

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: P1449917

Luminaire Tested: **TWC60_T4_48W_3000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449917
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_3000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T4 distribution, 48W
3000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6953 lumens
Efficiency: N/A
Efficacy: 147.3 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

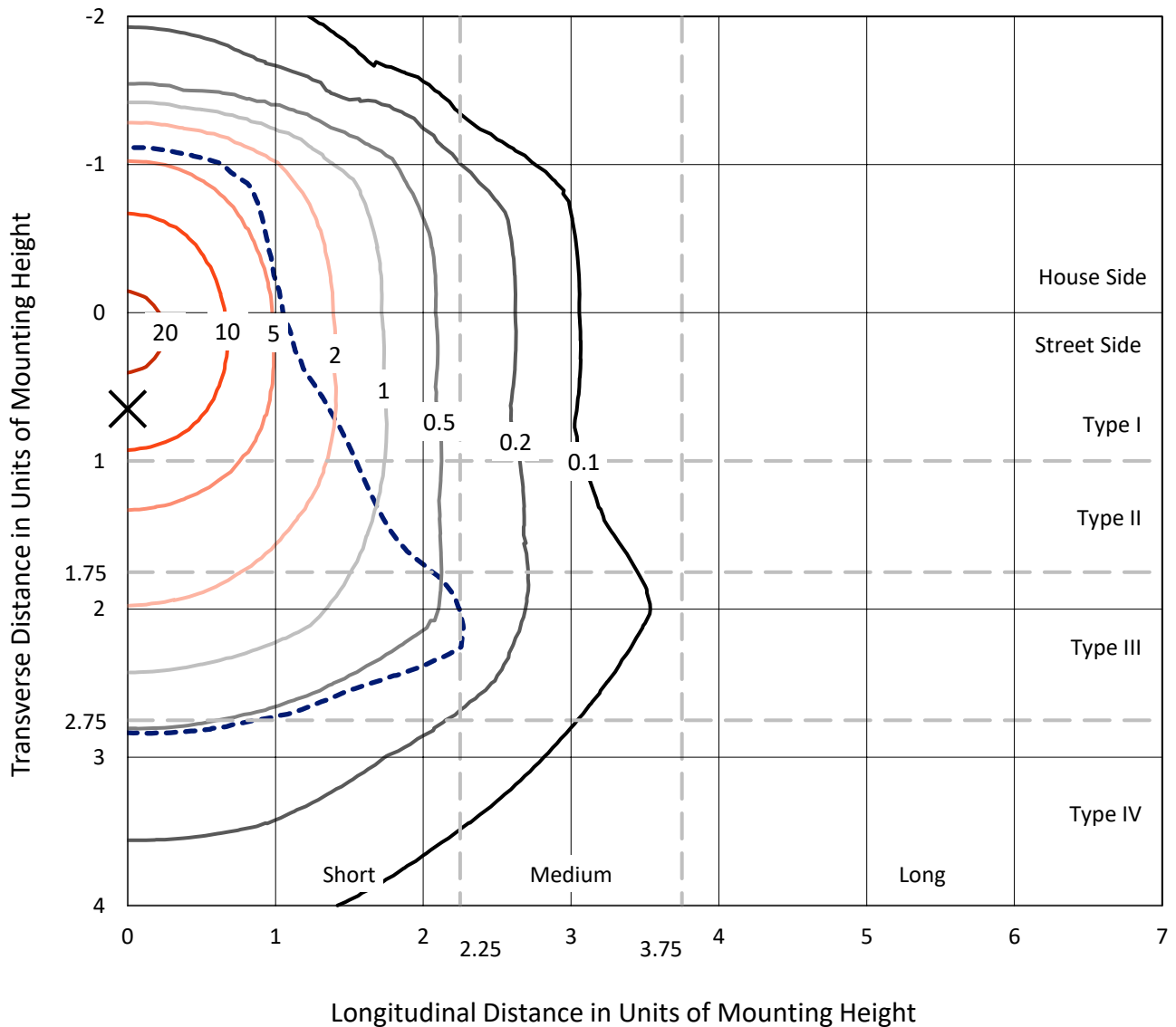
Input Watts (W): 47.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

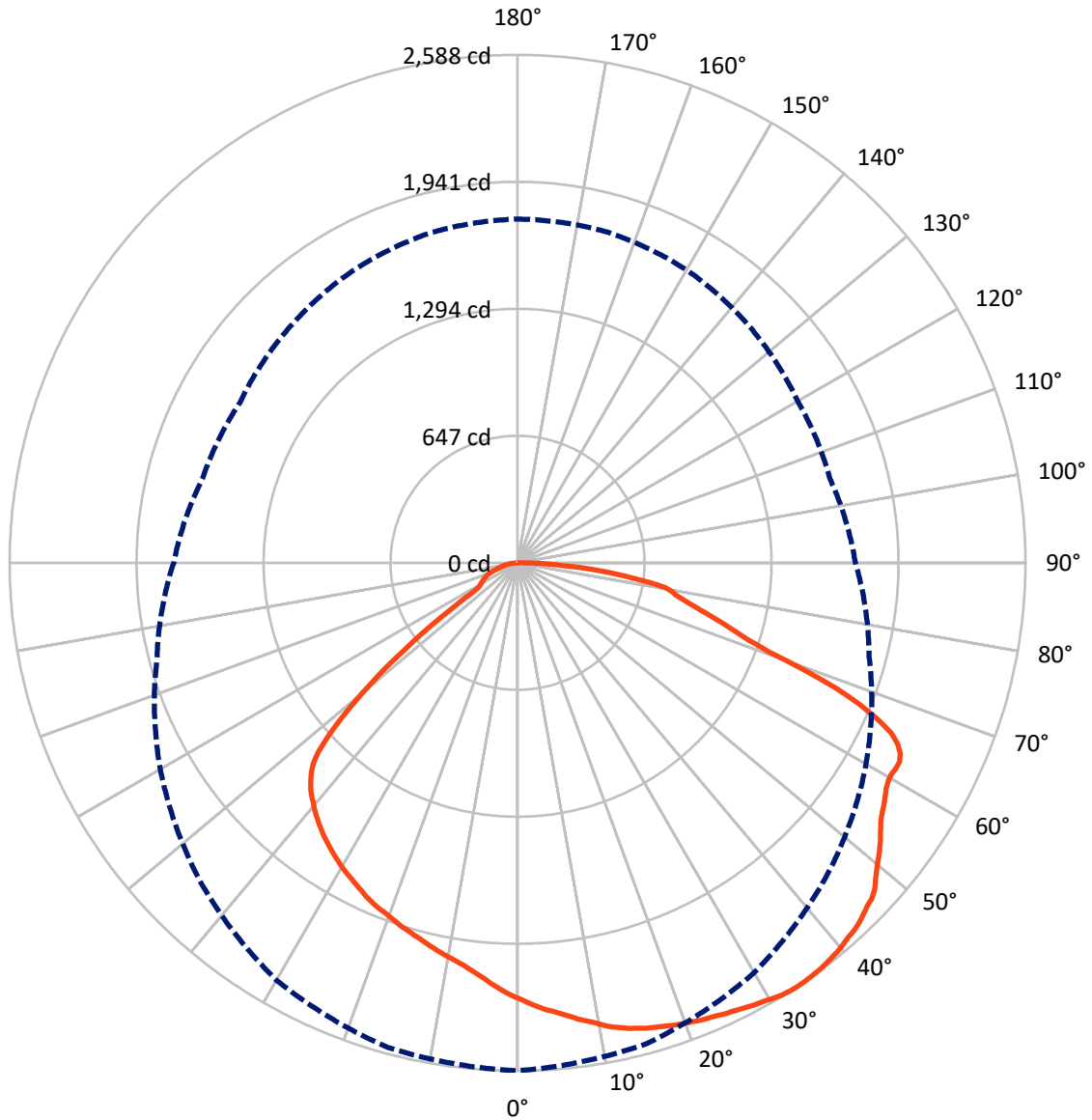
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 22.9 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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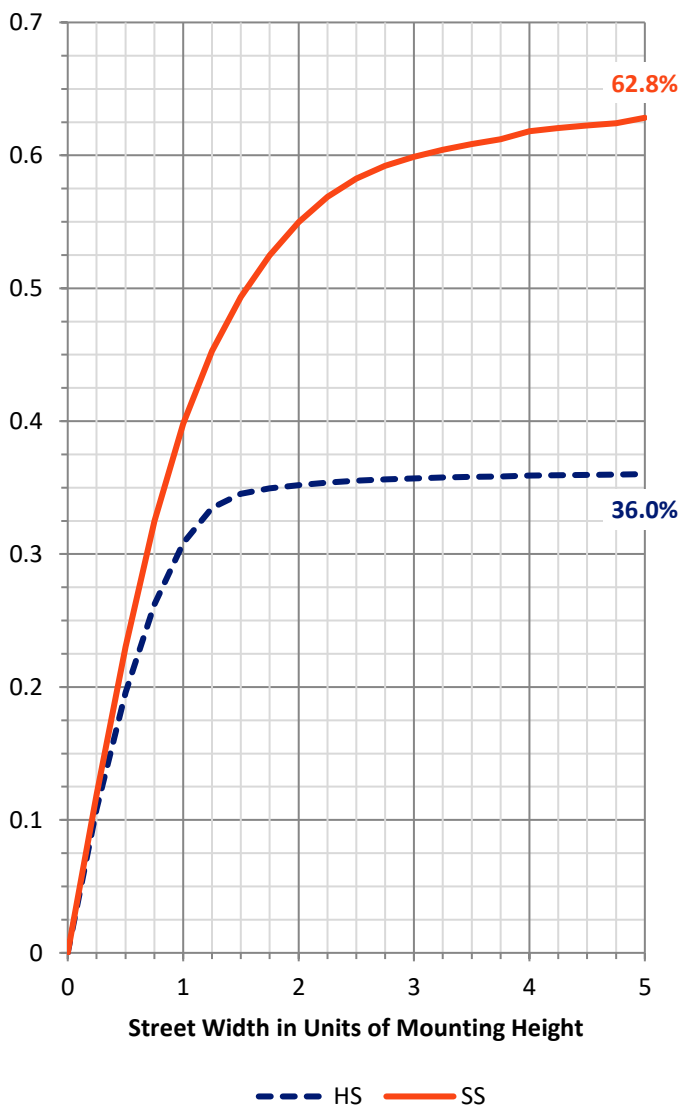
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2521.0	0.0	2521.0
	% Fixture	36.3	0.0	36.3
Street Side	Lumens	4432.0	0.0	4432.0
	% Fixture	63.7	0.0	63.7
Total	Lumens	6953.0	0.0	6953.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.9	3.0
10°-20°	613.3	8.8
20°-30°	956.3	13.8
30°-40°	1206.9	17.4
40°-50°	1319.7	19.0
50°-60°	1168.7	16.8
60°-70°	884.6	12.7
70°-80°	461.6	6.6
80°-90°	131.0	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°	6953.0	100.0
0°-180°	6953.0	100.0

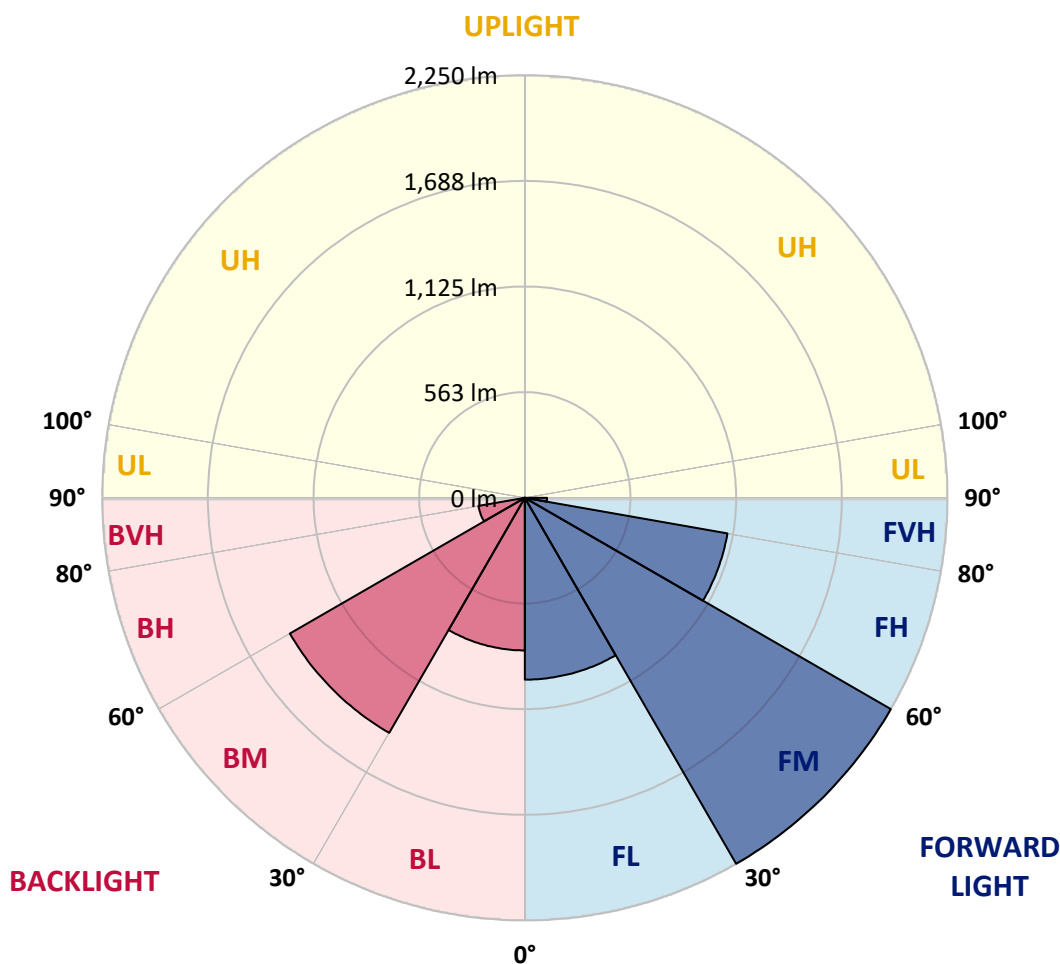


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	968.0	13.9			
FM (30°-60°)	2250.2	32.4			
FH (60°-80°)	1095.4	15.8			G1/1800
FVH (80°-90°)	118.4	1.7			G2/225
BL (0°-30°)	812.5	11.7	B2/1000		
BM (30°-60°)	1445.0	20.8	B2/2500		
BH (60°-80°)	250.8	3.6	B1/500		G1/500
BVH (80°-90°)	12.6	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°	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7
1°	2244.3	2242.4	2239.4	2236.2	2232.5	2228.1	2223.7	2218.9	2214.6	2211.2	2208.8
2°	2262.3	2260.5	2256.3	2249.3	2238.4	2230.2	2221.5	2212.6	2204.5	2197.8	2193.1
3°	2279.4	2276.0	2270.4	2261.1	2248.0	2232.1	2218.0	2205.6	2194.3	2184.3	2177.2
4°	2292.4	2290.5	2282.2	2270.1	2254.0	2232.4	2213.7	2197.9	2182.5	2168.7	2158.6
5°	2308.9	2305.0	2294.5	2278.7	2258.7	2232.9	2208.9	2188.9	2169.2	2150.9	2137.0
6°	2324.8	2319.6	2306.9	2286.7	2262.6	2232.1	2203.5	2179.0	2154.8	2131.9	2116.4
7°	2343.9	2335.1	2318.7	2293.8	2265.1	2230.5	2197.0	2168.1	2139.3	2113.0	2097.3
8°	2358.9	2349.4	2329.9	2301.8	2267.2	2227.0	2188.7	2155.8	2122.5	2094.8	2080.3
9°	2375.4	2365.1	2342.4	2309.9	2269.0	2223.0	2179.6	2142.5	2105.7	2077.8	2065.6
10°	2395.2	2383.1	2356.5	2317.8	2269.9	2218.9	2170.4	2128.8	2089.0	2061.5	2051.4
11°	2412.9	2399.6	2370.2	2325.0	2270.7	2214.0	2160.2	2114.6	2072.7	2046.8	2038.8
12°	2425.7	2412.8	2382.1	2332.2	2271.6	2207.6	2148.0	2098.9	2055.5	2032.2	2025.1
13°	2440.1	2423.8	2391.6	2339.0	2272.4	2200.7	2135.9	2082.5	2037.7	2017.3	2011.2
14°	2449.7	2433.9	2398.4	2343.1	2272.8	2194.7	2123.9	2065.9	2020.1	2003.1	1998.0
15°	2460.4	2441.9	2402.4	2344.5	2271.1	2187.5	2109.6	2048.5	2002.9	1988.6	1984.0
16°	2468.5	2448.2	2407.1	2345.5	2267.2	2179.5	2095.7	2031.6	1985.1	1973.5	1969.8
17°	2476.2	2454.3	2409.0	2343.6	2261.5	2169.3	2080.0	2013.0	1967.3	1957.7	1956.0
18°	2485.2	2460.8	2408.6	2338.5	2254.1	2158.8	2064.5	1994.0	1950.0	1941.5	1942.7
19°	2493.0	2467.6	2410.1	2334.4	2245.0	2146.7	2048.1	1974.6	1932.8	1925.9	1930.7
20°	2499.8	2474.4	2413.6	2329.6	2234.7	2132.7	2030.9	1954.9	1915.0	1911.4	1918.0
21°	2508.1	2480.1	2415.9	2324.8	2224.1	2116.5	2013.2	1934.8	1897.0	1895.9	1902.6
22°	2514.7	2486.0	2417.3	2320.0	2212.6	2099.2	1993.0	1913.9	1878.4	1879.8	1888.6
23°	2519.5	2489.7	2418.5	2315.8	2200.6	2080.8	1973.6	1892.4	1858.7	1863.3	1875.0
24°	2527.8	2494.7	2418.9	2311.7	2188.4	2061.6	1951.5	1870.3	1839.1	1846.5	1862.2
25°	2534.0	2498.6	2418.1	2306.1	2175.6	2042.3	1928.4	1848.1	1819.8	1830.2	1849.7
26°	2541.6	2502.2	2417.1	2299.6	2160.9	2022.0	1905.5	1824.6	1800.4	1812.6	1835.6
27°	2550.1	2506.3	2417.6	2292.5	2146.4	2000.7	1882.3	1801.8	1780.4	1795.0	1820.1
28°	2557.4	2512.4	2416.9	2284.9	2132.3	1978.6	1858.1	1777.7	1759.2	1778.2	1804.0
29°	2564.0	2518.2	2414.3	2276.5	2116.9	1955.2	1832.6	1753.1	1737.4	1762.4	1787.3
30°	2573.8	2523.5	2413.4	2267.1	2101.7	1930.7	1805.7	1727.0	1715.3	1744.9	1771.5
31°	2581.1	2527.9	2412.6	2257.4	2085.7	1905.9	1777.7	1701.7	1692.4	1725.4	1756.8
32°	2585.6	2533.4	2411.9	2246.9	2068.7	1881.1	1751.0	1675.3	1669.8	1705.4	1740.3
33°	2588.1	2537.1	2411.1	2237.1	2050.6	1854.6	1721.1	1648.3	1647.7	1685.6	1722.9
34°	2586.6	2536.2	2410.3	2227.0	2031.2	1828.3	1692.8	1621.3	1624.8	1665.4	1705.2
35°	2584.7	2535.9	2409.9	2215.9	2010.6	1800.3	1663.0	1594.2	1601.4	1644.5	1687.5
36°	2582.8	2531.9	2406.7	2204.1	1989.2	1771.9	1631.2	1567.3	1577.8	1623.3	1668.9
37°	2576.6	2526.9	2400.8	2193.0	1966.8	1740.8	1600.7	1540.2	1554.3	1601.7	1650.2
38°	2572.0	2521.4	2394.2	2181.4	1942.9	1711.7	1570.0	1514.3	1531.0	1579.8	1631.6
39°	2564.8	2512.4	2385.7	2168.0	1917.7	1681.9	1540.2	1486.7	1507.4	1558.6	1610.5
40°	2555.2	2502.6	2376.1	2152.1	1892.5	1649.9	1510.0	1457.8	1484.0	1539.1	1589.8
41°	2544.9	2490.2	2365.3	2135.9	1867.0	1617.4	1479.7	1429.1	1458.2	1520.1	1568.8
42°	2539.7	2481.0	2355.5	2119.0	1840.5	1583.1	1445.4	1399.4	1430.7	1499.3	1548.4
43°	2528.1	2470.6	2341.9	2103.2	1813.4	1547.9	1411.4	1370.8	1403.4	1476.0	1528.3
44°	2513.2	2458.2	2326.4	2087.7	1786.2	1512.0	1376.2	1341.4	1375.7	1450.9	1507.6



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CANDELA DISTRIBUTION (continued):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	2497.4	2441.7	2312.3	2071.4	1759.6	1474.6	1341.2	1310.0	1348.1	1425.9	1484.7
46°	2487.6	2426.5	2297.7	2054.8	1731.6	1437.9	1305.5	1278.5	1320.8	1400.3	1459.7
47°	2467.4	2411.9	2280.4	2036.5	1702.4	1400.1	1268.9	1246.0	1293.7	1374.2	1432.1
48°	2436.1	2392.1	2259.6	2017.1	1674.0	1360.7	1233.3	1215.6	1266.1	1347.5	1396.9
49°	2406.0	2360.9	2240.9	1996.7	1646.3	1321.6	1197.7	1185.0	1238.3	1319.2	1352.2
50°	2380.9	2331.4	2218.8	1976.1	1618.1	1281.0	1161.1	1153.0	1210.4	1289.5	1292.7
51°	2356.8	2305.6	2189.9	1954.7	1590.0	1242.0	1125.2	1120.4	1182.6	1258.1	1215.0
52°	2329.9	2280.8	2159.3	1931.6	1560.3	1203.9	1087.9	1087.8	1154.9	1223.4	1117.0
53°	2301.0	2254.7	2128.7	1908.7	1530.3	1164.7	1049.3	1054.4	1125.0	1184.3	1008.9
54°	2273.2	2225.3	2100.9	1882.8	1498.9	1127.1	1011.7	1022.7	1093.6	1136.5	893.2
55°	2253.9	2199.2	2071.9	1851.8	1462.5	1090.2	973.3	990.5	1061.5	1073.6	778.1
56°	2238.1	2178.6	2040.5	1818.4	1425.3	1050.8	935.4	957.2	1028.0	994.4	659.0
57°	2219.6	2161.8	2008.0	1783.4	1388.9	1010.5	892.2	923.7	993.3	899.1	538.1
58°	2202.8	2145.0	1980.7	1750.3	1353.0	969.1	850.1	888.6	955.8	795.9	424.6
59°	2190.9	2129.9	1959.1	1713.8	1316.3	928.4	809.5	853.2	918.0	691.3	325.8
60°	2188.4	2121.0	1942.0	1673.7	1277.6	885.1	770.5	816.6	875.2	581.7	255.7
61°	2194.3	2118.6	1928.9	1634.9	1235.8	841.3	731.0	778.9	828.2	472.4	217.9
62°	2194.4	2121.0	1915.1	1597.4	1191.7	798.8	693.9	740.0	772.0	369.3	204.7
63°	2179.3	2116.2	1911.1	1562.5	1147.6	754.4	658.2	700.7	704.6	276.4	196.1
64°	2146.5	2095.3	1916.4	1531.2	1104.8	708.7	624.8	660.7	621.4	212.7	188.5
65°	2092.9	2051.1	1930.3	1504.1	1058.6	662.1	591.3	620.1	537.3	188.8	180.7
66°	2003.3	1981.0	1926.2	1481.9	1004.6	615.8	557.1	579.3	447.4	177.4	172.8
67°	1888.3	1879.1	1897.0	1468.3	947.7	568.4	521.8	540.5	357.6	165.4	164.8
68°	1746.1	1750.7	1832.0	1472.9	888.3	521.8	485.1	502.7	285.4	155.3	157.0
69°	1553.2	1590.1	1707.2	1499.6	831.4	479.1	447.4	464.5	227.5	146.8	149.8
70°	1358.8	1407.0	1545.5	1533.3	775.2	439.3	407.3	424.5	171.8	138.5	142.9
71°	1239.2	1257.0	1345.8	1525.8	728.2	398.6	366.5	384.0	139.5	130.3	134.9
72°	1165.1	1162.1	1148.2	1414.8	686.2	359.6	325.4	339.0	128.6	123.0	125.4
73°	1097.0	1101.3	1008.1	1210.5	642.0	320.7	285.8	293.3	120.3	116.2	114.9
74°	1027.6	1044.4	930.9	979.3	636.4	286.1	249.2	244.5	111.0	109.2	104.1
75°	963.0	981.1	866.4	835.4	714.3	251.5	215.9	197.6	101.6	100.1	93.7
76°	908.2	911.8	808.4	771.0	769.3	219.9	187.1	150.2	93.0	90.2	83.1
77°	862.4	835.8	753.9	718.6	645.5	191.8	158.4	112.5	85.0	80.4	73.6
78°	824.1	766.2	695.0	663.6	454.7	163.4	130.3	95.2	77.7	71.0	67.0
79°	798.7	715.9	635.4	602.2	338.4	142.4	107.9	84.1	70.3	61.7	61.6
80°	764.6	669.3	578.0	517.5	292.3	124.1	87.4	73.8	62.2	50.5	55.8
81°	678.5	623.4	533.4	426.8	298.0	105.6	68.2	63.4	53.4	40.9	48.9
82°	591.9	577.9	491.0	363.3	265.2	88.6	51.2	53.2	44.6	34.3	41.3
83°	505.3	524.5	444.3	315.4	182.5	73.7	38.7	43.9	35.9	29.1	33.6
84°	417.6	467.8	381.6	274.4	122.9	59.9	29.1	35.0	27.5	23.1	25.2
85°	332.5	407.6	300.4	237.8	95.8	46.3	22.2	26.7	20.3	16.6	16.7
86°	233.3	328.2	230.5	192.3	76.4	33.9	15.2	19.1	14.0	10.2	8.6
87°	161.9	239.3	169.7	119.1	55.8	22.2	8.3	11.3	7.7	4.8	3.5
88°	88.0	142.5	111.6	53.0	35.9	11.7	3.8	4.6	2.8	1.8	1.4
89°	44.7	63.1	59.9	34.3	21.9	5.6	1.1	0.9	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



REPORT NUMBER: P1449917

CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7
1°	2208.2	2208.7	2209.2	2210.8	2213.7	2217.5	2222.1	2227.2	2231.3	2235.1	2238.0
2°	2191.1	2191.4	2193.1	2195.9	2201.5	2209.0	2217.6	2226.6	2234.9	2241.4	2249.9
3°	2172.9	2170.9	2173.7	2179.6	2188.5	2199.7	2211.2	2224.5	2236.2	2249.5	2262.0
4°	2151.9	2150.1	2153.3	2161.2	2173.2	2187.9	2203.5	2220.9	2237.8	2256.5	2272.3
5°	2129.5	2126.6	2131.7	2141.6	2157.7	2176.2	2195.6	2217.2	2239.9	2263.1	2281.6
6°	2109.3	2107.6	2111.1	2121.3	2139.5	2162.9	2187.1	2211.9	2239.6	2268.0	2290.5
7°	2090.6	2088.2	2092.5	2102.1	2121.1	2148.3	2178.2	2208.0	2238.7	2271.6	2299.7
8°	2073.8	2071.1	2075.6	2083.6	2102.9	2133.5	2167.8	2202.2	2237.4	2275.2	2309.3
9°	2059.9	2056.7	2061.1	2067.5	2085.2	2117.9	2155.9	2193.8	2234.7	2278.0	2318.8
10°	2046.6	2044.2	2047.7	2052.9	2068.7	2101.7	2143.7	2186.0	2231.6	2280.9	2328.1
11°	2034.0	2032.7	2034.9	2039.3	2052.5	2085.2	2129.9	2176.5	2227.5	2283.7	2337.3
12°	2021.2	2020.0	2021.1	2025.4	2036.1	2067.6	2115.4	2165.6	2222.7	2286.9	2346.4
13°	2008.1	2006.8	2008.2	2011.4	2019.7	2049.6	2100.7	2154.5	2218.0	2290.1	2354.2
14°	1995.8	1993.8	1996.3	1997.2	2004.3	2031.8	2084.9	2143.3	2214.4	2291.3	2359.9
15°	1982.2	1980.3	1981.9	1982.4	1988.4	2013.4	2068.2	2130.4	2208.7	2290.8	2362.4
16°	1969.5	1970.0	1967.7	1968.1	1973.0	1994.3	2051.1	2117.8	2202.1	2288.6	2363.6
17°	1957.2	1956.8	1954.8	1954.2	1957.4	1975.2	2033.3	2104.5	2194.3	2284.4	2362.3
18°	1946.3	1947.4	1943.5	1939.5	1940.3	1956.2	2014.0	2089.6	2183.3	2277.6	2359.1
19°	1933.5	1934.2	1931.0	1925.4	1924.5	1937.4	1995.5	2072.7	2170.7	2269.8	2356.1
20°	1920.5	1921.0	1918.5	1911.0	1908.2	1918.0	1975.7	2058.2	2158.1	2261.2	2353.2
21°	1907.9	1909.7	1905.4	1896.0	1891.6	1899.0	1955.2	2041.8	2143.5	2251.5	2350.1
22°	1897.6	1900.3	1893.1	1881.2	1874.6	1878.9	1934.6	2022.4	2127.2	2241.4	2347.5
23°	1887.9	1890.4	1881.1	1866.5	1856.3	1858.2	1913.1	2002.2	2110.6	2231.4	2346.1
24°	1876.5	1878.8	1869.6	1852.2	1838.5	1837.8	1890.4	1981.0	2094.0	2221.7	2344.6
25°	1862.8	1865.6	1857.2	1837.8	1820.8	1817.8	1868.1	1959.4	2076.0	2211.5	2340.3
26°	1849.2	1849.8	1842.8	1824.9	1802.0	1796.6	1845.2	1935.1	2056.9	2200.3	2335.2
27°	1833.6	1835.9	1826.6	1809.5	1783.8	1774.5	1820.0	1910.3	2036.9	2188.2	2329.5
28°	1819.5	1822.5	1811.5	1793.4	1765.6	1752.3	1795.6	1885.6	2016.4	2175.8	2324.4
29°	1805.9	1809.8	1797.1	1776.5	1747.5	1730.0	1769.8	1860.6	1995.0	2163.1	2318.8
30°	1792.6	1796.3	1783.0	1758.7	1729.1	1706.2	1742.8	1834.7	1972.4	2148.8	2312.2
31°	1777.1	1781.4	1768.7	1741.5	1710.2	1682.3	1716.9	1808.7	1950.0	2133.4	2303.8
32°	1761.6	1766.2	1753.5	1724.2	1689.1	1658.2	1689.5	1780.4	1927.0	2118.0	2297.1
33°	1745.8	1751.3	1738.4	1707.0	1667.7	1633.3	1661.4	1752.0	1902.3	2102.1	2290.1
34°	1730.5	1735.3	1721.8	1689.3	1646.1	1608.6	1633.1	1723.9	1877.7	2084.7	2282.3
35°	1715.3	1719.4	1705.1	1670.3	1623.4	1584.7	1604.4	1694.8	1852.6	2066.2	2274.7
36°	1697.5	1702.7	1687.3	1652.1	1601.3	1561.0	1576.6	1664.4	1826.1	2047.4	2266.9
37°	1679.3	1684.8	1669.4	1633.3	1579.7	1537.4	1548.9	1633.9	1799.0	2027.2	2258.8
38°	1659.9	1666.2	1650.5	1612.6	1558.7	1513.3	1522.3	1603.3	1771.1	2006.5	2249.2
39°	1640.6	1646.6	1629.6	1591.3	1537.9	1487.5	1493.9	1568.6	1742.1	1986.7	2237.8
40°	1619.9	1626.0	1610.3	1570.1	1516.9	1460.7	1463.0	1536.2	1711.7	1964.9	2225.3
41°	1599.6	1604.3	1588.8	1550.3	1494.3	1434.0	1431.4	1501.2	1679.9	1941.9	2210.9
42°	1578.7	1583.6	1568.0	1531.0	1471.5	1407.5	1399.7	1466.7	1647.3	1919.8	2196.9
43°	1557.0	1560.0	1546.8	1511.3	1448.5	1380.0	1369.0	1430.0	1613.9	1896.9	2183.2
44°	1536.2	1530.7	1525.7	1488.4	1425.1	1351.6	1337.7	1392.6	1578.1	1873.1	2169.3



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CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	1514.6	1498.8	1504.3	1464.4	1400.5	1323.4	1306.8	1355.2	1540.8	1847.9	2153.2
46°	1475.9	1460.3	1472.1	1440.3	1374.9	1294.9	1275.3	1318.0	1505.3	1822.6	2135.1
47°	1422.4	1397.9	1429.5	1414.4	1348.8	1265.5	1243.5	1278.2	1467.4	1798.2	2116.7
48°	1351.4	1312.0	1371.2	1385.2	1323.0	1235.9	1211.1	1241.1	1429.7	1774.7	2097.4
49°	1259.6	1207.4	1291.4	1352.5	1295.8	1207.7	1177.4	1203.5	1392.3	1751.1	2078.4
50°	1148.8	1091.4	1193.2	1312.6	1266.7	1179.2	1142.6	1166.7	1354.9	1727.7	2056.8
51°	1032.2	972.5	1082.7	1257.7	1236.7	1150.4	1109.0	1129.3	1318.3	1701.9	2033.1
52°	913.5	850.9	965.5	1183.7	1205.3	1120.9	1074.5	1090.0	1282.1	1673.5	2008.1
53°	791.7	724.1	847.9	1096.8	1171.9	1091.3	1039.4	1050.6	1243.8	1641.6	1980.8
54°	664.5	597.8	725.1	990.4	1136.1	1060.3	1005.1	1008.4	1206.3	1610.1	1948.9
55°	542.0	476.5	599.9	880.1	1096.9	1028.9	969.6	966.4	1168.2	1581.1	1916.0
56°	425.6	368.9	480.7	768.1	1049.3	996.5	933.9	925.7	1128.2	1551.5	1884.1
57°	323.6	287.9	367.6	650.2	988.4	961.4	897.4	883.8	1087.6	1519.7	1850.7
58°	262.9	243.7	288.5	531.8	911.2	924.0	859.5	843.0	1046.3	1484.7	1815.7
59°	232.6	227.2	242.2	419.5	818.9	886.1	822.2	804.3	1006.2	1446.7	1779.8
60°	220.5	220.1	221.2	319.7	720.0	846.8	783.7	765.9	962.0	1406.2	1744.2
61°	214.2	214.1	212.8	245.0	619.0	807.6	745.7	728.7	915.8	1364.7	1713.3
62°	207.8	207.7	206.1	207.4	513.9	766.1	708.0	691.6	869.0	1323.5	1687.0
63°	201.0	201.0	199.2	192.5	410.4	724.3	669.6	654.5	819.3	1278.2	1664.3
64°	194.3	194.6	192.4	185.2	313.8	676.8	630.3	617.9	769.1	1225.8	1645.4
65°	187.6	188.4	185.0	175.9	236.6	624.6	590.7	580.1	720.4	1171.8	1629.2
66°	181.1	182.4	177.8	167.6	196.5	558.2	550.9	542.1	675.3	1120.1	1622.3
67°	174.6	175.6	170.8	159.2	173.0	484.4	512.1	502.0	628.8	1070.0	1634.7
68°	168.1	168.8	163.9	151.0	159.0	405.8	474.6	461.4	578.4	1021.2	1661.0
69°	161.0	161.5	156.9	143.3	150.6	327.9	437.2	419.7	530.4	978.7	1669.0
70°	151.4	150.8	148.7	135.8	141.3	261.1	399.3	378.7	490.0	938.9	1632.9
71°	140.3	139.8	138.4	129.3	132.1	208.0	363.4	338.1	450.5	909.3	1519.8
72°	129.3	128.5	127.5	121.4	123.6	155.2	327.8	297.9	412.9	905.5	1318.4
73°	117.9	117.3	116.5	111.9	115.0	125.2	295.0	260.2	374.3	966.2	1098.3
74°	106.8	106.9	105.7	101.8	107.4	115.4	259.8	226.3	337.8	1034.3	939.4
75°	97.1	98.5	95.4	91.5	100.4	105.7	223.3	194.2	297.6	958.6	850.3
76°	90.3	93.0	87.2	81.8	92.3	96.9	187.6	165.6	258.4	793.2	782.5
77°	85.4	88.8	81.6	72.2	82.8	88.1	151.9	139.4	227.2	645.8	720.1
78°	80.2	82.8	76.6	62.9	73.2	79.8	119.1	115.0	209.5	499.6	661.9
79°	72.1	73.3	70.1	56.1	63.6	71.8	94.7	94.7	189.3	419.9	594.5
80°	64.1	65.8	61.9	50.8	54.5	63.9	80.1	76.6	172.0	414.7	510.8
81°	55.9	57.0	53.7	45.2	44.3	56.0	68.2	63.1	163.0	369.1	436.3
82°	46.3	46.4	45.1	38.7	34.5	47.4	57.0	49.7	152.3	266.7	379.8
83°	34.8	33.2	34.9	31.4	27.6	38.3	46.2	36.3	128.0	191.2	336.5
84°	24.8	23.9	25.2	23.7	21.7	29.9	35.6	26.7	92.5	153.9	296.7
85°	15.6	15.0	15.8	15.9	15.7	22.3	26.3	19.1	65.9	127.6	247.7
86°	7.3	6.4	7.4	8.3	9.7	14.8	18.5	12.6	45.6	103.8	176.5
87°	3.0	2.5	3.0	3.2	4.6	8.0	10.7	7.3	26.5	82.1	109.3
88°	1.2	1.1	1.2	1.3	1.6	2.9	4.1	4.0	12.6	62.9	81.5
89°	0.1	0.0	0.1	0.2	0.3	0.4	0.7	0.7	5.7	45.1	59.4



REPORT NUMBER: P1449917
 CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

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



REPORT NUMBER: P1449917
 CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

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



REPORT NUMBER: P1449917
CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

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



REPORT NUMBER: P1449917
CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
0°	2225.7	2225.7	2225.7
1°	2240.5	2242.8	2244.3
2°	2255.6	2259.7	2262.3
3°	2270.8	2275.9	2279.4
4°	2284.1	2291.3	2292.4
5°	2296.7	2306.2	2308.9
6°	2309.3	2321.3	2324.8
7°	2322.0	2336.3	2343.9
8°	2336.4	2352.2	2358.9
9°	2350.7	2369.6	2375.4
10°	2364.6	2387.9	2395.2
11°	2379.1	2404.9	2412.9
12°	2392.3	2419.3	2425.7
13°	2402.4	2430.3	2440.1
14°	2409.5	2440.6	2449.7
15°	2414.2	2447.5	2460.4
16°	2418.7	2454.2	2468.5
17°	2422.3	2461.2	2476.2
18°	2425.3	2469.4	2485.2
19°	2428.0	2476.5	2493.0
20°	2431.8	2483.3	2499.8
21°	2435.0	2489.2	2508.1
22°	2438.5	2494.7	2514.7
23°	2441.2	2500.4	2519.5
24°	2443.4	2507.5	2527.8
25°	2443.9	2512.5	2534.0
26°	2445.8	2518.3	2541.6
27°	2445.8	2524.8	2550.1
28°	2447.7	2531.9	2557.4
29°	2450.2	2537.6	2564.0
30°	2450.7	2544.5	2573.8
31°	2452.0	2551.7	2581.1
32°	2454.1	2554.3	2585.6
33°	2455.9	2556.1	2588.1
34°	2455.7	2556.2	2586.6
35°	2452.8	2555.4	2584.7
36°	2448.6	2551.1	2582.8
37°	2444.5	2547.5	2576.6
38°	2438.2	2541.1	2572.0
39°	2430.4	2533.2	2564.8
40°	2422.1	2524.8	2555.2
41°	2410.5	2512.1	2544.9
42°	2398.6	2504.9	2539.7
43°	2385.9	2494.1	2528.1
44°	2372.7	2480.5	2513.2



REPORT NUMBER: P1449917
CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
45°	2359.3	2465.4	2497.4
46°	2344.1	2449.7	2487.6
47°	2326.8	2434.6	2467.4
48°	2308.4	2409.6	2436.1
49°	2288.6	2376.2	2406.0
50°	2261.5	2350.3	2380.9
51°	2230.8	2324.8	2356.8
52°	2201.6	2299.4	2329.9
53°	2175.8	2271.8	2301.0
54°	2145.0	2243.0	2273.2
55°	2113.5	2219.3	2253.9
56°	2082.7	2202.3	2238.1
57°	2055.2	2187.8	2219.6
58°	2034.9	2169.5	2202.8
59°	2018.8	2155.7	2190.9
60°	2003.5	2148.5	2188.4
61°	1990.2	2149.1	2194.3
62°	1983.6	2149.8	2194.4
63°	1987.8	2140.2	2179.3
64°	1997.7	2113.1	2146.5
65°	1992.6	2063.6	2092.9
66°	1962.0	1986.2	2003.3
67°	1901.2	1878.3	1888.3
68°	1794.6	1739.9	1746.1
69°	1643.3	1568.5	1553.2
70°	1460.9	1388.5	1358.8
71°	1266.9	1252.9	1239.2
72°	1109.9	1165.3	1165.1
73°	1013.5	1099.8	1097.0
74°	957.3	1035.7	1027.6
75°	907.0	967.1	963.0
76°	858.3	897.8	908.2
77°	805.2	831.8	862.4
78°	744.1	775.8	824.1
79°	685.5	739.5	798.7
80°	627.3	706.9	764.6
81°	570.4	668.7	678.5
82°	514.8	611.1	591.9
83°	448.2	538.5	505.3
84°	370.4	465.6	417.6
85°	298.1	387.6	332.5
86°	245.2	295.6	233.3
87°	183.6	205.2	161.9
88°	119.9	118.6	88.0
89°	68.6	56.8	44.7



REPORT NUMBER: P1449917
CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

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



REPORT NUMBER: P1449917
CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

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



REPORT NUMBER: P1449917
CATALOG NUMBER: TWC60_T4_48W_3000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
180°	0.0	0.0	0.0

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

Report Prepared for

Cooper Lighting Solutions

Lumark

Report Number: SP1-2601-659-1

Test Date: 02/12/2026

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

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

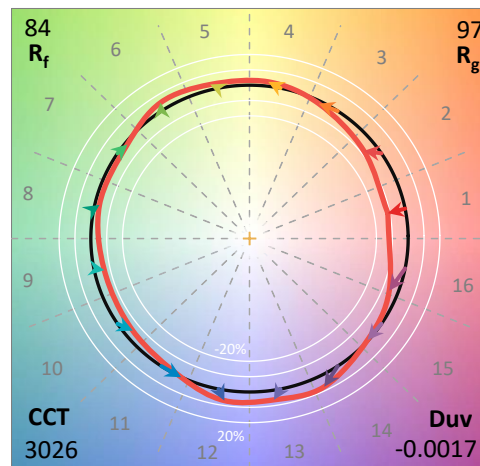
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2601-659-1
 Test Lab: COOPER LIGHTING SOLUTIONS
 Photometer: SP1 - 76IN SPHERE
 Measurement Geometry: 4π
 Issue Date: 02/16/2026
 Manufacturer: COOPER LIGHTING SOLUTIONS
 Product Line: Lumark
 Catalog Number: **MWP2460W34VDDKYYAD-T4-24W-3000K**
 Description: Mester Wedge, at T4 beam setting, 24W output, 3000K

Spectral Parameters

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

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



Test Conditions

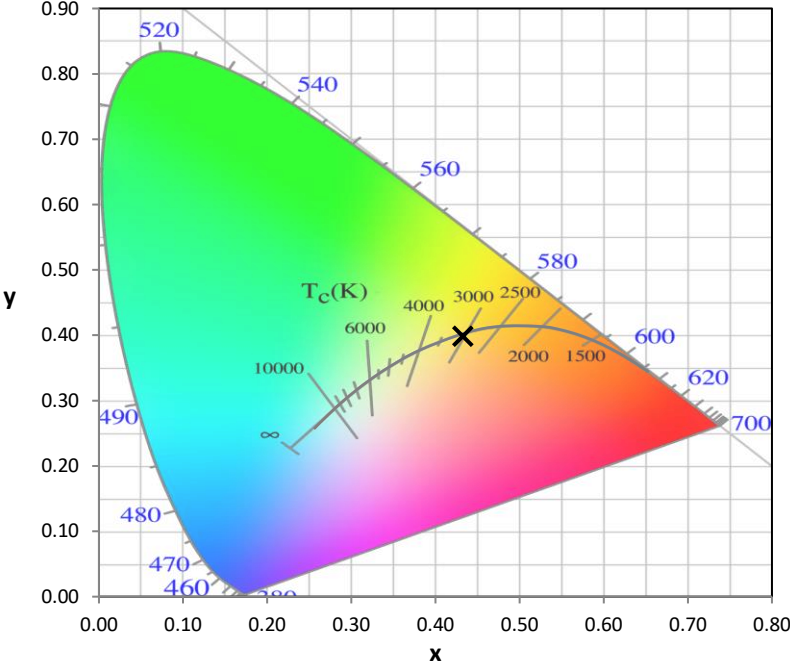
Stabilization Time: 64M
 Operation Time: 2H 4M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-1

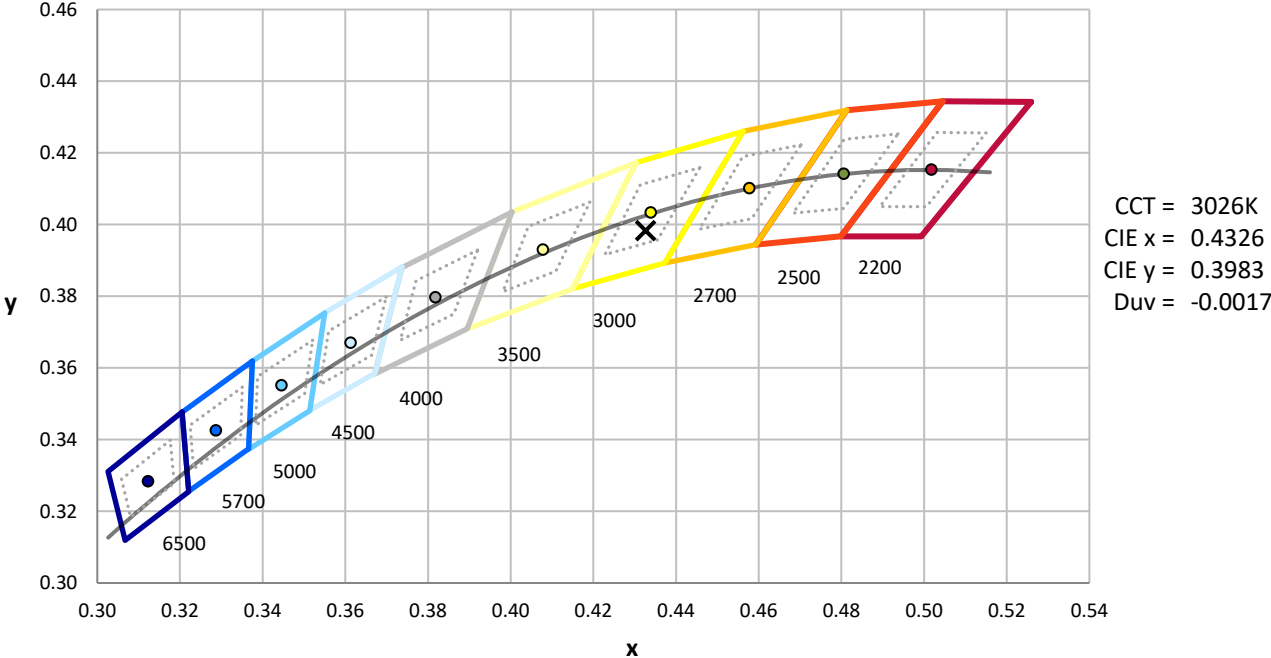
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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

REPORT NUMBER: SP1-2601-659-1

CIE 1931 Chromaticity Diagram



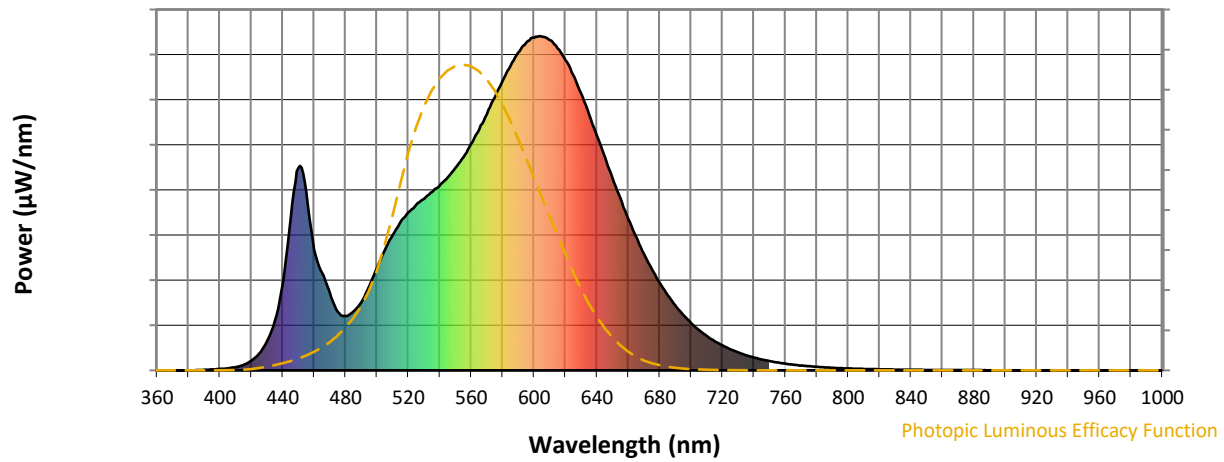
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-1

Photopic Flux vs. Wavelength

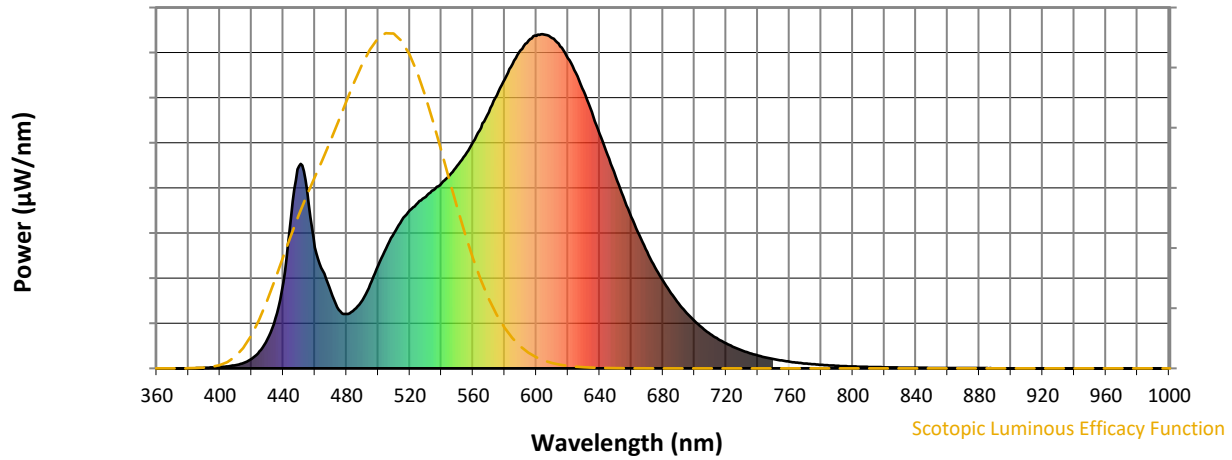


Photopic Lumens: NR

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

REPORT NUMBER: SP1-2601-659-1

Scotopic Flux vs. Wavelength



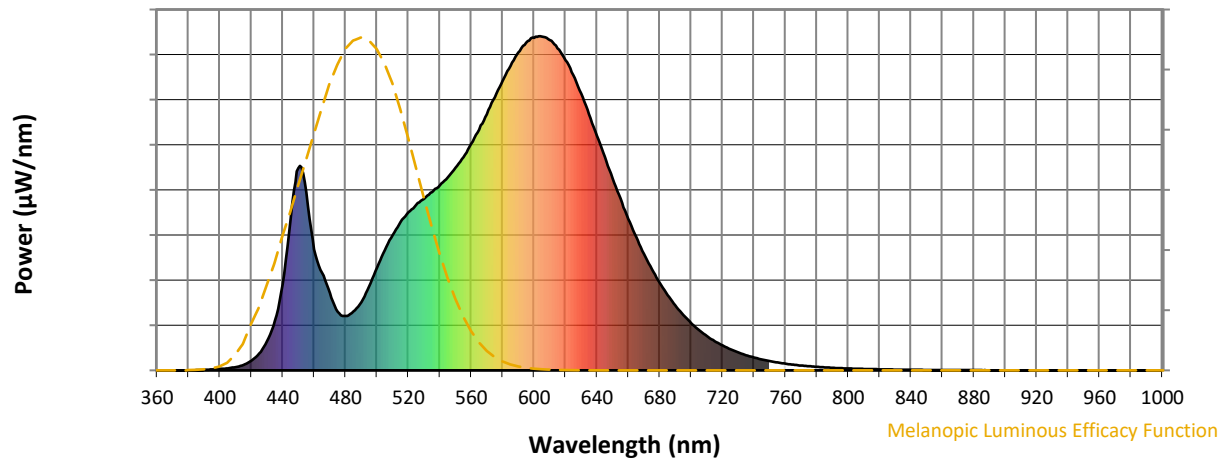
Scotopic Lumens: NR

S/P: 1.35

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

REPORT NUMBER: SP1-2601-659-1

Melanopic Flux vs. Wavelength



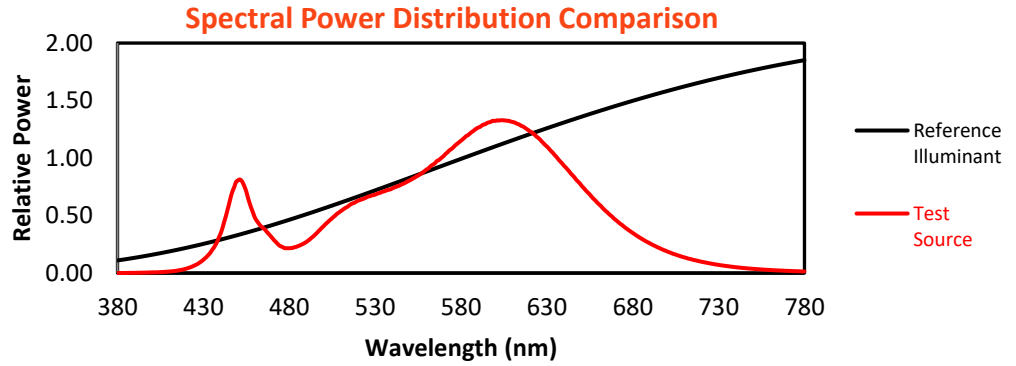
Melanopic Lumens: NR

M/P: 2.61

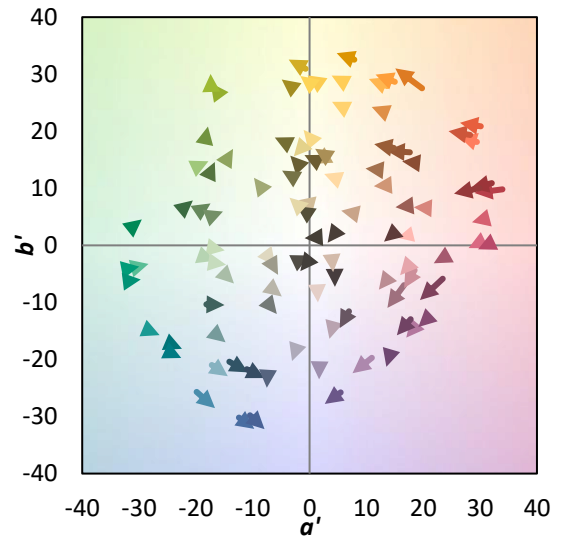
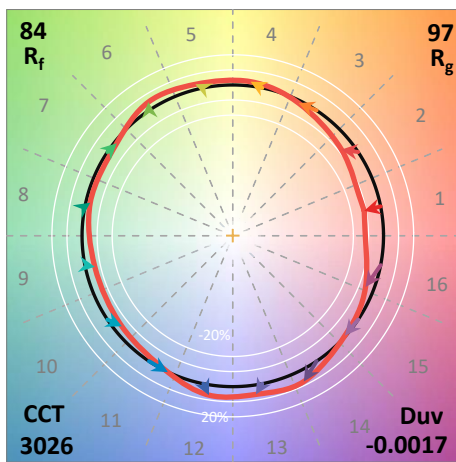
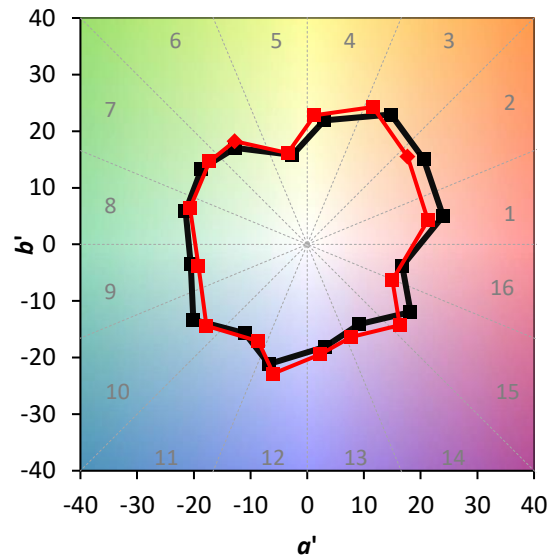
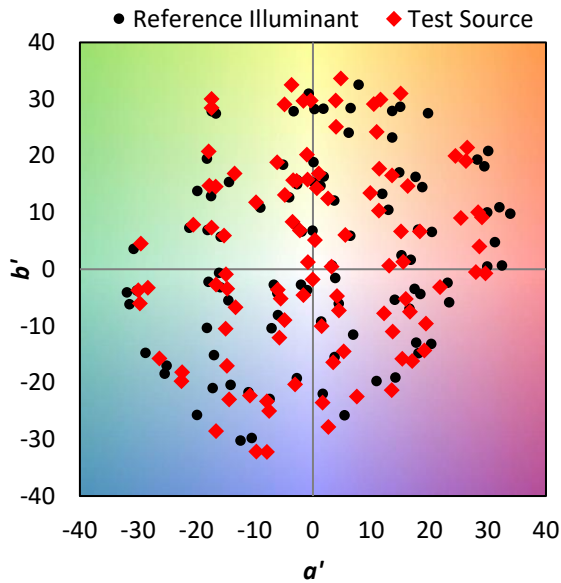
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	204	NR	620	928	NR	750	28	NR	880	1	NR
365	0	NR	495	251	NR	625	884	NR	755	24	NR	885	1	NR
370	0	NR	500	307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

Summary

$R_f = 84$
 $R_g = 97.4$
 $CIE R_a = 82.7$
 $R_9 = 7.5$

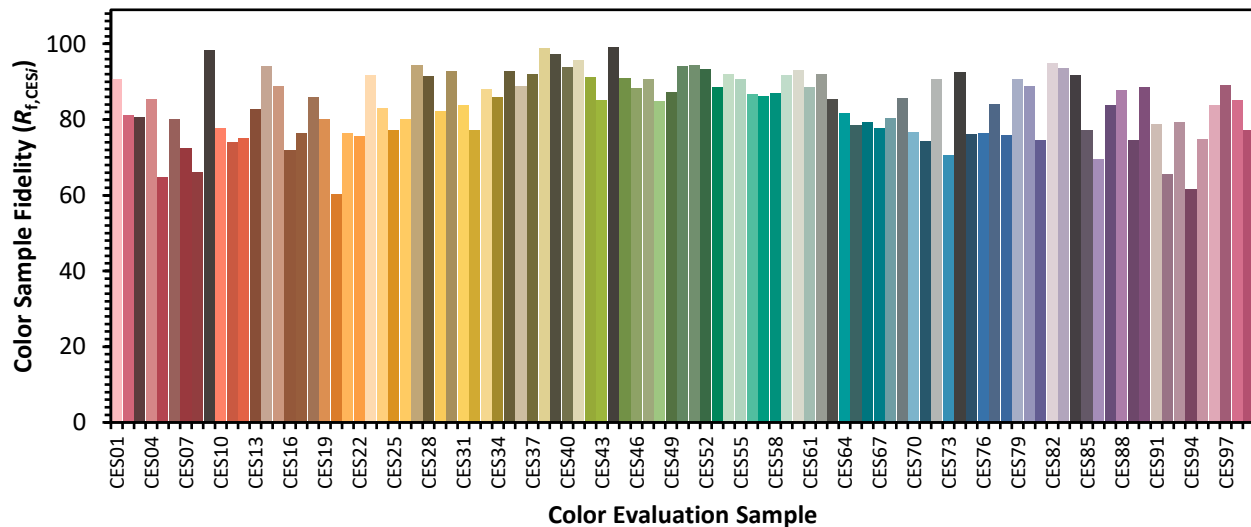


Color Vector Graphics

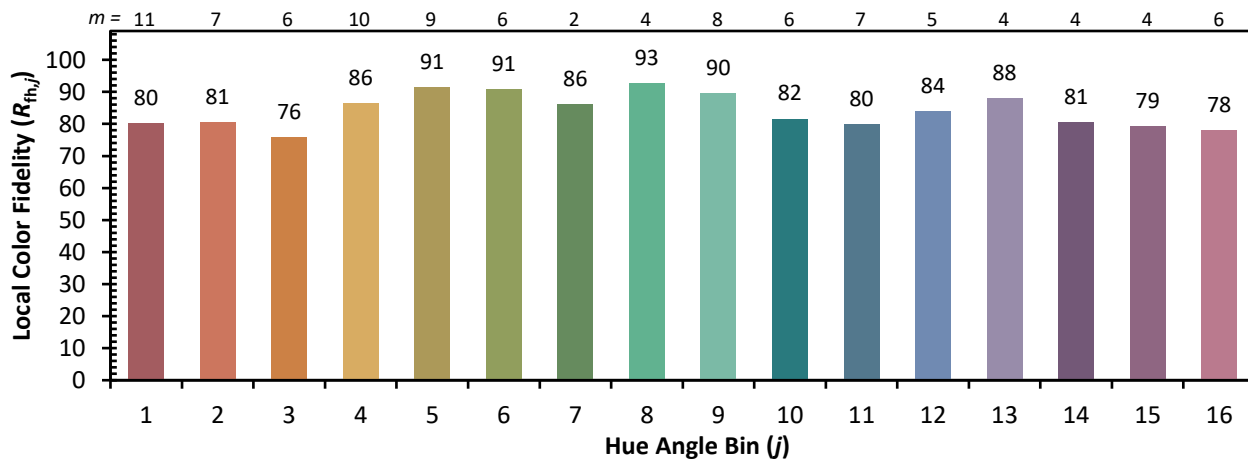
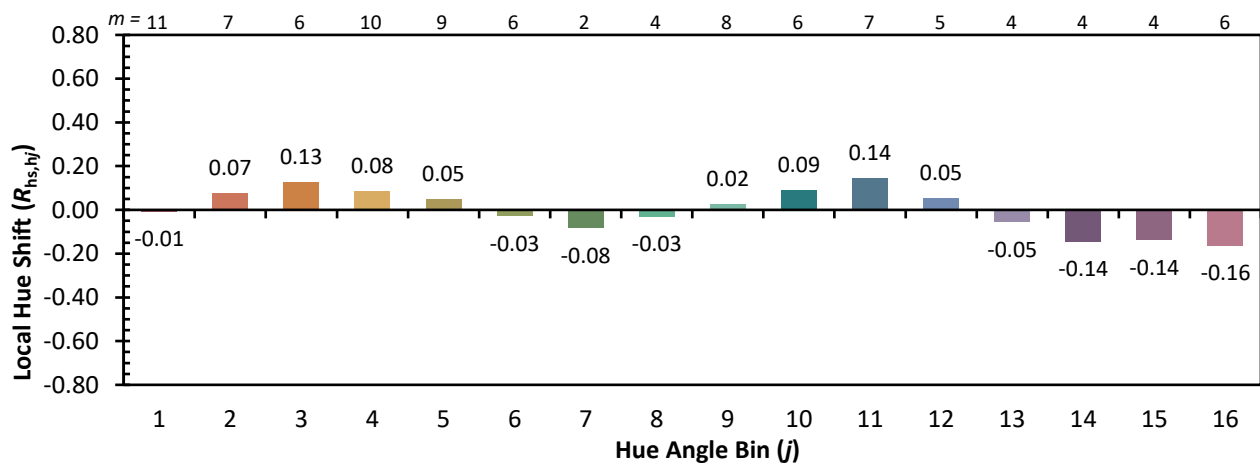
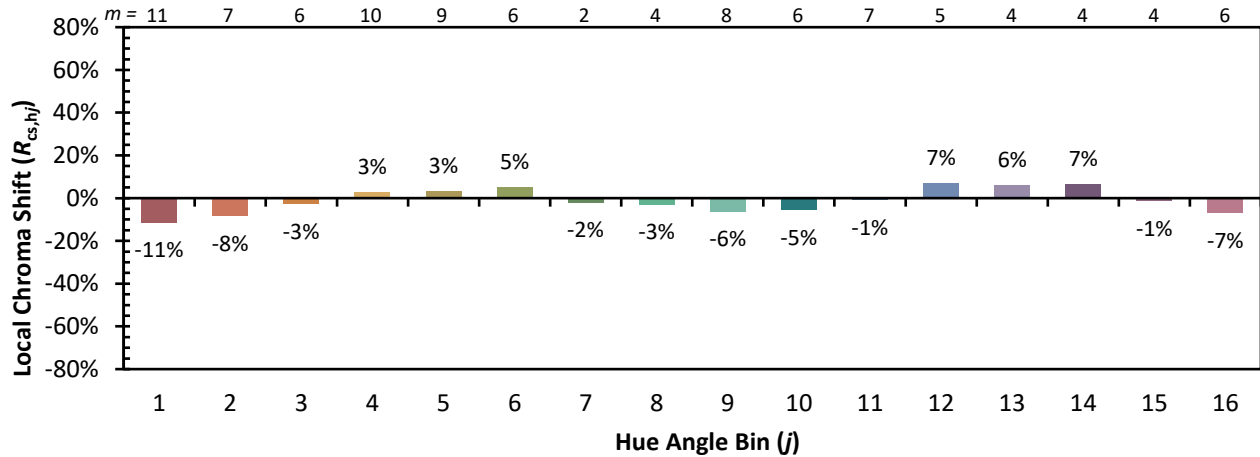


Individual Sample Fidelity Index ($R_{f,i}$)

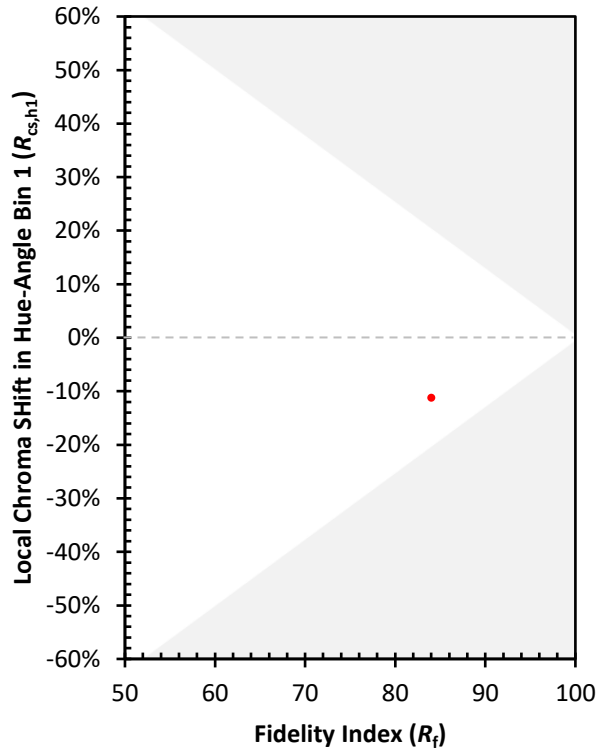
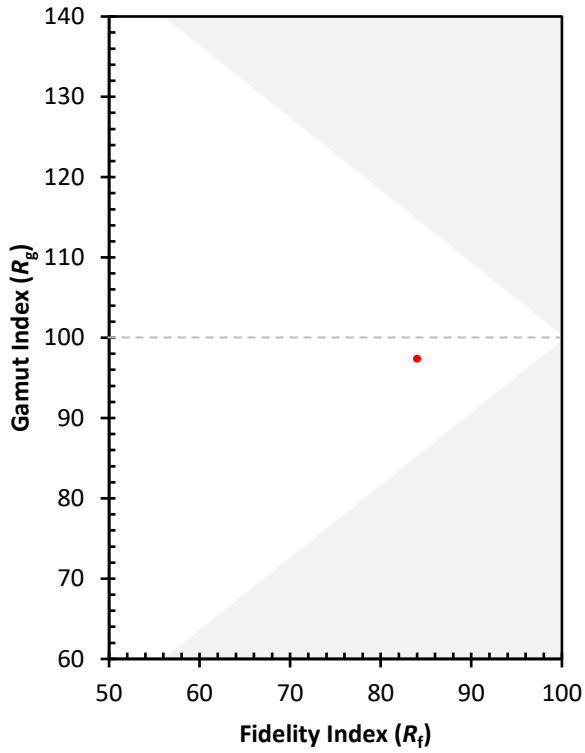
CES01 = 86	CES26 = 80	CES51 = 94	CES76 = 76
CES02 = 63	CES27 = 94	CES52 = 93	CES77 = 84
CES03 = 31	CES28 = 92	CES53 = 88	CES78 = 76
CES04 = 70	CES29 = 82	CES54 = 92	CES79 = 91
CES05 = 50	CES30 = 93	CES55 = 91	CES80 = 89
CES06 = 51	CES31 = 84	CES56 = 87	CES81 = 75
CES07 = 42	CES32 = 77	CES57 = 86	CES82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



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)