

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: P776658

Luminaire Tested: HCDJBS4050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776658
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B041)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K
Description: 6 INCH ROUND SHALLOW-WIDE LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5793.2 lumens
Efficiency: N/A
Efficacy: 120.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.16 / 1.25
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

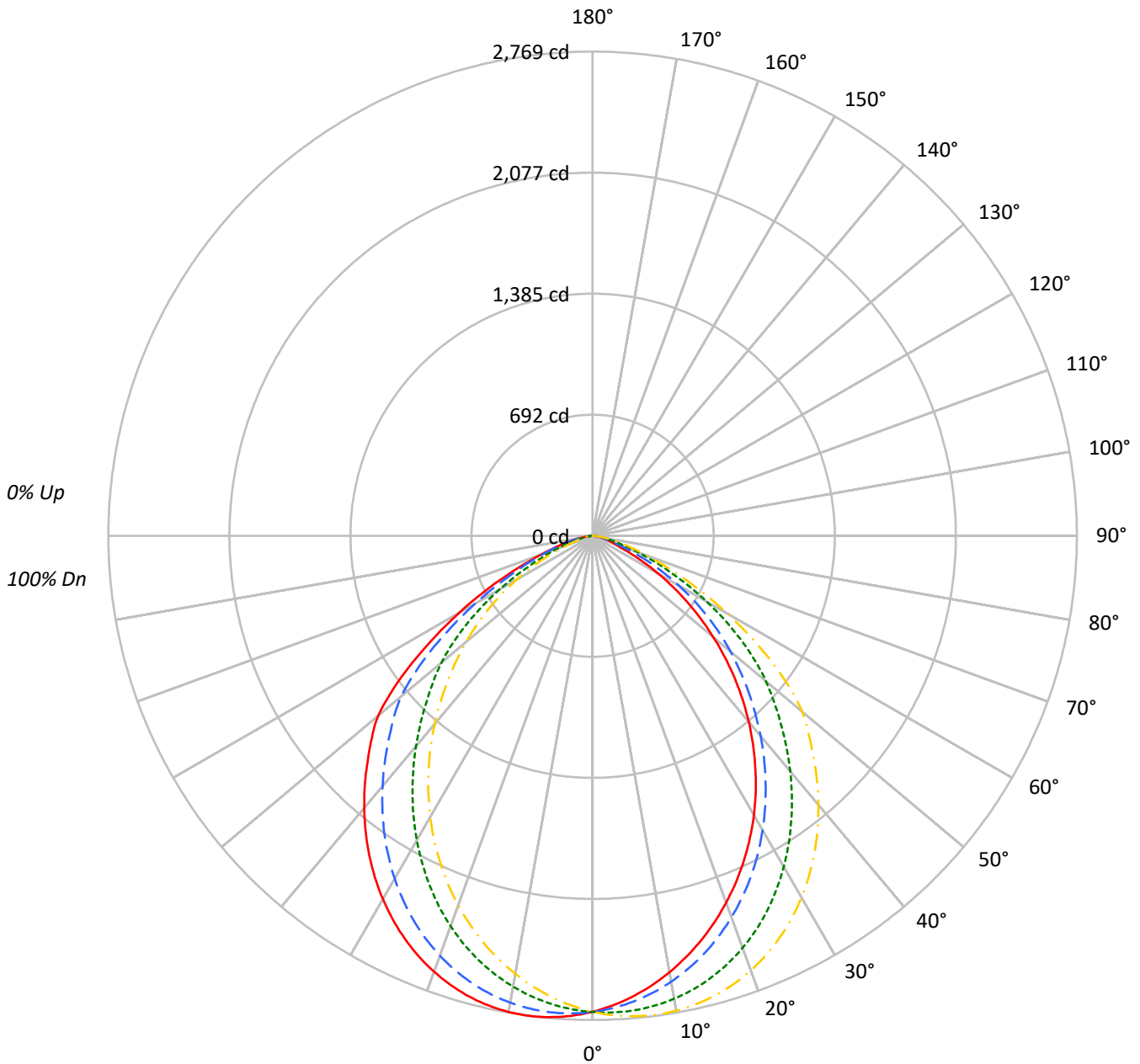
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	99	100	98	95	97	94	93	93	91	90	88								
2	102	95	89	84	100	93	88	83	90	85	82	87	83	80	84	81	78	76								
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51								
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45								
7	69	57	49	43	68	56	48	43	55	48	43	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	44	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°	149264	149264	149264	149264
5°	145520	149912	152069	147964
10°	141052	149652	153938	145761
15°	135966	148503	154825	142640
20°	130270	146289	154743	138560
25°	123872	142938	153789	133393
30°	116708	138357	151859	127273
35°	108569	132575	149024	120187
40°	99358	125750	145394	112396
45°	88877	118059	141015	104189
50°	76850	110291	136362	96184
55°	63128	98740	119355	83878
60°	47715	82482	96593	67275
65°	31326	63275	72278	49629
70°	20773	44302	49912	33419
75°	16606	28573	34652	21181
80°	12217	17521	20836	12533
85°	6604	10253	4529	7233

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 141976 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.5	4.4
10°-20°	721.8	12.5
20°-30°	1053.2	18.2
30°-40°	1192.0	20.6
40°-50°	1127.9	19.5
50°-60°	856.3	14.8
60°-70°	429.0	7.4
70°-80°	135.9	2.3
80°-90°	20.6	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2031.5	35.1
0°-40°	3223.5	55.6
0°-60°	5207.7	89.9
0°-90°	5793.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5793.2	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2723	2723	2723	2723	2723	
5°	2644	2724	2763	2689	2644	249
15°	2396	2617	2728	2513	2396	673
25°	2048	2363	2542	2205	2048	941
35°	1622	1981	2227	1796	1622	1012
45°	1146	1523	1819	1344	1146	882
55°	660	1033	1249	878	660	590
65°	242	488	557	383	242	251
75°	78	135	164	100	78	85
85°	10	16	7	12	10	15
90°	0	0	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°	2722.8	2722.8	2722.8	2722.8	2722.8	2722.8	2722.8	2722.8	2722.8	2722.8	2722.8
0.5°	2716.1	2718.0	2719.9	2721.4	2725.7	2726.1	2727.1	2727.6	2728.0	2728.0	2726.1
1°	2709.4	2712.7	2716.1	2720.4	2727.1	2729.5	2731.9	2733.3	2733.3	2732.4	2728.5
1.5°	2702.7	2707.0	2712.3	2718.5	2728.0	2732.8	2736.7	2738.6	2738.6	2736.2	2730.9
2°	2695.5	2700.8	2708.0	2716.6	2728.5	2735.2	2740.5	2743.4	2742.9	2740.0	2732.4
2.5°	2687.4	2694.1	2703.2	2714.2	2728.5	2737.6	2744.3	2747.7	2747.7	2743.4	2734.3
3°	2679.7	2687.4	2697.9	2711.3	2728.5	2739.5	2748.1	2752.0	2751.0	2745.7	2735.2
3.5°	2671.6	2680.2	2692.7	2708.0	2728.0	2741.4	2751.0	2755.8	2754.8	2748.1	2735.7
4°	2662.5	2672.6	2686.9	2704.6	2727.1	2742.4	2753.9	2759.1	2758.2	2750.5	2736.2
4.5°	2653.9	2664.4	2680.7	2700.8	2726.1	2743.4	2756.3	2762.5	2761.0	2752.0	2736.2
5°	2644.4	2656.3	2674.0	2696.5	2724.2	2743.8	2758.2	2764.9	2763.4	2753.4	2735.7
5.5°	2634.8	2647.2	2667.3	2691.7	2722.3	2744.3	2759.6	2767.3	2765.4	2754.4	2735.2
6°	2624.7	2638.1	2659.7	2686.9	2719.9	2743.8	2761.0	2769.2	2766.8	2754.8	2733.8
6.5°	2614.7	2629.0	2652.5	2681.7	2717.5	2743.4	2762.0	2770.6	2768.2	2754.8	2732.4
7°	2604.2	2619.5	2644.4	2675.9	2714.2	2742.4	2762.5	2771.6	2768.7	2754.8	2730.4
7.5°	2593.2	2609.4	2636.2	2669.7	2710.8	2741.0	2762.5	2772.0	2769.2	2753.9	2728.0
8°	2581.7	2598.9	2627.6	2663.0	2707.0	2739.5	2762.5	2772.5	2769.2	2752.9	2725.7
8.5°	2570.2	2588.4	2618.5	2656.3	2703.2	2737.6	2762.0	2772.5	2768.7	2751.5	2722.3
9°	2558.7	2577.9	2609.0	2649.1	2698.4	2735.7	2760.6	2772.0	2768.2	2750.0	2719.0
9.5°	2546.3	2566.4	2599.4	2642.0	2693.6	2732.8	2759.6	2771.1	2766.8	2747.7	2715.6
10°	2533.9	2554.9	2589.8	2633.8	2688.4	2730.0	2757.7	2769.7	2765.4	2745.3	2711.3
10.5°	2521.4	2543.0	2579.3	2625.7	2683.1	2726.1	2755.8	2768.2	2763.4	2741.9	2707.0
11°	2508.5	2531.0	2568.3	2617.1	2676.9	2722.3	2753.4	2766.3	2760.6	2739.0	2702.2
11.5°	2495.1	2518.6	2557.3	2608.0	2670.7	2718.5	2750.5	2763.4	2758.2	2735.2	2697.0
12°	2481.7	2505.7	2546.3	2598.4	2664.0	2713.7	2747.2	2761.0	2754.8	2731.4	2691.7
12.5°	2467.9	2492.7	2534.3	2589.3	2657.3	2708.9	2743.4	2757.7	2751.5	2727.1	2685.5
13°	2454.0	2479.3	2522.4	2578.8	2649.6	2703.7	2739.5	2753.9	2747.7	2722.3	2679.3
13.5°	2439.7	2466.0	2510.0	2568.8	2642.0	2698.4	2735.2	2750.0	2742.9	2717.0	2673.0
14°	2425.3	2452.1	2497.5	2558.3	2633.8	2692.2	2730.4	2745.7	2738.6	2711.3	2665.9
14.5°	2410.5	2438.2	2484.6	2547.3	2625.2	2686.0	2725.2	2741.0	2733.3	2705.6	2658.7
15°	2395.7	2423.4	2471.2	2535.3	2616.6	2678.8	2719.9	2735.7	2728.0	2699.4	2651.0
15.5°	2380.3	2408.6	2457.3	2523.8	2607.0	2672.1	2714.2	2730.4	2722.3	2692.7	2642.9
16°	2365.0	2393.7	2444.0	2511.4	2597.5	2664.4	2708.0	2724.2	2715.6	2685.5	2634.3
16.5°	2349.3	2378.4	2429.6	2499.4	2587.9	2656.8	2701.3	2718.0	2709.4	2678.3	2625.7
17°	2333.0	2363.1	2414.8	2486.0	2577.9	2648.7	2694.6	2711.8	2702.2	2670.7	2616.6
17.5°	2317.2	2347.3	2400.0	2473.1	2566.9	2640.0	2686.9	2704.6	2695.0	2662.5	2607.5
18°	2300.5	2331.1	2385.1	2459.7	2555.4	2631.4	2679.3	2697.0	2686.9	2653.9	2597.5
18.5°	2284.2	2315.3	2369.3	2445.9	2544.4	2621.9	2671.1	2689.3	2679.3	2644.8	2587.4
19°	2267.0	2298.6	2354.0	2431.5	2532.4	2612.3	2662.5	2681.2	2670.7	2635.7	2576.9
19.5°	2249.8	2282.3	2337.8	2416.7	2520.5	2602.3	2653.9	2672.6	2661.6	2626.7	2565.9
20°	2233.0	2265.1	2322.0	2402.3	2507.6	2591.7	2645.3	2663.5	2652.5	2616.6	2554.9
20.5°	2214.9	2247.9	2305.3	2387.0	2494.7	2580.7	2635.7	2654.4	2642.9	2606.1	2543.0
21°	2197.2	2230.2	2288.5	2371.7	2481.7	2570.2	2625.7	2644.8	2633.4	2595.6	2531.5



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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°	2143.1	2176.6	2236.4	2323.0	2440.1	2534.3	2593.7	2614.2	2601.8	2562.1	2494.2
23°	2124.5	2158.0	2218.7	2306.2	2425.3	2521.9	2582.7	2603.2	2590.3	2550.1	2480.8
23.5°	2105.8	2139.8	2201.0	2289.0	2410.5	2509.0	2571.2	2591.7	2578.8	2537.7	2467.4
24°	2086.7	2121.1	2182.3	2271.8	2395.2	2495.6	2558.7	2580.3	2567.3	2524.8	2453.5
24.5°	2067.1	2102.0	2163.2	2253.6	2379.4	2481.7	2546.3	2568.3	2554.4	2511.9	2439.2
25°	2047.9	2082.4	2144.6	2235.9	2363.1	2468.3	2533.9	2555.9	2542.5	2499.0	2424.8
25.5°	2028.3	2063.3	2125.9	2217.7	2346.9	2453.5	2521.0	2543.4	2529.1	2485.6	2410.0
26°	2008.7	2043.6	2106.8	2199.1	2330.6	2438.7	2507.6	2530.5	2516.2	2471.2	2395.2
26.5°	1988.6	2024.0	2086.2	2180.0	2313.4	2423.9	2493.7	2516.7	2502.3	2457.3	2379.9
27°	1968.6	2003.9	2067.1	2161.3	2295.7	2408.6	2479.3	2503.3	2488.9	2442.5	2364.1
27.5°	1948.0	1983.4	2047.0	2141.7	2278.5	2392.8	2465.5	2489.4	2474.6	2428.2	2348.3
28°	1927.4	1962.8	2026.9	2122.1	2260.3	2376.5	2450.7	2475.0	2459.7	2413.3	2331.6
28.5°	1906.9	1942.3	2005.9	2102.0	2242.1	2360.3	2435.3	2460.2	2444.9	2397.6	2315.3
29°	1886.3	1922.2	1985.3	2082.4	2224.0	2344.0	2420.0	2445.9	2429.6	2381.8	2298.6
29.5°	1865.2	1901.1	1964.7	2062.3	2204.8	2326.3	2404.7	2430.1	2414.3	2366.0	2281.3
30°	1843.7	1879.6	1944.2	2041.7	2185.7	2309.6	2388.5	2414.8	2399.0	2349.7	2263.6
30.5°	1822.2	1858.6	1922.2	2020.7	2166.6	2291.4	2371.7	2399.0	2383.2	2333.0	2246.0
31°	1800.7	1837.0	1901.1	2000.1	2147.0	2273.2	2355.0	2383.2	2367.0	2316.3	2228.3
31.5°	1779.2	1815.5	1879.1	1978.6	2126.9	2254.6	2338.3	2366.5	2349.7	2299.0	2209.6
32°	1757.2	1794.0	1857.6	1957.1	2106.3	2236.9	2321.0	2349.7	2333.5	2281.8	2191.4
32.5°	1735.2	1772.0	1835.6	1936.0	2086.2	2217.7	2303.8	2332.5	2316.7	2264.1	2172.8
33°	1712.7	1749.5	1814.1	1914.5	2066.1	2198.1	2285.6	2315.3	2299.0	2246.4	2154.1
33.5°	1690.7	1727.5	1791.6	1892.0	2045.1	2179.0	2267.5	2298.1	2281.3	2228.3	2135.5
34°	1668.2	1705.5	1769.6	1870.5	2024.0	2159.4	2248.8	2280.4	2263.2	2209.6	2115.4
34.5°	1645.2	1683.0	1746.6	1848.0	2002.0	2138.8	2230.2	2261.7	2245.0	2191.0	2095.8
35°	1622.3	1660.1	1724.6	1825.6	1981.0	2118.7	2211.5	2243.6	2226.8	2172.3	2076.2
35.5°	1599.8	1637.6	1701.2	1803.6	1959.5	2098.6	2191.9	2224.9	2208.6	2153.6	2056.6
36°	1576.9	1614.6	1679.2	1781.1	1937.5	2077.6	2172.8	2206.3	2190.0	2134.0	2036.0
36.5°	1553.9	1591.7	1656.2	1758.1	1915.5	2056.6	2153.2	2187.1	2170.4	2115.4	2015.9
37°	1530.5	1568.2	1632.3	1735.2	1893.0	2035.5	2133.1	2167.5	2151.3	2095.3	1995.3
37.5°	1507.0	1545.3	1609.9	1712.2	1870.5	2014.0	2112.5	2147.9	2131.6	2075.7	1974.3
38°	1483.1	1521.9	1586.9	1689.2	1848.5	1992.5	2092.4	2128.3	2112.0	2055.1	1953.3
38.5°	1460.2	1498.9	1563.5	1666.3	1825.6	1970.5	2071.4	2108.2	2092.4	2035.5	1933.2
39°	1437.2	1475.0	1540.5	1642.9	1803.1	1948.5	2050.8	2088.1	2071.9	2014.9	1911.6
39.5°	1412.8	1452.0	1517.1	1619.9	1780.6	1926.5	2029.8	2067.6	2052.3	1994.4	1890.6
40°	1388.4	1428.1	1494.1	1596.5	1757.2	1904.0	2008.3	2047.0	2031.7	1973.8	1868.6
40.5°	1365.0	1404.2	1469.7	1573.0	1733.2	1882.0	1986.7	2025.9	2010.6	1953.3	1847.6
41°	1341.1	1380.3	1446.8	1549.6	1710.3	1858.6	1964.7	2004.9	1990.1	1931.7	1825.6
41.5°	1316.7	1356.8	1422.9	1525.7	1687.8	1836.1	1943.2	1983.9	1969.5	1911.2	1804.0
42°	1292.3	1332.5	1399.4	1502.7	1663.4	1813.1	1921.2	1962.3	1948.0	1889.6	1782.0
42.5°	1268.4	1309.0	1376.5	1479.3	1640.9	1790.6	1899.2	1940.8	1926.9	1868.6	1760.0
43°	1244.5	1285.1	1352.5	1455.9	1617.0	1767.7	1876.7	1919.3	1905.4	1846.6	1738.0
43.5°	1220.1	1261.2	1329.1	1432.4	1594.1	1744.7	1854.7	1897.8	1884.4	1825.1	1716.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1146.4	1189.0	1258.3	1362.1	1522.8	1674.9	1786.3	1831.3	1818.9	1760.0	1649.6
45.5°	1122.0	1165.5	1235.8	1339.2	1500.8	1651.5	1763.9	1809.3	1797.3	1738.0	1627.6
46°	1097.6	1141.2	1211.9	1315.7	1476.4	1627.6	1740.9	1787.3	1775.3	1717.0	1606.0
46.5°	1072.3	1117.7	1189.0	1292.8	1453.0	1605.1	1718.9	1765.8	1754.8	1695.9	1585.0
47°	1047.4	1093.3	1165.5	1269.8	1429.5	1582.1	1696.9	1744.2	1734.2	1675.4	1563.9
47.5°	1023.5	1069.4	1142.6	1246.8	1407.5	1559.6	1675.4	1723.7	1713.2	1654.3	1542.4
48°	999.1	1046.0	1119.1	1223.9	1384.1	1537.6	1653.4	1702.6	1692.6	1633.8	1521.9
48.5°	974.7	1022.1	1096.2	1201.9	1362.1	1515.6	1632.3	1681.6	1671.6	1612.2	1499.9
49°	949.8	998.6	1073.2	1179.4	1339.2	1492.7	1609.9	1659.6	1649.6	1589.3	1477.4
49.5°	925.9	975.2	1050.8	1156.9	1316.2	1470.2	1587.4	1637.6	1626.1	1564.9	1452.5
50°	901.1	951.3	1028.3	1133.5	1293.2	1446.8	1563.0	1611.8	1598.9	1538.1	1427.6
50.5°	876.7	927.8	1004.8	1111.5	1270.3	1421.4	1536.2	1584.0	1570.2	1508.0	1399.4
51°	851.3	904.9	982.4	1088.1	1245.9	1394.6	1508.5	1553.4	1536.2	1476.4	1371.2
51.5°	827.9	881.5	959.9	1064.6	1220.5	1368.3	1479.3	1521.4	1503.7	1443.9	1340.1
52°	803.5	858.0	936.9	1041.2	1195.7	1339.6	1447.7	1486.9	1469.7	1409.9	1308.1
52.5°	779.6	835.1	914.5	1016.8	1168.9	1310.5	1415.2	1451.5	1433.4	1374.5	1275.1
53°	755.7	812.1	891.5	992.9	1141.6	1280.8	1381.2	1415.7	1398.5	1339.2	1242.5
53.5°	731.8	789.1	868.1	968.5	1115.3	1250.2	1346.8	1379.8	1360.7	1302.8	1208.6
54°	707.4	766.2	845.1	943.1	1087.6	1218.6	1312.8	1343.9	1322.9	1266.5	1175.1
54.5°	683.9	743.2	822.1	919.2	1061.3	1188.0	1277.5	1306.6	1285.6	1230.1	1141.2
55°	660.5	720.8	799.2	895.3	1033.1	1156.5	1242.5	1270.3	1248.8	1193.8	1107.7
55.5°	636.6	698.3	775.3	870.4	1005.8	1124.9	1206.2	1233.5	1210.5	1156.5	1072.8
56°	614.1	675.3	752.3	845.6	977.6	1091.9	1170.8	1196.2	1172.2	1118.7	1038.8
56.5°	590.7	652.4	729.4	820.7	949.8	1059.4	1134.5	1158.8	1135.4	1082.3	1004.4
57°	567.7	629.9	705.9	795.8	921.1	1026.8	1099.5	1121.1	1097.6	1046.5	970.9
57.5°	544.7	607.4	682.5	771.0	893.9	994.8	1063.2	1084.2	1060.8	1009.1	936.5
58°	522.7	585.4	660.0	746.1	865.2	961.8	1029.2	1047.4	1024.9	972.8	903.0
58.5°	500.7	562.9	636.6	721.7	837.0	929.8	993.4	1011.1	988.1	937.4	870.0
59°	478.3	541.4	614.1	696.4	808.3	897.2	958.0	974.7	951.8	903.0	836.5
59.5°	456.7	519.4	591.1	672.0	781.0	865.2	923.5	938.4	915.9	867.6	803.5
60°	435.2	497.9	569.1	648.1	752.3	833.6	889.1	903.0	881.0	833.6	772.4
60.5°	413.7	475.9	546.7	623.7	724.6	801.6	854.2	868.1	846.5	800.1	740.4
61°	392.7	455.3	524.2	599.3	696.4	771.0	820.7	833.6	812.1	768.1	709.8
61.5°	372.6	434.3	502.7	575.4	669.6	740.8	787.7	799.2	778.6	736.1	680.1
62°	352.0	413.7	481.6	551.9	641.8	711.2	756.1	766.2	745.6	705.0	650.9
62.5°	331.9	393.1	459.6	528.5	615.5	681.1	722.2	732.7	713.1	674.4	621.7
63°	312.8	373.5	438.6	505.1	588.7	650.9	690.6	700.2	682.0	643.8	593.5
63.5°	294.1	353.4	417.5	482.1	562.9	623.2	659.5	668.6	649.5	615.1	566.7
64°	275.5	334.3	396.5	459.1	537.1	594.0	630.4	638.0	617.4	588.3	540.9
64.5°	258.3	315.7	375.9	436.7	512.2	566.3	600.2	607.4	586.8	560.5	515.6
65°	241.5	297.5	355.8	414.7	487.8	539.5	571.1	578.7	557.2	534.2	490.7
65.5°	224.8	278.8	335.7	393.6	464.4	513.2	543.3	550.0	526.6	507.9	467.3
66°	209.5	261.6	315.7	371.6	441.0	486.9	516.5	521.8	497.9	483.1	444.3



TEST NUMBER: P776658

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	169.3	210.9	259.2	310.9	375.0	416.6	440.5	444.3	420.9	414.7	382.6
68°	160.7	195.1	241.5	292.2	353.0	394.6	418.5	421.4	397.9	392.7	362.0
68.5°	151.6	180.3	224.3	273.1	333.4	372.6	396.5	398.9	374.5	370.7	341.5
69°	143.0	168.4	208.0	255.4	313.7	350.6	374.5	376.4	351.0	349.1	323.3
69.5°	133.9	156.9	192.3	237.2	294.6	329.5	352.0	353.9	330.5	329.5	305.1
70°	129.6	145.4	177.9	221.4	276.4	310.4	332.4	334.8	311.4	310.9	287.9
70.5°	124.8	133.4	166.4	205.7	259.2	292.2	314.2	316.1	293.2	293.7	272.1
71°	119.6	122.0	155.0	190.4	243.0	274.5	296.0	298.0	276.0	276.4	256.4
71.5°	114.3	116.7	143.0	176.5	226.7	257.3	278.4	280.3	259.2	260.2	241.0
72°	108.6	111.9	131.5	165.0	211.4	242.0	262.1	264.5	243.4	244.4	226.7
72.5°	103.3	107.1	120.0	153.5	196.6	226.2	246.8	248.7	228.6	230.0	212.8
73°	98.0	101.9	111.0	142.0	183.2	211.9	232.0	234.4	214.3	215.2	199.4
73.5°	92.8	97.1	102.8	130.1	170.3	198.0	217.1	220.0	201.4	202.3	187.0
74°	88.0	92.3	95.7	118.6	157.8	185.1	204.2	206.6	188.0	189.4	175.0
74.5°	82.7	87.5	89.4	109.5	145.9	172.2	191.3	193.7	175.5	177.0	163.6
75°	78.4	82.7	83.7	100.9	134.9	160.2	179.4	181.3	163.6	165.5	152.1
75.5°	73.7	78.4	78.9	92.8	124.8	149.2	167.4	169.8	152.1	154.0	141.6
76°	69.3	73.7	74.1	85.6	114.8	138.2	155.9	158.3	140.6	143.0	131.5
76.5°	65.0	69.3	70.3	78.4	105.7	128.2	145.4	147.3	130.1	133.0	122.0
77°	60.7	65.0	66.0	72.2	97.1	118.6	134.9	137.3	119.6	122.9	112.9
77.5°	56.9	61.2	62.2	66.5	89.0	109.5	125.3	127.2	110.0	113.3	104.3
78°	52.6	56.9	58.3	61.2	81.3	100.9	115.7	117.7	100.4	104.3	95.7
78.5°	49.3	53.1	54.5	56.0	74.1	92.3	106.7	108.6	90.9	96.1	87.5
79°	45.4	49.3	51.2	51.2	67.4	84.7	98.0	99.5	82.3	87.5	79.9
79.5°	42.1	45.4	47.8	46.9	61.2	77.0	89.9	91.3	74.1	79.9	72.7
80°	38.7	42.1	44.5	43.0	55.5	69.8	81.8	83.2	66.0	72.2	65.5
80.5°	35.4	38.7	41.1	39.2	50.2	63.1	74.1	75.6	57.9	65.0	58.8
81°	32.0	35.4	37.8	35.9	45.4	56.9	67.0	68.4	51.2	58.3	52.6
81.5°	29.2	32.5	34.9	33.0	41.1	51.2	59.8	61.2	45.0	52.1	47.3
82°	26.3	29.2	32.0	30.1	36.8	45.9	53.1	55.0	38.3	46.9	42.1
82.5°	23.4	26.3	29.2	27.3	32.5	41.1	47.8	49.3	31.6	41.6	36.8
83°	20.6	23.4	26.3	24.9	28.2	36.3	42.6	44.0	25.3	36.3	31.6
83.5°	17.7	20.6	23.4	22.5	24.9	31.6	37.3	38.7	20.1	30.6	26.3
84°	15.3	17.7	21.0	20.1	21.5	26.8	31.6	33.0	14.8	25.3	22.5
84.5°	12.9	15.3	18.7	17.7	18.7	23.0	26.3	27.7	10.5	21.0	18.7
85°	10.5	12.9	16.3	15.8	16.3	19.1	22.0	22.5	7.2	17.2	15.3
85.5°	8.1	10.5	14.3	13.9	13.9	16.3	18.2	18.2	4.8	13.4	12.0
86°	6.2	8.6	12.0	12.0	11.5	12.9	14.8	13.9	3.3	10.0	9.1
86.5°	5.3	6.7	9.6	9.6	9.6	10.5	11.5	10.5	2.9	7.2	6.7
87°	3.8	5.3	7.7	7.7	7.7	8.1	8.6	7.7	1.9	4.8	4.8
87.5°	2.9	3.8	5.7	5.7	6.2	6.2	6.2	5.3	1.4	2.9	2.9
88°	1.9	2.9	3.8	4.3	4.8	4.3	3.8	2.9	1.0	1.4	1.4
88.5°	1.0	1.4	2.4	2.4	2.9	2.4	1.9	1.4	0.5	0.5	0.5



TEST NUMBER: P776658

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776658

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2722.8	2722.8	2722.8	2722.8	2722.8	2722.8
0.5°	2723.3	2722.3	2718.5	2716.1	2715.1	2716.1
1°	2723.7	2719.9	2713.7	2710.4	2708.4	2709.4
1.5°	2723.3	2717.0	2709.4	2703.7	2701.3	2702.7
2°	2723.3	2714.2	2704.1	2697.0	2693.6	2695.5
2.5°	2722.3	2710.8	2698.4	2690.3	2686.0	2687.4
3°	2721.4	2707.0	2692.7	2682.6	2677.8	2679.7
3.5°	2719.9	2702.7	2686.4	2675.0	2669.7	2671.6
4°	2718.0	2698.4	2680.2	2666.8	2661.1	2662.5
4.5°	2715.6	2693.6	2673.5	2658.2	2651.5	2653.9
5°	2713.2	2688.8	2666.4	2649.6	2642.0	2644.4
5.5°	2710.4	2683.1	2658.7	2640.5	2632.4	2634.8
6°	2707.0	2677.4	2650.6	2631.0	2622.4	2624.7
6.5°	2703.2	2671.1	2642.4	2621.4	2611.8	2614.7
7°	2699.4	2664.9	2634.3	2611.3	2600.8	2604.2
7.5°	2694.6	2657.7	2625.2	2600.8	2589.8	2593.2
8°	2690.3	2650.6	2616.1	2590.3	2578.8	2581.7
8.5°	2685.0	2643.4	2606.1	2579.3	2566.9	2570.2
9°	2679.7	2635.3	2596.5	2568.3	2554.9	2558.7
9.5°	2674.0	2626.7	2586.0	2556.3	2542.5	2546.3
10°	2667.8	2618.5	2575.5	2544.4	2530.0	2533.9
10.5°	2661.1	2609.4	2564.5	2532.4	2517.6	2521.4
11°	2654.4	2600.3	2553.5	2520.0	2504.7	2508.5
11.5°	2647.2	2590.3	2542.0	2507.1	2491.3	2495.1
12°	2640.0	2580.3	2530.0	2494.2	2477.4	2481.7
12.5°	2631.9	2570.2	2517.6	2480.3	2463.6	2467.9
13°	2623.8	2559.7	2505.2	2466.9	2449.7	2454.0
13.5°	2615.2	2548.2	2492.7	2453.0	2434.9	2439.7
14°	2606.1	2537.2	2479.3	2439.2	2420.5	2425.3
14.5°	2597.0	2525.3	2466.0	2424.8	2405.7	2410.5
15°	2587.0	2513.3	2452.6	2410.0	2390.4	2395.7
15.5°	2576.9	2501.3	2438.2	2394.7	2375.1	2380.3
16°	2566.9	2488.4	2423.9	2379.4	2359.8	2365.0
16.5°	2556.3	2475.5	2409.0	2364.1	2343.5	2349.3
17°	2545.3	2462.1	2394.2	2348.3	2327.7	2333.0
17.5°	2533.9	2448.7	2378.9	2332.0	2311.0	2317.2
18°	2521.9	2434.4	2363.6	2315.8	2294.7	2300.5
18.5°	2510.0	2420.0	2347.3	2299.0	2278.0	2284.2
19°	2497.5	2405.2	2331.6	2282.3	2260.8	2267.0
19.5°	2484.6	2390.4	2315.3	2265.1	2243.6	2249.8
20°	2471.7	2375.1	2298.6	2248.3	2226.3	2233.0
20.5°	2458.3	2359.8	2281.3	2230.6	2208.6	2214.9
21°	2444.4	2343.5	2264.1	2212.5	2190.5	2197.2



TEST NUMBER: P776658

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2401.4	2294.3	2210.6	2158.0	2136.0	2143.1
23°	2386.1	2276.6	2192.4	2139.3	2117.3	2124.5
23.5°	2371.3	2259.8	2174.2	2120.6	2098.6	2105.8
24°	2355.5	2241.6	2155.1	2101.5	2079.0	2086.7
24.5°	2339.2	2224.0	2136.4	2082.4	2059.4	2067.1
25°	2323.0	2205.3	2116.8	2062.8	2040.3	2047.9
25.5°	2306.2	2187.1	2097.7	2042.7	2020.7	2028.3
26°	2289.5	2169.0	2077.6	2022.6	2000.6	2008.7
26.5°	2271.8	2149.3	2058.5	2003.0	1980.5	1988.6
27°	2254.6	2129.7	2037.9	1982.9	1960.4	1968.6
27.5°	2237.3	2110.6	2017.8	1962.3	1939.9	1948.0
28°	2219.2	2091.0	1996.8	1941.3	1918.8	1927.4
28.5°	2201.5	2071.4	1976.7	1920.7	1898.7	1906.9
29°	2182.3	2050.8	1955.6	1899.7	1877.2	1886.3
29.5°	2163.7	2030.7	1934.6	1878.6	1856.2	1865.2
30°	2144.6	2010.6	1913.6	1857.1	1834.6	1843.7
30.5°	2125.9	1989.6	1892.0	1835.6	1813.6	1822.2
31°	2106.3	1968.6	1870.0	1814.1	1791.6	1800.7
31.5°	2086.2	1947.5	1849.0	1792.1	1770.1	1779.2
32°	2066.1	1926.0	1827.0	1770.1	1747.6	1757.2
32.5°	2046.5	1904.9	1805.0	1748.1	1726.1	1735.2
33°	2025.9	1883.9	1783.0	1726.1	1703.6	1712.7
33.5°	2005.4	1861.9	1761.0	1703.6	1681.6	1690.7
34°	1984.8	1839.9	1738.5	1681.1	1659.1	1668.2
34.5°	1963.8	1817.9	1715.6	1658.6	1636.6	1645.2
35°	1942.7	1795.9	1693.1	1635.7	1613.2	1622.3
35.5°	1921.7	1773.4	1671.1	1612.7	1591.2	1599.8
36°	1900.6	1751.9	1648.1	1590.2	1568.2	1576.9
36.5°	1879.1	1728.9	1625.6	1567.3	1544.8	1553.9
37°	1857.1	1706.5	1602.2	1543.9	1521.9	1530.5
37.5°	1835.6	1684.5	1579.7	1520.9	1498.9	1507.0
38°	1813.6	1661.5	1556.3	1497.5	1475.5	1483.1
38.5°	1791.6	1638.6	1533.8	1474.5	1452.0	1460.2
39°	1769.6	1616.5	1510.9	1451.5	1428.6	1437.2
39.5°	1747.6	1593.6	1487.9	1428.1	1405.2	1412.8
40°	1725.1	1570.6	1464.5	1404.2	1381.2	1388.4
40.5°	1703.1	1548.2	1441.5	1381.2	1357.8	1365.0
41°	1680.6	1524.7	1418.5	1357.8	1333.4	1341.1
41.5°	1658.2	1502.2	1395.1	1334.4	1309.5	1316.7
42°	1635.7	1479.8	1372.2	1310.9	1286.1	1292.3
42.5°	1613.2	1457.3	1349.7	1287.5	1262.2	1268.4
43°	1591.2	1434.8	1326.7	1264.1	1238.2	1244.5
43.5°	1568.2	1411.4	1304.2	1240.6	1214.3	1220.1

TEST NUMBER: P776658

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1501.3	1343.9	1235.4	1170.8	1142.6	1146.4
45.5°	1478.8	1321.5	1212.9	1147.4	1118.2	1122.0
46°	1456.8	1299.9	1190.9	1124.9	1094.3	1097.6
46.5°	1435.3	1278.4	1168.9	1101.5	1070.4	1072.3
47°	1413.8	1256.9	1146.4	1078.5	1046.5	1047.4
47.5°	1392.2	1234.9	1124.4	1055.5	1023.0	1023.5
48°	1371.7	1214.8	1102.9	1032.6	999.1	999.1
48.5°	1350.6	1193.3	1080.9	1010.1	974.7	974.7
49°	1328.6	1171.8	1059.8	988.1	951.3	949.8
49.5°	1305.2	1150.2	1038.8	965.6	927.8	925.9
50°	1281.3	1127.8	1017.3	943.1	903.9	901.1
50.5°	1255.9	1104.3	994.8	921.1	881.0	876.7
51°	1230.1	1080.9	973.3	899.1	857.1	851.3
51.5°	1203.3	1056.5	951.3	877.1	834.1	827.9
52°	1176.1	1032.1	928.8	855.6	811.1	803.5
52.5°	1147.4	1006.8	905.8	833.1	787.7	779.6
53°	1119.1	981.4	882.9	811.1	765.2	755.7
53.5°	1089.0	955.6	859.9	788.7	742.3	731.8
54°	1058.9	929.8	836.5	767.1	719.8	707.4
54.5°	1028.8	903.9	813.1	744.7	697.3	683.9
55°	999.1	877.6	789.1	722.2	675.3	660.5
55.5°	968.0	850.4	765.7	699.7	652.4	636.6
56°	937.4	824.1	741.8	677.7	630.4	614.1
56.5°	907.3	797.8	718.4	655.2	608.4	590.7
57°	877.1	771.0	694.0	633.2	586.4	567.7
57.5°	846.5	744.2	670.1	610.3	564.4	544.7
58°	816.9	717.9	646.6	588.7	543.3	522.7
58.5°	787.7	691.6	623.2	566.3	521.3	500.7
59°	757.6	665.3	599.7	544.3	499.8	478.3
59.5°	728.9	639.0	576.3	522.7	478.7	456.7
60°	700.2	613.6	553.4	501.2	457.7	435.2
60.5°	672.0	588.3	530.4	479.7	436.7	413.7
61°	643.8	563.4	507.9	458.7	416.1	392.7
61.5°	616.5	539.5	485.4	438.1	396.0	372.6
62°	590.7	515.6	463.4	417.5	376.4	352.0
62.5°	563.9	492.1	441.9	397.0	356.8	331.9
63°	538.1	468.7	420.9	376.9	337.7	312.8
63.5°	512.7	446.7	399.8	357.3	318.5	294.1
64°	488.3	424.7	379.3	337.7	300.4	275.5
64.5°	464.9	403.7	359.2	318.5	282.2	258.3
65°	441.9	382.6	339.6	299.9	265.4	241.5
65.5°	420.4	362.5	320.4	281.2	248.2	224.8
66°	399.4	342.4	301.3	263.5	232.0	209.5



TEST NUMBER: P776658

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	338.1	287.4	248.7	212.8	186.0	169.3
68°	319.5	270.2	232.0	198.0	172.7	160.7
68.5°	301.8	254.0	216.7	183.2	162.1	151.6
69°	284.6	238.2	200.9	168.8	152.1	143.0
69.5°	268.3	223.4	186.5	157.8	142.0	133.9
70°	252.5	208.5	173.6	146.8	131.5	129.6
70.5°	237.7	194.7	162.6	135.8	121.5	124.8
71°	222.9	181.7	151.6	124.8	116.7	119.6
71.5°	209.5	168.8	140.6	116.2	112.4	114.3
72°	196.1	158.3	129.6	108.6	107.6	108.6
72.5°	183.7	147.8	118.6	101.4	102.3	103.3
73°	171.2	137.3	109.5	94.7	97.1	98.0
73.5°	159.7	126.3	101.4	89.0	92.3	92.8
74°	148.7	117.2	93.7	84.2	87.5	88.0
74.5°	138.7	108.1	86.6	79.9	82.7	82.7
75°	128.7	100.0	80.3	76.0	78.4	78.4
75.5°	119.1	91.8	74.1	71.7	73.7	73.7
76°	110.0	84.7	68.9	67.9	69.3	69.3
76.5°	101.9	77.5	63.6	64.1	65.0	65.0
77°	93.7	70.8	58.8	60.3	61.2	60.7
77.5°	86.1	65.0	54.5	56.4	57.4	56.9
78°	78.4	58.8	50.2	53.1	53.6	52.6
78.5°	71.7	53.6	46.4	49.7	49.7	49.3
79°	65.0	48.8	43.0	46.4	45.9	45.4
79.5°	59.3	44.0	39.7	43.0	42.6	42.1
80°	53.6	39.7	36.8	39.7	39.2	38.7
80.5°	47.8	35.9	34.4	36.8	35.9	35.4
81°	43.5	32.0	31.6	34.0	32.5	32.0
81.5°	39.2	28.7	29.2	31.1	29.7	29.2
82°	34.4	25.8	26.3	28.2	26.3	26.3
82.5°	30.1	23.0	23.9	25.3	23.4	23.4
83°	25.3	20.1	21.5	23.0	20.6	20.6
83.5°	22.0	17.7	19.1	20.6	17.7	17.7
84°	18.7	15.3	17.2	18.2	15.8	15.3
84.5°	15.8	13.4	14.8	15.8	13.4	12.9
85°	12.9	11.5	12.9	13.4	11.0	10.5
85.5°	10.5	9.1	10.5	11.5	8.6	8.1
86°	8.1	7.7	8.6	9.1	7.2	6.2
86.5°	6.2	5.7	6.7	7.2	5.7	5.3
87°	4.3	4.3	4.8	5.3	4.3	3.8
87.5°	2.9	2.4	2.9	3.3	2.9	2.9
88°	1.9	1.0	1.4	1.9	1.9	1.9
88.5°	0.5	0.5	0.5	0.5	1.0	1.0



TEST NUMBER: P776658

CATALOG NUMBER: HCDJBS4050CSD-HCD61TRH-HCD61TRLWW-5000lm-4000K

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



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Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





21.5°	2179.5	2212.5	2271.3	2355.5	2467.9	2558.3	2615.2	2635.3	2623.3	2585.0	2519.0
22°	2161.3	2194.8	2254.1	2339.2	2454.5	2546.3	2605.1	2624.7	2612.3	2573.1	2506.6



44°	1194.7	1236.8	1305.7	1409.0	1570.2	1720.8	1831.8	1875.3	1862.4	1803.6	1694.0
44.5°	1170.8	1212.9	1282.2	1386.0	1546.7	1697.9	1809.3	1853.3	1840.9	1782.0	1672.0



66.5°	194.7	244.4	296.5	351.0	419.0	462.0	490.2	495.0	470.1	458.2	423.7
67°	180.8	227.7	277.9	330.5	397.0	438.6	465.4	469.2	444.3	436.2	403.2



89°	0.5	0.5	1.0	1.0	1.9	1.4	1.0	0.5	0.0	0.0	0.0
89.5°	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0

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21.5°	2430.6	2327.3	2246.9	2194.3	2172.3	2179.5
22°	2415.7	2311.0	2228.7	2176.6	2154.1	2161.3



44°	1545.8	1388.9	1280.8	1217.2	1189.9	1194.7
44.5°	1522.8	1366.4	1258.3	1193.8	1166.5	1170.8



66.5°	377.8	323.8	283.1	245.4	216.2	194.7
67°	356.8	304.7	265.4	229.6	200.9	180.8

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89°	0.0	0.0	0.0	0.0	0.5	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)