

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: P776756

Luminaire Tested: HCDJBL54050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776756
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B048)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K
Description: 8 INCH ROUND SHALLOW-WIDE LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5701.6 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.17 / 1.27
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

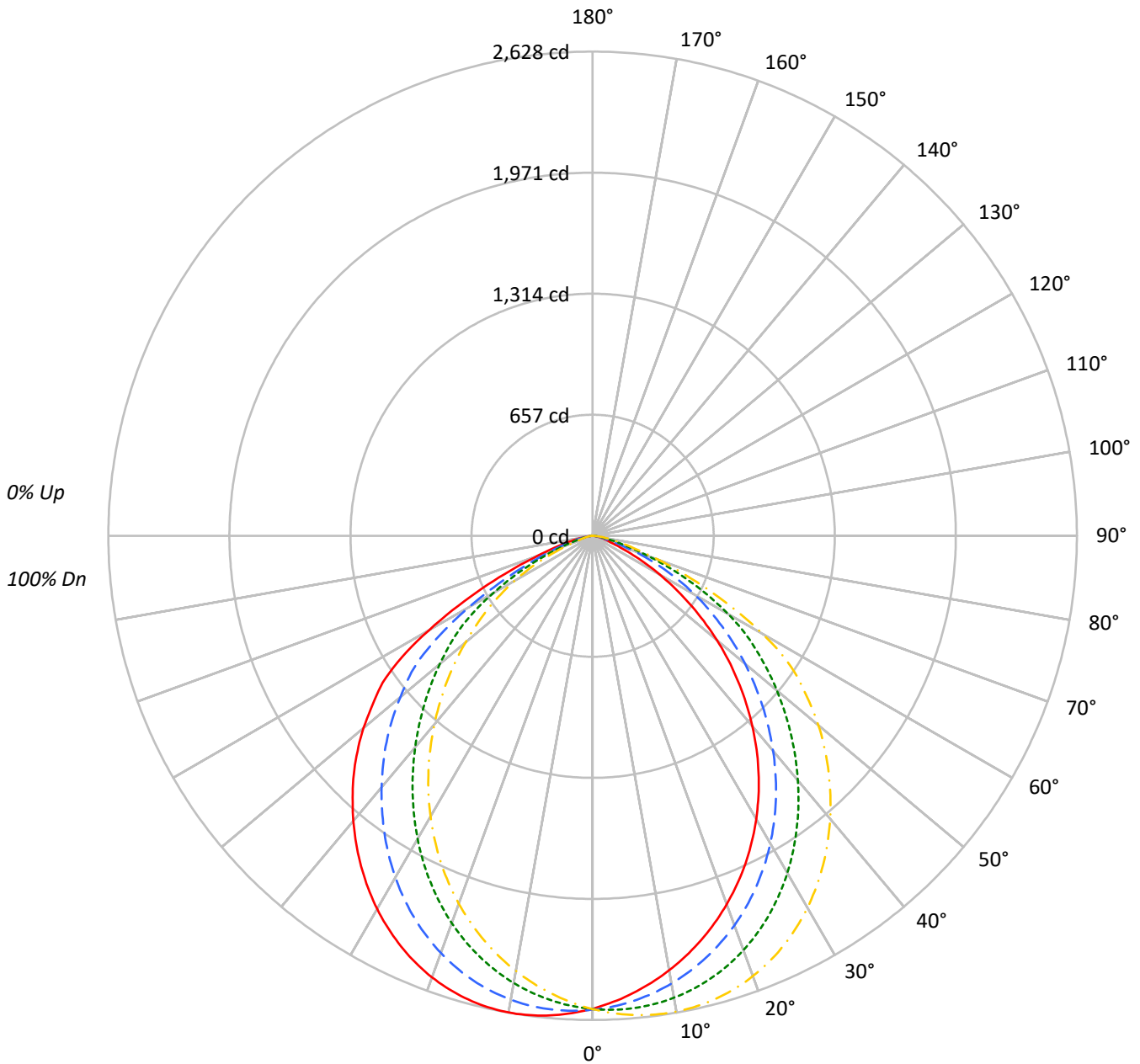
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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	111	107	103	100	108	105	101	98	100	98	95	97	94	92	93	91	90	88								
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	83	80	78	76								
3	94	85	77	72	92	83	76	71	80	74	70	77	73	69	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	59	54	65	58	53	63	57	52	61	56	52	50								
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44								
7	69	56	48	42	67	55	48	42	54	47	42	53	46	42	51	46	41	39								
8	64	52	44	38	63	51	43	38	50	43	38	48	42	37	47	42	37	35								
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32								
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	78460	78460	78460	78460
5°	76397	78873	80083	77619
10°	74226	78920	81456	76399
15°	71831	78585	82372	74783
20°	69157	77761	82845	72657
25°	66103	76414	82862	70031
30°	62592	74497	82440	66981
35°	58504	72025	81619	63472
40°	53728	69040	80502	59690
45°	48198	65667	79108	55680
50°	41726	61978	77049	51410
55°	34172	57763	74008	46686
60°	25615	51798	62660	38181
65°	16413	41712	45403	27314
70°	9292	28654	28074	16460
75°	7066	16774	17753	8930
80°	4976	9230	10127	4255
85°	2942	5044	2592	1787

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 80209 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.5	4.3
10°-20°	686.0	12.0
20°-30°	1010.1	17.7
30°-40°	1158.1	20.3
40°-50°	1114.5	19.5
50°-60°	888.7	15.6
60°-70°	461.3	8.1
70°-80°	124.4	2.2
80°-90°	15.9	0.3
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°	1938.6	34.0
0°-40°	3096.7	54.3
0°-60°	5100.0	89.4
0°-90°	5701.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5701.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2570	2570	2570	2570	2570	
5°	2493	2574	2613	2533	2493	235
15°	2273	2486	2606	2366	2273	639
25°	1962	2268	2460	2079	1962	902
35°	1570	1932	2190	1703	1570	979
45°	1116	1521	1832	1290	1116	858
55°	642	1085	1390	877	642	574
65°	227	577	628	378	227	235
75°	60	142	150	76	60	66
85°	8	14	7	5	8	11
90°	0	1	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2569.9	2569.9	2569.9	2569.9	2569.9	2569.9	2569.9	2569.9	2569.9	2569.9	2569.9
0.5°	2560.6	2571.8	2570.8	2569.4	2570.8	2573.1	2574.5	2574.5	2572.7	2580.6	2575.0
1°	2554.1	2567.1	2568.0	2569.0	2572.7	2577.3	2580.1	2580.1	2578.3	2584.3	2577.3
1.5°	2547.1	2562.0	2564.8	2568.5	2573.6	2580.1	2584.8	2584.8	2583.8	2587.5	2578.7
2°	2540.2	2556.9	2561.5	2567.1	2574.5	2583.4	2589.4	2589.4	2588.9	2590.8	2580.1
2.5°	2532.7	2551.3	2557.4	2566.2	2575.0	2586.2	2594.1	2594.1	2593.6	2594.1	2581.0
3°	2525.3	2545.3	2553.6	2564.3	2575.5	2588.9	2598.2	2598.2	2597.8	2596.8	2581.5
3.5°	2517.9	2539.2	2549.5	2562.5	2575.5	2591.3	2601.9	2601.9	2602.4	2599.2	2582.0
4°	2509.5	2532.7	2544.8	2560.1	2575.0	2593.1	2605.2	2605.2	2606.1	2601.0	2582.0
4.5°	2501.6	2526.2	2539.7	2557.4	2574.5	2594.5	2608.5	2608.5	2609.8	2602.9	2581.5
5°	2492.8	2519.3	2534.6	2554.6	2573.6	2595.4	2611.2	2611.2	2613.1	2604.3	2581.0
5.5°	2484.4	2512.3	2529.5	2551.3	2572.2	2596.4	2613.6	2613.6	2615.9	2605.2	2579.6
6°	2475.1	2504.9	2523.4	2547.6	2570.8	2596.8	2615.9	2615.9	2618.7	2605.7	2578.7
6.5°	2465.8	2497.0	2517.4	2543.9	2568.5	2597.3	2617.7	2617.7	2621.0	2606.1	2577.3
7°	2456.5	2489.1	2511.4	2539.7	2566.2	2597.3	2619.6	2619.6	2622.9	2606.1	2575.5
7.5°	2446.8	2480.7	2504.9	2535.5	2563.4	2596.8	2620.5	2620.5	2624.2	2605.7	2573.1
8°	2436.6	2472.3	2497.9	2530.4	2561.1	2596.4	2621.5	2621.5	2625.6	2605.2	2570.4
8.5°	2426.3	2463.5	2490.5	2525.3	2557.8	2595.0	2622.4	2622.4	2626.6	2603.8	2567.6
9°	2415.7	2454.7	2483.0	2519.7	2554.1	2594.1	2622.4	2622.4	2627.5	2602.9	2564.3
9.5°	2405.4	2445.4	2475.6	2514.1	2550.4	2592.2	2622.4	2622.4	2627.5	2601.0	2560.6
10°	2394.3	2436.1	2467.2	2508.1	2545.7	2589.9	2621.9	2634.9	2627.5	2598.7	2556.9
10.5°	2383.6	2426.3	2458.9	2501.6	2541.6	2588.0	2621.5	2634.5	2626.6	2596.4	2552.7
11°	2372.0	2416.1	2450.5	2494.6	2536.4	2585.2	2620.1	2634.0	2625.6	2593.6	2548.1
11.5°	2360.4	2406.4	2441.7	2488.1	2531.3	2582.4	2618.7	2633.1	2624.7	2590.8	2543.0
12°	2348.3	2395.7	2432.9	2480.7	2525.8	2579.2	2617.3	2632.1	2622.9	2587.1	2537.8
12.5°	2336.7	2385.0	2423.1	2472.8	2520.2	2575.5	2615.0	2630.3	2621.0	2583.4	2532.3
13°	2324.1	2373.9	2413.8	2464.9	2514.1	2571.8	2612.6	2628.4	2618.7	2579.2	2526.2
13.5°	2311.6	2362.7	2403.6	2457.0	2507.6	2567.6	2609.8	2626.1	2616.3	2575.0	2520.2
14°	2299.1	2351.6	2393.4	2448.2	2500.7	2562.9	2606.6	2623.8	2613.6	2569.9	2513.2
14.5°	2285.6	2339.9	2383.1	2439.8	2493.7	2557.8	2603.3	2621.0	2609.8	2564.8	2506.7
15°	2272.6	2328.3	2372.5	2430.5	2486.3	2552.2	2599.6	2617.3	2606.1	2559.2	2499.3
15.5°	2259.1	2315.8	2361.3	2421.2	2478.4	2547.1	2595.4	2613.6	2601.9	2553.6	2491.8
16°	2245.6	2303.2	2349.7	2411.5	2470.0	2541.1	2590.8	2609.8	2597.8	2547.1	2484.4
16.5°	2231.7	2290.7	2338.1	2401.3	2461.7	2534.6	2586.2	2605.2	2593.1	2540.6	2476.1
17°	2217.3	2277.7	2326.5	2390.6	2452.8	2528.1	2581.0	2600.6	2588.0	2533.7	2467.2
17.5°	2202.9	2264.7	2314.4	2380.4	2444.0	2521.1	2575.5	2595.4	2582.4	2526.2	2458.4
18°	2189.0	2251.2	2302.3	2369.2	2434.2	2513.7	2569.9	2589.9	2576.4	2518.8	2449.1
18.5°	2174.1	2237.7	2289.3	2358.1	2424.5	2505.8	2563.9	2584.3	2569.9	2510.9	2439.8
19°	2158.3	2223.8	2276.3	2346.4	2414.3	2498.4	2557.4	2578.3	2563.9	2503.0	2430.1
19.5°	2143.4	2209.4	2263.3	2334.4	2404.0	2490.0	2550.4	2571.8	2556.9	2494.2	2419.8
20°	2128.6	2195.5	2249.8	2322.8	2393.4	2481.2	2543.4	2564.8	2549.9	2485.3	2409.2
20.5°	2112.8	2180.6	2236.3	2310.2	2381.8	2472.3	2536.0	2557.8	2542.5	2476.1	2398.9
21°	2096.1	2166.2	2222.4	2297.7	2370.6	2463.0	2528.1	2550.4	2534.6	2466.8	2387.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2048.2	2120.2	2178.7	2257.3	2334.8	2433.3	2502.5	2525.8	2508.6	2436.6	2352.9
23°	2031.5	2104.4	2163.9	2243.3	2322.3	2422.6	2493.2	2517.4	2499.3	2425.4	2340.4
23.5°	2014.3	2088.6	2148.5	2229.4	2308.8	2411.9	2484.0	2508.1	2490.0	2414.7	2328.3
24°	1997.1	2072.4	2132.8	2215.0	2295.8	2400.3	2474.2	2498.8	2480.2	2403.1	2315.3
24.5°	1979.9	2056.1	2117.0	2199.6	2282.3	2388.7	2464.0	2489.1	2470.0	2391.5	2302.3
25°	1962.3	2039.4	2101.2	2184.8	2268.4	2377.1	2453.3	2478.8	2459.8	2379.4	2288.8
25.5°	1944.6	2022.2	2084.9	2169.5	2254.0	2364.6	2442.6	2468.6	2448.6	2367.4	2275.4
26°	1926.5	2005.5	2068.2	2153.7	2239.6	2352.0	2431.5	2457.9	2437.5	2354.8	2261.4
26.5°	1908.4	1988.3	2051.5	2137.4	2224.7	2339.5	2420.3	2446.8	2426.3	2341.8	2247.5
27°	1889.8	1971.1	2034.7	2121.6	2209.9	2326.5	2408.2	2435.2	2414.7	2328.8	2232.6
27.5°	1871.2	1953.4	2017.5	2105.3	2194.5	2313.0	2396.2	2424.0	2402.7	2315.8	2218.2
28°	1852.6	1935.3	2000.4	2088.6	2178.3	2298.6	2384.1	2411.9	2390.6	2301.8	2202.9
28.5°	1833.1	1916.7	1982.7	2071.4	2162.5	2285.1	2371.5	2399.4	2377.6	2287.9	2188.0
29°	1814.1	1898.6	1964.6	2053.8	2146.2	2270.3	2358.1	2386.9	2365.0	2273.5	2172.2
29.5°	1795.0	1880.0	1946.9	2036.6	2130.0	2255.9	2345.1	2374.3	2351.6	2259.1	2156.4
30°	1775.5	1861.9	1928.3	2018.9	2113.2	2241.0	2331.6	2361.3	2338.5	2244.7	2140.2
30.5°	1755.5	1842.4	1909.8	2001.3	2096.1	2225.2	2317.6	2347.8	2324.6	2229.4	2124.4
31°	1735.6	1823.4	1891.2	1983.6	2079.3	2209.9	2303.7	2333.9	2310.7	2214.5	2108.1
31.5°	1715.1	1804.3	1872.1	1964.6	2061.7	2194.1	2288.8	2320.0	2296.3	2199.2	2091.4
32°	1695.1	1784.8	1853.1	1946.0	2043.6	2177.8	2274.4	2305.6	2281.9	2183.9	2074.7
32.5°	1674.7	1764.4	1833.6	1927.0	2025.4	2161.6	2259.6	2291.6	2267.0	2167.6	2058.0
33°	1654.3	1744.9	1813.6	1908.4	2007.3	2144.4	2244.2	2277.2	2252.1	2151.8	2040.3
33.5°	1633.4	1724.9	1794.1	1888.9	1988.7	2127.6	2228.9	2261.4	2236.8	2135.1	2023.1
34°	1612.0	1704.9	1774.6	1869.8	1970.6	2110.9	2212.7	2246.1	2221.5	2118.8	2005.5
34.5°	1591.1	1684.5	1754.6	1849.8	1951.6	2093.3	2196.9	2230.8	2205.7	2102.6	1987.8
35°	1569.7	1663.6	1734.6	1830.8	1932.5	2075.6	2180.6	2215.4	2189.9	2085.4	1969.7
35.5°	1548.3	1642.7	1713.7	1810.4	1913.0	2058.0	2163.9	2199.2	2174.1	2068.2	1952.0
36°	1526.5	1621.7	1693.3	1790.4	1894.0	2039.8	2147.6	2182.5	2157.4	2050.5	1933.0
36.5°	1504.7	1600.8	1672.4	1769.5	1874.5	2021.7	2130.0	2166.2	2141.1	2033.8	1914.4
37°	1482.8	1579.5	1651.9	1750.0	1855.0	2002.7	2112.8	2149.9	2123.9	2015.7	1896.3
37.5°	1461.0	1558.1	1630.6	1729.5	1834.5	1984.1	2095.1	2132.8	2107.2	1998.0	1877.7
38°	1438.2	1536.7	1609.2	1708.6	1814.5	1965.0	2077.5	2115.6	2090.0	1979.9	1858.7
38.5°	1416.0	1514.9	1587.8	1686.8	1794.1	1946.0	2059.8	2098.4	2072.8	1962.3	1839.6
39°	1394.1	1492.6	1566.5	1666.8	1774.6	1927.0	2041.7	2081.7	2055.2	1943.7	1820.6
39.5°	1371.8	1471.2	1545.1	1645.4	1753.2	1907.4	2023.1	2063.5	2038.0	1925.1	1801.5
40°	1348.1	1449.4	1523.3	1624.5	1732.3	1887.5	2005.0	2045.4	2019.9	1906.5	1781.6
40.5°	1325.8	1427.1	1501.4	1602.7	1711.4	1868.0	1986.4	2027.3	2001.7	1887.9	1762.5
41°	1302.6	1404.8	1479.6	1581.8	1690.5	1848.0	1966.9	2009.6	1983.6	1868.9	1742.5
41.5°	1279.8	1382.5	1457.8	1560.4	1669.6	1827.5	1948.3	1991.1	1965.0	1850.8	1723.0
42°	1256.1	1360.2	1435.0	1539.1	1648.7	1807.1	1928.8	1972.0	1946.5	1831.3	1703.5
42.5°	1233.8	1337.4	1413.6	1517.7	1627.8	1787.1	1910.2	1953.4	1927.9	1811.7	1683.1
43°	1210.2	1314.7	1391.3	1496.3	1606.4	1766.7	1890.3	1934.9	1909.3	1791.8	1663.1
43.5°	1186.5	1291.9	1369.5	1474.0	1585.0	1746.2	1870.7	1915.8	1890.3	1772.7	1643.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1116.3	1222.7	1302.1	1409.0	1520.9	1683.5	1810.8	1857.7	1832.2	1712.3	1581.3
45.5°	1092.6	1199.9	1280.3	1387.6	1499.6	1662.6	1790.4	1838.2	1812.7	1691.4	1560.4
46°	1068.9	1176.7	1257.5	1365.3	1478.2	1641.7	1769.9	1817.8	1792.7	1671.0	1539.5
46.5°	1045.2	1153.5	1235.7	1343.5	1456.8	1620.4	1749.5	1797.8	1772.7	1650.1	1518.2
47°	1022.0	1130.7	1212.9	1321.6	1435.5	1599.0	1728.1	1777.4	1751.8	1628.7	1496.8
47.5°	997.9	1107.5	1190.6	1299.8	1413.2	1577.6	1707.7	1756.5	1730.9	1607.3	1474.5
48°	973.2	1084.3	1167.9	1278.4	1391.8	1556.2	1686.3	1735.6	1710.5	1584.6	1452.7
48.5°	950.0	1060.6	1145.6	1256.1	1370.4	1534.9	1664.9	1714.2	1689.1	1562.3	1430.4
49°	926.3	1037.8	1122.8	1234.3	1348.6	1512.6	1643.1	1692.8	1667.3	1539.5	1407.6
49.5°	902.6	1014.6	1101.0	1212.5	1326.3	1490.7	1621.7	1671.0	1644.5	1516.3	1384.8
50°	878.5	991.4	1079.2	1190.2	1304.9	1468.9	1599.0	1648.7	1622.2	1493.1	1362.1
50.5°	854.3	968.1	1056.4	1168.8	1283.1	1446.6	1576.2	1625.9	1599.0	1468.9	1339.8
51°	830.6	944.4	1034.1	1147.0	1261.3	1424.3	1553.5	1602.7	1575.8	1445.7	1317.5
51.5°	807.4	921.2	1011.8	1125.1	1239.4	1402.0	1530.2	1579.0	1552.1	1422.9	1295.6
52°	783.2	898.4	989.5	1103.3	1217.1	1378.8	1506.5	1554.9	1527.9	1401.1	1274.7
52.5°	760.0	875.2	967.2	1081.5	1194.8	1356.0	1482.8	1530.7	1503.8	1379.7	1252.9
53°	735.8	852.0	945.4	1059.6	1172.5	1332.3	1458.7	1507.5	1481.0	1357.0	1231.1
53.5°	712.2	829.2	923.1	1038.3	1150.7	1309.1	1434.5	1482.8	1458.7	1333.3	1205.5
54°	688.9	806.5	901.2	1015.5	1128.4	1285.9	1411.3	1460.5	1436.9	1306.3	1179.5
54.5°	665.7	783.7	878.9	994.1	1106.6	1263.6	1388.5	1439.2	1414.1	1276.6	1149.8
55°	642.0	760.9	857.1	972.3	1085.2	1241.3	1366.7	1417.3	1390.4	1243.1	1119.1
55.5°	619.2	737.7	835.7	951.4	1064.3	1219.9	1343.9	1392.7	1362.1	1210.6	1087.0
56°	596.0	715.9	813.4	930.0	1042.9	1197.6	1320.3	1365.3	1330.9	1174.4	1054.1
56.5°	573.3	693.6	792.1	908.7	1021.5	1173.9	1293.8	1334.7	1298.4	1138.1	1021.1
57°	550.5	670.8	771.2	888.2	998.3	1148.4	1265.4	1303.5	1263.6	1101.0	987.6
57.5°	527.7	649.0	750.2	867.3	975.1	1122.8	1235.2	1268.7	1225.9	1064.3	951.9
58°	506.4	627.1	728.4	846.4	950.5	1094.9	1204.1	1232.9	1187.9	1024.3	916.6
58.5°	484.1	605.8	707.0	824.1	926.3	1066.6	1171.6	1194.8	1149.3	984.4	881.3
59°	462.2	584.4	686.1	801.8	900.3	1037.3	1136.3	1156.3	1108.9	945.4	845.9
59.5°	440.4	563.0	664.8	779.1	874.7	1006.7	1101.0	1114.9	1067.5	906.8	810.2
60°	419.5	541.2	643.4	756.3	848.3	976.5	1064.8	1075.0	1026.2	866.4	775.3
60.5°	398.6	520.3	621.1	733.5	822.7	945.4	1028.1	1033.6	984.8	827.4	740.5
61°	378.1	499.9	599.7	709.8	795.3	913.8	990.0	993.7	944.0	788.8	706.1
61.5°	357.2	478.5	577.9	687.1	768.4	881.7	951.4	952.3	902.2	749.3	671.7
62°	337.7	457.6	556.1	663.4	741.9	849.2	914.2	912.4	861.7	711.2	637.4
62.5°	318.2	436.7	534.7	640.2	714.0	816.7	875.2	872.0	820.4	674.1	604.4
63°	299.2	416.2	512.4	616.9	686.6	783.2	837.1	831.5	780.9	639.2	572.3
63.5°	279.7	395.8	491.0	592.3	659.2	750.2	799.5	791.6	741.4	603.9	540.7
64°	262.0	376.3	469.7	569.1	632.3	717.7	763.3	753.0	703.3	570.5	510.1
64.5°	244.4	356.3	448.3	545.4	604.8	684.7	726.1	714.9	666.2	537.9	480.3
65°	227.2	336.3	427.4	522.2	577.4	652.2	690.8	677.8	628.5	506.4	452.0
65.5°	210.4	317.3	406.0	498.5	550.0	620.2	655.5	641.1	591.8	476.6	426.9
66°	194.6	298.7	385.1	475.2	522.6	588.6	620.6	605.3	555.6	447.8	402.3



TEST NUMBER: P776756

CATALOG NUMBER: HCDJBL34050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	153.8	244.4	322.9	406.0	443.6	498.0	521.7	505.4	452.9	372.6	328.0
68°	142.2	227.2	302.9	383.3	419.0	469.2	490.6	474.3	424.1	347.0	306.1
68.5°	131.0	210.4	283.4	360.5	394.4	440.9	459.9	444.1	395.3	321.9	286.2
69°	119.4	193.7	263.4	338.2	369.8	414.8	433.4	417.2	366.5	300.6	267.1
69.5°	110.6	177.5	243.9	315.4	345.6	389.3	406.9	390.7	338.2	280.6	249.0
70°	104.1	163.1	224.8	294.5	321.0	363.3	380.9	363.7	314.5	261.5	232.3
70.5°	99.9	149.1	206.3	273.2	299.2	337.3	354.5	337.3	292.2	243.9	216.5
71°	95.2	135.6	188.6	252.3	278.3	315.0	328.0	314.5	271.3	227.2	201.2
71.5°	90.6	122.2	171.4	232.3	257.8	292.2	305.2	292.7	251.8	211.4	187.2
72°	85.9	108.7	157.5	213.2	238.3	271.3	283.4	272.2	234.1	197.0	174.2
72.5°	81.3	98.9	144.0	195.1	219.3	251.3	263.4	253.2	217.4	183.0	161.2
73°	76.7	92.0	130.5	178.4	201.6	232.7	244.8	235.1	202.1	170.0	149.6
73.5°	72.5	87.3	117.1	162.1	185.4	215.1	227.2	218.3	188.1	157.9	138.4
74°	68.3	82.7	103.1	149.1	170.0	198.8	210.4	203.0	174.7	146.3	127.8
74.5°	64.1	78.5	93.4	135.6	155.2	183.5	195.1	188.6	162.1	135.6	118.0
75°	59.9	74.3	84.5	122.6	142.2	169.1	180.7	175.1	150.5	125.4	108.2
75.5°	56.2	70.1	77.6	109.6	129.6	155.6	167.2	162.6	138.9	115.2	99.4
76°	52.5	66.0	71.1	98.9	118.0	143.1	154.7	150.5	128.2	105.9	90.6
76.5°	49.2	62.2	65.5	89.2	106.8	131.0	143.1	139.8	118.0	97.1	82.7
77°	46.0	58.1	60.9	80.8	97.6	120.8	131.9	129.1	107.8	88.7	74.8
77.5°	42.7	54.4	56.7	72.9	88.3	110.1	121.7	119.4	98.5	80.4	67.4
78°	39.5	51.1	53.4	66.0	79.9	100.3	111.5	109.6	89.7	72.9	60.4
78.5°	36.7	47.8	49.7	59.9	72.0	91.5	102.2	100.3	80.8	66.0	53.9
79°	33.9	44.6	46.9	54.4	65.0	83.2	93.4	92.0	72.5	59.0	47.8
79.5°	31.1	41.3	43.7	49.2	58.5	75.3	85.0	83.6	65.0	53.0	43.2
80°	28.3	38.1	40.9	44.6	52.5	67.8	77.1	75.7	57.6	47.8	38.1
80.5°	26.0	35.3	37.6	40.4	46.9	61.3	69.7	68.8	50.6	42.3	33.0
81°	23.7	32.5	35.3	36.7	42.7	54.4	62.7	61.8	45.1	37.2	28.3
81.5°	21.4	30.2	32.5	33.4	38.1	48.8	55.7	55.3	39.5	32.1	23.2
82°	19.0	27.4	30.2	30.2	33.9	43.7	49.7	48.8	33.9	26.9	19.5
82.5°	17.2	25.1	27.4	27.4	29.3	39.0	44.6	43.7	27.9	21.8	16.3
83°	14.9	22.3	25.1	24.6	25.1	34.4	39.5	38.6	22.3	18.1	13.0
83.5°	13.0	20.4	23.2	22.8	21.8	29.3	34.4	33.4	18.1	14.4	10.2
84°	11.6	18.1	20.9	20.4	19.0	24.6	29.3	28.3	13.9	11.1	7.9
84.5°	9.8	16.3	18.6	18.6	16.7	21.4	24.2	23.2	10.7	8.4	6.0
85°	8.4	14.4	16.7	16.7	14.4	18.1	20.4	19.0	7.4	5.6	4.2
85.5°	7.0	12.5	15.3	14.9	12.1	14.9	16.7	15.3	4.6	3.7	2.8
86°	5.6	10.7	13.5	13.5	10.7	12.5	13.5	12.1	2.8	2.3	1.4
86.5°	4.2	8.8	11.6	11.6	8.8	10.2	10.7	8.8	1.9	0.9	0.5
87°	3.3	7.4	9.8	10.2	7.4	7.9	8.4	6.5	1.4	0.5	0.0
87.5°	2.3	6.0	8.4	8.8	6.0	6.5	6.0	4.6	0.9	0.0	0.0
88°	1.9	4.6	7.0	7.4	5.1	4.6	4.2	2.8	0.5	0.0	0.0
88.5°	0.9	3.7	5.6	6.0	3.7	3.3	2.8	1.4	0.5	0.0	0.0



TEST NUMBER: P776756

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	1.4	2.3	2.8	1.4	0.9	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776756

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2569.9	2569.9	2569.9	2569.9	2569.9	2569.9
0.5°	2569.4	2567.1	2564.8	2563.4	2561.5	2560.6
1°	2569.0	2564.3	2560.1	2557.4	2554.6	2554.1
1.5°	2568.0	2561.5	2555.0	2550.4	2547.6	2547.1
2°	2567.1	2558.3	2549.9	2543.9	2540.2	2540.2
2.5°	2565.2	2554.6	2544.3	2536.9	2532.7	2532.7
3°	2563.4	2550.8	2538.3	2529.5	2524.8	2525.3
3.5°	2561.5	2547.1	2532.3	2522.0	2516.9	2517.9
4°	2558.7	2542.5	2525.8	2514.1	2508.1	2509.5
4.5°	2556.4	2537.8	2518.8	2505.8	2499.7	2501.6
5°	2553.2	2532.7	2511.8	2497.4	2490.5	2492.8
5.5°	2549.9	2527.2	2504.4	2488.6	2481.6	2484.4
6°	2546.2	2521.6	2496.5	2479.8	2472.3	2475.1
6.5°	2542.0	2515.5	2488.6	2470.5	2462.6	2465.8
7°	2537.8	2509.5	2480.2	2461.2	2452.8	2456.5
7.5°	2533.2	2502.5	2471.9	2451.4	2442.6	2446.8
8°	2528.1	2495.6	2463.0	2441.2	2432.4	2436.6
8.5°	2523.0	2488.1	2453.8	2431.0	2421.7	2426.3
9°	2516.9	2480.7	2444.5	2420.3	2410.6	2415.7
9.5°	2511.4	2472.8	2434.7	2409.6	2399.4	2405.4
10°	2504.9	2464.4	2424.5	2398.5	2388.3	2394.3
10.5°	2498.4	2456.5	2414.3	2386.9	2376.6	2383.6
11°	2491.4	2447.3	2403.6	2375.7	2365.0	2372.0
11.5°	2484.4	2438.0	2392.4	2363.6	2352.9	2360.4
12°	2476.5	2428.7	2381.3	2351.6	2340.4	2348.3
12.5°	2468.6	2418.9	2369.7	2339.0	2327.9	2336.7
13°	2460.3	2409.2	2358.1	2326.5	2315.3	2324.1
13.5°	2451.9	2398.5	2346.0	2313.5	2302.8	2311.6
14°	2443.1	2387.8	2333.4	2300.9	2289.3	2299.1
14.5°	2434.2	2377.1	2321.4	2287.4	2275.8	2285.6
15°	2424.5	2366.0	2308.4	2273.5	2262.4	2272.6
15.5°	2414.7	2354.3	2294.9	2259.6	2248.0	2259.1
16°	2404.5	2342.3	2281.9	2245.6	2234.5	2245.6
16.5°	2394.3	2330.2	2267.9	2231.2	2220.1	2231.7
17°	2383.6	2317.6	2254.0	2216.8	2205.7	2217.3
17.5°	2372.5	2304.6	2239.6	2201.5	2190.8	2202.9
18°	2360.8	2291.6	2225.2	2187.1	2176.0	2189.0
18.5°	2349.2	2278.2	2210.3	2171.3	2160.2	2174.1
19°	2337.6	2264.7	2195.0	2156.4	2145.3	2158.3
19.5°	2325.1	2250.7	2179.7	2140.2	2129.5	2143.4
20°	2312.5	2236.3	2163.9	2124.4	2113.7	2128.6
20.5°	2299.5	2221.9	2148.1	2107.7	2097.9	2112.8
21°	2286.5	2207.1	2131.8	2091.4	2081.2	2096.1

TEST NUMBER: P776756

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2245.6	2161.1	2082.1	2040.3	2031.0	2048.2
23°	2231.2	2145.3	2065.4	2023.1	2013.8	2031.5
23.5°	2216.8	2129.0	2048.2	2005.9	1996.6	2014.3
24°	2201.5	2112.3	2030.6	1988.3	1979.0	1997.1
24.5°	2186.6	2096.1	2012.9	1969.7	1961.3	1979.9
25°	2171.3	2078.9	1994.3	1951.6	1943.2	1962.3
25.5°	2155.5	2062.6	1976.7	1933.5	1925.1	1944.6
26°	2139.7	2045.0	1958.5	1914.9	1907.0	1926.5
26.5°	2123.5	2027.8	1940.0	1895.8	1888.4	1908.4
27°	2107.2	2009.6	1921.4	1876.8	1869.8	1889.8
27.5°	2090.5	1992.0	1902.3	1857.7	1850.8	1871.2
28°	2073.8	1973.9	1883.3	1838.7	1831.3	1852.6
28.5°	2056.6	1955.3	1864.2	1819.2	1812.2	1833.1
29°	2039.4	1937.2	1844.7	1799.2	1793.2	1814.1
29.5°	2021.7	1918.6	1825.2	1779.2	1773.2	1795.0
30°	2004.1	1900.0	1805.7	1759.7	1753.2	1775.5
30.5°	1986.4	1880.5	1785.7	1739.3	1733.7	1755.5
31°	1968.8	1861.5	1765.8	1719.3	1713.3	1735.6
31.5°	1950.2	1841.9	1745.3	1698.9	1693.3	1715.1
32°	1932.1	1822.4	1724.9	1678.0	1672.4	1695.1
32.5°	1913.0	1802.9	1704.9	1657.5	1651.9	1674.7
33°	1894.4	1783.4	1684.5	1636.6	1631.0	1654.3
33.5°	1875.4	1763.0	1664.0	1615.7	1610.1	1633.4
34°	1856.3	1743.5	1642.7	1594.8	1588.8	1612.0
34.5°	1837.8	1723.0	1622.2	1573.9	1567.9	1591.1
35°	1818.3	1703.0	1600.8	1552.5	1546.0	1569.7
35.5°	1798.7	1683.1	1579.9	1530.7	1525.1	1548.3
36°	1779.2	1662.2	1559.5	1509.8	1502.8	1526.5
36.5°	1759.7	1642.2	1538.1	1488.4	1481.9	1504.7
37°	1739.7	1621.7	1517.2	1466.6	1459.6	1482.8
37.5°	1719.8	1601.3	1496.3	1444.8	1437.8	1461.0
38°	1699.8	1580.4	1474.9	1422.9	1415.5	1438.2
38.5°	1679.8	1559.5	1454.0	1401.5	1393.7	1416.0
39°	1660.3	1539.1	1432.2	1379.7	1371.4	1394.1
39.5°	1639.9	1518.6	1411.3	1357.9	1349.1	1371.8
40°	1619.4	1497.7	1389.9	1336.0	1326.8	1348.1
40.5°	1599.4	1476.8	1369.0	1314.2	1304.5	1325.8
41°	1579.0	1455.4	1347.7	1292.4	1281.2	1302.6
41.5°	1559.0	1435.5	1325.8	1270.5	1258.9	1279.8
42°	1538.6	1415.0	1304.9	1248.2	1236.6	1256.1
42.5°	1517.7	1393.7	1284.0	1226.4	1213.9	1233.8
43°	1497.2	1372.7	1263.1	1204.1	1190.6	1210.2
43.5°	1476.8	1352.3	1241.3	1182.7	1168.3	1186.5

TEST NUMBER: P776756

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1414.6	1289.6	1178.1	1116.8	1099.1	1116.3
45.5°	1393.7	1269.6	1156.7	1095.4	1076.8	1092.6
46°	1373.2	1249.2	1136.3	1073.6	1054.1	1068.9
46.5°	1351.8	1227.8	1114.9	1051.7	1030.8	1045.2
47°	1330.5	1206.9	1094.5	1029.9	1008.1	1022.0
47.5°	1309.1	1186.5	1072.6	1008.1	984.8	997.9
48°	1287.3	1165.6	1052.7	986.7	962.1	973.2
48.5°	1265.9	1144.7	1031.3	964.9	939.3	950.0
49°	1244.1	1124.2	1010.9	943.5	916.6	926.3
49.5°	1221.8	1103.3	990.0	921.7	894.3	902.6
50°	1200.4	1082.4	969.1	900.3	871.0	878.5
50.5°	1179.0	1061.0	948.1	879.4	848.3	854.3
51°	1158.1	1040.1	927.7	858.0	826.0	830.6
51.5°	1137.2	1020.2	907.3	836.2	803.7	807.4
52°	1117.7	1000.6	887.3	815.8	781.4	783.2
52.5°	1096.8	981.1	867.3	794.8	758.6	760.0
53°	1075.0	961.6	848.3	774.4	736.3	735.8
53.5°	1051.7	941.6	828.3	753.5	714.5	712.2
54°	1026.7	920.7	808.8	733.1	692.2	688.9
54.5°	1001.6	899.4	788.8	713.5	670.3	665.7
55°	973.7	877.1	768.4	693.6	649.0	642.0
55.5°	945.8	853.4	747.0	672.7	627.6	619.2
56°	916.6	829.7	726.1	652.7	606.7	596.0
56.5°	887.8	805.5	704.7	631.8	585.3	573.3
57°	857.1	780.4	683.4	611.3	564.4	550.5
57.5°	827.4	754.9	661.5	590.4	543.5	527.7
58°	796.7	729.3	640.2	570.5	523.1	506.4
58.5°	766.0	703.8	617.4	550.0	502.6	484.1
59°	735.8	677.3	595.6	529.6	482.2	462.2
59.5°	705.7	651.3	573.3	509.1	461.8	440.4
60°	675.0	625.3	550.5	489.2	441.3	419.5
60.5°	645.3	599.3	527.7	468.3	421.3	398.6
61°	616.0	573.3	505.0	448.3	401.4	378.1
61.5°	586.3	547.7	482.2	428.3	381.9	357.2
62°	557.0	522.2	459.9	408.3	362.8	337.7
62.5°	529.1	497.1	437.1	387.9	343.3	318.2
63°	501.3	472.4	414.4	367.9	324.7	299.2
63.5°	474.3	447.8	392.5	347.0	306.1	279.7
64°	448.8	423.7	370.7	327.0	288.5	262.0
64.5°	424.1	400.9	349.3	307.1	270.8	244.4
65°	399.5	378.1	328.0	288.0	253.6	227.2
65.5°	375.4	354.9	308.0	268.0	236.0	210.4
66°	350.7	332.6	287.1	248.5	219.7	194.6



TEST NUMBER: P776756

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	284.3	271.8	230.4	195.6	171.4	153.8
68°	265.3	252.3	212.3	178.9	158.4	142.2
68.5°	246.7	233.7	195.1	162.1	145.4	131.0
69°	229.0	216.5	178.9	149.6	132.9	119.4
69.5°	212.8	200.2	162.6	137.0	119.9	110.6
70°	197.9	184.4	150.0	124.0	106.8	104.1
70.5°	183.0	170.0	138.0	111.5	97.6	99.9
71°	169.1	157.9	125.4	100.8	91.1	95.2
71.5°	156.6	145.9	112.9	92.0	86.4	90.6
72°	144.0	134.3	102.7	84.1	82.2	85.9
72.5°	133.3	122.2	93.4	77.1	78.0	81.3
73°	122.6	110.6	84.5	71.1	73.9	76.7
73.5°	112.4	100.3	76.7	65.5	69.7	72.5
74°	103.1	91.5	69.7	60.9	65.5	68.3
74.5°	93.8	83.2	63.6	57.1	61.8	64.1
75°	85.5	75.7	57.6	53.4	58.1	59.9
75.5°	77.6	68.3	52.5	50.2	54.4	56.2
76°	70.6	61.8	47.4	46.9	50.6	52.5
76.5°	63.2	55.3	43.2	44.1	47.4	49.2
77°	57.1	49.7	39.5	40.9	44.1	46.0
77.5°	51.1	44.6	35.8	38.6	40.9	42.7
78°	46.0	40.0	32.5	35.8	38.1	39.5
78.5°	41.3	35.3	29.7	33.0	35.3	36.7
79°	36.2	31.6	26.9	30.7	32.5	33.9
79.5°	31.6	27.9	24.6	27.9	29.7	31.1
80°	26.9	24.2	22.3	25.6	26.9	28.3
80.5°	23.2	21.4	20.4	23.2	24.6	26.0
81°	20.0	18.6	18.6	21.4	22.3	23.7
81.5°	16.7	16.7	16.7	19.0	20.0	21.4
82°	13.9	14.9	14.9	17.2	17.7	19.0
82.5°	11.6	12.5	13.0	15.3	15.8	17.2
83°	9.3	10.7	11.6	13.5	13.9	14.9
83.5°	7.4	8.8	9.8	11.6	12.1	13.0
84°	6.0	7.4	8.4	9.8	10.2	11.6
84.5°	4.2	6.0	7.4	8.4	8.4	9.8
85°	3.3	5.1	6.0	7.0	7.0	8.4
85.5°	2.3	3.7	4.6	6.0	5.6	7.0
86°	1.4	2.8	3.7	4.6	4.6	5.6
86.5°	0.5	1.9	2.3	3.3	3.7	4.2
87°	0.0	0.9	1.4	2.3	2.8	3.3
87.5°	0.0	0.5	0.5	1.4	1.9	2.3
88°	0.0	0.0	0.0	0.5	0.9	1.9
88.5°	0.0	0.0	0.0	0.0	0.5	0.9



TEST NUMBER: P776756

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-HCD81TRLWW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	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 Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





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

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Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2080.3	2150.9	2208.0	2284.2	2359.0	2453.3	2519.7	2542.5	2526.2	2457.0	2376.6
22°	2064.5	2136.0	2193.6	2270.7	2347.4	2443.5	2511.4	2534.1	2517.9	2446.8	2364.6



44°	1163.2	1269.2	1346.7	1452.7	1563.7	1724.9	1850.3	1896.3	1871.2	1752.7	1622.7
44.5°	1140.0	1245.9	1324.9	1431.3	1542.3	1704.4	1830.8	1876.8	1852.2	1732.8	1602.2



66.5°	179.8	280.1	364.7	452.0	496.1	557.9	586.7	570.9	519.8	422.7	377.2
67°	164.9	261.5	344.2	428.8	470.1	527.3	554.2	537.9	486.4	397.7	352.6



89°	0.5	2.8	4.6	5.1	2.8	2.3	1.4	0.5	0.0	0.0	0.0
89.5°	0.0	1.9	3.3	3.7	1.9	1.4	0.5	0.0	0.0	0.0	0.0

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21.5°	2273.0	2191.8	2115.6	2074.7	2064.5	2080.3
22°	2259.1	2176.4	2099.3	2057.5	2048.2	2064.5



44°	1456.4	1331.9	1219.9	1160.4	1145.6	1163.2
44.5°	1435.0	1310.5	1199.0	1139.1	1122.4	1140.0



66.5°	326.6	312.2	267.6	230.4	203.0	179.8
67°	304.3	291.3	248.1	212.3	186.7	164.9

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Scaled Data Report



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

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Scaled Data Report



(END OF REPORT)