

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: P1449905

Luminaire Tested: **TWC60\_T3\_48W\_3000K**

Issue Date: 5/19/2026

**Test Information**

Test Method: LM-79-08  
Report Number: P1449905  
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\_3000K  
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T3 distribution, 48W  
3000K settings  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7438 lumens  
Efficiency: N/A  
Efficacy: 163.1 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 0.42' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

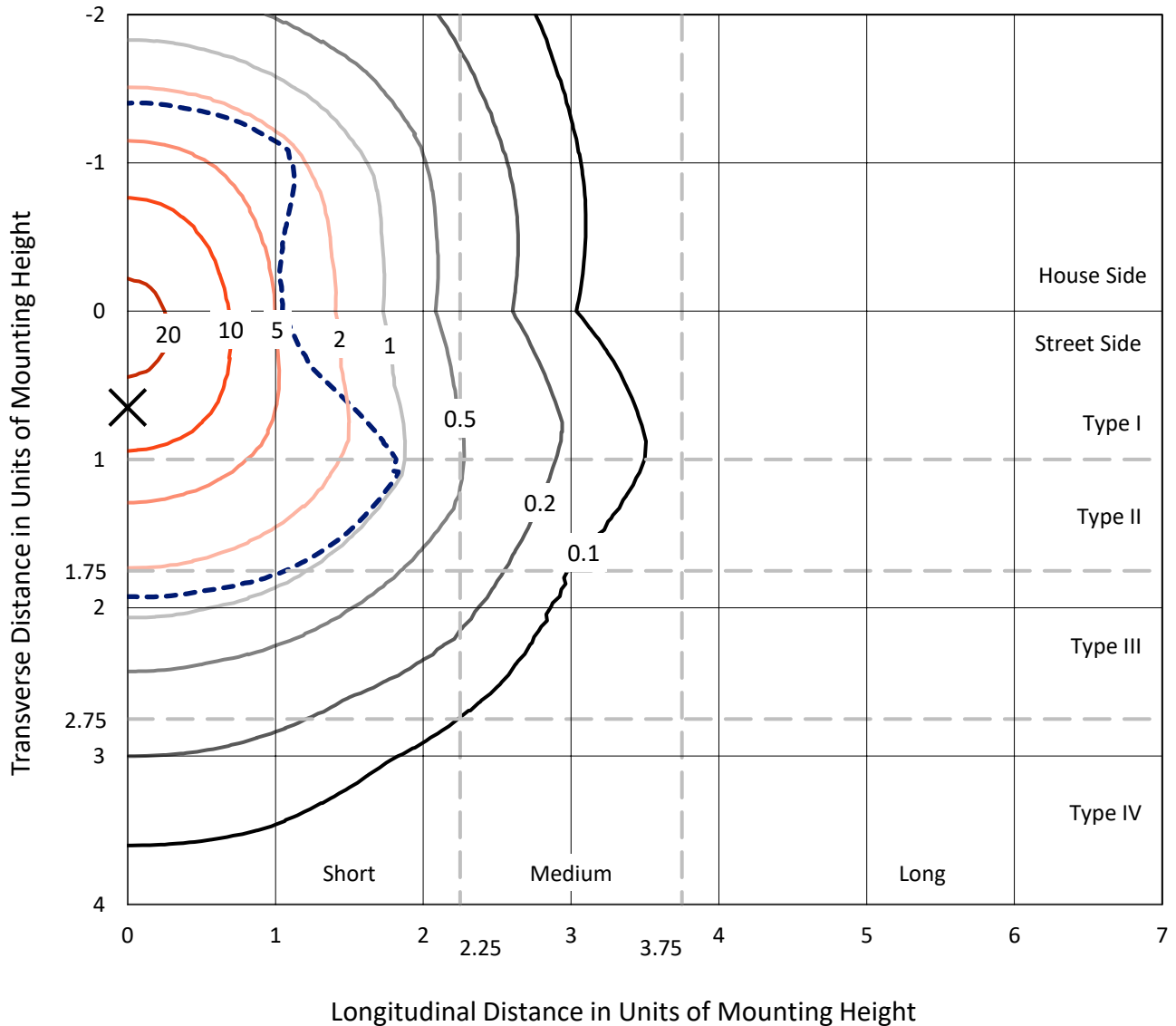
Input Watts (W): 45.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

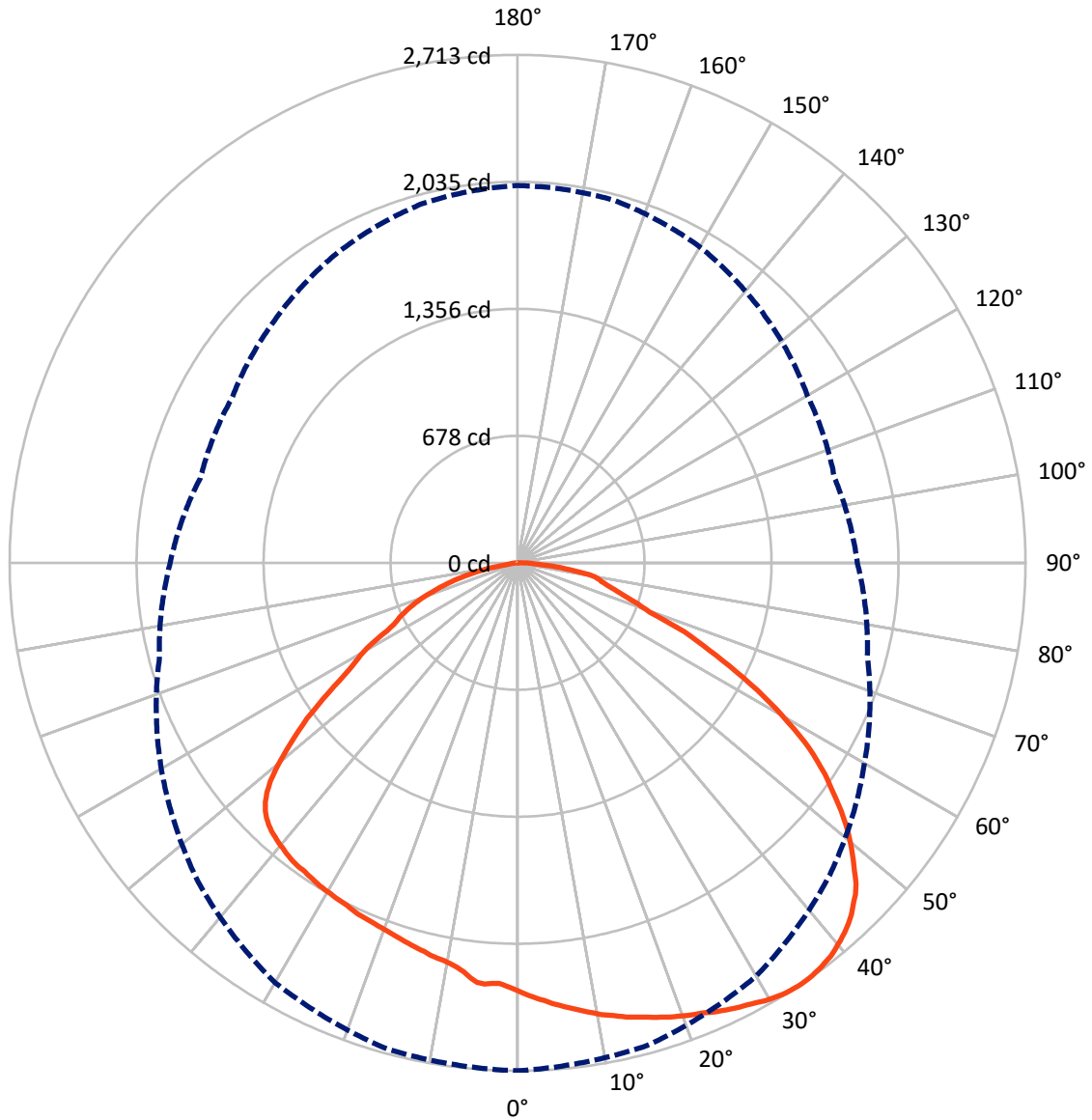
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.5 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



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

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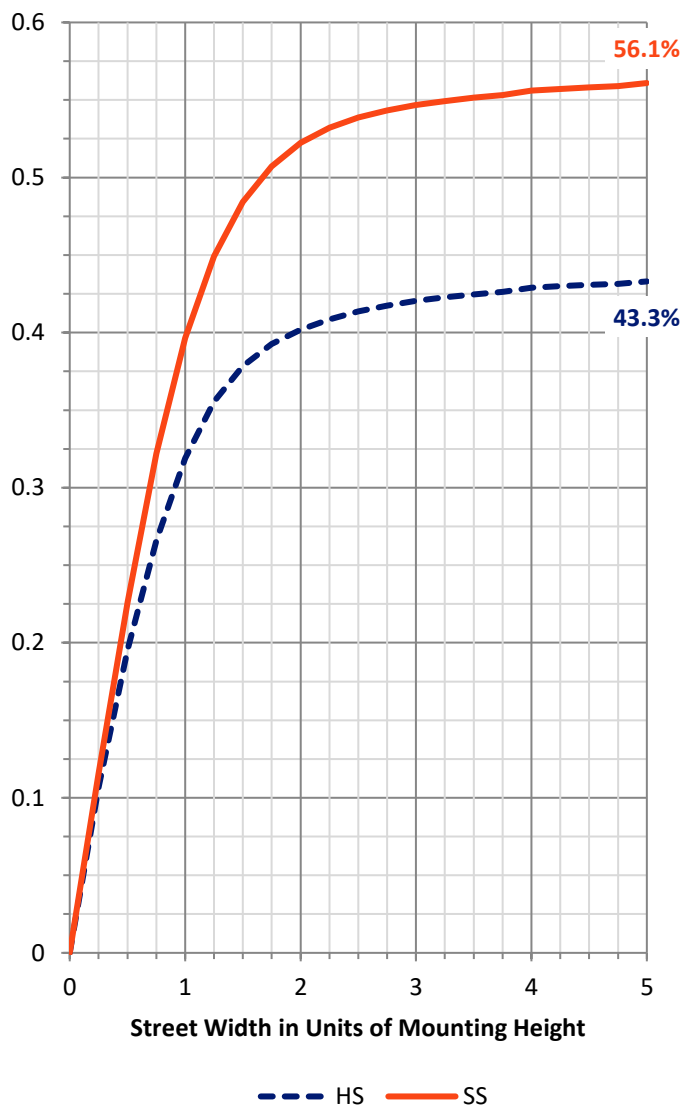
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3239.5	0.0	3239.5
	% Fixture	43.6	0.0	43.6
<b>Street Side</b>	Lumens	4198.5	0.0	4198.5
	% Fixture	56.4	0.0	56.4
<b>Total</b>	Lumens	7438.0	0.0	7438.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.0	2.9
10°-20°	640.3	8.6
20°-30°	1012.0	13.6
30°-40°	1300.3	17.5
40°-50°	1451.9	19.5
50°-60°	1344.7	18.1
60°-70°	929.0	12.5
70°-80°	440.1	5.9
80°-90°	100.7	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	7438.0	100.0
0°-180°	7438.0	100.0

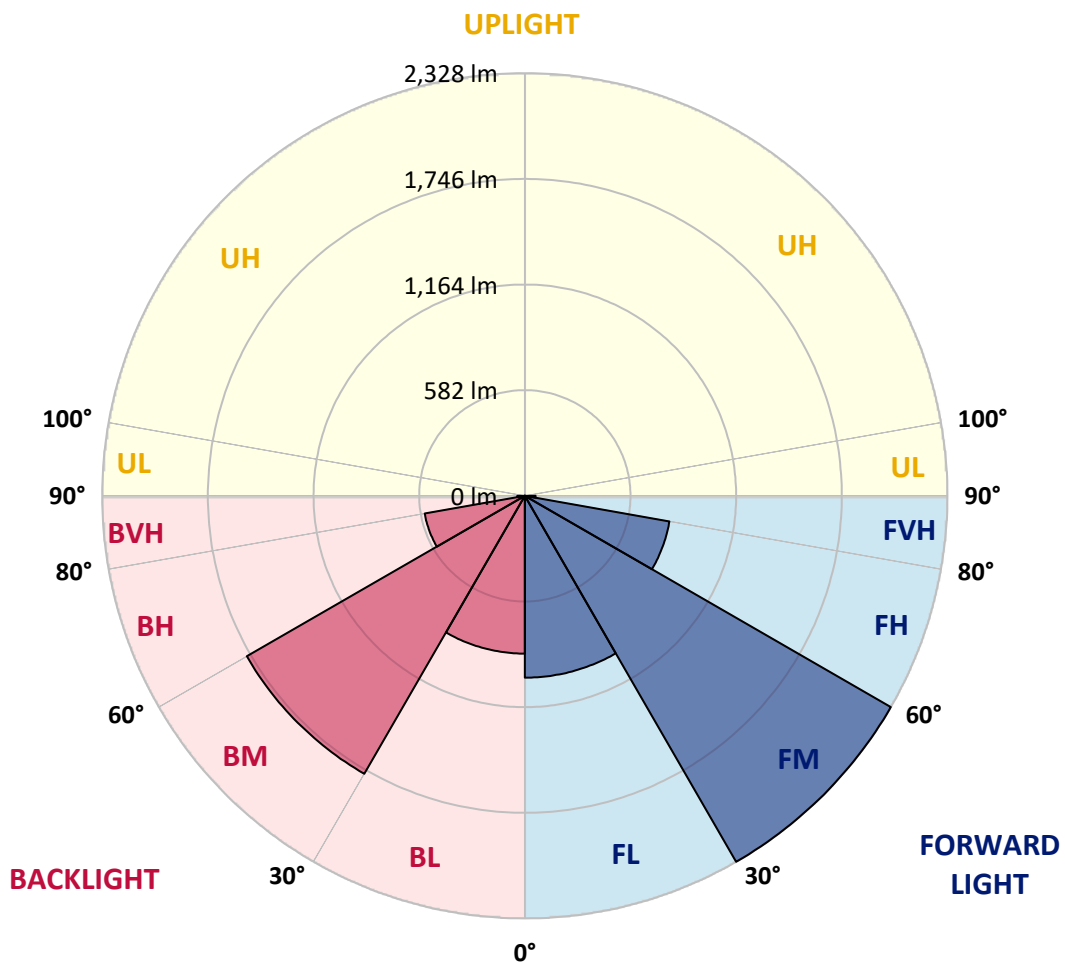


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1001.9	13.5			
FM	(30°-60°)	2328.4	31.3			
FH	(60°-80°)	809.0	10.9			G1/1800
FVH	(80°-90°)	59.2	0.8			G1/100
BL	(0°-30°)	869.4	11.7	B2/1000		
BM	(30°-60°)	1768.6	23.8	B2/2500		
BH	(60°-80°)	560.1	7.5	B2/1000		G2/1000
BVH	(80°-90°)	41.4	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°	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7
1°	2311.2	2311.4	2307.8	2305.0	2303.5	2298.8	2290.4	2287.4	2284.0	2282.7	2276.4
2°	2327.9	2327.1	2323.1	2314.7	2310.2	2301.2	2290.1	2280.4	2272.2	2267.3	2265.1
3°	2342.0	2344.4	2335.4	2327.7	2315.4	2304.6	2286.9	2273.6	2264.1	2254.5	2251.7
4°	2360.7	2360.0	2349.4	2334.6	2322.9	2300.9	2282.5	2263.9	2253.9	2244.4	2248.5
5°	2375.0	2371.9	2362.7	2343.3	2323.5	2301.0	2277.5	2259.3	2245.8	2245.3	2251.6
6°	2391.1	2384.2	2373.0	2353.6	2330.4	2300.5	2268.1	2248.7	2238.6	2250.6	2254.7
7°	2405.1	2398.8	2384.5	2360.5	2331.9	2296.9	2261.9	2238.0	2237.8	2250.9	2243.5
8°	2422.3	2414.8	2394.0	2365.0	2334.0	2296.1	2254.8	2229.2	2237.3	2238.6	2219.6
9°	2437.4	2429.3	2406.7	2374.1	2333.6	2291.0	2246.2	2223.3	2237.2	2222.0	2191.9
10°	2453.5	2442.6	2417.9	2381.5	2334.9	2287.1	2236.8	2216.4	2227.6	2192.4	2175.5
11°	2465.9	2456.3	2428.2	2387.9	2336.3	2283.3	2228.7	2211.2	2213.3	2171.7	2164.6
12°	2479.3	2467.7	2437.7	2390.4	2335.8	2274.6	2217.8	2206.5	2187.9	2155.3	2151.2
13°	2495.2	2481.8	2448.7	2397.2	2334.7	2269.4	2205.6	2198.8	2161.4	2140.9	2140.8
14°	2506.5	2492.9	2453.1	2401.2	2334.7	2263.3	2190.4	2191.6	2141.5	2129.4	2133.2
15°	2518.2	2504.3	2461.0	2403.6	2332.5	2254.3	2177.8	2176.4	2123.2	2115.4	2121.8
16°	2531.6	2512.5	2468.0	2405.6	2327.0	2247.7	2164.1	2163.0	2105.7	2103.9	2111.1
17°	2544.5	2523.1	2473.2	2405.8	2324.6	2235.1	2152.0	2137.9	2090.3	2091.5	2099.8
18°	2558.0	2533.0	2480.9	2402.4	2319.9	2227.2	2137.7	2111.8	2072.5	2077.3	2090.2
19°	2569.0	2544.5	2485.2	2404.2	2315.1	2214.7	2124.4	2086.0	2057.3	2064.1	2079.2
20°	2580.7	2554.9	2492.5	2405.2	2306.6	2202.3	2111.1	2061.7	2040.9	2052.6	2067.5
21°	2591.1	2565.6	2499.4	2404.2	2300.5	2188.2	2099.7	2039.7	2022.8	2036.5	2058.6
22°	2601.5	2572.3	2504.6	2403.9	2288.8	2173.6	2086.0	2019.3	2004.0	2023.2	2048.1
23°	2616.6	2583.7	2507.0	2400.4	2280.6	2160.9	2073.0	1996.9	1987.0	2009.7	2037.3
24°	2628.8	2594.1	2513.0	2399.0	2268.6	2142.8	2059.5	1974.9	1969.3	1994.6	2026.8
25°	2640.6	2603.2	2517.6	2396.8	2258.3	2122.0	2039.0	1952.8	1950.0	1980.4	2018.6
26°	2652.7	2612.2	2522.6	2392.5	2246.6	2103.0	2019.4	1931.5	1928.6	1965.8	2011.8
27°	2660.8	2622.6	2526.1	2388.4	2235.6	2083.8	1998.0	1907.4	1910.9	1951.5	2001.6
28°	2672.6	2631.5	2529.7	2383.2	2219.9	2061.1	1969.5	1882.3	1890.8	1939.8	1992.4
29°	2687.3	2640.0	2532.8	2378.8	2206.4	2037.7	1939.5	1858.4	1872.2	1926.4	1983.0
30°	2695.9	2648.1	2536.3	2372.2	2189.9	2013.2	1910.2	1831.6	1850.2	1909.5	1971.7
31°	2704.7	2657.4	2540.7	2367.4	2175.6	1989.5	1877.0	1805.1	1828.8	1897.2	1964.7
32°	2709.1	2664.0	2543.2	2362.9	2160.4	1961.2	1845.4	1780.0	1808.5	1882.7	1956.4
33°	2712.7	2669.6	2548.6	2357.4	2139.5	1933.9	1814.6	1752.0	1787.3	1867.0	1947.4
34°	2711.8	2670.2	2552.0	2348.9	2123.0	1906.9	1781.5	1722.1	1764.4	1851.7	1937.0
35°	2709.4	2665.9	2549.8	2343.8	2105.1	1877.9	1749.3	1695.6	1743.8	1835.3	1927.6
36°	2702.7	2665.6	2550.1	2337.9	2085.0	1846.2	1718.1	1668.6	1720.9	1822.7	1915.7
37°	2693.7	2655.4	2547.1	2331.8	2067.0	1815.2	1683.5	1639.1	1700.5	1803.9	1905.0
38°	2685.4	2649.2	2540.7	2325.5	2044.7	1785.6	1649.4	1609.1	1675.2	1787.3	1894.0
39°	2670.0	2634.6	2535.6	2319.3	2027.6	1754.5	1614.2	1578.4	1652.5	1767.6	1885.5
40°	2653.8	2617.7	2526.8	2310.5	2008.2	1722.2	1579.6	1548.8	1631.6	1750.4	1876.6
41°	2636.8	2602.5	2516.1	2302.0	1985.8	1692.3	1545.8	1522.1	1605.8	1736.4	1866.3
42°	2615.3	2586.8	2498.4	2293.2	1968.1	1657.7	1512.0	1495.5	1581.1	1722.3	1852.1
43°	2590.7	2562.9	2481.1	2282.5	1951.1	1624.5	1478.1	1467.8	1555.5	1706.6	1841.3
44°	2557.8	2535.6	2461.0	2273.2	1930.1	1591.4	1441.4	1437.2	1533.0	1685.7	1830.8



REPORT NUMBER: P1449905

CATALOG NUMBER: TWC60\_T3\_48W\_3000K

**CANDELA DISTRIBUTION (continued):**

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	2529.3	2507.9	2441.3	2262.4	1910.9	1559.5	1403.4	1405.6	1510.4	1666.4	1818.7
46°	2492.0	2473.4	2417.1	2249.4	1893.4	1528.5	1365.3	1374.5	1487.9	1649.9	1805.4
47°	2441.8	2436.3	2388.6	2234.9	1874.6	1494.2	1325.3	1342.3	1464.3	1635.0	1785.8
48°	2394.4	2393.2	2357.9	2216.0	1857.3	1458.6	1286.3	1309.1	1436.0	1616.3	1764.0
49°	2344.0	2341.6	2324.3	2194.3	1840.3	1423.1	1247.6	1274.6	1409.8	1596.0	1742.7
50°	2294.0	2294.1	2283.7	2171.4	1822.9	1385.6	1207.7	1237.7	1386.2	1574.9	1710.0
51°	2239.3	2240.7	2238.5	2148.5	1807.0	1348.0	1168.2	1200.7	1361.8	1553.5	1669.8
52°	2178.6	2185.8	2189.9	2121.1	1787.7	1309.2	1126.5	1166.3	1335.7	1532.1	1619.7
53°	2113.1	2122.6	2140.9	2092.9	1770.0	1270.7	1087.1	1131.8	1307.6	1510.6	1554.8
54°	2050.4	2058.3	2081.7	2056.4	1752.7	1231.6	1045.3	1096.6	1276.7	1489.1	1490.0
55°	1991.4	1996.2	2020.1	2013.2	1726.8	1193.2	1004.7	1060.7	1246.7	1456.5	1425.1
56°	1921.1	1933.1	1957.3	1968.1	1703.4	1154.5	962.9	1024.4	1216.9	1411.5	1353.4
57°	1849.6	1865.6	1888.7	1920.0	1678.3	1116.6	919.1	988.7	1186.6	1357.7	1276.4
58°	1766.8	1792.5	1824.9	1865.4	1651.3	1077.6	873.1	951.6	1155.0	1293.2	1191.7
59°	1677.5	1711.2	1753.9	1806.4	1622.0	1037.9	831.4	913.6	1121.2	1226.2	1113.8
60°	1587.6	1620.5	1685.1	1737.4	1586.9	998.4	786.5	873.0	1085.8	1157.8	1038.3
61°	1497.9	1533.7	1606.5	1664.0	1546.7	962.1	744.3	831.4	1050.6	1083.4	973.4
62°	1404.1	1439.7	1517.9	1584.3	1505.2	924.9	705.0	792.4	1009.9	1011.0	930.8
63°	1305.8	1343.4	1431.3	1498.3	1460.9	888.9	664.0	753.1	963.0	938.2	887.3
64°	1215.2	1242.8	1348.7	1412.4	1411.8	855.1	624.3	712.4	908.7	868.7	825.3
65°	1124.0	1145.1	1262.1	1319.5	1352.8	822.9	586.9	674.0	848.7	820.6	754.7
66°	1047.1	1052.8	1170.1	1222.2	1285.6	793.7	548.5	633.7	786.0	785.5	701.1
67°	965.0	973.4	1073.9	1125.9	1210.6	766.8	509.5	594.9	718.7	740.4	666.4
68°	859.7	881.6	973.2	1045.1	1122.7	741.9	471.1	556.9	651.0	684.7	639.4
69°	755.2	775.0	873.2	986.9	1029.5	722.2	432.4	518.2	587.2	642.1	611.4
70°	706.4	720.5	756.3	927.0	922.4	702.6	393.2	481.1	535.2	612.1	584.2
71°	659.5	667.9	677.8	845.1	792.1	683.0	354.1	443.3	501.0	583.2	559.4
72°	612.5	615.3	599.7	718.6	675.6	661.3	316.5	402.9	463.7	552.3	533.8
73°	572.7	582.2	521.6	625.2	559.2	629.2	279.8	360.5	428.3	521.8	504.4
74°	536.4	545.9	488.0	532.8	442.8	578.8	245.1	317.0	403.6	492.4	472.6
75°	505.8	505.5	453.4	440.5	476.5	520.3	212.3	271.0	382.8	464.9	438.9
76°	478.9	462.6	422.4	397.1	437.7	465.9	184.1	228.3	359.6	434.6	400.7
77°	458.0	420.3	390.3	373.7	308.3	409.9	155.8	199.1	337.1	407.5	357.5
78°	443.3	386.6	352.9	350.4	223.6	338.1	127.7	169.9	316.3	381.5	317.3
79°	423.3	362.8	319.7	304.0	178.0	268.9	104.7	140.8	294.3	356.2	281.6
80°	388.7	343.5	295.3	245.4	181.4	210.6	84.1	122.5	273.3	324.3	254.3
81°	336.6	321.1	272.5	206.8	187.6	155.6	65.8	104.3	251.2	290.0	225.8
82°	281.6	289.8	249.1	180.6	135.2	110.4	49.7	87.8	228.7	256.6	172.1
83°	231.3	257.8	215.9	157.4	88.1	74.7	36.9	72.1	206.1	231.6	118.2
84°	184.2	228.4	168.1	138.3	71.5	58.2	26.9	57.4	173.2	185.9	45.4
85°	127.6	179.3	129.8	117.6	55.1	41.9	20.3	43.8	140.4	140.2	32.3
86°	88.1	132.4	95.8	80.9	38.6	25.6	13.8	30.9	117.4	94.5	19.2
87°	70.5	77.3	63.7	45.2	27.4	14.8	7.3	21.0	78.0	48.8	6.2
88°	53.0	57.7	47.9	9.5	14.5	6.1	3.4	11.1	52.0	3.2	2.3
89°	35.5	38.6	32.2	5.8	9.6	3.1	1.0	1.4	26.0	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



REPORT NUMBER: P1449905  
 CATALOG NUMBER: TWC60\_T3\_48W\_3000K

**CANDELA DISTRIBUTION (continued):**

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



REPORT NUMBER: P1449905  
CATALOG NUMBER: TWC60\_T3\_48W\_3000K

**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: P1449905

CATALOG NUMBER: TWC60\_T3\_48W\_3000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7	2293.7
1°	2276.7	2275.8	2276.4	2280.5	2283.4	2285.2	2290.0	2292.8	2298.3	2302.2	2305.4
2°	2261.5	2261.5	2265.0	2266.2	2270.6	2276.6	2286.1	2289.6	2299.9	2307.0	2317.1
3°	2249.5	2248.8	2250.9	2253.6	2258.0	2270.8	2279.5	2287.9	2303.2	2314.3	2329.1
4°	2249.4	2250.8	2250.7	2246.8	2248.6	2257.1	2271.1	2287.1	2303.8	2321.4	2337.4
5°	2254.5	2255.9	2253.4	2249.6	2243.5	2249.5	2263.9	2282.9	2305.1	2327.4	2346.0
6°	2251.8	2251.9	2253.9	2251.0	2244.4	2238.7	2255.7	2277.0	2305.1	2331.1	2355.9
7°	2235.3	2230.2	2238.6	2246.1	2245.4	2233.9	2248.3	2269.2	2302.2	2336.5	2364.8
8°	2203.2	2202.7	2208.1	2228.6	2241.6	2230.7	2239.6	2265.1	2303.8	2339.8	2373.4
9°	2185.8	2184.8	2185.0	2200.9	2228.1	2229.3	2227.4	2255.0	2301.0	2344.8	2382.7
10°	2173.7	2170.4	2171.7	2179.3	2205.2	2225.6	2217.9	2247.1	2297.7	2345.9	2390.1
11°	2161.4	2161.3	2161.6	2164.7	2179.0	2219.1	2206.7	2239.5	2293.3	2346.2	2396.7
12°	2152.8	2154.0	2152.4	2149.9	2158.8	2205.8	2199.1	2229.1	2289.7	2350.5	2402.4
13°	2144.5	2146.5	2145.2	2139.7	2143.0	2183.4	2191.1	2220.0	2282.3	2351.1	2410.0
14°	2135.7	2134.5	2135.1	2130.3	2129.3	2156.9	2185.0	2205.2	2279.6	2350.5	2413.3
15°	2126.7	2127.2	2125.5	2118.5	2114.1	2132.7	2176.6	2195.8	2272.7	2347.6	2416.5
16°	2119.0	2118.5	2113.5	2104.1	2100.4	2111.7	2166.9	2181.7	2266.8	2347.0	2420.6
17°	2110.9	2110.1	2106.9	2094.3	2085.1	2092.6	2152.8	2166.6	2257.5	2343.8	2424.3
18°	2100.4	2101.7	2094.3	2082.0	2072.6	2074.7	2136.7	2154.6	2249.7	2341.9	2424.7
19°	2091.7	2094.1	2086.4	2070.9	2055.8	2056.0	2116.6	2137.7	2239.6	2337.2	2426.9
20°	2084.4	2085.9	2078.0	2058.7	2040.5	2038.8	2088.4	2122.8	2228.8	2333.4	2429.0
21°	2076.8	2080.3	2068.6	2047.0	2026.4	2021.6	2064.1	2105.9	2217.9	2324.9	2429.1
22°	2067.5	2073.5	2059.7	2036.9	2010.7	1999.9	2035.1	2091.3	2202.7	2319.1	2431.0
23°	2064.3	2068.6	2052.7	2024.4	1995.7	1980.1	2011.1	2072.6	2188.2	2310.7	2431.5
24°	2058.2	2064.0	2048.0	2012.5	1978.3	1958.4	1989.5	2055.9	2171.8	2301.2	2430.5
25°	2049.2	2060.0	2041.1	2002.2	1962.8	1938.8	1964.1	2038.7	2155.6	2294.9	2428.6
26°	2045.6	2051.7	2034.9	1992.4	1946.7	1919.0	1939.5	2022.7	2137.1	2286.2	2431.5
27°	2036.1	2043.7	2025.6	1982.5	1930.3	1897.1	1916.0	2006.1	2118.8	2275.1	2426.6
28°	2030.9	2040.2	2018.5	1972.7	1913.5	1875.5	1891.3	1991.0	2098.8	2263.9	2425.8
29°	2022.8	2035.7	2008.3	1958.8	1897.6	1852.1	1864.7	1967.3	2075.7	2252.1	2423.4
30°	2018.3	2029.7	2001.6	1949.6	1883.6	1830.6	1839.7	1943.0	2053.0	2239.8	2422.0
31°	2017.2	2026.2	1997.4	1936.7	1868.3	1805.5	1810.1	1918.1	2029.7	2226.0	2419.0
32°	2010.7	2022.4	1991.2	1925.6	1851.1	1782.9	1785.1	1889.0	2004.7	2211.2	2416.1
33°	2003.5	2015.0	1983.9	1915.6	1833.5	1761.2	1753.3	1855.1	1980.6	2197.0	2411.6
34°	1993.0	2009.9	1975.7	1904.5	1812.6	1737.9	1725.9	1817.7	1953.5	2180.6	2410.0
35°	1984.6	2003.0	1967.3	1893.1	1796.1	1712.5	1695.3	1782.9	1928.6	2167.3	2409.2
36°	1980.5	2000.3	1958.3	1882.2	1777.3	1687.7	1666.0	1747.8	1902.5	2151.3	2403.3
37°	1978.0	1997.1	1953.1	1867.1	1759.6	1663.4	1634.4	1712.4	1874.4	2135.9	2402.5
38°	1974.7	1990.9	1949.0	1855.4	1740.0	1638.7	1603.8	1677.8	1848.5	2121.3	2394.4
39°	1965.3	1982.8	1942.5	1843.0	1721.7	1611.9	1573.0	1641.3	1820.3	2104.0	2387.3
40°	1954.5	1972.9	1931.1	1831.6	1699.2	1585.7	1541.5	1606.6	1789.4	2089.6	2381.5
41°	1948.2	1964.7	1920.2	1818.1	1679.5	1558.3	1510.1	1568.4	1760.8	2073.7	2373.4
42°	1936.5	1954.2	1910.4	1802.8	1663.2	1534.9	1478.6	1533.8	1728.2	2058.2	2365.4
43°	1927.3	1944.5	1901.0	1791.4	1644.8	1511.4	1447.0	1496.7	1696.6	2044.6	2354.5
44°	1913.2	1929.9	1888.0	1780.2	1627.5	1487.9	1412.4	1457.1	1665.7	2031.3	2342.6



REPORT NUMBER: P1449905

CATALOG NUMBER: TWC60\_T3\_48W\_3000K

**CANDELA DISTRIBUTION (continued):**

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	1895.6	1912.7	1873.5	1766.1	1606.6	1456.1	1376.8	1416.9	1632.8	2018.5	2326.7
46°	1876.0	1888.0	1854.2	1751.1	1584.5	1425.5	1344.5	1377.4	1599.1	2003.5	2307.4
47°	1850.9	1856.8	1832.9	1736.5	1564.0	1396.5	1309.2	1336.9	1565.2	1990.0	2289.5
48°	1814.1	1815.3	1800.5	1718.5	1545.5	1369.6	1275.8	1296.5	1533.8	1976.1	2266.1
49°	1769.2	1762.8	1761.9	1700.0	1525.3	1341.5	1239.2	1256.2	1498.6	1960.4	2244.2
50°	1710.6	1698.8	1713.8	1675.0	1505.0	1312.0	1202.9	1214.9	1466.1	1947.2	2217.2
51°	1643.2	1623.9	1653.1	1647.6	1484.7	1282.5	1165.9	1175.6	1436.4	1931.7	2187.9
52°	1571.1	1548.6	1583.7	1607.9	1459.3	1253.3	1127.6	1134.0	1404.9	1912.3	2152.0
53°	1499.0	1473.2	1514.4	1553.9	1434.7	1226.7	1088.5	1090.7	1373.2	1888.2	2111.0
54°	1426.6	1397.8	1444.8	1499.9	1410.8	1197.2	1049.5	1049.0	1343.4	1864.8	2065.9
55°	1342.2	1310.4	1366.7	1445.6	1384.1	1164.1	1012.2	1004.6	1314.4	1841.3	2020.7
56°	1255.8	1224.6	1280.1	1374.5	1356.2	1131.4	975.2	960.0	1286.5	1812.7	1968.4
57°	1170.2	1141.0	1195.7	1303.6	1321.8	1096.1	934.4	915.9	1258.4	1779.5	1909.3
58°	1090.1	1068.2	1112.6	1227.7	1278.7	1060.3	893.5	872.5	1230.3	1746.8	1847.3
59°	1029.4	1016.5	1041.9	1147.7	1227.2	1026.5	853.5	830.2	1202.3	1705.2	1777.1
60°	983.1	973.2	988.0	1070.3	1165.1	990.0	813.7	788.8	1175.9	1662.9	1703.4
61°	936.8	921.9	945.3	993.2	1100.3	954.6	774.5	746.1	1144.5	1616.5	1629.2
62°	880.1	857.9	895.0	933.2	1030.7	918.3	733.9	705.5	1116.0	1565.6	1552.0
63°	805.7	784.5	826.5	891.0	955.5	878.0	691.2	664.9	1085.8	1504.7	1471.0
64°	745.0	737.8	755.6	848.7	883.0	838.9	649.5	624.3	1057.2	1434.7	1382.8
65°	712.4	710.8	712.7	791.2	812.5	798.1	608.5	585.2	1030.2	1357.9	1287.9
66°	685.7	683.8	683.4	724.0	751.5	750.2	566.7	544.4	1004.4	1273.3	1197.7
67°	660.2	654.8	659.2	677.5	711.0	693.1	526.8	502.9	976.3	1182.5	1123.1
68°	630.7	622.6	631.8	642.3	677.9	631.8	487.3	461.1	944.0	1079.7	1052.9
69°	598.7	587.1	603.2	611.1	631.5	570.7	449.6	417.9	901.9	964.8	981.6
70°	565.4	550.3	574.0	580.7	590.2	506.7	412.1	376.3	853.1	833.7	893.6
71°	527.5	508.3	540.4	552.1	562.5	447.2	375.6	334.9	792.4	720.5	778.8
72°	487.2	468.6	503.4	528.0	538.9	397.8	341.6	295.1	731.6	674.9	680.7
73°	448.8	432.1	464.1	504.0	512.0	363.7	306.9	259.0	666.1	631.0	582.7
74°	408.8	391.6	425.0	479.7	485.0	330.1	274.1	225.3	600.5	619.7	484.6
75°	369.6	350.4	384.0	454.1	459.4	301.8	239.1	193.3	535.0	487.9	446.4
76°	327.0	305.9	345.3	425.3	432.9	280.3	206.1	164.9	451.1	356.5	412.1
77°	286.5	264.3	306.3	392.1	405.3	259.3	175.3	139.4	340.4	289.9	383.4
78°	250.5	225.1	271.2	351.7	375.8	237.6	144.6	117.8	254.6	246.9	343.5
79°	204.0	177.0	236.9	308.2	346.2	217.5	118.3	98.6	176.1	241.7	292.8
80°	157.6	128.9	185.0	271.9	315.8	198.2	98.2	81.1	131.4	243.6	246.9
81°	111.1	80.9	133.0	244.3	284.0	178.0	81.8	66.3	113.7	182.8	215.3
82°	58.6	45.8	81.2	221.9	251.5	157.7	67.7	51.6	101.5	121.2	191.2
83°	36.3	35.3	38.7	160.5	218.0	137.4	54.2	36.9	83.1	96.3	171.1
84°	26.4	25.5	26.9	99.8	181.6	116.6	41.8	26.8	65.4	79.1	147.4
85°	19.3	18.6	19.7	68.4	145.1	95.0	30.9	18.9	47.7	66.1	111.9
86°	12.1	11.8	12.5	37.0	108.6	71.7	22.5	12.3	30.0	53.2	60.4
87°	5.1	5.0	5.3	6.3	72.4	53.3	14.0	6.9	17.6	40.3	36.7
88°	2.1	2.0	2.1	2.1	36.2	35.7	5.6	3.7	6.8	16.8	13.4
89°	0.7	0.7	0.7	0.7	0.8	18.1	0.9	0.6	3.4	11.0	8.7



REPORT NUMBER: P1449905  
 CATALOG NUMBER: TWC60\_T3\_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: P1449905  
 CATALOG NUMBER: TWC60\_T3\_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: P1449905  
CATALOG NUMBER: TWC60\_T3\_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: P1449905  
 CATALOG NUMBER: TWC60\_T3\_48W\_3000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
0°	2293.7	2293.7	2293.7
1°	2306.2	2309.1	2311.2
2°	2322.7	2327.3	2327.9
3°	2335.3	2343.9	2342.0
4°	2349.3	2356.0	2360.7
5°	2362.3	2372.2	2375.0
6°	2373.4	2388.9	2391.1
7°	2386.6	2400.4	2405.1
8°	2400.3	2416.9	2422.3
9°	2412.1	2433.4	2437.4
10°	2424.9	2446.8	2453.5
11°	2435.6	2460.3	2465.9
12°	2445.9	2471.5	2479.3
13°	2457.2	2483.4	2495.2
14°	2462.8	2497.0	2506.5
15°	2472.7	2507.8	2518.2
16°	2481.1	2520.5	2531.6
17°	2486.9	2529.2	2544.5
18°	2496.7	2543.1	2558.0
19°	2504.9	2552.6	2569.0
20°	2509.8	2563.6	2580.7
21°	2517.5	2574.2	2591.1
22°	2524.5	2587.3	2601.5
23°	2529.5	2597.8	2616.6
24°	2536.0	2610.1	2628.8
25°	2542.5	2618.8	2640.6
26°	2550.6	2629.6	2652.7
27°	2554.9	2640.3	2660.8
28°	2560.6	2651.1	2672.6
29°	2567.5	2657.6	2687.3
30°	2572.2	2668.8	2695.9
31°	2579.7	2676.9	2704.7
32°	2584.7	2682.9	2709.1
33°	2589.3	2688.2	2712.7
34°	2591.9	2687.4	2711.8
35°	2591.4	2684.1	2709.4
36°	2589.0	2682.0	2702.7
37°	2587.0	2672.4	2693.7
38°	2579.4	2660.8	2685.4
39°	2574.0	2646.2	2670.0
40°	2560.2	2632.4	2653.8
41°	2543.7	2614.1	2636.8
42°	2527.2	2595.9	2615.3
43°	2507.1	2574.5	2590.7
44°	2488.6	2544.3	2557.8



REPORT NUMBER: P1449905  
CATALOG NUMBER: TWC60\_T3\_48W\_3000K

**CANDELA DISTRIBUTION (continued):**

	330°	345°	360°
45°	2468.7	2512.6	2529.3
46°	2439.8	2480.0	2492.0
47°	2406.4	2438.4	2441.8
48°	2373.7	2389.6	2394.4
49°	2331.3	2339.2	2344.0
50°	2287.9	2290.1	2294.0
51°	2237.4	2234.7	2239.3
52°	2185.6	2178.2	2178.6
53°	2131.4	2115.3	2113.1
54°	2070.1	2053.4	2050.4
55°	2007.3	1990.1	1991.4
56°	1940.8	1926.1	1921.1
57°	1874.7	1857.0	1849.6
58°	1809.5	1778.5	1766.8
59°	1738.5	1690.1	1677.5
60°	1661.4	1601.4	1587.6
61°	1574.7	1511.2	1497.9
62°	1485.5	1419.6	1404.1
63°	1401.7	1321.6	1305.8
64°	1314.7	1226.9	1215.2
65°	1217.8	1131.8	1124.0
66°	1122.0	1047.3	1047.1
67°	1023.8	968.2	965.0
68°	923.1	871.6	859.7
69°	821.6	763.3	755.2
70°	713.1	713.8	706.4
71°	640.1	664.7	659.5
72°	568.1	615.7	612.5
73°	537.1	578.0	572.7
74°	508.6	538.7	536.4
75°	480.2	499.0	505.8
76°	449.4	460.3	478.9
77°	413.1	427.8	458.0
78°	374.7	405.2	443.3
79°	343.3	389.5	423.3
80°	316.1	371.9	388.7
81°	288.6	339.3	336.6
82°	252.4	297.3	281.6
83°	208.4	258.1	231.3
84°	163.9	217.7	184.2
85°	140.2	161.7	127.6
86°	104.4	112.0	88.1
87°	68.2	89.2	70.5
88°	51.3	67.0	53.0
89°	34.4	44.9	35.5



REPORT NUMBER: P1449905  
CATALOG NUMBER: TWC60\_T3\_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: P1449905  
CATALOG NUMBER: TWC60\_T3\_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

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

Scaled Data Report



REPORT NUMBER: P1449905  
CATALOG NUMBER: TWC60\_T3\_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

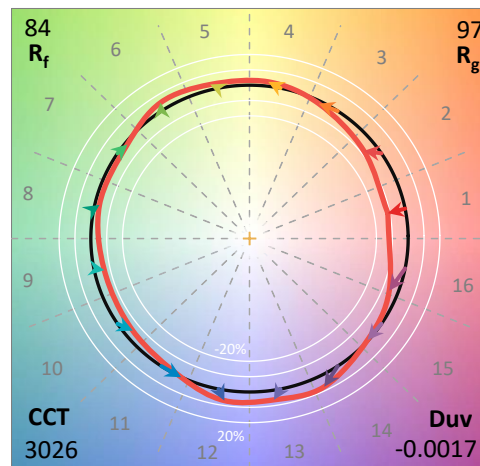
**Test Information**

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**

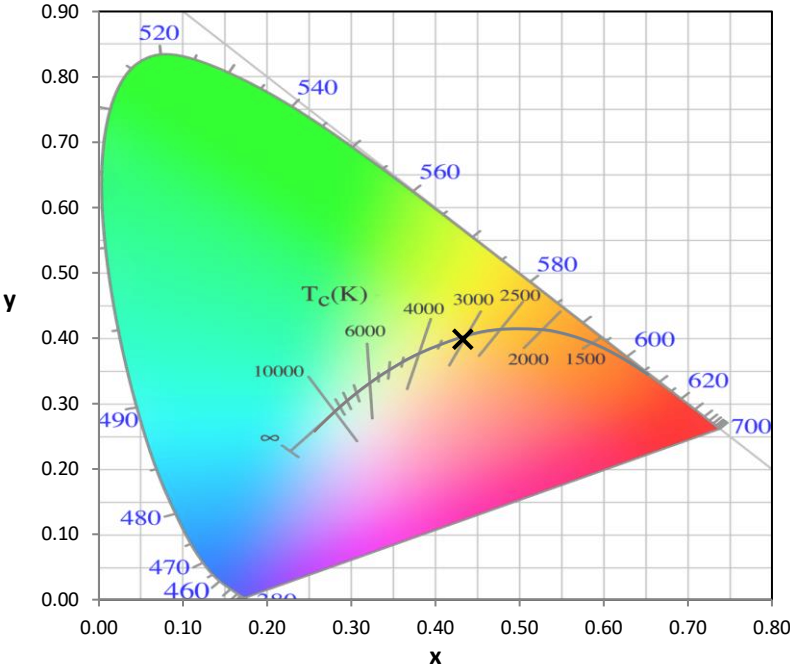
Stabilization Time: 64M  
 Operation Time: 2H 4M  
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-1

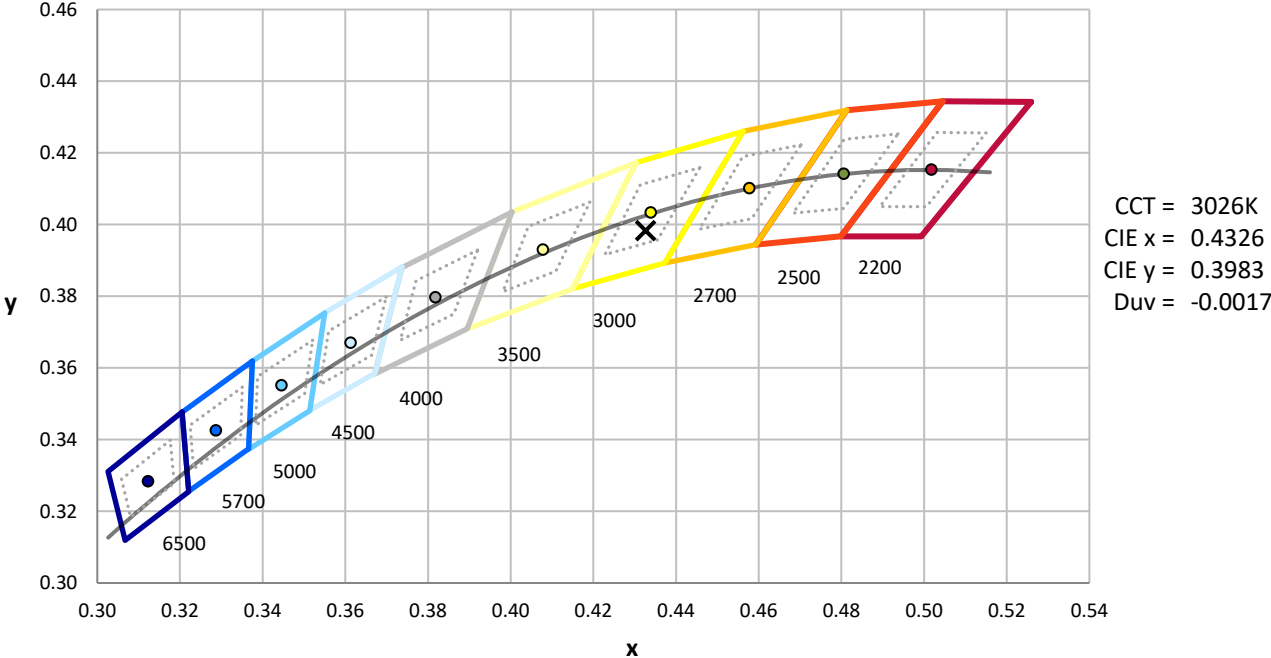
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208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



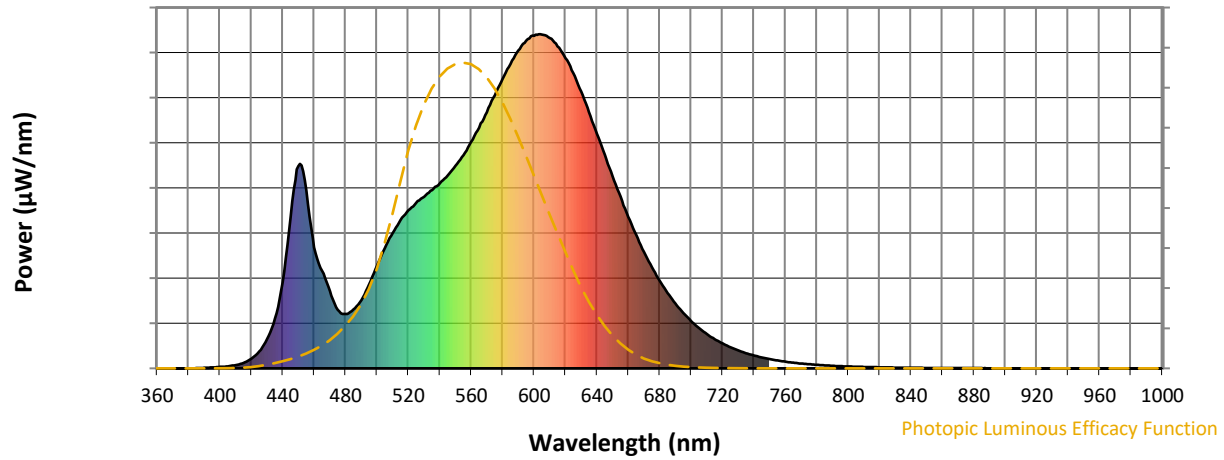
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-1

**Photopic Flux vs. Wavelength**

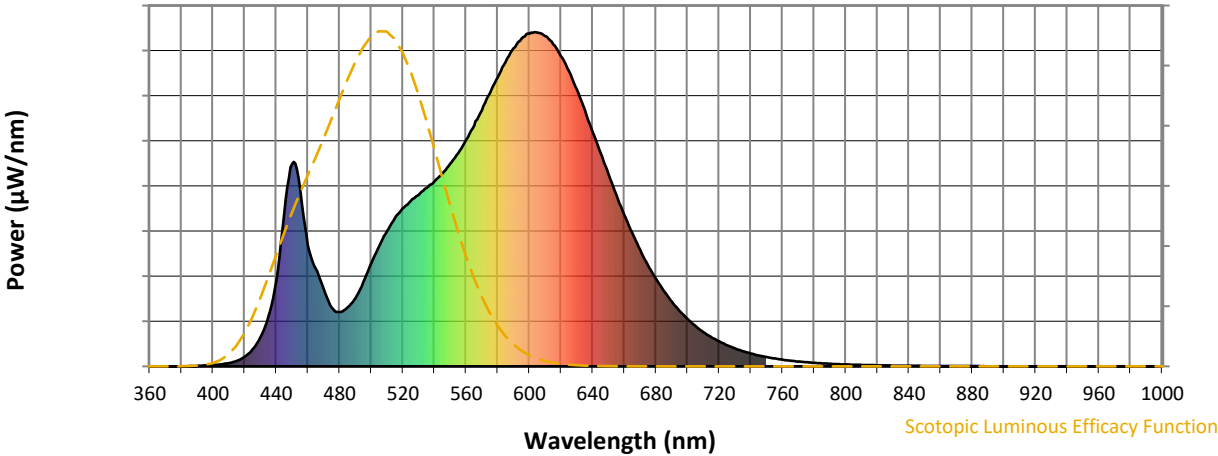


**Photopic Lumens: NR**

$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)	$\lambda$ (nm)	Power W <sup>^</sup> /nm	Lumens ( $\phi$ /nm)
360	0	NR	490	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

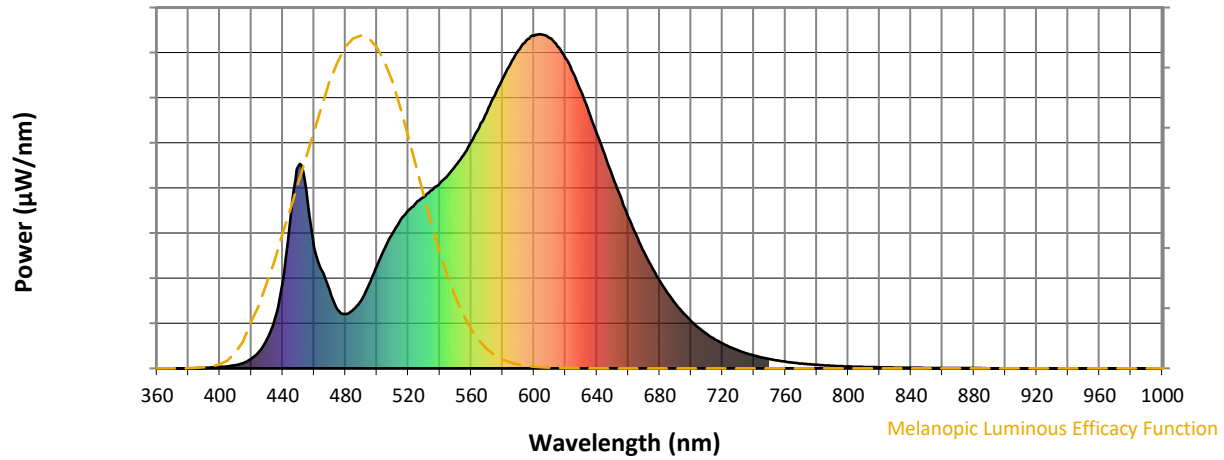


Scotopic Lumens: NR S/P: 1.35

λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	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



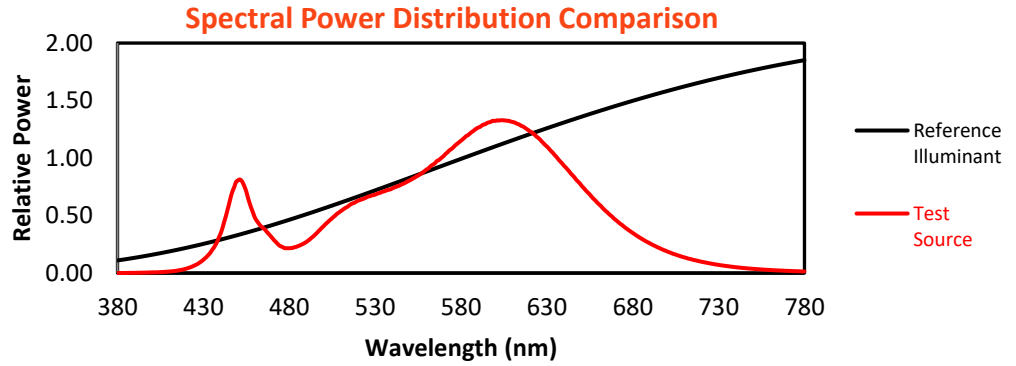
Melanopic Lumens: NR

M/P: 2.61

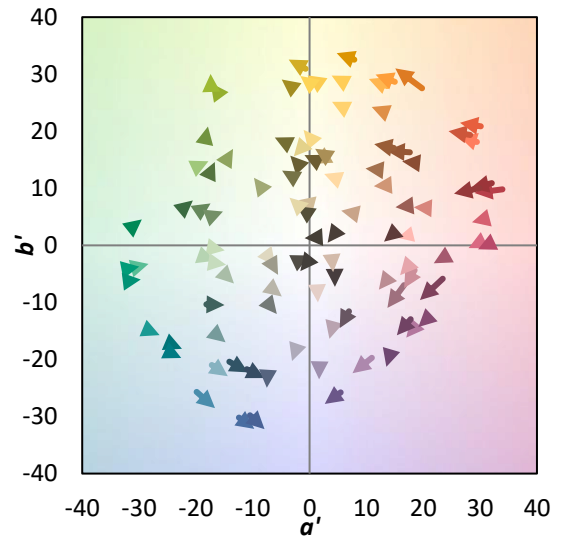
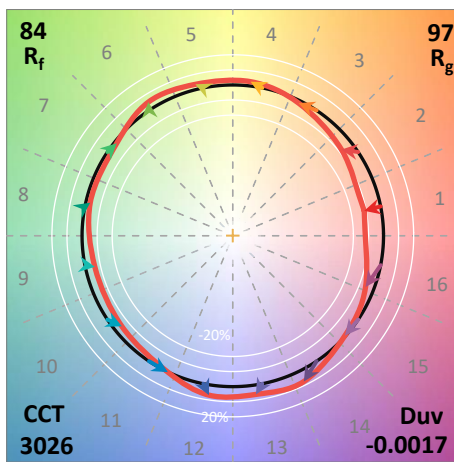
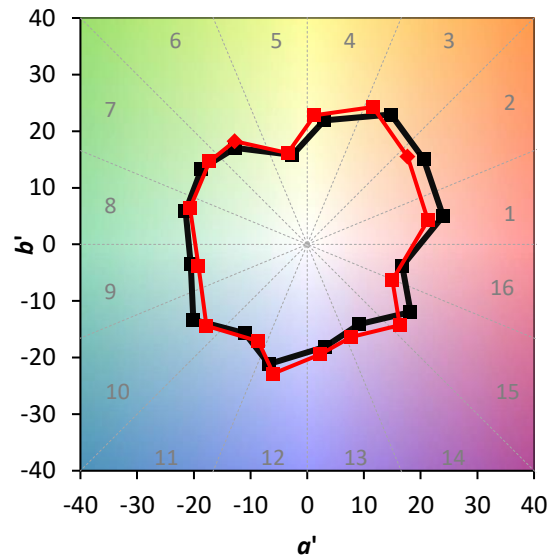
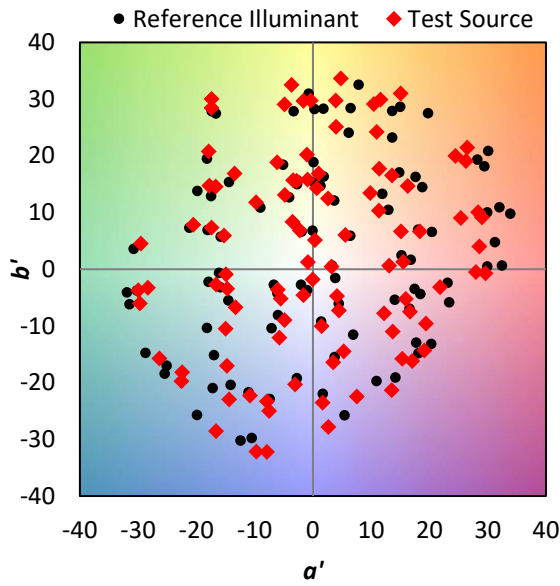
λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)	λ (nm)	Power W <sup>^</sup> /nm	Lumens (φ/nm)
360	0	NR	490	204	NR	620	928	NR	750	28	NR	880	1	NR
365	0	NR	495	251	NR	625	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**

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

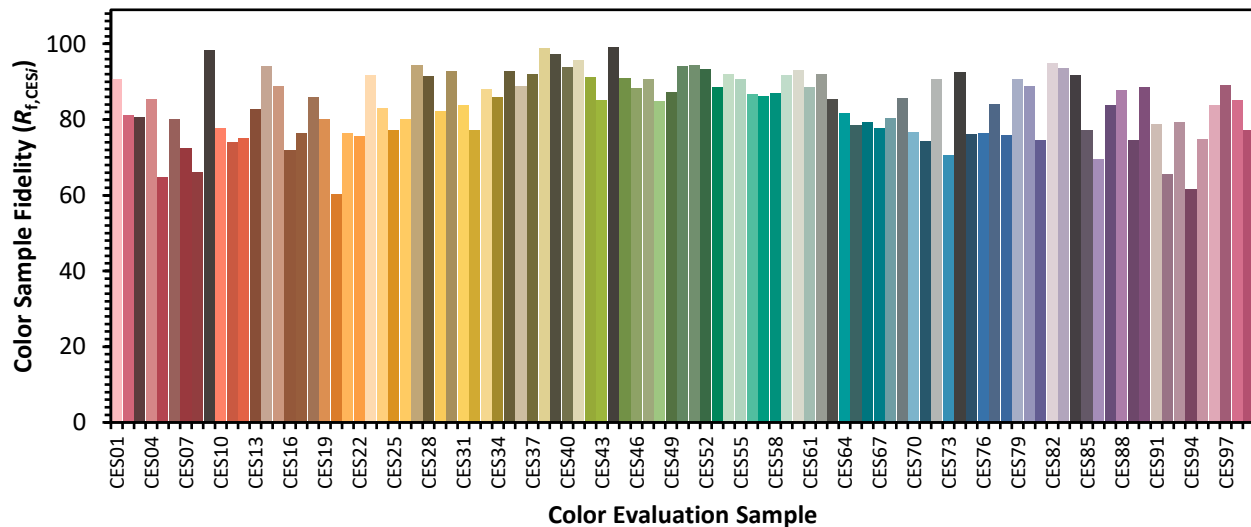


**Color Vector Graphics**

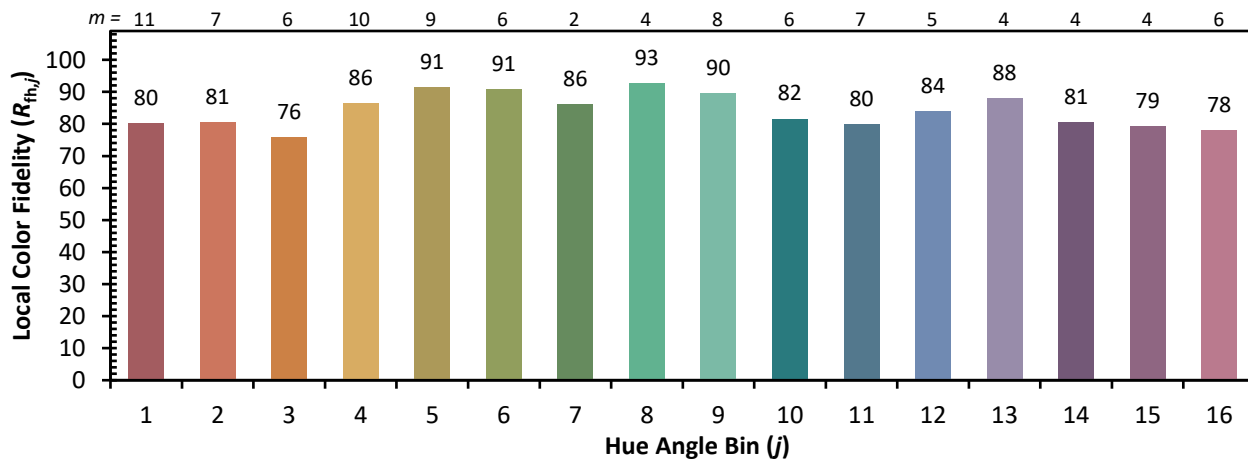
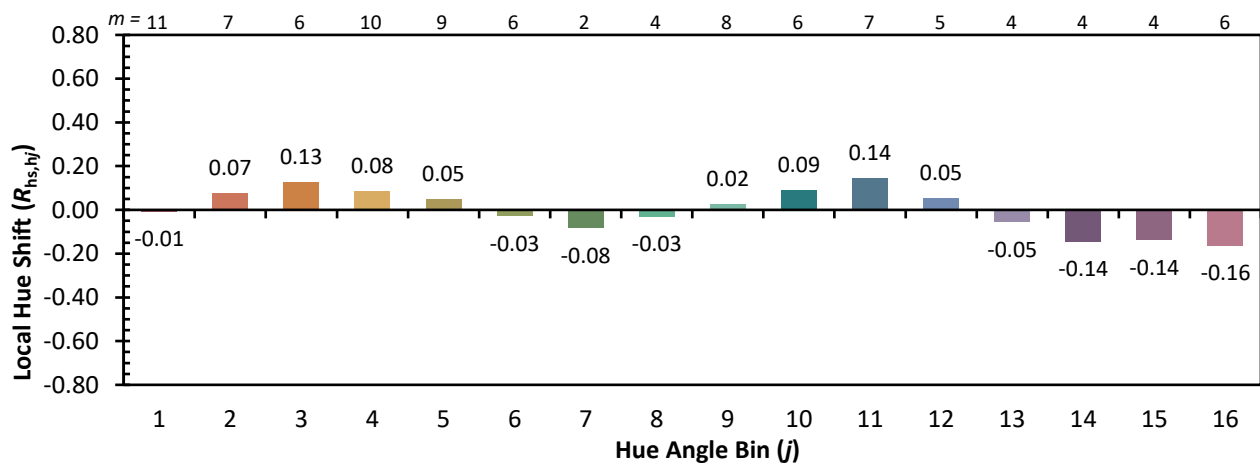
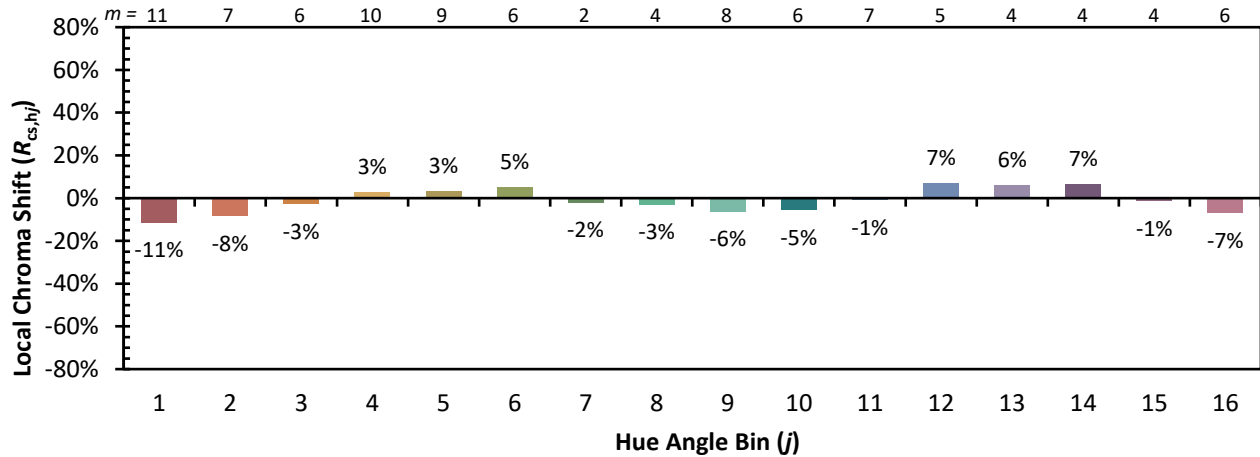


Individual Sample Fidelity Index ( $R_{f,i}$ )

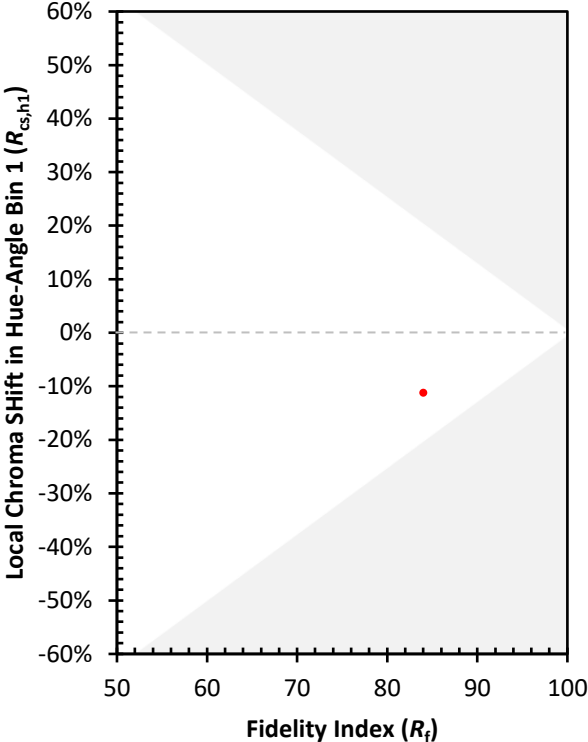
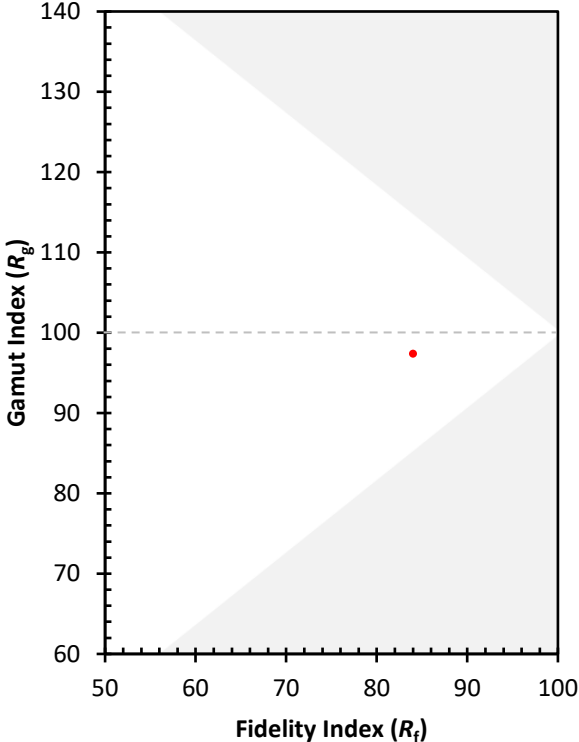
CES01 = 86	CES26 = 80	CES51 = 94	CES76 = 76
CES02 = 63	CES27 = 94	CES52 = 93	CES77 = 84
CES03 = 31	CES28 = 92	CES53 = 88	CES78 = 76
CES04 = 70	CES29 = 82	CES54 = 92	CES79 = 91
CES05 = 50	CES30 = 93	CES55 = 91	CES80 = 89
CES06 = 51	CES31 = 84	CES56 = 87	CES81 = 75
CES07 = 42	CES32 = 77	CES57 = 86	CES82 = 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)