

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO COMMERCIAL

Report Number: P776555

Luminaire Tested: HCDJBS4050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776555  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B034)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K  
Description: 4 INCH ROUND SHALLOW-WIDE LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5454.9 lumens  
Efficiency: N/A  
Efficacy: 113.6 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.14 / 1.22  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

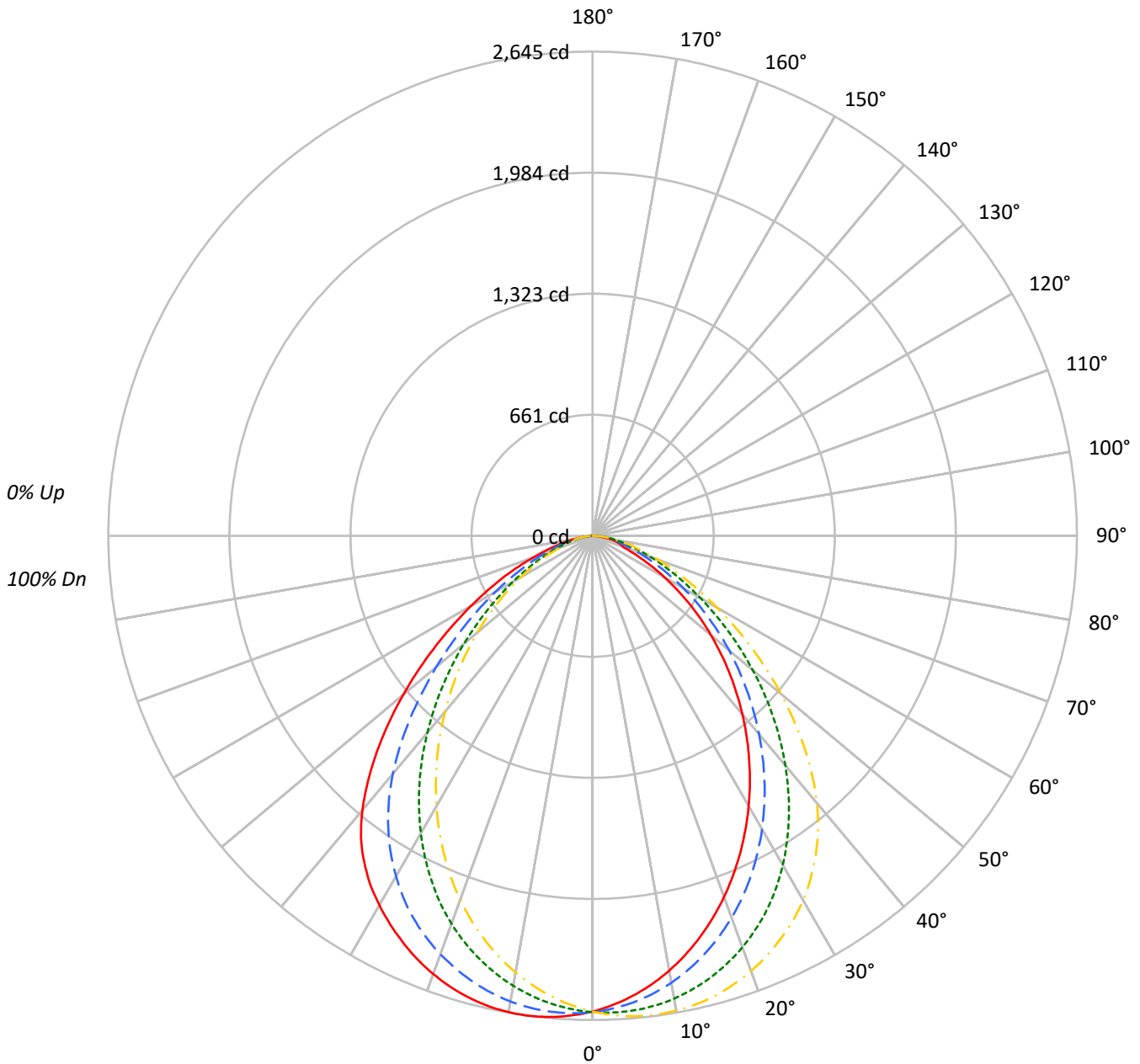
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

### Luminous Intensity Polar Plot





TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				
3	94	84	77	71	91	83	76	71	80	74	70	77	72	68	75	71	67	65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57				
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52	50				
6	74	62	54	48	73	61	53	48	59	53	47	58	52	47	56	51	47	45				
7	69	57	49	43	68	56	48	43	54	48	42	53	47	42	52	46	42	40				
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36				
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	35	33				
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	327222	327222	327222	327222
5°	318681	328763	333310	324215
10°	308220	328078	337688	318992
15°	295587	325293	340316	311691
20°	281139	320326	341151	301951
25°	265028	312879	340359	288898
30°	247681	301798	338506	272662
35°	228946	287066	334201	253235
40°	208938	269066	321194	230656
45°	187661	247764	296281	205672
50°	165029	223570	264176	179478
55°	140534	197427	228847	152228
60°	113944	170728	193104	126429
65°	86864	145647	160030	103302
70°	65754	123267	125953	82533
75°	68950	103084	98854	65838
80°	63125	90158	70372	50514
85°	31623	91547	19782	27002

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 89.5°  
 Luminance: 334579 cd/sqm



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.8	4.5
10°-20°	687.7	12.6
20°-30°	1000.0	18.3
30°-40°	1120.1	20.5
40°-50°	1013.3	18.6
50°-60°	735.9	13.5
60°-70°	421.0	7.7
70°-80°	186.9	3.4
80°-90°	45.2	0.8
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°-30°	1932.5	35.4
0°-40°	3052.5	56.0
0°-60°	4801.8	88.0
0°-90°	5454.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5454.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2600	2600	2600	2600	2600	
5°	2523	2602	2638	2566	2523	237
15°	2269	2497	2612	2392	2269	637
25°	1909	2253	2451	2080	1909	877
35°	1490	1868	2175	1648	1490	930
45°	1054	1392	1665	1156	1054	813
55°	640	900	1043	694	640	573
65°	292	489	537	347	292	295
75°	142	212	203	135	142	146
85°	22	63	14	19	22	34
90°	0	14	0	0	0	



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2600.1	2600.1	2600.1	2600.1	2600.1	2600.1	2600.1	2600.1	2600.1	2600.1	2600.1
0.5°	2592.8	2599.2	2599.2	2598.8	2603.8	2603.8	2604.2	2604.2	2604.2	2607.9	2604.2
1°	2586.0	2594.2	2596.0	2597.9	2605.2	2607.0	2608.8	2609.7	2609.3	2611.5	2606.5
1.5°	2579.6	2589.2	2592.4	2596.5	2605.6	2610.2	2613.4	2614.7	2614.3	2615.2	2608.3
2°	2572.3	2583.3	2588.7	2594.7	2606.5	2612.4	2617.5	2619.7	2618.8	2618.4	2609.7
2.5°	2565.0	2577.3	2584.6	2592.8	2606.5	2614.7	2621.1	2623.8	2622.9	2621.1	2610.6
3°	2556.8	2571.0	2580.1	2590.6	2606.5	2616.5	2624.3	2627.9	2627.0	2623.4	2611.1
3.5°	2549.1	2564.1	2575.1	2587.8	2606.1	2618.4	2627.5	2631.6	2630.2	2625.7	2611.5
4°	2540.4	2557.3	2570.1	2584.6	2605.2	2619.7	2630.2	2634.8	2633.4	2627.0	2611.1
4.5°	2531.8	2550.0	2564.1	2581.4	2603.8	2620.6	2632.5	2638.0	2636.1	2628.4	2610.6
5°	2522.6	2541.8	2558.2	2577.8	2602.4	2621.1	2634.3	2640.7	2638.4	2629.3	2610.2
5.5°	2513.1	2534.0	2551.8	2573.7	2600.6	2621.1	2635.7	2642.5	2640.3	2630.2	2608.8
6°	2503.0	2525.4	2545.0	2569.1	2598.3	2620.6	2637.1	2644.8	2642.1	2630.2	2607.4
6.5°	2493.0	2516.7	2538.1	2564.1	2595.6	2620.2	2638.0	2646.2	2643.4	2630.2	2605.6
7°	2482.5	2507.6	2530.8	2559.1	2592.4	2619.3	2638.4	2647.1	2644.4	2629.8	2603.3
7.5°	2471.6	2498.0	2523.1	2553.6	2589.2	2618.4	2638.4	2648.0	2644.8	2628.9	2601.0
8°	2460.2	2488.0	2514.9	2547.7	2585.5	2616.5	2638.4	2648.5	2645.3	2627.9	2597.9
8.5°	2448.8	2477.5	2506.2	2541.3	2581.4	2614.3	2638.0	2648.5	2644.8	2626.6	2594.7
9°	2436.9	2467.0	2497.6	2535.0	2577.3	2612.0	2636.6	2648.5	2644.4	2624.3	2591.5
9.5°	2424.2	2456.1	2488.5	2527.7	2572.3	2609.3	2635.7	2647.5	2643.9	2622.5	2587.4
10°	2411.9	2444.7	2478.9	2520.4	2567.3	2606.5	2633.9	2646.6	2642.5	2619.7	2583.3
10.5°	2398.7	2432.8	2468.9	2512.6	2561.4	2602.9	2632.0	2645.3	2641.2	2617.0	2578.7
11°	2385.9	2421.4	2458.8	2504.9	2555.5	2599.2	2629.8	2643.4	2638.9	2613.8	2573.7
11.5°	2371.8	2408.7	2448.3	2496.7	2549.5	2595.1	2627.0	2641.6	2637.1	2610.2	2568.7
12°	2358.1	2396.8	2437.4	2487.5	2543.2	2590.6	2624.3	2639.3	2634.3	2606.5	2563.2
12.5°	2344.0	2383.6	2426.0	2478.9	2536.3	2586.0	2620.6	2636.6	2631.6	2602.4	2557.3
13°	2329.4	2370.4	2414.6	2469.3	2529.0	2581.0	2617.0	2633.4	2628.4	2597.9	2551.4
13.5°	2314.8	2356.7	2402.8	2459.3	2521.7	2575.5	2613.4	2629.8	2624.8	2592.8	2544.5
14°	2299.7	2343.0	2390.4	2449.3	2513.5	2569.6	2608.8	2626.1	2620.6	2587.8	2537.7
14.5°	2284.2	2328.9	2377.7	2438.8	2505.3	2563.2	2604.2	2622.0	2616.1	2582.4	2530.4
15°	2268.7	2314.8	2365.4	2428.3	2496.7	2556.8	2599.2	2617.9	2612.0	2576.4	2523.6
15.5°	2252.8	2299.3	2351.7	2416.9	2487.5	2550.0	2593.8	2612.9	2607.0	2570.1	2515.3
16°	2236.8	2284.7	2338.5	2405.5	2478.0	2542.7	2587.8	2607.9	2601.5	2563.7	2507.1
16.5°	2220.0	2269.6	2324.4	2394.1	2468.9	2535.4	2581.9	2602.4	2595.6	2556.8	2498.9
17°	2203.6	2254.2	2310.7	2382.2	2458.8	2527.7	2575.5	2596.9	2590.1	2549.5	2490.3
17.5°	2186.7	2238.2	2296.1	2369.5	2448.3	2519.5	2568.7	2590.6	2583.7	2541.8	2481.2
18°	2169.8	2222.2	2281.5	2356.7	2437.9	2510.8	2561.8	2584.2	2576.9	2534.5	2472.0
18.5°	2152.0	2205.8	2266.5	2343.5	2426.9	2502.1	2554.6	2577.3	2570.1	2526.3	2462.0
19°	2134.3	2189.0	2251.4	2329.8	2415.5	2493.0	2546.8	2570.5	2562.8	2517.6	2452.4
19.5°	2116.9	2172.1	2235.5	2316.1	2404.1	2483.4	2538.6	2562.8	2555.0	2509.0	2442.4
20°	2099.2	2155.2	2220.0	2302.5	2391.8	2473.9	2530.4	2555.0	2547.3	2500.3	2431.9
20.5°	2080.5	2137.9	2204.0	2287.9	2379.5	2463.8	2521.7	2547.3	2539.1	2490.7	2421.0
21°	2062.2	2120.1	2187.6	2273.3	2366.7	2453.4	2512.6	2538.6	2530.4	2481.2	2410.0



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2005.7	2066.3	2137.0	2227.3	2326.6	2420.1	2483.9	2511.7	2503.0	2450.6	2374.9
23°	1987.0	2048.1	2119.7	2211.8	2313.0	2408.2	2473.9	2502.1	2493.0	2440.1	2362.6
23.5°	1967.4	2029.0	2101.9	2195.3	2298.4	2395.9	2463.4	2492.6	2483.4	2429.2	2350.3
24°	1947.8	2011.2	2084.1	2178.5	2283.8	2384.1	2452.4	2482.1	2473.0	2417.8	2337.1
24.5°	1928.2	1992.0	2065.9	2161.6	2268.7	2370.8	2441.5	2471.6	2462.5	2406.4	2323.4
25°	1908.6	1972.4	2047.2	2144.7	2253.2	2358.1	2430.1	2461.1	2451.1	2395.0	2309.8
25.5°	1888.6	1953.3	2028.5	2127.0	2237.3	2344.4	2418.7	2449.7	2440.1	2383.2	2295.6
26°	1869.0	1934.1	2008.9	2109.2	2221.3	2330.3	2406.9	2438.8	2429.2	2370.8	2281.0
26.5°	1848.4	1914.5	1990.2	2090.5	2204.5	2316.1	2394.6	2427.4	2417.3	2358.1	2266.0
27°	1828.4	1894.5	1971.1	2072.7	2187.1	2302.0	2382.2	2416.0	2405.5	2345.3	2250.0
27.5°	1807.9	1874.4	1951.5	2054.0	2169.8	2286.5	2369.5	2404.1	2393.6	2332.6	2234.1
28°	1787.4	1854.4	1931.0	2034.4	2152.0	2271.0	2356.3	2391.4	2380.9	2319.3	2217.7
28.5°	1766.9	1834.3	1911.8	2014.8	2133.8	2255.1	2342.1	2379.5	2368.6	2304.7	2200.4
29°	1745.9	1813.8	1891.8	1994.8	2115.1	2239.1	2328.5	2366.7	2355.8	2290.6	2183.0
29.5°	1724.9	1793.3	1871.7	1975.2	2096.0	2221.8	2313.9	2354.0	2343.0	2275.6	2165.7
30°	1704.4	1772.8	1849.8	1955.1	2076.8	2204.5	2299.3	2340.8	2329.4	2260.5	2147.9
30.5°	1683.0	1752.3	1829.8	1934.1	2057.7	2186.2	2283.8	2327.1	2316.1	2244.6	2129.2
31°	1661.6	1730.8	1808.8	1913.6	2037.6	2168.0	2267.8	2313.0	2302.5	2228.2	2110.6
31.5°	1640.6	1710.3	1787.8	1892.7	2017.1	2149.3	2251.9	2298.8	2288.8	2211.8	2091.9
32°	1619.6	1688.9	1765.9	1871.2	1996.6	2131.1	2235.0	2284.2	2274.2	2194.9	2072.3
32.5°	1598.2	1667.5	1745.0	1850.7	1976.1	2111.5	2217.2	2268.7	2260.1	2177.1	2052.7
33°	1576.8	1646.5	1723.1	1828.4	1955.1	2092.3	2199.4	2252.8	2244.6	2158.9	2032.2
33.5°	1555.3	1625.1	1702.1	1807.0	1933.7	2072.3	2181.2	2236.8	2227.7	2140.2	2011.6
34°	1533.9	1603.7	1679.8	1785.5	1912.3	2052.2	2163.0	2220.0	2209.9	2122.4	1990.2
34.5°	1512.0	1582.2	1658.4	1763.7	1889.9	2031.7	2144.3	2202.6	2192.6	2102.4	1968.8
35°	1490.2	1560.4	1636.0	1741.3	1868.5	2010.7	2125.1	2184.4	2175.3	2082.8	1946.9
35.5°	1468.7	1538.9	1614.1	1718.5	1846.2	1989.8	2105.5	2166.6	2158.0	2062.2	1923.7
36°	1446.9	1517.1	1591.8	1696.2	1823.8	1968.3	2085.5	2147.5	2139.3	2041.3	1900.9
36.5°	1425.4	1495.6	1570.4	1673.9	1801.5	1946.0	2065.0	2128.8	2119.7	2018.0	1876.7
37°	1403.1	1473.7	1548.5	1651.5	1778.7	1923.7	2044.0	2108.7	2099.2	1995.2	1852.6
37.5°	1381.7	1451.4	1525.3	1628.7	1755.0	1901.3	2022.1	2088.7	2078.2	1971.5	1827.9
38°	1359.3	1429.5	1503.4	1605.5	1731.8	1878.1	1999.8	2067.3	2054.9	1946.9	1802.9
38.5°	1338.4	1408.1	1480.6	1582.7	1708.5	1854.4	1977.5	2044.9	2031.7	1921.4	1777.3
39°	1316.5	1385.8	1458.2	1559.0	1684.8	1831.6	1954.2	2020.8	2007.5	1895.4	1750.4
39.5°	1294.1	1364.3	1435.9	1537.1	1661.1	1807.4	1931.0	1996.1	1981.1	1868.5	1724.0
40°	1271.8	1342.5	1413.6	1513.9	1637.8	1783.3	1905.9	1970.2	1955.1	1841.2	1696.7
40.5°	1250.8	1320.6	1391.2	1490.2	1613.2	1758.2	1880.8	1944.6	1928.2	1812.9	1668.8
41°	1228.0	1298.7	1368.4	1466.9	1589.1	1733.6	1854.4	1917.3	1900.9	1784.2	1641.0
41.5°	1206.6	1276.8	1346.6	1444.1	1564.9	1708.5	1829.3	1890.8	1872.6	1755.0	1613.2
42°	1184.7	1254.5	1324.2	1420.4	1540.3	1682.5	1802.0	1862.6	1843.9	1725.4	1584.5
42.5°	1163.3	1233.1	1301.4	1397.2	1515.7	1657.0	1775.1	1835.7	1815.2	1696.2	1555.8
43°	1141.4	1211.2	1279.1	1374.4	1491.5	1631.5	1747.3	1807.0	1786.0	1664.7	1526.6
43.5°	1120.0	1189.8	1256.8	1351.1	1466.9	1605.0	1719.9	1778.2	1755.9	1634.2	1497.4



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1054.4	1124.6	1190.2	1281.4	1392.1	1524.3	1634.7	1689.8	1664.7	1541.2	1408.1
45.5°	1033.9	1102.7	1167.9	1257.7	1367.5	1497.4	1606.4	1660.2	1633.7	1510.2	1378.5
46°	1012.0	1081.3	1146.0	1234.4	1342.5	1469.6	1576.8	1630.1	1602.7	1479.2	1347.9
46.5°	990.6	1060.3	1124.1	1211.6	1316.9	1442.7	1548.0	1599.6	1570.8	1447.8	1318.3
47°	969.1	1038.4	1102.2	1188.4	1291.9	1414.9	1518.9	1568.6	1539.4	1416.3	1288.2
47.5°	948.2	1017.0	1080.4	1165.6	1266.8	1387.6	1489.2	1537.6	1507.5	1385.3	1259.0
48°	926.7	995.6	1058.5	1142.3	1242.2	1360.2	1459.6	1507.0	1476.0	1354.3	1229.4
48.5°	905.8	974.6	1036.6	1119.6	1217.1	1332.4	1430.4	1476.5	1444.6	1323.8	1200.2
49°	884.8	953.6	1015.2	1096.8	1192.0	1305.1	1400.8	1445.0	1412.2	1292.3	1171.5
49.5°	864.3	932.2	994.2	1074.4	1167.0	1277.7	1371.2	1414.0	1380.8	1262.2	1142.8
50°	842.9	911.7	972.3	1052.1	1141.9	1250.4	1341.6	1382.6	1349.3	1231.2	1114.1
50.5°	822.3	890.7	950.9	1028.8	1117.3	1223.0	1312.4	1351.1	1317.4	1201.6	1085.4
51°	801.8	869.8	929.9	1006.0	1092.2	1195.2	1282.7	1320.6	1286.4	1171.5	1058.0
51.5°	781.3	848.8	909.0	984.2	1067.6	1168.8	1253.6	1289.6	1254.5	1141.4	1030.2
52°	761.3	828.3	888.4	962.3	1043.4	1141.4	1224.9	1258.6	1223.5	1112.3	1002.9
52.5°	741.2	807.8	867.5	940.4	1019.3	1114.5	1195.2	1227.1	1192.5	1083.1	976.0
53°	720.7	787.7	846.5	917.6	995.1	1087.6	1166.1	1196.6	1162.4	1054.4	949.1
53.5°	699.7	766.7	826.0	896.2	970.5	1061.7	1137.3	1166.1	1131.9	1025.2	922.6
54°	680.1	747.1	805.9	874.3	946.8	1034.8	1108.6	1136.0	1100.9	997.4	896.6
54.5°	660.1	726.6	785.4	852.4	923.5	1009.2	1080.8	1105.0	1071.7	969.6	871.1
55°	640.5	707.5	765.4	831.5	899.8	983.7	1053.0	1076.7	1043.0	942.2	846.0
55.5°	620.9	687.4	745.3	810.0	876.6	958.2	1024.7	1046.2	1012.9	914.9	820.1
56°	601.3	668.3	725.7	788.6	852.9	932.2	996.5	1017.0	984.2	887.5	795.9
56.5°	581.7	648.7	706.1	767.6	830.5	907.1	969.1	987.8	955.5	861.1	772.2
57°	562.5	629.5	686.5	747.1	808.2	882.5	942.2	959.1	927.2	835.1	748.0
57.5°	543.8	610.4	666.9	726.2	785.9	858.4	915.8	930.8	899.4	809.6	724.8
58°	524.7	591.7	647.8	705.6	763.5	833.7	888.9	903.0	872.5	784.5	702.0
58.5°	506.4	573.0	629.1	685.6	742.1	810.0	862.9	875.7	845.1	759.0	679.2
59°	488.2	555.2	610.4	666.0	720.2	786.3	836.9	848.8	818.2	734.8	657.3
59.5°	470.0	536.5	590.8	646.4	699.3	763.1	811.4	822.3	792.3	710.7	635.4
60°	452.7	518.8	572.5	627.2	678.3	739.8	786.3	796.4	767.2	687.4	614.0
60.5°	434.9	500.5	553.9	607.6	657.8	717.5	761.3	770.4	741.2	664.2	592.6
61°	417.6	483.2	536.1	589.0	637.7	695.2	737.1	745.3	717.0	641.4	572.5
61.5°	400.7	465.9	517.8	570.3	618.6	673.3	713.4	720.7	692.4	619.0	552.5
62°	384.3	449.0	501.0	552.5	598.5	651.9	689.7	696.5	669.6	598.1	532.9
62.5°	367.4	432.1	483.7	534.2	579.8	630.4	666.4	672.4	645.9	576.2	513.3
63°	351.9	415.7	466.8	516.9	560.7	609.5	643.7	649.1	622.7	555.2	494.6
63.5°	336.4	399.3	449.9	500.1	542.5	589.0	621.3	626.3	600.8	534.7	475.9
64°	321.4	382.9	434.4	483.2	524.2	568.9	599.4	604.4	578.9	516.0	458.1
64.5°	305.9	367.0	418.0	466.3	506.9	549.3	578.0	582.6	557.5	496.0	440.8
65°	291.7	351.9	402.5	450.4	489.1	530.1	557.5	561.1	537.4	477.3	423.9
65.5°	277.2	336.9	387.0	434.9	472.3	511.0	537.0	540.6	516.5	458.1	407.1
66°	263.0	321.8	372.4	419.4	455.8	492.3	516.9	520.1	495.0	440.3	391.1





TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	224.7	279.0	328.7	373.8	408.4	439.4	460.4	462.2	434.4	389.3	344.2
68°	213.3	265.8	315.4	359.7	393.8	422.1	441.7	443.1	415.3	372.4	330.0
68.5°	202.9	252.5	301.8	345.5	379.3	405.7	424.4	424.8	397.0	355.6	315.9
69°	192.8	239.8	288.5	331.9	364.2	390.2	407.5	407.5	378.8	338.7	302.2
69.5°	184.2	227.5	275.8	318.2	349.6	374.7	391.6	390.7	360.6	322.7	289.0
70°	178.7	215.6	263.0	305.0	335.0	359.7	375.6	373.8	342.3	307.7	275.8
70.5°	175.5	204.2	251.2	291.7	320.9	344.2	359.7	357.4	326.8	292.7	263.5
71°	172.3	194.2	239.3	279.4	307.7	329.6	343.7	340.5	311.3	278.5	251.2
71.5°	169.1	184.6	228.4	266.7	294.5	315.4	329.1	324.6	295.4	264.8	239.3
72°	165.9	176.9	217.4	254.8	281.7	302.2	314.5	309.5	280.8	251.6	227.9
72.5°	161.8	171.4	207.0	243.4	269.4	288.5	300.4	294.9	266.7	238.9	216.5
73°	157.7	167.3	197.4	232.0	257.1	275.8	287.6	280.8	253.0	226.1	205.6
73.5°	154.1	163.6	187.8	221.1	245.2	263.0	274.0	267.1	239.8	213.8	195.1
74°	150.0	160.0	179.1	210.6	233.8	251.6	261.2	253.9	227.5	201.9	184.6
74.5°	146.3	156.8	170.5	200.6	222.9	239.8	248.9	241.1	215.2	190.5	174.6
75°	141.8	153.2	162.7	191.0	212.0	228.4	237.5	228.8	203.3	179.6	165.0
75.5°	137.2	149.5	157.3	181.4	201.5	217.0	225.2	217.0	191.9	168.7	155.4
76°	132.2	145.4	151.8	172.8	191.9	206.5	214.2	205.1	180.5	158.2	145.9
76.5°	126.7	140.9	146.3	164.1	181.9	196.5	203.3	193.7	170.0	147.7	136.8
77°	121.7	136.3	140.4	156.8	172.8	186.4	192.8	182.3	159.1	137.7	128.1
77.5°	116.2	131.7	136.3	150.0	164.1	176.9	182.3	171.9	148.6	127.6	119.4
78°	110.8	126.7	132.7	143.1	155.4	167.3	172.3	161.4	138.1	118.1	110.3
78.5°	104.8	122.2	129.0	136.3	147.2	158.6	162.7	151.3	127.6	108.5	102.1
79°	98.9	116.7	124.9	129.5	139.5	150.0	153.2	141.3	117.2	98.9	93.9
79.5°	93.0	111.7	120.8	123.5	131.7	141.8	144.0	131.3	107.1	89.8	85.7
80°	87.1	106.2	116.2	117.6	124.4	133.6	135.4	121.7	97.1	81.1	77.9
80.5°	80.7	100.7	111.7	112.6	117.6	125.8	126.7	113.0	87.1	72.0	70.7
81°	74.3	94.8	107.1	107.6	110.8	118.1	118.1	103.5	77.0	63.8	63.4
81.5°	67.9	89.3	102.1	102.6	104.4	110.8	109.9	94.8	67.0	55.6	56.1
82°	61.5	83.0	97.1	97.6	98.0	103.5	101.2	86.2	57.0	48.8	49.2
82.5°	55.2	77.0	92.1	93.0	92.1	96.6	93.0	77.9	49.2	42.4	43.3
83°	47.9	70.7	87.1	88.0	86.2	89.3	85.2	69.7	41.0	36.0	37.4
83.5°	41.0	64.3	81.6	83.9	80.2	82.5	77.5	62.5	32.8	29.6	31.5
84°	34.2	57.9	76.6	79.3	74.3	75.7	70.2	54.7	25.1	23.2	25.5
84.5°	27.8	51.5	71.1	74.8	68.8	69.3	63.4	48.3	16.9	18.7	20.1
85°	21.9	45.1	66.1	70.2	63.4	62.9	56.5	41.9	13.7	14.6	14.6
85.5°	17.8	39.2	61.1	65.6	58.3	57.0	50.1	36.0	10.9	10.5	10.5
86°	15.5	34.2	56.1	60.6	53.3	51.1	44.7	29.6	9.1	6.8	6.4
86.5°	12.8	30.1	51.1	55.6	48.3	45.6	38.7	23.2	7.3	3.6	3.6
87°	10.5	26.4	46.0	50.1	43.8	40.1	32.8	18.2	5.5	1.8	1.4
87.5°	8.2	22.8	40.6	45.1	38.7	34.6	26.9	13.2	4.6	0.9	0.0
88°	5.9	19.1	35.6	39.7	33.7	29.2	21.0	9.1	2.7	0.5	0.0
88.5°	3.6	15.5	30.1	34.6	29.2	23.7	16.0	5.5	1.4	0.0	0.0



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	5.0	15.0	17.3	13.7	10.0	3.6	0.5	0.0	0.0	0.0



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2600.1	2600.1	2600.1	2600.1	2600.1	2600.1
0.5°	2599.2	2600.1	2596.0	2593.3	2592.4	2592.8
1°	2599.2	2597.9	2591.9	2587.4	2585.5	2586.0
1.5°	2598.8	2595.1	2586.9	2581.0	2578.7	2579.6
2°	2597.9	2591.9	2581.9	2574.6	2571.4	2572.3
2.5°	2596.5	2588.7	2576.4	2568.2	2564.1	2565.0
3°	2595.1	2585.1	2570.5	2560.5	2556.4	2556.8
3.5°	2592.8	2581.0	2564.6	2553.2	2548.2	2549.1
4°	2591.0	2576.4	2558.2	2545.0	2539.1	2540.4
4.5°	2588.3	2571.9	2550.9	2536.8	2529.9	2531.8
5°	2585.1	2566.4	2544.1	2528.1	2520.8	2522.6
5.5°	2581.9	2560.9	2536.3	2519.0	2511.2	2513.1
6°	2578.3	2555.5	2528.1	2509.4	2501.2	2503.0
6.5°	2574.2	2549.1	2520.4	2499.9	2490.7	2493.0
7°	2569.6	2542.7	2511.7	2489.8	2479.8	2482.5
7.5°	2565.0	2535.9	2502.6	2479.3	2468.9	2471.6
8°	2560.0	2528.6	2493.5	2468.4	2457.0	2460.2
8.5°	2554.6	2521.3	2483.4	2457.5	2445.1	2448.8
9°	2549.1	2513.1	2473.9	2446.1	2433.3	2436.9
9.5°	2542.7	2504.9	2462.9	2434.2	2420.5	2424.2
10°	2536.3	2496.2	2452.4	2421.9	2407.8	2411.9
10.5°	2529.9	2487.5	2441.5	2409.6	2395.0	2398.7
11°	2522.6	2478.0	2430.1	2396.8	2381.3	2385.9
11.5°	2515.3	2468.9	2418.7	2384.1	2367.7	2371.8
12°	2507.6	2458.4	2406.4	2370.4	2353.5	2358.1
12.5°	2499.9	2448.3	2394.1	2356.3	2339.4	2344.0
13°	2491.2	2437.9	2381.3	2342.6	2324.8	2329.4
13.5°	2482.5	2426.9	2368.6	2328.0	2309.3	2314.8
14°	2473.4	2415.5	2354.9	2313.4	2294.7	2299.7
14.5°	2464.3	2404.1	2341.7	2298.4	2279.2	2284.2
15°	2454.7	2392.3	2327.5	2283.3	2263.3	2268.7
15.5°	2444.7	2379.5	2313.0	2267.4	2247.3	2252.8
16°	2434.2	2367.2	2298.4	2251.9	2230.9	2236.8
16.5°	2423.7	2354.9	2283.8	2235.9	2214.5	2220.0
17°	2412.8	2341.2	2268.7	2219.5	2197.2	2203.6
17.5°	2401.8	2327.5	2252.8	2202.6	2179.8	2186.7
18°	2390.0	2313.9	2237.3	2185.8	2163.0	2169.8
18.5°	2378.6	2299.7	2220.9	2168.5	2145.2	2152.0
19°	2366.3	2285.1	2204.5	2151.1	2127.4	2134.3
19.5°	2354.0	2270.6	2187.6	2132.9	2109.2	2116.9
20°	2341.2	2254.6	2170.3	2115.1	2091.4	2099.2
20.5°	2328.0	2239.1	2153.0	2096.9	2073.2	2080.5
21°	2313.9	2222.7	2135.2	2078.2	2054.5	2062.2

TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2271.5	2173.0	2079.6	2020.8	1997.1	2005.7
23°	2256.0	2154.8	2060.4	2001.2	1977.9	1987.0
23.5°	2240.5	2137.5	2040.8	1981.1	1958.3	1967.4
24°	2224.1	2118.8	2021.2	1961.0	1938.3	1947.8
24.5°	2208.1	2100.1	2001.2	1940.5	1918.2	1928.2
25°	2190.8	2080.5	1980.6	1920.0	1897.7	1908.6
25.5°	2173.9	2061.8	1960.6	1899.5	1877.6	1888.6
26°	2155.7	2042.6	1939.2	1878.5	1857.1	1869.0
26.5°	2137.9	2023.0	1919.1	1857.1	1836.1	1848.4
27°	2119.7	2002.1	1897.2	1836.1	1815.6	1828.4
27.5°	2101.0	1982.0	1876.3	1814.7	1794.7	1807.9
28°	2081.8	1961.0	1853.9	1792.8	1773.2	1787.4
28.5°	2063.2	1940.5	1833.0	1771.4	1751.8	1766.9
29°	2043.1	1919.6	1810.6	1749.5	1730.8	1745.9
29.5°	2023.0	1898.1	1789.2	1727.7	1709.4	1724.9
30°	2003.4	1876.3	1766.4	1705.8	1688.0	1704.4
30.5°	1983.4	1854.4	1744.1	1683.4	1666.1	1683.0
31°	1962.4	1832.5	1721.3	1661.1	1644.7	1661.6
31.5°	1941.0	1810.2	1698.9	1638.8	1622.8	1640.6
32°	1919.6	1787.4	1676.1	1616.0	1600.9	1619.6
32.5°	1897.7	1765.0	1652.9	1594.5	1578.6	1598.2
33°	1875.8	1742.2	1630.1	1571.3	1557.2	1576.8
33.5°	1853.0	1719.4	1607.3	1549.0	1534.8	1555.3
34°	1830.2	1695.7	1584.5	1525.7	1512.9	1533.9
34.5°	1807.4	1672.0	1561.3	1502.9	1491.1	1512.0
35°	1784.2	1648.3	1537.1	1480.6	1468.7	1490.2
35.5°	1760.0	1625.1	1513.9	1457.8	1446.9	1468.7
36°	1735.9	1601.4	1491.1	1435.0	1424.5	1446.9
36.5°	1711.7	1576.8	1467.8	1412.7	1402.6	1425.4
37°	1686.6	1552.2	1444.1	1389.4	1380.8	1403.1
37.5°	1661.6	1528.0	1420.4	1366.6	1358.4	1381.7
38°	1635.6	1503.4	1396.7	1343.8	1336.1	1359.3
38.5°	1611.4	1478.8	1373.5	1321.5	1314.2	1338.4
39°	1585.0	1454.1	1350.2	1298.7	1292.3	1316.5
39.5°	1558.5	1429.1	1326.5	1276.8	1270.4	1294.1
40°	1532.5	1404.0	1302.8	1253.6	1247.6	1271.8
40.5°	1506.1	1378.9	1279.1	1231.2	1226.2	1250.8
41°	1479.7	1354.3	1255.9	1208.4	1204.3	1228.0
41.5°	1453.2	1329.2	1232.1	1186.6	1182.5	1206.6
42°	1426.8	1304.6	1208.9	1164.7	1160.1	1184.7
42.5°	1400.4	1280.0	1185.7	1141.9	1139.2	1163.3
43°	1372.5	1254.9	1162.9	1120.0	1117.7	1141.4
43.5°	1345.7	1229.9	1139.2	1097.7	1095.4	1120.0



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1264.5	1155.6	1070.8	1032.5	1031.1	1054.4
45.5°	1238.1	1131.9	1048.4	1010.6	1009.7	1033.9
46°	1210.3	1107.7	1026.1	989.6	988.7	1012.0
46.5°	1183.8	1083.1	1003.8	968.2	967.3	990.6
47°	1156.5	1058.9	981.0	947.2	946.8	969.1
47.5°	1129.6	1034.8	958.6	925.8	925.8	948.2
48°	1102.7	1011.1	936.8	904.4	904.9	926.7
48.5°	1076.2	986.9	914.4	883.9	883.9	905.8
49°	1050.3	963.7	893.5	863.4	863.4	884.8
49.5°	1023.8	940.4	871.6	841.9	843.3	864.3
50°	996.9	916.7	849.7	821.4	823.3	842.9
50.5°	970.9	893.5	828.3	801.4	802.3	822.3
51°	946.3	870.2	807.8	781.3	782.2	801.8
51.5°	920.3	847.4	787.2	760.3	762.6	781.3
52°	895.3	825.1	766.3	741.7	743.0	761.3
52.5°	870.2	802.7	745.8	721.6	723.4	741.2
53°	846.0	779.9	726.2	702.0	703.8	720.7
53.5°	821.4	758.5	706.1	682.4	684.2	699.7
54°	798.6	736.2	686.5	663.7	665.1	680.1
54.5°	774.9	715.2	667.4	645.0	646.4	660.1
55°	751.7	693.8	648.2	626.3	627.7	640.5
55.5°	728.4	673.7	629.5	608.1	609.0	620.9
56°	706.6	652.8	610.8	590.3	590.3	601.3
56.5°	684.7	633.6	593.1	572.5	572.1	581.7
57°	663.3	613.1	574.8	554.8	553.9	562.5
57.5°	642.3	594.0	557.0	537.4	535.6	543.8
58°	621.3	574.8	539.7	520.6	518.8	524.7
58.5°	600.8	556.6	522.4	503.7	500.5	506.4
59°	580.7	537.9	506.0	487.8	483.7	488.2
59.5°	561.1	520.6	489.1	471.3	466.3	470.0
60°	542.0	502.3	472.7	455.8	449.9	452.7
60.5°	522.9	485.5	456.8	439.4	433.1	434.9
61°	505.1	468.6	440.8	424.4	417.1	417.6
61.5°	486.8	452.2	425.8	409.3	401.1	400.7
62°	469.5	436.2	410.3	394.8	386.1	384.3
62.5°	452.2	420.3	394.8	379.7	370.6	367.4
63°	435.3	404.8	380.2	365.1	356.0	351.9
63.5°	419.4	390.2	365.6	351.0	341.4	336.4
64°	403.4	374.7	351.5	336.9	327.3	321.4
64.5°	388.4	361.0	337.3	323.2	313.6	305.9
65°	373.8	346.9	324.1	309.5	300.4	291.7
65.5°	358.7	333.2	310.4	296.3	287.2	277.2
66°	343.7	319.5	297.2	283.1	274.4	263.0



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	303.1	281.7	260.3	246.2	236.6	224.7
68°	289.9	269.4	248.9	234.8	224.3	213.3
68.5°	277.6	257.6	237.5	223.8	212.4	202.9
69°	265.3	246.2	226.6	213.3	201.0	192.8
69.5°	253.4	234.8	216.1	202.9	190.1	184.2
70°	242.1	224.3	206.0	193.3	180.1	178.7
70.5°	231.1	213.8	196.0	184.6	171.4	175.5
71°	219.7	203.8	186.4	176.0	164.6	172.3
71.5°	209.2	193.7	177.8	167.8	161.4	169.1
72°	199.2	184.2	169.1	161.4	157.7	165.9
72.5°	189.6	175.0	163.6	155.0	154.5	161.8
73°	179.6	166.4	155.9	148.6	150.9	157.7
73.5°	170.5	158.6	148.1	142.7	147.2	154.1
74°	161.8	150.9	140.4	136.3	142.7	150.0
74.5°	153.2	143.1	132.7	131.7	138.6	146.3
75°	144.5	135.4	126.3	127.2	134.0	141.8
75.5°	136.8	127.2	120.3	123.1	129.0	137.2
76°	128.5	120.3	114.4	119.0	124.0	132.2
76.5°	120.8	113.5	108.5	114.9	119.0	126.7
77°	113.5	106.7	103.5	110.3	113.5	121.7
77.5°	106.2	100.3	98.0	105.3	108.5	116.2
78°	98.9	93.9	93.0	100.7	103.0	110.8
78.5°	91.6	87.5	87.5	95.7	97.1	104.8
79°	84.8	81.6	82.5	90.7	91.2	98.9
79.5°	77.9	75.2	77.9	85.7	85.2	93.0
80°	71.6	69.7	73.4	80.2	78.9	87.1
80.5°	65.2	64.3	68.8	75.2	72.9	80.7
81°	58.8	58.8	64.3	69.7	67.0	74.3
81.5°	52.9	53.8	59.7	64.3	60.6	67.9
82°	47.4	48.3	54.7	59.3	54.7	61.5
82.5°	41.9	43.3	49.7	53.8	48.8	55.2
83°	36.0	38.7	44.2	48.8	42.8	47.9
83.5°	30.5	33.7	39.2	43.8	37.4	41.0
84°	25.1	28.7	33.7	38.7	32.4	34.2
84.5°	19.6	23.7	28.3	33.7	27.8	27.8
85°	14.6	18.7	22.8	28.3	24.2	21.9
85.5°	10.0	14.1	16.9	22.8	20.5	17.8
86°	5.9	9.6	12.8	17.3	16.9	15.5
86.5°	2.3	5.0	8.7	13.2	13.7	12.8
87°	0.0	0.9	4.6	9.1	10.5	10.5
87.5°	0.0	0.0	0.5	4.6	6.8	8.2
88°	0.0	0.0	0.0	0.5	3.6	5.9
88.5°	0.0	0.0	0.0	0.5	0.9	3.6



TEST NUMBER: P776555

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRH-HCD41TRLWW-5000lm-2700K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.5	0.5	0.0



Report Generated By 670245859 / DESKTOP-T8S5UU9



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

Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°    - · - 135°-315°

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

Scaled Data Report



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

Scaled Data Report





21.5°	2043.6	2102.4	2170.7	2258.3	2354.0	2442.4	2503.5	2529.9	2521.7	2471.1	2398.7
22°	2024.9	2084.6	2154.3	2243.2	2340.3	2431.5	2493.9	2521.3	2512.6	2461.1	2386.8



44°	1097.7	1167.9	1234.4	1327.4	1441.4	1578.1	1691.6	1748.6	1725.8	1603.2	1466.9
44.5°	1076.7	1146.0	1212.1	1304.2	1416.8	1551.2	1663.4	1719.4	1695.7	1573.1	1437.7



66.5°	249.8	306.8	357.4	403.9	439.4	474.1	497.3	500.5	474.1	423.0	375.6
67°	237.0	292.7	342.8	389.3	423.5	456.8	478.6	481.4	454.5	406.2	360.1



89°	1.4	11.9	24.2	28.7	24.2	19.1	10.9	2.7	0.5	0.0	0.0
89.5°	0.5	8.7	18.7	23.2	18.7	14.1	6.8	1.4	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





21.5°	2299.7	2206.7	2116.9	2059.5	2035.3	2043.6
22°	2286.1	2189.9	2097.8	2040.4	2016.7	2024.9



44°	1318.3	1205.3	1116.8	1076.2	1074.0	1097.7
44.5°	1292.3	1180.6	1093.6	1053.9	1052.5	1076.7



66.5°	330.0	306.3	284.9	270.8	261.2	249.8
67°	316.4	293.6	272.1	258.5	248.9	237.0

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

Scaled Data Report



89°	0.0	0.0	0.0	0.5	0.5	1.4
89.5°	0.0	0.0	0.0	0.5	0.5	0.5

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

Scaled Data Report



(END OF REPORT)