

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: P1449919

Luminaire Tested: **TWC60_T4_48W_5000K**

Issue Date: 5/19/2026

Test Information

Test Method: LM-79-08
Report Number: P1449919
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_5000K
Description: Tapered Wall Cutoff Wall Mount Luminaire at, T4 distribution, 48W
5000K settings
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7301 lumens
Efficiency: N/A
Efficacy: 154.0 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 0.42' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

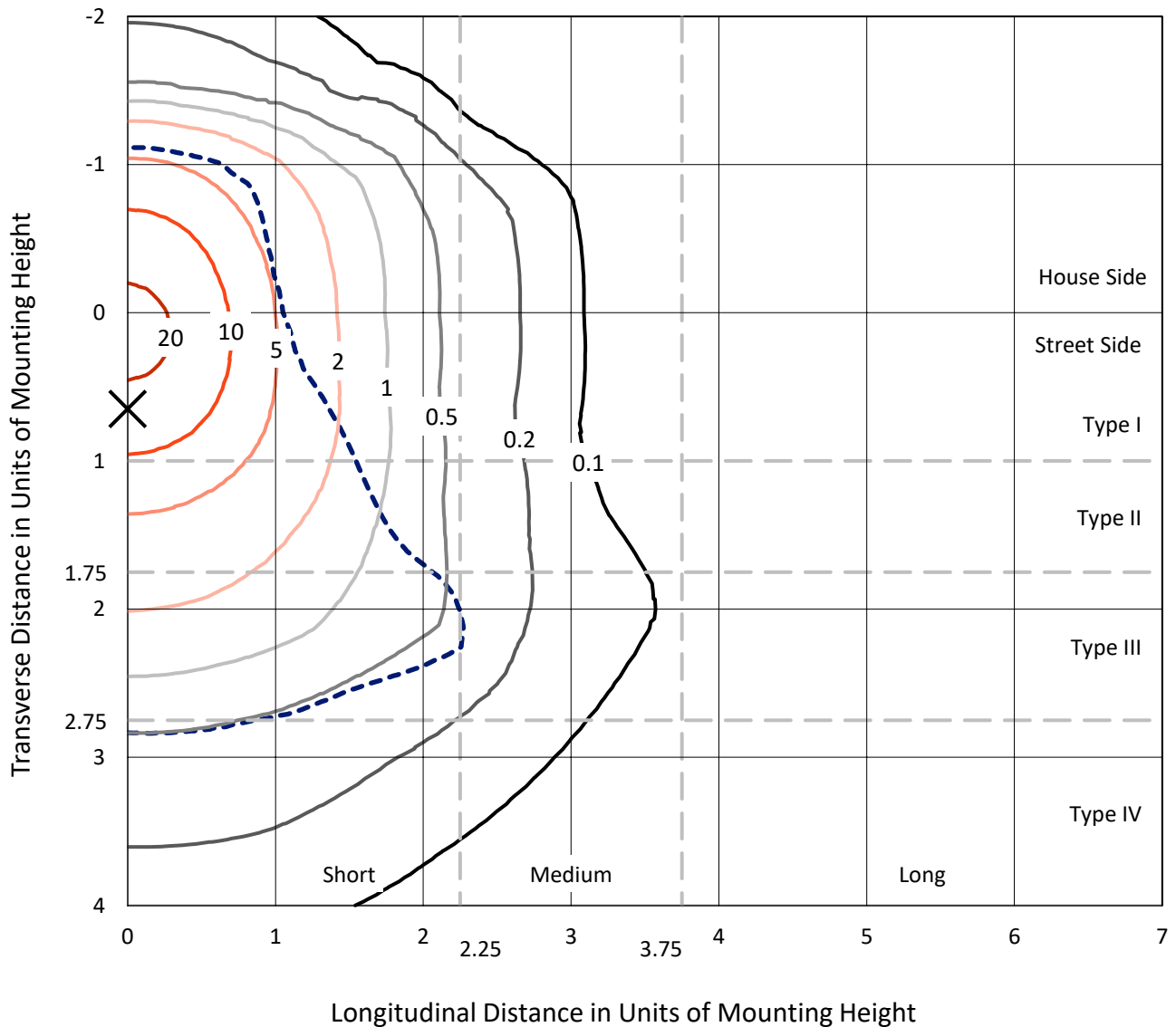
Input Watts (W): 47.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

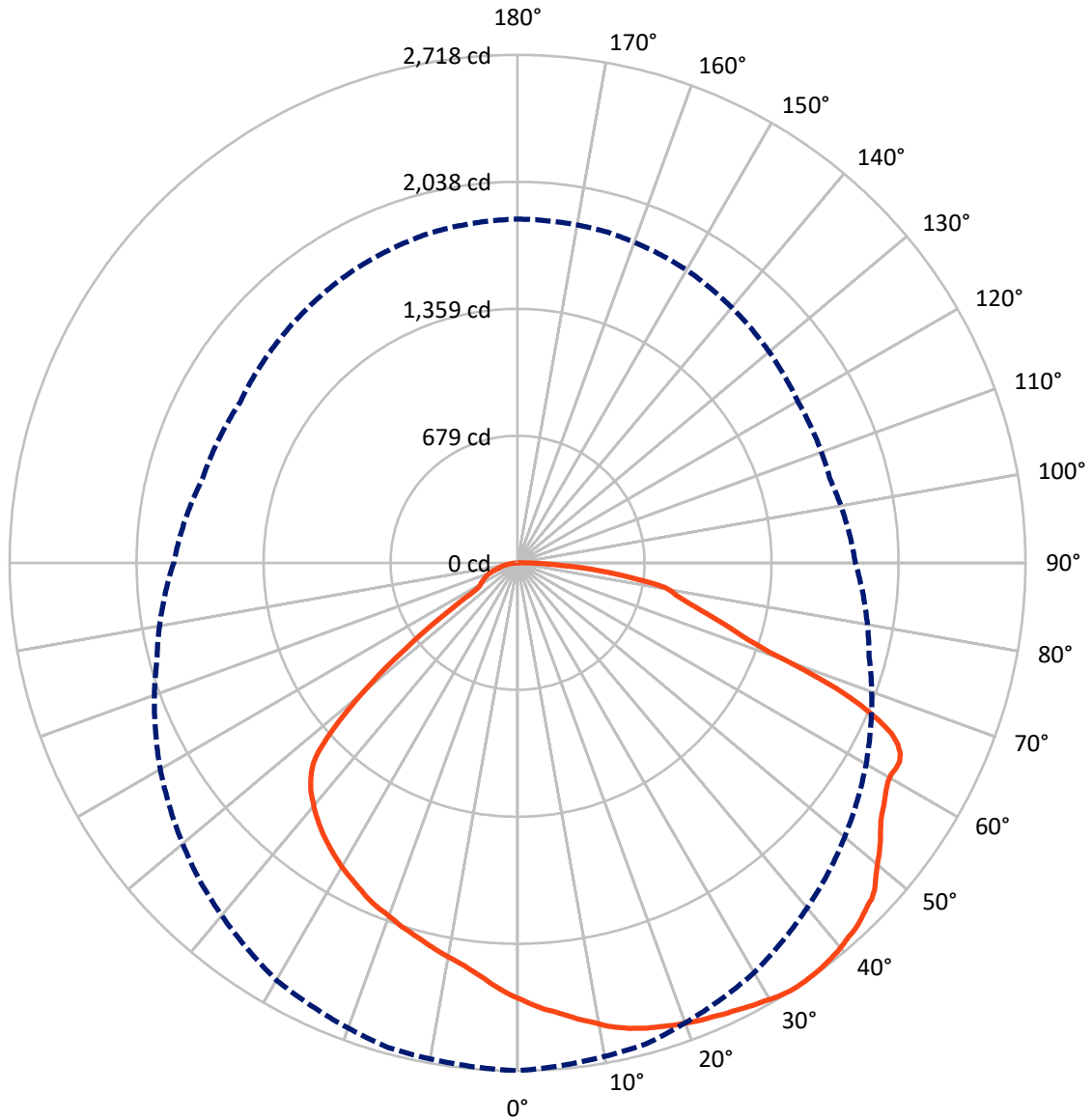
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 24.1 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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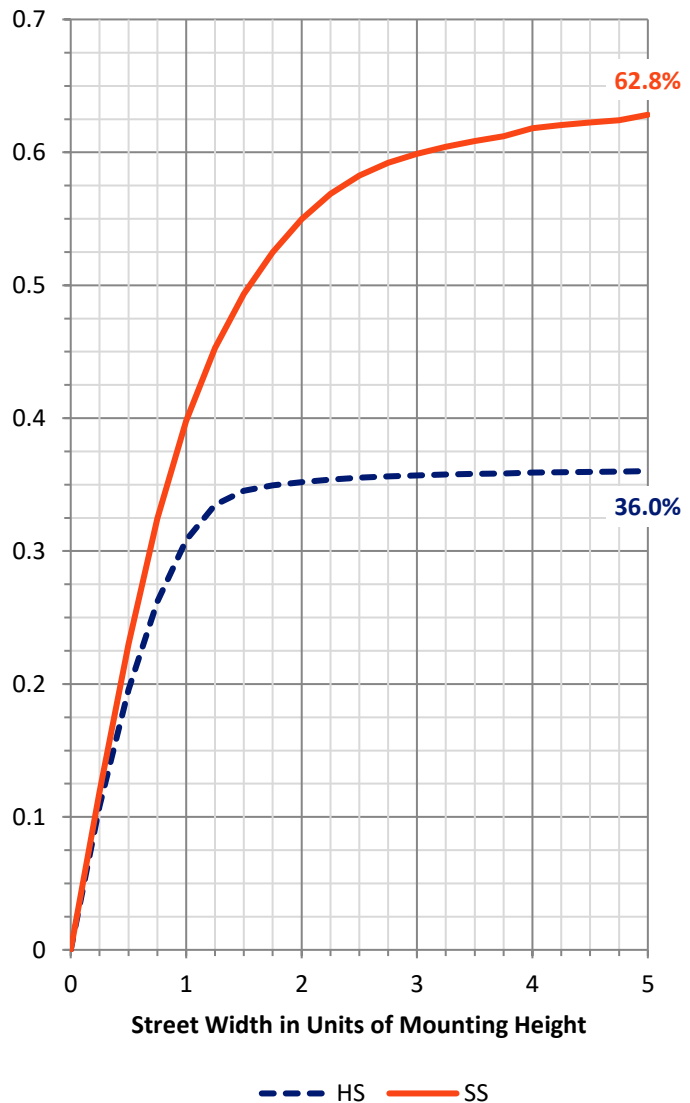
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2647.2	0.0	2647.2
	% Fixture	36.3	0.0	36.3
Street Side	Lumens	4653.8	0.0	4653.8
	% Fixture	63.7	0.0	63.7
Total	Lumens	7301.0	0.0	7301.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.5	3.0
10°-20°	644.0	8.8
20°-30°	1004.2	13.8
30°-40°	1267.3	17.4
40°-50°	1385.7	19.0
50°-60°	1227.2	16.8
60°-70°	928.9	12.7
70°-80°	484.7	6.6
80°-90°	137.6	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°	7301.0	100.0
0°-180°	7301.0	100.0

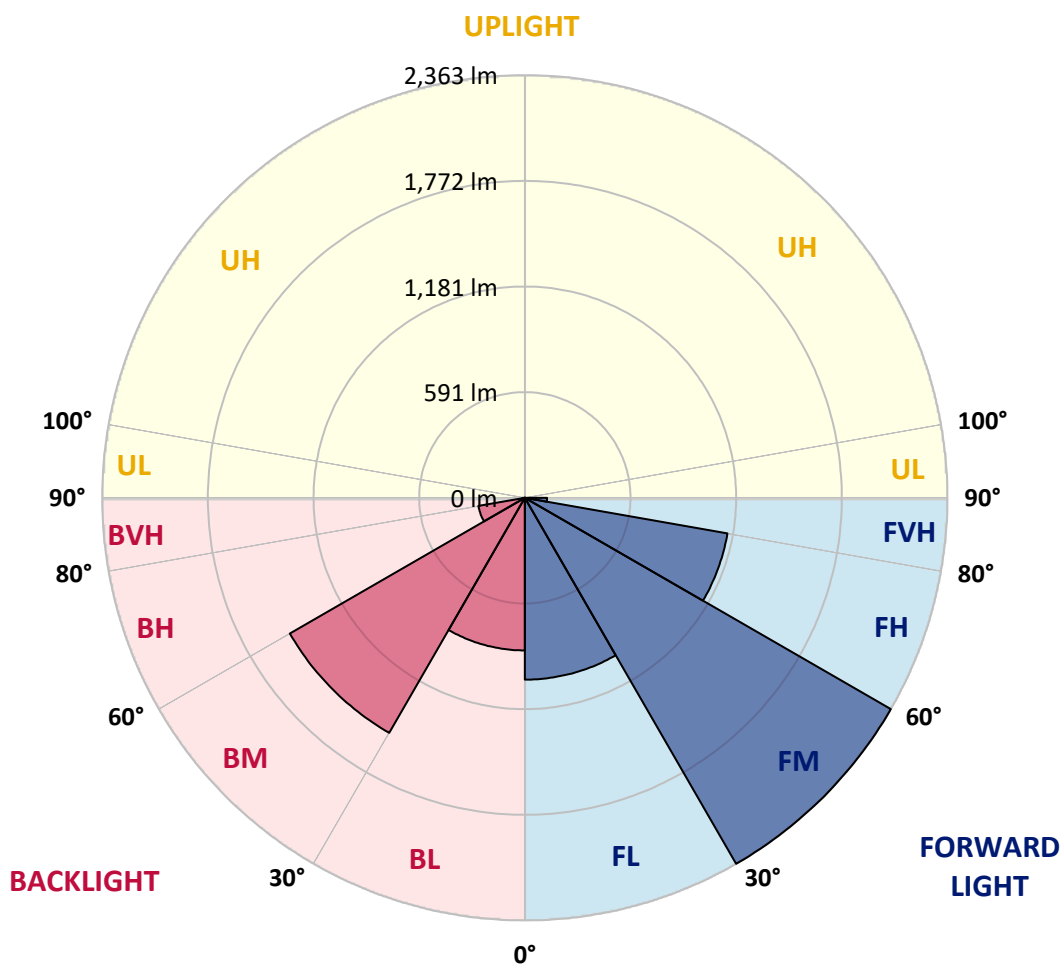


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1016.4	13.9			
FM (30°-60°)	2362.8	32.4			
FH (60°-80°)	1150.3	15.8			G1/1800
FVH (80°-90°)	124.3	1.7			G2/225
BL (0°-30°)	853.2	11.7	B2/1000		
BM (30°-60°)	1517.3	20.8	B2/2500		
BH (60°-80°)	263.4	3.6	B1/500		G1/500
BVH (80°-90°)	13.3	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°	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1
1°	2356.7	2354.6	2351.5	2348.2	2344.2	2339.7	2335.0	2329.9	2325.4	2321.9	2319.4
2°	2375.5	2373.6	2369.2	2361.9	2350.4	2341.8	2332.7	2323.3	2314.8	2307.8	2302.9
3°	2393.5	2389.9	2384.0	2374.3	2360.5	2343.8	2329.1	2316.0	2304.1	2293.7	2286.2
4°	2407.1	2405.1	2396.4	2383.7	2366.8	2344.1	2324.5	2308.0	2291.7	2277.3	2266.7
5°	2424.4	2420.3	2409.4	2392.7	2371.7	2344.7	2319.5	2298.4	2277.8	2258.6	2243.9
6°	2441.2	2435.7	2422.3	2401.1	2375.8	2343.8	2313.8	2288.1	2262.6	2238.6	2222.3
7°	2461.2	2451.9	2434.8	2408.6	2378.5	2342.2	2306.9	2276.6	2246.4	2218.8	2202.3
8°	2477.0	2467.0	2446.6	2417.0	2380.6	2338.5	2298.3	2263.7	2228.7	2199.6	2184.4
9°	2494.3	2483.5	2459.7	2425.5	2382.6	2334.3	2288.7	2249.7	2211.1	2181.8	2169.0
10°	2515.0	2502.4	2474.4	2433.8	2383.5	2330.0	2279.0	2235.4	2193.6	2164.6	2154.1
11°	2533.6	2519.7	2488.9	2441.3	2384.3	2324.8	2268.3	2220.4	2176.5	2149.2	2140.8
12°	2547.1	2533.5	2501.3	2448.9	2385.3	2318.0	2255.5	2204.0	2158.4	2133.9	2126.4
13°	2562.2	2545.1	2511.3	2456.1	2386.1	2310.8	2242.8	2186.8	2139.7	2118.3	2111.9
14°	2572.3	2555.7	2518.4	2460.4	2386.5	2304.5	2230.2	2169.3	2121.2	2103.3	2098.0
15°	2583.5	2564.1	2522.7	2461.9	2384.7	2297.0	2215.2	2151.0	2103.1	2088.2	2083.3
16°	2592.1	2570.7	2527.6	2462.9	2380.7	2288.6	2200.5	2133.3	2084.5	2072.3	2068.4
17°	2600.1	2577.1	2529.6	2460.9	2374.7	2277.8	2184.1	2113.7	2065.8	2055.7	2053.9
18°	2609.6	2584.0	2529.2	2455.6	2366.9	2266.8	2167.8	2093.8	2047.6	2038.7	2040.0
19°	2617.7	2591.1	2530.8	2451.2	2357.3	2254.1	2150.6	2073.5	2029.6	2022.3	2027.3
20°	2625.0	2598.3	2534.4	2446.2	2346.6	2239.4	2132.5	2052.8	2010.8	2007.1	2014.0
21°	2633.6	2604.2	2536.8	2441.2	2335.5	2222.4	2113.9	2031.7	1992.0	1990.8	1997.8
22°	2640.5	2610.4	2538.2	2436.1	2323.3	2204.2	2092.7	2009.7	1972.4	1973.9	1983.1
23°	2645.6	2614.4	2539.5	2431.7	2310.7	2185.0	2072.4	1987.1	1951.8	1956.5	1968.8
24°	2654.3	2619.6	2539.9	2427.4	2297.9	2164.8	2049.1	1963.9	1931.1	1939.0	1955.5
25°	2660.8	2623.6	2539.1	2421.5	2284.5	2144.5	2024.9	1940.6	1910.9	1921.8	1942.2
26°	2668.8	2627.5	2538.1	2414.7	2269.1	2123.2	2000.9	1915.9	1890.5	1903.3	1927.4
27°	2677.7	2631.8	2538.6	2407.3	2253.8	2100.8	1976.5	1892.0	1869.5	1884.9	1911.2
28°	2685.4	2638.2	2537.9	2399.2	2239.0	2077.7	1951.1	1866.6	1847.2	1867.2	1894.3
29°	2692.3	2644.2	2535.1	2390.5	2222.8	2053.0	1924.3	1840.8	1824.3	1850.7	1876.7
30°	2702.6	2649.8	2534.2	2380.5	2206.9	2027.4	1896.1	1813.5	1801.2	1832.2	1860.2
31°	2710.2	2654.4	2533.4	2370.4	2190.1	2001.3	1866.7	1786.9	1777.1	1811.7	1844.8
32°	2715.0	2660.2	2532.6	2359.3	2172.2	1975.2	1838.6	1759.1	1753.4	1790.8	1827.4
33°	2717.6	2664.1	2531.8	2349.1	2153.3	1947.4	1807.3	1730.8	1730.2	1770.0	1809.1
34°	2716.0	2663.1	2530.9	2338.5	2132.8	1919.8	1777.6	1702.5	1706.2	1748.7	1790.6
35°	2714.0	2662.8	2530.5	2326.8	2111.2	1890.4	1746.2	1673.9	1681.6	1726.8	1771.9
36°	2712.1	2658.6	2527.1	2314.4	2088.8	1860.6	1712.8	1645.8	1656.8	1704.6	1752.4
37°	2705.5	2653.4	2521.0	2302.7	2065.2	1827.9	1680.8	1617.3	1632.1	1681.8	1732.8
38°	2700.7	2647.6	2514.0	2290.6	2040.1	1797.3	1648.6	1590.1	1607.6	1658.9	1713.2
39°	2693.2	2638.2	2505.1	2276.5	2013.7	1766.0	1617.2	1561.1	1582.8	1636.6	1691.1
40°	2683.1	2627.8	2495.0	2259.8	1987.2	1732.5	1585.5	1530.8	1558.3	1616.2	1669.4
41°	2672.3	2614.9	2483.7	2242.9	1960.4	1698.3	1553.7	1500.6	1531.2	1596.2	1647.3
42°	2666.8	2605.2	2473.4	2225.0	1932.7	1662.3	1517.7	1469.5	1502.3	1574.4	1625.9
43°	2654.6	2594.3	2459.1	2208.5	1904.1	1625.4	1482.1	1439.4	1473.7	1549.9	1604.8
44°	2639.0	2581.2	2442.9	2192.2	1875.6	1587.6	1445.1	1408.5	1444.6	1523.5	1583.0



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CANDELA DISTRIBUTION (continued):

	0°	15°	30°	45°	60°	75°	90°	105°	120°	135°	150°
45°	2622.4	2563.9	2428.1	2175.1	1847.6	1548.4	1408.3	1375.6	1415.6	1497.3	1559.0
46°	2612.1	2547.9	2412.7	2157.6	1818.3	1509.8	1370.8	1342.5	1387.0	1470.4	1532.8
47°	2590.9	2532.6	2394.5	2138.5	1787.7	1470.1	1332.4	1308.3	1358.4	1443.0	1503.8
48°	2558.0	2511.8	2372.7	2118.0	1757.8	1428.8	1295.0	1276.4	1329.5	1415.0	1466.9
49°	2526.5	2479.1	2353.0	2096.6	1728.7	1387.7	1257.6	1244.3	1300.3	1385.3	1419.9
50°	2500.1	2448.1	2329.8	2075.0	1699.1	1345.2	1219.2	1210.7	1271.0	1354.1	1357.4
51°	2474.7	2421.0	2299.5	2052.5	1669.6	1304.1	1181.5	1176.5	1241.8	1321.1	1275.8
52°	2446.6	2395.0	2267.4	2028.3	1638.4	1264.2	1142.4	1142.2	1212.7	1284.6	1172.9
53°	2416.1	2367.6	2235.3	2004.2	1606.9	1223.0	1101.8	1107.2	1181.3	1243.6	1059.4
54°	2386.9	2336.6	2206.0	1977.1	1573.9	1183.5	1062.3	1073.9	1148.3	1193.3	937.9
55°	2366.7	2309.3	2175.6	1944.4	1535.7	1144.8	1022.0	1040.1	1114.6	1127.3	817.0
56°	2350.1	2287.7	2142.6	1909.4	1496.6	1103.3	982.2	1005.1	1079.5	1044.2	692.0
57°	2330.7	2270.0	2108.5	1872.7	1458.4	1061.0	936.8	969.9	1043.0	944.1	565.0
58°	2313.1	2252.4	2079.8	1838.0	1420.7	1017.6	892.6	933.1	1003.6	835.7	445.9
59°	2300.6	2236.5	2057.1	1799.6	1382.2	974.8	850.0	895.9	964.0	725.9	342.2
60°	2297.9	2227.1	2039.2	1757.5	1341.5	929.4	809.1	857.5	919.0	610.8	268.5
61°	2304.2	2224.7	2025.4	1716.7	1297.6	883.4	767.6	817.9	869.6	496.0	228.8
62°	2304.3	2227.2	2011.0	1677.4	1251.4	838.8	728.6	777.0	810.6	387.8	214.9
63°	2288.4	2222.2	2006.8	1640.7	1205.0	792.1	691.1	735.8	739.9	290.2	205.9
64°	2254.0	2200.1	2012.3	1607.8	1160.1	744.1	656.1	693.8	652.5	223.4	198.0
65°	2197.6	2153.8	2026.9	1579.4	1111.6	695.3	620.9	651.2	564.2	198.3	189.8
66°	2103.6	2080.2	2022.6	1556.1	1054.9	646.6	585.0	608.3	469.8	186.3	181.5
67°	1982.8	1973.1	1992.0	1541.8	995.1	596.8	548.0	567.6	375.5	173.7	173.0
68°	1833.5	1838.4	1923.7	1546.6	932.8	548.0	509.3	527.9	299.7	163.0	164.9
69°	1631.0	1669.6	1792.6	1574.6	873.1	503.1	469.8	487.7	238.9	154.1	157.3
70°	1426.8	1477.4	1622.9	1610.0	814.0	461.3	427.7	445.7	180.4	145.4	150.0
71°	1301.3	1319.9	1413.1	1602.2	764.6	418.5	384.8	403.2	146.5	136.8	141.7
72°	1223.5	1220.3	1205.6	1485.6	720.5	377.6	341.7	355.9	135.1	129.1	131.7
73°	1151.9	1156.4	1058.5	1271.1	674.2	336.7	300.1	308.0	126.3	122.1	120.6
74°	1079.0	1096.7	977.5	1028.3	668.3	300.4	261.6	256.7	116.6	114.7	109.4
75°	1011.2	1030.2	909.8	877.3	750.0	264.1	226.7	207.4	106.7	105.1	98.4
76°	953.6	957.4	848.8	809.6	807.8	230.9	196.5	157.7	97.7	94.7	87.3
77°	905.6	877.7	791.7	754.5	677.8	201.4	166.3	118.1	89.3	84.4	77.3
78°	865.4	804.5	729.8	696.8	477.5	171.6	136.8	99.9	81.6	74.6	70.4
79°	838.7	751.7	667.2	632.4	355.3	149.5	113.3	88.3	73.8	64.8	64.7
80°	802.9	702.8	606.9	543.4	306.9	130.3	91.8	77.5	65.3	53.0	58.6
81°	712.4	654.6	560.1	448.2	312.9	110.9	71.6	66.6	56.1	42.9	51.3
82°	621.5	606.8	515.6	381.5	278.4	93.0	53.7	55.9	46.9	36.0	43.4
83°	530.6	550.8	466.5	331.2	191.6	77.4	40.7	46.1	37.7	30.5	35.3
84°	438.5	491.2	400.7	288.1	129.0	62.9	30.6	36.7	28.9	24.2	26.5
85°	349.1	428.0	315.5	249.7	100.5	48.6	23.3	28.1	21.3	17.4	17.6
86°	245.0	344.6	242.0	201.9	80.2	35.6	16.0	20.1	14.7	10.7	9.0
87°	170.0	251.3	178.2	125.0	58.6	23.3	8.8	11.9	8.1	5.1	3.6
88°	92.4	149.6	117.2	55.7	37.7	12.3	4.0	4.9	3.0	1.9	1.5
89°	47.0	66.3	62.9	36.0	22.9	5.9	1.1	1.0	0.5	0.4	0.2



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CANDELA DISTRIBUTION (continued):

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



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CANDELA DISTRIBUTION (continued):

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



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CANDELA DISTRIBUTION (continued):

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



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CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
0°	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1	2337.1
1°	2318.7	2319.2	2319.7	2321.4	2324.5	2328.5	2333.4	2338.7	2342.9	2347.0	2350.0
2°	2300.7	2301.1	2302.8	2305.8	2311.7	2319.6	2328.6	2338.1	2346.7	2353.5	2362.5
3°	2281.6	2279.5	2282.5	2288.7	2298.0	2309.8	2321.9	2335.9	2348.2	2362.1	2375.2
4°	2259.6	2257.7	2261.1	2269.3	2282.0	2297.4	2313.8	2332.0	2349.8	2369.4	2386.0
5°	2236.0	2233.0	2238.4	2248.8	2265.7	2285.2	2305.5	2328.1	2352.0	2376.3	2395.8
6°	2214.8	2213.1	2216.8	2227.5	2246.6	2271.1	2296.6	2322.6	2351.7	2381.5	2405.1
7°	2195.2	2192.7	2197.3	2207.3	2227.3	2255.8	2287.2	2318.5	2350.8	2385.3	2414.8
8°	2177.6	2174.8	2179.4	2187.8	2208.2	2240.3	2276.3	2312.4	2349.4	2389.0	2424.9
9°	2162.9	2159.7	2164.2	2171.0	2189.6	2223.9	2263.8	2303.6	2346.6	2392.1	2434.9
10°	2149.1	2146.5	2150.2	2155.6	2172.2	2206.9	2251.0	2295.4	2343.3	2395.1	2444.6
11°	2135.8	2134.4	2136.7	2141.4	2155.2	2189.5	2236.5	2285.4	2339.0	2398.0	2454.3
12°	2122.3	2121.1	2122.2	2126.8	2138.1	2171.1	2221.3	2274.0	2333.9	2401.3	2463.9
13°	2108.6	2107.3	2108.7	2112.1	2120.8	2152.2	2205.8	2262.3	2329.0	2404.7	2472.0
14°	2095.7	2093.6	2096.2	2097.2	2104.7	2133.5	2189.3	2250.6	2325.2	2406.0	2478.0
15°	2081.4	2079.4	2081.1	2081.6	2087.9	2114.2	2171.7	2237.0	2319.2	2405.4	2480.6
16°	2068.1	2068.6	2066.1	2066.6	2071.8	2094.1	2153.8	2223.8	2312.3	2403.2	2481.9
17°	2055.2	2054.7	2052.6	2052.0	2055.4	2074.0	2135.1	2209.9	2304.1	2398.7	2480.5
18°	2043.7	2044.9	2040.8	2036.5	2037.5	2054.1	2114.8	2194.2	2292.6	2391.6	2477.2
19°	2030.3	2031.0	2027.6	2021.7	2020.8	2034.3	2095.3	2176.5	2279.4	2383.4	2474.1
20°	2016.6	2017.2	2014.5	2006.7	2003.7	2014.0	2074.6	2161.2	2266.1	2374.4	2471.0
21°	2003.4	2005.3	2000.8	1990.9	1986.3	1994.1	2053.1	2144.0	2250.8	2364.1	2467.7
22°	1992.5	1995.4	1987.8	1975.4	1968.4	1972.9	2031.4	2123.7	2233.7	2353.6	2465.0
23°	1982.4	1985.0	1975.3	1959.9	1949.2	1951.2	2008.9	2102.4	2216.3	2343.1	2463.6
24°	1970.4	1972.9	1963.2	1944.9	1930.6	1929.8	1985.0	2080.2	2198.8	2332.8	2462.0
25°	1956.0	1959.0	1950.2	1929.8	1912.0	1908.8	1961.6	2057.5	2179.9	2322.2	2457.4
26°	1941.7	1942.4	1935.0	1916.3	1892.2	1886.6	1937.5	2032.0	2159.8	2310.4	2452.0
27°	1925.4	1927.8	1918.0	1900.0	1873.1	1863.4	1911.1	2005.9	2138.8	2297.7	2446.1
28°	1910.5	1913.7	1902.2	1883.1	1853.9	1840.0	1885.5	1979.9	2117.4	2284.7	2440.8
29°	1896.3	1900.4	1887.1	1865.4	1835.0	1816.6	1858.4	1953.7	2094.8	2271.4	2434.9
30°	1882.4	1886.2	1872.3	1846.7	1815.7	1791.6	1830.0	1926.5	2071.1	2256.4	2427.9
31°	1866.0	1870.6	1857.2	1828.7	1795.8	1766.5	1802.9	1899.3	2047.6	2240.2	2419.1
32°	1849.7	1854.6	1841.3	1810.4	1773.7	1741.2	1774.0	1869.5	2023.4	2224.0	2412.1
33°	1833.2	1839.0	1825.4	1792.4	1751.2	1715.1	1744.5	1839.7	1997.5	2207.3	2404.8
34°	1817.1	1822.1	1808.0	1773.9	1728.4	1689.2	1714.8	1810.2	1971.7	2189.0	2396.5
35°	1801.2	1805.5	1790.4	1753.9	1704.6	1664.0	1684.7	1779.7	1945.4	2169.6	2388.5
36°	1782.4	1787.9	1771.8	1734.8	1681.4	1639.1	1655.5	1747.7	1917.5	2149.8	2380.4
37°	1763.3	1769.1	1752.9	1715.1	1658.8	1614.3	1626.4	1715.7	1889.1	2128.6	2371.9
38°	1743.0	1749.6	1733.1	1693.3	1636.7	1589.1	1598.5	1683.5	1859.7	2106.9	2361.8
39°	1722.7	1729.0	1711.1	1671.0	1614.9	1561.9	1568.6	1647.1	1829.3	2086.2	2349.8
40°	1701.0	1707.3	1690.9	1648.7	1592.9	1533.8	1536.3	1613.1	1797.4	2063.2	2336.7
41°	1679.7	1684.6	1668.3	1627.8	1569.1	1505.7	1503.0	1576.4	1763.9	2039.1	2321.6
42°	1657.7	1662.8	1646.5	1607.7	1545.2	1478.0	1469.8	1540.1	1729.7	2015.9	2306.9
43°	1634.9	1638.1	1624.2	1587.0	1521.0	1449.1	1437.5	1501.6	1694.6	1991.9	2292.5
44°	1613.0	1607.3	1602.1	1562.9	1496.5	1419.3	1404.6	1462.3	1657.0	1966.8	2277.8



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CANDELA DISTRIBUTION (continued):

	165°	180°	195°	210°	225°	240°	255°	270°	285°	300°	315°
45°	1590.4	1573.8	1579.6	1537.7	1470.6	1389.6	1372.2	1423.0	1617.9	1940.4	2260.9
46°	1549.8	1533.4	1545.8	1512.4	1443.7	1359.7	1339.1	1384.0	1580.7	1913.8	2241.9
47°	1493.6	1467.9	1501.0	1485.2	1416.3	1328.8	1305.7	1342.1	1540.8	1888.2	2222.7
48°	1419.0	1377.7	1439.9	1454.6	1389.2	1297.7	1271.7	1303.3	1501.3	1863.5	2202.4
49°	1322.6	1267.9	1356.0	1420.2	1360.6	1268.1	1236.3	1263.7	1462.0	1838.8	2182.4
50°	1206.3	1146.0	1253.0	1378.3	1330.1	1238.3	1199.8	1225.0	1422.7	1814.1	2159.8
51°	1083.9	1021.2	1136.9	1320.6	1298.6	1208.0	1164.5	1185.8	1384.3	1787.1	2134.9
52°	959.3	893.5	1013.9	1243.0	1265.6	1177.0	1128.2	1144.6	1346.2	1757.3	2108.6
53°	831.3	760.3	890.3	1151.7	1230.6	1145.9	1091.4	1103.2	1306.0	1723.8	2079.9
54°	697.8	627.7	761.4	1039.9	1193.0	1113.4	1055.4	1058.8	1266.7	1690.7	2046.5
55°	569.1	500.4	629.9	924.2	1151.8	1080.4	1018.1	1014.8	1226.6	1660.2	2011.9
56°	446.9	387.4	504.8	806.6	1101.8	1046.4	980.6	972.0	1184.7	1629.2	1978.4
57°	339.8	302.3	386.0	682.7	1037.9	1009.5	942.3	928.1	1142.0	1595.8	1943.3
58°	276.1	255.9	303.0	558.5	956.8	970.3	902.5	885.2	1098.7	1559.0	1906.6
59°	244.2	238.6	254.3	440.5	859.9	930.4	863.4	844.5	1056.6	1519.1	1868.9
60°	231.6	231.1	232.3	335.7	756.0	889.2	822.9	804.2	1010.1	1476.5	1831.5
61°	224.9	224.8	223.5	257.3	650.0	848.1	783.0	765.2	961.6	1433.0	1799.1
62°	218.2	218.1	216.4	217.7	539.7	804.5	743.4	726.3	912.5	1389.7	1771.4
63°	211.0	211.1	209.2	202.2	431.0	760.5	703.1	687.3	860.4	1342.2	1747.6
64°	204.0	204.3	202.0	194.4	329.5	710.7	661.9	648.8	807.6	1287.1	1727.8
65°	197.0	197.8	194.3	184.7	248.4	655.9	620.3	609.1	756.4	1230.4	1710.7
66°	190.2	191.5	186.7	176.0	206.4	586.1	578.5	569.2	709.1	1176.2	1703.5
67°	183.4	184.4	179.4	167.1	181.7	508.6	537.8	527.1	660.2	1123.5	1716.5
68°	176.6	177.2	172.1	158.6	166.9	426.1	498.3	484.5	607.4	1072.3	1744.2
69°	169.0	169.6	164.8	150.4	158.2	344.3	459.1	440.7	557.0	1027.7	1752.5
70°	159.0	158.4	156.2	142.6	148.4	274.2	419.3	397.7	514.5	985.9	1714.6
71°	147.4	146.8	145.3	135.7	138.7	218.4	381.6	355.0	473.0	954.8	1595.9
72°	135.7	134.9	133.9	127.5	129.8	163.0	344.2	312.8	433.5	950.8	1384.4
73°	123.8	123.2	122.3	117.6	120.8	131.4	309.7	273.2	393.0	1014.5	1153.2
74°	112.2	112.2	111.0	106.9	112.8	121.1	272.8	237.7	354.7	1086.1	986.4
75°	102.0	103.5	100.2	96.1	105.4	111.0	234.5	203.9	312.5	1006.6	892.8
76°	94.8	97.6	91.6	85.9	96.9	101.7	196.9	173.9	271.3	832.9	821.6
77°	89.7	93.2	85.7	75.8	87.0	92.6	159.5	146.3	238.6	678.1	756.2
78°	84.2	87.0	80.4	66.1	76.9	83.8	125.1	120.8	220.0	524.6	695.0
79°	75.7	77.0	73.6	58.9	66.8	75.4	99.4	99.5	198.8	441.0	624.3
80°	67.3	69.0	65.0	53.4	57.2	67.1	84.1	80.4	180.6	435.5	536.4
81°	58.7	59.9	56.4	47.5	46.5	58.8	71.6	66.3	171.1	387.6	458.1
82°	48.6	48.7	47.4	40.7	36.3	49.8	59.9	52.2	159.9	280.1	398.8
83°	36.5	34.9	36.7	33.0	29.0	40.2	48.5	38.1	134.4	200.8	353.4
84°	26.0	25.1	26.4	24.9	22.8	31.4	37.4	28.1	97.2	161.6	311.5
85°	16.4	15.7	16.6	16.6	16.4	23.4	27.6	20.0	69.2	134.0	260.1
86°	7.6	6.7	7.7	8.7	10.2	15.5	19.5	13.3	47.8	109.0	185.3
87°	3.1	2.6	3.2	3.4	4.9	8.4	11.3	7.6	27.8	86.2	114.8
88°	1.2	1.1	1.2	1.3	1.7	3.1	4.3	4.2	13.2	66.0	85.6
89°	0.1	0.0	0.1	0.2	0.3	0.4	0.8	0.8	6.0	47.4	62.4



REPORT NUMBER: P1449919
 CATALOG NUMBER: TWC60_T4_48W_5000K

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: P1449919
 CATALOG NUMBER: TWC60_T4_48W_5000K

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: P1449919
CATALOG NUMBER: TWC60_T4_48W_5000K

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: P1449919
 CATALOG NUMBER: TWC60_T4_48W_5000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
0°	2337.1	2337.1	2337.1
1°	2352.6	2355.1	2356.7
2°	2368.5	2372.8	2375.5
3°	2384.5	2389.8	2393.5
4°	2398.4	2405.9	2407.1
5°	2411.7	2421.6	2424.4
6°	2424.9	2437.5	2441.2
7°	2438.2	2453.2	2461.2
8°	2453.3	2469.9	2477.0
9°	2468.3	2488.2	2494.3
10°	2482.9	2507.4	2515.0
11°	2498.2	2525.3	2533.6
12°	2512.0	2540.3	2547.1
13°	2522.6	2552.0	2562.2
14°	2530.1	2562.7	2572.3
15°	2535.0	2570.0	2583.5
16°	2539.8	2577.0	2592.1
17°	2543.5	2584.3	2600.1
18°	2546.7	2593.0	2609.6
19°	2549.5	2600.5	2617.7
20°	2553.5	2607.6	2625.0
21°	2556.9	2613.8	2633.6
22°	2560.5	2619.6	2640.5
23°	2563.4	2625.5	2645.6
24°	2565.7	2632.9	2654.3
25°	2566.2	2638.2	2660.8
26°	2568.2	2644.4	2668.8
27°	2568.2	2651.1	2677.7
28°	2570.2	2658.6	2685.4
29°	2572.8	2664.6	2692.3
30°	2573.4	2671.9	2702.6
31°	2574.7	2679.5	2710.2
32°	2576.9	2682.2	2715.0
33°	2578.9	2684.0	2717.6
34°	2578.6	2684.1	2716.0
35°	2575.6	2683.3	2714.0
36°	2571.1	2678.8	2712.1
37°	2566.8	2675.0	2705.5
38°	2560.2	2668.3	2700.7
39°	2552.0	2660.0	2693.2
40°	2543.4	2651.1	2683.1
41°	2531.2	2637.8	2672.3
42°	2518.6	2630.3	2666.8
43°	2505.4	2618.9	2654.6
44°	2491.5	2604.7	2639.0



REPORT NUMBER: P1449919
CATALOG NUMBER: TWC60_T4_48W_5000K

CANDELA DISTRIBUTION (continued):

	330°	345°	360°
45°	2477.4	2588.8	2622.4
46°	2461.5	2572.3	2612.1
47°	2443.3	2556.5	2590.9
48°	2423.9	2530.3	2558.0
49°	2403.2	2495.1	2526.5
50°	2374.7	2467.9	2500.1
51°	2342.4	2441.2	2474.7
52°	2311.8	2414.5	2446.6
53°	2284.7	2385.5	2416.1
54°	2252.4	2355.2	2386.9
55°	2219.3	2330.3	2366.7
56°	2186.9	2312.6	2350.1
57°	2158.1	2297.3	2330.7
58°	2136.8	2278.1	2313.1
59°	2119.8	2263.6	2300.6
60°	2103.8	2256.1	2297.9
61°	2089.8	2256.6	2304.2
62°	2082.9	2257.4	2304.3
63°	2087.3	2247.3	2288.4
64°	2097.7	2218.9	2254.0
65°	2092.3	2166.9	2197.6
66°	2060.3	2085.6	2103.6
67°	1996.3	1972.3	1982.8
68°	1884.4	1827.0	1833.5
69°	1725.6	1647.0	1631.0
70°	1534.0	1458.0	1426.8
71°	1330.4	1315.6	1301.3
72°	1165.5	1223.6	1223.5
73°	1064.2	1154.8	1151.9
74°	1005.2	1087.5	1079.0
75°	952.4	1015.5	1011.2
76°	901.2	942.7	953.6
77°	845.5	873.5	905.6
78°	781.3	814.6	865.4
79°	719.8	776.5	838.7
80°	658.7	742.2	802.9
81°	598.9	702.1	712.4
82°	540.6	641.6	621.5
83°	470.6	565.4	530.6
84°	388.9	488.9	438.5
85°	313.0	407.0	349.1
86°	257.5	310.4	245.0
87°	192.8	215.5	170.0
88°	126.0	124.6	92.4
89°	72.0	59.6	47.0



REPORT NUMBER: P1449919
CATALOG NUMBER: TWC60_T4_48W_5000K

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: P1449919
CATALOG NUMBER: TWC60_T4_48W_5000K

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: P1449919
CATALOG NUMBER: TWC60_T4_48W_5000K

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: SP1-2601-659-3

Test Date: 02/12/2026

Luminaire Tested: MWP2460W34VDDKYYAD-T4-24W-5000K

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

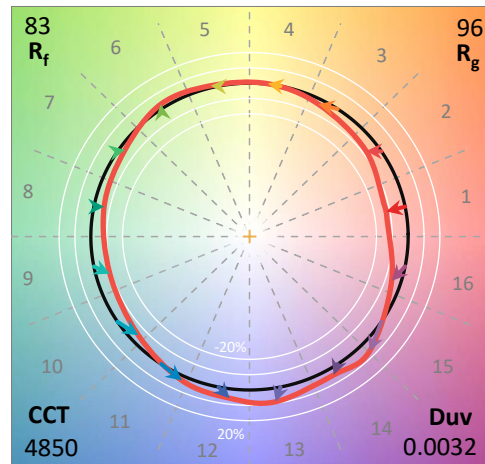
Test Information

Test Method: LM-79-2019
 Report Number: SP1-2601-659-3
 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-5000K**
 Description: Mester Wedge, at T4 beam setting, 24W output, 5000K

Spectral Parameters

CCT (K): 4850
 CIE u': 0.2108
 CIE v': 0.4905
 Duv: 0.0032
 CIE x: 0.3503
 CIE y: 0.3623
 CIE z: 0.2875
 Peak Wavelength (nm): 452
 Dominant Wavelength (nm): 571
 Purity: 13.81051
 Rf: 83.1
 Rg: 95.8

CRI (Ra):	82.6		
R1:	80.9	R9:	8.5
R2:	87.6	R10:	69.7
R3:	92.0	R11:	80.6
R4:	81.9	R12:	52.2
R5:	80.4	R13:	82.7
R6:	82.0	R14:	95.7
R7:	88.2	R15:	74.9
R8:	67.7		



Test Conditions

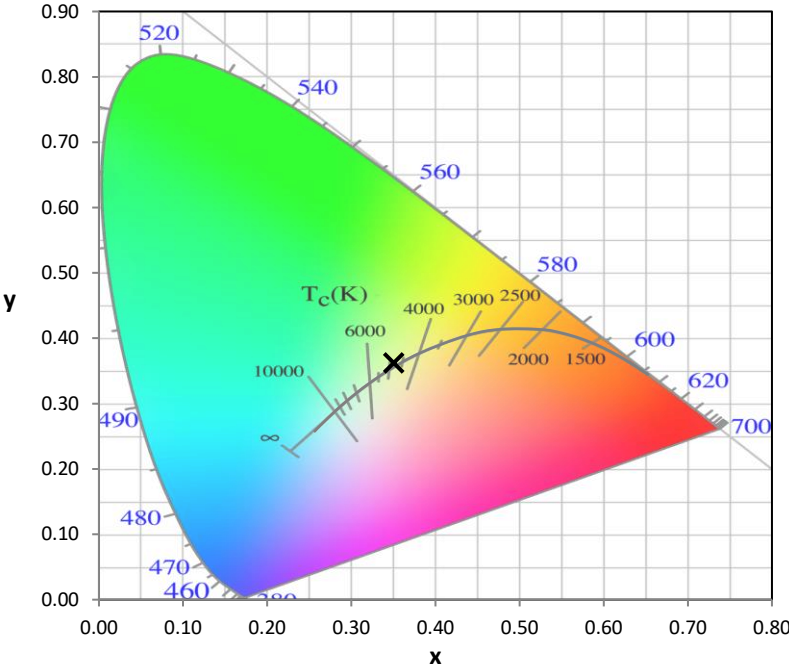
Stabilization Time: 25M
 Operation Time: 1H 25M
 Sphere Temperature (°C): 24.8

REPORT NUMBER: SP1-2601-659-3

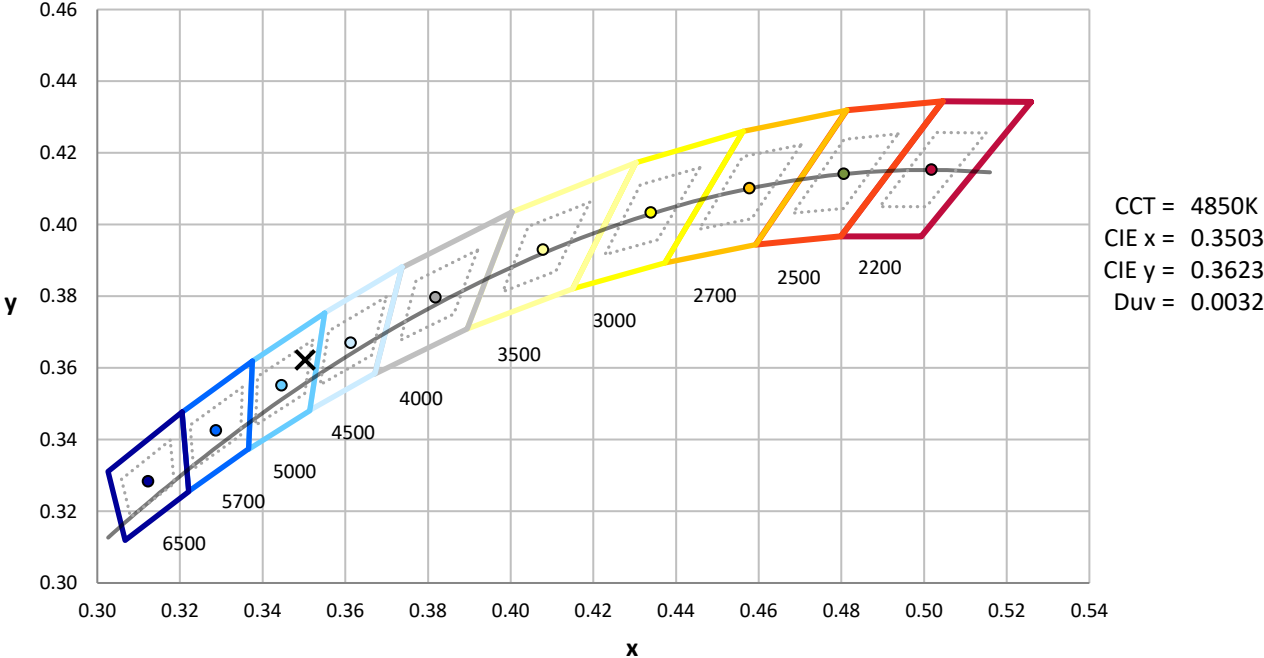
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	12/16/2025	6/16/2026
Power Meter	XITRON INXT2011004	10/21/2025	10/21/2026
AC Power Source	CHROMA 61603 IN0063	10/21/2025	10/21/2026
DC Power Source	AGILENT E3634A IN0208	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: SP1-2601-659-3

CIE 1931 Chromaticity Diagram



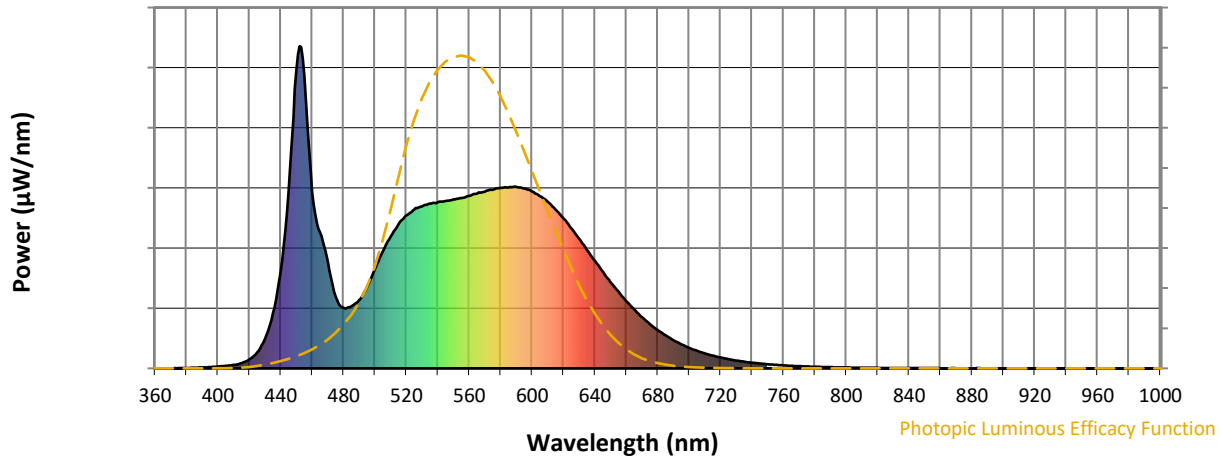
CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 5000K 4-step quadrangle

REPORT NUMBER: SP1-2601-659-3

Photopic Flux vs. Wavelength

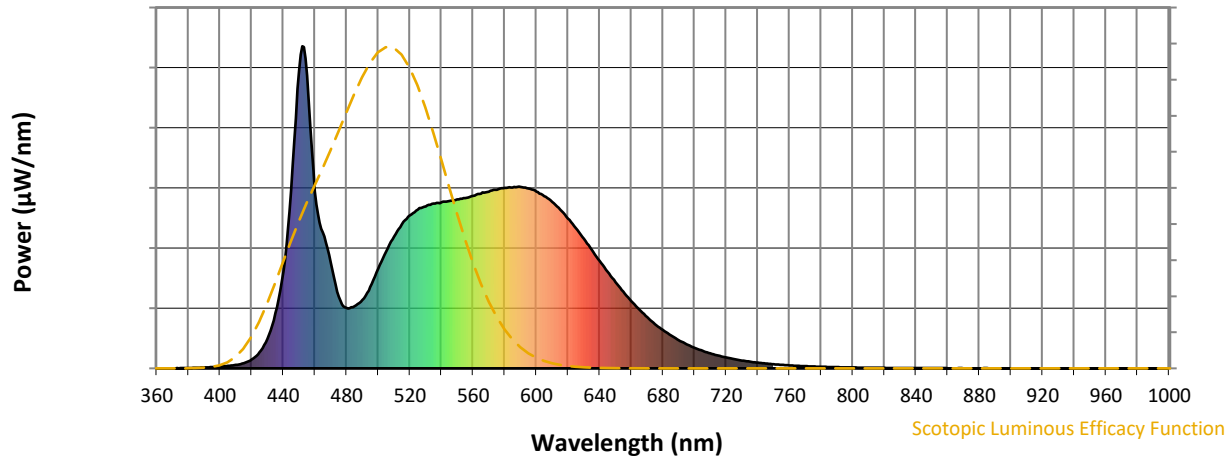


Photopic Lumens: NR

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	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

REPORT NUMBER: SP1-2601-659-3

Scotopic Flux vs. Wavelength



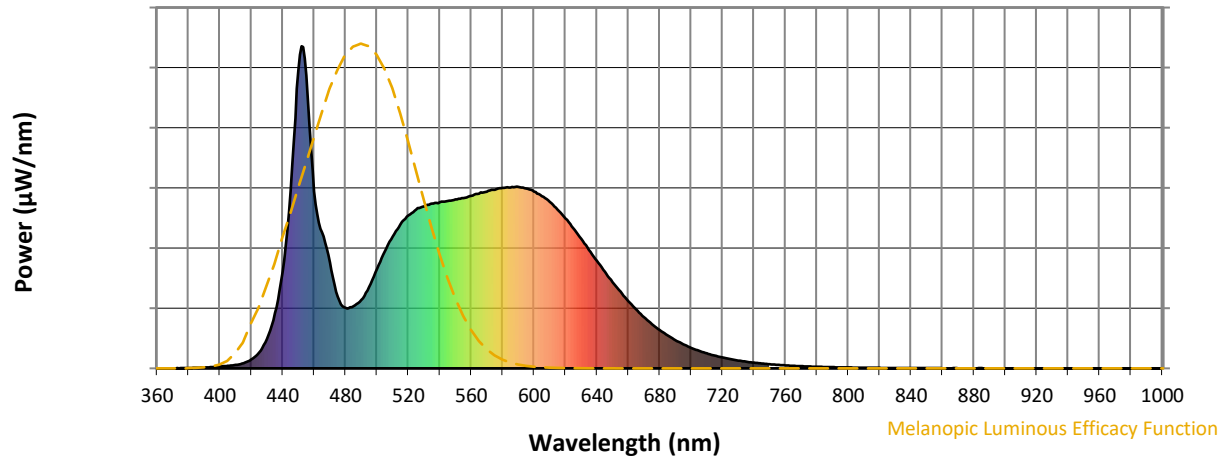
Scotopic Lumens: NR

S/P: 1.9

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	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

REPORT NUMBER: SP1-2601-659-3

Melanopic Flux vs. Wavelength



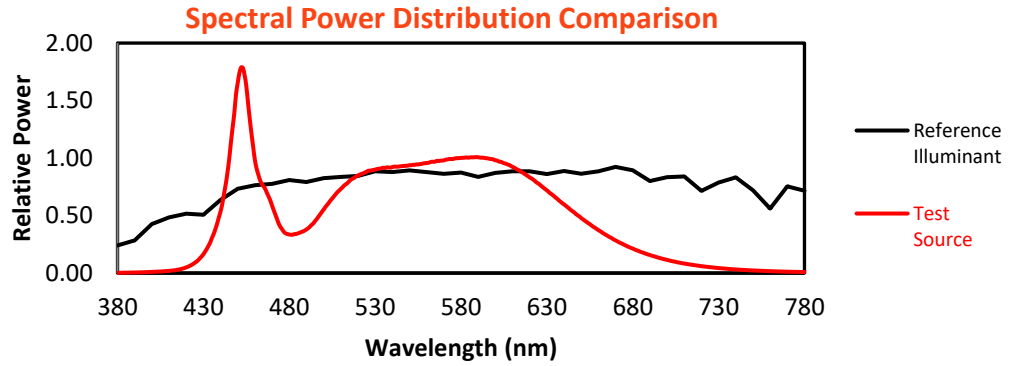
Melanopic Lumens: NR

M/P: 4

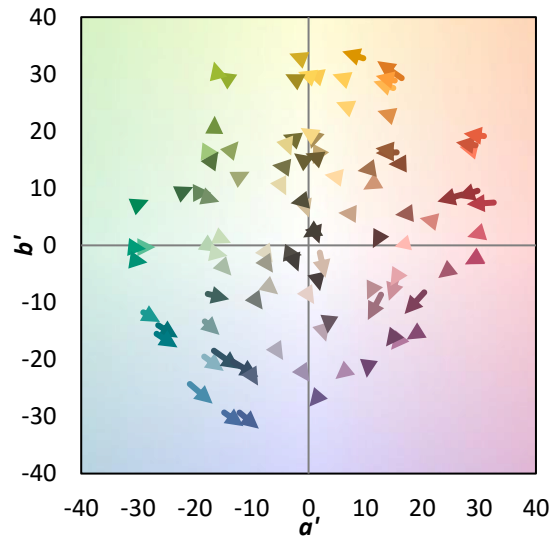
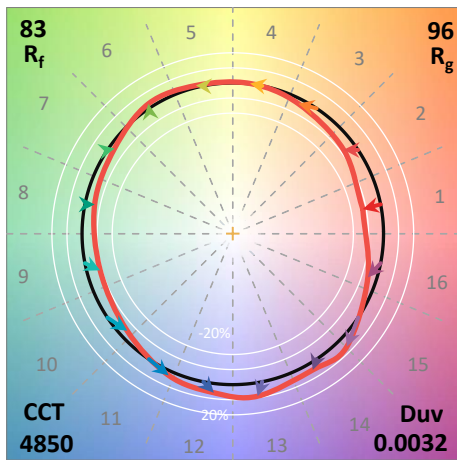
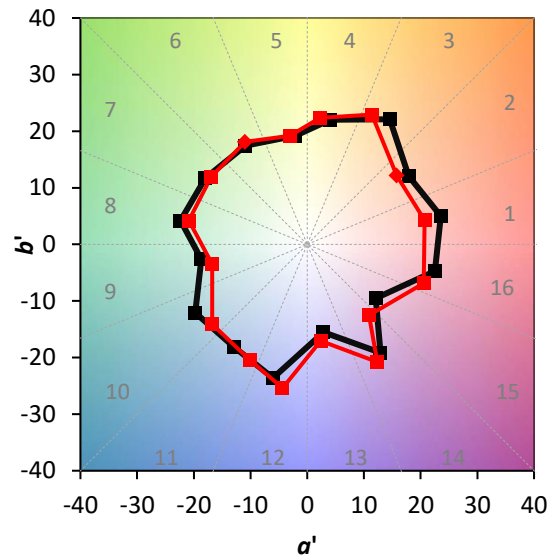
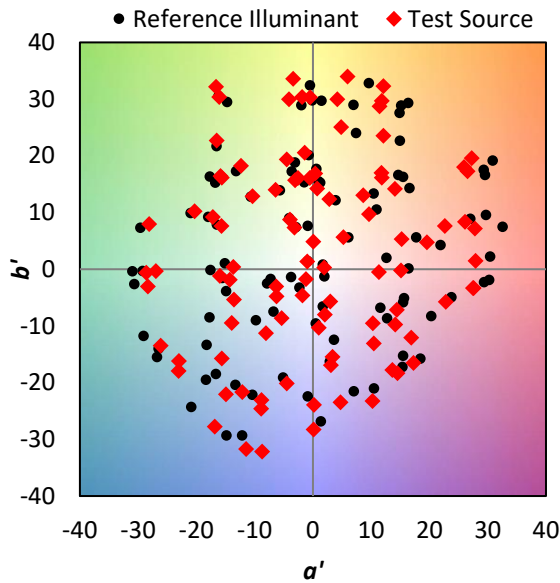
λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)	λ (nm)	Power W [^] /nm	Lumens (φ/nm)
360	0	NR	490	212	NR	620	465	NR	750	13	NR	880	0	NR
365	0	NR	495	253	NR	625	436	NR	755	11	NR	885	1	NR
370	0	NR	500	309	NR	630	403	NR	760	9	NR	890	0	NR
375	1	NR	505	363	NR	635	368	NR	765	8	NR	895	0	NR
380	1	NR	510	409	NR	640	334	NR	770	7	NR	900	0	NR
385	2	NR	515	448	NR	645	300	NR	775	6	NR	905	0	NR
390	3	NR	520	475	NR	650	268	NR	780	5	NR	910	0	NR
395	4	NR	525	493	NR	655	238	NR	785	4	NR	915	0	NR
400	6	NR	530	503	NR	660	209	NR	790	4	NR	920	0	NR
405	8	NR	535	512	NR	665	183	NR	795	3	NR	925	0	NR
410	11	NR	540	515	NR	670	159	NR	800	3	NR	930	0	NR
415	16	NR	545	520	NR	675	138	NR	805	2	NR	935	0	NR
420	28	NR	550	524	NR	680	119	NR	810	2	NR	940	0	NR
425	50	NR	555	528	NR	685	102	NR	815	2	NR	945	0	NR
430	92	NR	560	535	NR	690	88	NR	820	2	NR	950	0	NR
435	171	NR	565	542	NR	695	75	NR	825	1	NR	955	0	NR
440	300	NR	570	548	NR	700	64	NR	830	1	NR	960	0	NR
445	553	NR	575	555	NR	705	55	NR	835	1	NR	965	0	NR
450	925	NR	580	560	NR	710	46	NR	840	1	NR	970	0	NR
455	909	NR	585	562	NR	715	40	NR	845	1	NR	975	0	NR
460	550	NR	590	563	NR	720	34	NR	850	1	NR	980	0	NR
465	422	NR	595	558	NR	725	29	NR	855	1	NR	985	0	NR
470	328	NR	600	548	NR	730	24	NR	860	1	NR	990	0	NR
475	223	NR	605	534	NR	735	21	NR	865	0	NR	995	0	NR
480	188	NR	610	516	NR	740	18	NR	870	0	NR	1000	0	NR
485	193	NR	615	492	NR	745	15	NR	875	0	NR			

Summary

$R_f = 83.1$
 $R_g = 95.8$
 CIE $R_a = 82.6$
 $R_9 = 8.5$

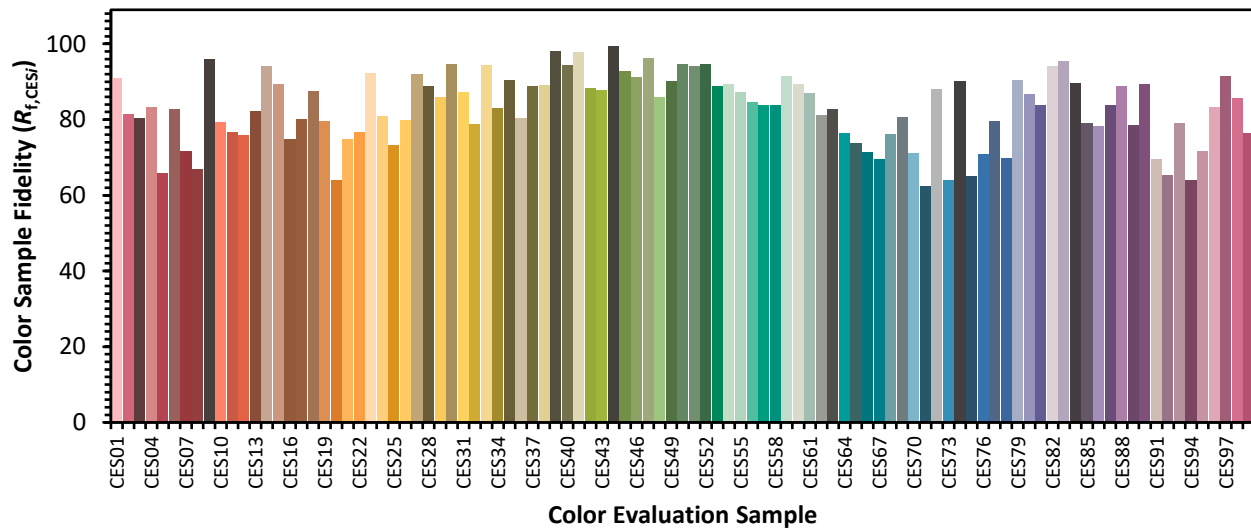


Color Vector Graphics

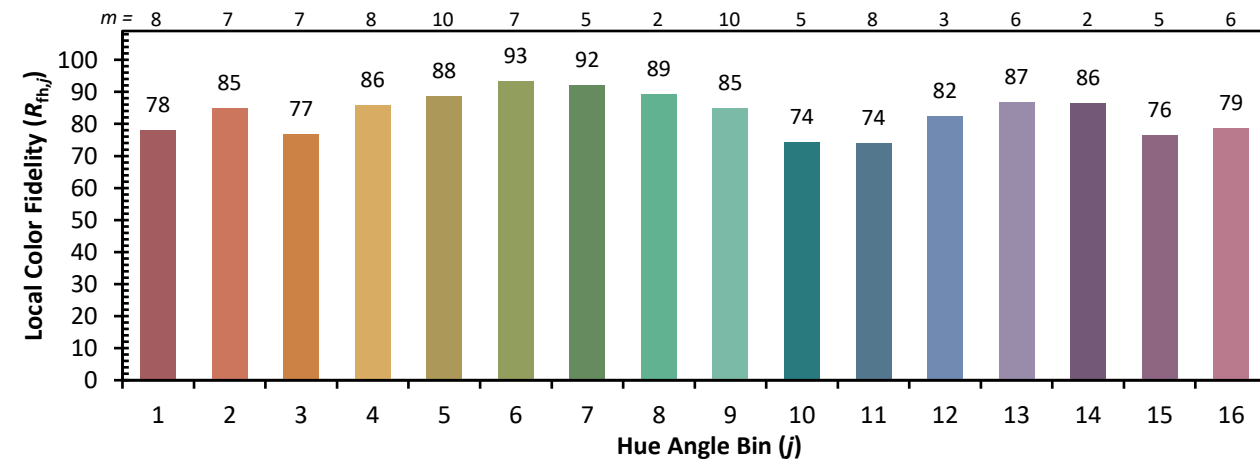
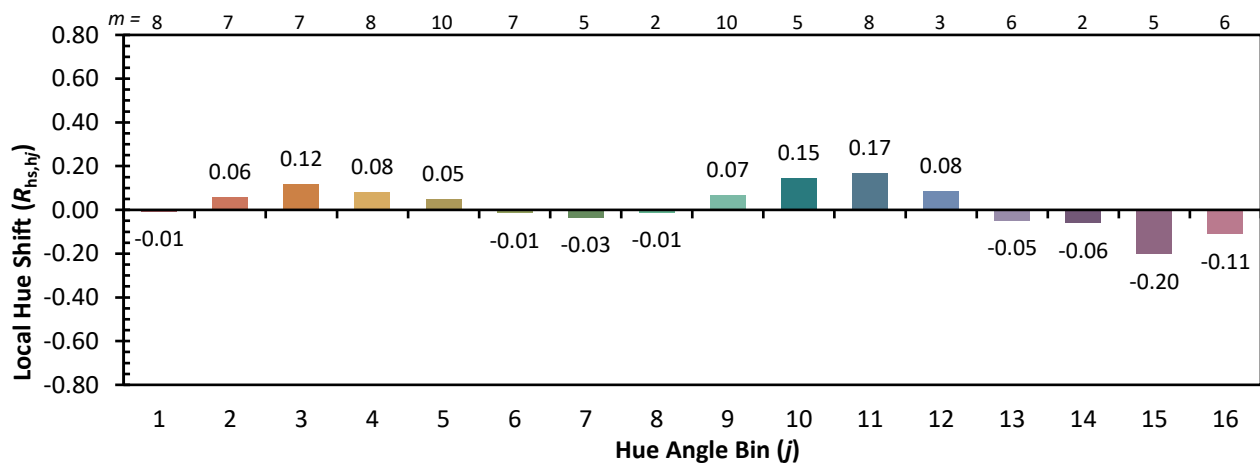
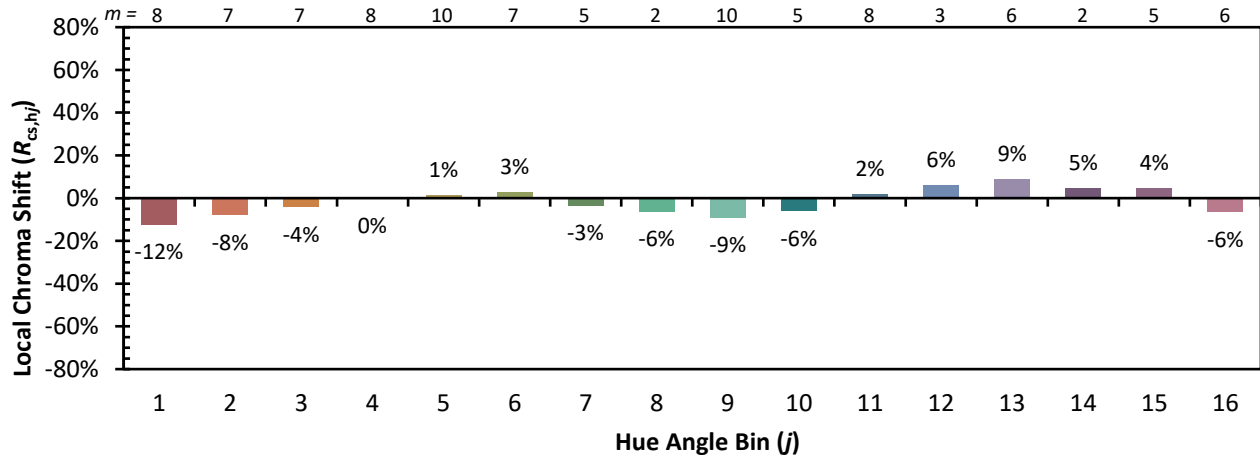


Individual Sample Fidelity Index ($R_{f,i}$)

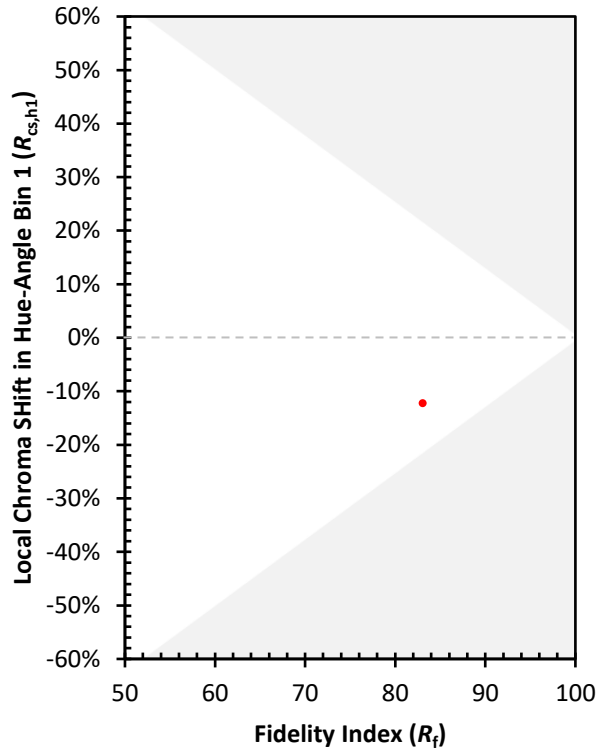
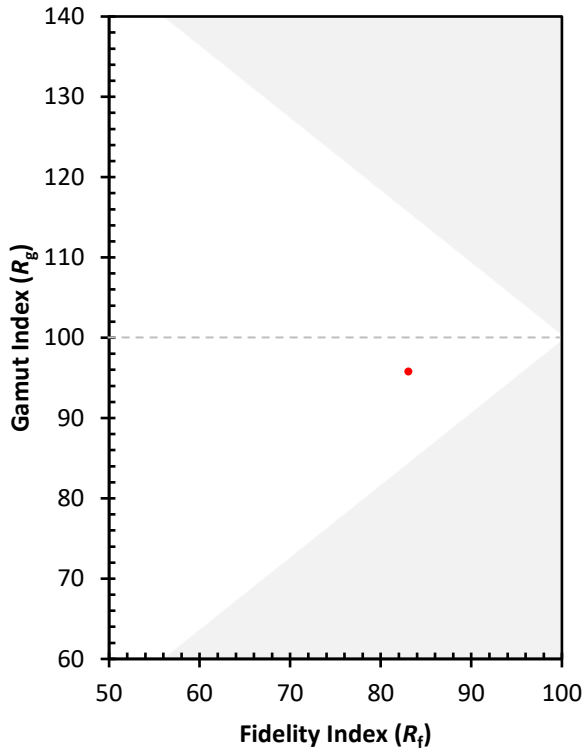
CES01 = 85	CES26 = 80	CES51 = 94	CES76 = 71
CES02 = 60	CES27 = 92	CES52 = 95	CES77 = 80
CES03 = 30	CES28 = 89	CES53 = 89	CES78 = 70
CES04 = 69	CES29 = 86	CES54 = 89	CES79 = 90
CES05 = 47	CES30 = 95	CES55 = 87	CES80 = 87
CES06 = 50	CES31 = 87	CES56 = 85	CES81 = 84
CES07 = 40	CES32 = 79	CES57 = 84	CES82 = 94
CES08 = 39	CES33 = 94	CES58 = 84	CES83 = 95
CES09 = 29	CES34 = 83	CES59 = 91	CES84 = 90
CES10 = 73	CES35 = 90	CES60 = 89	CES85 = 79
CES11 = 56	CES36 = 80	CES61 = 87	CES86 = 78
CES12 = 62	CES37 = 89	CES62 = 81	CES87 = 84
CES13 = 42	CES38 = 89	CES63 = 83	CES88 = 89
CES14 = 74	CES39 = 98	CES64 = 77	CES89 = 79
CES15 = 71	CES40 = 94	CES65 = 74	CES90 = 89
CES16 = 46	CES41 = 98	CES66 = 71	CES91 = 70
CES17 = 49	CES42 = 88	CES67 = 70	CES92 = 65
CES18 = 56	CES43 = 88	CES68 = 76	CES93 = 79
CES19 = 71	CES44 = 99	CES69 = 81	CES94 = 64
CES20 = 64	CES45 = 93	CES70 = 71	CES95 = 72
CES21 = 85	CES46 = 91	CES71 = 62	CES96 = 83
CES22 = 77	CES47 = 96	CES72 = 88	CES97 = 91
CES23 = 91	CES48 = 86	CES73 = 64	CES98 = 86
CES24 = 90	CES49 = 90	CES74 = 90	CES99 = 76
CES25 = 71	CES50 = 95	CES75 = 65	



Color Rendition by Hue-Angle Bin



Measure Comparisons



(END OF REPORT)