

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: P776650

Luminaire Tested: HCDJBS4050CSD-HCD61TRH-5000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776650
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B036)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD61TRH-5000lm-2700K
Description: 6 INCH ROUND SHALLOW-WIDE HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

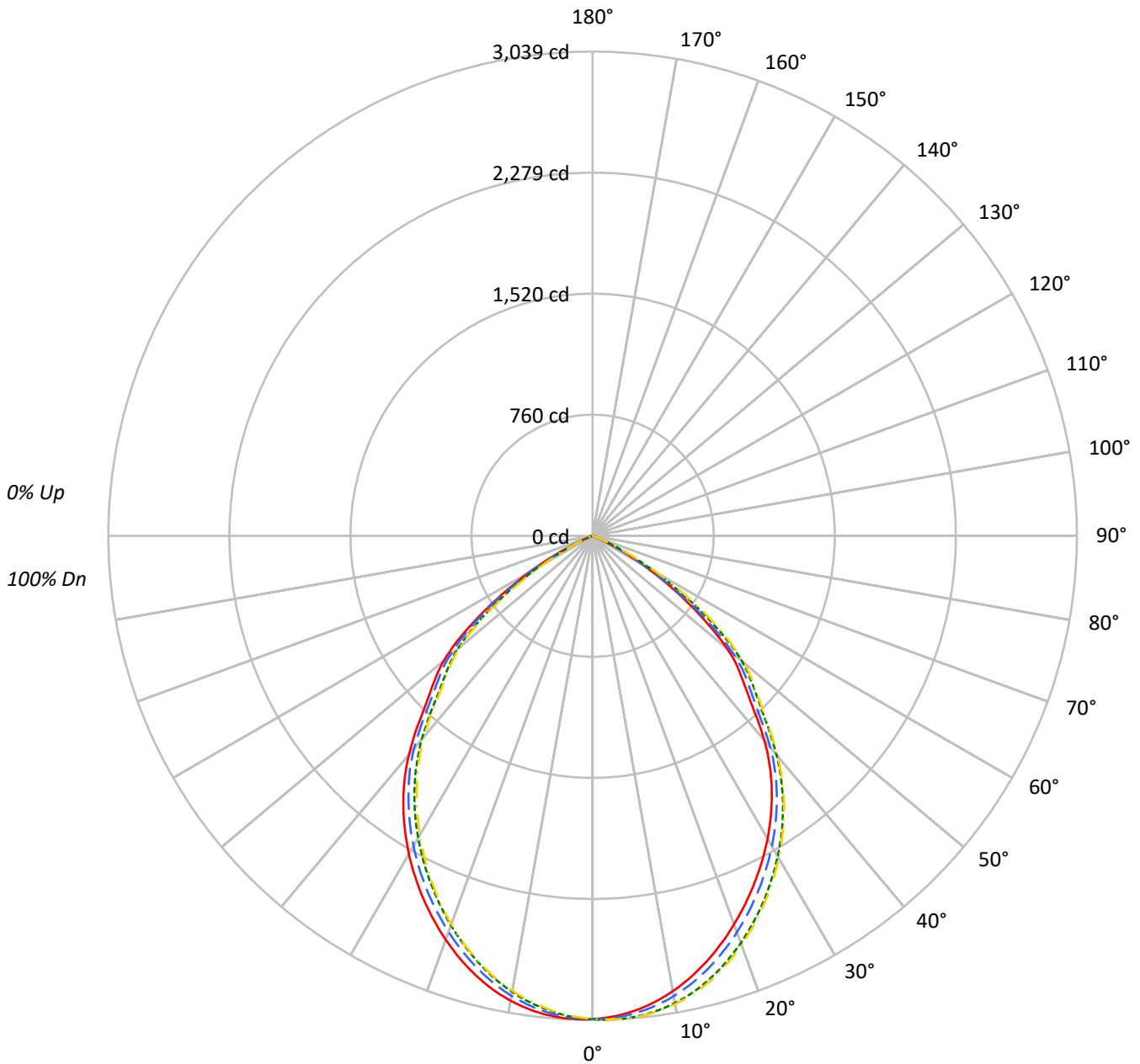
Lumens per Lamp: N/A
Luminaire Lumens: 5418.5 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.12 / 1.2
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): 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: P776650
CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

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	112	108	105	103	109	106	103	101	102	100	98	98	97	95	95	93	92	90								
2	104	98	93	89	102	96	91	87	93	89	86	90	87	84	87	84	82	80								
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71								
4	90	80	73	68	88	79	72	67	77	71	66	74	70	65	72	68	65	63								
5	84	73	65	60	82	72	65	60	70	64	59	68	63	58	66	62	58	56								
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52	50								
7	73	61	53	48	71	60	53	48	59	52	48	57	52	47	56	51	47	45								
8	68	56	49	43	67	55	48	43	54	48	43	53	47	43	52	47	43	41								
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37								
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	166330	166330	166330	166330
5°	164709	166789	166409	164808
10°	161565	165751	164960	161843
15°	156965	162986	161851	157351
20°	151400	158686	157327	151750
25°	145400	153287	152017	145484
30°	138983	147086	145965	138610
35°	131169	139307	138578	130433
40°	120011	128491	128290	119324
45°	105600	114469	114082	104856
50°	93933	104159	103766	94359
55°	69254	80179	80752	71128
60°	39569	49415	50610	42464
65°	11415	18562	17499	14839
70°	289	433	289	882
75°	191	191	191	191
80°	158	158	158	158
85°	314	0	0	314

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°

Vertical Angle: 45°

Luminance: 115562 cd/sqm



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	285.0	5.3
10°-20°	791.9	14.6
20°-30°	1133.0	20.9
30°-40°	1254.1	23.1
40°-50°	1101.8	20.3
50°-60°	701.5	12.9
60°-70°	149.3	2.8
70°-80°	1.2	0.0
80°-90°	0.6	0.0
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°	2209.9	40.8
0°-40°	3464.0	63.9
0°-60°	5267.3	97.2
0°-90°	5418.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5418.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3034	3034	3034	3034	3034	
5°	2993	3031	3024	2995	2993	283
15°	2766	2872	2852	2772	2766	778
25°	2404	2534	2513	2405	2404	1106
35°	1960	2082	2071	1949	1960	1220
45°	1362	1476	1472	1352	1362	1059
55°	725	839	845	744	725	645
65°	88	143	135	114	88	117
75°	1	1	1	1	1	1
85°	0	0	0	0	0	1
90°	0	0	0	2	0	



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3034.1	3034.1	3034.1	3034.1	3034.1	3034.1	3034.1	3034.1	3034.1	3034.1	3034.1
0.5°	3031.8	3033.2	3034.5	3034.1	3037.3	3036.8	3035.4	3035.0	3035.0	3035.0	3034.5
1°	3029.5	3031.3	3034.1	3034.1	3038.2	3038.2	3036.8	3036.3	3035.9	3035.0	3033.6
1.5°	3026.8	3029.5	3032.7	3034.1	3039.1	3039.5	3038.2	3037.3	3035.9	3034.5	3032.2
2°	3023.1	3026.8	3030.9	3033.2	3039.1	3040.0	3039.1	3037.7	3035.9	3033.2	3030.4
2.5°	3019.5	3023.6	3028.6	3031.8	3039.1	3040.4	3039.1	3037.7	3035.0	3031.8	3028.1
3°	3015.4	3019.9	3025.9	3030.4	3038.2	3040.0	3039.1	3036.8	3034.1	3030.0	3025.4
3.5°	3010.4	3015.8	3022.7	3028.1	3037.3	3039.1	3038.6	3035.9	3032.2	3027.2	3021.8
4°	3004.9	3011.3	3019.0	3025.4	3035.4	3038.2	3037.3	3034.5	3030.0	3024.5	3017.7
4.5°	2999.0	3006.3	3014.5	3021.8	3033.6	3036.8	3035.9	3032.7	3027.2	3020.9	3013.6
5°	2993.1	3000.3	3009.5	3018.1	3030.9	3034.5	3033.6	3030.0	3024.0	3016.8	3009.0
5.5°	2986.2	2994.0	3004.0	3014.0	3028.1	3031.8	3031.3	3027.2	3019.9	3012.2	3003.5
6°	2978.5	2987.1	2998.5	3009.5	3024.5	3029.1	3028.1	3023.6	3015.8	3006.7	2997.2
6.5°	2971.2	2979.8	2992.1	3004.0	3020.4	3025.4	3024.5	3019.5	3011.3	3001.3	2991.2
7°	2963.0	2972.1	2985.3	2998.1	3015.8	3021.3	3020.4	3014.9	3006.3	2995.3	2984.4
7.5°	2953.9	2963.9	2978.0	2991.7	3010.4	3016.8	3015.8	3009.9	3000.3	2988.5	2976.7
8°	2944.8	2954.8	2969.8	2984.9	3005.4	3011.7	3010.8	3004.0	2994.0	2981.7	2968.9
8.5°	2934.7	2945.7	2961.6	2978.0	2999.0	3006.3	3005.4	2998.1	2987.1	2973.9	2960.2
9°	2924.7	2935.6	2953.0	2969.8	2992.1	2999.9	2999.0	2991.2	2979.4	2965.7	2951.1
9.5°	2913.8	2925.6	2943.4	2961.6	2984.9	2993.5	2992.1	2984.4	2971.6	2957.1	2942.0
10°	2902.4	2914.2	2933.4	2953.0	2977.6	2986.2	2985.3	2976.7	2963.4	2947.9	2932.0
10.5°	2890.5	2902.8	2923.3	2943.4	2969.4	2978.5	2977.6	2968.4	2954.8	2938.4	2921.5
11°	2878.2	2891.4	2912.4	2933.4	2960.7	2970.3	2969.4	2959.3	2944.8	2928.3	2910.6
11.5°	2865.5	2879.1	2901.0	2922.9	2951.1	2961.2	2960.2	2950.2	2934.7	2917.4	2899.2
12°	2852.7	2866.4	2889.6	2911.9	2941.6	2952.0	2951.1	2940.2	2924.7	2906.0	2887.3
12.5°	2839.0	2853.6	2877.3	2901.0	2931.1	2942.0	2941.1	2930.2	2913.8	2894.6	2875.0
13°	2824.9	2840.4	2864.5	2889.2	2920.1	2932.0	2930.6	2919.2	2901.9	2882.3	2862.3
13.5°	2810.8	2826.3	2851.3	2876.9	2908.8	2921.1	2919.7	2907.8	2890.5	2870.0	2849.5
14°	2796.2	2812.1	2838.1	2863.6	2896.9	2909.7	2908.3	2896.0	2877.8	2856.8	2835.8
14.5°	2781.2	2797.1	2824.0	2851.3	2884.6	2897.4	2896.0	2883.7	2864.5	2843.6	2821.3
15°	2765.7	2782.1	2809.9	2837.2	2871.8	2885.1	2883.7	2870.5	2851.8	2829.5	2807.1
15.5°	2750.2	2767.0	2794.8	2823.5	2858.6	2871.8	2870.5	2857.3	2838.1	2815.3	2792.5
16°	2733.8	2751.1	2779.8	2808.0	2845.0	2859.1	2856.8	2843.6	2823.1	2800.7	2777.1
16.5°	2717.8	2735.1	2764.7	2794.4	2830.4	2845.0	2842.7	2829.5	2809.0	2785.7	2761.6
17°	2700.5	2718.7	2748.8	2778.9	2815.8	2830.8	2828.5	2814.9	2793.9	2770.7	2746.1
17.5°	2683.6	2702.3	2732.4	2762.9	2800.7	2815.3	2814.0	2799.4	2778.9	2754.7	2730.1
18°	2666.3	2685.5	2716.4	2746.5	2785.3	2800.3	2798.0	2783.9	2762.9	2738.8	2712.8
18.5°	2649.0	2668.1	2699.6	2731.0	2769.3	2784.3	2782.5	2768.4	2746.5	2722.4	2696.8
19°	2631.2	2651.3	2682.7	2714.2	2752.9	2768.4	2766.6	2752.0	2730.6	2706.0	2679.5
19.5°	2613.9	2634.0	2665.4	2697.8	2736.5	2752.0	2750.2	2736.0	2713.7	2689.1	2662.7
20°	2595.2	2615.7	2647.6	2680.0	2720.1	2735.1	2733.3	2719.2	2696.8	2671.8	2644.9
20.5°	2577.0	2597.5	2629.9	2662.2	2702.3	2718.3	2716.4	2701.9	2680.0	2654.5	2627.6
21°	2558.3	2579.7	2612.1	2644.9	2685.0	2700.5	2698.7	2684.5	2662.2	2636.7	2608.9



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2501.4	2523.7	2556.5	2589.3	2630.3	2645.8	2644.4	2629.9	2608.4	2582.0	2553.8
23°	2482.7	2505.0	2537.4	2570.6	2611.2	2627.1	2625.8	2611.6	2589.8	2563.3	2534.2
23.5°	2463.1	2485.9	2518.2	2551.5	2592.5	2608.4	2606.6	2592.9	2570.6	2544.6	2515.5
24°	2443.5	2466.3	2498.2	2531.9	2573.8	2589.3	2587.9	2573.4	2551.9	2525.5	2495.9
24.5°	2423.9	2446.7	2479.0	2512.7	2554.2	2568.8	2568.3	2553.8	2532.3	2505.5	2476.7
25°	2403.8	2427.1	2459.0	2492.2	2534.2	2549.2	2548.3	2534.2	2513.2	2486.3	2456.7
25.5°	2384.2	2407.5	2439.4	2472.6	2514.1	2529.2	2528.2	2514.6	2493.6	2466.3	2437.1
26°	2363.7	2387.9	2419.3	2452.6	2494.1	2508.2	2507.7	2495.0	2473.6	2446.2	2416.6
26.5°	2343.2	2367.4	2398.4	2432.1	2473.6	2488.1	2487.7	2474.5	2453.0	2425.7	2396.5
27°	2323.2	2347.3	2377.9	2411.6	2453.0	2466.7	2467.2	2453.0	2433.0	2405.2	2376.0
27.5°	2302.2	2326.8	2357.4	2389.7	2431.6	2445.8	2446.2	2432.5	2412.5	2384.7	2355.1
28°	2281.2	2305.9	2335.9	2368.7	2410.7	2425.2	2424.3	2412.0	2391.5	2363.7	2333.7
28.5°	2259.8	2284.4	2314.5	2346.9	2388.8	2402.5	2402.5	2390.6	2370.6	2342.3	2313.1
29°	2238.4	2263.9	2293.1	2325.5	2367.4	2380.6	2381.0	2368.3	2349.1	2320.9	2291.7
29.5°	2217.0	2242.1	2271.7	2303.1	2345.5	2358.3	2359.2	2346.4	2327.7	2299.5	2270.3
30°	2195.6	2220.6	2249.8	2281.2	2323.6	2336.8	2336.4	2325.0	2305.9	2277.6	2248.0
30.5°	2172.8	2198.8	2227.5	2259.4	2299.9	2313.1	2313.1	2302.7	2283.1	2255.3	2225.7
31°	2150.0	2176.4	2205.1	2236.1	2277.6	2289.9	2290.8	2279.0	2261.2	2233.4	2203.8
31.5°	2127.7	2154.1	2181.9	2212.9	2253.9	2266.7	2267.1	2256.6	2238.0	2210.6	2181.4
32°	2104.9	2131.8	2159.1	2189.7	2230.7	2243.9	2243.4	2233.4	2215.6	2187.4	2158.7
32.5°	2081.6	2108.1	2135.9	2166.4	2207.0	2219.3	2218.8	2210.2	2192.4	2164.6	2135.0
33°	2058.0	2084.8	2112.2	2142.7	2182.8	2194.7	2195.6	2186.0	2168.7	2141.3	2111.7
33.5°	2034.3	2060.7	2088.5	2118.1	2157.8	2170.1	2170.5	2161.9	2144.1	2118.1	2088.5
34°	2009.6	2037.0	2064.3	2094.4	2133.1	2145.9	2145.4	2137.2	2119.9	2093.5	2064.3
34.5°	1985.0	2012.8	2039.7	2068.4	2108.1	2119.0	2119.9	2111.7	2095.3	2068.9	2040.2
35°	1960.0	1987.8	2015.1	2043.4	2081.6	2094.0	2094.4	2086.2	2070.7	2044.7	2015.1
35.5°	1934.0	1962.7	1990.1	2017.4	2056.1	2067.1	2068.0	2060.7	2044.7	2020.1	1990.1
36°	1908.0	1937.6	1964.1	1991.4	2029.7	2041.1	2041.5	2034.7	2019.7	1995.1	1965.9
36.5°	1881.1	1910.8	1938.1	1964.5	2003.3	2012.8	2014.7	2007.4	1993.2	1968.6	1940.4
37°	1854.7	1883.9	1911.7	1937.6	1974.6	1985.5	1986.4	1980.0	1967.3	1942.7	1914.0
37.5°	1827.4	1856.1	1884.3	1910.3	1946.8	1956.3	1957.7	1952.2	1939.5	1916.7	1887.5
38°	1798.7	1828.7	1856.5	1881.1	1918.1	1927.6	1929.4	1923.5	1911.2	1889.3	1862.0
38.5°	1769.9	1800.0	1827.8	1852.0	1888.4	1898.5	1900.3	1893.9	1883.4	1861.5	1833.3
39°	1739.9	1770.9	1798.2	1822.8	1858.4	1867.5	1869.7	1864.3	1854.7	1833.3	1804.6
39.5°	1708.9	1738.5	1766.8	1790.9	1826.9	1836.5	1838.8	1833.7	1824.6	1803.2	1774.1
40°	1677.0	1706.6	1733.9	1758.6	1795.5	1805.0	1806.9	1802.8	1792.7	1772.7	1745.3
40.5°	1642.4	1672.9	1700.7	1725.3	1761.7	1771.8	1775.0	1770.4	1760.8	1740.8	1712.1
41°	1609.1	1639.2	1667.0	1692.0	1728.9	1739.0	1741.2	1737.1	1728.5	1707.5	1678.8
41.5°	1576.3	1605.4	1633.2	1658.8	1696.1	1705.7	1708.9	1703.9	1694.8	1673.3	1645.1
42°	1543.0	1571.7	1599.5	1625.0	1662.9	1674.3	1677.0	1672.4	1662.4	1641.4	1614.1
42.5°	1506.6	1536.2	1564.4	1590.4	1629.6	1640.5	1644.2	1640.1	1629.6	1608.6	1579.9
43°	1473.7	1502.9	1531.6	1557.1	1595.4	1606.8	1610.5	1605.4	1595.4	1573.5	1546.2
43.5°	1443.2	1471.9	1500.6	1526.1	1563.5	1574.9	1578.1	1572.2	1560.3	1538.5	1511.1



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1362.1	1390.3	1417.7	1441.8	1476.5	1487.4	1490.6	1484.2	1471.5	1449.1	1423.2
45.5°	1336.6	1365.3	1392.6	1416.3	1450.0	1460.5	1463.7	1457.3	1444.6	1423.2	1396.7
46°	1312.9	1341.6	1368.0	1391.7	1424.5	1434.6	1437.7	1431.4	1419.1	1397.6	1371.7
46.5°	1289.2	1317.9	1343.9	1367.1	1399.5	1409.9	1413.1	1407.2	1394.5	1373.0	1347.1
47°	1265.9	1294.2	1320.6	1343.4	1374.9	1385.3	1388.5	1382.6	1369.8	1349.3	1323.8
47.5°	1242.7	1271.0	1296.9	1319.7	1350.7	1361.6	1364.8	1358.0	1345.7	1325.6	1300.1
48°	1219.0	1247.3	1272.3	1296.0	1326.6	1337.9	1340.7	1334.3	1322.4	1302.4	1276.9
48.5°	1192.6	1220.4	1246.8	1271.0	1302.9	1314.2	1317.4	1311.5	1298.8	1278.7	1253.6
49°	1163.9	1189.8	1216.7	1243.2	1276.9	1289.2	1293.3	1286.9	1273.2	1252.3	1228.1
49.5°	1134.7	1159.3	1186.6	1214.0	1249.5	1262.8	1266.4	1259.1	1245.4	1223.6	1199.0
50°	1101.4	1125.1	1152.5	1182.1	1221.3	1235.9	1239.5	1231.8	1216.7	1194.9	1170.2
50.5°	1066.3	1090.5	1118.8	1149.3	1190.3	1205.3	1208.5	1203.1	1186.6	1164.8	1138.3
51°	1030.3	1055.4	1081.8	1113.7	1157.0	1170.7	1175.7	1170.2	1154.8	1131.5	1105.5
51.5°	993.9	1018.5	1045.4	1076.4	1121.9	1136.5	1142.9	1135.2	1121.5	1097.3	1071.4
52°	956.5	980.7	1007.1	1037.2	1083.7	1101.0	1107.4	1100.1	1085.5	1061.8	1036.3
52.5°	918.7	942.4	969.7	997.5	1044.5	1064.5	1070.9	1063.6	1047.2	1024.4	1000.3
53°	880.0	903.7	929.2	956.1	1003.9	1026.7	1034.9	1025.3	1006.6	985.2	963.8
53.5°	841.2	864.0	890.0	914.6	962.9	988.9	998.4	988.0	967.0	947.0	925.5
54°	802.0	824.4	848.5	872.2	921.4	948.8	960.2	947.0	926.4	906.8	886.8
54.5°	763.3	786.5	807.5	830.7	880.4	909.1	920.5	906.8	885.0	866.7	847.6
55°	724.6	746.4	765.6	788.8	838.9	870.4	882.2	867.7	844.9	826.6	809.3
55.5°	685.4	706.8	725.0	747.4	798.8	829.4	843.5	827.6	805.7	785.6	769.2
56°	647.1	666.7	684.0	705.0	757.4	788.4	802.5	785.6	765.1	744.2	729.6
56.5°	609.3	628.4	642.5	664.4	716.8	748.7	762.4	746.0	725.5	703.6	689.9
57°	571.9	588.8	601.5	623.9	676.3	706.8	721.8	706.3	685.8	664.0	651.2
57.5°	534.5	550.5	562.3	585.1	638.0	667.1	682.2	667.6	648.0	624.3	611.1
58°	498.1	512.2	524.1	545.9	599.2	626.6	641.2	628.0	609.3	584.7	572.8
58.5°	462.5	475.3	485.8	509.0	561.9	587.9	601.1	590.1	572.8	547.3	535.5
59°	427.4	437.9	448.4	472.1	524.1	548.7	561.0	551.4	535.0	510.4	497.6
59.5°	394.6	402.8	412.9	435.7	487.1	510.8	521.3	515.4	497.6	474.8	461.6
60°	360.9	366.8	377.8	401.0	450.7	473.0	483.0	477.1	461.6	441.6	427.4
60.5°	328.6	333.6	344.1	367.3	416.5	437.9	447.0	442.5	427.9	408.3	393.7
61°	297.6	300.8	310.8	333.1	382.8	402.8	411.0	408.3	394.2	375.0	360.0
61.5°	267.5	270.2	279.8	303.5	348.6	367.8	375.0	373.7	360.5	341.8	326.3
62°	237.9	239.7	250.6	272.5	314.4	332.7	339.0	339.0	326.7	308.5	292.6
62.5°	210.5	211.4	221.9	243.3	282.5	297.6	303.0	304.4	293.0	278.4	262.9
63°	183.6	184.1	195.5	216.0	252.0	265.7	270.7	272.5	258.4	249.7	234.2
63.5°	156.3	159.5	169.5	189.6	222.4	234.2	239.7	241.1	226.0	221.9	207.3
64°	133.5	139.4	149.5	164.1	194.6	205.5	210.5	211.9	194.6	195.0	181.8
64.5°	110.7	119.8	129.4	143.5	167.7	177.7	182.7	183.2	164.1	170.0	157.7
65°	88.0	100.7	109.4	123.0	143.1	151.3	156.8	156.8	134.9	145.4	135.3
65.5°	65.2	81.1	89.3	102.5	119.4	127.1	132.2	131.2	108.9	123.0	115.3
66°	47.8	61.5	69.3	82.0	97.5	104.4	109.4	107.5	84.8	101.6	95.2



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	15.0	26.0	30.1	33.3	51.0	55.1	59.2	57.9	38.7	56.5	53.3
68°	11.8	17.8	21.0	22.3	37.8	41.0	44.2	43.7	23.2	43.3	41.5
68.5°	8.7	13.7	12.8	14.1	24.2	26.9	29.6	29.6	7.7	30.1	29.2
69°	5.5	10.0	10.0	10.9	10.9	13.2	15.0	15.5	3.6	17.3	17.3
69.5°	2.3	5.9	7.3	7.7	5.5	6.8	7.7	8.7	2.3	10.5	10.0
70°	1.8	2.3	4.6	4.6	2.7	3.2	3.6	4.1	1.8	5.5	5.5
70.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.3	1.8	2.7	2.7
71°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
71.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.8	1.8	1.8
72°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.8	1.8
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
73°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
73.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
74°	0.9	0.9	1.4	0.9	0.9	0.9	0.9	0.9	0.9	1.4	1.4
74.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.4
75°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
75.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
76°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
76.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
77°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
77.5°	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.5	0.5	0.9	0.9
78°	0.9	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.9	0.9
78.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
85.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
86°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
86.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
87°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
87.5°	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
88°	0.5	0.9	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.5
88.5°	0.5	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.5	0.5



TEST NUMBER: P776650
CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.5	1.4	1.4	0.9	0.5	0.0	0.0	0.5	0.0	0.9	0.5



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3034.1	3034.1	3034.1	3034.1	3034.1	3034.1
0.5°	3032.2	3033.6	3032.2	3030.4	3030.9	3031.8
1°	3030.9	3031.3	3029.5	3027.7	3028.1	3029.5
1.5°	3028.6	3028.1	3025.9	3024.0	3024.5	3026.8
2°	3026.3	3025.0	3022.2	3020.4	3021.3	3023.1
2.5°	3023.1	3020.9	3018.1	3015.8	3016.8	3019.5
3°	3019.5	3016.8	3013.6	3011.3	3012.2	3015.4
3.5°	3015.8	3011.7	3008.5	3006.3	3007.2	3010.4
4°	3011.3	3006.7	3003.1	3000.8	3001.7	3004.9
4.5°	3006.3	3000.8	2997.2	2994.4	2995.8	2999.0
5°	3000.8	2994.9	2991.2	2988.5	2989.4	2993.1
5.5°	2994.9	2988.0	2984.4	2981.2	2982.1	2986.2
6°	2988.5	2981.2	2977.1	2974.4	2974.8	2978.5
6.5°	2981.2	2973.9	2969.8	2966.6	2966.6	2971.2
7°	2973.9	2965.7	2961.6	2958.4	2958.9	2963.0
7.5°	2966.2	2957.1	2953.0	2949.8	2950.2	2953.9
8°	2957.5	2948.4	2943.8	2940.6	2940.6	2944.8
8.5°	2948.4	2938.8	2934.7	2931.1	2931.1	2934.7
9°	2938.8	2928.8	2924.7	2921.5	2920.6	2924.7
9.5°	2928.8	2918.3	2914.2	2911.0	2910.1	2913.8
10°	2918.3	2907.4	2903.3	2900.1	2898.7	2902.4
10.5°	2907.4	2896.0	2891.9	2888.7	2887.3	2890.5
11°	2895.5	2884.1	2880.0	2876.9	2875.0	2878.2
11.5°	2883.7	2871.4	2867.7	2864.5	2862.7	2865.5
12°	2871.8	2859.1	2855.0	2851.8	2849.5	2852.7
12.5°	2858.6	2845.4	2841.8	2838.6	2836.3	2839.0
13°	2845.4	2831.7	2828.5	2825.4	2822.2	2824.9
13.5°	2831.3	2817.2	2814.4	2810.8	2808.0	2810.8
14°	2817.2	2802.6	2799.8	2796.2	2793.5	2796.2
14.5°	2803.0	2788.0	2785.3	2781.6	2778.4	2781.2
15°	2787.5	2772.5	2769.8	2766.1	2762.5	2765.7
15.5°	2772.0	2757.0	2753.8	2750.6	2747.0	2750.2
16°	2756.5	2740.6	2737.4	2734.2	2731.0	2733.8
16.5°	2740.6	2724.2	2721.5	2718.3	2714.2	2717.8
17°	2724.6	2707.8	2704.6	2701.4	2697.8	2700.5
17.5°	2708.2	2690.5	2687.3	2684.1	2680.0	2683.6
18°	2690.9	2673.2	2670.0	2666.8	2662.7	2666.3
18.5°	2673.6	2655.4	2651.7	2649.0	2644.9	2649.0
19°	2655.8	2637.6	2634.0	2630.8	2627.1	2631.2
19.5°	2638.5	2619.8	2615.7	2612.5	2608.9	2613.9
20°	2620.7	2601.2	2596.6	2593.4	2590.2	2595.2
20.5°	2602.5	2582.5	2577.9	2574.7	2571.5	2577.0
21°	2584.3	2562.9	2558.8	2555.1	2552.4	2558.3



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2527.8	2505.5	2499.5	2495.9	2494.5	2501.4
23°	2508.6	2485.4	2479.5	2474.5	2474.9	2482.7
23.5°	2489.5	2465.4	2459.0	2454.9	2454.9	2463.1
24°	2469.9	2445.3	2438.0	2433.5	2434.8	2443.5
24.5°	2449.9	2425.2	2417.5	2412.9	2413.9	2423.9
25°	2430.3	2405.2	2396.1	2391.1	2393.4	2403.8
25.5°	2410.2	2384.7	2375.1	2370.6	2373.3	2384.2
26°	2389.7	2363.7	2353.2	2347.8	2352.3	2363.7
26.5°	2369.2	2342.3	2332.3	2326.8	2331.4	2343.2
27°	2348.7	2321.3	2310.0	2304.5	2310.0	2323.2
27.5°	2328.2	2299.9	2288.1	2282.2	2288.1	2302.2
28°	2307.2	2278.1	2265.8	2259.8	2266.2	2281.2
28.5°	2285.8	2256.2	2243.4	2237.0	2244.3	2259.8
29°	2264.4	2234.3	2220.6	2213.8	2222.5	2238.4
29.5°	2243.0	2212.0	2197.9	2191.0	2199.7	2217.0
30°	2221.1	2189.7	2174.2	2168.2	2176.9	2195.6
30.5°	2198.8	2166.9	2150.9	2144.5	2154.1	2172.8
31°	2176.9	2143.6	2127.2	2120.4	2130.9	2150.0
31.5°	2153.7	2120.4	2103.5	2096.7	2107.2	2127.7
32°	2130.4	2097.1	2078.9	2072.5	2083.9	2104.9
32.5°	2107.6	2073.4	2054.8	2048.4	2059.8	2081.6
33°	2083.9	2048.8	2030.6	2024.2	2035.6	2058.0
33.5°	2060.2	2024.2	2006.0	1999.2	2011.5	2034.3
34°	2035.6	1999.6	1981.4	1974.1	1986.9	2009.6
34.5°	2011.0	1974.6	1955.4	1949.0	1961.8	1985.0
35°	1986.4	1949.0	1929.9	1923.5	1936.3	1960.0
35.5°	1961.3	1923.1	1904.8	1898.0	1910.8	1934.0
36°	1936.3	1896.6	1878.4	1872.0	1884.8	1908.0
36.5°	1909.9	1870.2	1852.4	1845.6	1858.8	1881.1
37°	1883.0	1842.9	1825.1	1819.2	1831.9	1854.7
37.5°	1856.1	1815.1	1797.7	1792.3	1804.6	1827.4
38°	1828.3	1787.3	1770.4	1764.5	1776.8	1798.7
38.5°	1800.0	1758.1	1741.7	1736.2	1748.1	1769.9
39°	1770.4	1728.9	1713.4	1708.0	1719.8	1739.9
39.5°	1741.2	1698.4	1682.9	1678.4	1688.4	1708.9
40°	1710.7	1667.4	1651.5	1646.9	1656.5	1677.0
40.5°	1678.4	1635.1	1619.1	1614.6	1623.2	1642.4
41°	1645.1	1601.8	1586.3	1581.3	1590.9	1609.1
41.5°	1611.8	1568.5	1553.0	1548.9	1557.1	1576.3
42°	1579.9	1537.1	1521.1	1516.1	1525.2	1543.0
42.5°	1547.1	1504.3	1487.9	1481.5	1490.1	1506.6
43°	1513.8	1470.1	1454.1	1449.1	1456.9	1473.7
43.5°	1479.7	1436.8	1421.3	1416.3	1425.0	1443.2



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1391.7	1352.5	1337.9	1333.8	1343.0	1362.1
45.5°	1365.7	1326.6	1312.0	1308.8	1317.9	1336.6
46°	1341.1	1302.4	1288.3	1284.6	1294.2	1312.9
46.5°	1316.5	1279.2	1264.6	1261.4	1270.5	1289.2
47°	1294.2	1256.4	1241.3	1238.1	1247.3	1265.9
47.5°	1270.5	1232.2	1218.5	1214.9	1224.5	1242.7
48°	1247.7	1210.3	1195.8	1192.1	1201.2	1219.0
48.5°	1224.9	1186.2	1173.0	1168.4	1177.1	1192.6
49°	1199.9	1162.0	1147.9	1142.9	1150.2	1163.9
49.5°	1172.1	1133.8	1121.9	1116.5	1121.5	1134.7
50°	1143.4	1106.4	1093.7	1088.2	1091.0	1101.4
50.5°	1112.4	1074.5	1063.6	1056.3	1057.2	1066.3
51°	1078.6	1041.7	1029.9	1022.1	1022.6	1030.3
51.5°	1044.9	1006.2	994.8	985.2	987.1	993.9
52°	1010.7	970.6	957.4	947.4	948.3	956.5
52.5°	974.7	932.8	919.2	909.1	909.6	918.7
53°	938.3	895.5	880.4	869.5	870.4	880.0
53.5°	900.5	857.2	840.8	829.8	830.7	841.2
54°	863.1	819.4	801.6	790.2	791.1	802.0
54.5°	825.3	782.0	762.8	750.5	751.5	763.3
55°	788.4	744.2	723.2	710.4	712.3	724.6
55.5°	750.1	705.4	684.9	669.9	674.0	685.4
56°	711.4	668.1	646.2	630.7	635.7	647.1
56.5°	674.0	631.1	608.8	592.4	598.3	609.3
57°	635.2	594.7	570.5	554.1	560.5	571.9
57.5°	598.3	558.7	534.1	517.2	523.6	534.5
58°	561.4	523.1	498.5	481.7	487.6	498.1
58.5°	524.1	487.6	463.9	446.1	453.4	462.5
59°	487.6	453.4	430.2	412.4	417.9	427.4
59.5°	453.4	420.2	396.5	379.6	385.5	394.6
60°	419.7	387.3	364.1	347.7	353.6	360.9
60.5°	386.0	354.1	333.1	317.6	322.2	328.6
61°	352.3	323.1	302.6	288.9	291.2	297.6
61.5°	318.5	292.6	274.3	262.0	263.9	267.5
62°	287.1	262.5	246.5	234.7	236.1	237.9
62.5°	257.0	233.8	220.1	210.1	209.2	210.5
63°	227.9	206.4	195.0	185.9	183.6	183.6
63.5°	200.1	180.5	171.8	164.1	160.9	156.3
64°	173.6	155.4	152.2	145.8	142.2	133.5
64.5°	149.9	134.9	133.1	127.1	123.5	110.7
65°	126.7	114.4	113.9	108.9	104.4	88.0
65.5°	105.7	94.3	94.3	90.7	85.7	65.2
66°	86.6	73.8	75.2	72.5	66.5	47.8



TEST NUMBER: P776650

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	47.4	33.3	35.1	34.6	28.7	15.0
68°	36.5	23.7	25.5	24.6	20.1	11.8
68.5°	25.5	16.4	16.9	16.4	16.4	8.7
69°	14.6	12.8	13.2	12.8	12.8	5.5
69.5°	8.7	9.1	9.6	9.1	9.1	2.3
70°	4.6	5.5	5.5	5.5	5.5	1.8
70.5°	2.3	1.8	1.8	1.8	1.8	1.8
71°	1.8	1.8	1.8	1.8	1.8	1.8
71.5°	1.8	1.4	1.4	1.4	1.4	1.4
72°	1.4	1.4	1.4	1.4	1.4	1.4
72.5°	1.4	1.4	1.4	1.4	1.4	1.4
73°	1.4	1.4	1.4	1.4	1.4	1.4
73.5°	1.4	1.4	1.4	1.4	1.4	1.4
74°	1.4	1.4	1.4	1.4	0.9	0.9
74.5°	0.9	0.9	0.9	0.9	0.9	0.9
75°	0.9	0.9	0.9	0.9	0.9	0.9
75.5°	0.9	0.9	0.9	0.9	0.9	0.9
76°	0.9	0.9	0.9	0.9	0.9	0.9
76.5°	0.9	0.9	0.9	0.9	0.9	0.9
77°	0.9	0.9	0.9	0.9	0.9	0.9
77.5°	0.9	0.9	0.9	0.9	0.9	0.9
78°	0.9	0.9	0.9	0.9	0.9	0.9
78.5°	0.5	0.9	0.9	0.9	0.9	0.5
79°	0.5	0.5	0.9	0.9	0.9	0.5
79.5°	0.5	0.5	0.9	0.9	0.5	0.5
80°	0.5	0.5	0.9	0.9	0.5	0.5
80.5°	0.5	0.5	0.9	0.9	0.5	0.5
81°	0.5	0.5	0.9	0.9	0.5	0.5
81.5°	0.5	0.5	0.9	0.9	0.5	0.5
82°	0.5	0.5	0.9	0.9	0.5	0.5
82.5°	0.5	0.5	0.9	0.9	0.5	0.5
83°	0.5	0.5	0.9	0.9	0.5	0.5
83.5°	0.5	0.5	0.9	0.9	0.5	0.5
84°	0.5	0.5	0.9	0.9	0.5	0.5
84.5°	0.5	0.5	0.9	0.9	0.5	0.5
85°	0.5	0.5	0.9	0.9	0.9	0.5
85.5°	0.5	0.5	0.9	0.9	0.9	0.5
86°	0.5	0.5	0.9	0.9	0.9	0.5
86.5°	0.5	0.5	0.9	1.4	0.9	0.5
87°	0.5	0.5	1.4	1.4	1.4	0.5
87.5°	0.5	0.9	1.4	1.8	1.4	0.5
88°	0.5	0.9	1.8	2.3	1.8	0.5
88.5°	0.5	0.9	2.3	2.7	2.3	0.5



TEST NUMBER: P776650
CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.5	1.8	3.2	2.3	3.2	0.5



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°	2539.6	2561.0	2593.4	2626.2	2667.2	2682.3	2680.4	2666.3	2644.0	2618.9	2590.7
22°	2520.5	2542.4	2574.7	2608.4	2649.0	2664.5	2662.7	2648.1	2626.2	2600.7	2572.0



44°	1414.5	1443.7	1471.5	1497.0	1533.4	1544.8	1547.6	1541.2	1528.4	1506.1	1480.1
44.5°	1387.6	1416.3	1444.1	1468.7	1504.3	1515.2	1517.9	1512.5	1499.3	1476.9	1449.6



66.5°	34.6	47.4	54.2	61.5	77.9	83.4	88.4	86.1	69.3	82.5	77.9
67°	23.7	35.5	41.5	46.5	64.7	69.3	73.8	72.0	53.8	69.3	65.6



89°	0.5	0.9	1.4	0.9	0.0	0.0	0.0	0.5	0.0	0.5	0.5
89.5°	0.5	1.4	1.4	0.9	0.5	0.0	0.0	0.5	0.0	0.5	0.5

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

Scaled Data Report





21.5°	2566.1	2543.7	2539.2	2535.5	2533.7	2539.6
22°	2546.5	2524.6	2519.6	2515.0	2513.7	2520.5



44°	1448.2	1407.2	1392.6	1387.2	1396.7	1414.5
44.5°	1419.1	1379.4	1364.4	1360.3	1369.4	1387.6

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

Scaled Data Report



66.5°	69.7	57.9	60.6	58.3	52.4	34.6
67°	58.3	44.2	46.9	45.6	39.6	23.7

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

Scaled Data Report



89°	0.5	1.4	2.3	3.2	2.3	0.5
89.5°	0.5	1.4	2.7	3.2	2.7	0.5

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

Scaled Data Report



(END OF REPORT)