

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: P1449881

Luminaire Tested: **TWC150_T4_60W_3000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449881
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_T4_60W_3000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T4 distribution, 60W
3000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8926 lumens
Efficiency: N/A
Efficacy: 152.8 lumens/watt
Luminous Opening: Rectangular (W 1.33' x L: 0.42' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G2

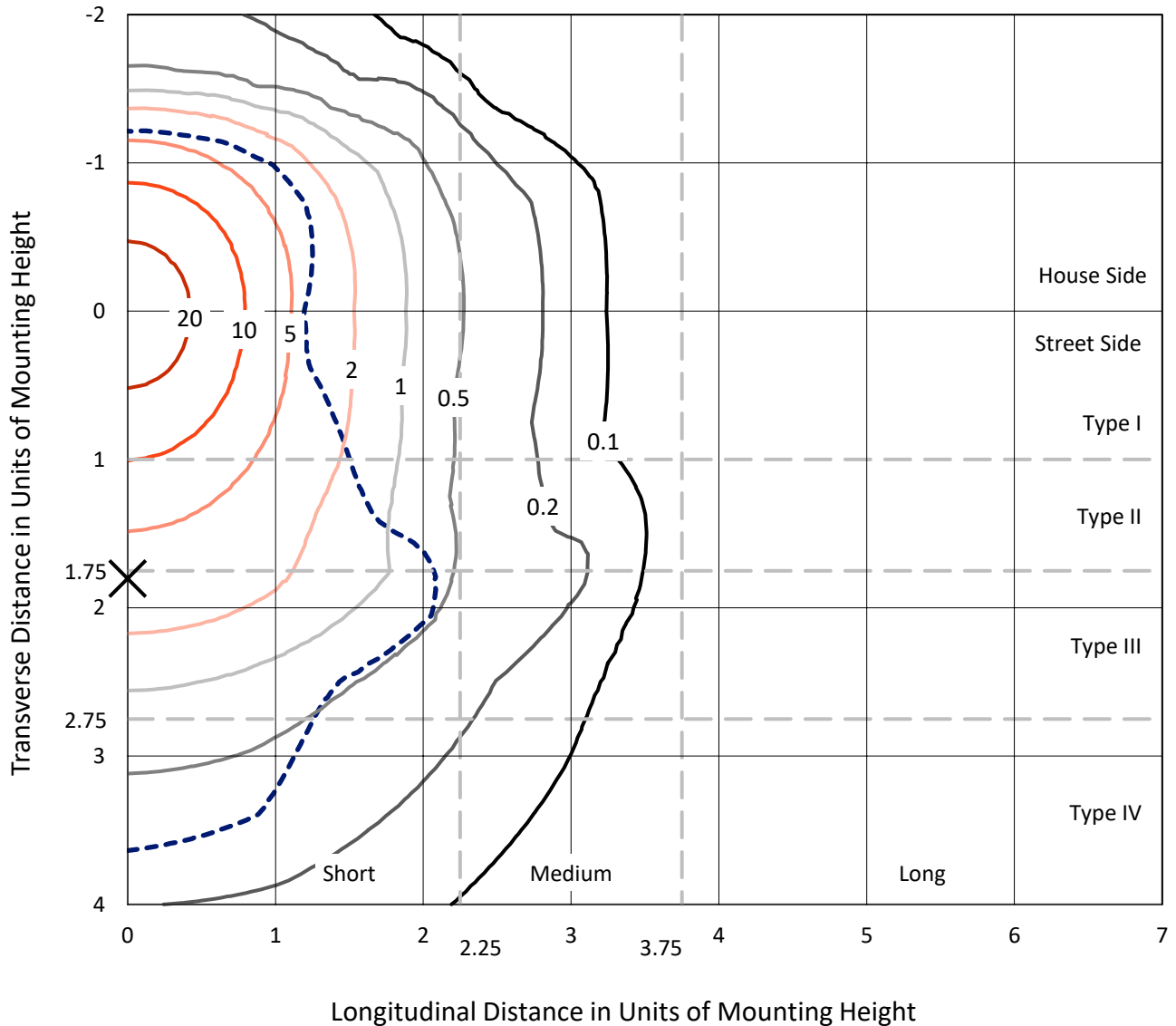
Input Watts (W): 58.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

Iso-Footcandle Lines of Horizontal Illumination

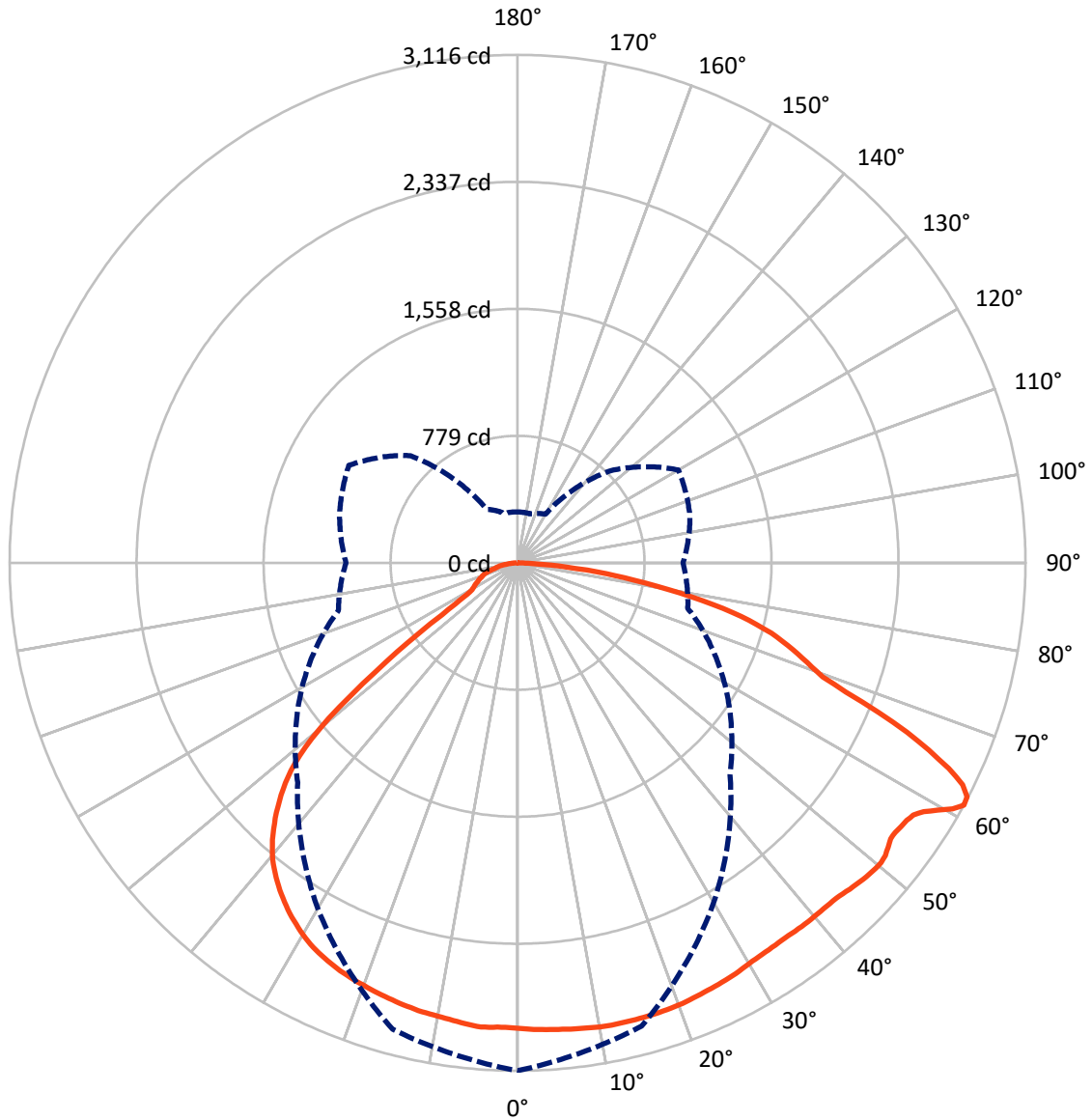
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 28.6 fc
 Type IV - Short - N/A

REPORT NUMBER: P1449881
CATALOG NUMBER: TWC150_T4_60W_3000K

Luminous Intensity Polar Plot



— Vertical Plane Through 0-Deg Lateral - - - Horizontal Cone Through 61-Deg Vertical

REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

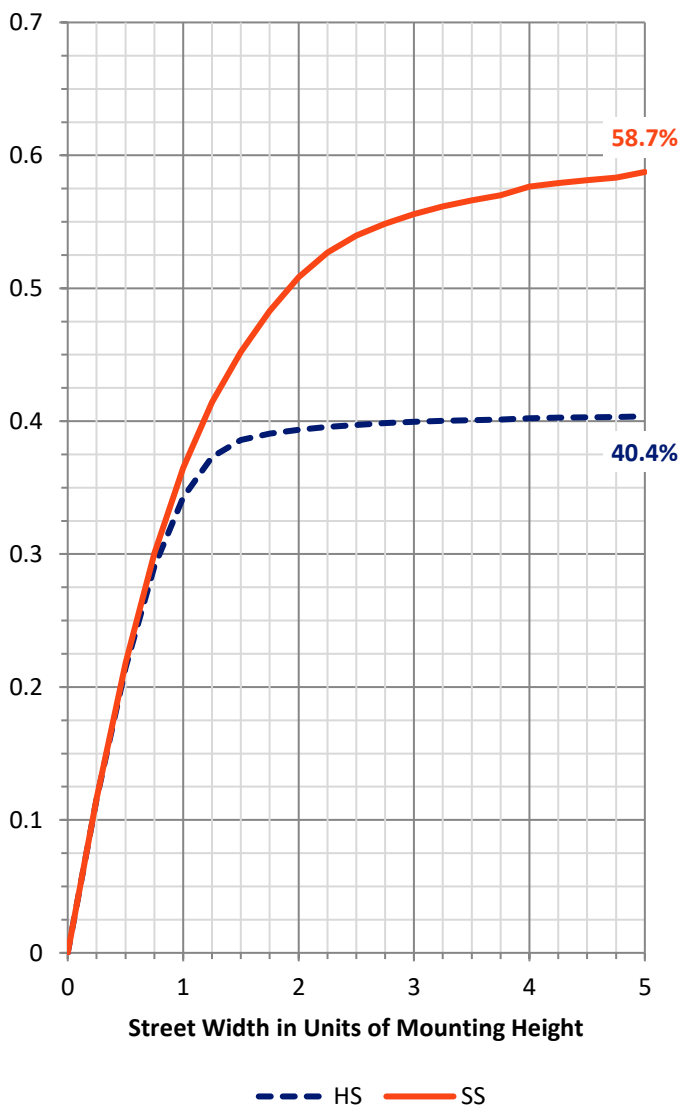
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3628.7	0.0	3628.7
	% Fixture	40.7	0.0	40.7
Street Side	Lumens	5297.3	0.0	5297.3
	% Fixture	59.3	0.0	59.3
Total	Lumens	8926.0	0.0	8926.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.8	3.0
10°-20°	789.6	8.8
20°-30°	1227.7	13.8
30°-40°	1538.5	17.2
40°-50°	1675.3	18.8
50°-60°	1513.4	17.0
60°-70°	1152.2	12.9
70°-80°	609.2	6.8
80°-90°	148.2	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	8926.0	100.0
0°-180°	8926.0	100.0

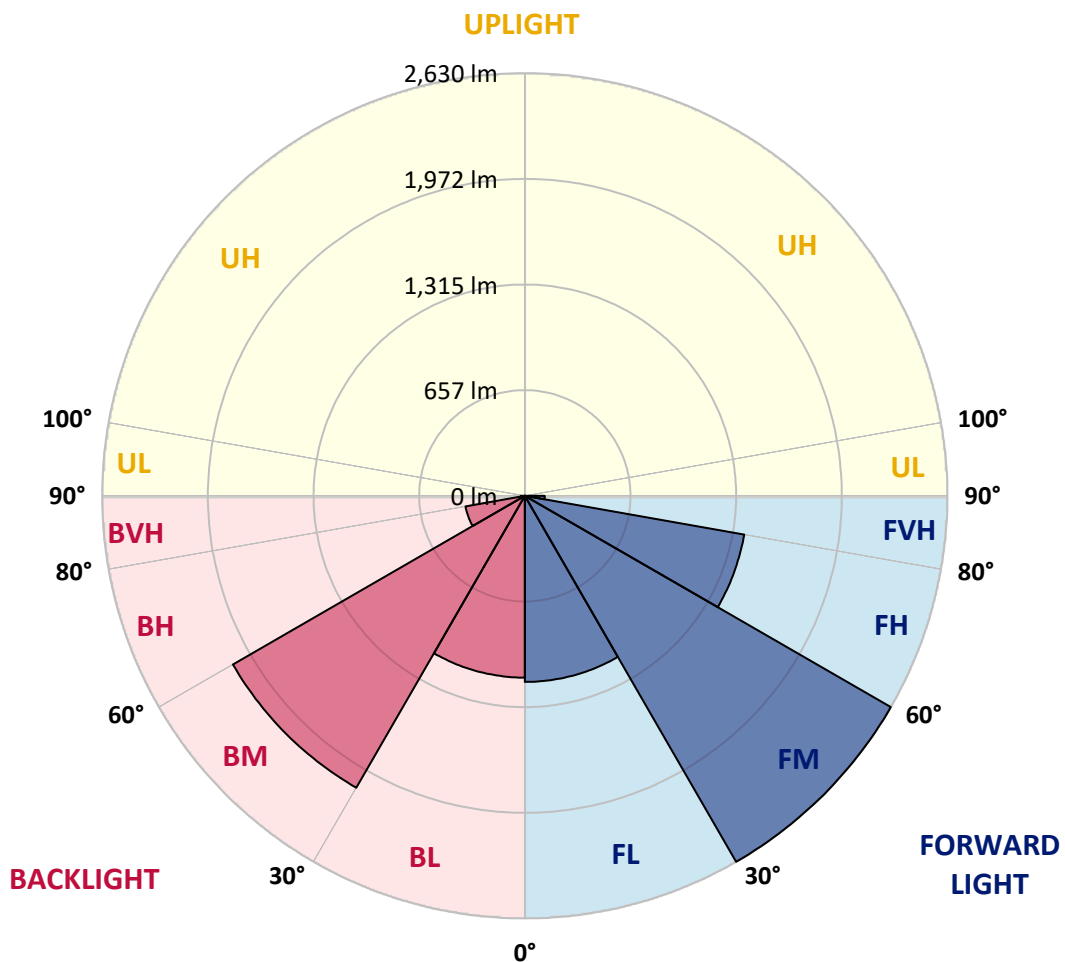


REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1157.9	13.0			
FM (30°-60°)	2629.6	29.5			
FH (60°-80°)	1386.2	15.5			G1/1800
FVH (80°-90°)	123.5	1.4			G2/225
BL (0°-30°)	1131.2	12.7	B3/2500		
BM (30°-60°)	2097.6	23.5	B2/2500		
BH (60°-80°)	375.2	4.2	B1/500		G1/500
BVH (80°-90°)	24.7	0.3			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





REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

CANDELA DISTRIBUTION (FULL):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8
1°	2862.1	2861.7	2860.4	2858.4	2857.3	2856.1	2856.2	2854.1	2854.4	2853.2	2852.8
2°	2865.9	2864.6	2862.1	2859.8	2857.6	2854.4	2855.3	2850.8	2850.4	2850.5	2849.5
3°	2869.2	2867.3	2864.2	2860.9	2856.5	2852.6	2852.1	2846.9	2846.7	2847.2	2848.7
4°	2872.3	2869.7	2866.2	2860.6	2854.8	2848.5	2846.7	2842.2	2842.2	2845.6	2849.7
5°	2874.9	2871.6	2866.5	2860.4	2850.9	2844.2	2841.0	2836.1	2837.6	2845.5	2851.3
6°	2878.8	2874.5	2867.6	2858.9	2849.4	2838.5	2833.8	2829.0	2833.8	2844.4	2848.9
7°	2881.9	2877.0	2868.0	2856.2	2844.6	2831.9	2825.3	2821.1	2830.1	2840.2	2842.6
8°	2886.2	2879.7	2868.1	2853.7	2839.0	2824.0	2816.4	2812.7	2825.5	2832.8	2834.0
9°	2890.0	2882.7	2868.7	2850.4	2832.3	2815.6	2806.5	2803.7	2819.0	2823.1	2825.7
10°	2893.4	2885.0	2868.7	2848.0	2826.3	2806.6	2794.3	2794.7	2810.2	2812.1	2817.1
11°	2894.6	2886.9	2868.3	2844.7	2819.4	2797.4	2782.5	2785.5	2799.2	2802.0	2808.8
12°	2894.3	2887.0	2866.8	2839.4	2811.5	2785.1	2769.9	2775.2	2787.2	2791.7	2801.2
13°	2894.0	2885.2	2863.1	2832.5	2801.1	2773.2	2755.3	2762.8	2773.8	2779.6	2794.2
14°	2893.7	2884.6	2860.1	2824.5	2790.3	2761.5	2739.6	2749.1	2759.2	2769.3	2787.4
15°	2893.5	2883.2	2854.7	2817.0	2777.5	2746.6	2723.4	2734.4	2743.4	2757.8	2779.0
16°	2893.2	2879.9	2849.5	2806.9	2764.1	2731.8	2706.6	2718.3	2728.0	2746.9	2769.5
17°	2892.3	2877.4	2843.8	2795.9	2748.0	2714.0	2688.6	2701.5	2711.4	2734.9	2759.9
18°	2890.3	2874.2	2837.5	2784.4	2731.4	2695.2	2668.6	2682.3	2695.3	2722.0	2750.6
19°	2888.1	2870.2	2830.5	2772.9	2713.5	2673.6	2648.9	2663.0	2677.9	2707.8	2740.1
20°	2885.9	2866.2	2823.3	2761.1	2695.2	2651.9	2627.0	2642.8	2661.4	2693.4	2729.5
21°	2881.8	2862.7	2815.5	2748.3	2678.0	2627.6	2605.8	2622.4	2643.5	2680.4	2718.5
22°	2877.3	2857.1	2807.1	2735.8	2658.1	2604.1	2583.0	2599.7	2624.9	2665.2	2706.6
23°	2872.8	2851.1	2798.7	2721.9	2638.0	2578.0	2558.2	2578.3	2604.4	2650.0	2694.0
24°	2869.3	2846.5	2789.9	2709.1	2618.1	2551.6	2533.5	2554.8	2583.0	2632.0	2680.3
25°	2864.8	2839.3	2780.6	2692.9	2597.1	2524.4	2506.2	2531.9	2560.8	2615.5	2667.5
26°	2860.5	2834.0	2770.7	2678.8	2576.4	2496.4	2478.4	2506.4	2538.4	2597.8	2652.8
27°	2856.5	2827.2	2761.0	2663.2	2553.5	2468.7	2449.7	2480.6	2515.2	2579.6	2639.1
28°	2849.8	2820.4	2749.5	2646.6	2531.8	2439.4	2420.9	2453.8	2492.0	2560.2	2622.5
29°	2842.8	2811.9	2738.9	2629.4	2507.6	2410.6	2389.9	2426.1	2468.9	2541.8	2606.3
30°	2837.2	2803.8	2726.7	2611.5	2483.1	2380.0	2359.0	2396.6	2445.1	2521.8	2587.8
31°	2834.0	2797.0	2713.3	2593.9	2457.7	2349.3	2327.7	2366.2	2419.6	2500.0	2569.5
32°	2831.1	2791.2	2699.1	2575.1	2432.4	2316.9	2296.1	2334.7	2395.1	2478.2	2549.2
33°	2829.1	2785.5	2686.9	2555.2	2404.6	2284.7	2263.0	2301.8	2368.6	2455.3	2527.3
34°	2828.2	2780.9	2674.3	2534.8	2378.0	2252.2	2229.4	2269.5	2343.5	2432.2	2502.2
35°	2826.7	2777.9	2662.0	2513.8	2349.4	2218.1	2194.4	2234.8	2314.9	2406.6	2476.4
36°	2828.2	2774.0	2650.6	2491.8	2320.8	2183.3	2157.7	2201.5	2287.3	2381.0	2448.5
37°	2830.5	2773.0	2641.3	2470.4	2290.6	2147.1	2120.6	2166.2	2257.1	2352.9	2418.7
38°	2831.7	2772.0	2630.4	2449.6	2260.1	2110.9	2082.2	2130.6	2225.9	2324.0	2387.3
39°	2833.2	2769.5	2620.9	2427.0	2229.6	2071.8	2042.2	2094.7	2193.1	2291.9	2354.1
40°	2832.5	2765.7	2612.8	2407.1	2196.2	2032.2	2001.5	2058.9	2160.7	2259.6	2320.9
41°	2833.5	2761.7	2602.3	2386.8	2162.8	1992.2	1960.4	2023.2	2127.9	2226.1	2283.1
42°	2835.9	2759.3	2590.6	2369.3	2130.0	1951.2	1917.8	1985.7	2093.6	2190.1	2245.6
43°	2838.8	2757.0	2578.1	2348.4	2096.9	1909.9	1875.2	1947.7	2057.6	2153.0	2202.5
44°	2846.8	2757.2	2567.4	2328.4	2064.0	1866.5	1832.7	1909.9	2022.4	2112.9	2157.9



REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

CANDELA DISTRIBUTION (continued):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	2857.3	2762.7	2555.2	2307.0	2033.3	1824.6	1786.9	1870.7	1984.4	2072.2	2108.2
46°	2865.2	2769.5	2543.5	2285.3	2003.2	1779.2	1742.6	1830.1	1945.9	2030.3	2055.1
47°	2875.4	2771.5	2535.8	2261.9	1973.8	1737.5	1697.1	1790.4	1906.8	1987.6	1997.8
48°	2881.7	2776.1	2534.7	2237.3	1945.7	1692.9	1651.2	1747.7	1865.4	1938.5	1936.5
49°	2888.6	2777.1	2527.5	2216.0	1917.6	1651.0	1603.4	1706.7	1822.6	1888.0	1870.8
50°	2891.0	2782.4	2518.3	2191.1	1890.2	1606.6	1555.2	1661.7	1778.7	1832.6	1801.5
51°	2883.6	2785.5	2507.7	2170.2	1861.5	1563.9	1507.6	1616.4	1732.3	1774.8	1728.7
52°	2865.2	2774.7	2495.1	2150.5	1834.3	1521.3	1458.1	1568.5	1683.9	1712.4	1644.2
53°	2847.6	2752.4	2484.2	2129.4	1801.8	1479.2	1408.2	1519.9	1634.5	1647.2	1540.9
54°	2846.4	2734.2	2465.5	2102.1	1765.5	1437.4	1357.7	1470.0	1583.8	1578.3	1410.2
55°	2855.9	2734.8	2438.8	2075.6	1726.8	1392.9	1306.9	1418.7	1529.7	1505.8	1245.7
56°	2863.1	2739.6	2413.1	2046.0	1684.7	1349.6	1257.0	1369.6	1472.3	1428.3	1059.1
57°	2879.0	2743.4	2403.3	2017.5	1641.2	1302.4	1206.1	1318.2	1410.8	1346.3	880.4
58°	2922.1	2755.9	2402.3	1984.3	1599.0	1253.5	1156.9	1266.8	1345.7	1245.1	701.7
59°	2990.1	2800.6	2397.9	1934.4	1557.3	1199.1	1108.4	1209.5	1276.4	1122.6	524.4
60°	3065.8	2866.8	2392.9	1884.4	1511.3	1141.9	1061.4	1155.1	1209.7	959.3	419.3
61°	3116.3	2942.1	2406.8	1842.8	1463.8	1081.0	1015.1	1095.2	1139.7	796.2	344.5
62°	3109.3	2981.0	2455.0	1813.0	1410.2	1020.6	969.2	1034.5	1069.7	633.1	303.4
63°	3050.5	2958.3	2525.7	1786.0	1354.5	958.6	923.5	973.9	994.9	481.6	283.3
64°	2932.0	2879.6	2587.7	1762.7	1293.5	896.8	876.0	911.7	917.0	369.7	271.3
65°	2773.1	2735.7	2584.8	1752.5	1222.9	836.3	826.8	853.3	826.7	298.0	260.5
66°	2605.6	2558.5	2503.0	1769.1	1142.0	774.8	777.6	795.3	736.4	259.0	250.0
67°	2397.7	2383.4	2339.9	1841.7	1062.8	720.0	728.1	737.3	645.3	241.1	238.8
68°	2164.3	2142.6	2125.8	1947.8	992.0	664.4	669.7	676.0	513.9	229.1	227.2
69°	1999.2	1948.9	1902.8	1971.3	929.4	613.3	611.0	622.0	382.0	217.5	215.6
70°	1915.8	1830.8	1677.6	1837.0	868.9	562.0	550.3	568.0	283.5	205.4	204.2
71°	1843.1	1768.0	1519.8	1549.7	816.5	515.9	491.6	517.2	227.6	192.9	193.1
72°	1772.2	1699.9	1435.5	1262.7	793.3	471.2	434.5	463.9	200.0	180.5	182.8
73°	1695.3	1630.8	1366.6	1070.3	878.4	427.2	380.1	409.3	184.4	168.3	174.0
74°	1616.2	1560.0	1293.1	992.1	1107.1	384.8	330.3	355.8	170.7	156.8	164.3
75°	1517.4	1484.0	1212.2	921.2	972.9	339.8	283.3	299.8	156.4	146.0	151.8
76°	1411.3	1397.5	1135.6	863.6	615.8	294.7	243.0	249.6	143.6	135.9	139.0
77°	1290.5	1308.0	1048.6	808.8	437.8	249.7	204.6	197.5	131.0	125.9	125.6
78°	1152.0	1207.6	965.7	717.4	374.8	226.8	170.9	157.8	119.3	114.0	112.1
79°	1012.1	1088.7	900.5	577.3	405.7	199.6	140.7	133.0	107.5	101.3	100.3
80°	864.8	963.8	827.7	485.4	430.1	172.0	115.3	116.4	96.9	88.5	88.5
81°	724.5	827.1	744.3	435.9	339.1	157.0	94.0	101.5	86.3	75.7	76.9
82°	600.9	694.2	650.8	394.8	247.8	137.3	72.8	86.6	75.6	61.3	69.9
83°	501.1	590.3	517.2	335.1	156.6	122.5	56.4	71.8	63.5	49.0	61.3
84°	357.2	454.8	424.4	274.9	131.5	98.8	42.1	57.7	51.2	41.9	51.3
85°	256.8	334.5	327.1	214.7	112.5	63.0	30.7	45.1	39.4	34.8	40.5
86°	156.9	214.6	229.6	92.7	92.1	41.4	21.1	33.3	28.0	25.9	28.6
87°	65.7	94.8	132.2	36.5	64.2	33.1	14.7	22.3	20.2	18.3	20.3
88°	32.8	47.1	66.9	26.5	20.3	25.0	8.2	14.9	13.7	10.7	12.0
89°	1.0	0.9	1.6	17.7	15.3	16.8	1.9	7.6	7.2	3.2	3.8



REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

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: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

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: P1449881
CATALOG NUMBER: TWC150_T4_60W_3000K

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: P1449881

CATALOG NUMBER: TWC150_T4_60W_3000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8	2856.8
1°	2853.0	2853.2	2853.8	2854.4	2853.1	2853.7	2855.2	2858.3	2859.1	2860.5	2861.3
2°	2850.5	2851.3	2850.9	2851.2	2850.7	2851.2	2852.7	2858.0	2858.3	2861.6	2863.5
3°	2849.4	2850.9	2850.2	2849.4	2848.2	2848.2	2850.1	2856.1	2858.0	2862.4	2865.6
4°	2853.2	2854.9	2853.3	2850.3	2846.4	2844.3	2845.5	2851.9	2856.4	2860.9	2866.6
5°	2854.6	2856.2	2855.2	2852.2	2846.6	2840.9	2841.0	2848.5	2853.3	2861.2	2867.7
6°	2851.4	2852.1	2852.7	2851.5	2846.7	2836.7	2834.4	2842.8	2849.6	2859.3	2867.6
7°	2844.8	2845.7	2846.4	2846.9	2843.5	2834.2	2828.5	2836.0	2844.5	2856.7	2866.8
8°	2836.2	2838.5	2838.6	2838.9	2838.1	2831.5	2820.8	2827.8	2839.1	2853.3	2866.5
9°	2830.2	2832.2	2833.2	2830.6	2830.6	2827.1	2812.3	2820.0	2832.7	2849.0	2864.1
10°	2823.1	2825.8	2825.9	2822.7	2820.6	2820.0	2804.1	2810.5	2824.4	2844.0	2860.4
11°	2817.8	2821.5	2819.9	2814.8	2810.5	2809.9	2794.5	2799.4	2816.1	2837.0	2857.1
12°	2812.1	2818.1	2815.3	2807.9	2800.5	2799.3	2785.9	2788.1	2807.1	2828.3	2852.9
13°	2808.0	2813.3	2809.3	2800.3	2789.4	2786.1	2775.0	2776.1	2796.2	2819.0	2848.8
14°	2801.1	2806.5	2803.6	2793.8	2779.7	2772.0	2763.3	2762.8	2784.0	2809.4	2841.7
15°	2794.6	2800.9	2797.6	2786.7	2768.5	2757.9	2750.0	2747.5	2771.0	2797.8	2833.3
16°	2786.2	2793.8	2789.8	2776.9	2758.5	2742.5	2735.8	2732.0	2755.5	2785.2	2822.6
17°	2777.0	2785.8	2781.7	2768.1	2747.3	2726.9	2720.2	2714.3	2738.6	2769.9	2812.5
18°	2769.8	2779.4	2774.4	2759.0	2734.8	2710.4	2702.4	2697.4	2720.1	2753.3	2802.9
19°	2761.6	2772.1	2766.8	2748.5	2721.7	2696.1	2684.6	2677.4	2699.8	2736.4	2791.4
20°	2752.6	2763.1	2757.4	2738.5	2708.1	2679.1	2664.1	2656.5	2677.4	2720.6	2782.0
21°	2743.6	2755.0	2747.4	2728.3	2693.9	2662.0	2644.6	2635.2	2654.4	2703.7	2771.1
22°	2732.6	2747.3	2738.2	2715.8	2679.9	2644.0	2623.7	2612.2	2631.9	2686.2	2758.9
23°	2723.9	2737.7	2729.5	2703.3	2665.0	2625.1	2602.3	2586.7	2607.5	2667.3	2746.3
24°	2714.9	2728.5	2719.8	2689.4	2649.6	2604.5	2580.3	2563.1	2582.6	2648.4	2733.2
25°	2703.1	2718.0	2709.1	2676.2	2632.6	2583.7	2557.7	2535.8	2556.9	2628.5	2720.5
26°	2691.6	2706.3	2697.0	2663.1	2615.8	2559.7	2533.1	2508.4	2529.9	2607.9	2706.3
27°	2678.6	2692.3	2683.7	2649.6	2597.6	2537.9	2507.6	2480.2	2503.7	2587.8	2691.6
28°	2662.9	2678.8	2669.1	2634.8	2579.4	2515.1	2481.0	2452.4	2477.2	2565.6	2676.0
29°	2646.9	2663.0	2653.2	2618.9	2559.3	2491.1	2453.0	2422.2	2447.0	2543.4	2658.9
30°	2630.0	2644.3	2636.6	2602.4	2539.8	2467.9	2424.8	2393.0	2417.5	2519.2	2642.8
31°	2609.8	2623.8	2616.7	2582.7	2519.5	2443.3	2394.4	2361.7	2387.9	2495.8	2626.1
32°	2588.4	2600.8	2594.6	2563.0	2497.7	2419.2	2364.2	2331.2	2357.4	2471.1	2610.2
33°	2563.6	2577.8	2571.1	2539.7	2474.5	2393.4	2330.6	2298.6	2325.9	2446.3	2590.5
34°	2538.7	2551.9	2545.9	2517.1	2451.4	2366.6	2299.4	2266.1	2295.1	2419.4	2572.4
35°	2511.4	2524.9	2519.4	2490.4	2427.6	2338.4	2263.6	2230.9	2261.8	2392.1	2551.3
36°	2483.3	2496.1	2490.4	2464.0	2401.6	2310.1	2230.2	2196.5	2227.2	2365.1	2530.8
37°	2452.1	2466.3	2461.0	2433.4	2374.7	2280.2	2194.5	2159.0	2193.9	2335.4	2509.4
38°	2421.2	2434.1	2430.1	2402.9	2347.2	2249.8	2160.5	2122.8	2156.4	2307.5	2490.5
39°	2386.5	2398.3	2396.4	2369.3	2316.4	2217.9	2124.4	2083.1	2120.0	2276.3	2470.3
40°	2351.6	2360.6	2360.9	2336.9	2284.0	2185.8	2089.9	2043.2	2079.9	2245.3	2449.7
41°	2309.8	2316.2	2320.7	2302.4	2250.0	2153.8	2053.1	2002.4	2043.2	2211.8	2429.9
42°	2263.5	2269.1	2276.4	2264.9	2215.2	2120.2	2015.6	1962.0	2001.5	2179.5	2411.4
43°	2214.6	2215.0	2226.2	2225.2	2178.1	2085.3	1977.8	1918.8	1960.7	2147.0	2393.6
44°	2160.0	2159.4	2175.9	2180.9	2140.3	2050.3	1939.2	1876.4	1918.4	2115.9	2373.5



REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	2102.5	2097.9	2117.6	2133.2	2101.0	2013.2	1901.4	1832.1	1877.0	2087.2	2356.2
46°	2038.9	2033.0	2056.7	2081.6	2060.2	1976.2	1860.8	1786.2	1833.4	2055.4	2333.3
47°	1973.0	1962.5	1991.1	2027.1	2018.2	1937.9	1821.1	1740.9	1790.4	2028.1	2311.3
48°	1901.6	1885.6	1921.3	1967.2	1973.6	1897.5	1779.1	1693.3	1746.3	1997.9	2287.5
49°	1821.5	1785.0	1843.2	1903.6	1924.5	1855.5	1736.1	1648.3	1702.2	1973.0	2268.5
50°	1718.9	1662.4	1748.8	1837.9	1872.0	1813.2	1692.3	1599.1	1658.4	1945.2	2244.5
51°	1590.8	1501.2	1626.8	1765.4	1816.2	1768.1	1646.5	1551.3	1614.6	1920.2	2222.8
52°	1423.0	1309.1	1469.1	1687.9	1756.8	1722.3	1600.6	1500.9	1572.8	1889.7	2203.8
53°	1234.6	1103.1	1284.3	1597.0	1694.8	1672.4	1552.7	1452.3	1528.9	1858.2	2182.4
54°	1040.4	922.5	1076.4	1480.8	1629.3	1623.1	1506.1	1402.2	1488.7	1824.2	2159.2
55°	846.3	741.9	899.4	1331.1	1558.8	1569.9	1455.3	1350.5	1444.9	1787.3	2131.1
56°	653.3	563.0	722.5	1155.7	1485.6	1515.1	1405.1	1299.9	1402.3	1746.9	2105.0
57°	516.0	458.0	546.3	968.4	1408.2	1455.7	1352.6	1246.6	1355.8	1702.3	2077.0
58°	423.8	387.7	444.1	781.1	1323.9	1392.7	1300.0	1197.0	1307.1	1662.2	2046.4
59°	361.7	344.1	375.4	595.4	1223.3	1328.1	1244.6	1145.9	1254.4	1618.8	2000.9
60°	326.7	323.1	334.4	467.4	1097.6	1263.4	1188.9	1099.8	1196.3	1575.0	1952.6
61°	310.5	312.3	313.8	378.7	929.8	1195.3	1130.4	1052.1	1138.2	1526.5	1907.7
62°	299.8	302.7	302.7	322.4	762.1	1126.4	1071.1	1006.1	1074.4	1476.2	1877.4
63°	290.2	294.1	292.7	292.5	595.1	1056.5	1012.5	959.6	1013.8	1422.2	1852.6
64°	280.7	284.7	283.4	276.9	452.1	985.8	951.5	913.5	948.4	1364.6	1829.1
65°	270.6	274.3	273.6	265.9	350.4	913.2	892.4	864.1	887.8	1299.5	1816.7
66°	260.0	264.7	262.5	255.3	289.4	826.9	834.0	811.4	824.4	1218.7	1829.9
67°	250.3	256.0	252.4	244.1	255.7	740.6	775.5	756.3	767.8	1138.0	1893.6
68°	240.6	247.1	243.0	232.5	238.5	654.4	717.0	696.7	711.9	1062.2	2005.1
69°	231.0	238.1	233.0	220.4	226.3	523.2	661.2	638.6	657.1	1000.5	2056.4
70°	221.5	230.6	223.8	208.6	214.3	387.5	608.5	579.1	605.0	936.5	1960.5
71°	214.0	222.8	215.8	197.3	202.0	285.4	557.6	519.6	554.8	881.0	1700.5
72°	204.9	211.9	207.5	186.7	190.1	227.3	506.8	460.9	507.6	846.7	1401.8
73°	192.5	199.0	195.6	177.1	177.6	197.6	455.1	405.8	462.5	882.9	1171.1
74°	179.0	184.8	183.0	168.7	165.6	181.3	404.6	357.6	420.9	1108.9	1043.5
75°	164.8	170.2	168.6	156.9	153.2	166.9	351.0	309.7	374.8	1149.6	972.2
76°	150.7	155.7	154.1	144.4	142.7	153.1	298.7	261.7	332.4	783.6	918.9
77°	135.6	140.9	138.2	130.6	131.7	139.7	246.8	222.4	290.1	488.3	855.1
78°	122.4	130.1	123.8	117.3	121.4	127.5	198.8	185.8	247.8	411.6	780.3
79°	113.1	121.0	113.7	104.0	108.4	115.3	158.6	154.4	223.9	378.8	635.8
80°	105.3	112.6	105.1	90.7	95.4	103.5	131.4	126.5	196.4	476.4	530.9
81°	93.6	99.3	94.2	77.5	82.4	92.5	113.4	102.1	173.0	354.8	469.9
82°	82.0	86.0	83.3	70.2	69.3	81.6	98.0	81.6	156.1	262.1	425.7
83°	70.3	72.6	72.4	62.9	53.5	70.6	82.6	62.9	140.2	170.0	384.7
84°	56.4	58.1	58.4	53.3	43.8	57.9	67.2	47.9	124.7	141.0	296.7
85°	41.1	42.4	44.2	43.6	36.8	45.8	53.3	37.1	86.6	121.7	207.5
86°	30.4	32.0	32.3	31.6	29.0	33.8	39.9	26.4	47.7	101.7	118.3
87°	21.6	22.7	23.0	21.4	20.1	24.1	28.5	15.7	33.2	70.5	49.6
88°	12.8	13.4	13.6	14.8	13.9	16.4	19.2	8.4	18.8	39.7	24.9
89°	4.0	4.2	4.5	8.2	7.7	8.7	10.0	3.1	4.4	29.9	0.6



REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

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: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

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: P1449881
CATALOG NUMBER: TWC150_T4_60W_3000K

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: P1449881
CATALOG NUMBER: TWC150_T4_60W_3000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
0°	2856.8	2856.8	2856.8
1°	2861.2	2861.8	2862.1
2°	2864.9	2865.6	2865.9
3°	2868.2	2868.8	2869.2
4°	2869.9	2872.2	2872.3
5°	2871.1	2874.7	2874.9
6°	2873.3	2878.1	2878.8
7°	2875.3	2880.0	2881.9
8°	2876.5	2883.1	2886.2
9°	2877.3	2885.7	2890.0
10°	2877.5	2888.9	2893.4
11°	2877.8	2890.6	2894.6
12°	2876.1	2890.3	2894.3
13°	2873.5	2889.8	2894.0
14°	2870.1	2889.8	2893.7
15°	2865.3	2888.0	2893.5
16°	2859.3	2884.7	2893.2
17°	2855.2	2883.3	2892.3
18°	2848.5	2880.3	2890.3
19°	2843.8	2877.9	2888.1
20°	2838.2	2874.6	2885.9
21°	2832.0	2870.4	2881.8
22°	2823.5	2865.8	2877.3
23°	2815.5	2859.9	2872.8
24°	2807.0	2854.8	2869.3
25°	2797.5	2849.8	2864.8
26°	2789.3	2843.7	2860.5
27°	2778.7	2836.9	2856.5
28°	2769.9	2832.3	2849.8
29°	2758.7	2823.5	2842.8
30°	2748.1	2816.0	2837.2
31°	2736.0	2808.8	2834.0
32°	2722.9	2803.9	2831.1
33°	2711.1	2799.1	2829.1
34°	2699.9	2796.2	2828.2
35°	2688.3	2791.2	2826.7
36°	2677.7	2789.5	2828.2
37°	2668.2	2788.4	2830.5
38°	2658.5	2787.6	2831.7
39°	2652.2	2787.2	2833.2
40°	2643.3	2784.0	2832.5
41°	2634.9	2780.2	2833.5
42°	2623.5	2778.4	2835.9
43°	2612.9	2777.6	2838.8
44°	2601.8	2777.4	2846.8



REPORT NUMBER: P1449881
 CATALOG NUMBER: TWC150_T4_60W_3000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
45°	2592.0	2783.2	2857.3
46°	2580.3	2789.0	2865.2
47°	2575.2	2793.5	2875.4
48°	2572.9	2798.4	2881.7
49°	2566.2	2802.1	2888.6
50°	2558.7	2806.4	2891.0
51°	2548.8	2806.8	2883.6
52°	2539.7	2796.7	2865.2
53°	2529.9	2773.8	2847.6
54°	2515.4	2757.5	2846.4
55°	2489.7	2756.3	2855.9
56°	2461.6	2764.1	2863.1
57°	2446.4	2767.5	2879.0
58°	2444.0	2780.4	2922.1
59°	2440.2	2822.6	2990.1
60°	2437.5	2887.3	3065.8
61°	2450.6	2962.5	3116.3
62°	2495.2	3004.6	3109.3
63°	2566.3	2985.4	3050.5
64°	2636.1	2910.9	2932.0
65°	2640.4	2777.0	2773.1
66°	2573.7	2599.5	2605.6
67°	2426.7	2422.1	2397.7
68°	2222.5	2184.6	2164.3
69°	1995.8	1975.0	1999.2
70°	1767.8	1848.4	1915.8
71°	1583.5	1781.0	1843.1
72°	1483.2	1716.9	1772.2
73°	1410.4	1642.0	1695.3
74°	1338.9	1573.6	1616.2
75°	1256.5	1492.3	1517.4
76°	1173.9	1407.3	1411.3
77°	1083.6	1314.7	1290.5
78°	998.0	1219.9	1152.0
79°	928.1	1101.6	1012.1
80°	860.0	975.6	864.8
81°	781.0	835.8	724.5
82°	686.6	700.3	600.9
83°	562.2	603.4	501.1
84°	447.9	474.5	357.2
85°	351.8	353.1	256.8
86°	256.8	232.0	156.9
87°	161.8	110.9	65.7
88°	13.0	55.4	32.8
89°	6.7	0.8	1.0



REPORT NUMBER: P1449881
CATALOG NUMBER: TWC150_T4_60W_3000K

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: P1449881
CATALOG NUMBER: TWC150_T4_60W_3000K

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: P1449881
CATALOG NUMBER: TWC150_T4_60W_3000K

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: SP1-2601-659-1

Test Date: 02/12/2026

Luminaire Tested: MWP2460W34VDDKYYAD-T4-24W-3000K

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

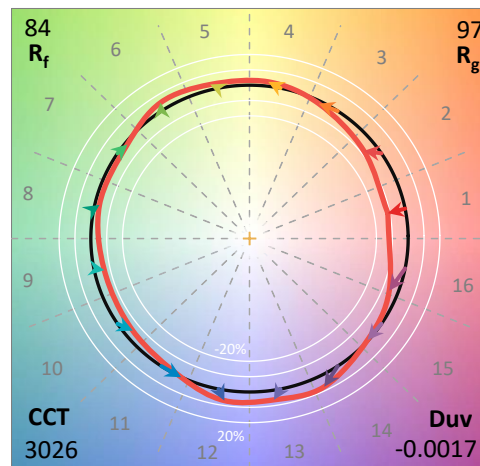
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2601-659-1
 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-3000K**
 Description: Mester Wedge, at T4 beam setting, 24W output, 3000K

Spectral Parameters

CCT (K): 3026
 CIE u': 0.2503
 CIE v': 0.5184
 Duv: -0.0017
 CIE x: 0.4326
 CIE y: 0.3983
 CIE z: 0.1691
 Peak Wavelength (nm): 604
 Dominant Wavelength (nm): 583
 Purity: 49.3886
 Rf: 84
 Rg: 97.4

CRI (Ra):	82.7		
R1:	81.4	R9:	7.5
R2:	90.7	R10:	78.8
R3:	96.3	R11:	80.8
R4:	81.1	R12:	70.7
R5:	81.6	R13:	83.7
R6:	88.6	R14:	98.6
R7:	82.6	R15:	74.2
R8:	59.3		



Test Conditions

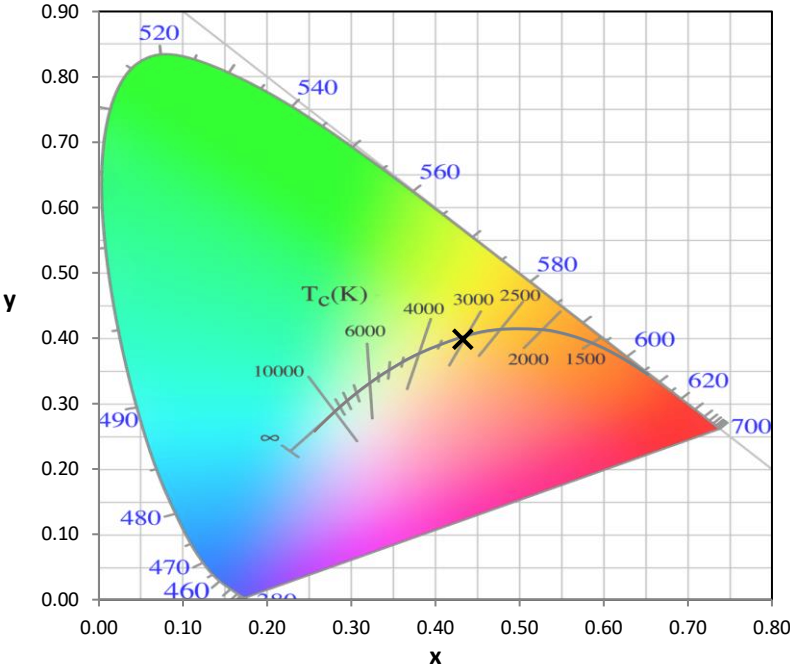
Stabilization Time: 64M
 Operation Time: 2H 4M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-1

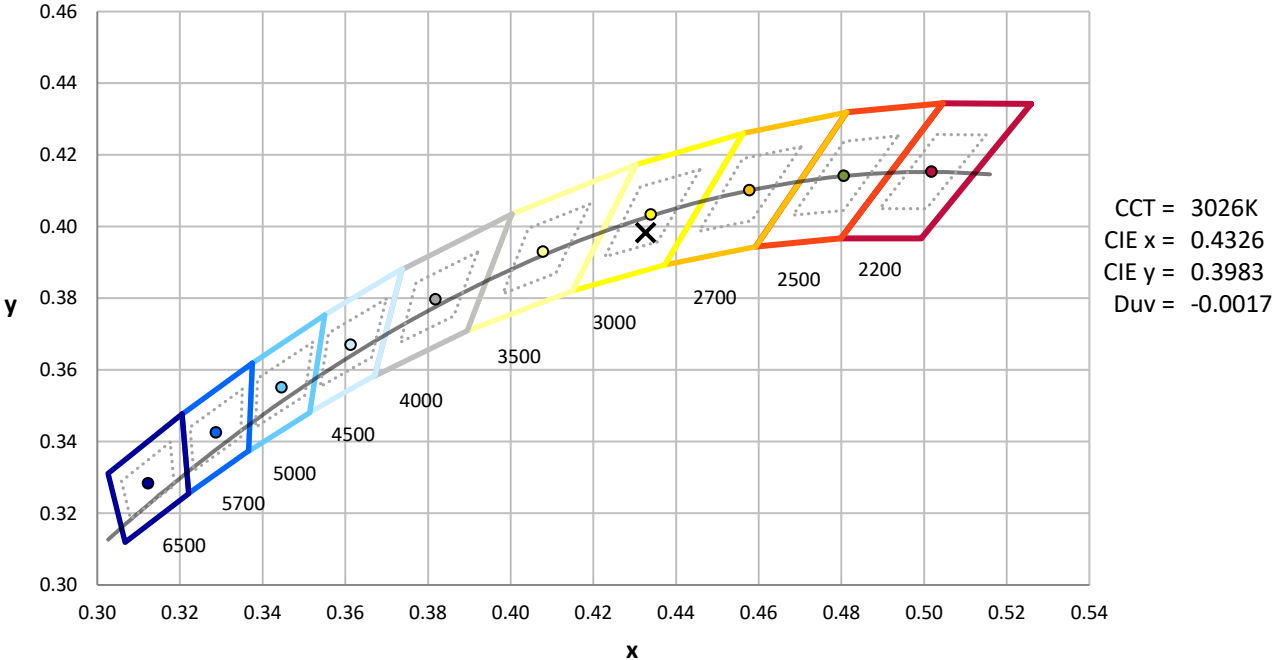
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2601-659-1

CIE 1931 Chromaticity Diagram



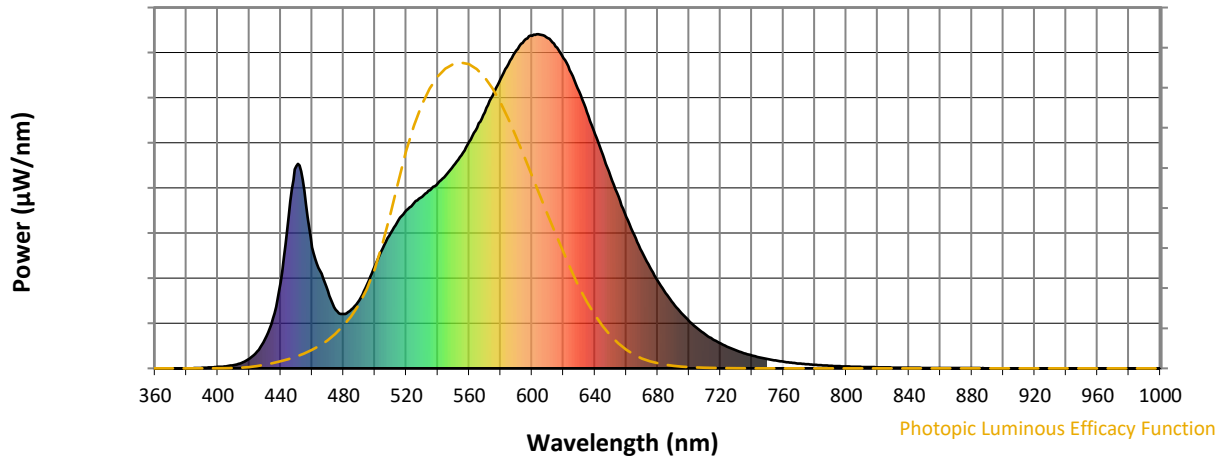
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-1

Photopic Flux vs. Wavelength

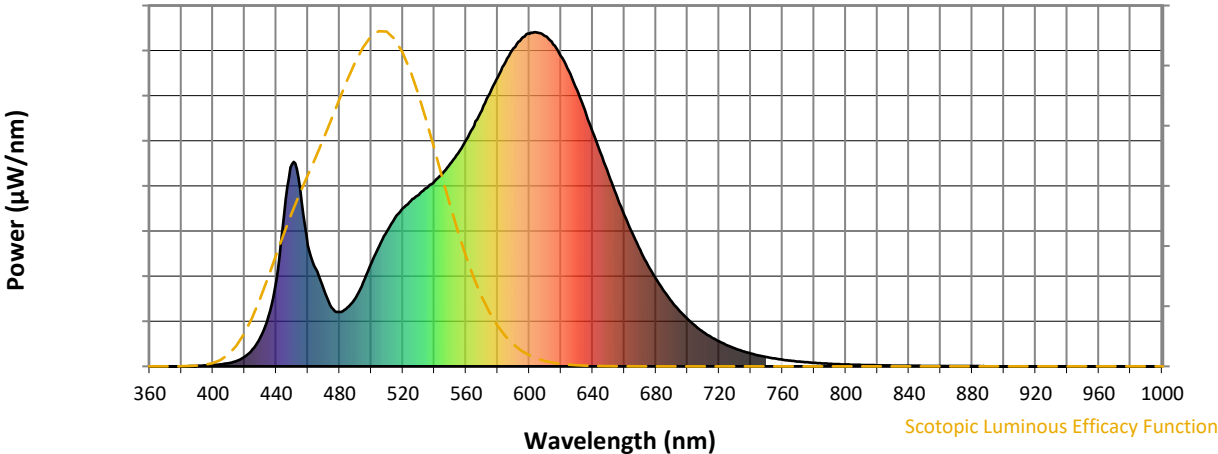


Photopic Lumens: NR

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	204	NR	620	928	NR	750	28	NR	880	1	NR
365	0	NR	495	251	NR	625	884	NR	755	24	NR	885	1	NR
370	0	NR	500	307	NR	630	828	NR	760	20	NR	890	0	NR
375	0	NR	505	360	NR	635	767	NR	765	17	NR	895	0	NR
380	0	NR	510	405	NR	640	702	NR	770	14	NR	900	0	NR
385	1	NR	515	444	NR	645	639	NR	775	12	NR	905	0	NR
390	2	NR	520	473	NR	650	574	NR	780	11	NR	910	0	NR
395	3	NR	525	495	NR	655	514	NR	785	9	NR	915	0	NR
400	5	NR	530	513	NR	660	453	NR	790	8	NR	920	0	NR
405	6	NR	535	534	NR	665	399	NR	795	7	NR	925	0	NR
410	10	NR	540	554	NR	670	348	NR	800	6	NR	930	0	NR
415	17	NR	545	577	NR	675	303	NR	805	5	NR	935	0	NR
420	29	NR	550	606	NR	680	263	NR	810	4	NR	940	0	NR
425	51	NR	555	638	NR	685	226	NR	815	4	NR	945	0	NR
430	87	NR	560	678	NR	690	194	NR	820	3	NR	950	0	NR
435	150	NR	565	720	NR	695	166	NR	825	3	NR	955	0	NR
440	258	NR	570	767	NR	700	142	NR	830	2	NR	960	0	NR
445	454	NR	575	817	NR	705	121	NR	835	2	NR	965	0	NR
450	605	NR	580	866	NR	710	103	NR	840	2	NR	970	0	NR
455	533	NR	585	911	NR	715	87	NR	845	2	NR	975	0	NR
460	362	NR	590	952	NR	720	74	NR	850	1	NR	980	0	NR
465	293	NR	595	981	NR	725	63	NR	855	1	NR	985	0	NR
470	231	NR	600	995	NR	730	54	NR	860	1	NR	990	0	NR
475	176	NR	605	999	NR	735	46	NR	865	1	NR	995	0	NR
480	163	NR	610	989	NR	740	38	NR	870	1	NR	1000	0	NR
485	176	NR	615	964	NR	745	33	NR	875	1	NR			

REPORT NUMBER: SP1-2601-659-1

Scotopic Flux vs. Wavelength



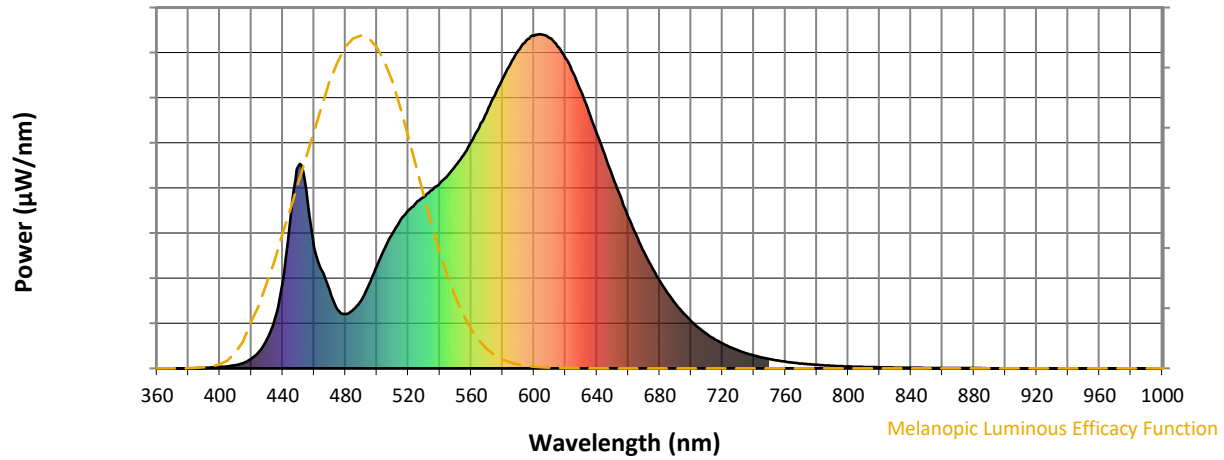
Scotopic Lumens: NR

S/P: 1.35

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	204	NR	620	928	NR	750	28	NR	880	1	NR
365	0	NR	495	251	NR	625	884	NR	755	24	NR	885	1	NR
370	0	NR	500	307	NR	630	828	NR	760	20	NR	890	0	NR
375	0	NR	505	360	NR	635	767	NR	765	17	NR	895	0	NR
380	0	NR	510	405	NR	640	702	NR	770	14	NR	900	0	NR
385	1	NR	515	444	NR	645	639	NR	775	12	NR	905	0	NR
390	2	NR	520	473	NR	650	574	NR	780	11	NR	910	0	NR
395	3	NR	525	495	NR	655	514	NR	785	9	NR	915	0	NR
400	5	NR	530	513	NR	660	453	NR	790	8	NR	920	0	NR
405	6	NR	535	534	NR	665	399	NR	795	7	NR	925	0	NR
410	10	NR	540	554	NR	670	348	NR	800	6	NR	930	0	NR
415	17	NR	545	577	NR	675	303	NR	805	5	NR	935	0	NR
420	29	NR	550	606	NR	680	263	NR	810	4	NR	940	0	NR
425	51	NR	555	638	NR	685	226	NR	815	4	NR	945	0	NR
430	87	NR	560	678	NR	690	194	NR	820	3	NR	950	0	NR
435	150	NR	565	720	NR	695	166	NR	825	3	NR	955	0	NR
440	258	NR	570	767	NR	700	142	NR	830	2	NR	960	0	NR
445	454	NR	575	817	NR	705	121	NR	835	2	NR	965	0	NR
450	605	NR	580	866	NR	710	103	NR	840	2	NR	970	0	NR
455	533	NR	585	911	NR	715	87	NR	845	2	NR	975	0	NR
460	362	NR	590	952	NR	720	74	NR	850	1	NR	980	0	NR
465	293	NR	595	981	NR	725	63	NR	855	1	NR	985	0	NR
470	231	NR	600	995	NR	730	54	NR	860	1	NR	990	0	NR
475	176	NR	605	999	NR	735	46	NR	865	1	NR	995	0	NR
480	163	NR	610	989	NR	740	38	NR	870	1	NR	1000	0	NR
485	176	NR	615	964	NR	745	33	NR	875	1	NR			

REPORT NUMBER: SP1-2601-659-1

Melanopic Flux vs. Wavelength



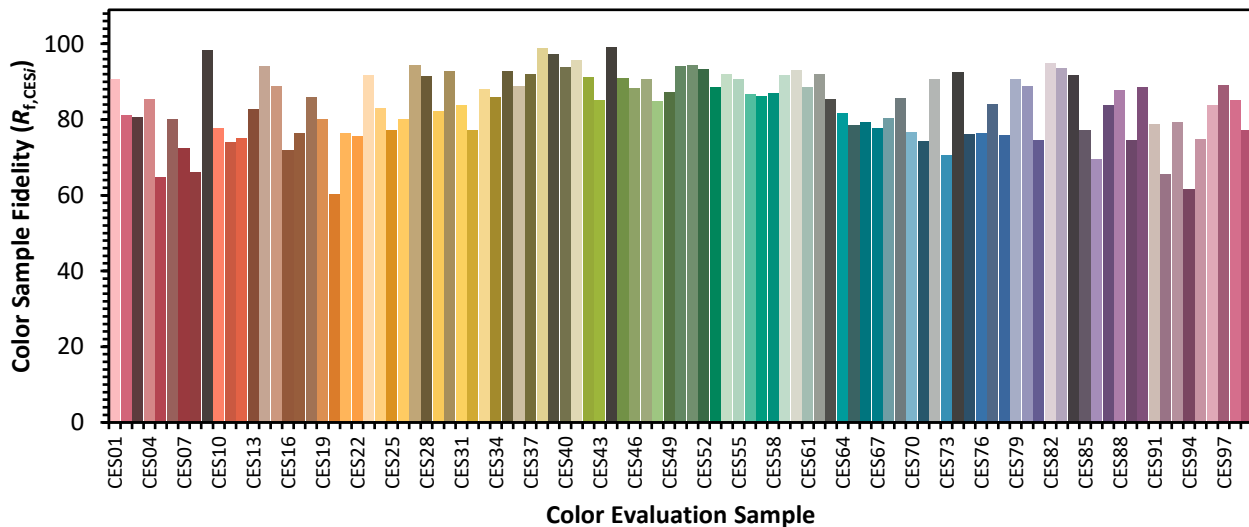
Melanopic Lumens: NR

M/P: 2.61

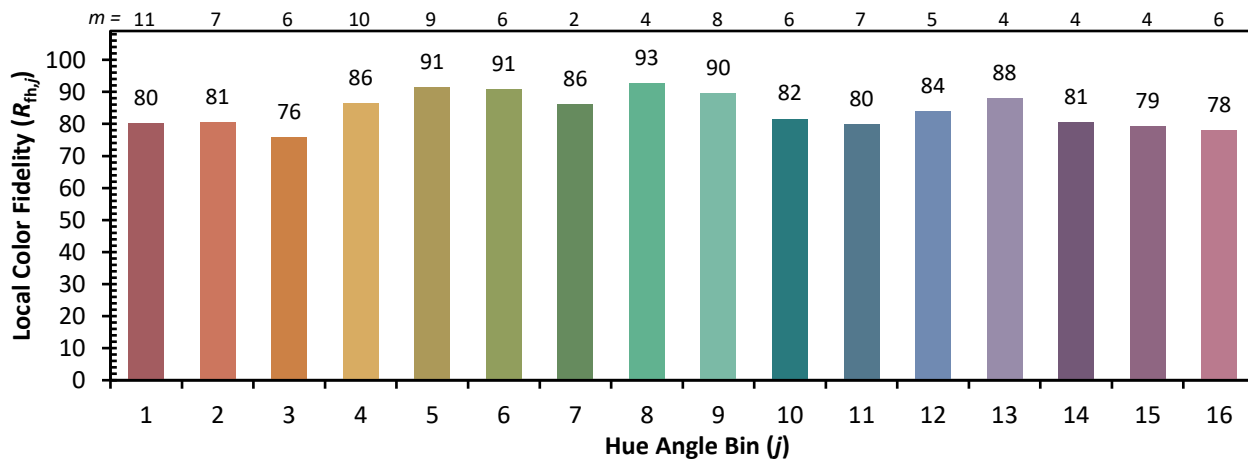
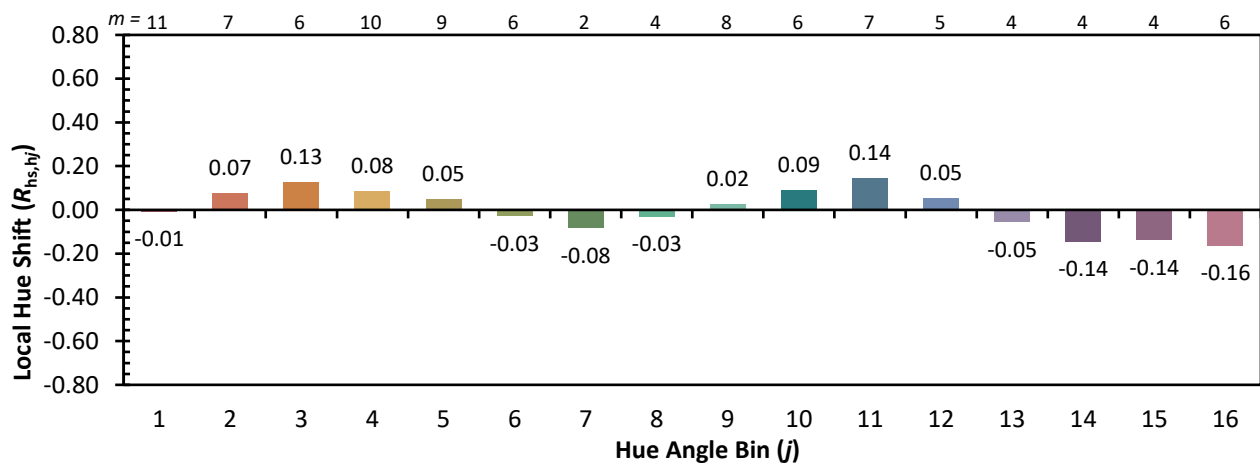
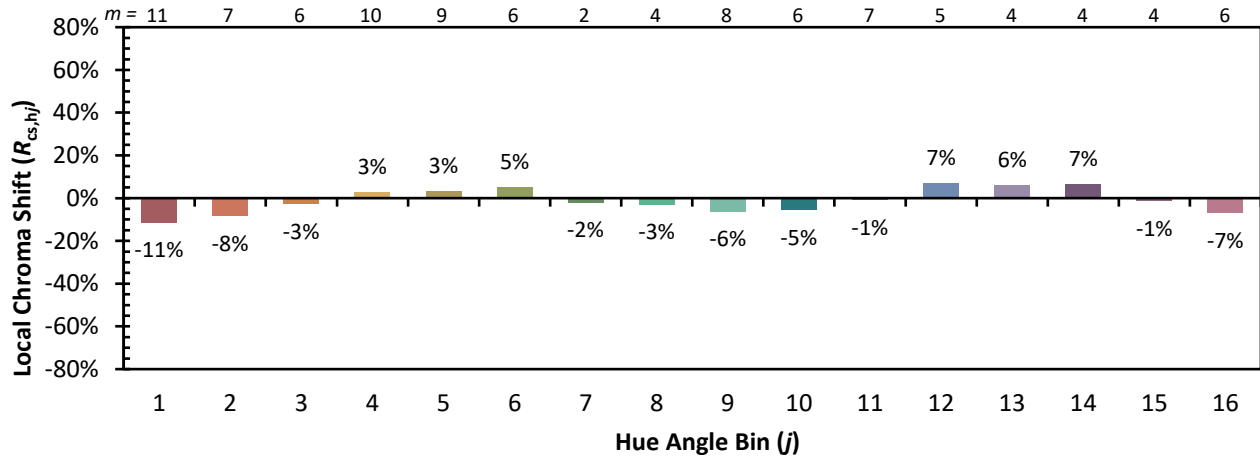
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	204	NR	620	928	NR	750	28	NR	880	1	NR
365	0	NR	495	251	NR	625	884	NR	755	24	NR	885	1	NR
370	0	NR	500	307	NR	630	828	NR	760	20	NR	890	0	NR
375	0	NR	505	360	NR	635	767	NR	765	17	NR	895	0	NR
380	0	NR	510	405	NR	640	702	NR	770	14	NR	900	0	NR
385	1	NR	515	444	NR	645	639	NR	775	12	NR	905	0	NR
390	2	NR	520	473	NR	650	574	NR	780	11	NR	910	0	NR
395	3	NR	525	495	NR	655	514	NR	785	9	NR	915	0	NR
400	5	NR	530	513	NR	660	453	NR	790	8	NR	920	0	NR
405	6	NR	535	534	NR	665	399	NR	795	7	NR	925	0	NR
410	10	NR	540	554	NR	670	348	NR	800	6	NR	930	0	NR
415	17	NR	545	577	NR	675	303	NR	805	5	NR	935	0	NR
420	29	NR	550	606	NR	680	263	NR	810	4	NR	940	0	NR
425	51	NR	555	638	NR	685	226	NR	815	4	NR	945	0	NR
430	87	NR	560	678	NR	690	194	NR	820	3	NR	950	0	NR
435	150	NR	565	720	NR	695	166	NR	825	3	NR	955	0	NR
440	258	NR	570	767	NR	700	142	NR	830	2	NR	960	0	NR
445	454	NR	575	817	NR	705	121	NR	835	2	NR	965	0	NR
450	605	NR	580	866	NR	710	103	NR	840	2	NR	970	0	NR
455	533	NR	585	911	NR	715	87	NR	845	2	NR	975	0	NR
460	362	NR	590	952	NR	720	74	NR	850	1	NR	980	0	NR
465	293	NR	595	981	NR	725	63	NR	855	1	NR	985	0	NR
470	231	NR	600	995	NR	730	54	NR	860	1	NR	990	0	NR
475	176	NR	605	999	NR	735	46	NR	865	1	NR	995	0	NR
480	163	NR	610	989	NR	740	38	NR	870	1	NR	1000	0	NR
485	176	NR	615	964	NR	745	33	NR	875	1	NR			

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

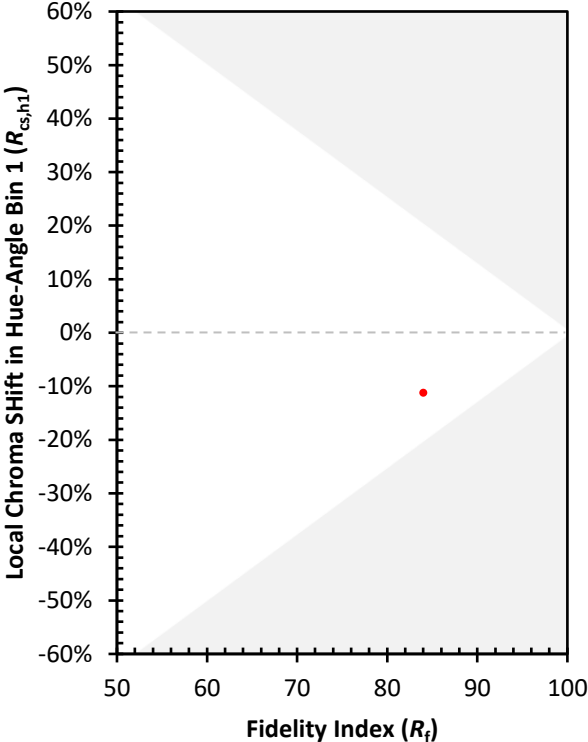
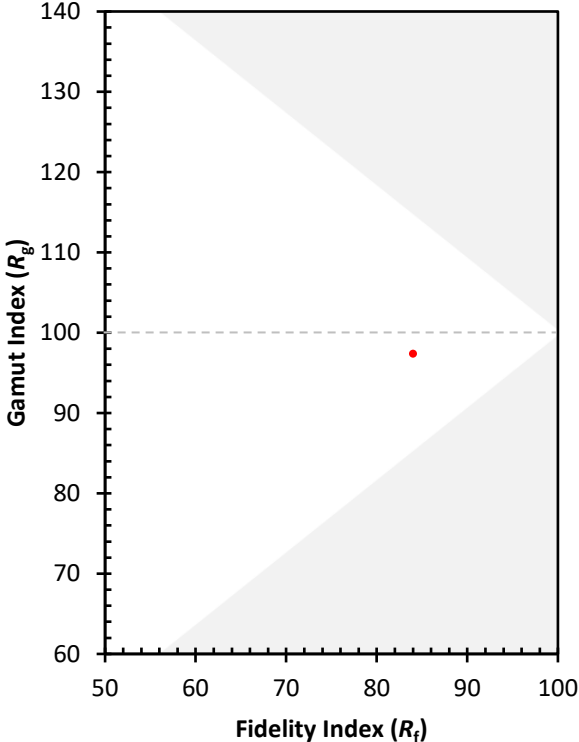
CES01 = 86	CES26 = 80	CES51 = 94	CES76 = 76
CES02 = 63	CES27 = 94	CES52 = 93	CES77 = 84
CES03 = 31	CES28 = 92	CES53 = 88	CES78 = 76
CES04 = 70	CES29 = 82	CES54 = 92	CES79 = 91
CES05 = 50	CES30 = 93	CES55 = 91	CES80 = 89
CES06 = 51	CES31 = 84	CES56 = 87	CES81 = 75
CES07 = 42	CES32 = 77	CES57 = 86	CES82 = 95
CES08 = 41	CES33 = 88	CES58 = 87	CES83 = 93
CES09 = 29	CES34 = 86	CES59 = 92	CES84 = 92
CES10 = 76	CES35 = 93	CES60 = 93	CES85 = 77
CES11 = 59	CES36 = 89	CES61 = 89	CES86 = 69
CES12 = 65	CES37 = 92	CES62 = 92	CES87 = 84
CES13 = 43	CES38 = 99	CES63 = 85	CES88 = 88
CES14 = 74	CES39 = 97	CES64 = 82	CES89 = 75
CES15 = 72	CES40 = 94	CES65 = 79	CES90 = 89
CES16 = 48	CES41 = 96	CES66 = 79	CES91 = 79
CES17 = 50	CES42 = 91	CES67 = 78	CES92 = 66
CES18 = 57	CES43 = 85	CES68 = 80	CES93 = 79
CES19 = 72	CES44 = 99	CES69 = 86	CES94 = 62
CES20 = 67	CES45 = 91	CES70 = 77	CES95 = 75
CES21 = 87	CES46 = 88	CES71 = 74	CES96 = 84
CES22 = 79	CES47 = 91	CES72 = 91	CES97 = 89
CES23 = 92	CES48 = 85	CES73 = 71	CES98 = 85
CES24 = 91	CES49 = 87	CES74 = 93	CES99 = 77
CES25 = 72	CES50 = 94	CES75 = 76	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)