

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: P1449907

Luminaire Tested: **TWC60\_T3\_48W\_5000K**

Issue Date: 5/19/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449907  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( )  
Test Lab: INNOVATION CENTER  
Issue Date: 5/19/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: TWC60\_T3\_48W\_5000K  
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T3 distribution, 48W  
5000K settings  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7810 lumens  
Efficiency: N/A  
Efficacy: 170.5 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.42' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

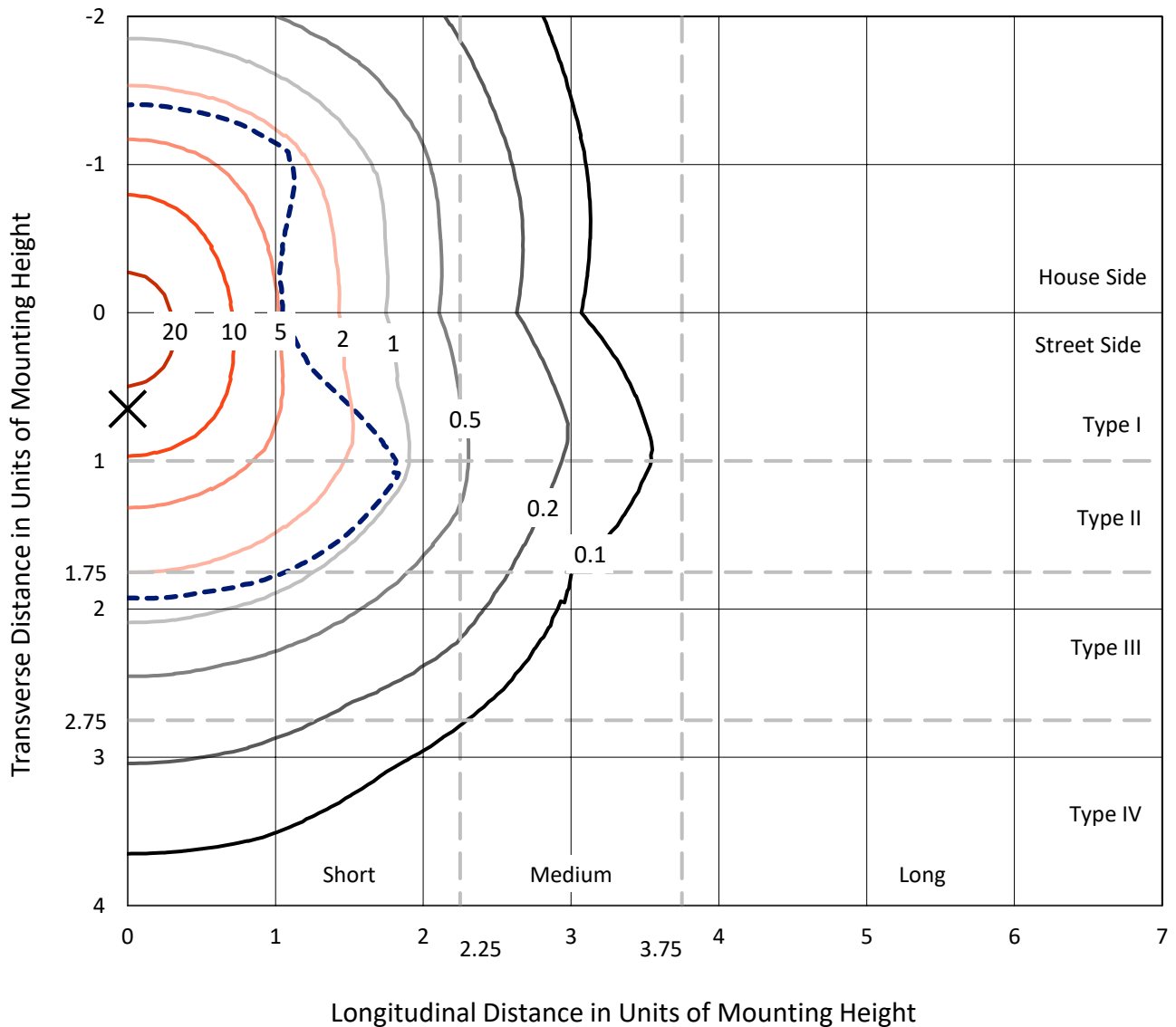
Input Watts (W): 45.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

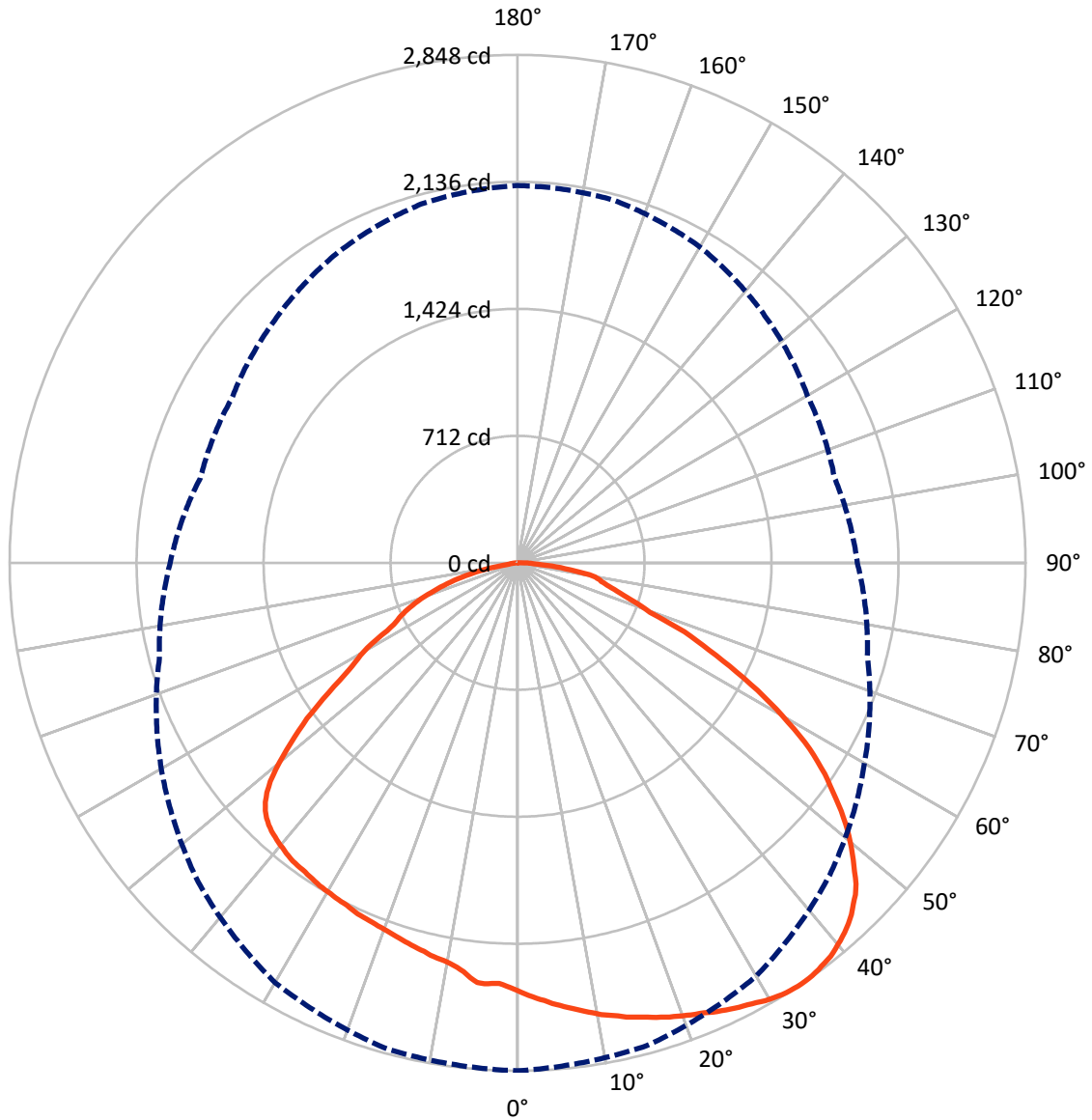
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 24.7 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



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

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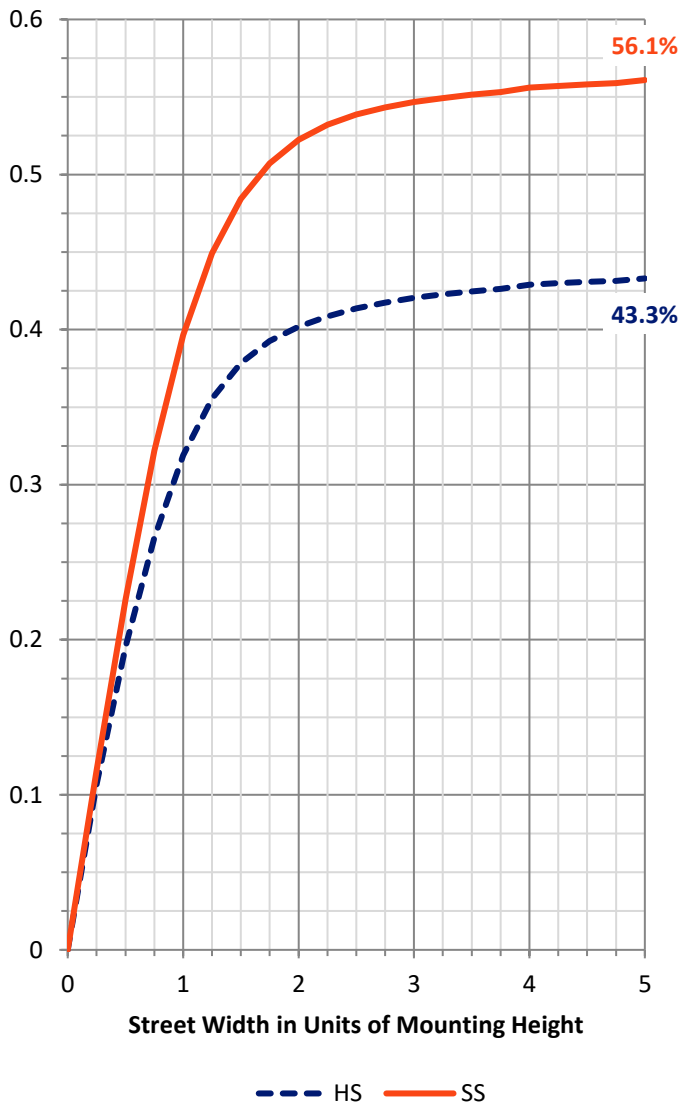
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3401.5	0.0	3401.5
	% Fixture	43.6	0.0	43.6
<b>Street Side</b>	Lumens	4408.5	0.0	4408.5
	% Fixture	56.4	0.0	56.4
<b>Total</b>	Lumens	7810.0	0.0	7810.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	229.9	2.9
10°-20°	672.3	8.6
20°-30°	1062.6	13.6
30°-40°	1365.4	17.5
40°-50°	1524.6	19.5
50°-60°	1412.0	18.1
60°-70°	975.4	12.5
70°-80°	462.1	5.9
80°-90°	105.7	1.4
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°	7810.0	100.0
0°-180°	7810.0	100.0

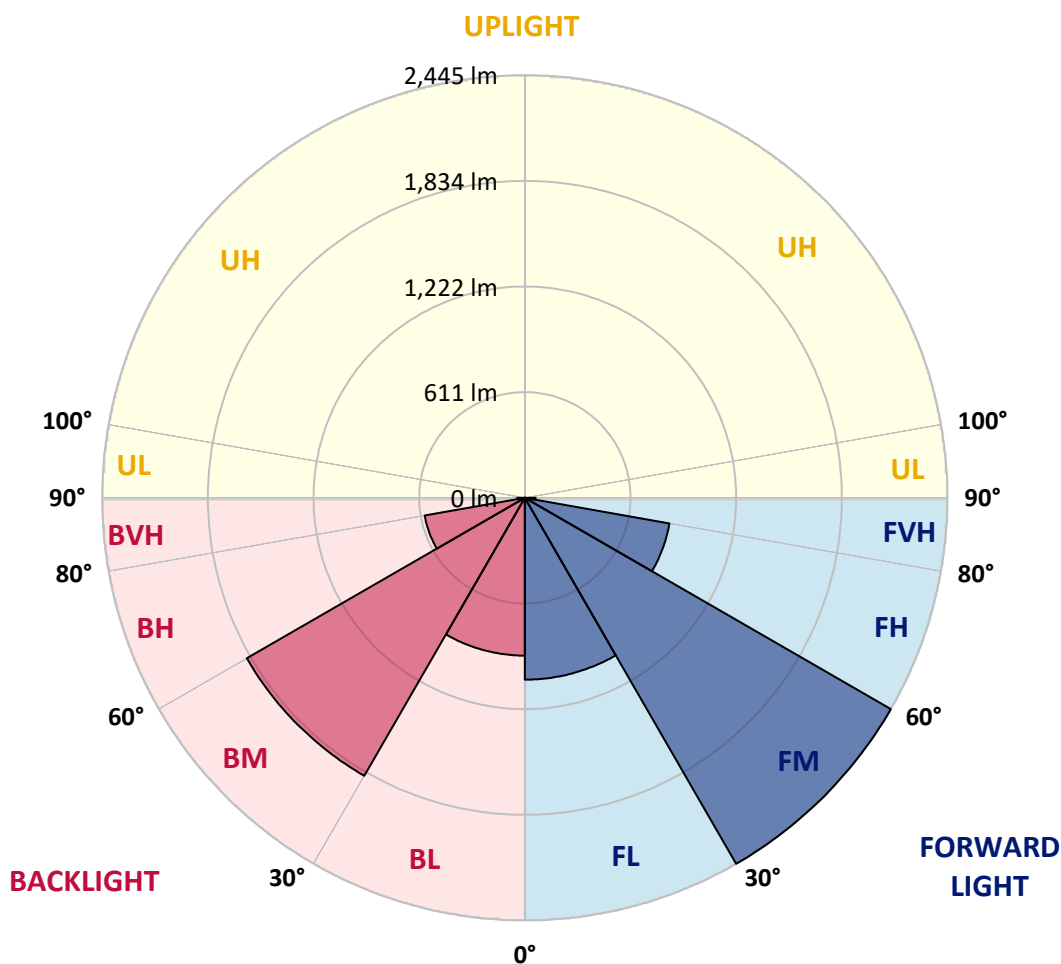


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1052.0	13.5			
FM (30°-60°)	2444.8	31.3			
FH (60°-80°)	849.4	10.9			G1/1800
FVH (80°-90°)	62.2	0.8			G1/100
BL (0°-30°)	912.9	11.7	B2/1000		
BM (30°-60°)	1857.0	23.8	B2/2500		
BH (60°-80°)	588.1	7.5	B2/1000		G2/1000
BVH (80°-90°)	43.5	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5
1°	2426.8	2427.0	2423.2	2420.3	2418.7	2413.8	2404.9	2401.8	2398.2	2396.9	2390.2
2°	2444.3	2443.4	2439.2	2430.5	2425.8	2416.3	2404.6	2394.5	2385.8	2380.7	2378.3
3°	2459.2	2461.6	2452.2	2444.1	2431.3	2419.8	2401.3	2387.3	2377.3	2367.2	2364.3
4°	2478.8	2478.0	2466.9	2451.4	2439.1	2415.9	2396.7	2377.2	2366.6	2356.6	2360.9
5°	2493.8	2490.5	2480.9	2460.5	2439.7	2416.1	2391.4	2372.3	2358.2	2357.6	2364.2
6°	2510.6	2503.4	2491.6	2471.3	2447.0	2415.5	2381.5	2361.2	2350.6	2363.2	2367.5
7°	2525.4	2518.8	2503.8	2478.5	2448.5	2411.8	2375.0	2349.9	2349.7	2363.5	2355.7
8°	2543.4	2535.5	2513.8	2483.3	2450.8	2410.9	2367.6	2340.7	2349.2	2350.5	2330.6
9°	2559.3	2550.8	2527.0	2492.8	2450.3	2405.6	2358.5	2334.4	2349.1	2333.1	2301.6
10°	2576.2	2564.8	2538.8	2500.6	2451.7	2401.5	2348.7	2327.2	2339.0	2302.1	2284.3
11°	2589.2	2579.1	2549.7	2507.4	2453.1	2397.5	2340.2	2321.7	2324.0	2280.3	2272.9
12°	2603.3	2591.1	2559.6	2510.0	2452.6	2388.4	2328.7	2316.9	2297.4	2263.1	2258.8
13°	2620.0	2605.9	2571.2	2517.0	2451.4	2382.9	2315.9	2308.8	2269.5	2248.0	2247.8
14°	2631.8	2617.5	2575.7	2521.2	2451.4	2376.5	2300.0	2301.2	2248.6	2235.9	2239.9
15°	2644.1	2629.6	2584.1	2523.8	2449.2	2367.1	2286.8	2285.2	2229.4	2221.2	2227.9
16°	2658.3	2638.2	2591.5	2525.9	2443.4	2360.1	2272.4	2271.2	2211.1	2209.1	2216.7
17°	2671.8	2649.3	2596.9	2526.1	2440.8	2346.9	2259.7	2244.9	2194.8	2196.1	2204.8
18°	2685.9	2659.7	2605.0	2522.5	2436.0	2338.6	2244.6	2217.4	2176.2	2181.2	2194.7
19°	2697.4	2671.8	2609.5	2524.4	2430.9	2325.4	2230.7	2190.4	2160.2	2167.3	2183.1
20°	2709.7	2682.7	2617.2	2525.5	2421.9	2312.5	2216.7	2164.8	2143.0	2155.3	2170.9
21°	2720.7	2693.9	2624.4	2524.4	2415.5	2297.6	2204.8	2141.8	2123.9	2138.4	2161.5
22°	2731.6	2701.0	2629.8	2524.1	2403.2	2282.3	2190.3	2120.3	2104.2	2124.3	2150.5
23°	2747.5	2712.9	2632.4	2520.5	2394.7	2269.0	2176.7	2096.8	2086.4	2110.2	2139.2
24°	2760.3	2723.9	2638.7	2519.0	2382.0	2249.9	2162.5	2073.6	2067.7	2094.3	2128.2
25°	2772.6	2733.4	2643.5	2516.7	2371.2	2228.1	2141.0	2050.5	2047.5	2079.4	2119.6
26°	2785.4	2742.9	2648.7	2512.2	2358.9	2208.2	2120.4	2028.1	2025.0	2064.1	2112.4
27°	2793.8	2753.7	2652.5	2507.9	2347.4	2188.0	2097.9	2002.8	2006.5	2049.1	2101.7
28°	2806.3	2763.1	2656.2	2502.4	2330.9	2164.2	2068.0	1976.4	1985.3	2036.8	2092.1
29°	2821.7	2772.0	2659.4	2497.8	2316.7	2139.6	2036.5	1951.3	1965.8	2022.7	2082.1
30°	2830.8	2780.5	2663.1	2490.8	2299.5	2113.8	2005.8	1923.2	1942.8	2005.0	2070.3
31°	2839.9	2790.3	2667.8	2485.8	2284.4	2089.0	1970.9	1895.3	1920.2	1992.1	2063.0
32°	2844.5	2797.3	2670.4	2481.0	2268.4	2059.3	1937.7	1869.0	1898.9	1976.9	2054.2
33°	2848.4	2803.1	2676.1	2475.3	2246.6	2030.6	1905.3	1839.7	1876.7	1960.3	2044.8
34°	2847.4	2803.8	2679.6	2466.4	2229.1	2002.3	1870.6	1808.3	1852.6	1944.3	2033.9
35°	2844.9	2799.2	2677.3	2461.0	2210.4	1971.8	1836.8	1780.4	1831.0	1927.1	2024.0
36°	2837.8	2798.9	2677.6	2454.8	2189.3	1938.6	1804.0	1752.0	1807.0	1913.8	2011.6
37°	2828.4	2788.2	2674.5	2448.4	2170.4	1906.0	1767.7	1721.1	1785.6	1894.2	2000.3
38°	2819.7	2781.7	2667.8	2441.8	2147.0	1874.9	1731.9	1689.6	1759.0	1876.7	1988.8
39°	2803.5	2766.4	2662.4	2435.3	2129.0	1842.3	1694.9	1657.3	1735.1	1856.0	1979.8
40°	2786.5	2748.6	2653.1	2426.0	2108.6	1808.4	1658.6	1626.3	1713.2	1838.0	1970.4
41°	2768.7	2732.7	2641.9	2417.1	2085.2	1776.9	1623.1	1598.3	1686.1	1823.2	1959.7
42°	2746.1	2716.2	2623.3	2407.9	2066.5	1740.6	1587.6	1570.3	1660.2	1808.4	1944.7
43°	2720.2	2691.1	2605.2	2396.7	2048.7	1705.8	1552.0	1541.2	1633.3	1792.0	1933.4
44°	2685.8	2662.4	2584.1	2386.8	2026.6	1671.0	1513.5	1509.1	1609.6	1770.0	1922.3



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**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	2655.8	2633.4	2563.4	2375.6	2006.5	1637.5	1473.5	1475.9	1586.0	1749.7	1909.7
46°	2616.6	2597.1	2538.0	2361.9	1988.1	1604.9	1433.6	1443.3	1562.4	1732.4	1895.7
47°	2563.9	2558.2	2508.0	2346.6	1968.3	1568.9	1391.6	1409.4	1537.5	1716.8	1875.1
48°	2514.2	2512.9	2475.8	2326.8	1950.2	1531.6	1350.7	1374.5	1507.9	1697.2	1852.3
49°	2461.3	2458.7	2440.5	2304.1	1932.3	1494.2	1310.0	1338.4	1480.3	1675.8	1829.8
50°	2408.7	2408.8	2397.9	2280.0	1914.1	1454.9	1268.1	1299.6	1455.5	1653.7	1795.5
51°	2351.3	2352.8	2350.4	2256.0	1897.3	1415.4	1226.6	1260.7	1429.9	1631.2	1753.4
52°	2287.5	2295.1	2299.5	2227.2	1877.1	1374.7	1182.9	1224.7	1402.5	1608.7	1700.7
53°	2218.8	2228.7	2248.0	2197.5	1858.5	1334.3	1141.5	1188.4	1373.0	1586.2	1632.6
54°	2152.9	2161.3	2185.8	2159.3	1840.3	1293.2	1097.6	1151.4	1340.6	1563.5	1564.5
55°	2091.0	2096.0	2121.2	2113.9	1813.2	1252.8	1054.9	1113.7	1309.0	1529.3	1496.4
56°	2017.2	2029.8	2055.2	2066.5	1788.6	1212.2	1011.0	1075.6	1277.7	1482.1	1421.1
57°	1942.1	1958.9	1983.1	2016.0	1762.3	1172.4	965.0	1038.1	1245.9	1425.6	1340.2
58°	1855.1	1882.1	1916.2	1958.7	1733.8	1131.5	916.8	999.2	1212.7	1357.9	1251.3
59°	1761.4	1796.8	1841.7	1896.8	1703.1	1089.8	873.0	959.3	1177.2	1287.6	1169.5
60°	1667.0	1701.5	1769.3	1824.3	1666.3	1048.4	825.8	916.7	1140.1	1215.7	1090.2
61°	1572.9	1610.4	1686.8	1747.2	1624.1	1010.2	781.6	873.0	1103.1	1137.6	1022.1
62°	1474.3	1511.7	1593.8	1663.5	1580.5	971.2	740.2	832.1	1060.4	1061.6	977.4
63°	1371.1	1410.6	1502.9	1573.3	1533.9	933.3	697.2	790.8	1011.1	985.1	931.7
64°	1276.0	1305.0	1416.2	1483.0	1482.4	897.9	655.5	748.1	954.1	912.1	866.6
65°	1180.3	1202.4	1325.3	1385.5	1420.5	864.1	616.2	707.7	891.2	861.7	792.5
66°	1099.5	1105.4	1228.6	1283.4	1349.9	833.4	575.9	665.4	825.4	824.7	736.1
67°	1013.2	1022.1	1127.6	1182.2	1271.2	805.2	535.0	624.6	754.7	777.5	699.7
68°	902.7	925.7	1021.9	1097.4	1178.8	779.0	494.7	584.8	683.5	718.9	671.4
69°	792.9	813.7	916.9	1036.3	1081.0	758.3	454.0	544.1	616.6	674.3	642.0
70°	741.7	756.5	794.1	973.4	968.5	737.7	412.9	505.2	562.0	642.7	613.5
71°	692.4	701.3	711.7	887.4	831.8	717.2	371.8	465.5	526.0	612.3	587.4
72°	643.2	646.1	629.7	754.6	709.4	694.4	332.4	423.1	486.9	579.9	560.4
73°	601.3	611.3	547.7	656.4	587.2	660.7	293.7	378.5	449.7	547.8	529.6
74°	563.2	573.2	512.4	559.5	464.9	607.8	257.4	332.9	423.8	517.0	496.2
75°	531.1	530.8	476.1	462.5	500.4	546.3	222.9	284.5	401.9	488.2	460.9
76°	502.8	485.7	443.6	416.9	459.6	489.2	193.3	239.7	377.6	456.4	420.8
77°	480.9	441.3	409.9	392.3	323.7	430.4	163.6	209.1	353.9	427.9	375.4
78°	465.5	406.0	370.6	367.9	234.8	355.0	134.1	178.4	332.1	400.5	333.2
79°	444.5	381.0	335.7	319.2	186.9	282.4	110.0	147.8	309.1	374.0	295.7
80°	408.1	360.6	310.1	257.7	190.5	221.1	88.3	128.6	287.0	340.5	267.0
81°	353.4	337.2	286.1	217.2	197.0	163.4	69.1	109.6	263.7	304.6	237.1
82°	295.7	304.3	261.5	189.7	142.0	116.0	52.2	92.2	240.2	269.5	180.7
83°	242.9	270.7	226.7	165.3	92.5	78.5	38.7	75.7	216.4	243.2	124.1
84°	193.4	239.8	176.5	145.3	75.1	61.1	28.2	60.3	181.8	195.2	47.7
85°	134.0	188.3	136.2	123.5	57.8	44.0	21.3	46.0	147.5	147.2	33.9
86°	92.5	139.0	100.6	85.0	40.5	26.9	14.5	32.4	123.2	99.3	20.2
87°	74.0	81.2	66.9	47.5	28.7	15.5	7.7	22.0	81.9	51.3	6.5
88°	55.6	60.6	50.3	10.0	15.2	6.4	3.6	11.6	54.6	3.4	2.4
89°	37.2	40.5	33.8	6.1	10.1	3.3	1.1	1.5	27.3	1.0	0.8



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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



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**CANDELA DISTRIBUTION (continued):**

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



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**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: P1449907

CATALOG NUMBER: TWC60\_T3\_48W\_5000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5	2408.5
1°	2390.5	2389.6	2390.3	2394.6	2397.6	2399.5	2404.5	2407.4	2413.3	2417.3	2420.7
2°	2374.6	2374.6	2378.3	2379.5	2384.2	2390.5	2400.5	2404.1	2414.9	2422.4	2432.9
3°	2362.0	2361.3	2363.5	2366.3	2370.9	2384.4	2393.5	2402.3	2418.4	2430.1	2445.6
4°	2361.9	2363.4	2363.3	2359.2	2361.1	2370.0	2384.7	2401.5	2419.0	2437.5	2454.3
5°	2367.2	2368.7	2366.1	2362.1	2355.7	2362.0	2377.1	2397.1	2420.4	2443.8	2463.4
6°	2364.5	2364.6	2366.7	2363.6	2356.6	2350.7	2368.5	2390.9	2420.4	2447.7	2473.7
7°	2347.1	2341.8	2350.5	2358.4	2357.7	2345.6	2360.8	2382.7	2417.3	2453.4	2483.1
8°	2313.4	2312.8	2318.5	2340.1	2353.7	2342.3	2351.6	2378.4	2419.0	2456.8	2492.1
9°	2295.2	2294.1	2294.3	2311.0	2339.5	2340.8	2338.8	2367.8	2416.1	2462.0	2501.8
10°	2282.4	2278.9	2280.4	2288.3	2315.4	2336.9	2328.8	2359.5	2412.7	2463.2	2509.6
11°	2269.5	2269.3	2269.7	2273.0	2287.9	2330.1	2317.0	2351.5	2408.0	2463.5	2516.5
12°	2260.4	2261.8	2260.1	2257.4	2266.7	2316.1	2309.0	2340.6	2404.2	2468.0	2522.6
13°	2251.8	2253.9	2252.5	2246.7	2250.2	2292.6	2300.7	2331.0	2396.4	2468.7	2530.6
14°	2242.5	2241.3	2241.8	2236.9	2235.8	2264.8	2294.3	2315.4	2393.7	2468.1	2533.9
15°	2233.1	2233.6	2231.8	2224.4	2219.8	2239.3	2285.4	2305.6	2386.3	2465.0	2537.4
16°	2225.0	2224.4	2219.2	2209.3	2205.4	2217.3	2275.2	2290.8	2380.2	2464.4	2541.7
17°	2216.4	2215.6	2212.3	2199.0	2189.4	2197.3	2260.5	2275.0	2370.4	2461.0	2545.6
18°	2205.4	2206.8	2199.0	2186.2	2176.2	2178.4	2243.6	2262.4	2362.2	2459.0	2546.0
19°	2196.3	2198.9	2190.7	2174.5	2158.6	2158.8	2222.4	2244.6	2351.6	2454.1	2548.2
20°	2188.7	2190.2	2182.0	2161.7	2142.5	2140.7	2192.9	2229.0	2340.2	2450.1	2550.5
21°	2180.7	2184.3	2172.0	2149.4	2127.8	2122.8	2167.3	2211.2	2328.8	2441.2	2550.6
22°	2170.9	2177.3	2162.7	2138.7	2111.2	2099.9	2136.9	2195.9	2312.9	2435.1	2552.5
23°	2167.5	2172.0	2155.4	2125.6	2095.5	2079.2	2111.7	2176.2	2297.7	2426.3	2553.1
24°	2161.1	2167.2	2150.4	2113.2	2077.2	2056.3	2089.0	2158.7	2280.4	2416.3	2552.0
25°	2151.7	2163.0	2143.2	2102.3	2061.0	2035.8	2062.4	2140.7	2263.5	2409.7	2550.1
26°	2147.9	2154.3	2136.6	2092.1	2044.0	2014.9	2036.5	2123.8	2244.0	2400.6	2553.1
27°	2137.9	2146.0	2126.9	2081.6	2026.9	1992.0	2011.8	2106.4	2224.8	2388.9	2548.0
28°	2132.4	2142.3	2119.5	2071.4	2009.2	1969.3	1985.9	2090.6	2203.7	2377.2	2547.1
29°	2124.0	2137.6	2108.7	2056.8	1992.6	1944.7	1958.0	2065.6	2179.5	2364.7	2544.6
30°	2119.2	2131.2	2101.7	2047.1	1977.8	1922.2	1931.7	2040.2	2155.6	2351.8	2543.1
31°	2118.0	2127.5	2097.3	2033.5	1961.8	1895.7	1900.6	2014.0	2131.2	2337.3	2540.0
32°	2111.2	2123.6	2090.8	2021.9	1943.7	1872.1	1874.4	1983.5	2105.0	2321.7	2536.9
33°	2103.7	2115.8	2083.1	2011.4	1925.2	1849.2	1841.0	1947.9	2079.6	2306.9	2532.3
34°	2092.6	2110.5	2074.5	1999.7	1903.2	1824.8	1812.2	1908.6	2051.2	2289.7	2530.5
35°	2083.9	2103.2	2065.7	1987.8	1885.9	1798.2	1780.1	1872.1	2025.1	2275.7	2529.7
36°	2079.5	2100.3	2056.2	1976.3	1866.2	1772.1	1749.3	1835.2	1997.7	2258.9	2523.5
37°	2076.9	2096.9	2050.8	1960.5	1847.6	1746.5	1716.1	1798.0	1968.2	2242.7	2522.7
38°	2073.5	2090.5	2046.5	1948.1	1827.0	1720.6	1684.1	1761.7	1940.9	2227.4	2514.2
39°	2063.5	2082.0	2039.7	1935.2	1807.8	1692.5	1651.7	1723.4	1911.3	2209.2	2506.7
40°	2052.3	2071.5	2027.7	1923.3	1784.1	1665.0	1618.6	1687.0	1878.9	2194.1	2500.6
41°	2045.6	2063.0	2016.3	1909.0	1763.5	1636.3	1585.7	1646.9	1848.9	2177.4	2492.1
42°	2033.3	2051.9	2005.9	1893.0	1746.4	1611.6	1552.6	1610.5	1814.6	2161.2	2483.7
43°	2023.7	2041.8	1996.1	1881.0	1727.0	1587.0	1519.4	1571.6	1781.4	2146.9	2472.3
44°	2008.9	2026.4	1982.4	1869.3	1708.9	1562.3	1483.0	1530.0	1749.0	2132.9	2459.8



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**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	1990.5	2008.4	1967.2	1854.5	1687.0	1528.9	1445.7	1487.8	1714.5	2119.5	2443.0
46°	1969.8	1982.5	1947.0	1838.6	1663.8	1496.8	1411.7	1446.3	1679.1	2103.7	2422.8
47°	1943.5	1949.7	1924.6	1823.3	1642.2	1466.4	1374.7	1403.7	1643.5	2089.5	2404.0
48°	1904.8	1906.1	1890.5	1804.5	1622.8	1438.1	1339.6	1361.3	1610.5	2075.0	2379.4
49°	1857.6	1850.9	1850.0	1785.1	1601.5	1408.6	1301.2	1319.0	1573.5	2058.5	2356.4
50°	1796.2	1783.8	1799.5	1758.7	1580.3	1377.7	1263.0	1275.6	1539.4	2044.6	2328.1
51°	1725.4	1705.2	1735.8	1730.0	1559.0	1346.6	1224.2	1234.4	1508.3	2028.3	2297.4
52°	1649.7	1626.0	1662.9	1688.3	1532.2	1316.0	1184.0	1190.7	1475.1	2007.9	2259.7
53°	1574.0	1546.9	1590.1	1631.6	1506.4	1288.1	1142.9	1145.3	1441.8	1982.6	2216.6
54°	1497.9	1467.7	1517.1	1574.9	1481.4	1257.0	1102.0	1101.5	1410.6	1958.1	2169.3
55°	1409.4	1376.0	1435.0	1517.9	1453.4	1222.3	1062.8	1054.9	1380.2	1933.4	2121.7
56°	1318.6	1285.9	1344.1	1443.3	1424.0	1188.0	1024.0	1008.0	1350.8	1903.3	2066.8
57°	1228.7	1198.1	1255.5	1368.8	1387.9	1150.9	981.1	961.8	1321.3	1868.5	2004.8
58°	1144.6	1121.6	1168.2	1289.1	1342.7	1113.3	938.2	916.2	1291.8	1834.2	1939.7
59°	1080.8	1067.3	1094.0	1205.1	1288.6	1077.8	896.1	871.7	1262.4	1790.5	1866.0
60°	1032.2	1021.9	1037.4	1123.8	1223.3	1039.5	854.3	828.3	1234.7	1746.0	1788.6
61°	983.7	968.1	992.6	1042.9	1155.4	1002.4	813.3	783.4	1201.8	1697.3	1710.6
62°	924.2	900.8	939.7	979.8	1082.3	964.3	770.6	740.8	1171.8	1643.9	1629.6
63°	846.0	823.7	867.8	935.5	1003.3	921.9	725.7	698.2	1140.1	1579.9	1544.6
64°	782.3	774.7	793.4	891.1	927.2	880.8	682.0	655.6	1110.0	1506.4	1451.9
65°	748.0	746.3	748.3	830.8	853.1	838.0	638.9	614.5	1081.8	1425.8	1352.3
66°	720.0	718.0	717.6	760.2	789.1	787.7	595.1	571.6	1054.6	1336.9	1257.6
67°	693.2	687.6	692.2	711.3	746.5	727.8	553.1	528.1	1025.2	1241.7	1179.3
68°	662.2	653.7	663.4	674.4	711.8	663.4	511.7	484.2	991.2	1133.7	1105.6
69°	628.7	616.5	633.4	641.7	663.0	599.2	472.1	438.8	947.0	1013.1	1030.7
70°	593.7	577.9	602.7	609.8	619.7	532.0	432.8	395.1	895.8	875.4	938.3
71°	553.9	533.7	567.5	579.7	590.7	469.5	394.4	351.7	832.0	756.6	817.8
72°	511.6	492.0	528.6	554.5	565.9	417.7	358.7	309.9	768.2	708.7	714.8
73°	471.3	453.7	487.3	529.2	537.6	381.9	322.3	271.9	699.4	662.5	611.8
74°	429.2	411.2	446.3	503.7	509.3	346.6	287.8	236.6	630.6	650.7	508.8
75°	388.1	367.9	403.2	476.8	482.4	316.9	251.0	203.0	561.8	512.3	468.7
76°	343.3	321.2	362.6	446.6	454.6	294.3	216.5	173.1	473.6	374.4	432.7
77°	300.9	277.5	321.6	411.8	425.5	272.3	184.1	146.4	357.5	304.4	402.6
78°	263.0	236.3	284.7	369.3	394.6	249.5	151.8	123.7	267.4	259.2	360.6
79°	214.3	185.8	248.8	323.6	363.5	228.4	124.2	103.6	184.9	253.8	307.4
80°	165.5	135.4	194.2	285.5	331.6	208.2	103.1	85.1	138.0	255.8	259.3
81°	116.6	84.9	139.6	256.5	298.2	186.9	85.9	69.6	119.4	191.9	226.1
82°	61.5	48.1	85.3	233.0	264.1	165.6	71.1	54.2	106.6	127.3	200.8
83°	38.1	37.0	40.6	168.5	229.0	144.2	56.9	38.7	87.3	101.1	179.7
84°	27.7	26.7	28.3	104.7	190.6	122.4	43.9	28.2	68.7	83.1	154.7
85°	20.2	19.6	20.7	71.8	152.3	99.7	32.5	19.9	50.1	69.4	117.5
86°	12.7	12.4	13.1	38.9	114.0	75.3	23.6	12.9	31.5	55.9	63.4
87°	5.3	5.3	5.6	6.6	76.0	56.0	14.7	7.3	18.4	42.3	38.6
88°	2.2	2.1	2.2	2.2	38.0	37.5	5.9	3.9	7.1	17.7	14.1
89°	0.8	0.8	0.8	0.8	0.8	19.0	1.0	0.6	3.6	11.6	9.2



REPORT NUMBER: P1449907  
 CATALOG NUMBER: TWC60\_T3\_48W\_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: P1449907  
 CATALOG NUMBER: TWC60\_T3\_48W\_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: P1449907  
CATALOG NUMBER: TWC60\_T3\_48W\_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: P1449907  
 CATALOG NUMBER: TWC60\_T3\_48W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
0°	2408.5	2408.5	2408.5
1°	2421.5	2424.6	2426.8
2°	2438.9	2443.7	2444.3
3°	2452.1	2461.1	2459.2
4°	2466.8	2473.8	2478.8
5°	2480.5	2490.9	2493.8
6°	2492.1	2508.4	2510.6
7°	2505.9	2520.4	2525.4
8°	2520.3	2537.8	2543.4
9°	2532.8	2555.1	2559.3
10°	2546.2	2569.2	2576.2
11°	2557.4	2583.3	2589.2
12°	2568.2	2595.1	2603.3
13°	2580.1	2607.6	2620.0
14°	2586.0	2621.9	2631.8
15°	2596.4	2633.2	2644.1
16°	2605.2	2646.6	2658.3
17°	2611.3	2655.7	2671.8
18°	2621.6	2670.3	2685.9
19°	2630.2	2680.3	2697.4
20°	2635.3	2691.8	2709.7
21°	2643.5	2702.9	2720.7
22°	2650.8	2716.7	2731.6
23°	2656.0	2727.7	2747.5
24°	2662.8	2740.6	2760.3
25°	2669.6	2749.8	2772.6
26°	2678.2	2761.1	2785.4
27°	2682.7	2772.3	2793.8
28°	2688.7	2783.7	2806.3
29°	2695.9	2790.6	2821.7
30°	2700.9	2802.3	2830.8
31°	2708.7	2810.7	2839.9
32°	2713.9	2817.1	2844.5
33°	2718.8	2822.6	2848.4
34°	2721.5	2821.8	2847.4
35°	2721.0	2818.4	2844.9
36°	2718.5	2816.1	2837.8
37°	2716.4	2806.0	2828.4
38°	2708.4	2793.8	2819.7
39°	2702.7	2778.5	2803.5
40°	2688.2	2764.1	2786.5
41°	2670.9	2744.8	2768.7
42°	2653.5	2725.7	2746.1
43°	2632.5	2703.3	2720.2
44°	2613.1	2671.5	2685.8



REPORT NUMBER: P1449907  
 CATALOG NUMBER: TWC60\_T3\_48W\_5000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
45°	2592.1	2638.2	2655.8
46°	2561.9	2604.0	2616.6
47°	2526.8	2560.4	2563.9
48°	2492.4	2509.1	2514.2
49°	2447.9	2456.1	2461.3
50°	2402.3	2404.7	2408.7
51°	2349.2	2346.5	2351.3
52°	2294.9	2287.2	2287.5
53°	2238.0	2221.1	2218.8
54°	2173.6	2156.1	2152.9
55°	2107.7	2089.6	2091.0
56°	2037.9	2022.4	2017.2
57°	1968.4	1949.8	1942.1
58°	1900.0	1867.5	1855.1
59°	1825.4	1774.6	1761.4
60°	1744.5	1681.4	1667.0
61°	1653.4	1586.7	1572.9
62°	1559.7	1490.6	1474.3
63°	1471.8	1387.7	1371.1
64°	1380.4	1288.3	1276.0
65°	1278.7	1188.4	1180.3
66°	1178.2	1099.7	1099.5
67°	1075.0	1016.7	1013.2
68°	969.2	915.2	902.7
69°	862.7	801.5	792.9
70°	748.7	749.5	741.7
71°	672.2	698.0	692.4
72°	596.5	646.5	643.2
73°	564.0	606.9	601.3
74°	534.1	565.7	563.2
75°	504.2	523.9	531.1
76°	471.9	483.3	502.8
77°	433.8	449.2	480.9
78°	393.4	425.5	465.5
79°	360.5	408.9	444.5
80°	331.9	390.5	408.1
81°	303.0	356.2	353.4
82°	265.0	312.2	295.7
83°	218.8	271.0	242.9
84°	172.1	228.6	193.4
85°	147.2	169.8	134.0
86°	109.6	117.6	92.5
87°	71.7	93.7	74.0
88°	53.9	70.4	55.6
89°	36.1	47.1	37.2



REPORT NUMBER: P1449907  
CATALOG NUMBER: TWC60\_T3\_48W\_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: P1449907  
CATALOG NUMBER: TWC60\_T3\_48W\_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

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

Scaled Data Report



REPORT NUMBER: P1449907  
CATALOG NUMBER: TWC60\_T3\_48W\_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

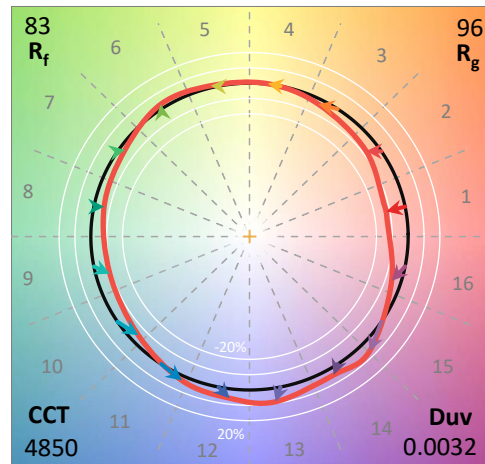
**Test Information**

Test Method: LM-79-2019  
 Report Number: SP1-2601-659-3  
 Test Lab: COOPER LIGHTING SOLUTIONS  
 Photometer: SP1 - 76IN SPHERE  
 Measurement Geometry:  $4\pi$   
 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  
 R<sub>f</sub>: 83.1  
 R<sub>g</sub>: 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**

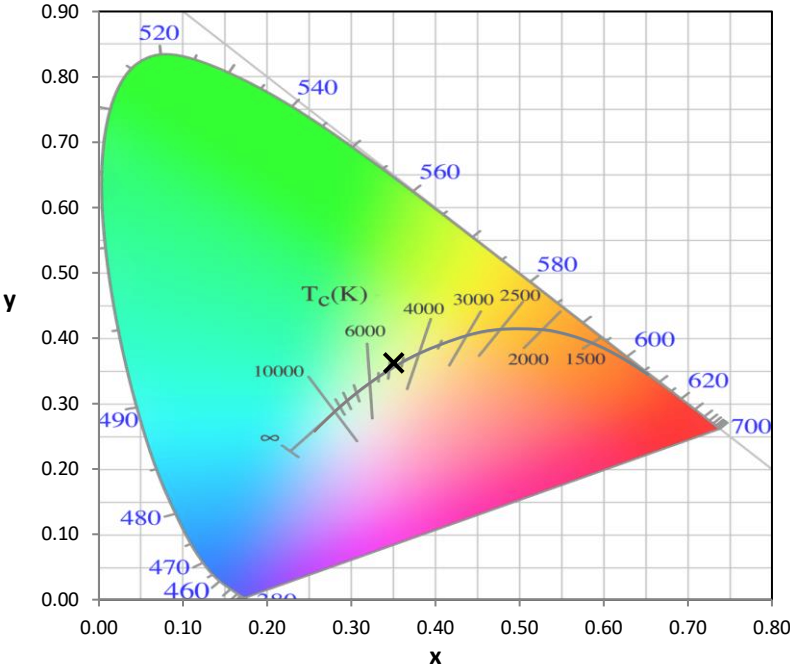
Stabilization Time: 25M  
 Operation Time: 1H 25M  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-3

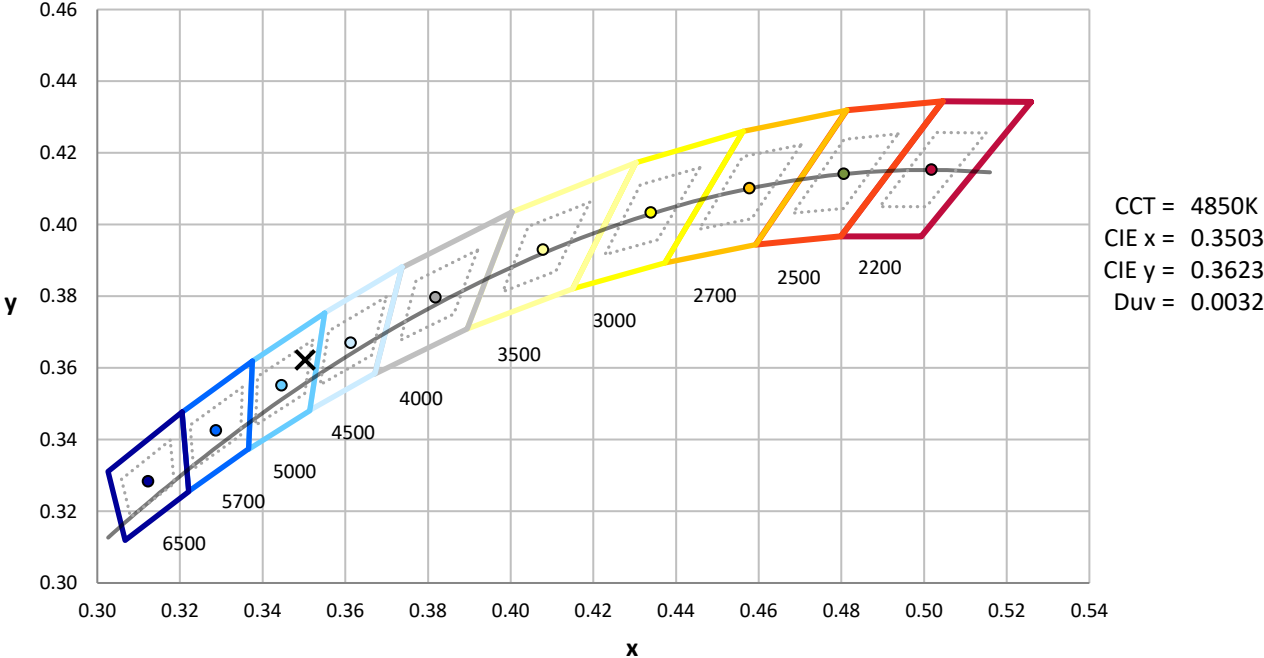
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



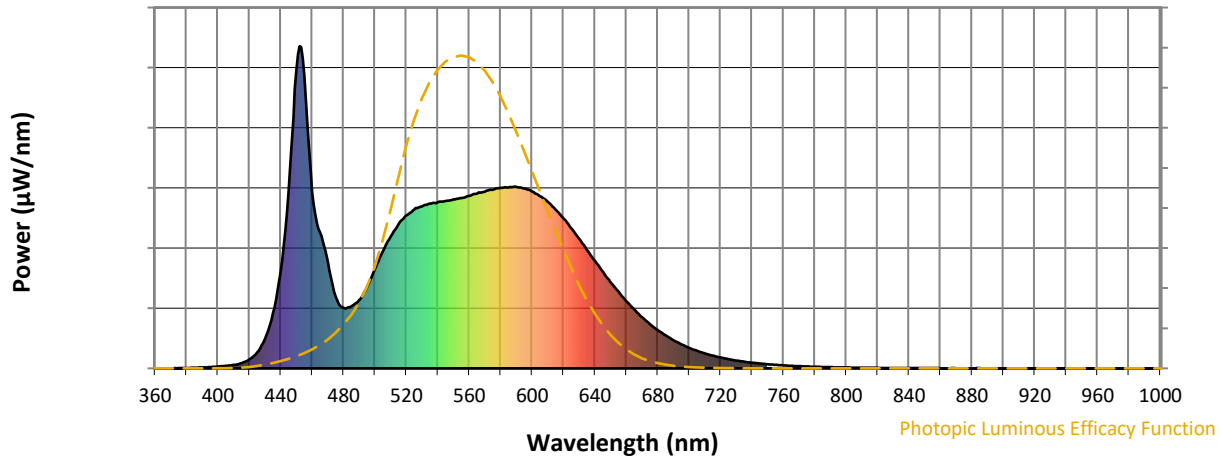
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-3

**Photopic Flux vs. Wavelength**

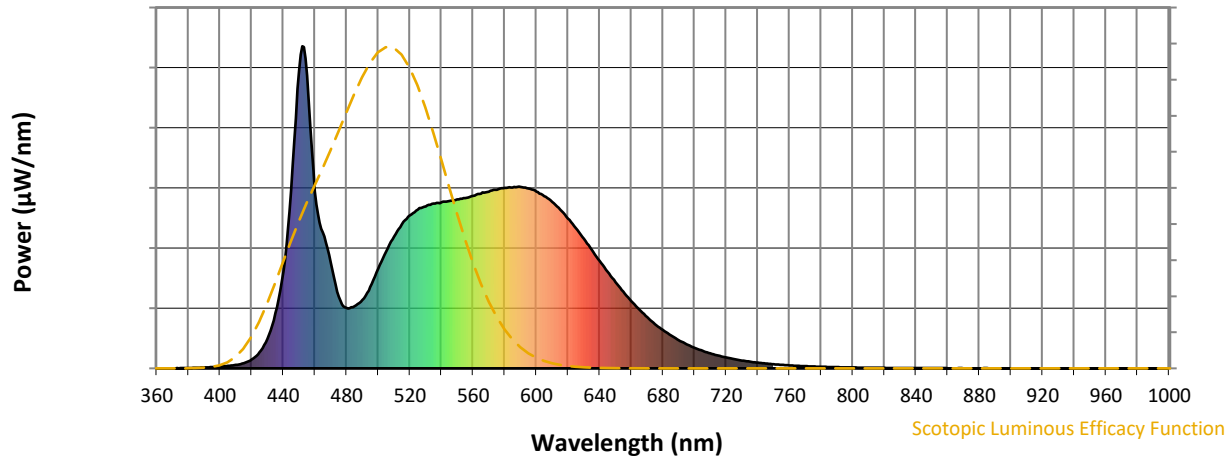


**Photopic Lumens: NR**

λ (nm)	Power W <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	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**



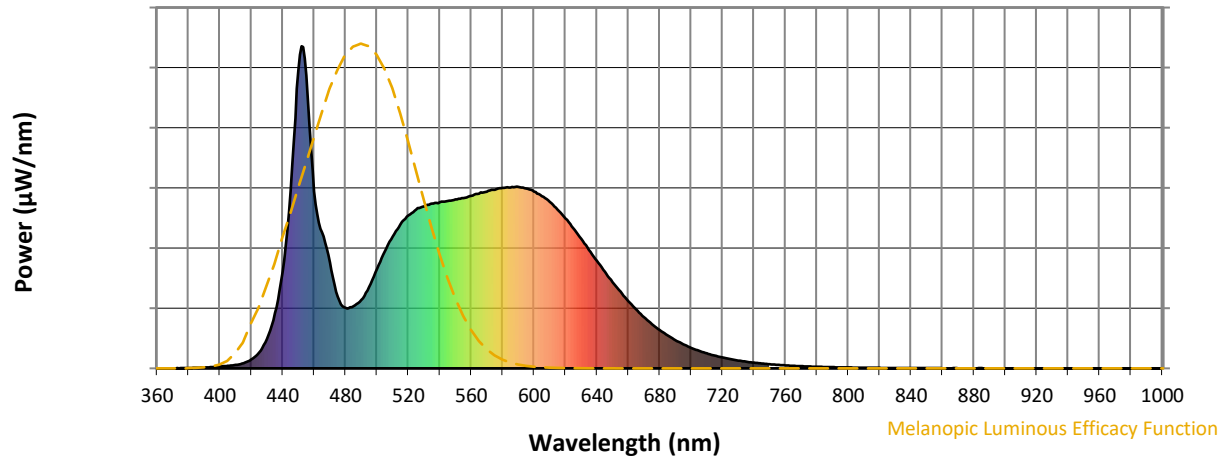
**Scotopic Lumens: NR**

**S/P: 1.9**

λ (nm)	Power W <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	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



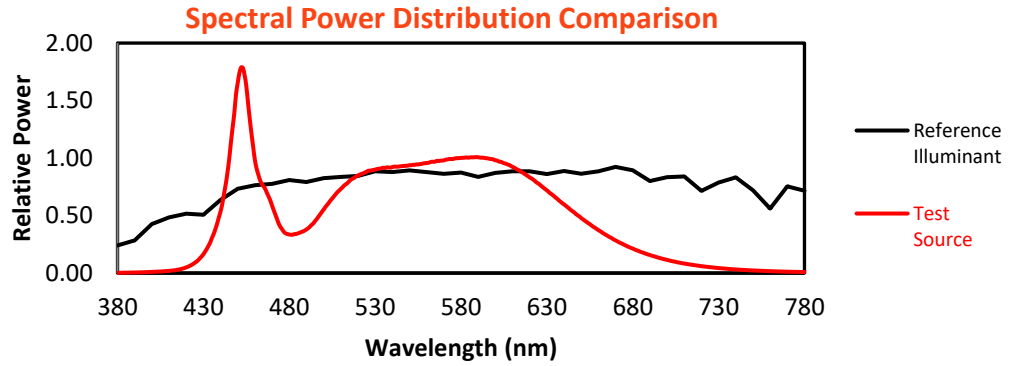
Melanopic Lumens: NR

M/P: 4

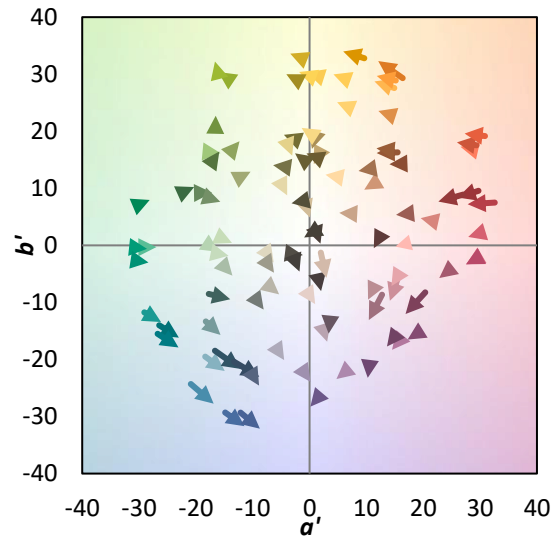
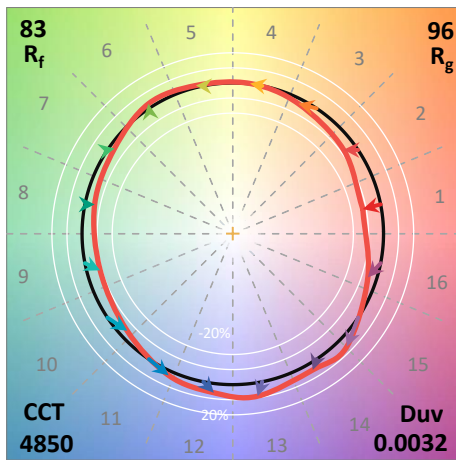
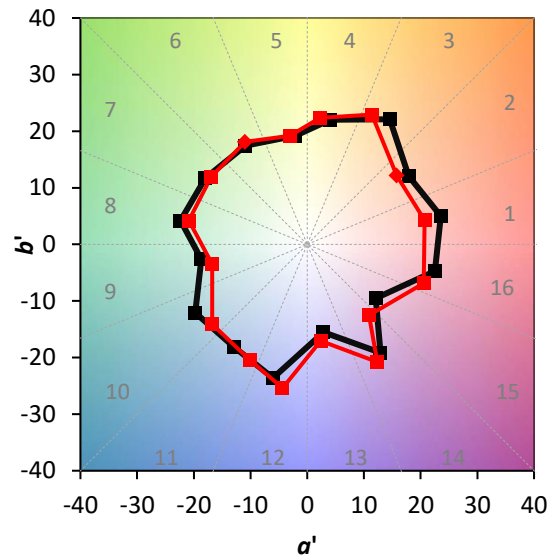
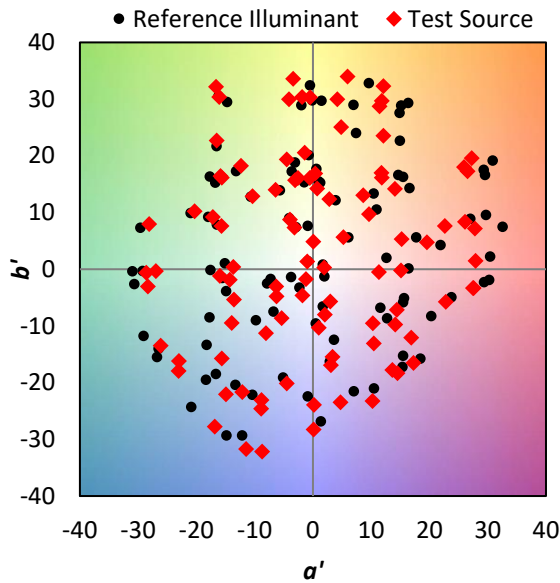
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	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  $R_a = 82.6$   
 $R_9 = 8.5$

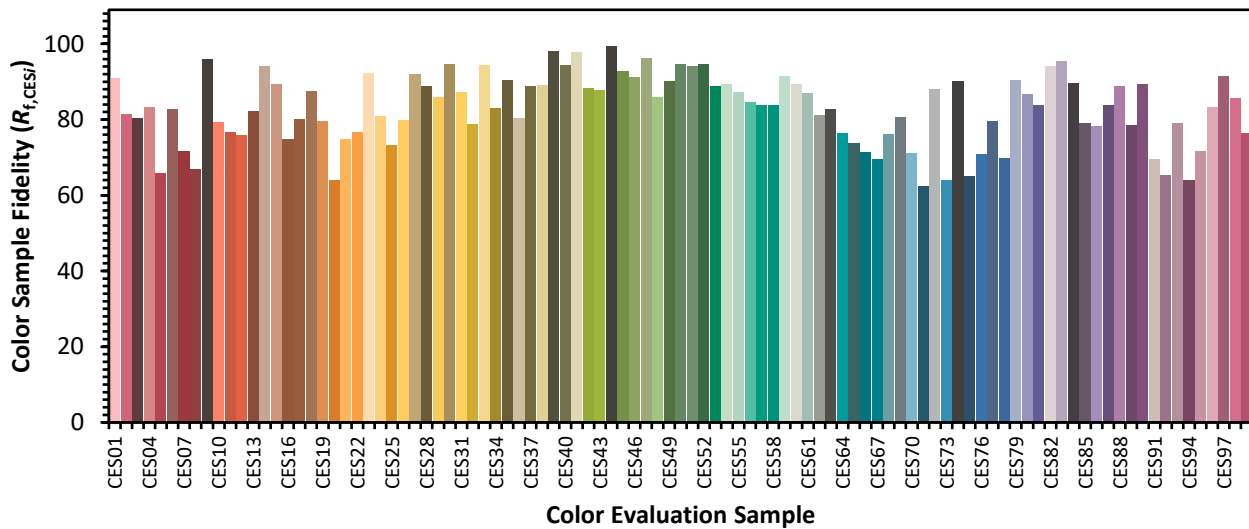


**Color Vector Graphics**

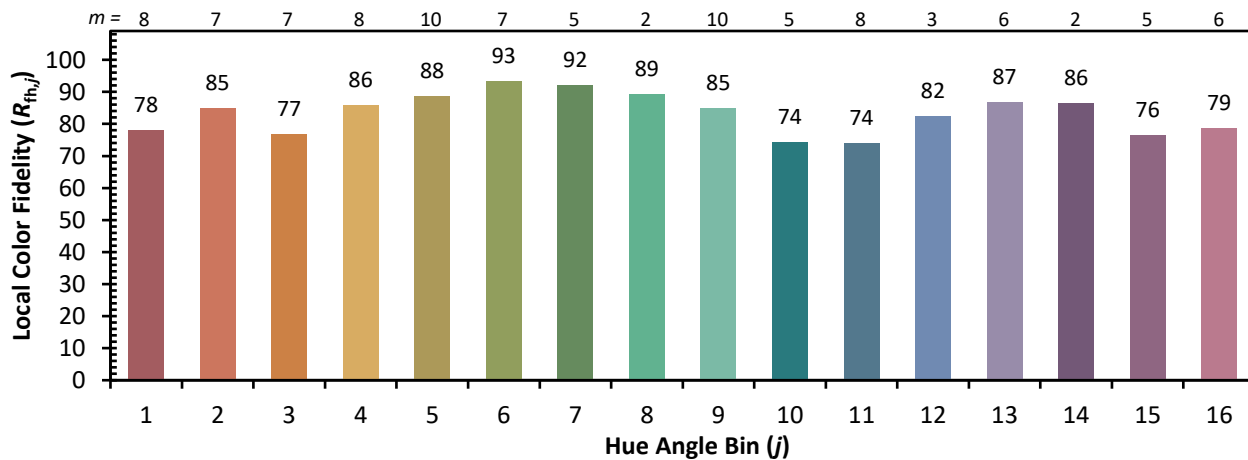
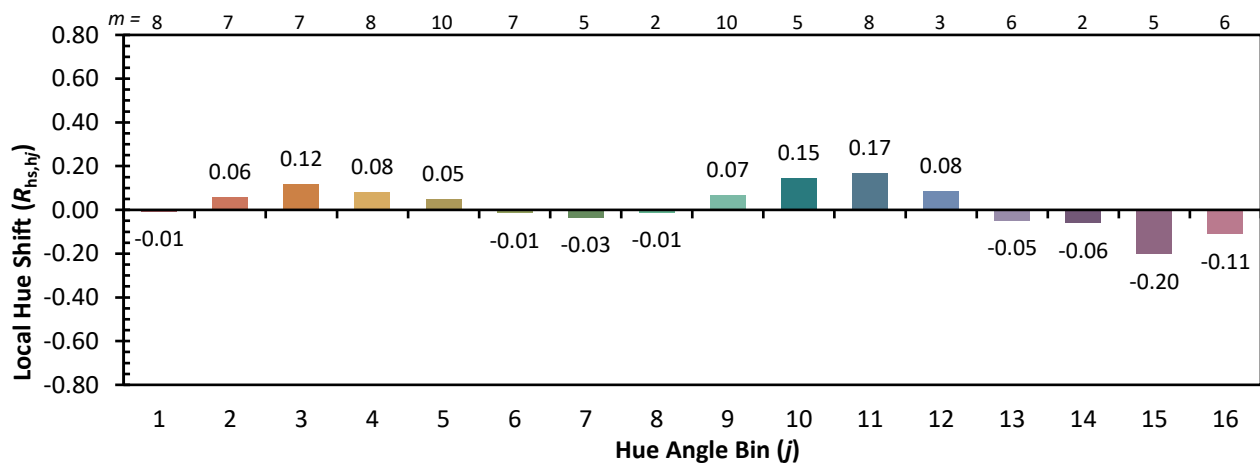
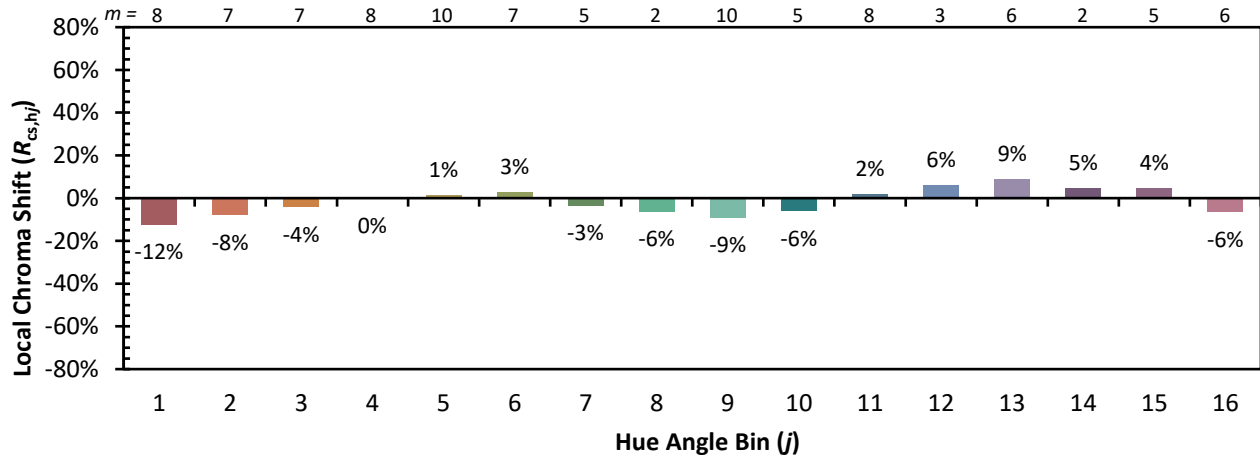


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

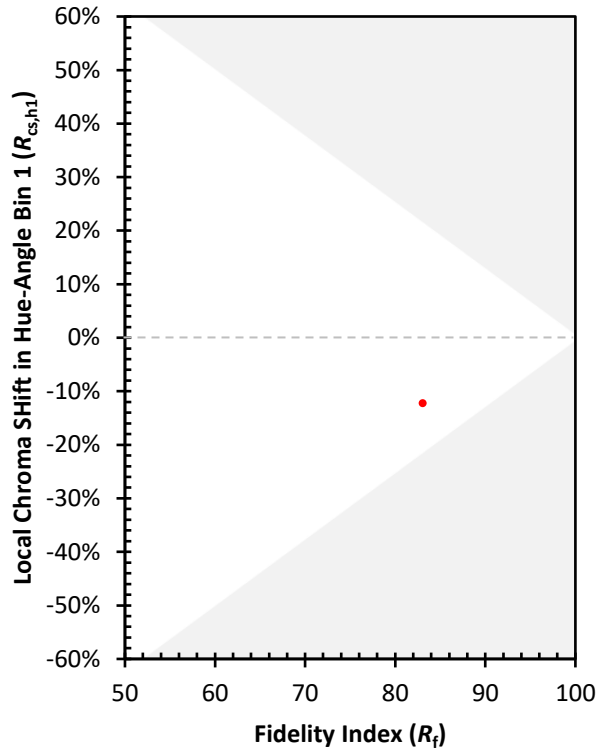
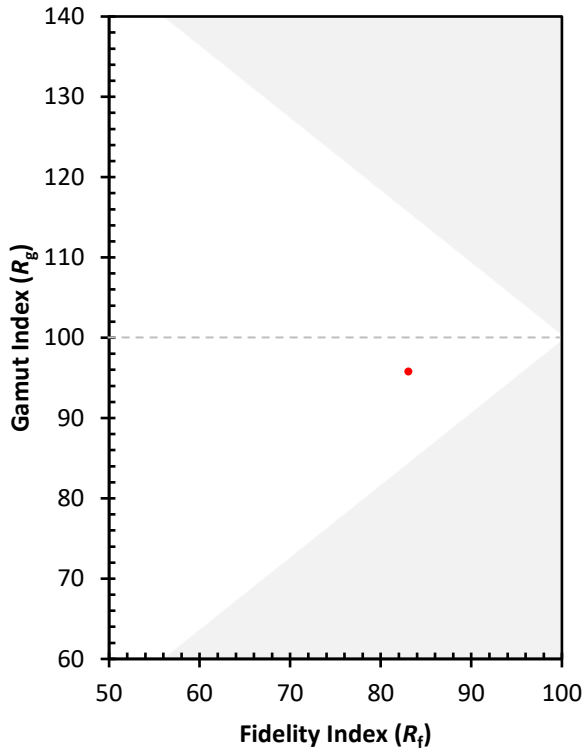
CES01 = 85	CES26 = 80	CES51 = 94	CES76 = 71
CES02 = 60	CES27 = 92	CES52 = 95	CES77 = 80
CES03 = 30	CES28 = 89	CES53 = 89	CES78 = 70
CES04 = 69	CES29 = 86	CES54 = 89	CES79 = 90
CES05 = 47	CES30 = 95	CES55 = 87	CES80 = 87
CES06 = 50	CES31 = 87	CES56 = 85	CES81 = 84
CES07 = 40	CES32 = 79	CES57 = 84	CES82 = 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)