

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: P1449906

Luminaire Tested: **TWC60_T3_48W_4000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449906
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_4000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T3 distribution, 48W
4000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7708 lumens
Efficiency: N/A
Efficacy: 172.8 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

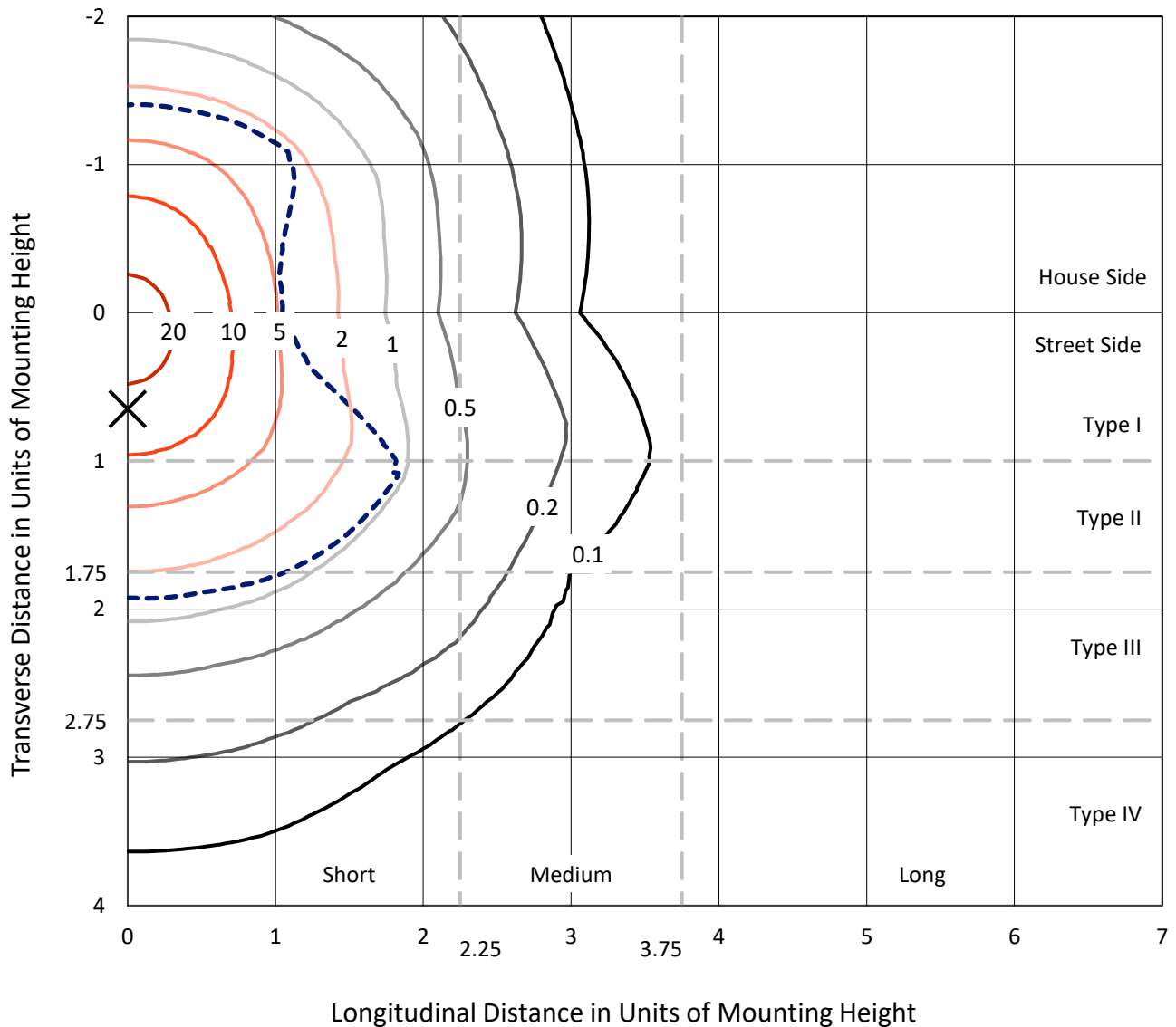
Input Watts (W): 44.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

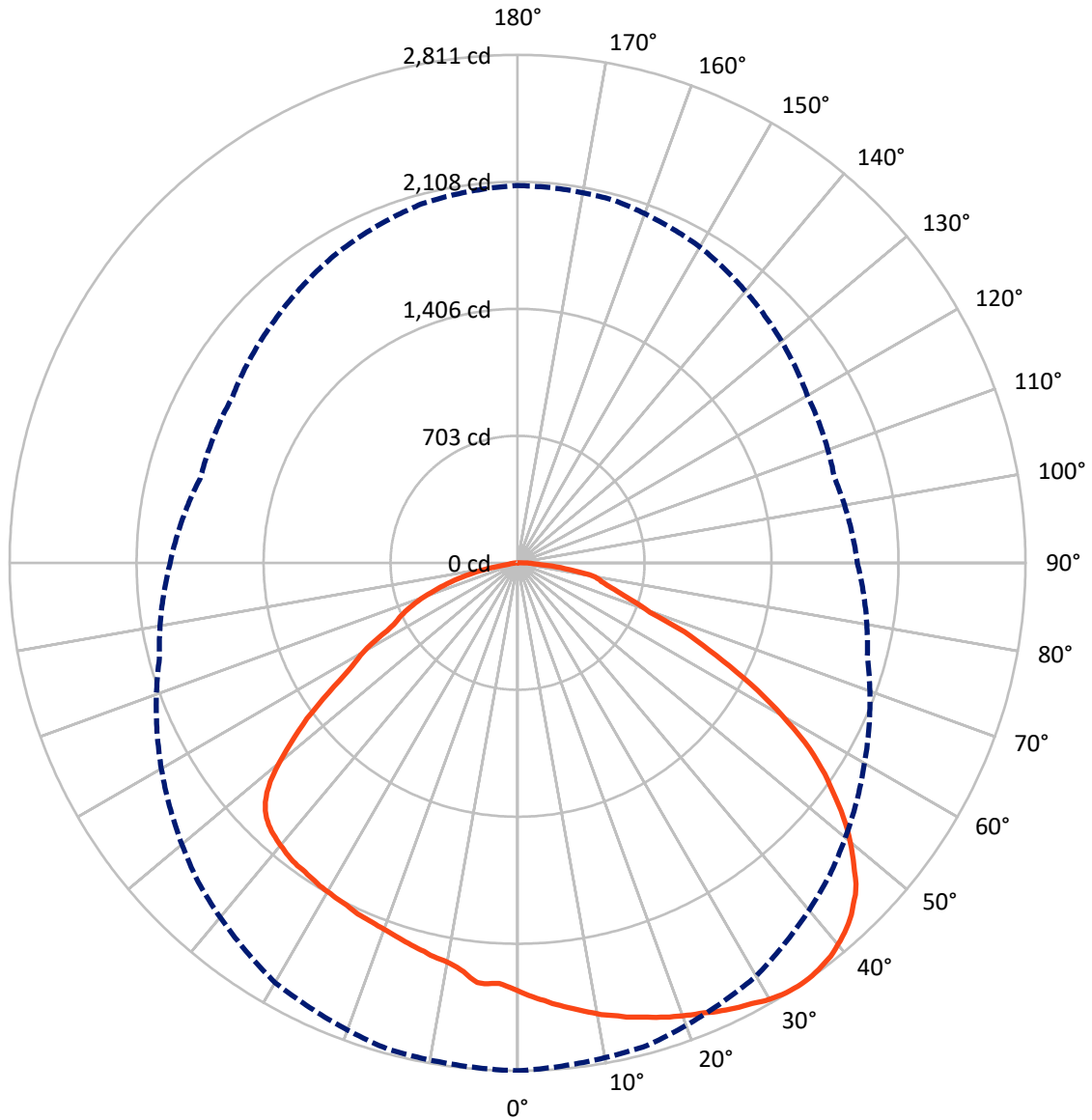
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 24.4 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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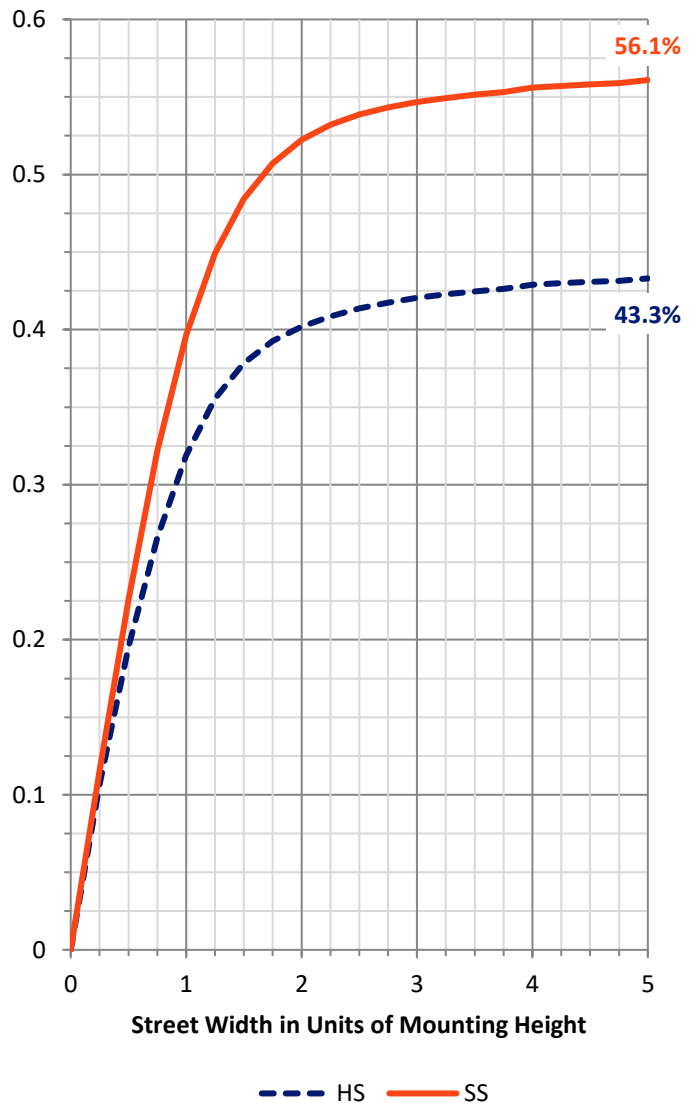
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3357.1	0.0	3357.1
	% Fixture	43.6	0.0	43.6
Street Side	Lumens	4350.9	0.0	4350.9
	% Fixture	56.4	0.0	56.4
Total	Lumens	7708.0	0.0	7708.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.9	2.9
10°-20°	663.5	8.6
20°-30°	1048.7	13.6
30°-40°	1347.5	17.5
40°-50°	1504.6	19.5
50°-60°	1393.5	18.1
60°-70°	962.7	12.5
70°-80°	456.1	5.9
80°-90°	104.3	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°	7708.0	100.0
0°-180°	7708.0	100.0

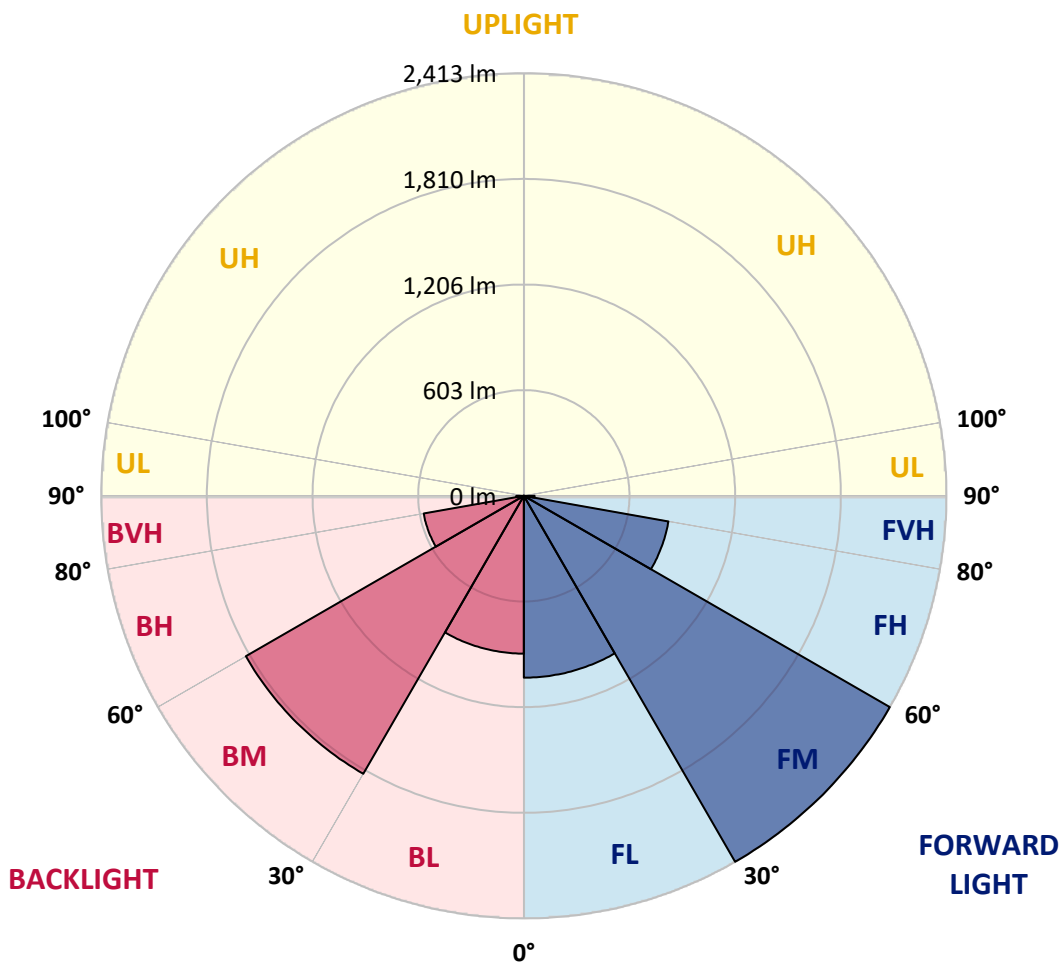


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1038.2	13.5			
FM (30°-60°)	2412.9	31.3			
FH (60°-80°)	838.3	10.9			G1/1800
FVH (80°-90°)	61.4	0.8			G1/100
BL (0°-30°)	900.9	11.7	B2/1000		
BM (30°-60°)	1832.8	23.8	B2/2500		
BH (60°-80°)	580.5	7.5	B2/1000		G2/1000
BVH (80°-90°)	42.9	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°	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0
1°	2395.1	2395.3	2391.5	2388.7	2387.1	2382.2	2373.5	2370.4	2366.9	2365.5	2359.0
2°	2412.4	2411.5	2407.4	2398.8	2394.1	2384.7	2373.2	2363.2	2354.7	2349.6	2347.3
3°	2427.1	2429.5	2420.2	2412.2	2399.5	2388.2	2369.9	2356.1	2346.3	2336.3	2333.4
4°	2446.4	2445.7	2434.7	2419.3	2407.2	2384.4	2365.4	2346.1	2335.7	2325.9	2330.1
5°	2461.3	2458.0	2448.5	2428.4	2407.8	2384.6	2360.2	2341.3	2327.4	2326.8	2333.3
6°	2477.9	2470.7	2459.1	2439.0	2415.0	2384.0	2350.4	2330.4	2319.9	2332.3	2336.6
7°	2492.4	2485.9	2471.1	2446.1	2416.5	2380.3	2344.0	2319.2	2319.0	2332.6	2325.0
8°	2510.2	2502.4	2480.9	2450.9	2418.8	2379.4	2336.7	2310.1	2318.5	2319.8	2300.1
9°	2525.9	2517.5	2494.0	2460.3	2418.3	2374.2	2327.7	2304.0	2318.4	2302.6	2271.5
10°	2542.5	2531.3	2505.7	2467.9	2419.7	2370.1	2318.0	2296.8	2308.4	2272.0	2254.5
11°	2555.4	2545.4	2516.4	2474.6	2421.1	2366.2	2309.6	2291.4	2293.7	2250.5	2243.2
12°	2569.3	2557.3	2526.2	2477.2	2420.6	2357.2	2298.3	2286.6	2267.4	2233.6	2229.3
13°	2585.8	2571.9	2537.6	2484.2	2419.4	2351.8	2285.6	2278.6	2239.9	2218.6	2218.5
14°	2597.5	2583.4	2542.1	2488.3	2419.4	2345.5	2269.9	2271.2	2219.2	2206.7	2210.7
15°	2609.6	2595.2	2550.3	2490.8	2417.2	2336.2	2256.9	2255.4	2200.3	2192.1	2198.8
16°	2623.5	2603.7	2557.6	2492.9	2411.5	2329.3	2242.7	2241.5	2182.2	2180.3	2187.7
17°	2636.9	2614.7	2563.0	2493.1	2409.0	2316.2	2230.2	2215.6	2166.2	2167.4	2176.0
18°	2650.8	2624.9	2571.0	2489.6	2404.1	2308.0	2215.3	2188.4	2147.7	2152.7	2166.1
19°	2662.2	2636.9	2575.4	2491.5	2399.2	2295.1	2201.5	2161.8	2132.0	2139.0	2154.6
20°	2674.3	2647.7	2583.0	2492.6	2390.3	2282.3	2187.7	2136.5	2115.0	2127.2	2142.6
21°	2685.1	2658.7	2590.1	2491.5	2384.0	2267.6	2176.0	2113.8	2096.2	2110.5	2133.3
22°	2695.9	2665.7	2595.5	2491.1	2371.9	2252.5	2161.7	2092.6	2076.8	2096.6	2122.4
23°	2711.6	2677.5	2598.1	2487.6	2363.4	2239.4	2148.2	2069.4	2059.2	2082.7	2111.2
24°	2724.2	2688.3	2604.2	2486.1	2350.9	2220.5	2134.3	2046.6	2040.7	2067.0	2100.4
25°	2736.4	2697.7	2609.0	2483.8	2340.2	2199.0	2113.0	2023.7	2020.7	2052.3	2091.9
26°	2749.0	2707.0	2614.2	2479.4	2328.1	2179.4	2092.7	2001.6	1998.6	2037.2	2084.8
27°	2757.3	2717.8	2617.8	2475.1	2316.7	2159.4	2070.5	1976.7	1980.3	2022.3	2074.3
28°	2769.6	2727.0	2621.5	2469.7	2300.5	2136.0	2041.0	1950.6	1959.4	2010.2	2064.7
29°	2784.8	2735.8	2624.7	2465.2	2286.4	2111.6	2009.9	1925.9	1940.1	1996.3	2054.9
30°	2793.8	2744.2	2628.4	2458.3	2269.4	2086.2	1979.6	1898.1	1917.4	1978.8	2043.2
31°	2802.8	2753.9	2632.9	2453.3	2254.6	2061.7	1945.1	1870.6	1895.1	1966.1	2036.0
32°	2807.4	2760.7	2635.5	2448.6	2238.8	2032.4	1912.4	1844.6	1874.1	1951.1	2027.4
33°	2811.2	2766.5	2641.1	2443.0	2217.2	2004.1	1880.5	1815.6	1852.1	1934.7	2018.1
34°	2810.2	2767.1	2644.6	2434.2	2200.0	1976.2	1846.2	1784.7	1828.4	1918.9	2007.3
35°	2807.7	2762.7	2642.4	2428.9	2181.5	1946.0	1812.8	1757.2	1807.1	1902.0	1997.6
36°	2800.8	2762.3	2642.6	2422.7	2160.7	1913.2	1780.4	1729.1	1783.4	1888.8	1985.3
37°	2791.5	2751.8	2639.6	2416.4	2142.0	1881.1	1744.6	1698.6	1762.3	1869.4	1974.2
38°	2782.9	2745.4	2632.9	2410.0	2118.9	1850.4	1709.3	1667.5	1736.0	1852.2	1962.8
39°	2766.9	2730.3	2627.6	2403.5	2101.2	1818.2	1672.8	1635.7	1712.4	1831.7	1953.9
40°	2750.1	2712.7	2618.5	2394.4	2081.1	1784.7	1636.9	1605.0	1690.8	1814.0	1944.7
41°	2732.5	2697.0	2607.4	2385.6	2057.9	1753.7	1601.9	1577.4	1664.1	1799.4	1934.1
42°	2710.2	2680.7	2589.1	2376.4	2039.5	1717.8	1566.9	1549.8	1638.5	1784.8	1919.3
43°	2684.7	2655.9	2571.2	2365.4	2021.9	1683.5	1531.7	1521.1	1611.9	1768.6	1908.2
44°	2650.7	2627.6	2550.3	2355.7	2000.1	1649.2	1493.7	1489.4	1588.6	1746.9	1897.2



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CANDELA DISTRIBUTION (continued):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	2621.1	2599.0	2529.9	2344.5	1980.3	1616.2	1454.3	1456.6	1565.3	1726.9	1884.8
46°	2582.4	2563.2	2504.8	2331.1	1962.1	1583.9	1414.9	1424.4	1541.9	1709.8	1870.9
47°	2530.4	2524.8	2475.3	2316.0	1942.6	1548.4	1373.4	1391.0	1517.5	1694.4	1850.7
48°	2481.3	2480.1	2443.5	2296.4	1924.7	1511.6	1333.0	1356.6	1488.2	1675.0	1828.1
49°	2429.1	2426.6	2408.6	2274.0	1907.1	1474.7	1292.8	1320.9	1460.9	1653.9	1805.9
50°	2377.3	2377.3	2366.6	2250.3	1889.1	1435.9	1251.5	1282.6	1436.5	1632.1	1772.0
51°	2320.6	2322.1	2319.7	2226.5	1872.6	1396.9	1210.6	1244.3	1411.2	1609.9	1730.5
52°	2257.6	2265.1	2269.4	2198.1	1852.6	1356.8	1167.4	1208.7	1384.2	1587.7	1678.5
53°	2189.8	2199.6	2218.6	2168.8	1834.2	1316.8	1126.6	1172.9	1355.1	1565.4	1611.3
54°	2124.8	2133.0	2157.3	2131.1	1816.3	1276.3	1083.2	1136.4	1323.1	1543.1	1544.1
55°	2063.7	2068.6	2093.5	2086.3	1789.5	1236.5	1041.2	1099.2	1291.9	1509.3	1476.9
56°	1990.9	2003.3	2028.4	2039.5	1765.2	1196.4	997.8	1061.6	1261.1	1462.8	1402.6
57°	1916.7	1933.3	1957.2	1989.7	1739.3	1157.1	952.4	1024.6	1229.7	1407.0	1322.7
58°	1830.9	1857.5	1891.2	1933.1	1711.2	1116.7	904.8	986.1	1196.9	1340.2	1235.0
59°	1738.4	1773.3	1817.6	1872.0	1680.9	1075.5	861.6	946.8	1161.9	1270.8	1154.2
60°	1645.2	1679.3	1746.2	1800.4	1644.5	1034.7	815.0	904.7	1125.2	1199.8	1075.9
61°	1552.3	1589.3	1664.8	1724.4	1602.9	997.0	771.4	861.6	1088.7	1122.8	1008.7
62°	1455.0	1492.0	1573.0	1641.8	1559.9	958.5	730.6	821.2	1046.6	1047.7	964.6
63°	1353.2	1392.2	1483.3	1552.7	1513.9	921.1	688.1	780.4	997.9	972.3	919.6
64°	1259.3	1287.9	1397.7	1463.7	1463.0	886.2	647.0	738.3	941.6	900.2	855.3
65°	1164.8	1186.7	1307.9	1367.4	1401.9	852.8	608.2	698.5	879.5	850.4	782.1
66°	1085.2	1091.0	1212.6	1266.6	1332.3	822.5	568.4	656.7	814.6	814.0	726.5
67°	1000.0	1008.7	1112.9	1166.8	1254.6	794.6	528.0	616.4	744.8	767.3	690.6
68°	890.9	913.6	1008.5	1083.1	1163.4	768.8	488.3	577.1	674.6	709.5	662.6
69°	782.6	803.1	904.9	1022.7	1066.9	748.4	448.1	537.0	608.5	665.4	633.6
70°	732.0	746.6	783.7	960.6	955.8	728.1	407.5	498.6	554.7	634.3	605.4
71°	683.4	692.1	702.4	875.8	820.9	707.8	367.0	459.4	519.2	604.3	579.7
72°	634.8	637.6	621.5	744.7	700.2	685.3	328.0	417.6	480.6	572.3	553.1
73°	593.5	603.3	540.5	647.8	579.5	652.0	289.9	373.6	443.9	540.7	522.7
74°	555.8	565.7	505.7	552.2	458.9	599.8	254.0	328.5	418.2	510.2	489.8
75°	524.2	523.9	469.9	456.5	493.8	539.2	220.0	280.8	396.7	481.8	454.9
76°	496.3	479.4	437.8	411.5	453.6	482.8	190.7	236.6	372.6	450.4	415.3
77°	474.6	435.6	404.5	387.2	319.5	424.8	161.5	206.3	349.3	422.3	370.5
78°	459.4	400.7	365.7	363.1	231.7	350.3	132.3	176.1	327.7	395.3	328.8
79°	438.7	376.0	331.3	315.1	184.4	278.7	108.5	145.9	305.0	369.1	291.8
80°	402.8	355.9	306.0	254.3	188.0	218.3	87.1	126.9	283.2	336.1	263.5
81°	348.8	332.8	282.4	214.3	194.4	161.2	68.2	108.1	260.3	300.6	234.0
82°	291.9	300.3	258.1	187.2	140.1	114.5	51.5	91.0	237.0	266.0	178.4
83°	239.7	267.1	223.8	163.1	91.3	77.4	38.2	74.7	213.6	240.0	122.5
84°	190.9	236.7	174.2	143.4	74.1	60.3	27.8	59.5	179.4	192.7	47.1
85°	132.2	185.9	134.5	121.9	57.1	43.4	21.1	45.4	145.5	145.3	33.5
86°	91.3	137.2	99.3	83.9	40.0	26.5	14.3	32.0	121.6	98.0	19.9
87°	73.0	80.1	66.1	46.8	28.3	15.3	7.6	21.7	80.8	50.6	6.4
88°	54.9	59.8	49.7	9.8	15.0	6.3	3.5	11.5	53.9	3.3	2.4
89°	36.7	40.0	33.3	6.0	10.0	3.2	1.1	1.5	27.0	0.9	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: P1449906
 CATALOG NUMBER: TWC60_T3_48W_4000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0	2377.0
1°	2359.3	2358.4	2359.1	2363.3	2366.3	2368.1	2373.1	2376.0	2381.7	2385.7	2389.1
2°	2343.6	2343.6	2347.2	2348.4	2353.0	2359.2	2369.1	2372.7	2383.4	2390.8	2401.2
3°	2331.2	2330.4	2332.6	2335.4	2340.0	2353.3	2362.2	2370.9	2386.8	2398.3	2413.7
4°	2331.0	2332.5	2332.4	2328.4	2330.3	2339.1	2353.5	2370.1	2387.4	2405.6	2422.2
5°	2336.3	2337.7	2335.2	2331.3	2325.0	2331.2	2346.0	2365.8	2388.8	2411.9	2431.2
6°	2333.6	2333.7	2335.7	2332.8	2325.9	2320.0	2337.6	2359.7	2388.8	2415.7	2441.4
7°	2316.4	2311.2	2319.8	2327.6	2327.0	2315.0	2329.9	2351.6	2385.7	2421.3	2450.6
8°	2283.2	2282.6	2288.3	2309.5	2323.0	2311.7	2320.9	2347.4	2387.4	2424.7	2459.5
9°	2265.2	2264.1	2264.4	2280.8	2308.9	2310.2	2308.3	2336.8	2384.6	2429.9	2469.1
10°	2252.6	2249.2	2250.6	2258.4	2285.2	2306.4	2298.4	2328.7	2381.2	2431.0	2476.9
11°	2239.9	2239.7	2240.0	2243.3	2258.1	2299.6	2286.8	2320.8	2376.6	2431.4	2483.7
12°	2230.9	2232.2	2230.6	2227.9	2237.1	2285.9	2278.9	2310.0	2372.8	2435.8	2489.6
13°	2222.4	2224.4	2223.1	2217.4	2220.8	2262.7	2270.7	2300.6	2365.1	2436.4	2497.5
14°	2213.2	2212.0	2212.6	2207.7	2206.6	2235.2	2264.4	2285.2	2362.4	2435.9	2500.9
15°	2203.9	2204.4	2202.7	2195.4	2190.8	2210.1	2255.6	2275.5	2355.2	2432.8	2504.3
16°	2196.0	2195.4	2190.2	2180.4	2176.6	2188.3	2245.5	2260.9	2349.1	2432.2	2508.5
17°	2187.5	2186.7	2183.4	2170.3	2160.8	2168.6	2231.0	2245.3	2339.4	2428.9	2512.3
18°	2176.6	2178.0	2170.3	2157.6	2147.8	2150.0	2214.3	2232.8	2331.3	2426.9	2512.7
19°	2167.7	2170.1	2162.1	2146.1	2130.4	2130.6	2193.4	2215.3	2320.9	2422.1	2515.0
20°	2160.1	2161.6	2153.5	2133.5	2114.5	2112.8	2164.3	2199.9	2309.7	2418.1	2517.2
21°	2152.2	2155.8	2143.7	2121.3	2100.0	2095.0	2139.0	2182.4	2298.4	2409.3	2517.3
22°	2142.6	2148.8	2134.5	2110.8	2083.7	2072.4	2109.0	2167.2	2282.7	2403.3	2519.2
23°	2139.2	2143.7	2127.2	2097.8	2068.1	2052.0	2084.2	2147.8	2267.7	2394.6	2519.8
24°	2132.9	2138.9	2122.3	2085.6	2050.1	2029.5	2061.7	2130.6	2250.7	2384.7	2518.7
25°	2123.6	2134.8	2115.2	2074.9	2034.1	2009.2	2035.4	2112.7	2233.9	2378.2	2516.8
26°	2119.8	2126.2	2108.7	2064.7	2017.3	1988.6	2009.9	2096.1	2214.7	2369.2	2519.8
27°	2110.0	2117.9	2099.1	2054.4	2000.4	1966.0	1985.5	2078.9	2195.7	2357.7	2514.7
28°	2104.6	2114.3	2091.8	2044.3	1983.0	1943.5	1960.0	2063.3	2175.0	2346.1	2513.9
29°	2096.3	2109.6	2081.2	2029.9	1966.5	1919.3	1932.4	2038.7	2151.1	2333.8	2511.4
30°	2091.5	2103.4	2074.3	2020.3	1952.0	1897.1	1906.5	2013.5	2127.5	2321.1	2509.9
31°	2090.4	2099.8	2069.9	2007.0	1936.2	1871.0	1875.8	1987.7	2103.4	2306.8	2506.8
32°	2083.7	2095.9	2063.5	1995.5	1918.3	1847.7	1849.9	1957.6	2077.5	2291.4	2503.8
33°	2076.2	2088.1	2055.9	1985.1	1900.0	1825.1	1817.0	1922.5	2052.4	2276.7	2499.2
34°	2065.3	2082.9	2047.4	1973.6	1878.4	1801.0	1788.6	1883.7	2024.4	2259.8	2497.4
35°	2056.7	2075.7	2038.7	1961.8	1861.3	1774.7	1756.9	1847.7	1998.7	2245.9	2496.6
36°	2052.4	2072.9	2029.4	1950.5	1841.9	1749.0	1726.5	1811.2	1971.6	2229.4	2490.6
37°	2049.8	2069.5	2024.0	1934.9	1823.4	1723.7	1693.7	1774.5	1942.5	2213.4	2489.7
38°	2046.4	2063.2	2019.7	1922.7	1803.2	1698.2	1662.1	1738.7	1915.6	2198.3	2481.3
39°	2036.6	2054.8	2013.0	1909.9	1784.2	1670.4	1630.1	1700.9	1886.3	2180.4	2474.0
40°	2025.5	2044.5	2001.2	1898.1	1760.8	1643.2	1597.5	1665.0	1854.4	2165.4	2468.0
41°	2018.9	2036.0	1989.9	1884.1	1740.5	1614.9	1564.9	1625.4	1824.8	2149.0	2459.5
42°	2006.8	2025.1	1979.7	1868.3	1723.6	1590.6	1532.3	1589.5	1790.9	2133.0	2451.3
43°	1997.2	2015.1	1970.0	1856.5	1704.5	1566.3	1499.5	1551.1	1758.2	2118.9	2440.0
44°	1982.6	2000.0	1956.5	1844.8	1686.5	1541.9	1463.7	1510.0	1726.1	2105.1	2427.6



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CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	1964.5	1982.1	1941.5	1830.2	1665.0	1508.9	1426.8	1468.3	1692.1	2091.8	2411.1
46°	1944.1	1956.6	1921.5	1814.6	1642.1	1477.2	1393.3	1427.4	1657.2	2076.2	2391.2
47°	1918.1	1924.2	1899.5	1799.5	1620.7	1447.2	1356.8	1385.4	1622.1	2062.2	2372.6
48°	1880.0	1881.2	1865.8	1780.9	1601.6	1419.3	1322.1	1343.6	1589.4	2047.9	2348.4
49°	1833.4	1826.7	1825.8	1761.8	1580.6	1390.2	1284.2	1301.8	1553.0	2031.6	2325.6
50°	1772.7	1760.5	1776.0	1735.8	1559.6	1359.7	1246.5	1259.0	1519.3	2017.9	2297.7
51°	1702.8	1682.9	1713.1	1707.4	1538.6	1329.0	1208.2	1218.3	1488.6	2001.8	2267.4
52°	1628.1	1604.8	1641.2	1666.3	1512.2	1298.8	1168.6	1175.1	1455.9	1981.7	2230.2
53°	1553.4	1526.7	1569.3	1610.3	1486.7	1271.3	1128.0	1130.3	1423.0	1956.7	2187.7
54°	1478.4	1448.6	1497.3	1554.3	1462.0	1240.6	1087.6	1087.1	1392.2	1932.5	2140.9
55°	1391.0	1358.0	1416.3	1498.0	1434.4	1206.3	1049.0	1041.1	1362.2	1908.2	2094.0
56°	1301.4	1269.1	1326.5	1424.4	1405.4	1172.5	1010.6	994.8	1333.2	1878.5	2039.8
57°	1212.7	1182.4	1239.1	1350.9	1369.8	1135.9	968.3	949.2	1304.0	1844.1	1978.6
58°	1129.6	1107.0	1153.0	1272.3	1325.1	1098.8	925.9	904.2	1274.9	1810.2	1914.4
59°	1066.7	1053.4	1079.7	1189.3	1271.8	1063.7	884.4	860.3	1245.9	1767.1	1841.6
60°	1018.8	1008.5	1023.8	1109.1	1207.3	1025.9	843.2	817.5	1218.6	1723.2	1765.2
61°	970.9	955.4	979.7	1029.3	1140.3	989.3	802.6	773.1	1186.1	1675.2	1688.3
62°	912.1	889.0	927.4	967.0	1068.1	951.7	760.5	731.1	1156.5	1622.5	1608.4
63°	835.0	812.9	856.5	923.3	990.2	909.8	716.3	689.0	1125.2	1559.3	1524.4
64°	772.1	764.6	783.0	879.5	915.1	869.3	673.1	647.0	1095.5	1486.7	1433.0
65°	738.3	736.6	738.5	820.0	841.9	827.0	630.6	606.5	1067.6	1407.1	1334.7
66°	710.6	708.6	708.2	750.2	778.8	777.4	587.3	564.1	1040.8	1319.5	1241.2
67°	684.1	678.6	683.1	702.1	736.8	718.3	545.9	521.2	1011.8	1225.4	1163.8
68°	653.6	645.2	654.7	665.6	702.6	654.7	505.0	477.8	978.2	1118.9	1091.1
69°	620.5	608.4	625.1	633.3	654.4	591.4	465.9	433.1	934.7	999.8	1017.3
70°	585.9	570.3	594.8	601.8	611.6	525.1	427.1	390.0	884.1	863.9	926.0
71°	546.7	526.7	560.1	572.1	582.9	463.4	389.2	347.1	821.2	746.7	807.1
72°	504.9	485.6	521.7	547.2	558.5	412.3	354.0	305.8	758.2	699.4	705.4
73°	465.1	447.8	481.0	522.3	530.6	376.9	318.1	268.4	690.3	653.9	603.8
74°	423.6	405.8	440.4	497.2	502.6	342.1	284.1	233.5	622.3	642.2	502.2
75°	383.0	363.1	397.9	470.6	476.1	312.8	247.7	200.4	554.4	505.6	462.6
76°	338.9	317.0	357.8	440.7	448.6	290.4	213.6	170.9	467.4	369.5	427.1
77°	297.0	273.9	317.4	406.4	420.0	268.7	181.7	144.4	352.8	300.4	397.3
78°	259.6	233.2	281.0	364.5	389.5	246.2	149.8	122.1	263.9	255.9	355.9
79°	211.5	183.4	245.5	319.4	358.7	225.4	122.6	102.2	182.5	250.5	303.4
80°	163.3	133.6	191.7	281.7	327.2	205.4	101.8	84.0	136.2	252.4	255.9
81°	115.1	83.8	137.8	253.1	294.3	184.4	84.8	68.7	117.8	189.4	223.1
82°	60.7	47.4	84.2	230.0	260.7	163.4	70.1	53.5	105.2	125.6	198.1
83°	37.6	36.5	40.1	166.3	226.0	142.4	56.2	38.2	86.1	99.8	177.3
84°	27.3	26.4	27.9	103.4	188.1	120.9	43.4	27.8	67.8	82.0	152.7
85°	20.0	19.3	20.4	70.9	150.3	98.4	32.0	19.6	49.4	68.5	115.9
86°	12.6	12.2	12.9	38.4	112.5	74.3	23.3	12.8	31.1	55.2	62.6
87°	5.3	5.2	5.5	6.5	75.0	55.2	14.5	7.2	18.2	41.8	38.1
88°	2.2	2.1	2.2	2.2	37.5	37.0	5.8	3.9	7.0	17.5	13.9
89°	0.8	0.8	0.8	0.8	0.8	18.7	0.9	0.6	3.6	11.4	9.0



REPORT NUMBER: P1449906
 CATALOG NUMBER: TWC60_T3_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: P1449906
 CATALOG NUMBER: TWC60_T3_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: P1449906
CATALOG NUMBER: TWC60_T3_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: P1449906
 CATALOG NUMBER: TWC60_T3_48W_4000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
0°	2377.0	2377.0	2377.0
1°	2389.9	2392.9	2395.1
2°	2407.1	2411.8	2412.4
3°	2420.1	2429.0	2427.1
4°	2434.6	2441.5	2446.4
5°	2448.1	2458.4	2461.3
6°	2459.6	2475.6	2477.9
7°	2473.2	2487.5	2492.4
8°	2487.4	2504.7	2510.2
9°	2499.7	2521.7	2525.9
10°	2513.0	2535.6	2542.5
11°	2524.0	2549.6	2555.4
12°	2534.6	2561.2	2569.3
13°	2546.4	2573.6	2585.8
14°	2552.2	2587.7	2597.5
15°	2562.4	2598.8	2609.6
16°	2571.2	2612.0	2623.5
17°	2577.2	2621.0	2636.9
18°	2587.3	2635.4	2650.8
19°	2595.8	2645.3	2662.2
20°	2600.9	2656.7	2674.3
21°	2608.9	2667.6	2685.1
22°	2616.1	2681.2	2695.9
23°	2621.3	2692.1	2711.6
24°	2628.0	2704.8	2724.2
25°	2634.7	2713.8	2736.4
26°	2643.2	2725.1	2749.0
27°	2647.7	2736.1	2757.3
28°	2653.6	2747.3	2769.6
29°	2660.7	2754.1	2784.8
30°	2665.6	2765.7	2793.8
31°	2673.3	2774.0	2802.8
32°	2678.5	2780.3	2807.4
33°	2683.3	2785.7	2811.2
34°	2686.0	2785.0	2810.2
35°	2685.5	2781.6	2807.7
36°	2683.0	2779.3	2800.8
37°	2680.9	2769.4	2791.5
38°	2673.0	2757.3	2782.9
39°	2667.4	2742.2	2766.9
40°	2653.1	2728.0	2750.1
41°	2636.0	2709.0	2732.5
42°	2618.9	2690.1	2710.2
43°	2598.1	2667.9	2684.7
44°	2579.0	2636.7	2650.7



REPORT NUMBER: P1449906
CATALOG NUMBER: TWC60_T3_48W_4000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
45°	2558.3	2603.8	2621.1
46°	2528.4	2570.0	2582.4
47°	2493.8	2526.9	2530.4
48°	2459.8	2476.4	2481.3
49°	2415.9	2424.1	2429.1
50°	2370.9	2373.3	2377.3
51°	2318.6	2315.8	2320.6
52°	2264.9	2257.3	2257.6
53°	2208.7	2192.1	2189.8
54°	2145.2	2127.9	2124.8
55°	2080.2	2062.3	2063.7
56°	2011.3	1996.0	1990.9
57°	1942.7	1924.4	1916.7
58°	1875.1	1843.1	1830.9
59°	1801.6	1751.5	1738.4
60°	1721.7	1659.5	1645.2
61°	1631.8	1566.0	1552.3
62°	1539.4	1471.1	1455.0
63°	1452.5	1369.6	1353.2
64°	1362.4	1271.4	1259.3
65°	1262.0	1172.9	1164.8
66°	1162.8	1085.3	1085.2
67°	1060.9	1003.4	1000.0
68°	956.6	903.2	890.9
69°	851.4	791.0	782.6
70°	738.9	739.7	732.0
71°	663.4	688.9	683.4
72°	588.7	638.1	634.8
73°	556.6	599.0	593.5
74°	527.1	558.3	555.8
75°	497.6	517.1	524.2
76°	465.7	477.0	496.3
77°	428.1	443.4	474.6
78°	388.3	419.9	459.4
79°	355.8	403.6	438.7
80°	327.6	385.4	402.8
81°	299.0	351.6	348.8
82°	261.6	308.1	291.9
83°	215.9	267.5	239.7
84°	169.9	225.6	190.9
85°	145.3	167.6	132.2
86°	108.2	116.1	91.3
87°	70.7	92.4	73.0
88°	53.2	69.5	54.9
89°	35.7	46.5	36.7



REPORT NUMBER: P1449906
CATALOG NUMBER: TWC60_T3_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: P1449906
CATALOG NUMBER: TWC60_T3_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: P1449906
CATALOG NUMBER: TWC60_T3_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

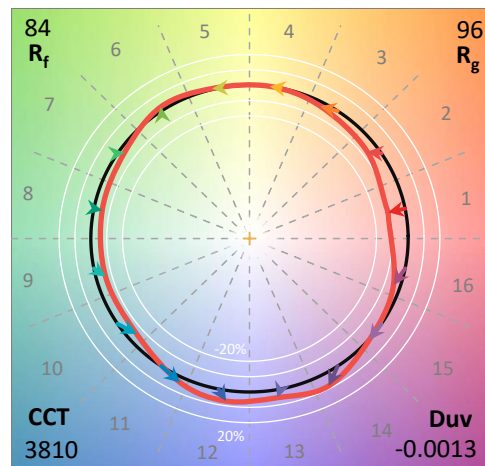
Test Information

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

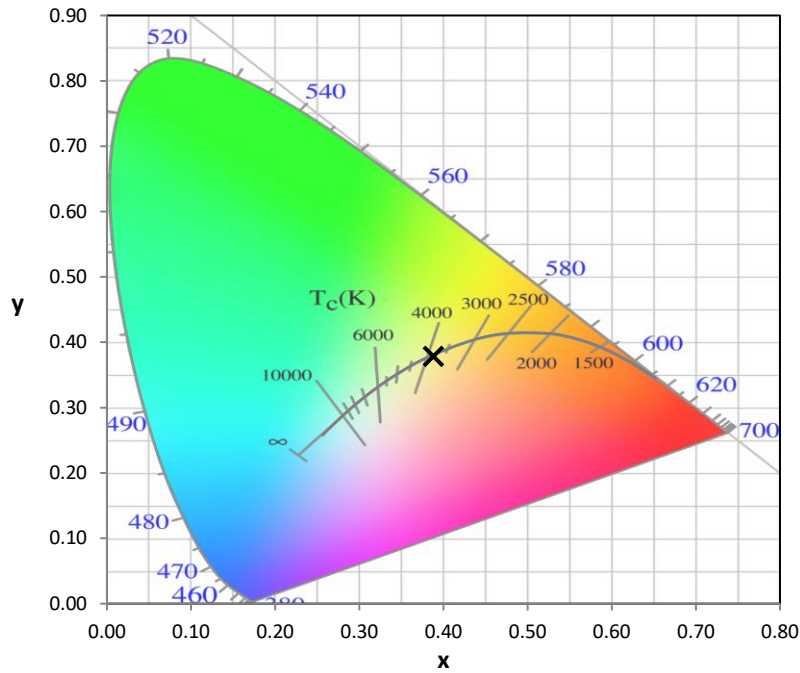
Stabilization Time: 20M
 Operation Time: 1H 20M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-2

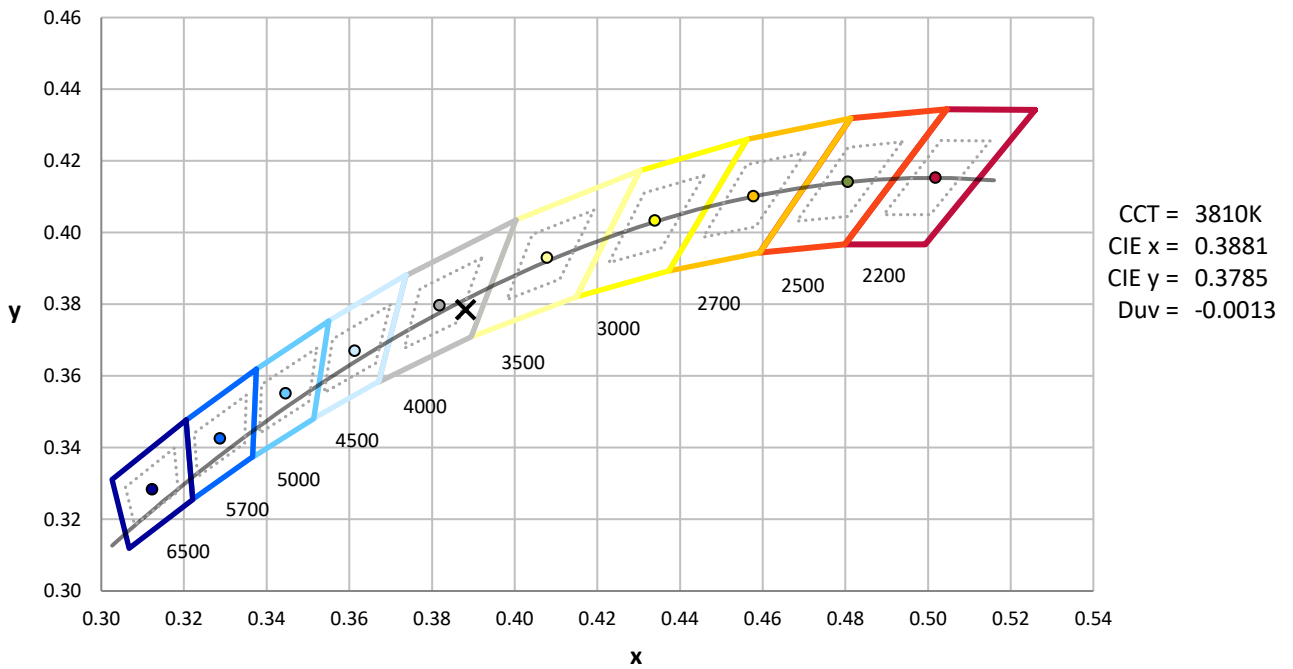
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



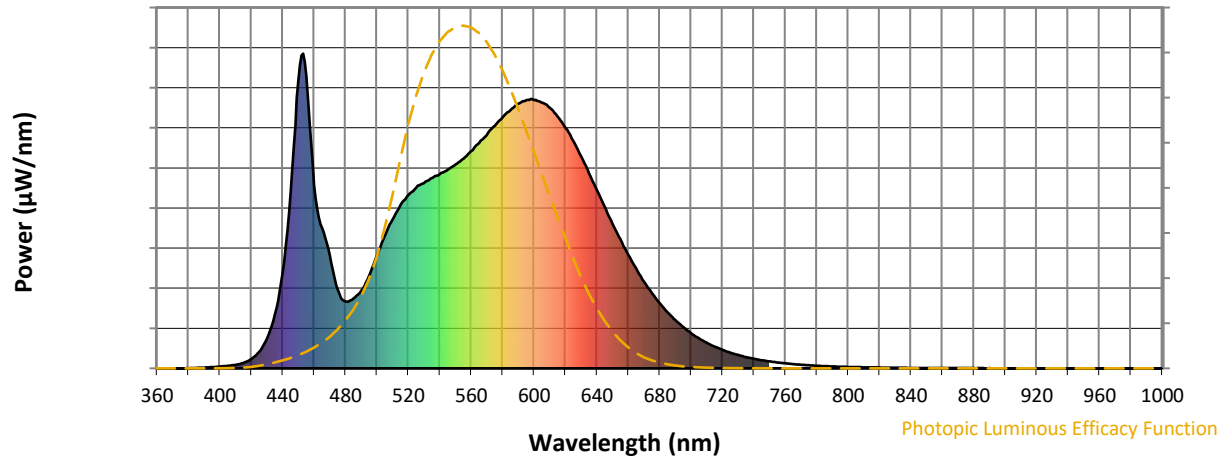
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 4000K 7-step quadrangle

REPORT NUMBER: SP1-2601-659-2

Photopic Flux vs. Wavelength

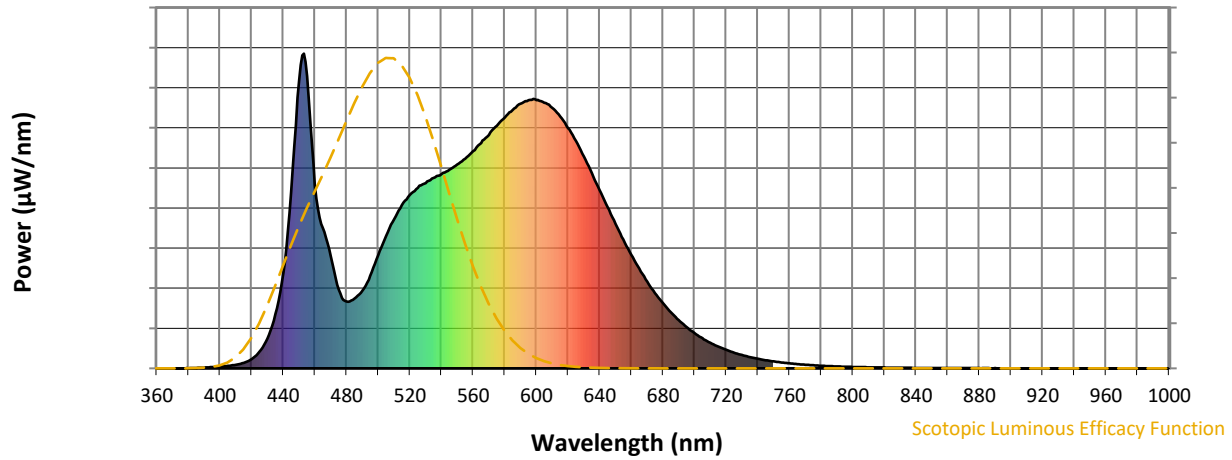


Photopic Lumens: NR

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



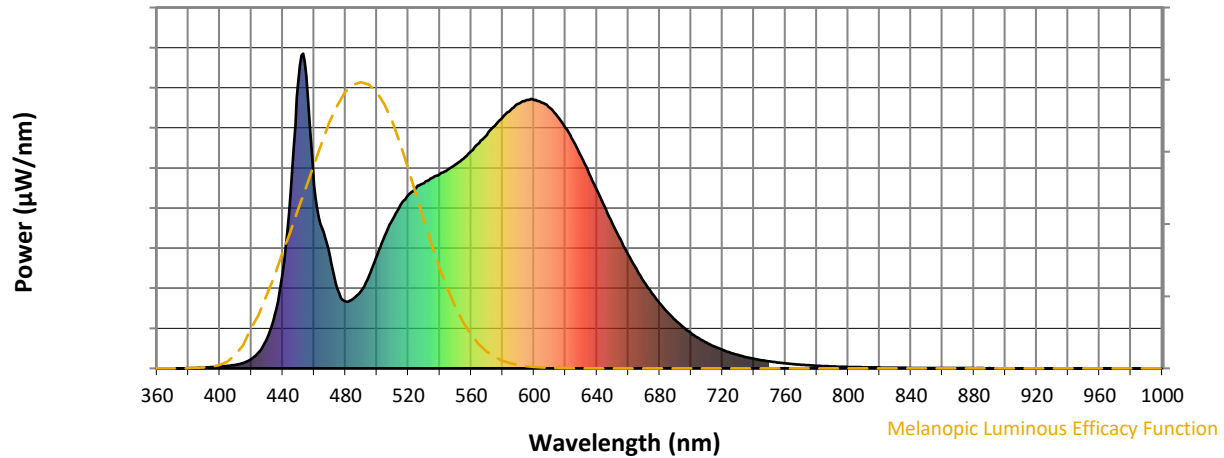
Scotopic Lumens: NR

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



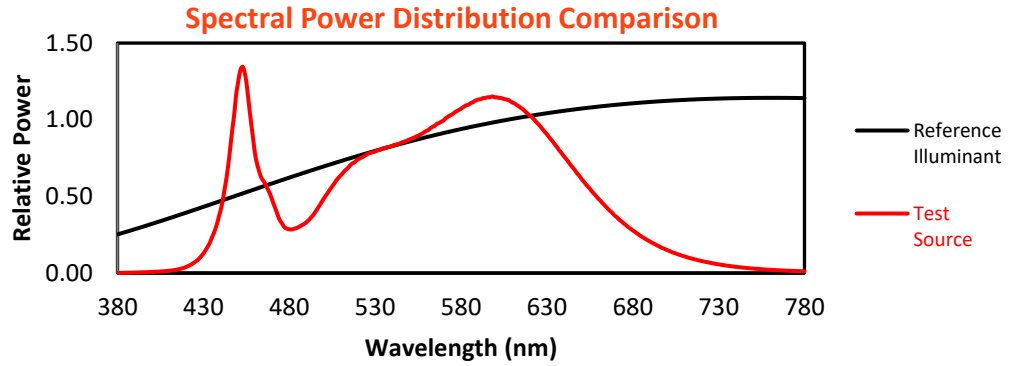
Melanopic Lumens: NR

M/P: 3.35

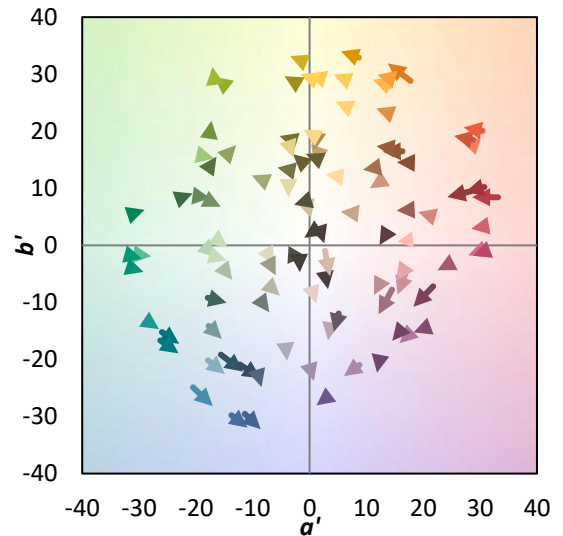
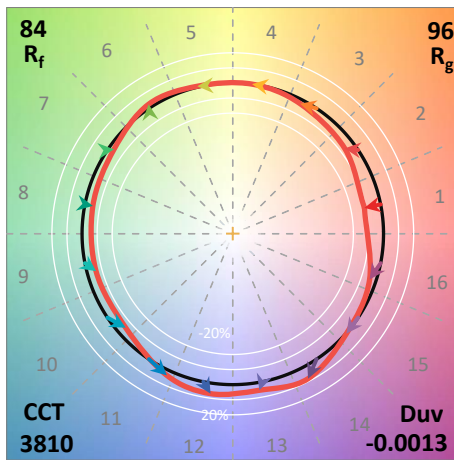
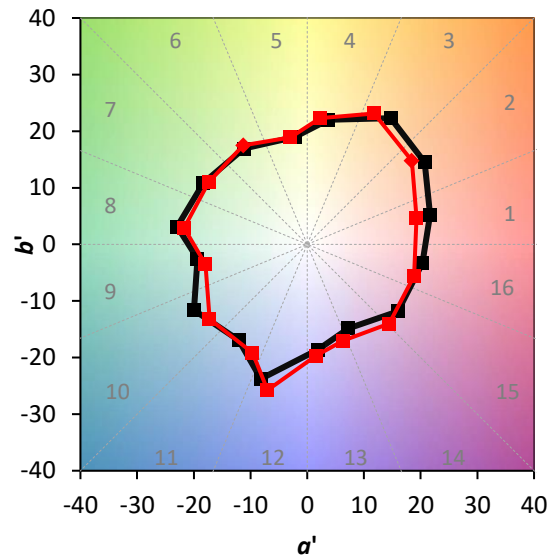
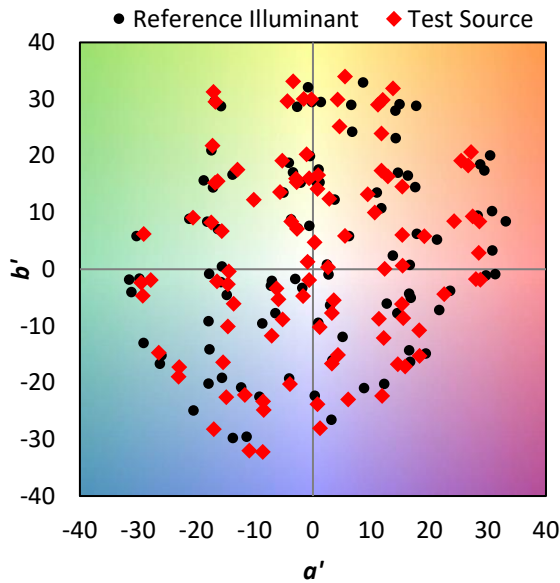
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	247	NR	620	764	NR	750	22	NR	880	1	NR
365	0	NR	495	294	NR	625	723	NR	755	19	NR	885	1	NR
370	0	NR	500	359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

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

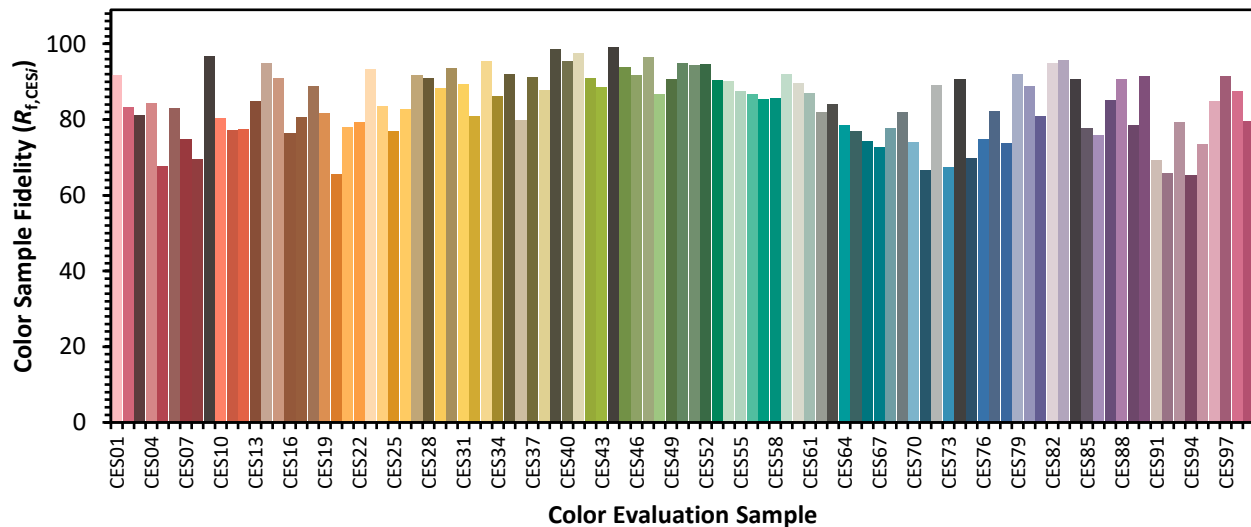


Color Vector Graphics

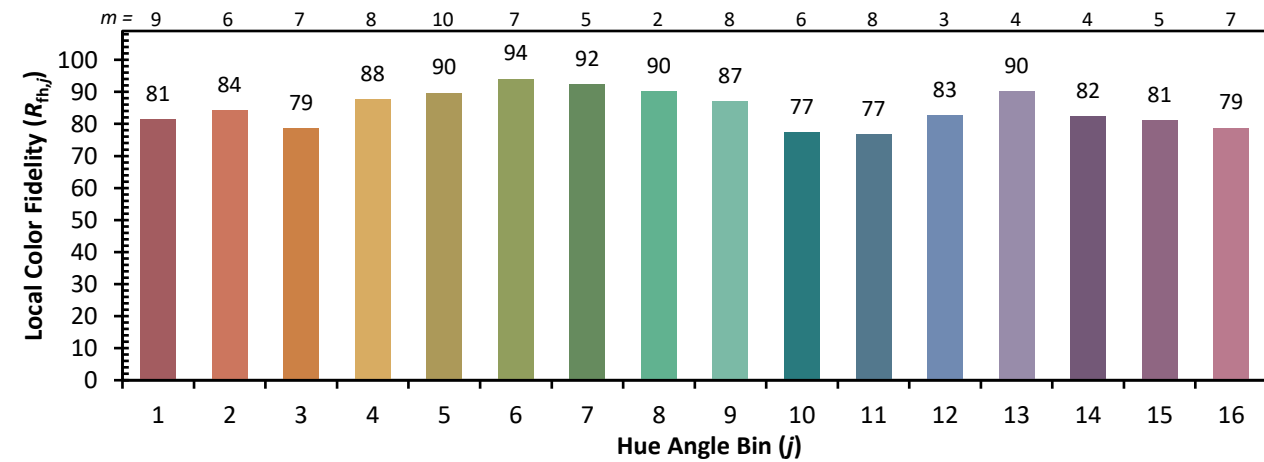
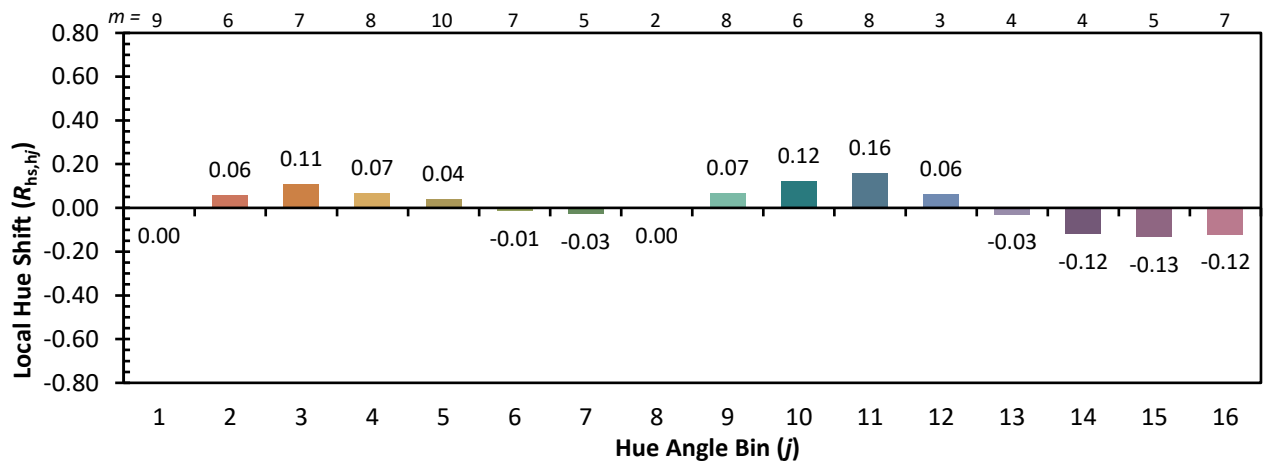
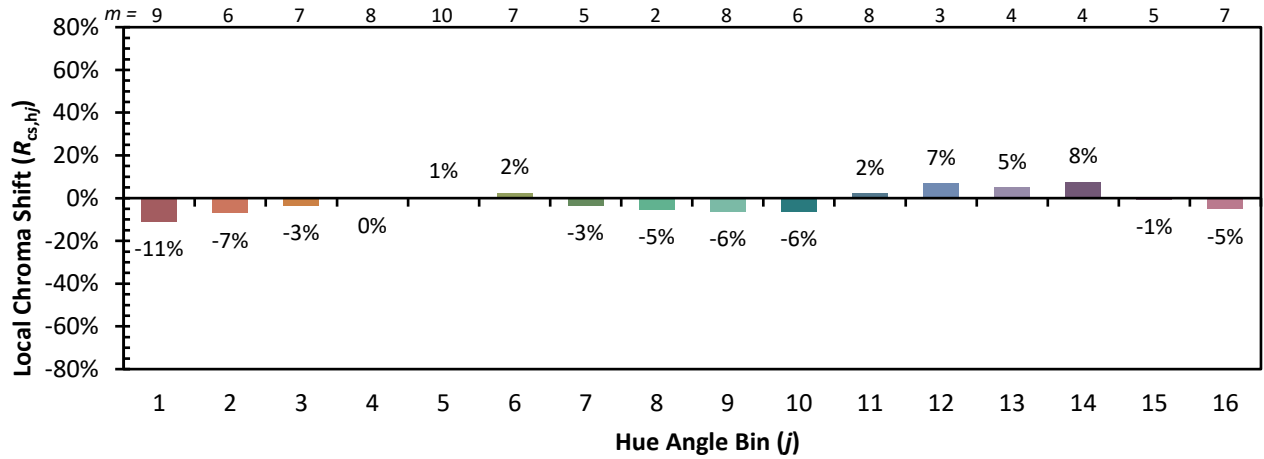


Individual Sample Fidelity Index ($R_{f,i}$)

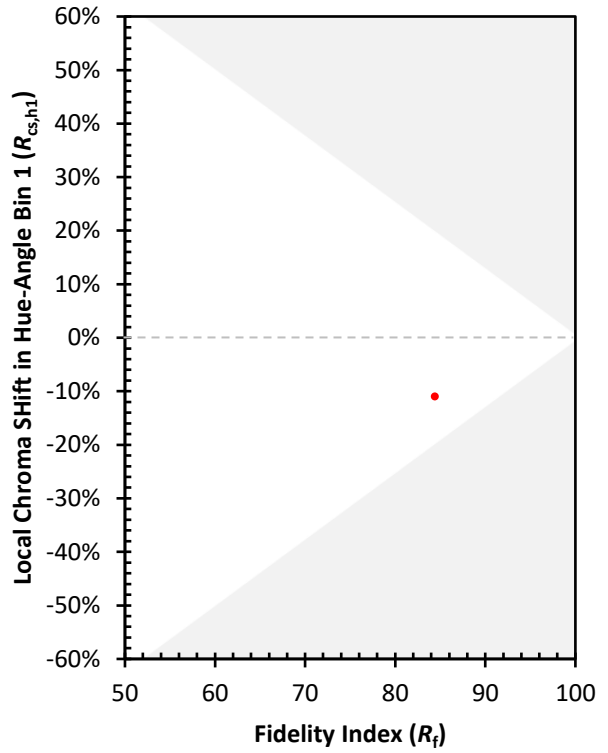
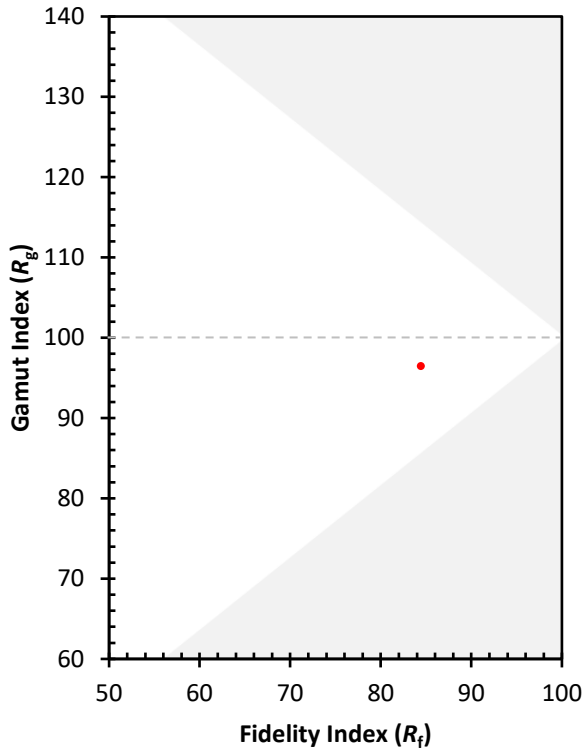
CES01 = 86	CES26 = 83	CES51 = 94	CES76 = 75
CES02 = 62	CES27 = 92	CES52 = 95	CES77 = 82
CES03 = 31	CES28 = 91	CES53 = 90	CES78 = 74
CES04 = 70	CES29 = 88	CES54 = 90	CES79 = 92
CES05 = 48	CES30 = 94	CES55 = 88	CES80 = 89
CES06 = 51	CES31 = 89	CES56 = 87	CES81 = 81
CES07 = 41	CES32 = 81	CES57 = 86	CES82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