

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: P1449859

Luminaire Tested: **TWC150_T2_60W_5000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449859
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_5000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T2 distribution, 60W
5000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10073 lumens
Efficiency: N/A
Efficacy: 172.8 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

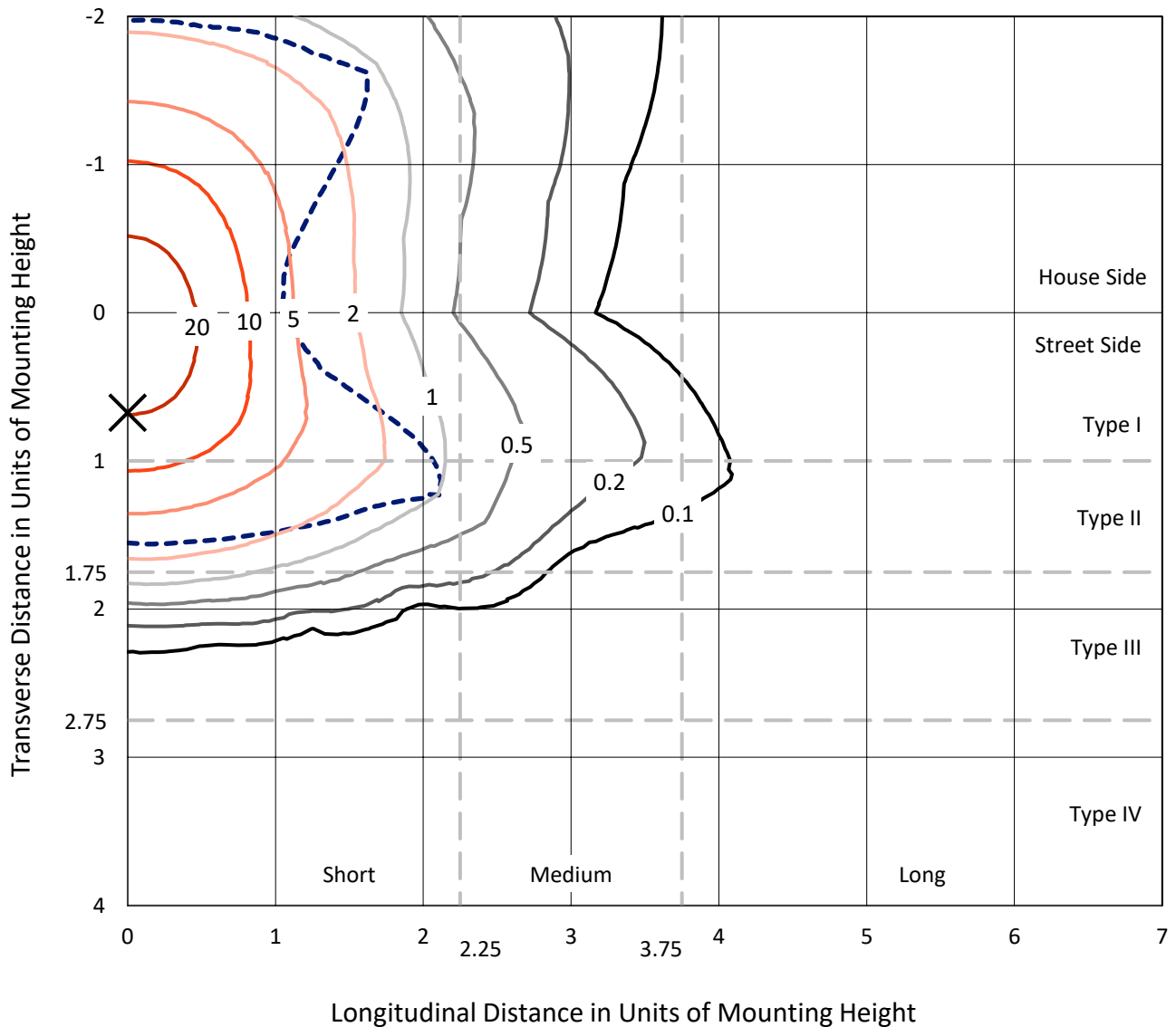
Input Watts (W): 58.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

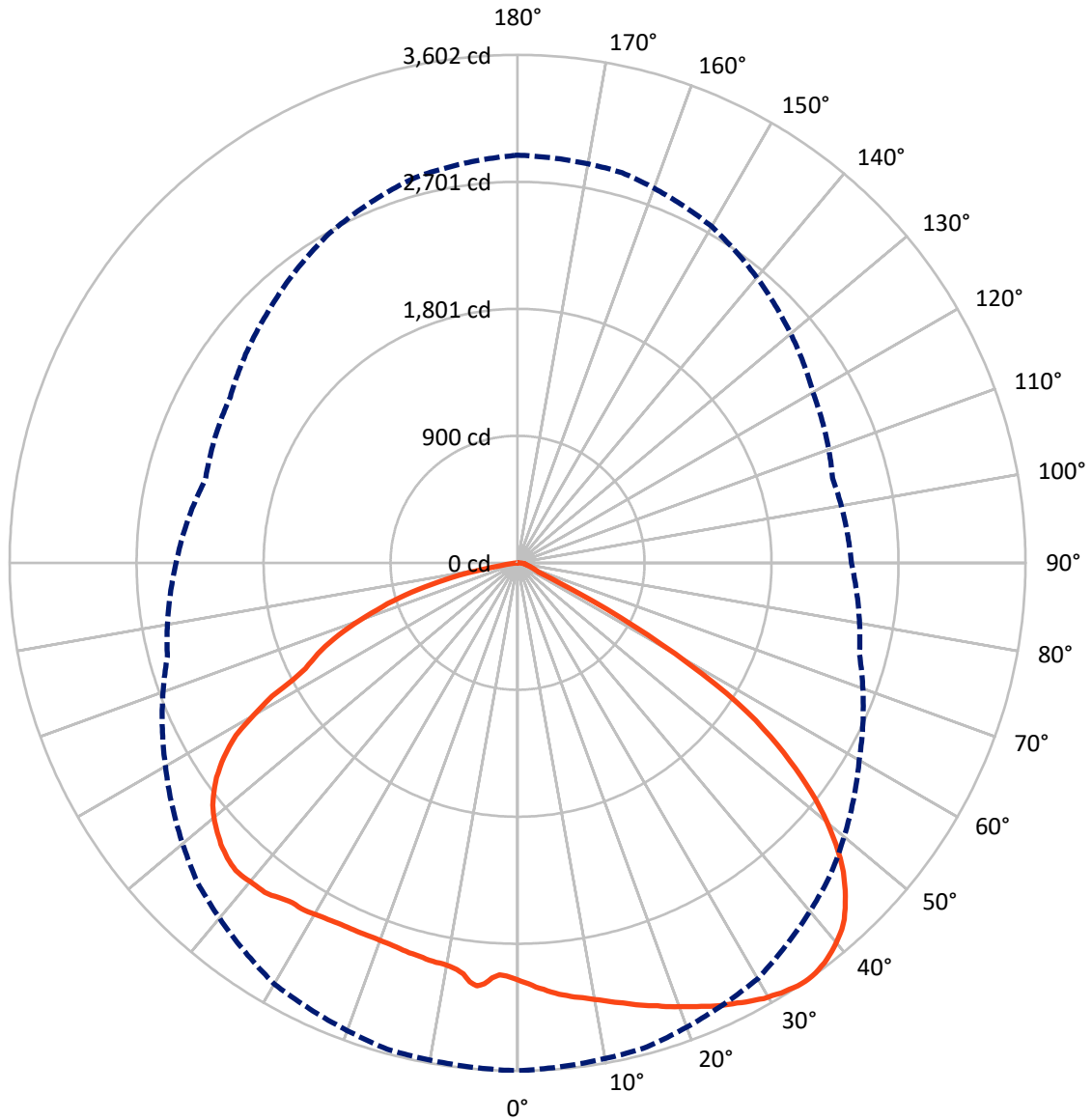
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 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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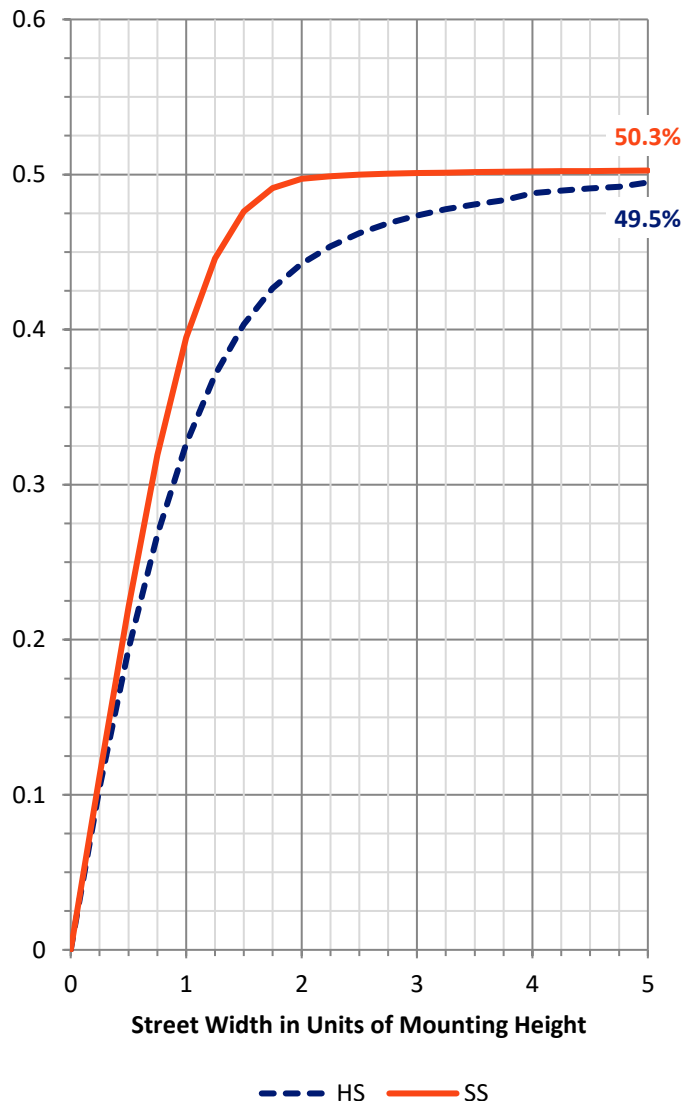
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5011.8	0.0	5011.8
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	5061.2	0.0	5061.2
	% Fixture	50.2	0.0	50.2
Total	Lumens	10073.0	0.0	10073.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.4	2.8
10°-20°	841.1	8.4
20°-30°	1349.5	13.4
30°-40°	1766.1	17.5
40°-50°	2012.4	20.0
50°-60°	1916.2	19.0
60°-70°	1244.0	12.3
70°-80°	551.4	5.5
80°-90°	107.0	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°	10073.0	100.0
0°-180°	10073.0	100.0

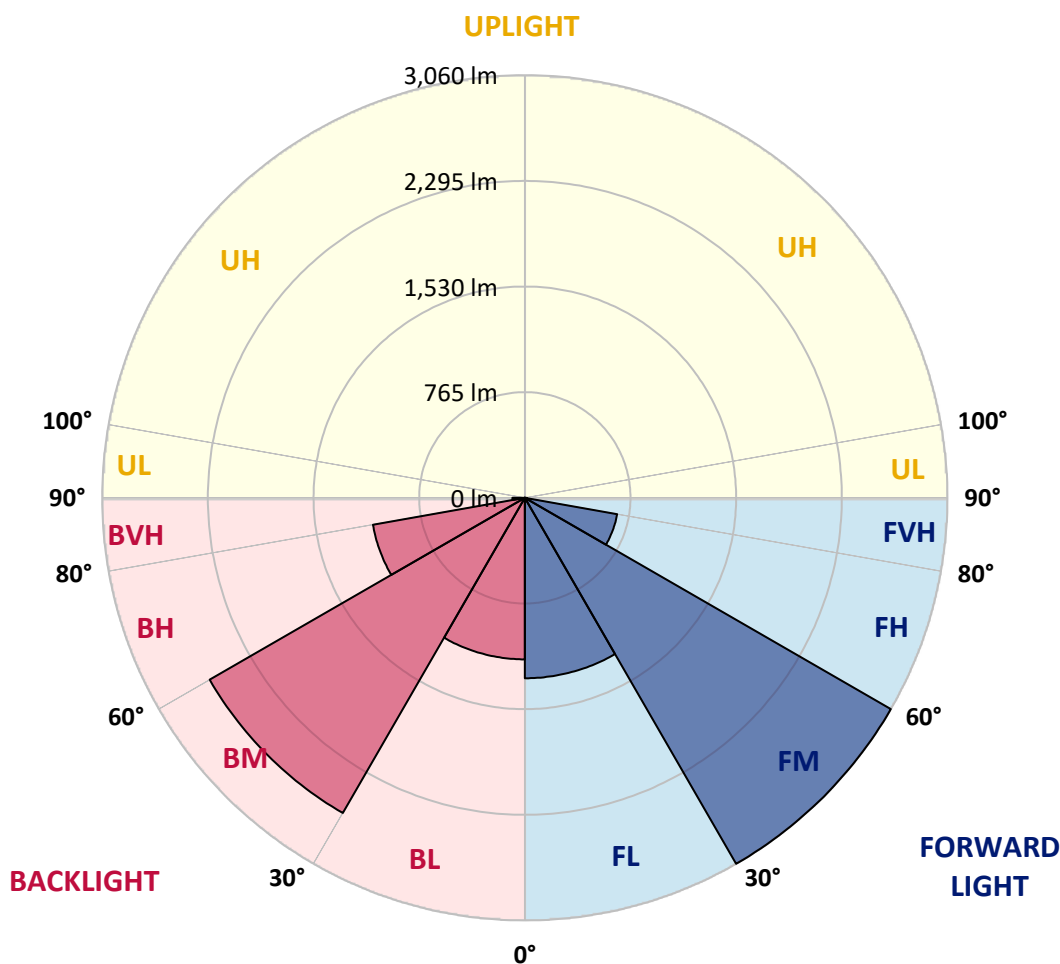


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1306.4	13.0			
FM (30°-60°)	3059.8	30.4			
FH (60°-80°)	678.6	6.7			G1/1800
FVH (80°-90°)	16.4	0.2			G1/100
BL (0°-30°)	1169.6	11.6	B3/2500		
BM (30°-60°)	2634.8	26.2	B3/5000		
BH (60°-80°)	1116.7	11.1	B3/2500		G3/2500
BVH (80°-90°)	90.6	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°	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6
1°	2985.5	2983.7	2984.8	2977.5	2972.0	2969.7	2967.1	2961.5	2956.6	2952.9	2950.0
2°	3010.9	3006.1	3000.8	2992.4	2982.2	2972.4	2964.4	2954.2	2945.8	2941.7	2936.4
3°	3030.9	3028.6	3019.1	3005.8	2992.2	2973.2	2961.1	2946.2	2934.3	2926.4	2922.3
4°	3053.8	3047.2	3036.7	3020.0	2997.1	2973.9	2955.1	2937.6	2924.0	2923.0	2934.6
5°	3072.7	3066.4	3052.1	3032.2	3003.4	2975.1	2951.7	2928.8	2916.3	2937.2	2973.0
6°	3089.0	3081.3	3066.9	3042.7	3009.4	2971.7	2939.1	2914.6	2919.2	2972.0	3005.8
7°	3105.0	3094.9	3075.0	3049.6	3012.0	2970.9	2933.0	2906.0	2936.6	2999.4	3010.2
8°	3118.8	3108.8	3088.2	3055.1	3016.1	2968.7	2924.1	2898.6	2959.5	3002.3	2971.8
9°	3135.8	3124.6	3096.3	3064.6	3015.1	2963.2	2912.8	2891.7	2981.0	2979.1	2927.1
10°	3152.1	3136.8	3110.1	3068.9	3017.7	2955.0	2901.8	2895.5	2980.0	2930.8	2906.7
11°	3171.1	3156.3	3118.7	3073.4	3014.0	2950.8	2891.4	2904.1	2967.2	2896.2	2891.8
12°	3191.2	3174.5	3131.5	3080.9	3014.7	2943.9	2874.5	2912.9	2925.9	2878.8	2881.0
13°	3209.0	3190.9	3145.1	3083.5	3013.6	2934.4	2859.4	2919.0	2885.8	2863.1	2873.5
14°	3232.1	3210.6	3159.5	3089.4	3011.4	2924.6	2845.2	2922.8	2854.6	2849.9	2868.5
15°	3255.3	3232.4	3173.0	3095.7	3005.8	2912.6	2828.7	2910.7	2831.6	2838.8	2855.5
16°	3274.4	3251.0	3191.5	3100.8	3006.4	2905.2	2812.7	2889.5	2814.1	2826.7	2847.3
17°	3294.0	3271.0	3204.0	3110.6	3005.1	2895.0	2797.3	2856.3	2793.4	2814.1	2840.3
18°	3318.1	3287.2	3217.9	3118.3	3003.2	2883.6	2783.8	2810.7	2777.7	2798.3	2833.2
19°	3339.8	3308.6	3233.3	3126.2	2998.3	2869.5	2769.5	2769.4	2761.3	2786.6	2821.8
20°	3359.6	3323.9	3244.0	3131.0	2998.2	2859.4	2759.0	2734.4	2741.3	2772.3	2810.4
21°	3382.2	3344.4	3260.1	3135.2	2990.3	2849.0	2753.3	2707.7	2718.5	2756.8	2804.2
22°	3405.2	3361.6	3268.9	3140.0	2982.7	2836.6	2747.0	2681.4	2695.7	2743.1	2797.3
23°	3428.8	3384.9	3280.5	3140.9	2973.9	2818.9	2740.2	2655.0	2676.6	2729.1	2785.9
24°	3451.5	3404.6	3292.8	3143.8	2966.7	2803.4	2729.9	2631.4	2655.2	2716.2	2779.3
25°	3470.2	3423.0	3306.1	3142.0	2955.6	2778.5	2716.4	2607.6	2634.1	2702.2	2776.3
26°	3488.3	3441.8	3318.5	3140.5	2940.8	2754.7	2693.8	2575.3	2608.3	2684.9	2771.0
27°	3510.8	3458.9	3335.7	3143.1	2929.2	2732.7	2666.5	2548.0	2585.2	2671.0	2764.3
28°	3528.1	3474.7	3344.1	3137.8	2912.6	2705.3	2629.0	2515.7	2562.7	2659.1	2762.5
29°	3549.6	3494.5	3356.6	3139.0	2893.9	2679.1	2589.8	2484.3	2542.0	2643.9	2761.1
30°	3560.9	3512.7	3363.8	3136.1	2877.8	2646.4	2541.0	2451.9	2517.7	2630.7	2755.7
31°	3577.3	3524.4	3377.8	3139.3	2858.7	2614.7	2495.3	2419.5	2491.3	2618.9	2755.3
32°	3587.1	3538.5	3385.0	3137.5	2837.7	2582.7	2450.2	2383.8	2468.9	2606.4	2752.4
33°	3598.0	3545.8	3396.9	3135.6	2817.7	2546.6	2405.8	2349.0	2441.6	2594.6	2754.2
34°	3601.9	3553.9	3405.6	3135.3	2797.8	2510.0	2366.5	2312.9	2418.5	2583.3	2753.4
35°	3599.7	3555.5	3414.6	3133.7	2778.2	2474.7	2323.7	2276.8	2389.7	2569.7	2750.7
36°	3588.2	3554.1	3414.5	3128.2	2757.9	2434.5	2280.4	2240.8	2364.7	2561.6	2738.5
37°	3575.9	3542.7	3420.0	3129.6	2738.1	2394.8	2235.9	2203.7	2339.1	2546.5	2737.4
38°	3554.9	3527.6	3416.0	3131.8	2721.7	2357.5	2191.6	2167.0	2315.3	2530.3	2738.3
39°	3529.6	3509.2	3406.9	3131.1	2704.0	2317.7	2145.6	2132.6	2289.9	2509.8	2744.2
40°	3501.9	3483.7	3398.8	3132.6	2687.7	2276.7	2099.5	2098.2	2264.9	2495.6	2750.8
41°	3471.2	3455.0	3382.0	3132.6	2672.3	2239.4	2053.3	2063.9	2238.6	2491.0	2748.2
42°	3428.8	3419.9	3362.1	3130.8	2657.0	2200.3	2008.1	2024.2	2209.0	2483.1	2747.1
43°	3374.5	3379.1	3334.8	3129.2	2644.6	2163.5	1957.4	1984.6	2174.0	2467.0	2746.8
44°	3316.5	3328.4	3303.5	3126.3	2632.3	2128.7	1905.3	1945.5	2149.3	2449.1	2748.6



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CANDELA DISTRIBUTION (continued):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	3253.0	3274.3	3270.6	3117.9	2621.4	2095.1	1854.0	1903.1	2124.5	2430.4	2748.5
46°	3185.0	3211.2	3228.3	3107.4	2611.5	2063.2	1804.8	1861.6	2099.8	2424.7	2741.9
47°	3102.8	3141.8	3185.9	3090.6	2605.3	2029.4	1749.8	1819.8	2072.5	2416.2	2727.0
48°	3014.0	3063.7	3129.4	3074.1	2595.7	1991.2	1697.8	1774.4	2040.1	2404.0	2709.5
49°	2919.0	2975.1	3068.0	3045.7	2588.9	1951.0	1642.7	1725.0	2008.2	2388.5	2689.8
50°	2815.4	2874.3	3000.6	3016.1	2584.3	1907.5	1589.1	1671.2	1983.3	2371.5	2667.0
51°	2702.0	2774.1	2924.1	2984.4	2578.7	1862.8	1534.0	1619.2	1956.3	2349.9	2642.2
52°	2582.2	2658.8	2839.8	2948.9	2576.2	1816.0	1477.0	1574.7	1923.3	2330.8	2618.7
53°	2452.7	2538.8	2743.0	2902.5	2569.8	1761.4	1422.6	1532.6	1887.5	2313.0	2591.7
54°	2318.7	2409.4	2633.3	2848.7	2562.0	1714.2	1368.7	1481.0	1850.4	2291.8	2562.6
55°	2176.5	2271.9	2516.7	2784.9	2556.0	1665.9	1310.2	1428.2	1809.5	2267.8	2530.9
56°	2024.0	2126.6	2391.7	2716.1	2545.7	1618.7	1252.8	1379.5	1775.6	2240.1	2496.3
57°	1851.5	1969.0	2253.9	2637.0	2530.3	1573.3	1195.9	1331.2	1736.5	2211.6	2458.3
58°	1644.3	1797.2	2108.3	2540.9	2505.8	1528.1	1136.8	1280.9	1699.3	2182.7	2414.5
59°	1411.2	1593.4	1951.7	2433.7	2478.3	1483.4	1078.0	1226.3	1658.9	2153.4	2362.8
60°	1169.8	1358.9	1781.6	2309.0	2441.7	1438.7	1017.0	1170.6	1617.5	2124.1	2305.2
61°	942.5	1117.0	1594.2	2169.6	2402.3	1397.3	958.8	1114.8	1575.3	2094.7	2235.8
62°	715.3	890.4	1369.1	2005.2	2353.2	1361.4	904.5	1062.4	1535.7	2054.5	2131.6
63°	488.2	663.8	1134.5	1828.7	2295.4	1329.2	845.9	1006.6	1498.5	2010.7	2027.5
64°	316.5	437.2	900.5	1644.9	2226.2	1302.9	788.3	954.7	1459.1	1961.0	1921.1
65°	208.0	273.1	666.5	1429.8	2145.8	1284.9	733.2	903.5	1418.7	1910.2	1740.7
66°	160.1	179.9	432.4	1190.5	2049.5	1276.5	678.8	852.4	1375.2	1842.0	1609.6
67°	145.2	141.2	264.3	944.8	1931.1	1271.9	626.8	801.2	1332.6	1732.4	1532.6
68°	135.0	128.3	167.3	699.0	1784.7	1269.6	574.3	751.8	1282.3	1596.6	1468.4
69°	125.0	118.2	130.9	453.2	1620.3	1265.5	523.9	703.6	1232.7	1491.2	1405.1
70°	115.1	108.5	117.8	264.1	1411.1	1264.6	474.8	657.4	1185.3	1424.9	1344.3
71°	105.9	100.3	108.2	155.9	1135.0	1271.2	427.2	610.8	1131.6	1360.7	1288.4
72°	98.5	92.1	98.6	113.0	840.3	1272.5	384.3	565.0	1046.0	1290.2	1229.5
73°	91.2	84.0	89.0	100.3	545.2	1242.6	341.6	517.9	965.5	1217.1	1167.1
74°	83.9	76.8	79.3	88.1	250.2	1155.9	300.8	472.1	912.3	1148.1	1097.1
75°	76.4	69.0	70.3	75.9	138.8	1045.1	262.4	429.2	867.7	1082.9	1023.8
76°	70.0	62.0	60.0	67.6	117.0	926.0	224.0	386.5	818.5	1019.4	935.6
77°	65.2	56.5	52.1	61.2	96.5	806.7	185.8	346.3	769.8	960.3	833.9
78°	62.1	51.9	45.6	53.8	75.9	687.5	153.8	297.7	724.9	903.3	741.9
79°	59.6	49.0	41.0	44.7	68.9	524.5	125.0	259.6	677.1	848.6	656.8
80°	56.3	46.6	37.3	36.4	68.8	396.4	99.1	221.5	630.2	777.8	590.8
81°	52.5	43.5	34.4	30.9	63.9	277.2	77.5	183.5	585.5	703.6	522.9
82°	48.0	40.1	31.8	27.0	54.7	180.3	58.9	154.1	537.0	628.0	372.7
83°	39.7	34.8	29.0	23.5	45.3	106.2	42.6	126.3	488.9	570.3	222.5
84°	31.4	28.5	24.6	20.4	31.1	79.3	32.6	99.0	422.5	518.0	75.1
85°	22.5	21.1	18.5	17.4	18.3	52.6	22.6	74.9	340.2	413.9	43.2
86°	15.7	16.0	13.5	12.9	11.8	25.9	12.6	52.2	272.2	309.7	11.9
87°	10.7	10.9	9.2	8.9	8.0	14.2	7.2	35.3	204.3	205.6	5.8
88°	5.8	5.9	5.0	4.9	4.2	9.5	3.3	18.5	136.3	101.5	2.0
89°	0.8	0.8	0.8	0.8	0.9	4.9	1.1	2.0	68.4	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: P1449859
 CATALOG NUMBER: TWC150_T2_60W_5000K

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: P1449859
CATALOG NUMBER: TWC150_T2_60W_5000K

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: P1449859

CATALOG NUMBER: TWC150_T2_60W_5000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6	2966.6
1°	2947.2	2947.0	2949.3	2947.3	2951.8	2955.1	2958.9	2967.6	2972.3	2975.3	2979.2
2°	2929.6	2931.2	2930.2	2932.2	2942.4	2947.4	2954.7	2965.0	2977.3	2984.1	2993.9
3°	2921.1	2924.6	2919.8	2920.4	2924.7	2937.6	2945.6	2960.8	2976.5	2992.4	3010.6
4°	2948.8	2948.1	2938.8	2923.5	2914.0	2924.6	2937.9	2958.9	2982.9	3001.4	3023.5
5°	2993.1	2995.3	2981.4	2956.6	2919.2	2912.3	2929.6	2952.7	2981.4	3011.1	3036.6
6°	3014.1	3014.7	3013.9	2988.4	2943.4	2905.1	2919.2	2945.6	2981.0	3017.9	3046.5
7°	2997.1	2991.4	3000.1	3003.3	2972.8	2907.9	2908.5	2940.2	2981.4	3022.9	3057.1
8°	2944.6	2939.0	2949.0	2983.8	2990.3	2919.3	2896.4	2933.3	2982.1	3026.6	3064.3
9°	2915.8	2915.8	2916.2	2932.7	2985.4	2940.2	2881.7	2921.5	2975.5	3027.8	3071.9
10°	2903.1	2902.2	2901.4	2900.8	2949.3	2954.6	2872.6	2912.7	2973.2	3030.8	3080.3
11°	2892.2	2893.3	2890.3	2885.7	2906.8	2956.9	2864.2	2902.1	2964.8	3029.4	3083.9
12°	2890.1	2890.8	2882.8	2870.0	2876.3	2943.9	2859.4	2886.4	2960.8	3029.2	3091.9
13°	2883.6	2886.5	2879.2	2861.2	2858.6	2911.8	2862.5	2872.0	2953.6	3028.9	3099.6
14°	2876.5	2879.0	2867.3	2854.0	2840.3	2870.2	2869.8	2860.2	2947.4	3029.2	3106.9
15°	2869.5	2871.7	2860.4	2844.4	2823.6	2834.1	2869.2	2847.8	2938.1	3032.2	3117.6
16°	2864.5	2869.4	2856.6	2830.5	2811.5	2806.5	2871.5	2827.5	2929.6	3034.5	3126.0
17°	2859.6	2863.8	2850.2	2822.0	2794.5	2786.8	2860.0	2812.3	2919.8	3033.4	3136.6
18°	2851.7	2855.9	2839.9	2810.3	2777.4	2763.8	2839.9	2793.4	2914.8	3033.4	3147.7
19°	2843.6	2853.0	2834.9	2802.1	2758.8	2742.9	2811.8	2778.6	2905.7	3031.6	3157.4
20°	2842.1	2850.8	2827.2	2788.4	2747.0	2722.6	2774.1	2756.8	2895.7	3030.5	3159.9
21°	2839.6	2847.8	2823.0	2776.7	2731.7	2702.7	2731.7	2739.4	2888.3	3030.8	3167.5
22°	2836.6	2847.1	2820.1	2767.2	2713.3	2678.2	2689.6	2720.6	2874.5	3024.5	3172.5
23°	2836.9	2850.0	2817.1	2759.8	2695.3	2648.6	2653.9	2704.7	2861.0	3020.4	3178.9
24°	2834.3	2850.0	2816.0	2746.3	2677.5	2624.0	2622.3	2688.2	2842.3	3011.8	3184.2
25°	2832.9	2851.1	2814.9	2740.9	2662.7	2602.6	2591.2	2678.8	2822.2	3002.6	3186.4
26°	2836.6	2853.0	2810.7	2732.1	2645.9	2575.2	2561.4	2669.9	2803.4	2992.4	3190.1
27°	2835.5	2855.0	2811.8	2726.7	2629.1	2546.8	2529.8	2656.9	2778.4	2985.1	3192.8
28°	2837.8	2860.6	2811.8	2717.9	2610.4	2518.0	2502.3	2644.0	2752.6	2969.0	3194.7
29°	2844.1	2866.1	2813.1	2708.1	2595.0	2494.2	2471.7	2625.9	2725.6	2957.6	3198.7
30°	2845.3	2872.3	2817.5	2701.8	2577.5	2465.0	2436.6	2596.8	2695.7	2941.5	3204.7
31°	2857.2	2882.0	2819.2	2699.4	2561.1	2439.4	2399.5	2564.0	2664.2	2928.2	3207.5
32°	2861.7	2890.1	2827.2	2692.0	2542.7	2409.6	2365.7	2523.2	2635.6	2916.0	3205.2
33°	2864.2	2892.2	2828.3	2690.1	2521.3	2381.1	2326.0	2473.8	2603.2	2898.6	3211.6
34°	2863.9	2890.4	2826.4	2687.1	2507.8	2352.4	2291.5	2421.1	2570.9	2883.8	3208.6
35°	2864.5	2900.9	2823.5	2682.3	2487.6	2325.1	2253.7	2367.5	2537.2	2868.7	3213.1
36°	2875.9	2914.9	2825.8	2672.8	2471.2	2295.7	2214.2	2313.0	2503.7	2859.9	3215.3
37°	2890.5	2932.9	2837.5	2659.8	2454.9	2266.4	2173.2	2266.4	2470.4	2843.3	3220.0
38°	2901.1	2944.1	2849.6	2656.9	2437.6	2235.5	2135.2	2217.0	2438.6	2835.2	3220.1
39°	2905.8	2945.8	2857.5	2655.0	2415.9	2203.0	2097.1	2170.2	2405.3	2823.1	3221.2
40°	2908.1	2948.6	2855.9	2650.5	2391.6	2173.4	2059.1	2121.1	2369.6	2812.1	3218.7
41°	2912.3	2953.3	2854.9	2646.1	2372.6	2144.6	2012.1	2075.5	2334.6	2799.4	3222.0
42°	2916.3	2958.9	2864.3	2639.3	2356.0	2115.8	1966.5	2027.9	2299.8	2792.8	3215.0
43°	2920.7	2958.3	2866.1	2639.0	2343.2	2086.9	1918.6	1977.6	2266.4	2788.8	3209.4
44°	2914.4	2948.4	2865.7	2638.9	2329.2	2049.3	1872.4	1927.2	2229.1	2786.8	3196.5



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CATALOG NUMBER: TWC150_T2_60W_5000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	2902.5	2935.7	2856.1	2636.0	2304.2	2008.7	1826.1	1876.2	2191.9	2784.2	3180.6
46°	2884.8	2917.2	2839.7	2631.6	2282.5	1968.7	1780.0	1825.1	2158.1	2779.4	3159.3
47°	2866.7	2900.3	2820.1	2622.3	2263.0	1930.3	1734.3	1771.0	2122.1	2774.2	3133.0
48°	2846.5	2875.0	2801.0	2610.0	2245.8	1900.2	1687.4	1719.6	2089.3	2771.5	3100.5
49°	2822.6	2851.2	2777.2	2593.3	2224.6	1863.5	1639.9	1663.3	2055.0	2767.4	3069.2
50°	2796.9	2824.5	2755.7	2574.4	2201.8	1825.5	1590.9	1607.5	2019.5	2761.5	3030.9
51°	2768.4	2793.8	2730.3	2547.7	2175.6	1788.6	1541.0	1554.0	1987.4	2754.7	2986.9
52°	2740.3	2761.7	2701.0	2525.3	2151.6	1752.5	1486.6	1498.6	1954.0	2747.0	2929.7
53°	2702.2	2717.3	2669.0	2497.9	2132.8	1720.1	1431.3	1443.5	1923.8	2733.7	2869.2
54°	2661.6	2672.1	2635.6	2471.3	2114.1	1681.5	1376.0	1386.0	1897.5	2714.0	2796.7
55°	2615.1	2621.1	2591.4	2441.2	2095.4	1640.8	1326.7	1327.7	1872.5	2690.7	2716.8
56°	2562.1	2561.1	2543.6	2411.6	2070.4	1593.7	1274.3	1268.5	1853.2	2655.4	2627.8
57°	2501.4	2497.6	2487.5	2375.0	2042.8	1548.3	1218.6	1209.2	1840.2	2621.3	2521.1
58°	2433.5	2421.7	2424.8	2341.1	2017.0	1501.0	1163.0	1149.9	1824.2	2579.4	2406.9
59°	2360.7	2343.3	2357.2	2299.2	1992.3	1456.7	1109.2	1091.8	1811.2	2530.2	2273.4
60°	2280.6	2222.2	2282.7	2255.8	1959.5	1411.6	1056.0	1035.1	1795.0	2474.9	2128.0
61°	2135.9	2101.0	2155.7	2202.0	1925.5	1368.3	1003.0	978.7	1779.3	2407.0	1968.9
62°	1991.2	1979.6	2028.7	2131.7	1889.6	1322.1	948.1	922.3	1772.7	2331.9	1794.4
63°	1846.6	1791.0	1901.3	2061.4	1845.1	1273.3	890.7	864.2	1765.5	2237.0	1604.4
64°	1699.2	1680.1	1727.3	1989.6	1801.9	1228.6	833.8	805.8	1762.2	2130.7	1394.5
65°	1620.4	1615.6	1624.0	1850.7	1752.1	1182.1	777.0	751.4	1754.5	2003.8	1157.3
66°	1561.0	1555.4	1555.4	1682.7	1701.5	1133.8	722.1	697.9	1750.1	1854.2	917.8
67°	1501.4	1488.2	1499.8	1564.8	1642.9	1085.5	668.5	644.3	1746.8	1684.5	678.4
68°	1432.2	1410.3	1441.1	1487.4	1570.2	1036.1	615.6	587.2	1727.2	1475.3	438.9
69°	1357.0	1323.3	1373.1	1412.7	1460.1	984.6	564.0	531.9	1684.5	1232.3	263.9
70°	1278.4	1236.9	1305.3	1342.7	1360.2	935.4	514.3	478.5	1609.9	951.3	161.1
71°	1189.4	1139.0	1226.5	1277.7	1300.0	885.7	468.5	425.6	1501.5	669.2	119.9
72°	1098.9	1050.3	1144.2	1223.0	1249.1	837.6	425.8	376.6	1400.1	387.1	106.8
73°	1012.5	967.3	1055.8	1171.7	1188.8	785.4	381.9	329.9	1317.6	211.6	96.5
74°	921.4	875.0	964.7	1119.1	1130.1	709.8	341.7	288.4	1185.7	125.6	86.3
75°	831.7	781.0	872.8	1064.4	1070.5	648.0	303.2	247.7	1033.6	107.2	76.1
76°	735.5	675.0	784.1	1003.8	1011.2	602.4	269.7	210.8	822.0	89.9	65.2
77°	637.6	573.8	692.2	927.3	949.9	558.5	236.2	180.1	608.3	72.7	55.9
78°	548.3	476.6	609.4	834.4	884.1	512.6	202.8	154.5	394.6	66.4	47.2
79°	451.9	358.7	523.3	734.7	820.4	469.7	174.7	132.8	220.5	63.3	39.4
80°	326.4	240.8	430.4	643.6	753.0	429.4	143.4	110.6	119.2	57.9	33.5
81°	200.9	123.7	283.3	579.5	679.6	388.0	116.4	90.1	96.8	47.2	29.7
82°	78.0	40.5	136.8	528.7	610.9	347.1	94.7	69.7	75.5	37.4	26.4
83°	57.1	31.9	96.5	371.3	534.3	304.9	74.3	49.2	54.2	27.1	23.6
84°	36.1	23.4	56.2	213.9	475.6	258.5	56.7	35.3	52.4	19.0	20.8
85°	15.4	14.9	16.2	56.6	420.1	212.2	41.3	24.6	45.5	14.7	17.2
86°	9.4	8.8	10.2	31.4	262.9	166.0	29.9	15.9	33.6	11.6	11.9
87°	4.5	4.3	4.7	6.2	107.5	123.8	18.5	10.8	20.0	7.7	7.3
88°	1.7	1.7	1.8	1.8	53.2	82.4	7.1	5.8	13.3	3.9	2.8
89°	0.4	0.3	0.4	0.4	0.7	40.9	1.0	0.7	6.8	0.7	0.8



REPORT NUMBER: P1449859
 CATALOG NUMBER: TWC150_T2_60W_5000K

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: P1449859
 CATALOG NUMBER: TWC150_T2_60W_5000K

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: P1449859
CATALOG NUMBER: TWC150_T2_60W_5000K

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: P1449859
 CATALOG NUMBER: TWC150_T2_60W_5000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
0°	2966.6	2966.6	2966.6
1°	2983.9	2986.0	2985.5
2°	3002.6	3005.5	3010.9
3°	3018.7	3027.2	3030.9
4°	3039.0	3047.5	3053.8
5°	3054.5	3065.9	3072.7
6°	3068.2	3083.0	3089.0
7°	3081.4	3101.5	3105.0
8°	3094.7	3115.9	3118.8
9°	3106.2	3128.0	3135.8
10°	3116.7	3141.4	3152.1
11°	3129.3	3160.0	3171.1
12°	3142.9	3181.3	3191.2
13°	3160.1	3199.5	3209.0
14°	3175.2	3222.7	3232.1
15°	3192.8	3240.1	3255.3
16°	3209.2	3261.0	3274.4
17°	3222.8	3276.7	3294.0
18°	3237.9	3299.3	3318.1
19°	3253.4	3319.3	3339.8
20°	3269.4	3338.4	3359.6
21°	3286.1	3356.6	3382.2
22°	3298.9	3381.2	3405.2
23°	3311.0	3401.9	3428.8
24°	3329.6	3422.4	3451.5
25°	3342.4	3446.2	3470.2
26°	3359.0	3463.0	3488.3
27°	3374.2	3477.6	3510.8
28°	3387.2	3498.6	3528.1
29°	3395.4	3518.4	3549.6
30°	3413.3	3533.8	3560.9
31°	3424.8	3547.0	3577.3
32°	3435.6	3558.6	3587.1
33°	3446.1	3566.4	3598.0
34°	3448.9	3570.4	3601.9
35°	3458.6	3571.2	3599.7
36°	3462.3	3566.4	3588.2
37°	3457.2	3556.0	3575.9
38°	3454.4	3541.1	3554.9
39°	3443.8	3515.9	3529.6
40°	3427.6	3488.4	3501.9
41°	3404.1	3460.2	3471.2
42°	3379.4	3420.1	3428.8
43°	3348.3	3379.0	3374.5
44°	3313.3	3326.0	3316.5



REPORT NUMBER: P1449859
 CATALOG NUMBER: TWC150_T2_60W_5000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
45°	3273.3	3263.1	3253.0
46°	3226.1	3196.4	3185.0
47°	3167.1	3124.3	3102.8
48°	3106.2	3039.9	3014.0
49°	3033.2	2943.9	2919.0
50°	2953.6	2845.2	2815.4
51°	2865.3	2740.7	2702.0
52°	2767.8	2623.3	2582.2
53°	2666.7	2496.5	2452.7
54°	2548.9	2366.1	2318.7
55°	2423.0	2227.0	2176.5
56°	2287.9	2074.5	2024.0
57°	2144.0	1914.5	1851.5
58°	1988.0	1727.6	1644.3
59°	1824.6	1507.6	1411.2
60°	1636.3	1269.4	1169.8
61°	1423.4	1019.3	942.5
62°	1181.6	791.1	715.3
63°	948.3	563.1	488.2
64°	715.2	373.7	316.5
65°	482.0	235.2	208.0
66°	304.0	166.1	160.1
67°	188.2	141.2	145.2
68°	138.4	130.1	135.0
69°	122.2	120.4	125.0
70°	111.8	110.9	115.1
71°	102.9	102.6	105.9
72°	93.7	94.3	98.5
73°	84.5	86.1	91.2
74°	77.2	78.9	83.9
75°	68.7	71.4	76.4
76°	59.5	64.5	70.0
77°	51.7	59.3	65.2
78°	46.2	55.4	62.1
79°	42.0	52.6	59.6
80°	38.8	50.0	56.3
81°	36.2	46.6	52.5
82°	33.3	42.7	48.0
83°	29.9	36.6	39.7
84°	24.1	29.7	31.4
85°	18.9	22.0	22.5
86°	12.3	15.9	15.7
87°	8.5	10.8	10.7
88°	4.6	5.8	5.8
89°	0.8	0.7	0.8



REPORT NUMBER: P1449859
CATALOG NUMBER: TWC150_T2_60W_5000K

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: P1449859
CATALOG NUMBER: TWC150_T2_60W_5000K

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: P1449859
CATALOG NUMBER: TWC150_T2_60W_5000K

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: SP1-2601-659-3

Test Date: 02/12/2026

Luminaire Tested: MWP2460W34VDDKYYAD-T4-24W-5000K

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

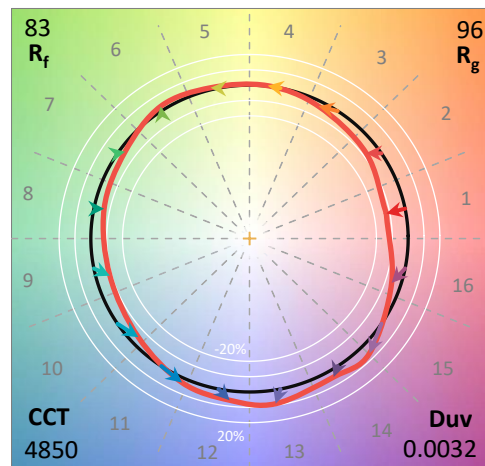
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2601-659-3
 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-5000K**
 Description: Mester Wedge, at T4 beam setting, 24W output, 5000K

Spectral Parameters

CCT (K): 4850
 CIE u': 0.2108
 CIE v': 0.4905
 Duv: 0.0032
 CIE x: 0.3503
 CIE y: 0.3623
 CIE z: 0.2875
 Peak Wavelength (nm): 452
 Dominant Wavelength (nm): 571
 Purity: 13.81051
 Rf: 83.1
 Rg: 95.8

CRI (Ra):	82.6		
R1:	80.9	R9:	8.5
R2:	87.6	R10:	69.7
R3:	92.0	R11:	80.6
R4:	81.9	R12:	52.2
R5:	80.4	R13:	82.7
R6:	82.0	R14:	95.7
R7:	88.2	R15:	74.9
R8:	67.7		



Test Conditions

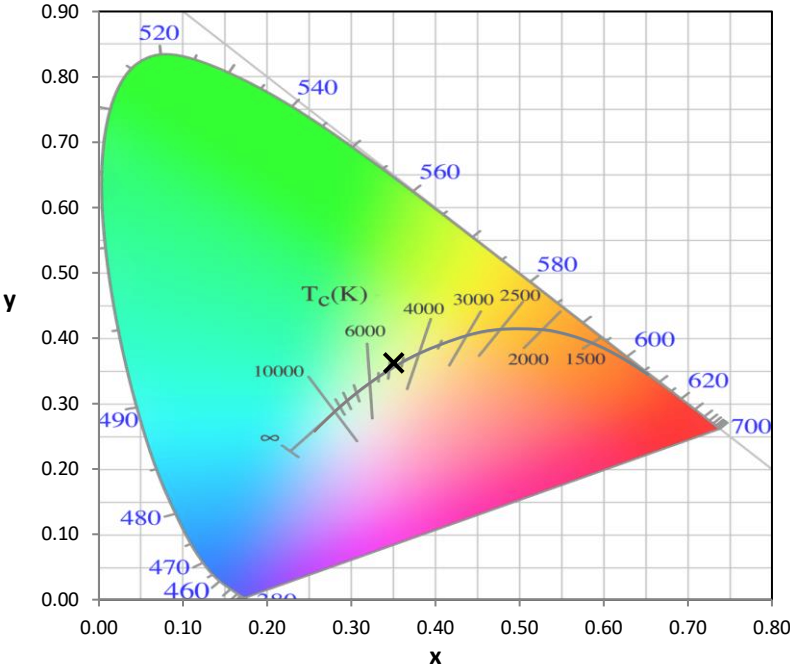
Stabilization Time: 25M
 Operation Time: 1H 25M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-3

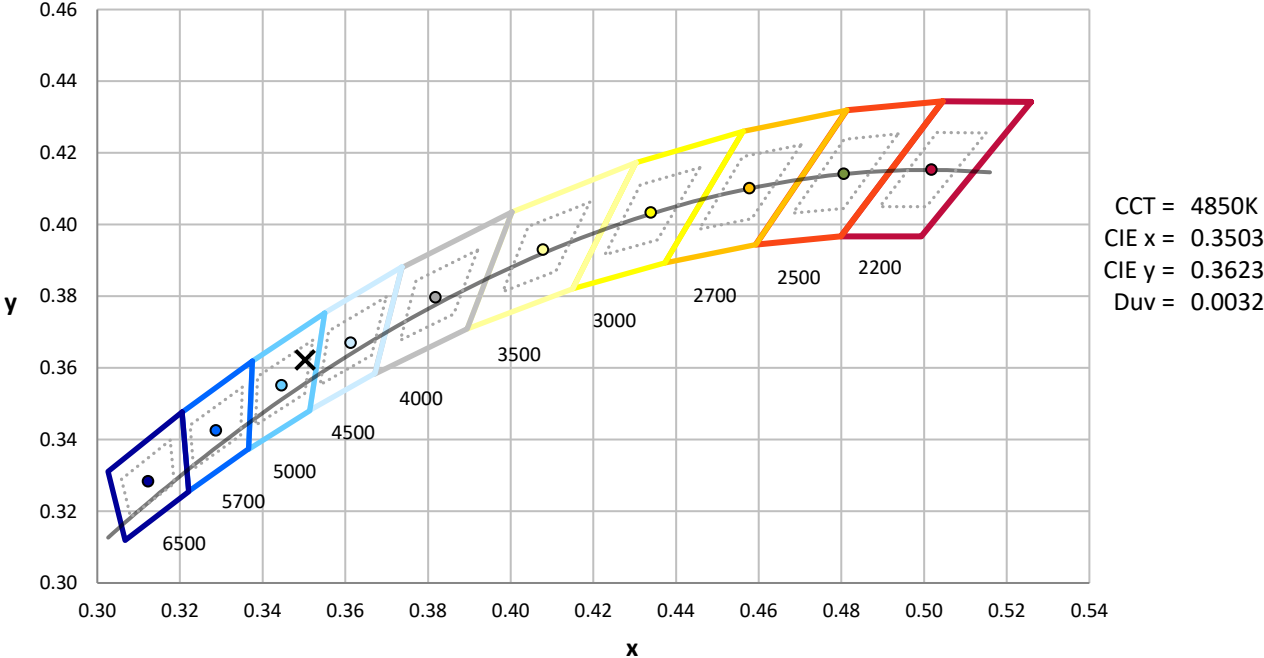
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2601-659-3

CIE 1931 Chromaticity Diagram



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

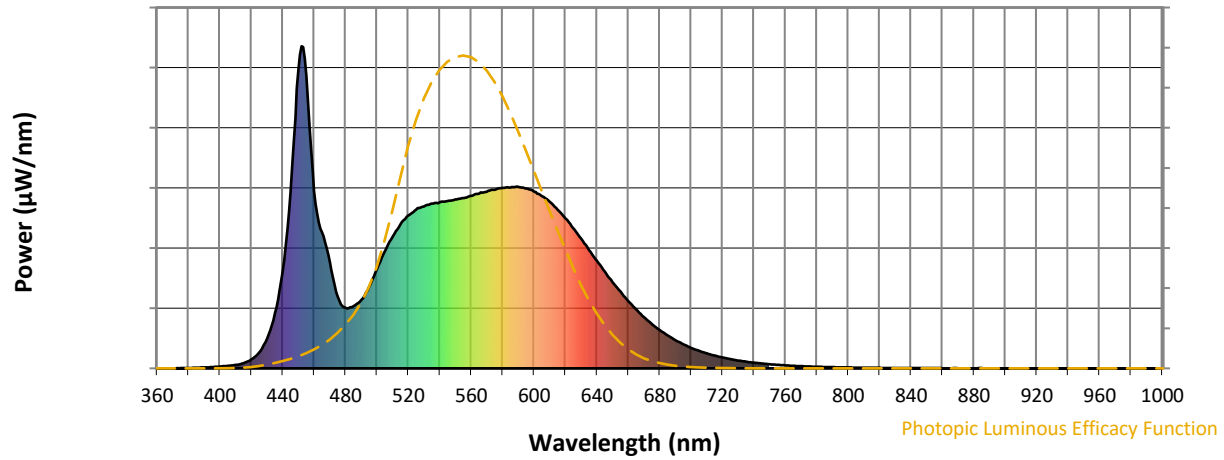


CCT = 4850K
 CIE x = 0.3503
 CIE y = 0.3623
 Duv = 0.0032

Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-3

Photopic Flux vs. Wavelength

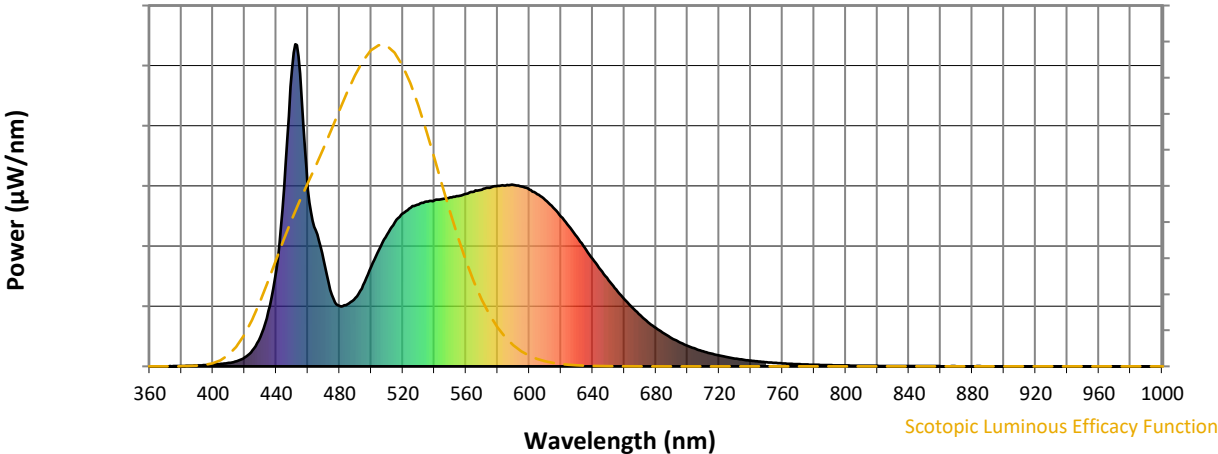


Photopic Lumens: NR

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

REPORT NUMBER: SP1-2601-659-3

Scotopic Flux vs. Wavelength



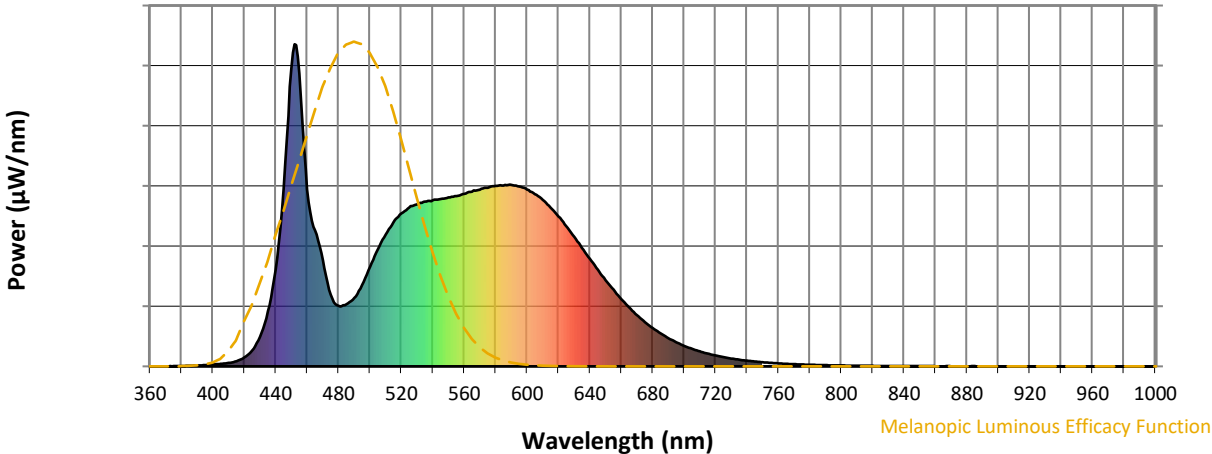
Scotopic Lumens: NR

S/P: 1.9

λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

REPORT NUMBER: SP1-2601-659-3

Melanopic Flux vs. Wavelength



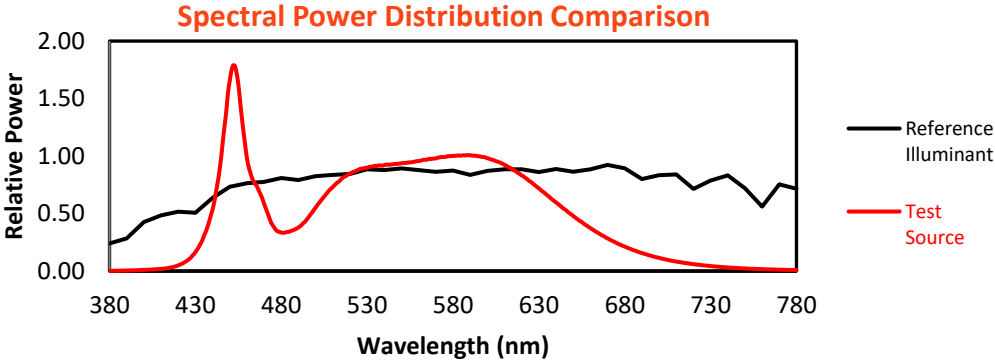
Melanopic Lumens: NR

M/P: 4

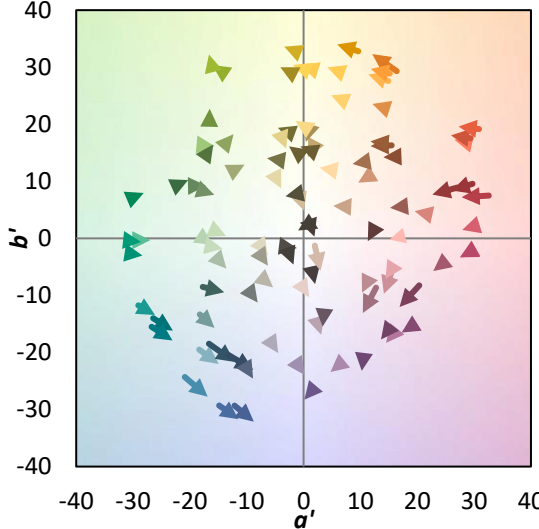
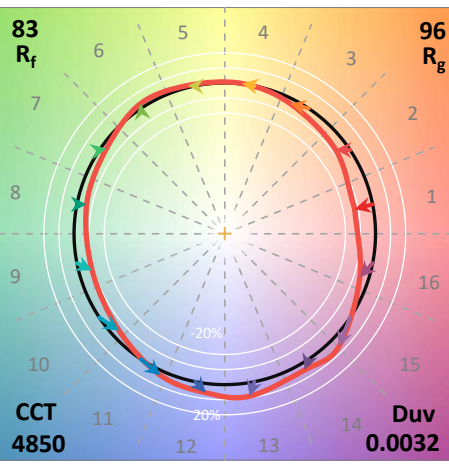
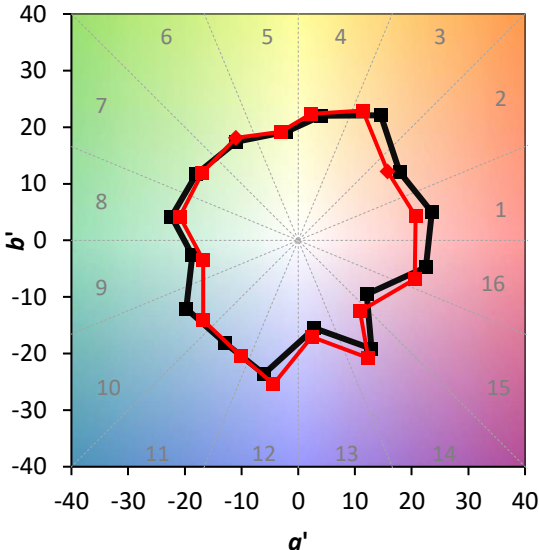
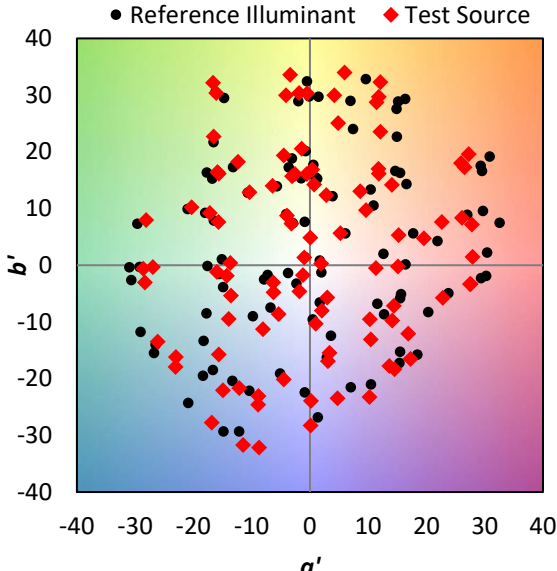
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

Summary

$R_f = 83.1$
 $R_g = 95.8$
 $CIE R_a = 82.6$
 $R_9 = 8.5$

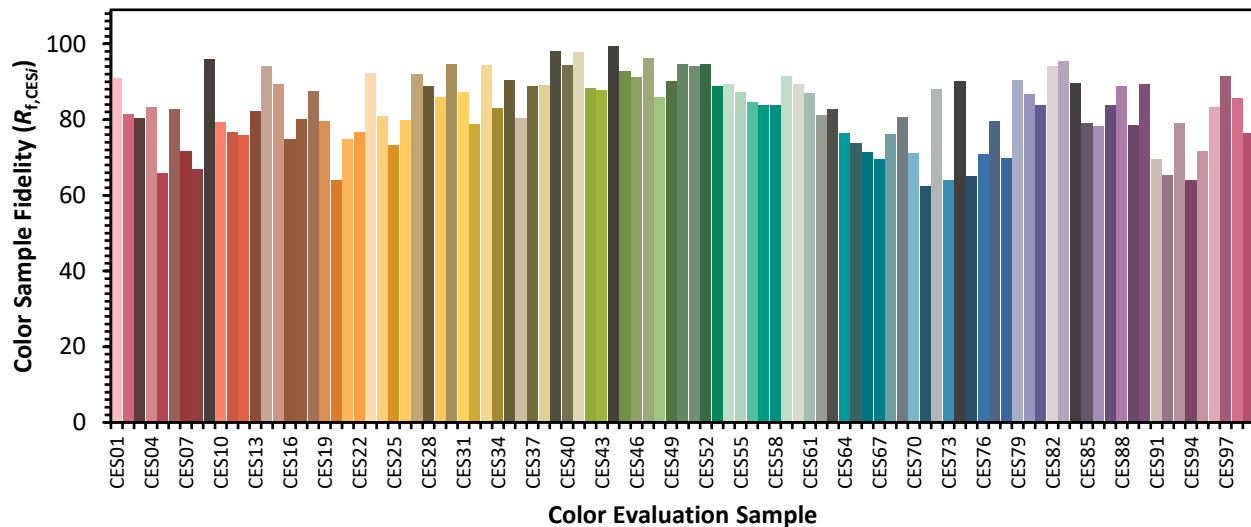


Color Vector Graphics

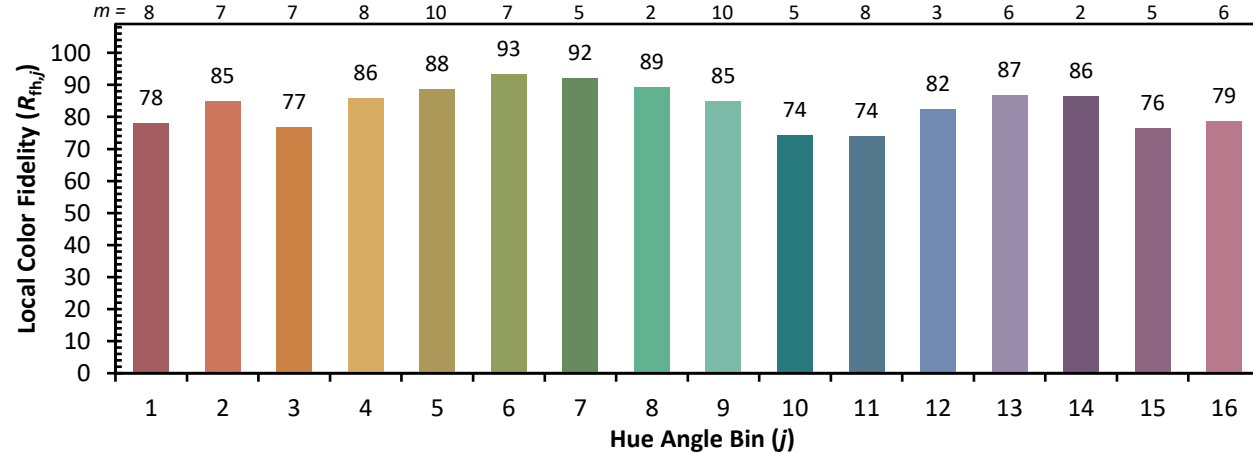
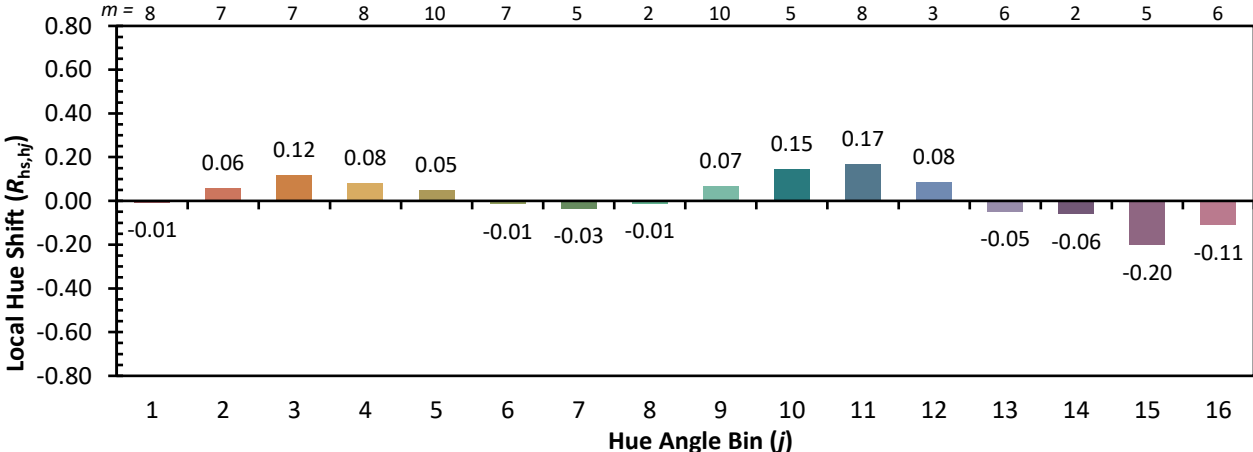
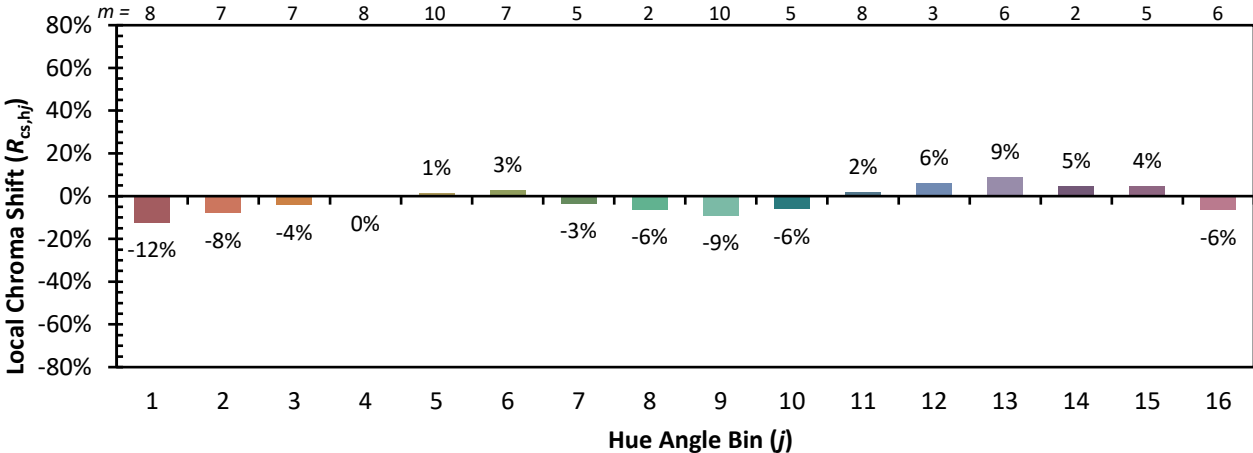


Individual Sample Fidelity Index ($R_{f,i}$)

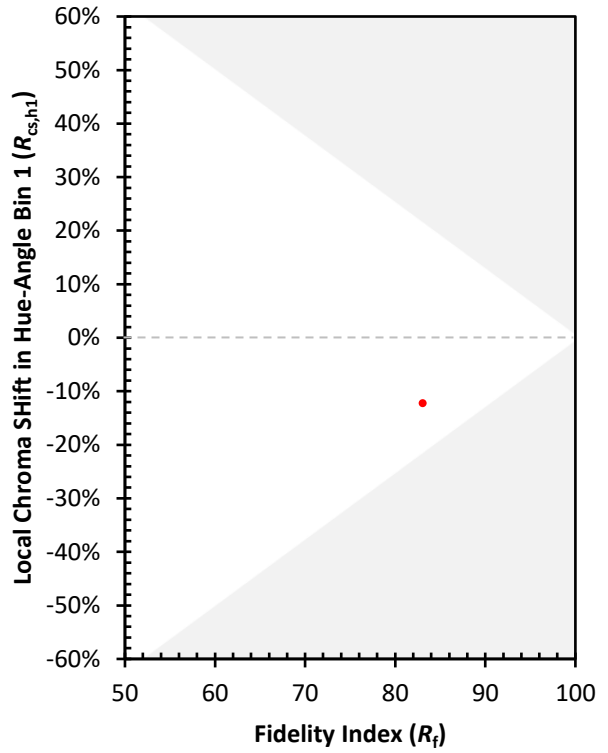
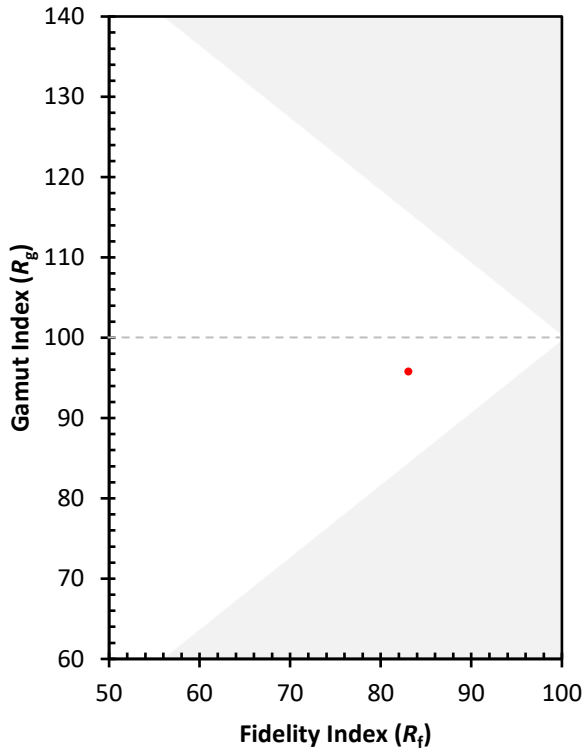
CES01 = 85	CES26 = 80	CES51 = 94	CES76 = 71
CES02 = 60	CES27 = 92	CES52 = 95	CES77 = 80
CES03 = 30	CES28 = 89	CES53 = 89	CES78 = 70
CES04 = 69	CES29 = 86	CES54 = 89	CES79 = 90
CES05 = 47	CES30 = 95	CES55 = 87	CES80 = 87
CES06 = 50	CES31 = 87	CES56 = 85	CES81 = 84
CES07 = 40	CES32 = 79	CES57 = 84	CES82 = 94
CES08 = 39	CES33 = 94	CES58 = 84	CES83 = 95
CES09 = 29	CES34 = 83	CES59 = 91	CES84 = 90
CES10 = 73	CES35 = 90	CES60 = 89	CES85 = 79
CES11 = 56	CES36 = 80	CES61 = 87	CES86 = 78
CES12 = 62	CES37 = 89	CES62 = 81	CES87 = 84
CES13 = 42	CES38 = 89	CES63 = 83	CES88 = 89
CES14 = 74	CES39 = 98	CES64 = 77	CES89 = 79
CES15 = 71	CES40 = 94	CES65 = 74	CES90 = 89
CES16 = 46	CES41 = 98	CES66 = 71	CES91 = 70
CES17 = 49	CES42 = 88	CES67 = 70	CES92 = 65
CES18 = 56	CES43 = 88	CES68 = 76	CES93 = 79
CES19 = 71	CES44 = 99	CES69 = 81	CES94 = 64
CES20 = 64	CES45 = 93	CES70 = 71	CES95 = 72
CES21 = 85	CES46 = 91	CES71 = 62	CES96 = 83
CES22 = 77	CES47 = 96	CES72 = 88	CES97 = 91
CES23 = 91	CES48 = 86	CES73 = 64	CES98 = 86
CES24 = 90	CES49 = 90	CES74 = 90	CES99 = 76
CES25 = 71	CES50 = 95	CES75 = 65	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)