

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: P1449894

Luminaire Tested: **TWC60\_T2\_48W\_4000K**

Issue Date: 5/19/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449894  
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\_T2\_48W\_4000K  
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T2 distribution, 48W  
4000K settings  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7469 lumens  
Efficiency: N/A  
Efficacy: 161.0 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.42' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G2

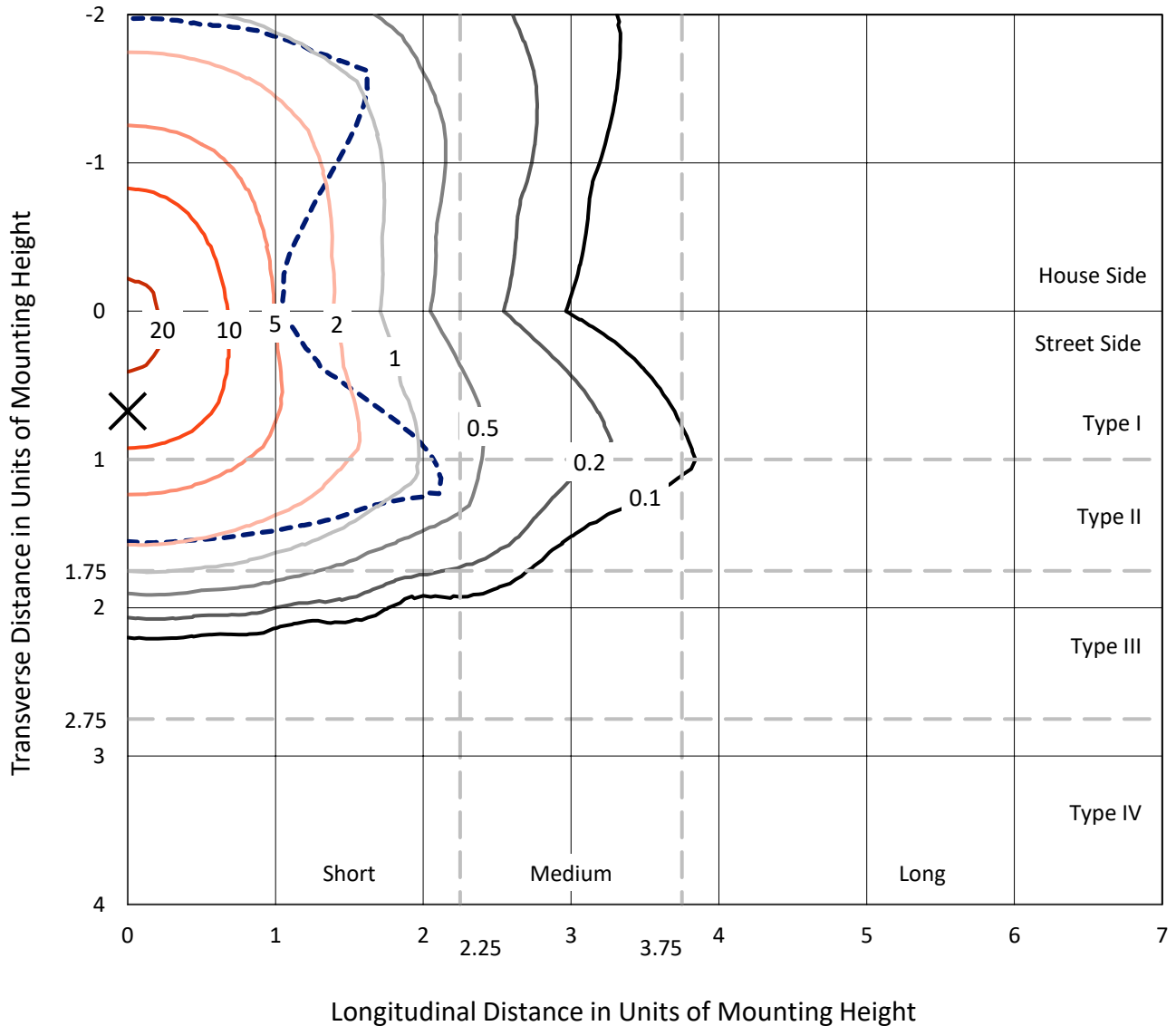
Input Watts (W): 46.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

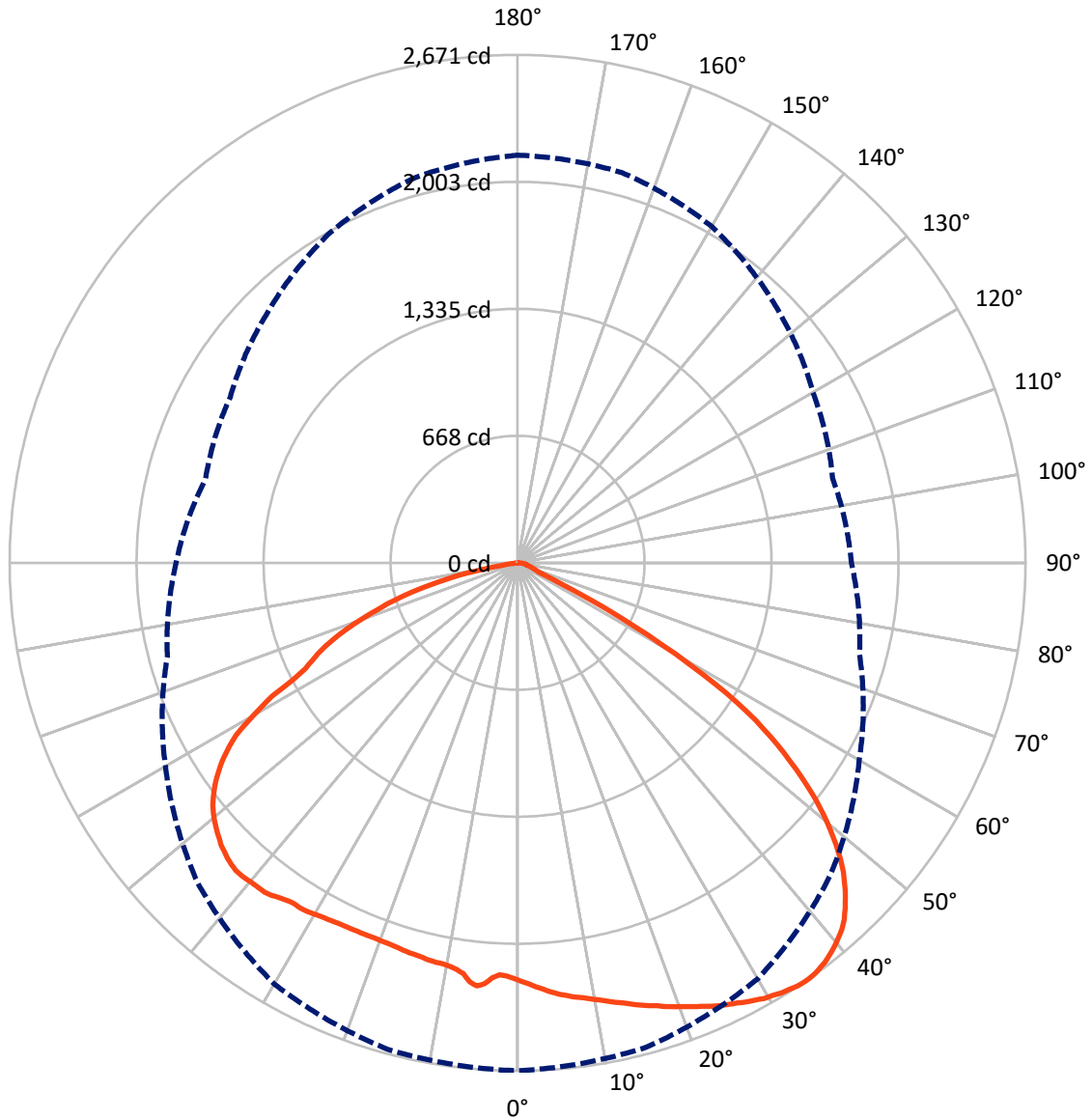
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 22.5 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



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

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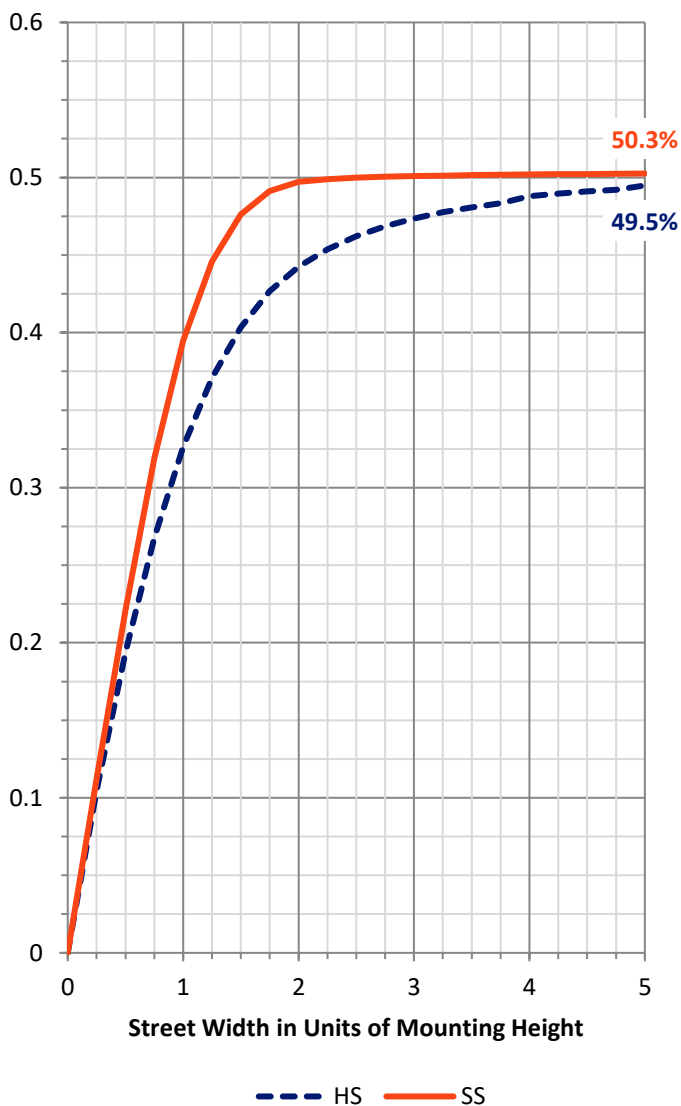
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3716.1	0.0	3716.1
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	3752.9	0.0	3752.9
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	7469.0	0.0	7469.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.6	2.8
10°-20°	623.7	8.4
20°-30°	1000.6	13.4
30°-40°	1309.5	17.5
40°-50°	1492.1	20.0
50°-60°	1420.9	19.0
60°-70°	922.4	12.3
70°-80°	408.8	5.5
80°-90°	79.3	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°	7469.0	100.0
0°-180°	7469.0	100.0

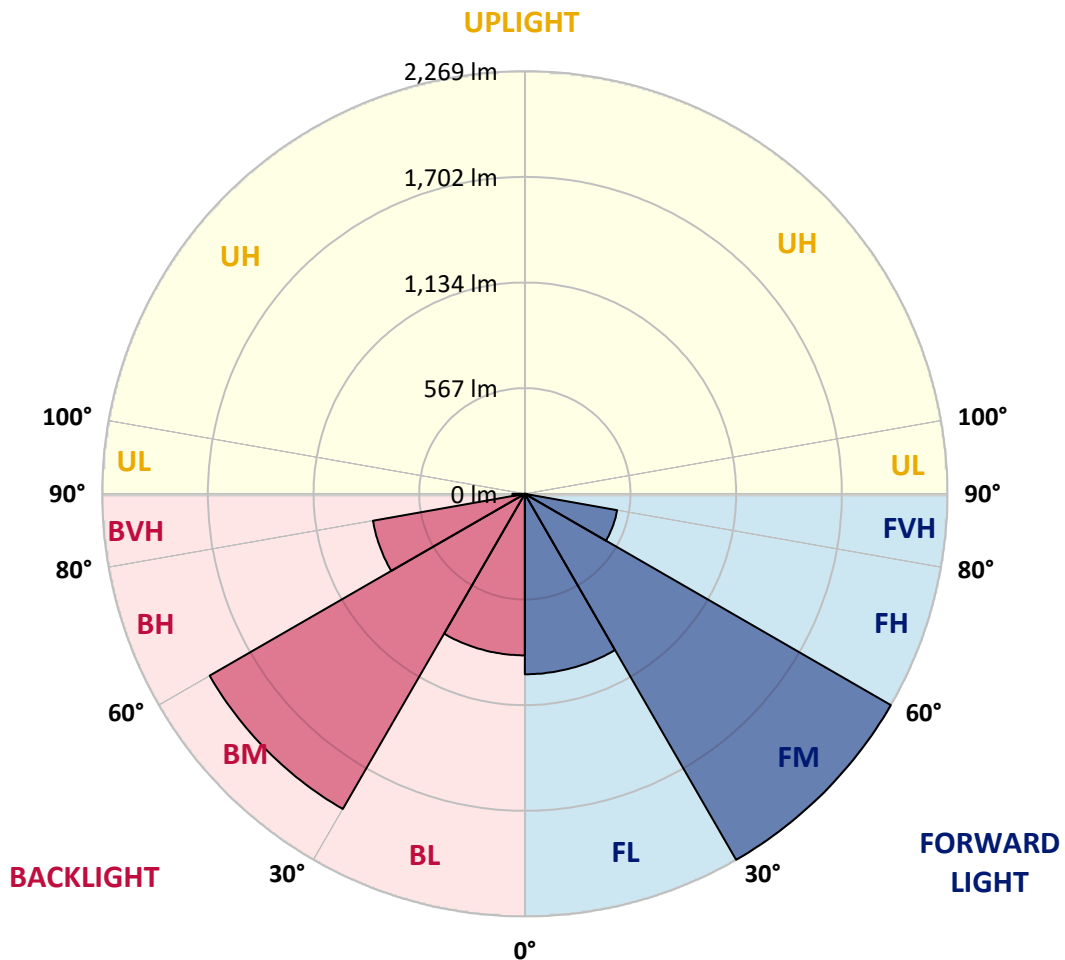


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	968.7	13.0			
FM (30°-60°)	2268.8	30.4			
FH (60°-80°)	503.2	6.7			G0/660
FVH (80°-90°)	12.2	0.2			G1/100
BL (0°-30°)	867.3	11.6	B2/1000		
BM (30°-60°)	1953.7	26.2	B2/2500		
BH (60°-80°)	828.0	11.1	B2/1000		G2/1000
BVH (80°-90°)	67.2	0.9			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7
1°	2213.7	2212.4	2213.2	2207.8	2203.7	2202.0	2200.1	2195.9	2192.3	2189.5	2187.4
2°	2232.5	2229.0	2225.1	2218.8	2211.3	2204.0	2198.1	2190.5	2184.3	2181.2	2177.3
3°	2247.4	2245.7	2238.6	2228.8	2218.7	2204.6	2195.6	2184.6	2175.8	2169.9	2166.9
4°	2264.3	2259.4	2251.7	2239.3	2222.3	2205.1	2191.2	2178.2	2168.1	2167.4	2176.0
5°	2278.4	2273.7	2263.1	2248.3	2227.0	2206.0	2188.6	2171.7	2162.4	2177.9	2204.5
6°	2290.5	2284.7	2274.0	2256.1	2231.5	2203.5	2179.3	2161.1	2164.5	2203.7	2228.8
7°	2302.3	2294.8	2280.1	2261.3	2233.4	2202.9	2174.8	2154.8	2177.4	2224.0	2232.0
8°	2312.6	2305.2	2289.9	2265.3	2236.4	2201.2	2168.2	2149.3	2194.4	2226.1	2203.6
9°	2325.2	2316.9	2295.9	2272.4	2235.7	2197.2	2159.8	2144.1	2210.4	2209.0	2170.4
10°	2337.2	2325.9	2306.1	2275.5	2237.6	2191.1	2151.7	2146.9	2209.6	2173.2	2155.3
11°	2351.3	2340.4	2312.5	2278.9	2234.9	2188.0	2144.0	2153.3	2200.2	2147.5	2144.2
12°	2366.3	2353.8	2321.9	2284.4	2235.4	2182.9	2131.4	2159.9	2169.5	2134.6	2136.2
13°	2379.5	2366.0	2332.1	2286.4	2234.5	2175.8	2120.2	2164.4	2139.8	2123.0	2130.7
14°	2396.6	2380.6	2342.7	2290.7	2232.9	2168.5	2109.7	2167.2	2116.6	2113.2	2126.9
15°	2413.8	2396.8	2352.7	2295.5	2228.8	2159.6	2097.5	2158.2	2099.6	2104.9	2117.3
16°	2427.9	2410.6	2366.4	2299.2	2229.2	2154.2	2085.6	2142.5	2086.6	2096.0	2111.3
17°	2442.5	2425.4	2375.7	2306.5	2228.2	2146.6	2074.1	2117.9	2071.2	2086.6	2106.0
18°	2460.3	2437.4	2386.0	2312.1	2226.8	2138.1	2064.2	2084.1	2059.6	2074.9	2100.8
19°	2476.4	2453.3	2397.5	2318.0	2223.2	2127.7	2053.6	2053.5	2047.5	2066.3	2092.3
20°	2491.1	2464.6	2405.4	2321.6	2223.2	2120.2	2045.8	2027.5	2032.6	2055.6	2083.9
21°	2507.9	2479.8	2417.3	2324.7	2217.3	2112.5	2041.5	2007.7	2015.7	2044.1	2079.3
22°	2524.9	2492.6	2423.9	2328.2	2211.6	2103.3	2036.9	1988.2	1998.9	2034.0	2074.1
23°	2542.4	2509.9	2432.4	2328.9	2205.1	2090.2	2031.8	1968.6	1984.7	2023.6	2065.7
24°	2559.3	2524.5	2441.6	2331.1	2199.7	2078.7	2024.2	1951.1	1968.8	2014.0	2060.8
25°	2573.1	2538.1	2451.4	2329.7	2191.5	2060.2	2014.2	1933.5	1953.1	2003.7	2058.6
26°	2586.5	2552.0	2460.7	2328.7	2180.6	2042.6	1997.4	1909.5	1934.0	1990.8	2054.6
27°	2603.2	2564.8	2473.4	2330.6	2171.9	2026.2	1977.2	1889.3	1916.9	1980.5	2049.7
28°	2616.1	2576.5	2479.6	2326.7	2159.6	2005.9	1949.4	1865.4	1900.2	1971.7	2048.3
29°	2632.0	2591.1	2488.9	2327.5	2145.8	1986.5	1920.3	1842.0	1884.9	1960.4	2047.3
30°	2640.4	2604.6	2494.2	2325.3	2133.8	1962.2	1884.1	1818.1	1866.9	1950.6	2043.3
31°	2652.5	2613.3	2504.6	2327.7	2119.7	1938.8	1850.3	1794.1	1847.3	1941.9	2043.0
32°	2659.8	2623.8	2510.0	2326.4	2104.1	1915.0	1816.8	1767.6	1830.7	1932.6	2040.9
33°	2667.9	2629.2	2518.8	2325.0	2089.3	1888.3	1783.9	1741.8	1810.4	1923.9	2042.2
34°	2670.8	2635.1	2525.2	2324.8	2074.6	1861.1	1754.7	1715.0	1793.3	1915.5	2041.6
35°	2669.1	2636.4	2531.9	2323.6	2060.0	1835.0	1723.0	1688.2	1771.9	1905.4	2039.6
36°	2660.6	2635.3	2531.8	2319.5	2044.9	1805.2	1690.9	1661.5	1753.4	1899.4	2030.6
37°	2651.5	2626.8	2535.9	2320.5	2030.2	1775.7	1657.9	1634.0	1734.4	1888.2	2029.7
38°	2635.9	2615.6	2533.0	2322.2	2018.1	1748.1	1625.1	1606.8	1716.8	1876.2	2030.4
39°	2617.1	2602.0	2526.1	2321.7	2005.0	1718.5	1590.9	1581.3	1697.9	1861.0	2034.8
40°	2596.6	2583.1	2520.2	2322.8	1992.9	1688.1	1556.7	1555.8	1679.4	1850.4	2039.7
41°	2573.9	2561.8	2507.7	2322.8	1981.5	1660.5	1522.5	1530.3	1659.9	1847.0	2037.8
42°	2542.4	2535.8	2492.9	2321.4	1970.1	1631.5	1489.0	1500.9	1637.9	1841.2	2037.0
43°	2502.2	2505.6	2472.7	2320.3	1960.9	1604.2	1451.4	1471.6	1612.0	1829.3	2036.7
44°	2459.2	2468.0	2449.5	2318.1	1951.8	1578.4	1412.8	1442.6	1593.7	1816.0	2038.0



REPORT NUMBER: P1449894

CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	2412.1	2427.9	2425.1	2311.9	1943.7	1553.5	1374.7	1411.1	1575.3	1802.1	2038.0
46°	2361.6	2381.0	2393.7	2304.1	1936.4	1529.8	1338.2	1380.3	1557.0	1797.9	2033.1
47°	2300.7	2329.6	2362.3	2291.6	1931.8	1504.8	1297.5	1349.4	1536.7	1791.6	2022.0
48°	2234.9	2271.7	2320.4	2279.4	1924.6	1476.5	1258.9	1315.7	1512.7	1782.5	2009.1
49°	2164.4	2206.0	2274.9	2258.4	1919.7	1446.7	1218.0	1279.1	1489.1	1771.1	1994.5
50°	2087.6	2131.3	2224.9	2236.4	1916.3	1414.4	1178.3	1239.2	1470.6	1758.5	1977.5
51°	2003.5	2057.0	2168.2	2212.9	1912.1	1381.2	1137.4	1200.6	1450.6	1742.4	1959.2
52°	1914.7	1971.5	2105.7	2186.5	1910.2	1346.5	1095.2	1167.7	1426.1	1728.2	1941.7
53°	1818.6	1882.5	2033.9	2152.2	1905.5	1306.0	1054.8	1136.4	1399.6	1715.0	1921.7
54°	1719.3	1786.5	1952.5	2112.2	1899.7	1271.1	1014.9	1098.2	1372.0	1699.3	1900.2
55°	1613.8	1684.6	1866.1	2064.9	1895.3	1235.2	971.5	1059.0	1341.7	1681.6	1876.7
56°	1500.8	1576.8	1773.4	2014.0	1887.6	1200.3	928.9	1022.9	1316.6	1661.0	1851.0
57°	1372.9	1460.0	1671.2	1955.3	1876.2	1166.6	886.7	987.1	1287.6	1639.9	1822.8
58°	1219.2	1332.6	1563.3	1884.0	1858.0	1133.0	842.9	949.7	1260.0	1618.4	1790.3
59°	1046.4	1181.5	1447.2	1804.5	1837.6	1099.9	799.3	909.3	1230.1	1596.7	1752.0
60°	867.4	1007.6	1321.1	1712.1	1810.5	1066.8	754.1	868.0	1199.4	1575.0	1709.3
61°	698.8	828.3	1182.1	1608.7	1781.3	1036.1	711.0	826.6	1168.1	1553.2	1657.8
62°	530.4	660.2	1015.2	1486.8	1744.8	1009.4	670.7	787.8	1138.7	1523.4	1580.6
63°	362.0	492.2	841.2	1355.9	1702.0	985.6	627.2	746.4	1111.1	1490.9	1503.4
64°	234.7	324.2	667.7	1219.7	1650.7	966.1	584.5	707.9	1081.9	1454.0	1424.5
65°	154.2	202.5	494.2	1060.2	1591.1	952.7	543.7	669.9	1051.9	1416.4	1290.7
66°	118.7	133.4	320.6	882.8	1519.7	946.5	503.3	632.0	1019.7	1365.8	1193.5
67°	107.7	104.7	196.0	700.6	1431.9	943.1	464.8	594.1	988.1	1284.5	1136.4
68°	100.1	95.2	124.1	518.3	1323.3	941.4	425.9	557.5	950.8	1183.8	1088.8
69°	92.7	87.6	97.1	336.1	1201.4	938.4	388.5	521.7	914.0	1105.7	1041.9
70°	85.4	80.5	87.4	195.8	1046.3	937.7	352.0	487.5	878.9	1056.6	996.8
71°	78.5	74.4	80.2	115.6	841.6	942.6	316.8	452.9	839.1	1008.9	955.3
72°	73.1	68.3	73.1	83.8	623.1	943.5	284.9	418.9	775.6	956.6	911.6
73°	67.6	62.3	66.0	74.4	404.3	921.4	253.3	384.0	715.9	902.4	865.4
74°	62.2	56.9	58.8	65.3	185.5	857.1	223.0	350.1	676.5	851.3	813.5
75°	56.6	51.1	52.1	56.3	102.9	774.9	194.6	318.3	643.4	803.0	759.2
76°	51.9	45.9	44.5	50.1	86.7	686.6	166.1	286.6	606.9	755.9	693.7
77°	48.4	41.9	38.6	45.4	71.5	598.2	137.7	256.8	570.8	712.1	618.3
78°	46.1	38.5	33.8	39.9	56.3	509.8	114.0	220.7	537.5	669.8	550.1
79°	44.2	36.3	30.4	33.1	51.1	388.9	92.7	192.5	502.0	629.3	487.0
80°	41.8	34.5	27.7	27.0	51.0	293.9	73.5	164.3	467.3	576.7	438.0
81°	39.0	32.3	25.5	22.9	47.4	205.5	57.5	136.1	434.1	521.7	387.7
82°	35.6	29.7	23.6	20.0	40.6	133.7	43.6	114.2	398.2	465.6	276.4
83°	29.4	25.8	21.5	17.4	33.6	78.8	31.6	93.6	362.5	422.8	165.0
84°	23.3	21.1	18.2	15.2	23.1	58.8	24.2	73.4	313.3	384.1	55.7
85°	16.7	15.7	13.7	12.9	13.6	39.0	16.7	55.5	252.2	306.9	32.0
86°	11.7	11.8	10.0	9.6	8.7	19.2	9.4	38.7	201.9	229.7	8.8
87°	8.0	8.1	6.8	6.6	5.9	10.6	5.4	26.2	151.5	152.5	4.3
88°	4.3	4.3	3.7	3.6	3.1	7.0	2.4	13.7	101.1	75.2	1.5
89°	0.6	0.6	0.6	0.6	0.6	3.7	0.8	1.5	50.7	0.5	0.3



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**CANDELA DISTRIBUTION (continued):**

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



REPORT NUMBER: P1449894  
 CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

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



REPORT NUMBER: P1449894  
CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

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



REPORT NUMBER: P1449894

CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7	2199.7
1°	2185.3	2185.1	2186.9	2185.4	2188.7	2191.2	2194.0	2200.4	2203.9	2206.1	2209.0
2°	2172.3	2173.4	2172.7	2174.2	2181.7	2185.5	2190.9	2198.5	2207.6	2212.7	2219.9
3°	2166.0	2168.5	2165.0	2165.5	2168.6	2178.2	2184.1	2195.4	2207.0	2218.8	2232.3
4°	2186.5	2186.0	2179.1	2167.7	2160.7	2168.5	2178.4	2194.0	2211.8	2225.5	2241.9
5°	2219.3	2221.0	2210.7	2192.3	2164.5	2159.4	2172.3	2189.4	2210.7	2232.7	2251.6
6°	2234.9	2235.4	2234.8	2215.8	2182.5	2154.1	2164.5	2184.1	2210.4	2237.8	2258.9
7°	2222.3	2218.1	2224.6	2226.9	2204.3	2156.2	2156.6	2180.2	2210.7	2241.4	2266.8
8°	2183.4	2179.2	2186.6	2212.4	2217.3	2164.6	2147.6	2175.0	2211.2	2244.2	2272.1
9°	2162.1	2162.1	2162.3	2174.6	2213.6	2180.2	2136.7	2166.3	2206.3	2245.1	2277.8
10°	2152.6	2151.9	2151.3	2150.9	2186.9	2190.8	2130.0	2159.7	2204.6	2247.3	2284.0
11°	2144.5	2145.4	2143.1	2139.7	2155.3	2192.5	2123.8	2151.8	2198.3	2246.2	2286.7
12°	2143.0	2143.5	2137.6	2128.1	2132.8	2182.9	2120.2	2140.2	2195.4	2246.1	2292.6
13°	2138.1	2140.3	2134.9	2121.5	2119.6	2159.1	2122.5	2129.5	2190.0	2245.9	2298.3
14°	2132.9	2134.7	2126.0	2116.2	2106.0	2128.2	2127.9	2120.8	2185.5	2246.1	2303.8
15°	2127.7	2129.4	2121.0	2109.1	2093.7	2101.5	2127.4	2111.6	2178.6	2248.3	2311.6
16°	2124.0	2127.6	2118.1	2098.8	2084.7	2081.0	2129.2	2096.6	2172.3	2250.1	2317.9
17°	2120.4	2123.5	2113.4	2092.5	2072.1	2066.3	2120.6	2085.3	2165.0	2249.2	2325.8
18°	2114.5	2117.6	2105.8	2083.8	2059.4	2049.3	2105.8	2071.2	2161.3	2249.2	2334.0
19°	2108.5	2115.5	2102.0	2077.7	2045.6	2033.8	2084.9	2060.3	2154.5	2247.9	2341.2
20°	2107.4	2113.8	2096.3	2067.6	2036.9	2018.8	2057.0	2044.1	2147.1	2247.1	2343.0
21°	2105.5	2111.6	2093.2	2058.9	2025.5	2004.0	2025.5	2031.2	2141.6	2247.3	2348.7
22°	2103.3	2111.1	2091.1	2051.8	2011.9	1985.8	1994.3	2017.3	2131.4	2242.7	2352.4
23°	2103.5	2113.2	2088.8	2046.3	1998.5	1963.9	1967.8	2005.5	2121.4	2239.6	2357.1
24°	2101.6	2113.2	2088.0	2036.4	1985.3	1945.6	1944.4	1993.3	2107.5	2233.2	2361.0
25°	2100.5	2114.1	2087.2	2032.3	1974.4	1929.8	1921.3	1986.3	2092.7	2226.4	2362.7
26°	2103.3	2115.5	2084.1	2025.8	1961.9	1909.5	1899.2	1979.7	2078.7	2218.8	2365.4
27°	2102.5	2117.0	2084.9	2021.8	1949.5	1888.4	1875.8	1970.0	2060.1	2213.4	2367.4
28°	2104.2	2121.1	2084.9	2015.3	1935.6	1867.0	1855.4	1960.5	2041.0	2201.5	2368.8
29°	2108.8	2125.2	2085.9	2008.0	1924.1	1849.4	1832.7	1947.1	2021.0	2193.0	2371.8
30°	2109.8	2129.8	2089.2	2003.3	1911.2	1827.8	1806.7	1925.5	1998.9	2181.1	2376.2
31°	2118.6	2137.0	2090.4	2001.6	1899.0	1808.8	1779.2	1901.1	1975.4	2171.2	2378.3
32°	2121.9	2143.0	2096.3	1996.1	1885.4	1786.7	1754.1	1870.9	1954.3	2162.1	2376.6
33°	2123.8	2144.5	2097.1	1994.7	1869.5	1765.6	1724.7	1834.3	1930.2	2149.3	2381.4
34°	2123.5	2143.2	2095.7	1992.5	1859.5	1744.3	1699.1	1795.2	1906.3	2138.3	2379.1
35°	2124.0	2151.0	2093.6	1988.9	1844.5	1724.0	1671.1	1755.5	1881.3	2127.1	2382.5
36°	2132.4	2161.4	2095.3	1981.8	1832.3	1702.3	1641.8	1715.0	1856.5	2120.6	2384.1
37°	2143.3	2174.7	2103.9	1972.2	1820.3	1680.5	1611.4	1680.5	1831.8	2108.3	2387.6
38°	2151.1	2183.0	2112.9	1970.0	1807.4	1657.6	1583.2	1643.9	1808.2	2102.3	2387.7
39°	2154.6	2184.3	2118.8	1968.6	1791.3	1633.5	1555.0	1609.2	1783.5	2093.3	2388.5
40°	2156.3	2186.4	2117.6	1965.3	1773.3	1611.5	1526.8	1572.8	1757.0	2085.1	2386.6
41°	2159.4	2189.9	2116.9	1962.1	1759.3	1590.2	1492.0	1539.0	1731.1	2075.7	2389.1
42°	2162.4	2194.0	2123.9	1957.0	1746.9	1568.9	1458.1	1503.7	1705.2	2070.8	2383.9
43°	2165.6	2193.5	2125.2	1956.8	1737.4	1547.4	1422.6	1466.3	1680.5	2067.8	2379.7
44°	2161.0	2186.2	2124.9	1956.7	1727.1	1519.5	1388.4	1429.0	1652.9	2066.3	2370.2



REPORT NUMBER: P1449894

CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	2152.2	2176.8	2117.7	1954.5	1708.6	1489.4	1354.0	1391.2	1625.3	2064.4	2358.4
46°	2139.1	2163.1	2105.6	1951.3	1692.5	1459.8	1319.8	1353.3	1600.2	2060.9	2342.6
47°	2125.6	2150.5	2091.1	1944.4	1678.0	1431.3	1285.9	1313.2	1573.5	2057.0	2323.1
48°	2110.7	2131.8	2076.9	1935.3	1665.2	1409.0	1251.2	1275.1	1549.2	2055.1	2298.9
49°	2092.9	2114.2	2059.3	1922.9	1649.5	1381.7	1216.0	1233.3	1523.8	2052.0	2275.8
50°	2073.9	2094.3	2043.3	1908.9	1632.6	1353.6	1179.6	1192.0	1497.5	2047.6	2247.4
51°	2052.7	2071.6	2024.5	1889.1	1613.2	1326.2	1142.7	1152.3	1473.6	2042.6	2214.8
52°	2031.9	2047.7	2002.8	1872.5	1595.4	1299.5	1102.3	1111.2	1448.9	2036.9	2172.4
53°	2003.7	2014.9	1979.0	1852.2	1581.5	1275.4	1061.3	1070.4	1426.5	2027.0	2127.4
54°	1973.5	1981.3	1954.3	1832.4	1567.6	1246.8	1020.3	1027.7	1407.0	2012.4	2073.7
55°	1939.1	1943.5	1921.5	1810.1	1553.7	1216.6	983.7	984.4	1388.5	1995.1	2014.5
56°	1899.7	1899.0	1886.0	1788.2	1535.1	1181.7	944.8	940.6	1374.1	1969.0	1948.5
57°	1854.7	1851.9	1844.5	1761.0	1514.7	1148.1	903.6	896.6	1364.5	1943.7	1869.4
58°	1804.4	1795.6	1798.0	1735.9	1495.6	1112.9	862.3	852.6	1352.6	1912.6	1784.7
59°	1750.4	1737.5	1747.8	1704.8	1477.3	1080.2	822.5	809.5	1343.0	1876.1	1685.7
60°	1691.0	1647.7	1692.6	1672.6	1453.0	1046.7	783.0	767.5	1330.9	1835.1	1577.9
61°	1583.7	1557.9	1598.4	1632.8	1427.7	1014.6	743.7	725.7	1319.3	1784.8	1459.9
62°	1476.5	1467.8	1504.3	1580.6	1401.1	980.3	703.0	683.9	1314.4	1729.1	1330.5
63°	1369.2	1328.0	1409.8	1528.5	1368.1	944.1	660.5	640.8	1309.1	1658.7	1189.7
64°	1260.0	1245.8	1280.8	1475.3	1336.1	911.0	618.2	597.5	1306.6	1579.9	1034.0
65°	1201.5	1198.0	1204.2	1372.3	1299.1	876.5	576.1	557.2	1301.0	1485.8	858.1
66°	1157.4	1153.3	1153.3	1247.7	1261.6	840.7	535.4	517.5	1297.6	1374.9	680.6
67°	1113.3	1103.5	1112.1	1160.3	1218.2	804.9	495.7	477.8	1295.2	1249.0	503.0
68°	1062.0	1045.7	1068.5	1102.9	1164.2	768.2	456.5	435.4	1280.7	1093.9	325.5
69°	1006.2	981.2	1018.1	1047.5	1082.6	730.0	418.2	394.4	1249.0	913.7	195.7
70°	947.9	917.1	967.8	995.6	1008.6	693.6	381.3	354.8	1193.7	705.4	119.4
71°	881.9	844.6	909.4	947.4	963.9	656.7	347.4	315.6	1113.4	496.2	88.9
72°	814.8	778.7	848.4	906.8	926.2	621.1	315.8	279.3	1038.2	287.0	79.2
73°	750.7	717.3	782.9	868.8	881.5	582.4	283.1	244.6	977.0	156.9	71.6
74°	683.2	648.8	715.3	829.8	837.9	526.3	253.4	213.8	879.2	93.1	64.0
75°	616.7	579.1	647.1	789.3	793.7	480.5	224.8	183.6	766.4	79.5	56.4
76°	545.3	500.5	581.4	744.3	749.8	446.7	200.0	156.3	609.5	66.7	48.3
77°	472.7	425.5	513.2	687.6	704.3	414.1	175.1	133.6	451.0	53.9	41.4
78°	406.6	353.4	451.9	618.7	655.5	380.1	150.4	114.6	292.6	49.2	35.0
79°	335.1	266.0	388.0	544.8	608.3	348.3	129.6	98.4	163.5	47.0	29.2
80°	242.0	178.5	319.1	477.2	558.3	318.4	106.3	82.0	88.4	42.9	24.8
81°	148.9	91.8	210.0	429.7	503.9	287.7	86.3	66.8	71.8	35.0	22.0
82°	57.9	30.0	101.4	392.1	452.9	257.4	70.2	51.7	56.0	27.7	19.6
83°	42.3	23.7	71.5	275.3	396.2	226.1	55.1	36.5	40.2	20.1	17.5
84°	26.8	17.3	41.6	158.6	352.7	191.7	42.1	26.2	38.9	14.1	15.4
85°	11.4	11.0	12.0	42.0	311.5	157.4	30.6	18.2	33.8	10.9	12.8
86°	7.0	6.5	7.6	23.3	194.9	123.1	22.2	11.8	24.9	8.6	8.8
87°	3.3	3.2	3.5	4.6	79.7	91.8	13.7	8.0	14.8	5.7	5.4
88°	1.2	1.2	1.3	1.3	39.5	61.1	5.3	4.3	9.9	2.9	2.1
89°	0.3	0.3	0.3	0.3	0.5	30.4	0.7	0.5	5.0	0.6	0.6



REPORT NUMBER: P1449894  
 CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

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



REPORT NUMBER: P1449894  
 CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

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



REPORT NUMBER: P1449894  
CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

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



REPORT NUMBER: P1449894  
 CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
0°	2199.7	2199.7	2199.7
1°	2212.5	2214.1	2213.7
2°	2226.4	2228.6	2232.5
3°	2238.3	2244.7	2247.4
4°	2253.4	2259.7	2264.3
5°	2264.9	2273.3	2278.4
6°	2275.0	2286.0	2290.5
7°	2284.8	2299.7	2302.3
8°	2294.7	2310.4	2312.6
9°	2303.2	2319.4	2325.2
10°	2311.0	2329.3	2337.2
11°	2320.4	2343.1	2351.3
12°	2330.4	2358.9	2366.3
13°	2343.2	2372.4	2379.5
14°	2354.4	2389.6	2396.6
15°	2367.4	2402.5	2413.8
16°	2379.5	2418.0	2427.9
17°	2389.7	2429.6	2442.5
18°	2400.9	2446.4	2460.3
19°	2412.3	2461.2	2476.4
20°	2424.2	2475.3	2491.1
21°	2436.6	2488.9	2507.9
22°	2446.1	2507.1	2524.9
23°	2455.1	2522.5	2542.4
24°	2468.9	2537.7	2559.3
25°	2478.3	2555.3	2573.1
26°	2490.6	2567.7	2586.5
27°	2501.9	2578.6	2603.2
28°	2511.5	2594.1	2616.1
29°	2517.7	2608.8	2632.0
30°	2530.9	2620.3	2640.4
31°	2539.4	2630.1	2652.5
32°	2547.5	2638.6	2659.8
33°	2555.2	2644.4	2667.9
34°	2557.3	2647.4	2670.8
35°	2564.5	2648.0	2669.1
36°	2567.2	2644.4	2660.6
37°	2563.5	2636.7	2651.5
38°	2561.4	2625.7	2635.9
39°	2553.5	2607.0	2617.1
40°	2541.5	2586.6	2596.6
41°	2524.1	2565.7	2573.9
42°	2505.8	2535.9	2542.4
43°	2482.7	2505.5	2502.2
44°	2456.8	2466.2	2459.2



REPORT NUMBER: P1449894  
 CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
45°	2427.1	2419.6	2412.1
46°	2392.1	2370.1	2361.6
47°	2348.3	2316.6	2300.7
48°	2303.2	2254.0	2234.9
49°	2249.1	2182.9	2164.4
50°	2190.0	2109.7	2087.6
51°	2124.6	2032.2	2003.5
52°	2052.3	1945.1	1914.7
53°	1977.4	1851.1	1818.6
54°	1889.9	1754.5	1719.3
55°	1796.6	1651.3	1613.8
56°	1696.4	1538.2	1500.8
57°	1589.8	1419.6	1372.9
58°	1474.1	1281.0	1219.2
59°	1352.9	1117.8	1046.4
60°	1213.3	941.3	867.4
61°	1055.4	755.8	698.8
62°	876.1	586.6	530.4
63°	703.2	417.5	362.0
64°	530.3	277.1	234.7
65°	357.4	174.4	154.2
66°	225.4	123.2	118.7
67°	139.6	104.7	107.7
68°	102.6	96.5	100.1
69°	90.6	89.3	92.7
70°	82.9	82.2	85.4
71°	76.3	76.1	78.5
72°	69.5	69.9	73.1
73°	62.6	63.8	67.6
74°	57.3	58.5	62.2
75°	51.0	52.9	56.6
76°	44.1	47.8	51.9
77°	38.4	43.9	48.4
78°	34.3	41.1	46.1
79°	31.2	39.0	44.2
80°	28.8	37.0	41.8
81°	26.8	34.5	39.0
82°	24.7	31.7	35.6
83°	22.2	27.1	29.4
84°	17.9	22.0	23.3
85°	14.0	16.3	16.7
86°	9.1	11.8	11.7
87°	6.3	8.0	8.0
88°	3.4	4.3	4.3
89°	0.6	0.5	0.6



REPORT NUMBER: P1449894  
CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

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



REPORT NUMBER: P1449894  
CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

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

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

Scaled Data Report



REPORT NUMBER: P1449894  
CATALOG NUMBER: TWC60\_T2\_48W\_4000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
180°	0.0	0.0	0.0

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

Report Prepared for

Cooper Lighting Solutions

Lumark

Report Number: SP1-2601-659-2

Test Date: 02/12/2026

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

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

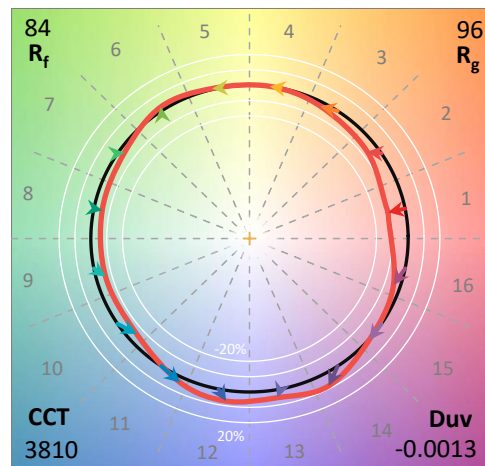
**Test Information**

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

**Spectral Parameters**

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

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



**Test Conditions**

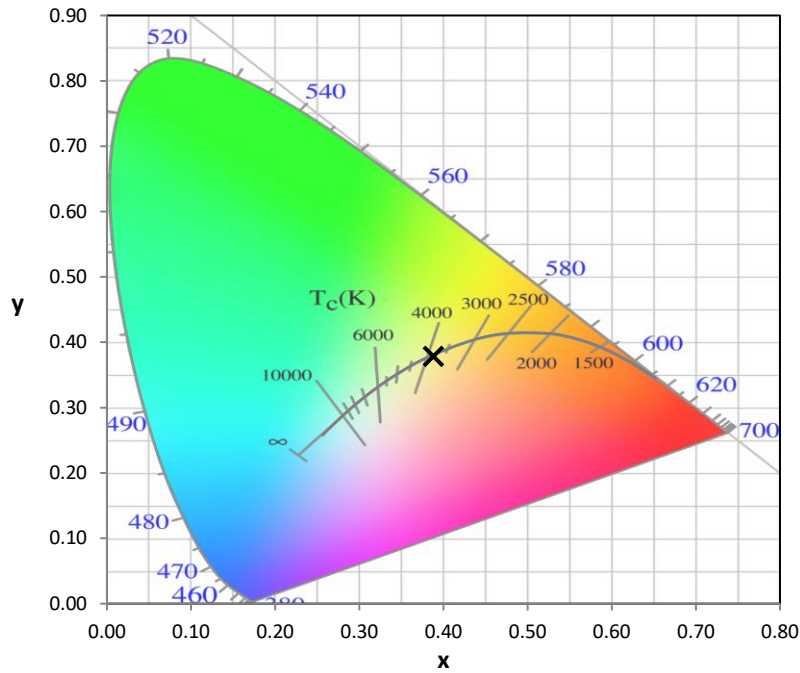
Stabilization Time: 20M  
 Operation Time: 1H 20M  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-2

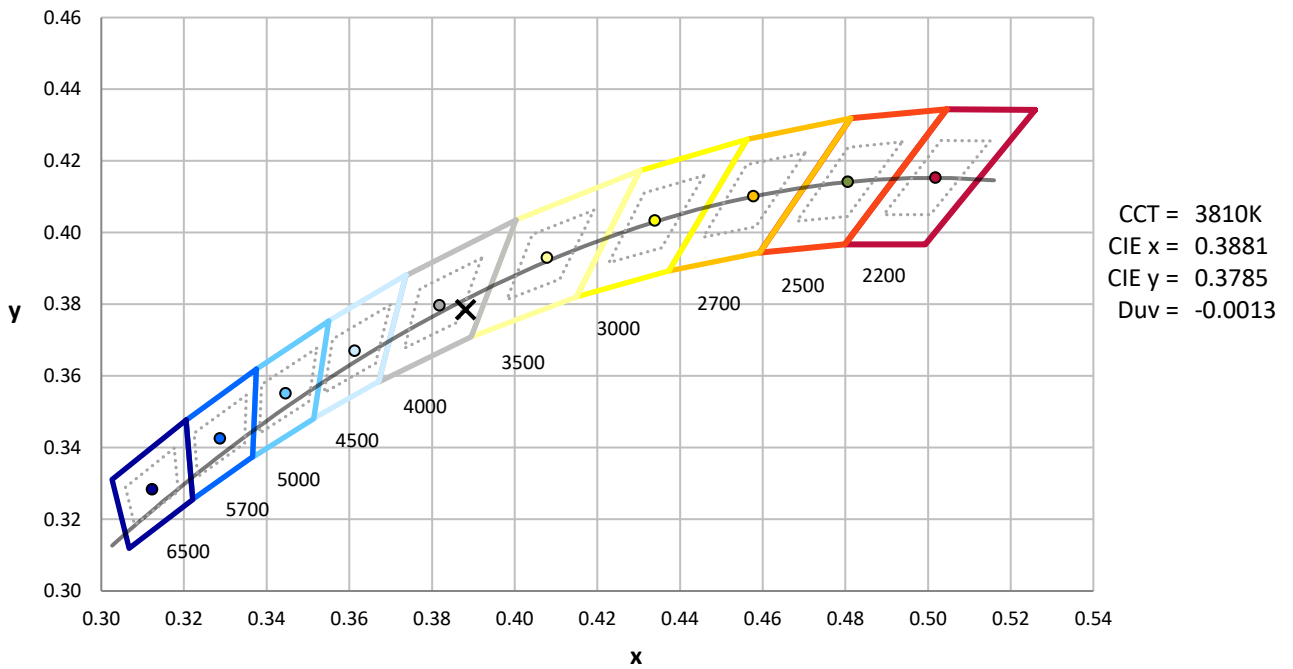
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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

REPORT NUMBER: SP1-2601-659-2

**CIE 1931 Chromaticity Diagram**



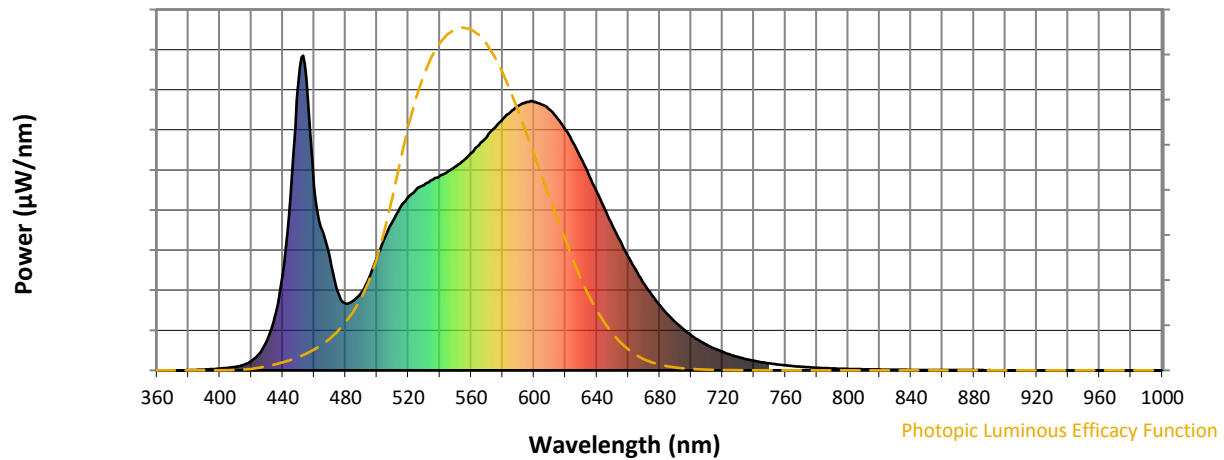
**CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles**



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2601-659-2

**Photopic Flux vs. Wavelength**

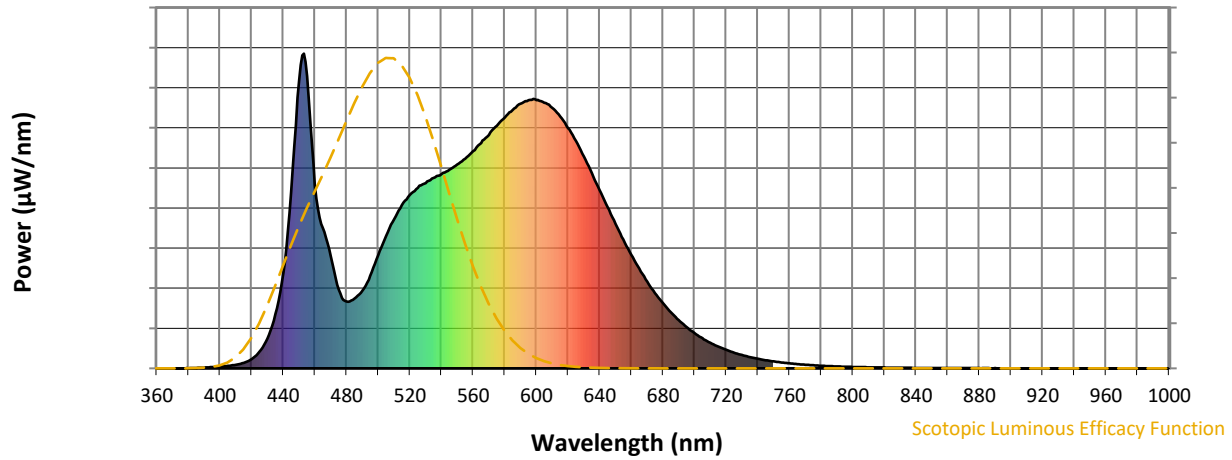


**Photopic Lumens: NR**

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

REPORT NUMBER: SP1-2601-659-2

**Scotopic Flux vs. Wavelength**



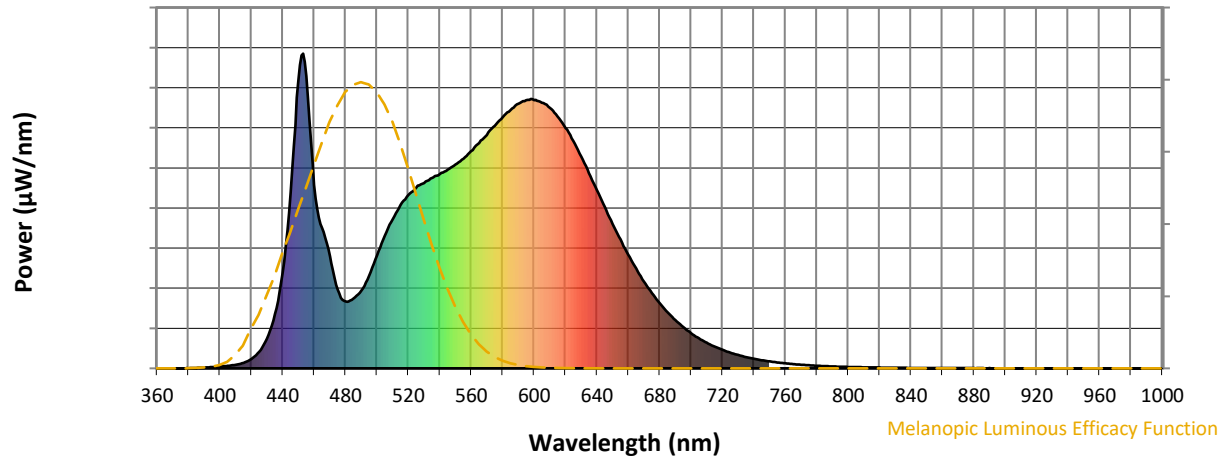
**Scotopic Lumens: NR**

**S/P: 1.64**

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

REPORT NUMBER: SP1-2601-659-2

Melanopic Flux vs. Wavelength



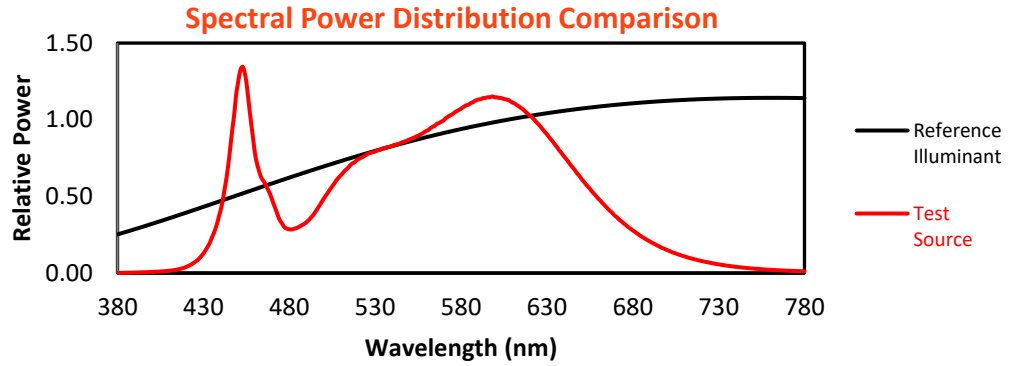
Melanopic Lumens: NR

M/P: 3.35

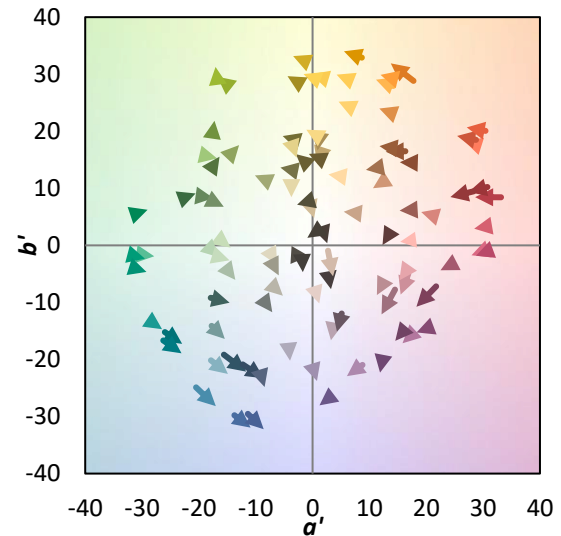
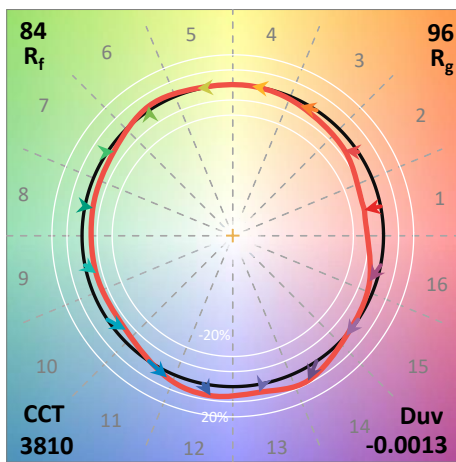
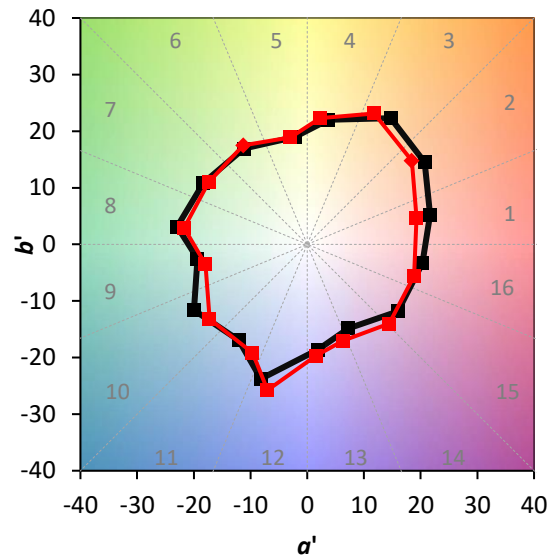
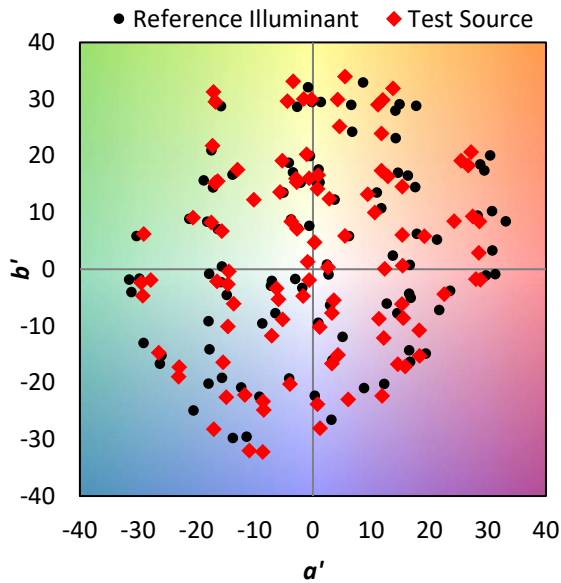
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625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

**Summary**

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

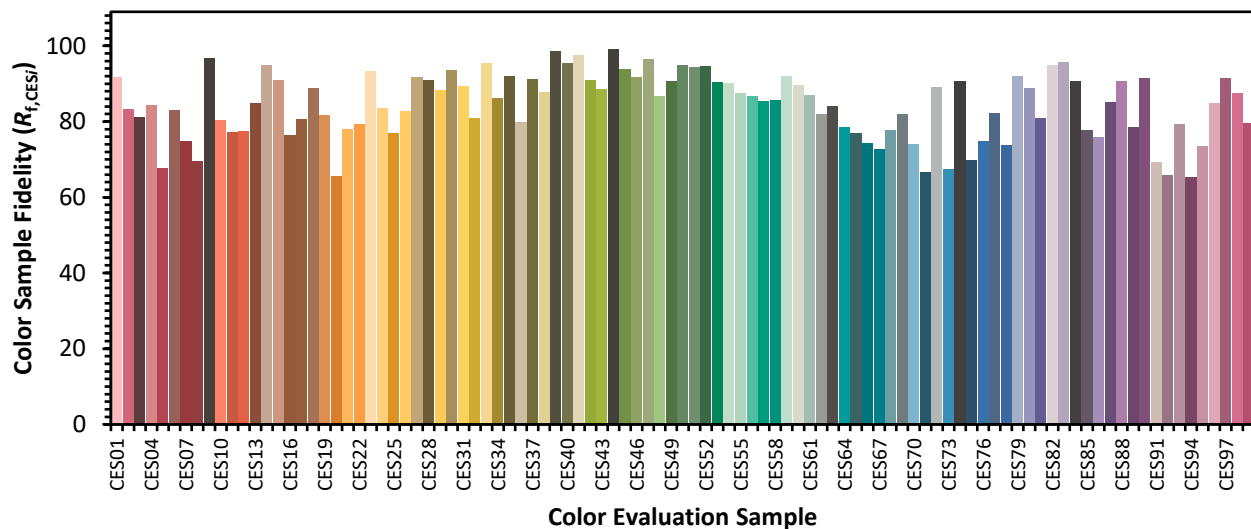


**Color Vector Graphics**

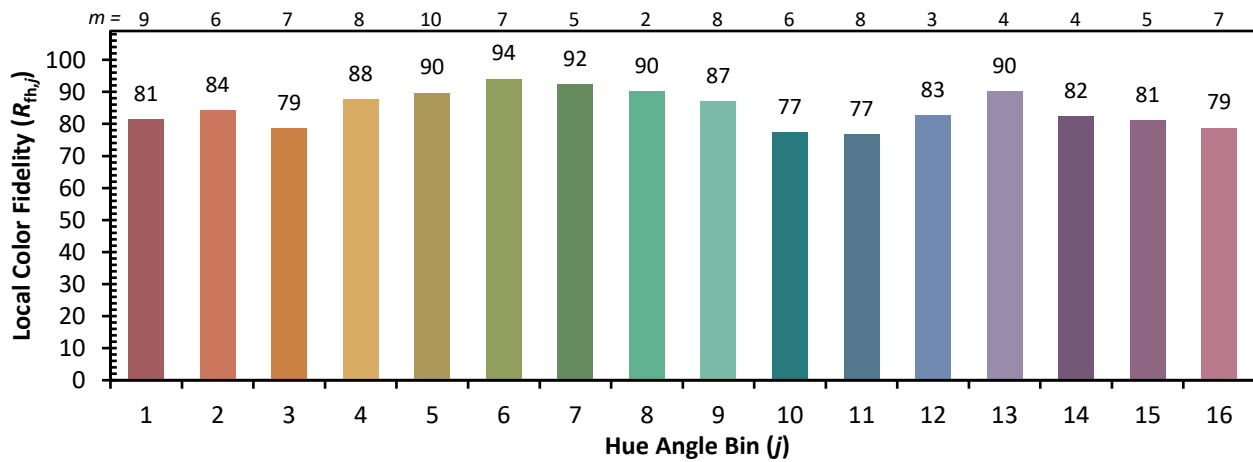
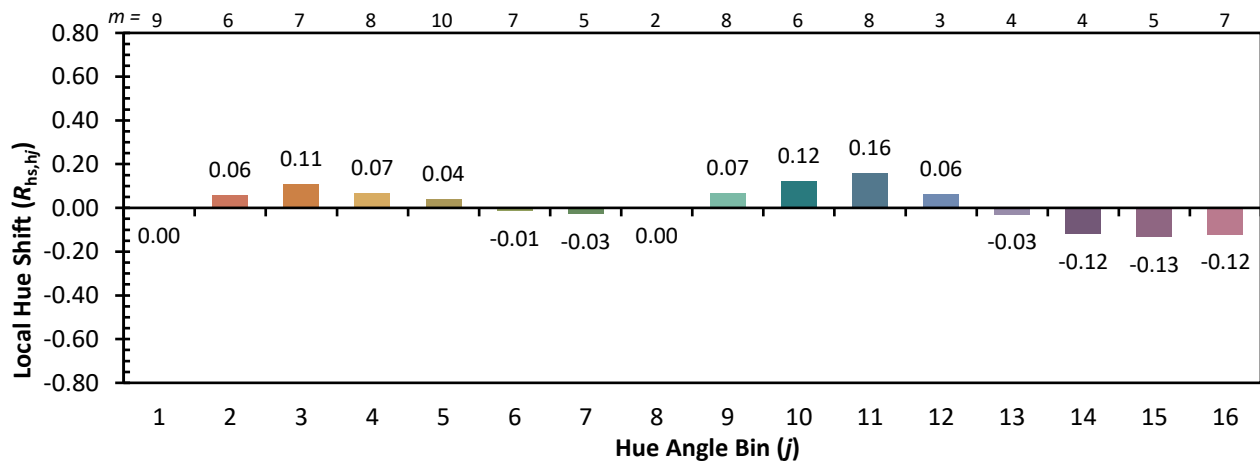
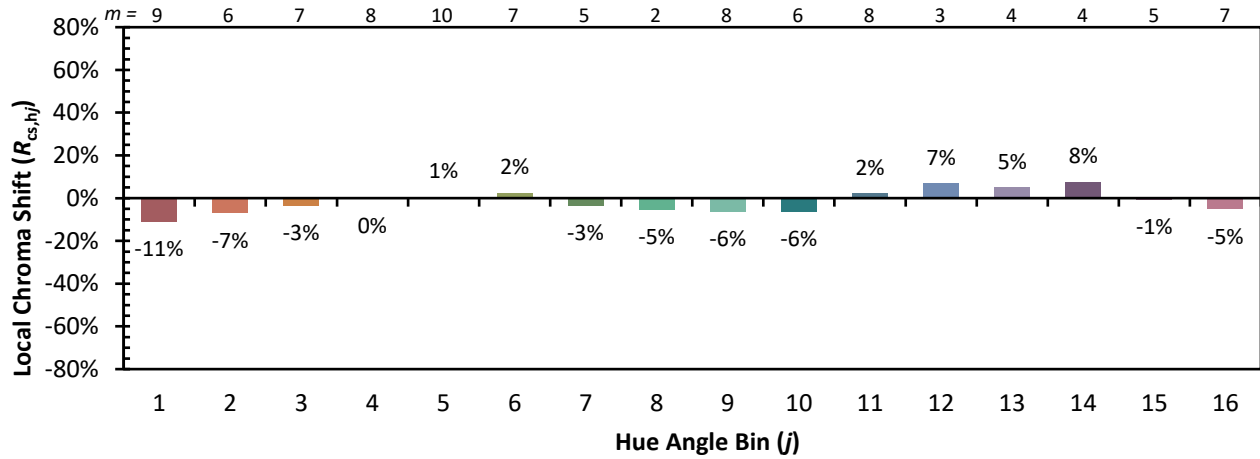


**Individual Sample Fidelity Index ( $R_{f,i}$ )**

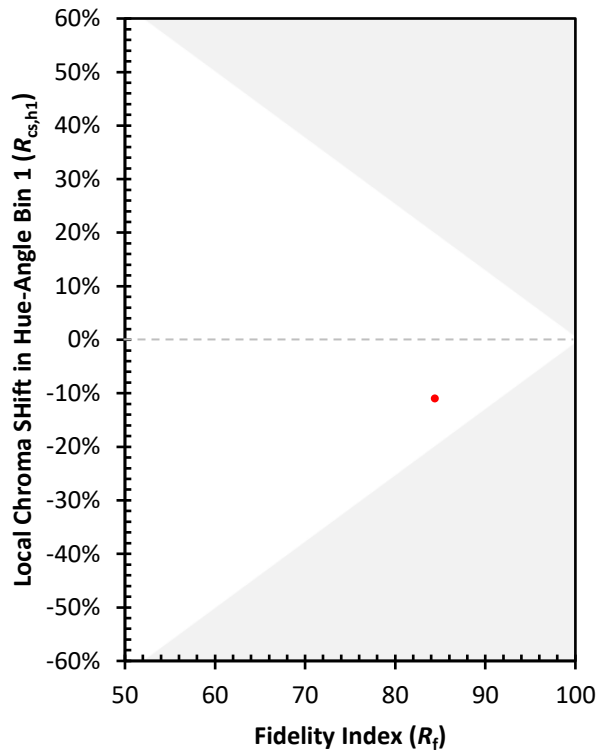
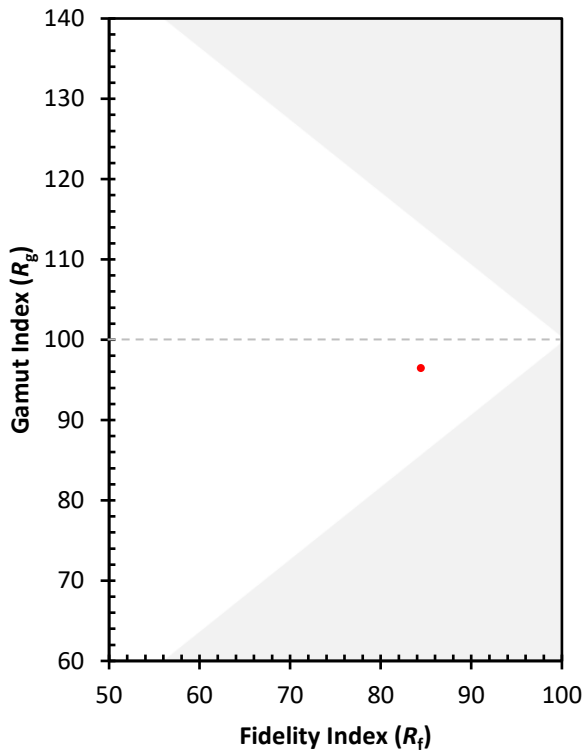
CES01 = 86	CES26 = 83	CES51 = 94	CES76 = 75
CES02 = 62	CES27 = 92	CES52 = 95	CES77 = 82
CES03 = 31	CES28 = 91	CES53 = 90	CES78 = 74
CES04 = 70	CES29 = 88	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 94	CES55 = 88	CES80 = 89
CES06 = 51	CES31 = 89	CES56 = 87	CES81 = 81
CES07 = 41	CES32 = 81	CES57 = 86	CES82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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)