CES76 = 75
CES02 = 62	CES27 = 92	CES52 = 95	CES77 = 82
CES03 = 31	CES28 = 91	CES53 = 90	CES78 = 74
CES04 = 70	CES29 = 88	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 94	CES55 = 88	CES80 = 89
CES06 = 51	CES31 = 89	CES56 = 87	CES81 = 81
CES07 = 41	CES32 = 81	CES57 = 86	CES82 = 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)