

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: P1449918

Luminaire Tested: **TWC60_T4_48W_4000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449918
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_T4_48W_4000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T4 distribution, 48W
4000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7205 lumens
Efficiency: N/A
Efficacy: 156.0 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 0.42' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

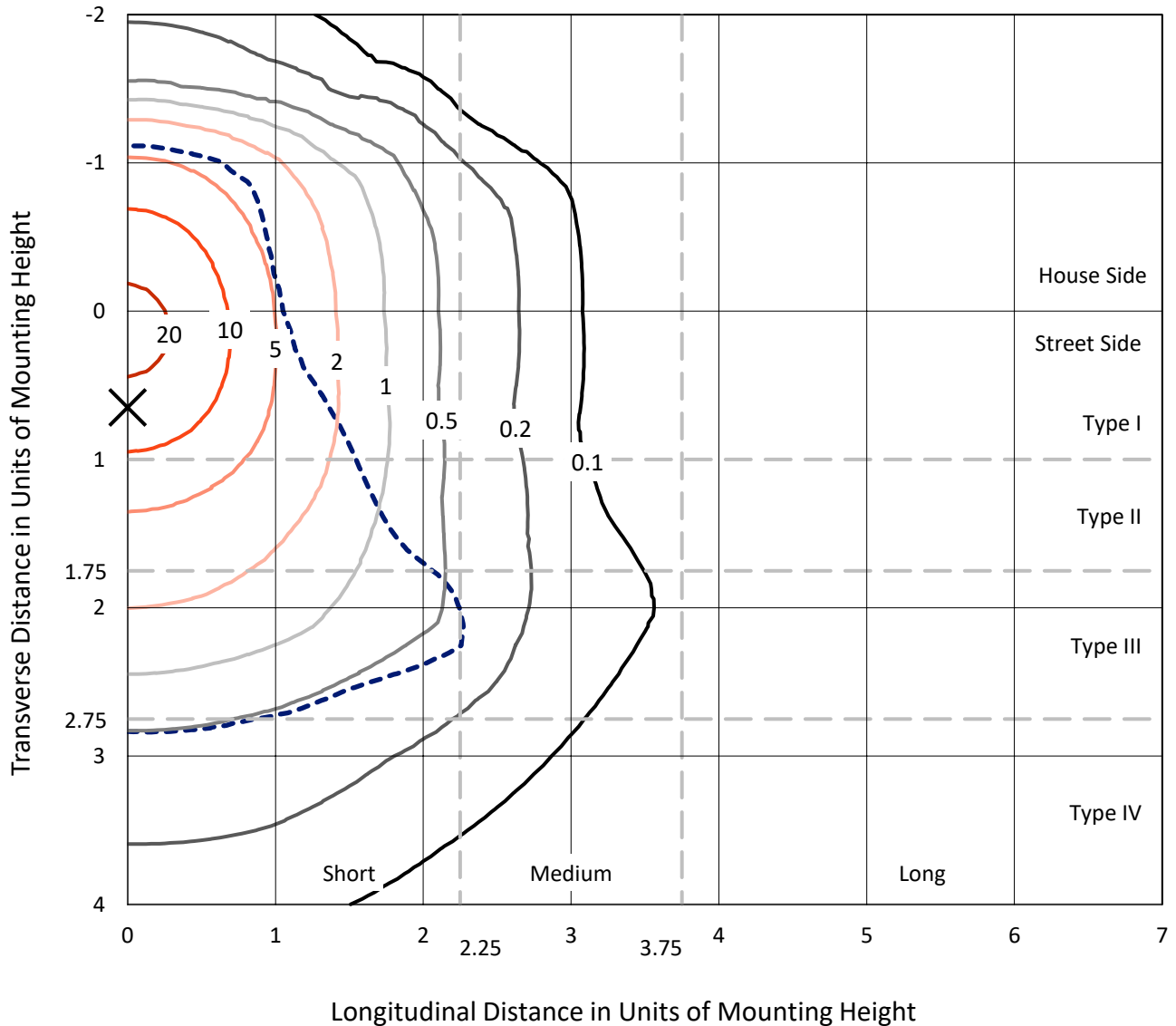
Input Watts (W): 46.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

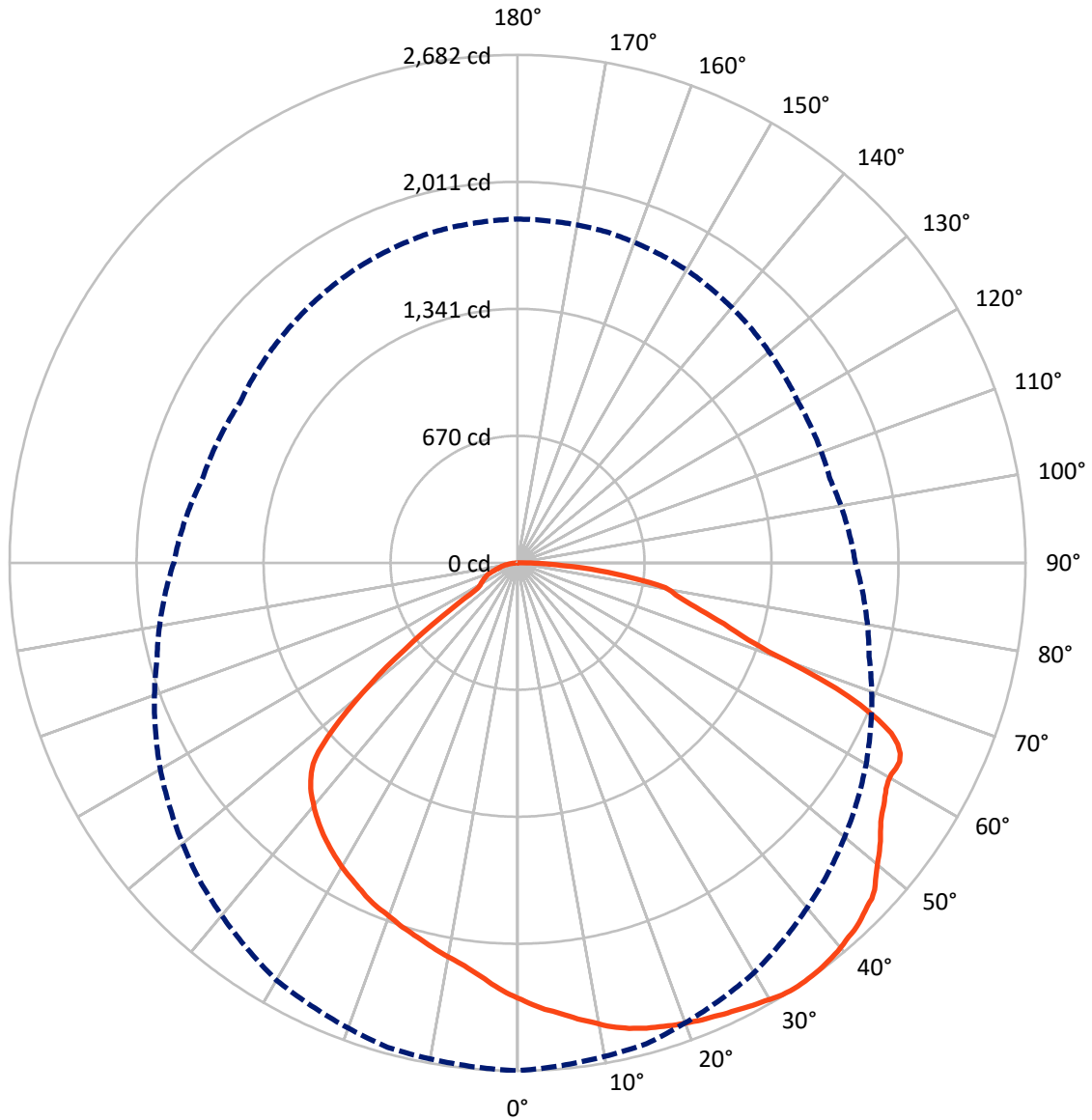
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.7 fc
 Type IV - 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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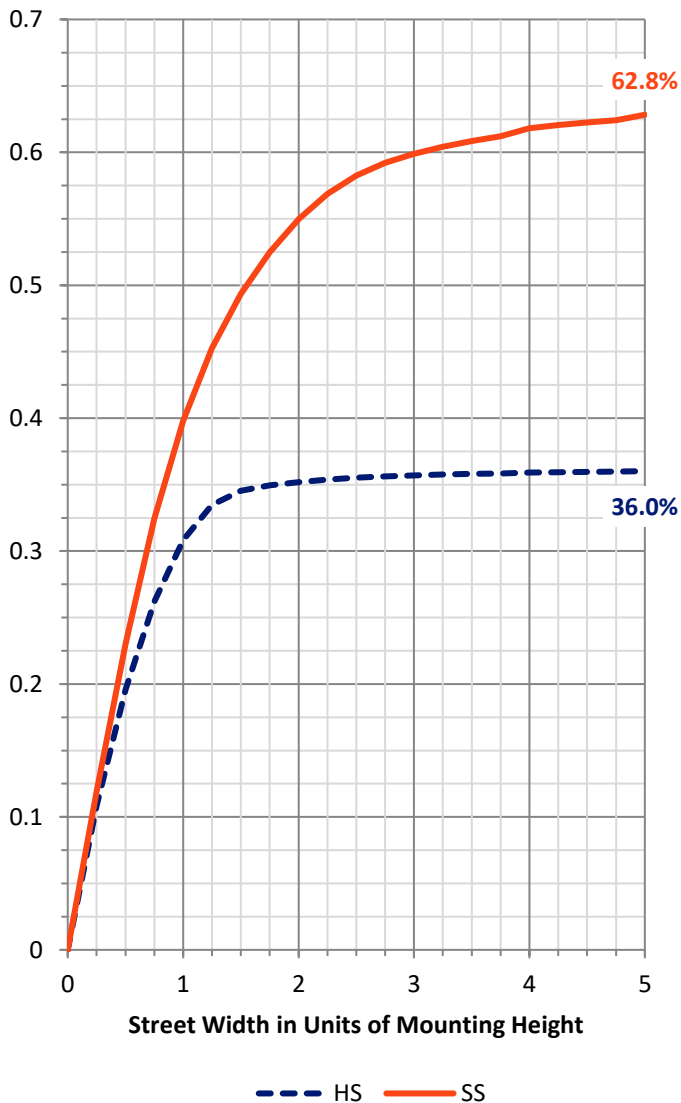
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2612.4	0.0	2612.4
	% Fixture	36.3	0.0	36.3
Street Side	Lumens	4592.6	0.0	4592.6
	% Fixture	63.7	0.0	63.7
Total	Lumens	7205.0	0.0	7205.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.5	3.0
10°-20°	635.5	8.8
20°-30°	991.0	13.8
30°-40°	1250.6	17.4
40°-50°	1367.5	19.0
50°-60°	1211.0	16.8
60°-70°	916.7	12.7
70°-80°	478.3	6.6
80°-90°	135.8	1.9
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°	7205.0	100.0
0°-180°	7205.0	100.0

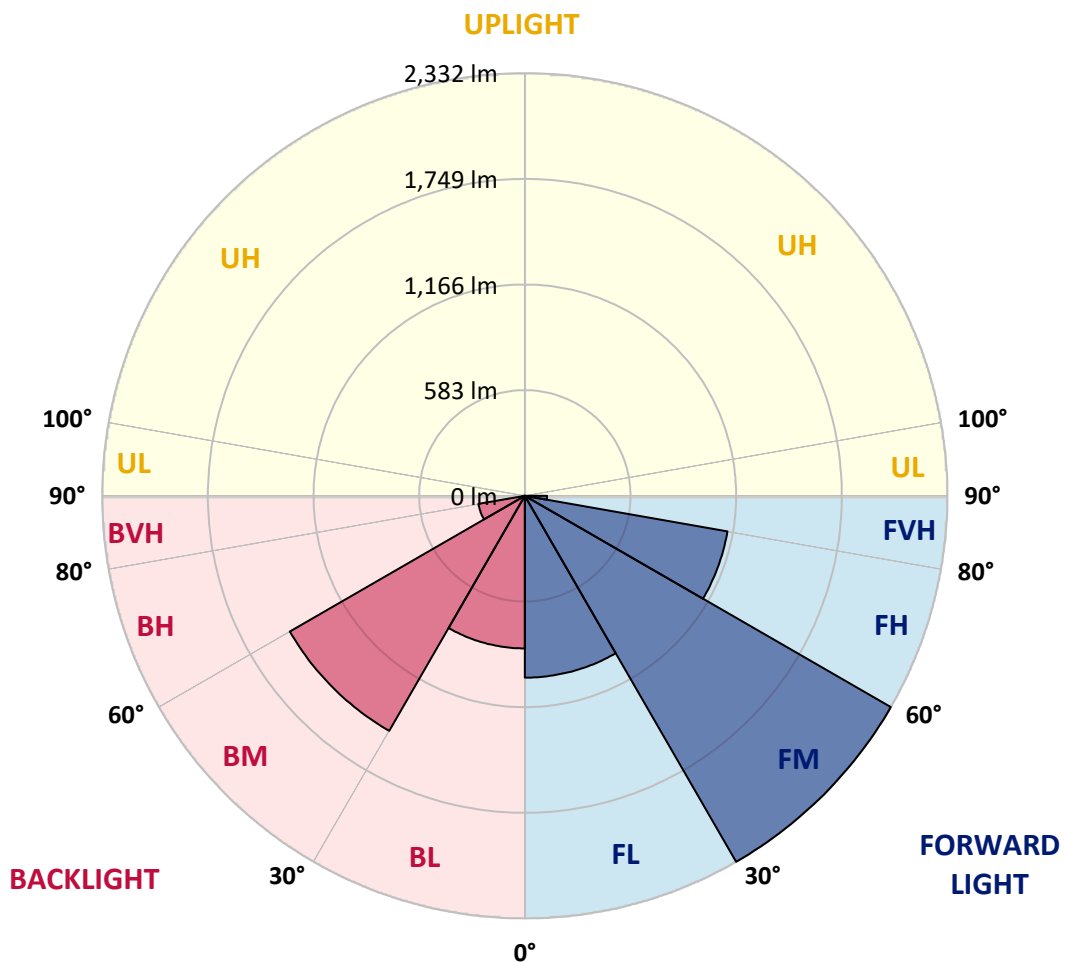


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1003.1	13.9			
FM (30°-60°)	2331.8	32.4			
FH (60°-80°)	1135.1	15.8			G1/1800
FVH (80°-90°)	122.7	1.7			G2/225
BL (0°-30°)	842.0	11.7	B2/1000		
BM (30°-60°)	1497.4	20.8	B2/2500		
BH (60°-80°)	259.9	3.6	B1/500		G1/500
BVH (80°-90°)	13.1	0.2			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
0°	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3
1°	2325.7	2323.7	2320.6	2317.3	2313.4	2308.9	2304.2	2299.3	2294.9	2291.4	2288.9
2°	2344.3	2342.4	2338.0	2330.8	2319.5	2311.1	2302.0	2292.8	2284.4	2277.4	2272.6
3°	2362.0	2358.5	2352.6	2343.1	2329.5	2313.0	2298.4	2285.6	2273.8	2263.5	2256.1
4°	2375.5	2373.5	2364.9	2352.4	2335.7	2313.3	2294.0	2277.6	2261.6	2247.3	2236.9
5°	2392.6	2388.5	2377.7	2361.3	2340.5	2313.9	2289.0	2268.2	2247.8	2228.9	2214.4
6°	2409.1	2403.7	2390.5	2369.6	2344.6	2313.0	2283.3	2258.0	2232.9	2209.2	2193.1
7°	2428.8	2419.7	2402.8	2377.0	2347.2	2311.4	2276.6	2246.6	2216.8	2189.6	2173.4
8°	2444.4	2434.6	2414.4	2385.2	2349.3	2307.7	2268.1	2233.9	2199.4	2170.7	2155.7
9°	2461.5	2450.8	2427.3	2393.6	2351.2	2303.6	2258.6	2220.2	2182.1	2153.1	2140.5
10°	2482.0	2469.5	2441.9	2401.8	2352.1	2299.4	2249.1	2206.0	2164.7	2136.2	2125.8
11°	2500.3	2486.5	2456.1	2409.2	2353.0	2294.2	2238.5	2191.2	2147.9	2121.0	2112.7
12°	2513.6	2500.2	2468.4	2416.7	2354.0	2287.6	2225.8	2175.0	2130.0	2105.9	2098.5
13°	2528.5	2511.7	2478.3	2423.8	2354.7	2280.4	2213.3	2158.0	2111.5	2090.4	2084.1
14°	2538.5	2522.1	2485.3	2428.0	2355.1	2274.2	2200.9	2140.8	2093.3	2075.7	2070.4
15°	2549.5	2530.4	2489.5	2429.5	2353.4	2266.8	2186.1	2122.7	2075.5	2060.7	2055.9
16°	2558.0	2536.9	2494.3	2430.5	2349.4	2258.5	2171.6	2105.2	2057.1	2045.0	2041.2
17°	2566.0	2543.2	2496.3	2428.5	2343.4	2247.9	2155.4	2086.0	2038.6	2028.7	2026.9
18°	2575.3	2550.0	2495.9	2423.3	2335.8	2237.0	2139.3	2066.3	2020.7	2011.9	2013.2
19°	2583.3	2557.0	2497.5	2419.0	2326.3	2224.5	2122.3	2046.2	2002.9	1995.7	2000.6
20°	2590.4	2564.1	2501.0	2414.1	2315.7	2210.0	2104.5	2025.8	1984.4	1980.7	1987.5
21°	2599.0	2569.9	2503.5	2409.1	2304.7	2193.2	2086.1	2004.9	1965.8	1964.6	1971.6
22°	2605.8	2576.1	2504.9	2404.1	2292.8	2175.3	2065.2	1983.3	1946.5	1947.9	1957.0
23°	2610.8	2580.0	2506.1	2399.7	2280.3	2156.3	2045.1	1960.9	1926.1	1930.8	1942.9
24°	2619.4	2585.1	2506.5	2395.5	2267.7	2136.3	2022.2	1938.1	1905.8	1913.5	1929.7
25°	2625.8	2589.1	2505.7	2389.7	2254.4	2116.3	1998.3	1915.0	1885.7	1896.5	1916.7
26°	2633.7	2592.9	2504.7	2382.9	2239.3	2095.3	1974.6	1890.7	1865.7	1878.3	1902.1
27°	2642.5	2597.2	2505.2	2375.6	2224.2	2073.2	1950.5	1867.2	1844.9	1860.1	1886.1
28°	2650.1	2603.5	2504.5	2367.7	2209.5	2050.3	1925.4	1842.1	1822.9	1842.7	1869.4
29°	2656.9	2609.5	2501.8	2359.0	2193.6	2026.0	1899.0	1816.6	1800.3	1826.3	1852.0
30°	2667.1	2614.9	2500.9	2349.2	2177.9	2000.7	1871.1	1789.6	1777.5	1808.1	1835.7
31°	2674.6	2619.5	2500.1	2339.2	2161.3	1975.0	1842.2	1763.4	1753.8	1787.9	1820.5
32°	2679.3	2625.2	2499.3	2328.3	2143.6	1949.2	1814.4	1736.0	1730.4	1767.2	1803.4
33°	2681.9	2629.0	2498.5	2318.2	2125.0	1921.8	1783.5	1708.0	1707.5	1746.7	1785.3
34°	2680.3	2628.1	2497.6	2307.7	2104.8	1894.5	1754.2	1680.1	1683.7	1725.7	1767.1
35°	2678.3	2627.8	2497.2	2296.2	2083.5	1865.6	1723.2	1651.9	1659.5	1704.1	1748.6
36°	2676.4	2623.6	2493.9	2284.0	2061.3	1836.1	1690.3	1624.1	1635.0	1682.1	1729.4
37°	2670.0	2618.5	2487.9	2272.5	2038.1	1803.9	1658.7	1596.1	1610.7	1659.7	1710.0
38°	2665.2	2612.8	2481.0	2260.5	2013.3	1773.7	1626.9	1569.2	1586.4	1637.1	1690.7
39°	2657.8	2603.5	2472.2	2246.6	1987.2	1742.8	1596.0	1540.5	1562.0	1615.1	1668.9
40°	2647.8	2593.3	2462.2	2230.1	1961.1	1709.7	1564.7	1510.7	1537.8	1594.9	1647.4
41°	2637.2	2580.5	2451.0	2213.4	1934.6	1676.0	1533.3	1480.9	1511.1	1575.2	1625.6
42°	2631.7	2570.9	2440.9	2195.8	1907.2	1640.5	1497.8	1450.1	1482.5	1553.7	1604.5
43°	2619.7	2560.1	2426.8	2179.4	1879.1	1604.0	1462.6	1420.5	1454.3	1529.5	1583.7
44°	2604.3	2547.3	2410.7	2163.4	1851.0	1566.8	1426.1	1390.0	1425.6	1503.4	1562.2



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CANDELA DISTRIBUTION (continued):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	2588.0	2530.2	2396.1	2146.5	1823.3	1528.0	1389.8	1357.5	1396.9	1477.6	1538.5
46°	2577.7	2514.4	2380.9	2129.3	1794.4	1490.0	1352.8	1324.8	1368.7	1451.1	1512.6
47°	2556.8	2499.3	2363.0	2110.4	1764.1	1450.8	1314.9	1291.1	1340.6	1424.0	1484.0
48°	2524.4	2478.8	2341.5	2090.2	1734.7	1410.1	1278.0	1259.7	1312.0	1396.4	1447.6
49°	2493.2	2446.5	2322.1	2069.0	1706.0	1369.5	1241.1	1227.9	1283.2	1367.1	1401.3
50°	2467.2	2415.9	2299.2	2047.7	1676.7	1327.5	1203.2	1194.7	1254.3	1336.3	1339.6
51°	2442.2	2389.2	2269.3	2025.5	1647.6	1287.0	1165.9	1161.0	1225.5	1303.7	1259.0
52°	2414.4	2363.5	2237.6	2001.6	1616.9	1247.5	1127.3	1127.2	1196.7	1267.7	1157.5
53°	2384.3	2336.5	2205.9	1977.9	1585.8	1206.9	1087.3	1092.7	1165.8	1227.2	1045.4
54°	2355.5	2305.9	2177.0	1951.1	1553.2	1167.9	1048.3	1059.8	1133.2	1177.6	925.6
55°	2335.5	2278.9	2147.0	1918.9	1515.6	1129.8	1008.6	1026.4	1100.0	1112.5	806.3
56°	2319.2	2257.6	2114.4	1884.3	1477.0	1088.8	969.3	991.9	1065.3	1030.5	682.9
57°	2300.0	2240.2	2080.8	1848.1	1439.2	1047.1	924.5	957.2	1029.3	931.7	557.6
58°	2282.7	2222.7	2052.5	1813.8	1402.0	1004.3	880.9	920.8	990.4	824.7	440.0
59°	2270.3	2207.1	2030.1	1775.9	1364.0	962.0	838.8	884.1	951.3	716.3	337.7
60°	2267.7	2197.8	2012.4	1734.4	1323.9	917.2	798.4	846.2	906.9	602.8	265.0
61°	2273.9	2195.4	1998.8	1694.2	1280.6	871.8	757.5	807.1	858.2	489.5	225.8
62°	2274.0	2197.9	1984.5	1655.3	1234.9	827.8	719.0	766.8	800.0	382.7	212.1
63°	2258.3	2192.9	1980.4	1619.1	1189.2	781.7	682.0	726.1	730.2	286.4	203.2
64°	2224.3	2171.2	1985.8	1586.7	1144.9	734.3	647.4	684.7	643.9	220.4	195.4
65°	2168.7	2125.5	2000.3	1558.6	1097.0	686.1	612.7	642.6	556.7	195.6	187.3
66°	2075.9	2052.8	1996.0	1535.6	1041.0	638.1	577.3	600.3	463.6	183.8	179.1
67°	1956.7	1947.2	1965.8	1521.5	982.0	589.0	540.7	560.1	370.6	171.4	170.8
68°	1809.4	1814.2	1898.4	1526.3	920.5	540.8	502.6	520.9	295.7	160.9	162.7
69°	1609.5	1647.7	1769.0	1553.9	861.6	496.5	463.6	481.3	235.8	152.1	155.3
70°	1408.1	1457.9	1601.5	1588.8	803.3	455.2	422.0	439.9	178.0	143.5	148.0
71°	1284.1	1302.6	1394.5	1581.1	754.6	413.0	379.8	397.9	144.6	135.0	139.8
72°	1207.4	1204.2	1189.8	1466.1	711.0	372.7	337.2	351.2	133.3	127.4	129.9
73°	1136.7	1141.2	1044.6	1254.3	665.3	332.3	296.2	304.0	124.6	120.4	119.0
74°	1064.8	1082.3	964.7	1014.8	659.5	296.5	258.2	253.3	115.0	113.2	107.9
75°	997.9	1016.6	897.8	865.7	740.1	260.6	223.7	204.7	105.3	103.7	97.1
76°	941.1	944.8	837.7	798.9	797.2	227.9	193.9	155.7	96.4	93.4	86.1
77°	893.7	866.1	781.3	744.6	668.9	198.8	164.1	116.6	88.1	83.3	76.3
78°	854.0	794.0	720.2	687.7	471.2	169.4	135.0	98.6	80.5	73.6	69.4
79°	827.6	741.8	658.4	624.1	350.6	147.6	111.8	87.1	72.9	64.0	63.9
80°	792.3	693.6	599.0	536.2	302.9	128.6	90.6	76.5	64.4	52.3	57.8
81°	703.1	646.0	552.7	442.3	308.8	109.4	70.6	65.7	55.3	42.3	50.7
82°	613.4	598.8	508.8	376.5	274.8	91.8	53.0	55.1	46.3	35.5	42.8
83°	523.6	543.5	460.4	326.9	189.1	76.4	40.1	45.4	37.2	30.1	34.8
84°	432.7	484.7	395.4	284.4	127.3	62.0	30.2	36.3	28.5	23.9	26.2
85°	344.5	422.3	311.3	246.4	99.2	48.0	23.0	27.7	21.0	17.2	17.4
86°	241.7	340.1	238.8	199.2	79.1	35.1	15.8	19.8	14.5	10.6	8.9
87°	167.7	248.0	175.8	123.4	57.8	23.0	8.6	11.7	8.0	5.0	3.6
88°	91.2	147.6	115.6	55.0	37.2	12.1	4.0	4.8	2.9	1.8	1.5
89°	46.4	65.4	62.1	35.5	22.6	5.8	1.1	1.0	0.5	0.4	0.2



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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



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CATALOG NUMBER: TWC60_T4_48W_4000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3	2306.3
1°	2288.2	2288.7	2289.2	2290.9	2294.0	2297.9	2302.7	2307.9	2312.1	2316.1	2319.1
2°	2270.5	2270.8	2272.5	2275.5	2281.3	2289.1	2297.9	2307.3	2315.9	2322.6	2331.5
3°	2251.6	2249.6	2252.5	2258.6	2267.8	2279.4	2291.4	2305.2	2317.3	2331.1	2344.0
4°	2229.9	2228.1	2231.4	2239.5	2252.0	2267.2	2283.3	2301.3	2318.9	2338.3	2354.6
5°	2206.6	2203.6	2209.0	2219.3	2235.9	2255.1	2275.2	2297.5	2321.1	2345.1	2364.3
6°	2185.7	2184.0	2187.6	2198.2	2217.0	2241.3	2266.4	2292.0	2320.8	2350.2	2373.5
7°	2166.4	2163.9	2168.4	2178.3	2198.0	2226.1	2257.1	2288.0	2319.9	2354.0	2383.0
8°	2149.0	2146.2	2150.8	2159.1	2179.2	2210.9	2246.4	2282.0	2318.5	2357.6	2393.0
9°	2134.5	2131.3	2135.8	2142.5	2160.8	2194.7	2234.0	2273.3	2315.7	2360.6	2402.9
10°	2120.8	2118.2	2121.9	2127.3	2143.6	2177.9	2221.4	2265.2	2312.5	2363.6	2412.5
11°	2107.7	2106.4	2108.6	2113.3	2126.9	2160.7	2207.1	2255.4	2308.2	2366.5	2422.0
12°	2094.4	2093.2	2094.3	2098.8	2109.9	2142.6	2192.1	2244.1	2303.3	2369.7	2431.5
13°	2080.9	2079.6	2081.0	2084.3	2092.9	2123.9	2176.8	2232.5	2298.4	2373.1	2439.5
14°	2068.1	2066.1	2068.7	2069.6	2077.0	2105.5	2160.5	2221.0	2294.6	2374.4	2445.4
15°	2054.1	2052.1	2053.7	2054.2	2060.5	2086.4	2143.1	2207.6	2288.7	2373.8	2448.0
16°	2040.9	2041.4	2039.0	2039.5	2044.5	2066.6	2125.5	2194.6	2281.9	2371.6	2449.3
17°	2028.2	2027.7	2025.6	2025.0	2028.3	2046.8	2107.0	2180.8	2273.8	2367.2	2447.9
18°	2016.8	2018.0	2014.0	2009.8	2010.7	2027.1	2087.0	2165.3	2262.4	2360.1	2444.6
19°	2003.6	2004.3	2001.0	1995.1	1994.2	2007.6	2067.8	2147.9	2249.4	2352.1	2441.5
20°	1990.1	1990.7	1988.0	1980.3	1977.4	1987.5	2047.4	2132.8	2236.3	2343.2	2438.5
21°	1977.1	1979.0	1974.5	1964.7	1960.2	1967.8	2026.1	2115.8	2221.2	2333.1	2435.2
22°	1966.3	1969.2	1961.7	1949.4	1942.5	1947.0	2004.7	2095.7	2204.3	2322.7	2432.6
23°	1956.3	1958.9	1949.3	1934.1	1923.6	1925.5	1982.4	2074.7	2187.1	2312.3	2431.2
24°	1944.5	1946.9	1937.4	1919.4	1905.2	1904.4	1958.9	2052.8	2169.9	2302.2	2429.6
25°	1930.3	1933.2	1924.5	1904.4	1886.8	1883.7	1935.8	2030.4	2151.2	2291.6	2425.1
26°	1916.2	1916.9	1909.6	1891.1	1867.3	1861.8	1912.1	2005.3	2131.4	2280.0	2419.8
27°	1900.1	1902.4	1892.8	1875.0	1848.5	1838.9	1886.0	1979.5	2110.7	2267.5	2414.0
28°	1885.4	1888.6	1877.2	1858.4	1829.6	1815.8	1860.7	1953.9	2089.5	2254.6	2408.7
29°	1871.4	1875.4	1862.3	1840.8	1810.9	1792.7	1834.0	1928.0	2067.3	2241.5	2402.9
30°	1857.6	1861.4	1847.6	1822.4	1791.8	1768.0	1806.0	1901.2	2043.9	2226.7	2396.0
31°	1841.5	1846.0	1832.8	1804.7	1772.2	1743.3	1779.2	1874.3	2020.6	2210.7	2387.3
32°	1825.4	1830.2	1817.1	1786.6	1750.4	1718.3	1750.7	1844.9	1996.8	2194.8	2380.4
33°	1809.1	1814.8	1801.4	1768.9	1728.1	1692.5	1721.6	1815.5	1971.2	2178.3	2373.1
34°	1793.2	1798.2	1784.2	1750.5	1705.7	1667.0	1692.3	1786.4	1945.8	2160.2	2365.0
35°	1777.5	1781.7	1766.9	1730.9	1682.2	1642.1	1662.6	1756.3	1919.8	2141.1	2357.1
36°	1759.0	1764.4	1748.5	1712.0	1659.3	1617.6	1633.8	1724.7	1892.3	2121.6	2349.1
37°	1740.2	1745.9	1729.9	1692.5	1637.0	1593.1	1605.0	1693.1	1864.2	2100.6	2340.7
38°	1720.1	1726.5	1710.3	1671.0	1615.2	1568.2	1577.5	1661.4	1835.3	2079.2	2330.7
39°	1700.1	1706.3	1688.6	1649.0	1593.7	1541.4	1548.0	1625.4	1805.2	2058.7	2318.9
40°	1678.7	1684.9	1668.7	1627.0	1571.9	1513.6	1516.1	1591.9	1773.8	2036.1	2306.0
41°	1657.6	1662.5	1646.4	1606.4	1548.5	1485.9	1483.3	1555.6	1740.7	2012.2	2291.1
42°	1635.9	1641.0	1624.9	1586.5	1524.9	1458.5	1450.5	1519.9	1707.0	1989.4	2276.5
43°	1613.4	1616.6	1602.9	1566.1	1501.0	1430.1	1418.6	1481.9	1672.3	1965.7	2262.3
44°	1591.8	1586.2	1581.0	1542.4	1476.8	1400.6	1386.2	1443.1	1635.2	1940.9	2247.9



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CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	1569.5	1553.1	1558.8	1517.5	1451.2	1371.4	1354.1	1404.3	1596.6	1914.9	2231.2
46°	1529.4	1513.2	1525.4	1492.5	1424.7	1341.8	1321.5	1365.8	1559.9	1888.7	2212.4
47°	1474.0	1448.6	1481.3	1465.7	1397.7	1311.4	1288.5	1324.5	1520.5	1863.4	2193.4
48°	1400.3	1359.6	1420.9	1435.5	1371.0	1280.7	1255.0	1286.1	1481.5	1839.0	2173.4
49°	1305.2	1251.2	1338.2	1401.5	1342.7	1251.4	1220.1	1247.1	1442.8	1814.6	2153.7
50°	1190.4	1130.9	1236.5	1360.2	1312.6	1222.0	1184.0	1208.9	1404.0	1790.3	2131.4
51°	1069.7	1007.7	1122.0	1303.2	1281.6	1192.1	1149.2	1170.2	1366.1	1763.6	2106.8
52°	946.7	881.7	1000.5	1226.6	1248.9	1161.5	1113.4	1129.5	1328.5	1734.2	2080.9
53°	820.4	750.3	878.6	1136.6	1214.4	1130.8	1077.0	1088.7	1288.9	1701.1	2052.6
54°	688.6	619.4	751.4	1026.3	1177.3	1098.7	1041.5	1044.9	1250.0	1668.4	2019.5
55°	561.7	493.8	621.7	912.0	1136.6	1066.2	1004.8	1001.4	1210.5	1638.4	1985.4
56°	441.1	382.3	498.2	796.0	1087.3	1032.6	967.7	959.3	1169.1	1607.8	1952.4
57°	335.3	298.3	381.0	673.8	1024.3	996.2	929.9	915.9	1127.0	1574.8	1917.8
58°	272.4	252.5	299.0	551.1	944.2	957.5	890.6	873.5	1084.3	1538.5	1881.5
59°	241.0	235.5	250.9	434.7	848.6	918.2	852.0	833.4	1042.7	1499.1	1844.3
60°	228.5	228.1	229.2	331.2	746.0	877.5	812.1	793.7	996.9	1457.1	1807.4
61°	222.0	221.8	220.6	253.9	641.4	836.9	772.7	755.2	949.0	1414.1	1775.4
62°	215.3	215.2	213.6	214.9	532.6	793.9	733.7	716.7	900.5	1371.5	1748.1
63°	208.3	208.3	206.5	199.5	425.3	750.5	693.9	678.3	849.0	1324.6	1724.6
64°	201.3	201.6	199.3	191.9	325.1	701.4	653.2	640.3	797.0	1270.2	1705.0
65°	194.4	195.2	191.7	182.3	245.2	647.2	612.1	601.1	746.5	1214.3	1688.2
66°	187.7	189.0	184.3	173.7	203.6	578.4	570.9	561.7	699.8	1160.7	1681.1
67°	181.0	182.0	177.0	164.9	179.3	502.0	530.7	520.2	651.6	1108.8	1693.9
68°	174.2	174.9	169.8	156.5	164.8	420.5	491.8	478.1	599.4	1058.2	1721.2
69°	166.8	167.4	162.6	148.4	156.1	339.8	453.0	434.9	549.7	1014.2	1729.5
70°	156.9	156.3	154.1	140.7	146.4	270.6	413.8	392.5	507.7	973.0	1692.1
71°	145.4	144.9	143.4	133.9	136.8	215.6	376.6	350.3	466.8	942.3	1574.9
72°	133.9	133.2	132.2	125.8	128.1	160.8	339.7	308.7	427.8	938.3	1366.1
73°	122.2	121.5	120.7	116.0	119.2	129.7	305.7	269.7	387.8	1001.2	1138.1
74°	110.7	110.8	109.5	105.5	111.3	119.5	269.2	234.5	350.1	1071.8	973.5
75°	100.7	102.1	98.8	94.9	104.0	109.5	231.4	201.2	308.4	993.4	881.1
76°	93.5	96.4	90.4	84.8	95.6	100.4	194.4	171.6	267.7	821.9	810.8
77°	88.5	92.0	84.5	74.8	85.8	91.3	157.4	144.4	235.5	669.2	746.2
78°	83.1	85.9	79.4	65.2	75.9	82.7	123.4	119.2	217.1	517.7	685.9
79°	74.8	76.0	72.7	58.1	65.9	74.4	98.1	98.2	196.2	435.2	616.1
80°	66.4	68.1	64.1	52.7	56.5	66.3	83.0	79.4	178.2	429.8	529.3
81°	57.9	59.1	55.6	46.9	45.9	58.0	70.6	65.4	168.9	382.5	452.1
82°	48.0	48.0	46.8	40.1	35.8	49.1	59.1	51.5	157.8	276.4	393.5
83°	36.0	34.4	36.2	32.6	28.6	39.7	47.8	37.6	132.6	198.1	348.7
84°	25.7	24.8	26.1	24.5	22.5	30.9	36.9	27.7	95.9	159.4	307.4
85°	16.2	15.5	16.4	16.4	16.2	23.1	27.3	19.8	68.2	132.3	256.7
86°	7.5	6.6	7.6	8.6	10.0	15.3	19.2	13.1	47.2	107.5	182.9
87°	3.1	2.6	3.1	3.3	4.8	8.3	11.1	7.5	27.4	85.0	113.3
88°	1.2	1.1	1.2	1.3	1.7	3.0	4.3	4.1	13.0	65.2	84.5
89°	0.1	0.0	0.1	0.2	0.3	0.4	0.8	0.7	5.9	46.8	61.5



REPORT NUMBER: P1449918
 CATALOG NUMBER: TWC60_T4_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: P1449918
 CATALOG NUMBER: TWC60_T4_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: P1449918
CATALOG NUMBER: TWC60_T4_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: P1449918
 CATALOG NUMBER: TWC60_T4_48W_4000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
0°	2306.3	2306.3	2306.3
1°	2321.7	2324.1	2325.7
2°	2337.4	2341.6	2344.3
3°	2353.1	2358.4	2362.0
4°	2366.8	2374.3	2375.5
5°	2379.9	2389.7	2392.6
6°	2393.0	2405.4	2409.1
7°	2406.2	2421.0	2428.8
8°	2421.0	2437.5	2444.4
9°	2435.9	2455.5	2461.5
10°	2450.3	2474.4	2482.0
11°	2465.4	2492.1	2500.3
12°	2479.0	2506.9	2513.6
13°	2489.4	2518.4	2528.5
14°	2496.8	2529.0	2538.5
15°	2501.7	2536.2	2549.5
16°	2506.4	2543.1	2558.0
17°	2510.1	2550.4	2566.0
18°	2513.3	2558.9	2575.3
19°	2516.0	2566.3	2583.3
20°	2519.9	2573.3	2590.4
21°	2523.3	2579.4	2599.0
22°	2526.9	2585.1	2605.8
23°	2529.7	2591.0	2610.8
24°	2531.9	2598.3	2619.4
25°	2532.4	2603.6	2625.8
26°	2534.4	2609.6	2633.7
27°	2534.4	2616.3	2642.5
28°	2536.4	2623.6	2650.1
29°	2539.0	2629.5	2656.9
30°	2539.6	2636.8	2667.1
31°	2540.9	2644.2	2674.6
32°	2543.0	2646.9	2679.3
33°	2545.0	2648.7	2681.9
34°	2544.7	2648.8	2680.3
35°	2541.7	2648.0	2678.3
36°	2537.3	2643.6	2676.4
37°	2533.1	2639.8	2670.0
38°	2526.5	2633.2	2665.2
39°	2518.5	2625.1	2657.8
40°	2509.9	2616.3	2647.8
41°	2497.9	2603.1	2637.2
42°	2485.5	2595.7	2631.7
43°	2472.4	2584.5	2619.7
44°	2458.7	2570.4	2604.3



REPORT NUMBER: P1449918
 CATALOG NUMBER: TWC60_T4_48W_4000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
45°	2444.9	2554.8	2588.0
46°	2429.1	2538.5	2577.7
47°	2411.2	2522.9	2556.8
48°	2392.1	2497.0	2524.4
49°	2371.6	2462.3	2493.2
50°	2343.5	2435.5	2467.2
51°	2311.6	2409.1	2442.2
52°	2281.4	2382.8	2414.4
53°	2254.6	2354.1	2384.3
54°	2222.7	2324.3	2355.5
55°	2190.1	2299.7	2335.5
56°	2158.2	2282.2	2319.2
57°	2129.7	2267.1	2300.0
58°	2108.7	2248.1	2282.7
59°	2091.9	2233.9	2270.3
60°	2076.2	2226.4	2267.7
61°	2062.3	2227.0	2273.9
62°	2055.5	2227.7	2274.0
63°	2059.8	2217.8	2258.3
64°	2070.1	2189.7	2224.3
65°	2064.8	2138.4	2168.7
66°	2033.2	2058.1	2075.9
67°	1970.1	1946.3	1956.7
68°	1859.6	1803.0	1809.4
69°	1702.9	1625.4	1609.5
70°	1513.8	1438.9	1408.1
71°	1312.9	1298.3	1284.1
72°	1150.2	1207.5	1207.4
73°	1050.2	1139.6	1136.7
74°	992.0	1073.2	1064.8
75°	939.8	1002.2	997.9
76°	889.4	930.3	941.1
77°	834.3	862.0	893.7
78°	771.0	803.9	854.0
79°	710.3	766.3	827.6
80°	650.0	732.5	792.3
81°	591.1	692.9	703.1
82°	533.5	633.2	613.4
83°	464.4	558.0	523.6
84°	383.8	482.5	432.7
85°	308.9	401.6	344.5
86°	254.1	306.3	241.7
87°	190.2	212.7	167.7
88°	124.3	122.9	91.2
89°	71.0	58.8	46.4



REPORT NUMBER: P1449918
CATALOG NUMBER: TWC60_T4_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: P1449918
CATALOG NUMBER: TWC60_T4_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: P1449918
CATALOG NUMBER: TWC60_T4_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

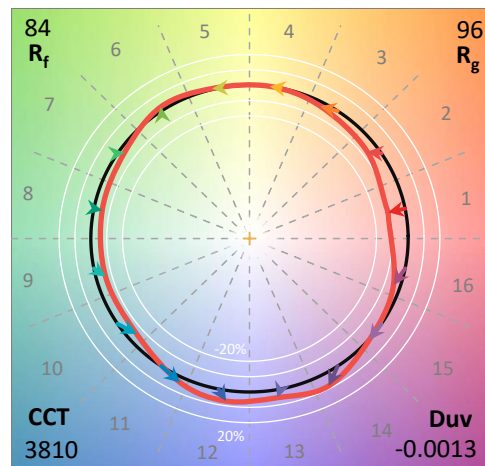
Test Information

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

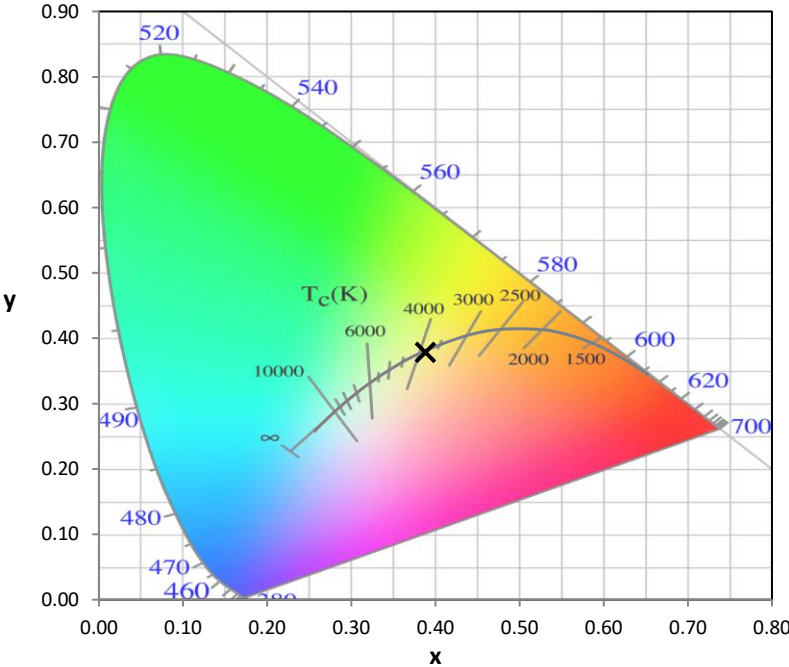
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-2

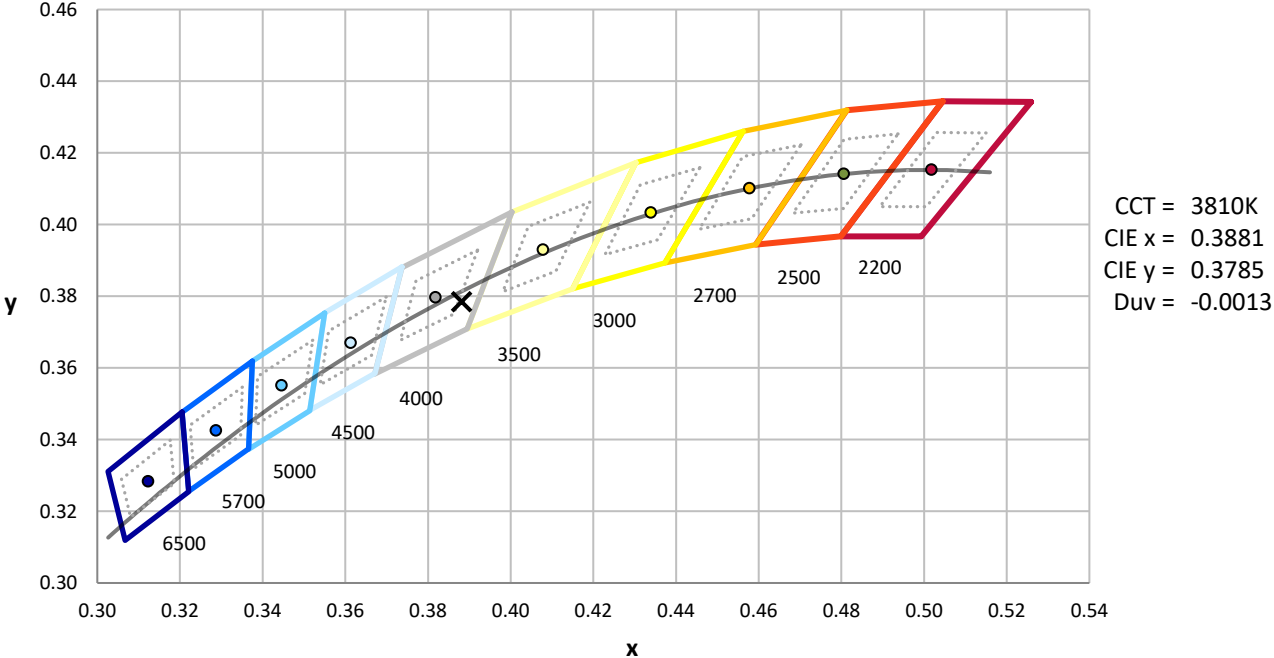
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



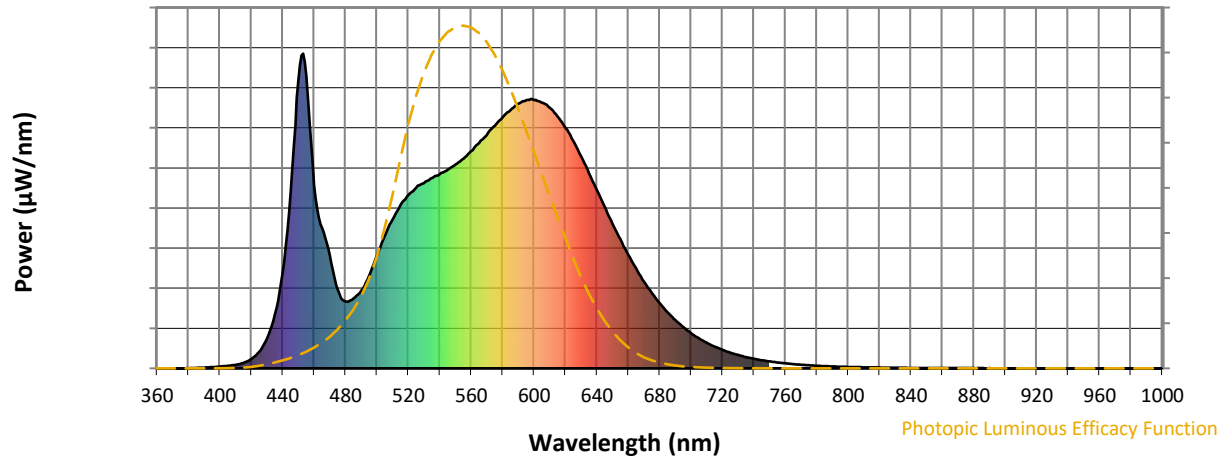
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2601-659-2

Photopic Flux vs. Wavelength

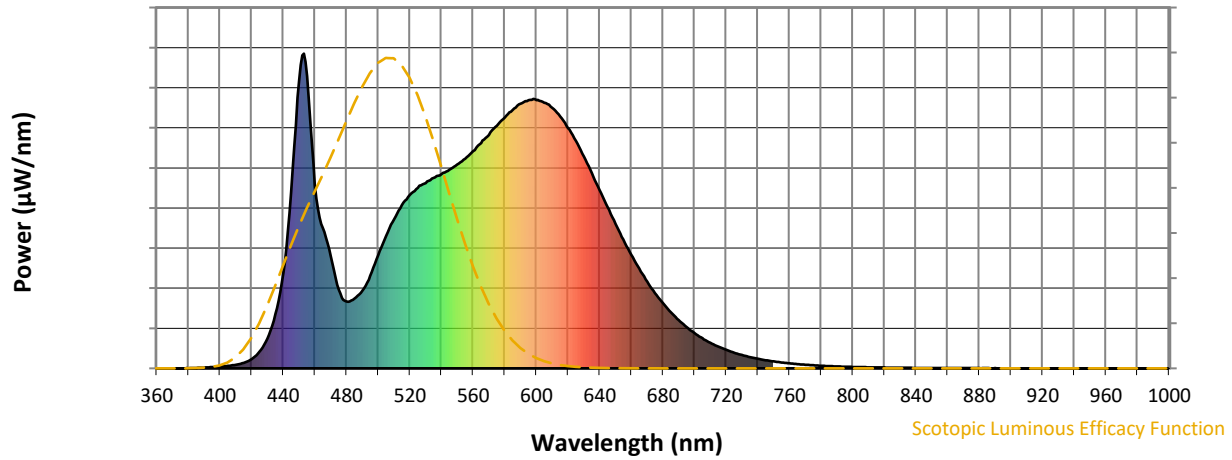


Photopic Lumens: NR

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	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



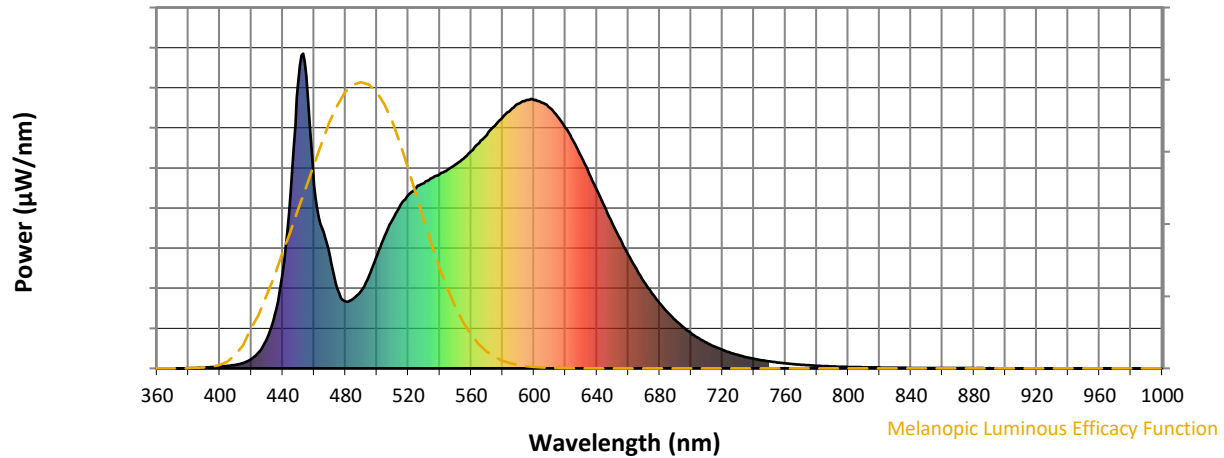
Scotopic Lumens: NR

S/P: 1.64

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	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



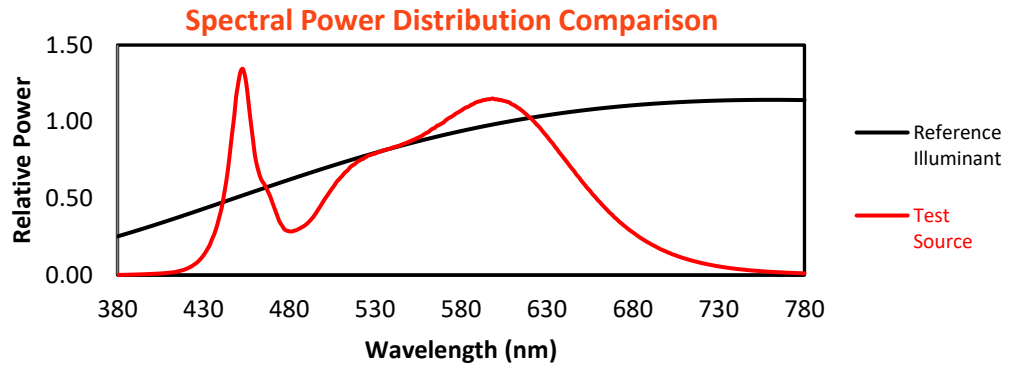
Melanopic Lumens: NR

M/P: 3.35

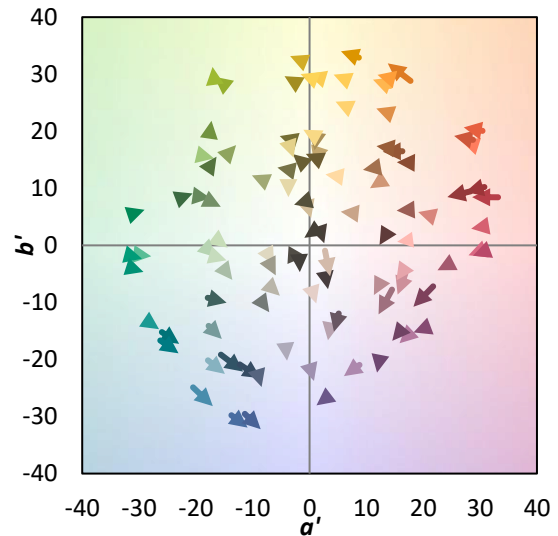
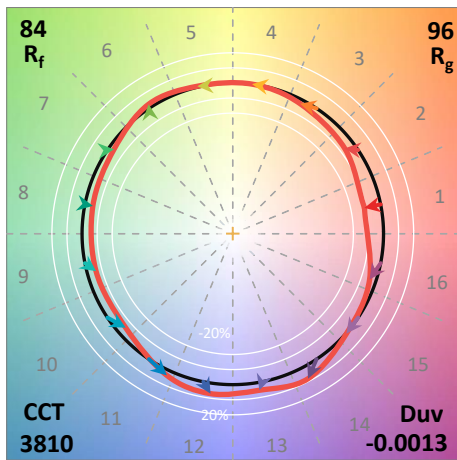
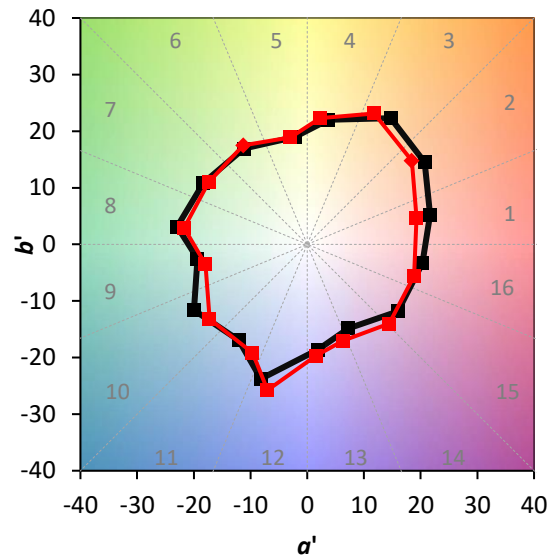
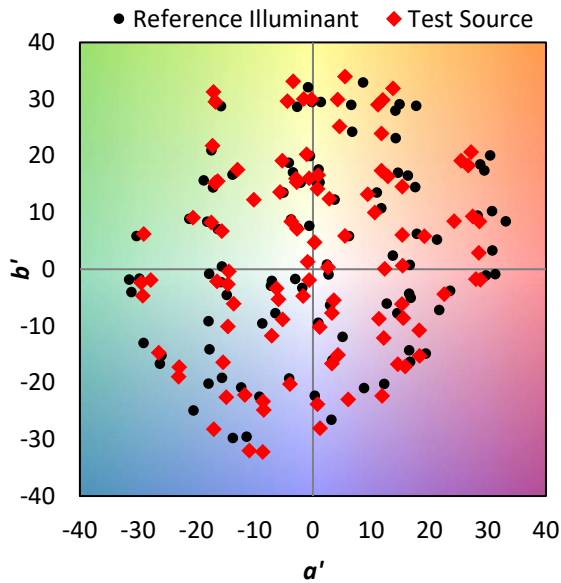
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359	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 $R_a = 84.5$
 $R_9 = 15.9$

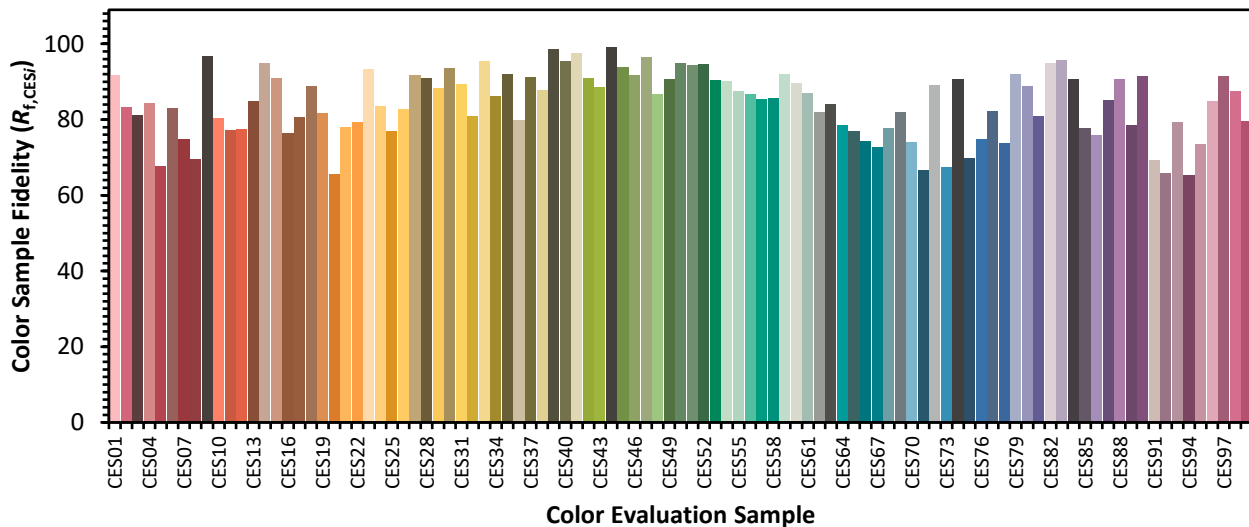


Color Vector Graphics

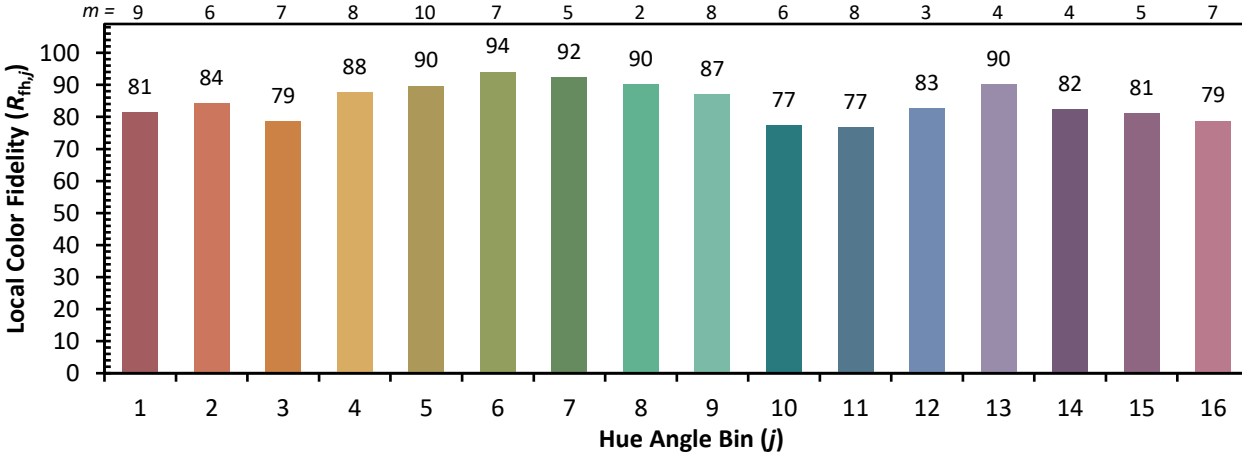
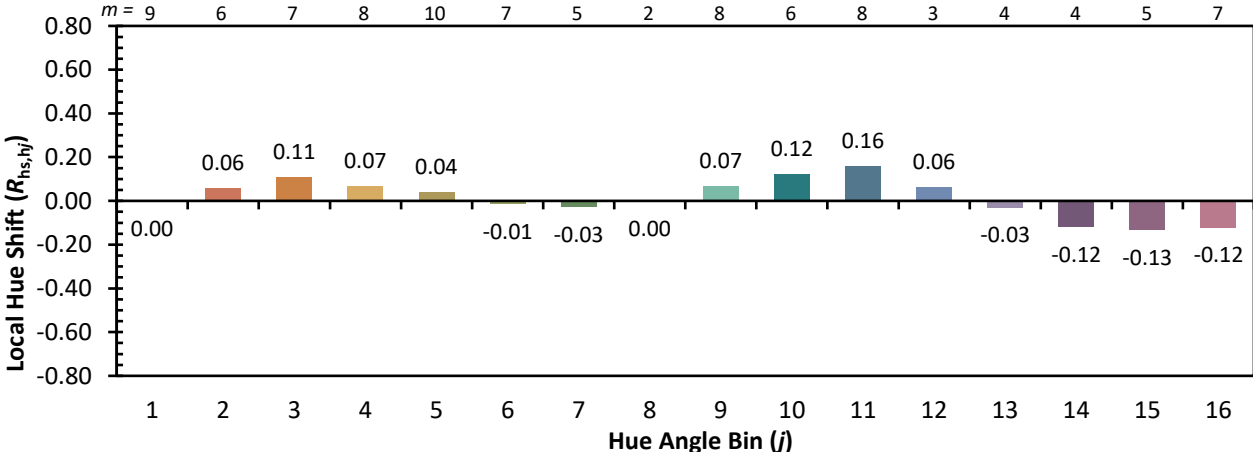
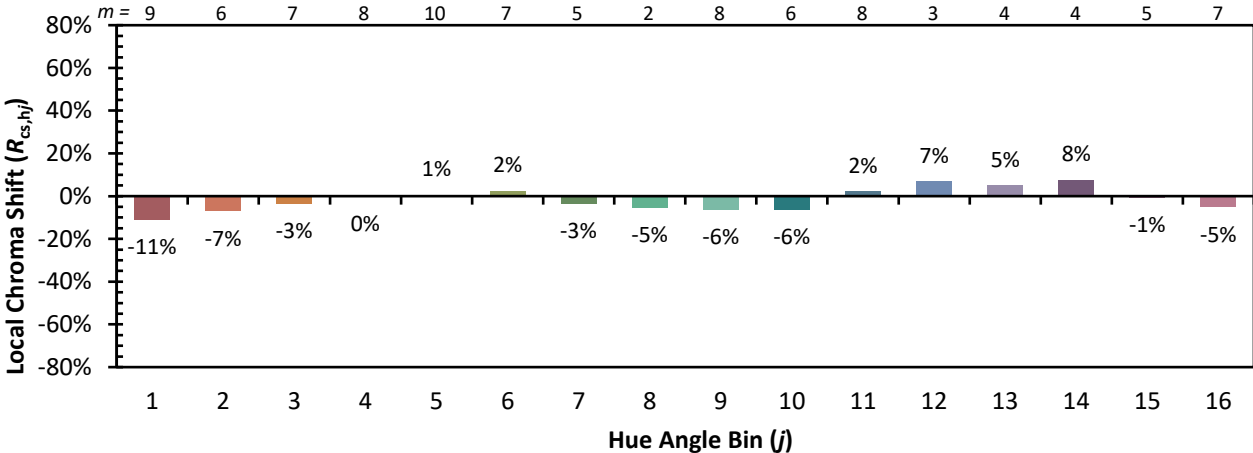


Individual Sample Fidelity Index ($R_{f,i}$)

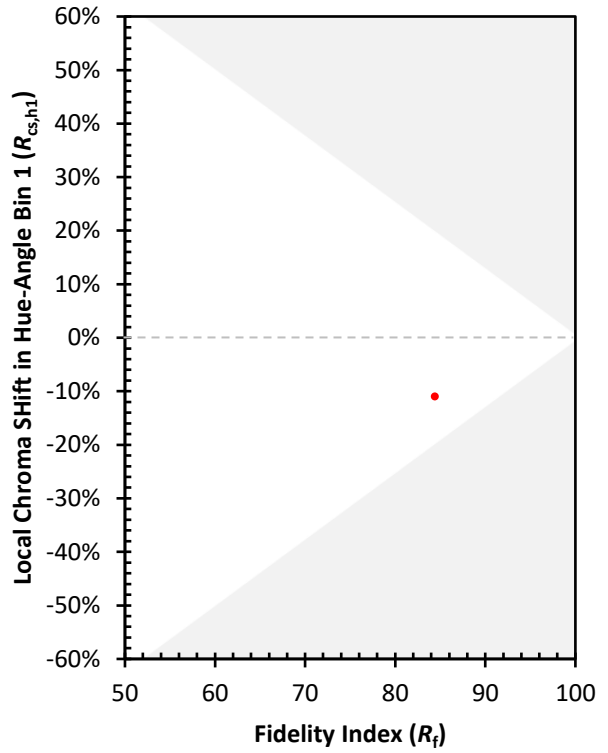
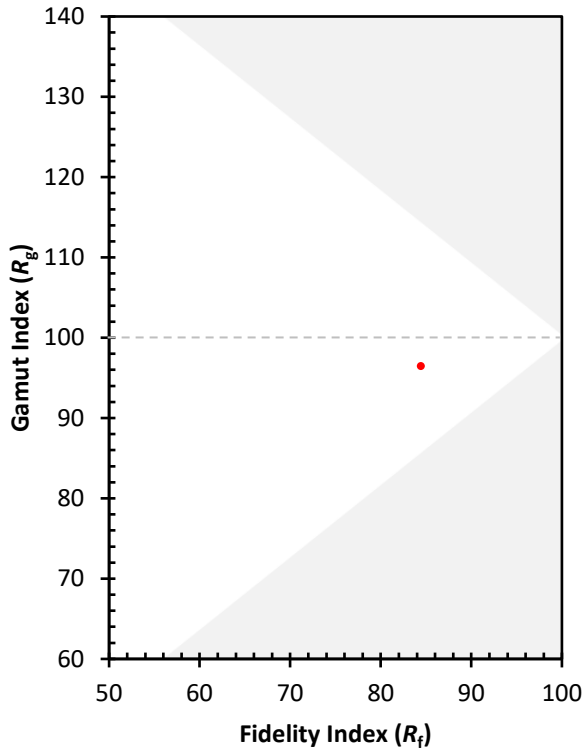
CES01 = 86	CES26 = 83	CES51 = 94	CES76 = 75
CES02 = 62	CES27 = 92	CES52 = 95	CES77 = 82
CES03 = 31	CES28 = 91	CES53 = 90	CES78 = 74
CES04 = 70	CES29 = 88	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 94	CES55 = 88	CES80 = 89
CES06 = 51	CES31 = 89	CES56 = 87	CES81 = 81
CES07 = 41	CES32 = 81	CES57 = 86	CES82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