

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: P776659

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

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776659
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-5000K
Description: 6 INCH ROUND SHALLOW-WIDE LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5879.0 lumens
Efficiency: N/A
Efficacy: 122.5 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

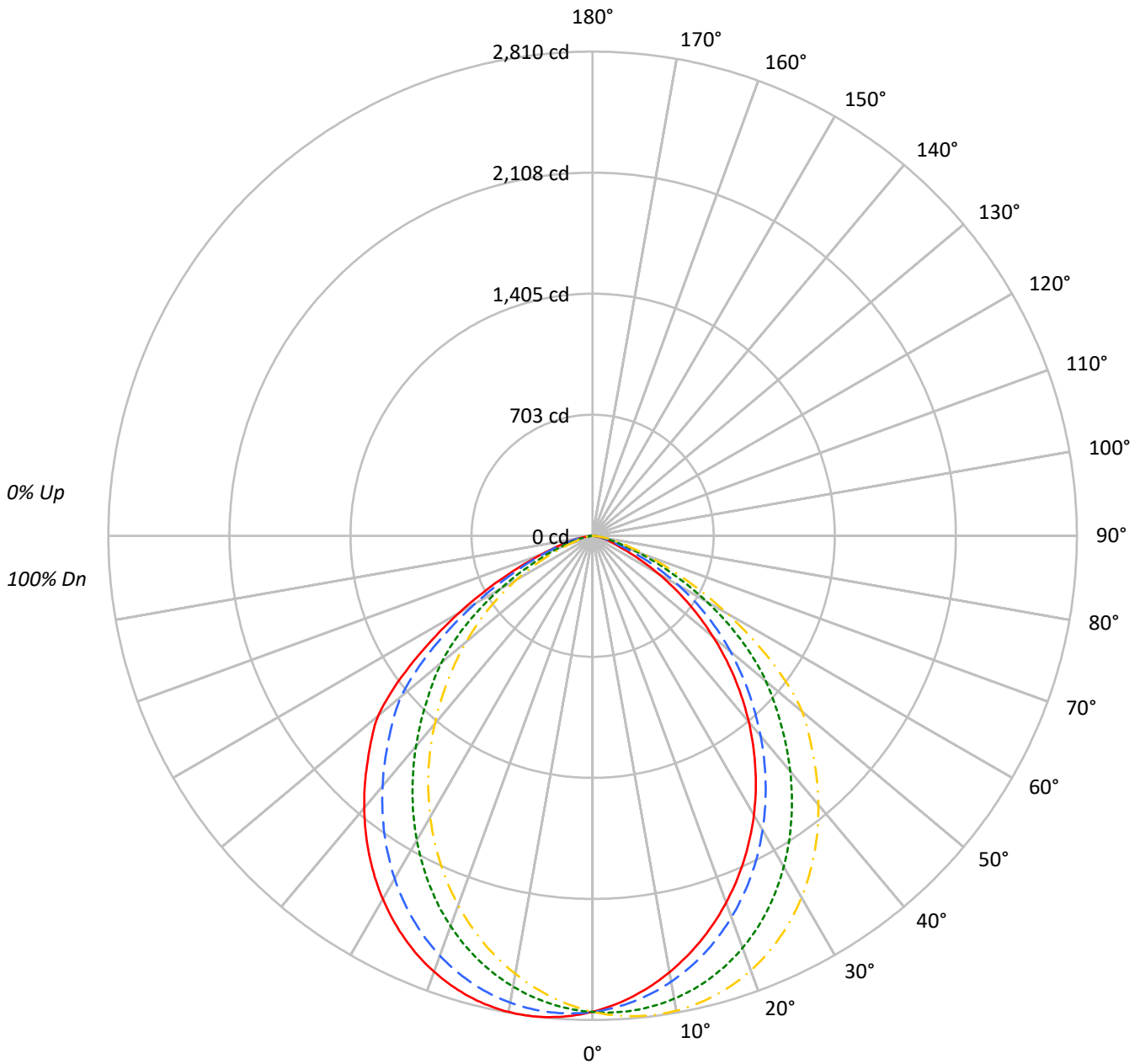
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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					100			
1	111	107	103	100	108	105	101	99	100	98	95	97	94	93	93	91	90	88					88			
2	102	95	89	84	100	93	88	83	90	85	82	87	83	80	84	81	78	76					76			
3	94	85	78	72	92	83	77	71	81	75	70	78	73	69	75	71	68	66					66			
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58					58			
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51					51			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40					40			
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	35	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	151474	151474	151474	151474
5°	147672	152135	154325	150154
10°	143139	151868	156215	147921
15°	137975	150705	157118	144751
20°	132201	148454	157035	140613
25°	125711	145055	156063	135371
30°	118436	140408	154106	129159
35°	110175	134535	151233	121967
40°	100832	127611	147548	114064
45°	90195	119811	143100	105732
50°	77985	111928	138375	97609
55°	64065	100202	121124	85120
60°	48428	83710	98018	68273
65°	31793	64222	73341	50369
70°	21077	44960	50650	33916
75°	16860	28997	35160	21477
80°	12407	17774	21152	12723
85°	6730	10378	4592	7296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 144077 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.3	4.4
10°-20°	732.4	12.5
20°-30°	1068.8	18.2
30°-40°	1209.7	20.6
40°-50°	1144.6	19.5
50°-60°	869.0	14.8
60°-70°	435.4	7.4
70°-80°	137.9	2.3
80°-90°	20.9	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°	2061.6	35.1
0°-40°	3271.2	55.6
0°-60°	5284.8	89.9
0°-90°	5879.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5879.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2763	2763	2763	2763	2763	
5°	2684	2765	2804	2729	2684	253
15°	2431	2655	2768	2550	2431	683
25°	2078	2398	2580	2238	2078	955
35°	1646	2010	2260	1822	1646	1027
45°	1163	1545	1846	1364	1163	895
55°	670	1048	1267	891	670	599
65°	245	495	565	388	245	254
75°	80	137	166	101	80	86
85°	11	16	7	12	11	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°	2763.1	2763.1	2763.1	2763.1	2763.1	2763.1	2763.1	2763.1	2763.1	2763.1	2763.1
0.5°	2756.3	2758.3	2760.2	2761.6	2766.0	2766.5	2767.5	2768.0	2768.4	2768.4	2766.5
1°	2749.5	2752.9	2756.3	2760.7	2767.5	2769.9	2772.3	2773.8	2773.8	2772.8	2768.9
1.5°	2742.7	2747.1	2752.4	2758.7	2768.4	2773.3	2777.2	2779.1	2779.1	2776.7	2771.4
2°	2735.4	2740.8	2748.1	2756.8	2768.9	2775.7	2781.1	2784.0	2783.5	2780.6	2772.8
2.5°	2727.2	2734.0	2743.2	2754.4	2768.9	2778.2	2784.9	2788.3	2788.3	2784.0	2774.8
3°	2719.4	2727.2	2737.9	2751.5	2768.9	2780.1	2788.8	2792.7	2791.7	2786.4	2775.7
3.5°	2711.2	2719.9	2732.5	2748.1	2768.4	2782.0	2791.7	2796.6	2795.6	2788.8	2776.2
4°	2702.0	2712.1	2726.7	2744.7	2767.5	2783.0	2794.7	2800.0	2799.0	2791.3	2776.7
4.5°	2693.2	2703.9	2720.4	2740.8	2766.5	2784.0	2797.1	2803.4	2801.9	2792.7	2776.7
5°	2683.5	2695.6	2713.6	2736.4	2764.6	2784.5	2799.0	2805.8	2804.4	2794.2	2776.2
5.5°	2673.8	2686.4	2706.8	2731.6	2762.6	2784.9	2800.5	2808.2	2806.3	2795.1	2775.7
6°	2663.6	2677.2	2699.0	2726.7	2760.2	2784.5	2801.9	2810.2	2807.8	2795.6	2774.3
6.5°	2653.4	2668.0	2691.8	2721.4	2757.8	2784.0	2802.9	2811.6	2809.2	2795.6	2772.8
7°	2642.7	2658.3	2683.5	2715.5	2754.4	2783.0	2803.4	2812.6	2809.7	2795.6	2770.9
7.5°	2631.6	2648.1	2675.3	2709.2	2751.0	2781.5	2803.4	2813.1	2810.2	2794.7	2768.4
8°	2619.9	2637.4	2666.5	2702.4	2747.1	2780.1	2803.4	2813.6	2810.2	2793.7	2766.0
8.5°	2608.3	2626.7	2657.3	2695.6	2743.2	2778.2	2802.9	2813.6	2809.7	2792.2	2762.6
9°	2596.6	2616.0	2647.6	2688.4	2738.4	2776.2	2801.4	2813.1	2809.2	2790.8	2759.2
9.5°	2584.0	2604.4	2637.9	2681.1	2733.5	2773.3	2800.5	2812.1	2807.8	2788.3	2755.8
10°	2571.4	2592.7	2628.2	2672.8	2728.2	2770.4	2798.5	2810.7	2806.3	2785.9	2751.5
10.5°	2558.8	2580.6	2617.5	2664.6	2722.8	2766.5	2796.6	2809.2	2804.4	2782.5	2747.1
11°	2545.7	2568.5	2606.3	2655.8	2716.5	2762.6	2794.2	2807.3	2801.4	2779.6	2742.2
11.5°	2532.1	2555.9	2595.2	2646.6	2710.2	2758.7	2791.3	2804.4	2799.0	2775.7	2736.9
12°	2518.5	2542.8	2584.0	2636.9	2703.4	2753.9	2787.9	2801.9	2795.6	2771.8	2731.6
12.5°	2504.4	2529.7	2571.9	2627.7	2696.6	2749.0	2784.0	2798.5	2792.2	2767.5	2725.2
13°	2490.3	2516.1	2559.7	2617.0	2688.8	2743.7	2780.1	2794.7	2788.3	2762.6	2718.9
13.5°	2475.8	2502.5	2547.1	2606.8	2681.1	2738.4	2775.7	2790.8	2783.5	2757.3	2712.6
14°	2461.2	2488.4	2534.5	2596.1	2672.8	2732.0	2770.9	2786.4	2779.1	2751.5	2705.3
14.5°	2446.2	2474.3	2521.4	2585.0	2664.1	2725.7	2765.5	2781.5	2773.8	2745.6	2698.1
15°	2431.1	2459.3	2507.8	2572.8	2655.4	2718.5	2760.2	2776.2	2768.4	2739.3	2690.3
15.5°	2415.6	2444.2	2493.7	2561.2	2645.6	2711.7	2754.4	2770.9	2762.6	2732.5	2682.1
16°	2400.1	2429.2	2480.1	2548.6	2635.9	2703.9	2748.1	2764.6	2755.8	2725.2	2673.3
16.5°	2384.0	2413.7	2465.6	2536.4	2626.2	2696.1	2741.3	2758.3	2749.5	2718.0	2664.6
17°	2367.5	2398.1	2450.5	2522.9	2616.0	2687.9	2734.5	2751.9	2742.2	2710.2	2655.4
17.5°	2351.5	2382.1	2435.5	2509.8	2604.9	2679.1	2726.7	2744.7	2735.0	2702.0	2646.1
18°	2334.5	2365.6	2420.4	2496.2	2593.2	2670.4	2718.9	2736.9	2726.7	2693.2	2635.9
18.5°	2318.0	2349.6	2404.4	2482.1	2582.1	2660.7	2710.7	2729.1	2718.9	2684.0	2625.7
19°	2300.6	2332.6	2388.9	2467.5	2569.9	2651.0	2702.0	2720.9	2710.2	2674.8	2615.1
19.5°	2283.1	2316.1	2372.4	2452.5	2557.8	2640.8	2693.2	2712.1	2701.0	2665.5	2603.9
20°	2266.1	2298.6	2356.4	2437.9	2544.7	2630.1	2684.5	2702.9	2691.8	2655.4	2592.7
20.5°	2247.7	2281.2	2339.4	2422.4	2531.6	2619.0	2674.8	2693.7	2682.1	2644.7	2580.6
21°	2229.7	2263.2	2322.4	2406.9	2518.5	2608.3	2664.6	2684.0	2672.3	2634.0	2569.0



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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°	2174.9	2208.8	2269.5	2357.4	2476.3	2571.9	2632.1	2652.9	2640.3	2600.0	2531.1
23°	2155.9	2189.9	2251.5	2340.4	2461.2	2559.3	2620.9	2641.8	2628.7	2587.9	2517.5
23.5°	2137.0	2171.5	2233.6	2322.9	2446.2	2546.2	2609.2	2630.1	2617.0	2575.3	2503.9
24°	2117.6	2152.5	2214.7	2305.4	2430.6	2532.6	2596.6	2618.5	2605.4	2562.2	2489.9
24.5°	2097.7	2133.1	2195.2	2287.0	2414.6	2518.5	2584.0	2606.3	2592.3	2549.1	2475.3
25°	2078.3	2113.2	2176.3	2269.0	2398.1	2504.9	2571.4	2593.7	2580.1	2536.0	2460.7
25.5°	2058.4	2093.8	2157.4	2250.6	2381.6	2489.9	2558.3	2581.1	2566.5	2522.4	2445.7
26°	2038.5	2073.9	2138.0	2231.6	2365.1	2474.8	2544.7	2568.0	2553.4	2507.8	2430.6
26.5°	2018.1	2054.0	2117.1	2212.2	2347.6	2459.8	2530.6	2553.9	2539.4	2493.7	2415.1
27°	1997.7	2033.6	2097.7	2193.3	2329.7	2444.2	2516.1	2540.3	2525.8	2478.7	2399.1
27.5°	1976.8	2012.8	2077.3	2173.4	2312.2	2428.2	2502.0	2526.3	2511.2	2464.1	2383.1
28°	1956.0	1991.9	2056.9	2153.5	2293.8	2411.7	2486.9	2511.7	2496.2	2449.1	2366.1
28.5°	1935.1	1971.0	2035.6	2133.1	2275.3	2395.2	2471.4	2496.6	2481.1	2433.1	2349.6
29°	1914.2	1950.6	2014.7	2113.2	2256.9	2378.7	2455.9	2482.1	2465.6	2417.0	2332.6
29.5°	1892.9	1929.3	1993.8	2092.8	2237.5	2360.7	2440.3	2466.1	2450.1	2401.0	2315.1
30°	1871.0	1907.4	1973.0	2072.0	2218.1	2343.8	2423.8	2450.5	2434.5	2384.5	2297.2
30.5°	1849.2	1886.1	1950.6	2050.6	2198.6	2325.3	2406.9	2434.5	2418.5	2367.5	2279.2
31°	1827.3	1864.2	1929.3	2029.7	2178.7	2306.9	2389.9	2418.5	2402.0	2350.6	2261.3
31.5°	1805.5	1842.4	1906.9	2007.9	2158.4	2287.9	2372.9	2401.5	2384.5	2333.1	2242.3
32°	1783.2	1820.6	1885.1	1986.1	2137.5	2270.0	2355.4	2384.5	2368.0	2315.6	2223.9
32.5°	1760.9	1798.2	1862.8	1964.7	2117.1	2250.6	2337.9	2367.1	2351.0	2297.7	2205.0
33°	1738.0	1775.4	1840.9	1942.9	2096.7	2230.7	2319.5	2349.6	2333.1	2279.7	2186.0
33.5°	1715.7	1753.1	1818.1	1920.0	2075.4	2211.3	2301.0	2332.1	2315.1	2261.3	2167.1
34°	1692.9	1730.8	1795.8	1898.2	2054.0	2191.4	2282.1	2314.2	2296.7	2242.3	2146.7
34.5°	1669.6	1708.0	1772.5	1875.4	2031.7	2170.5	2263.2	2295.2	2278.2	2223.4	2126.8
35°	1646.3	1684.7	1750.2	1852.6	2010.3	2150.1	2244.3	2276.8	2259.8	2204.5	2106.9
35.5°	1623.5	1661.8	1726.4	1830.3	1988.5	2129.7	2224.4	2257.9	2241.4	2185.5	2087.0
36°	1600.2	1638.5	1704.1	1807.4	1966.2	2108.4	2205.0	2238.9	2222.4	2165.6	2066.1
36.5°	1576.9	1615.2	1680.8	1784.2	1943.8	2087.0	2185.1	2219.5	2202.5	2146.7	2045.8
37°	1553.1	1591.5	1656.5	1760.9	1921.0	2065.7	2164.7	2199.6	2183.1	2126.3	2024.9
37.5°	1529.3	1568.2	1633.7	1737.6	1898.2	2043.8	2143.8	2179.7	2163.2	2106.4	2003.5
38°	1505.1	1544.4	1610.4	1714.3	1875.9	2022.0	2123.4	2159.8	2143.3	2085.6	1982.2
38.5°	1481.8	1521.1	1586.6	1691.0	1852.6	1999.6	2102.1	2139.4	2123.4	2065.7	1961.8
39°	1458.5	1496.8	1563.3	1667.2	1829.8	1977.3	2081.2	2119.0	2102.5	2044.8	1939.9
39.5°	1433.7	1473.5	1539.5	1643.9	1807.0	1955.0	2059.8	2098.2	2082.6	2023.9	1918.6
40°	1409.0	1449.3	1516.2	1620.1	1783.2	1932.2	2038.0	2077.3	2061.8	2003.0	1896.3
40.5°	1385.2	1425.0	1491.5	1596.3	1758.9	1909.9	2016.1	2055.9	2040.4	1982.2	1874.9
41°	1360.9	1400.7	1468.2	1572.5	1735.6	1886.1	1993.8	2034.6	2019.5	1960.3	1852.6
41.5°	1336.2	1376.9	1443.9	1548.3	1712.8	1863.3	1972.0	2013.2	1998.7	1939.5	1830.7
42°	1311.4	1352.2	1420.1	1525.0	1688.1	1840.0	1949.7	1991.4	1976.8	1917.6	1808.4
42.5°	1287.2	1328.4	1396.8	1501.2	1665.2	1817.2	1927.3	1969.6	1955.5	1896.3	1786.1
43°	1262.9	1304.1	1372.6	1477.4	1641.0	1793.9	1904.5	1947.7	1933.6	1873.9	1763.8
43.5°	1238.1	1279.9	1348.8	1453.6	1617.7	1770.6	1882.2	1925.9	1912.3	1852.1	1741.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1163.4	1206.6	1277.0	1382.3	1545.4	1699.7	1812.8	1858.4	1845.8	1786.1	1674.0
45.5°	1138.6	1182.8	1254.1	1359.0	1523.0	1675.9	1790.0	1836.1	1823.9	1763.8	1651.7
46°	1113.9	1158.0	1229.9	1335.2	1498.3	1651.7	1766.7	1813.8	1801.6	1742.4	1629.8
46.5°	1088.2	1134.3	1206.6	1311.9	1474.5	1628.8	1744.4	1791.9	1780.8	1721.1	1608.5
47°	1062.9	1109.5	1182.8	1288.6	1450.7	1605.5	1722.0	1770.1	1759.9	1700.2	1587.1
47.5°	1038.7	1085.2	1159.5	1265.3	1428.4	1582.7	1700.2	1749.2	1738.5	1678.8	1565.3
48°	1013.9	1061.5	1135.7	1242.0	1404.6	1560.4	1677.9	1727.9	1717.7	1658.0	1544.4
48.5°	989.1	1037.2	1112.4	1219.7	1382.3	1538.1	1656.5	1706.5	1696.3	1636.1	1522.1
49°	963.9	1013.4	1089.1	1196.9	1359.0	1514.8	1633.7	1684.2	1674.0	1612.8	1499.2
49.5°	939.6	989.6	1066.3	1174.1	1335.7	1492.0	1610.9	1661.8	1650.2	1588.1	1474.0
50°	914.4	965.4	1043.5	1150.3	1312.4	1468.2	1586.1	1635.6	1622.5	1560.9	1448.8
50.5°	889.6	941.6	1019.7	1128.0	1289.1	1442.5	1558.9	1607.5	1593.4	1530.3	1420.1
51°	863.9	918.3	996.9	1104.2	1264.3	1415.3	1530.8	1576.4	1558.9	1498.3	1391.5
51.5°	840.1	894.5	974.1	1080.4	1238.6	1388.6	1501.2	1543.9	1525.9	1465.3	1360.0
52°	815.4	870.7	950.8	1056.6	1213.4	1359.5	1469.2	1509.0	1491.5	1430.8	1327.4
52.5°	791.1	847.4	928.0	1031.9	1186.2	1329.9	1436.2	1473.0	1454.6	1394.9	1293.9
53°	766.9	824.1	904.7	1007.6	1158.5	1299.8	1401.7	1436.6	1419.2	1359.0	1260.9
53.5°	742.6	800.8	880.9	982.8	1131.8	1268.7	1366.7	1400.2	1380.8	1322.1	1226.5
54°	717.8	777.5	857.6	957.1	1103.7	1236.7	1332.3	1363.8	1342.5	1285.2	1192.5
54.5°	694.1	754.2	834.3	932.8	1077.0	1205.6	1296.4	1326.0	1304.6	1248.3	1158.0
55°	670.3	731.4	811.0	908.6	1048.4	1173.6	1260.9	1289.1	1267.3	1211.4	1124.1
55.5°	646.0	708.6	786.8	883.3	1020.7	1141.5	1224.1	1251.7	1228.4	1173.6	1088.6
56°	623.2	685.3	763.5	858.1	992.1	1108.1	1188.1	1213.9	1189.6	1135.2	1054.2
56.5°	599.4	662.0	740.2	832.9	963.9	1075.1	1151.3	1176.0	1152.2	1098.3	1019.2
57°	576.1	639.2	716.4	807.6	934.8	1042.0	1115.8	1137.7	1113.9	1061.9	985.3
57.5°	552.8	616.4	692.6	782.4	907.1	1009.5	1078.9	1100.3	1076.5	1024.1	950.3
58°	530.5	594.1	669.8	757.1	878.0	976.0	1044.5	1062.9	1040.1	987.2	916.3
58.5°	508.2	571.3	646.0	732.4	849.4	943.5	1008.1	1026.0	1002.7	951.3	882.9
59°	485.4	549.4	623.2	706.7	820.2	910.5	972.2	989.1	965.8	916.3	848.9
59.5°	463.5	527.1	599.9	681.9	792.6	878.0	937.2	952.3	929.4	880.4	815.4
60°	441.7	505.3	577.6	657.7	763.5	846.0	902.3	916.3	894.0	846.0	783.8
60.5°	419.8	482.9	554.8	632.9	735.3	813.4	866.8	880.9	859.1	812.0	751.3
61°	398.5	462.1	531.9	608.1	706.7	782.4	832.9	846.0	824.1	779.5	720.3
61.5°	378.1	440.7	510.1	583.9	679.5	751.8	799.4	811.0	790.2	747.0	690.2
62°	357.2	419.8	488.7	560.1	651.3	721.7	767.3	777.5	756.7	715.4	660.6
62.5°	336.8	399.0	466.4	536.3	624.6	691.1	732.9	743.6	723.7	684.3	631.0
63°	317.4	379.1	445.1	512.5	597.5	660.6	700.8	710.6	692.1	653.3	602.3
63.5°	298.5	358.7	423.7	489.2	571.3	632.4	669.3	678.5	659.1	624.2	575.1
64°	279.6	339.3	402.4	465.9	545.0	602.8	639.7	647.5	626.6	597.0	548.9
64.5°	262.1	320.3	381.5	443.1	519.8	574.7	609.1	616.4	595.5	568.8	523.2
65°	245.1	301.9	361.1	420.8	495.1	547.5	579.5	587.3	565.4	542.1	498.0
65.5°	228.1	283.0	340.7	399.4	471.3	520.8	551.4	558.2	534.4	515.4	474.2
66°	212.6	265.5	320.3	377.1	447.5	494.1	524.2	529.5	505.3	490.2	450.9



TEST NUMBER: P776659

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	171.8	214.0	263.1	315.5	380.5	422.7	447.0	450.9	427.1	420.8	388.3
68°	163.1	198.0	245.1	296.5	358.2	400.4	424.7	427.6	403.8	398.5	367.4
68.5°	153.9	183.0	227.6	277.1	338.3	378.1	402.4	404.8	380.0	376.1	346.5
69°	145.1	170.8	211.1	259.2	318.4	355.8	380.0	382.0	356.2	354.3	328.1
69.5°	135.9	159.2	195.1	240.7	299.0	334.4	357.2	359.2	335.4	334.4	309.7
70°	131.5	147.5	180.6	224.7	280.5	315.0	337.3	339.7	316.0	315.5	292.2
70.5°	126.7	135.4	168.9	208.7	263.1	296.5	318.9	320.8	297.5	298.0	276.2
71°	121.3	123.8	157.3	193.2	246.6	278.6	300.4	302.4	280.0	280.5	260.1
71.5°	116.0	118.4	145.1	179.1	230.1	261.1	282.5	284.4	263.1	264.0	244.6
72°	110.2	113.6	133.5	167.4	214.5	245.6	266.0	268.4	247.0	248.0	230.1
72.5°	104.8	108.7	121.8	155.8	199.5	229.6	250.4	252.4	232.0	233.5	216.0
73°	99.5	103.4	112.6	144.1	185.9	215.0	235.4	237.8	217.4	218.4	202.4
73.5°	94.2	98.5	104.4	132.0	172.8	200.9	220.3	223.3	204.3	205.3	189.8
74°	89.3	93.7	97.1	120.4	160.2	187.8	207.2	209.7	190.7	192.2	177.6
74.5°	84.0	88.8	90.8	111.1	148.0	174.7	194.1	196.6	178.1	179.6	166.0
75°	79.6	84.0	84.9	102.4	136.9	162.6	182.0	183.9	166.0	167.9	154.3
75.5°	74.7	79.6	80.1	94.2	126.7	151.4	169.9	172.3	154.3	156.3	143.7
76°	70.4	74.7	75.2	86.9	116.5	140.3	158.2	160.7	142.7	145.1	133.5
76.5°	66.0	70.4	71.3	79.6	107.3	130.1	147.5	149.5	132.0	134.9	123.8
77°	61.6	66.0	67.0	73.3	98.5	120.4	136.9	139.3	121.3	124.7	114.5
77.5°	57.8	62.1	63.1	67.5	90.3	111.1	127.2	129.1	111.6	115.0	105.8
78°	53.4	57.8	59.2	62.1	82.5	102.4	117.5	119.4	101.9	105.8	97.1
78.5°	50.0	53.9	55.3	56.8	75.2	93.7	108.2	110.2	92.2	97.6	88.8
79°	46.1	50.0	51.9	51.9	68.4	85.9	99.5	101.0	83.5	88.8	81.1
79.5°	42.7	46.1	48.5	47.6	62.1	78.1	91.2	92.7	75.2	81.1	73.8
80°	39.3	42.7	45.1	43.7	56.3	70.9	83.0	84.5	67.0	73.3	66.5
80.5°	35.9	39.3	41.7	39.8	51.0	64.1	75.2	76.7	58.7	66.0	59.7
81°	32.5	35.9	38.3	36.4	46.1	57.8	67.9	69.4	51.9	59.2	53.4
81.5°	29.6	33.0	35.4	33.5	41.7	51.9	60.7	62.1	45.6	52.9	48.0
82°	26.7	29.6	32.5	30.6	37.4	46.6	53.9	55.8	38.8	47.6	42.7
82.5°	23.8	26.7	29.6	27.7	33.0	41.7	48.5	50.0	32.0	42.2	37.4
83°	20.9	23.8	26.7	25.2	28.6	36.9	43.2	44.7	25.7	36.9	32.0
83.5°	18.0	20.9	23.8	22.8	25.2	32.0	37.9	39.3	20.4	31.1	26.7
84°	15.5	18.0	21.4	20.4	21.8	27.2	32.0	33.5	15.0	25.7	22.8
84.5°	13.1	15.5	18.9	18.0	18.9	23.3	26.7	28.2	10.7	21.4	18.9
85°	10.7	13.1	16.5	16.0	16.5	19.4	22.3	22.8	7.3	17.5	15.5
85.5°	8.3	10.7	14.6	14.1	14.1	16.5	18.4	18.4	4.9	13.6	12.1
86°	6.3	8.7	12.1	12.1	11.6	13.1	15.0	14.1	3.4	10.2	9.2
86.5°	5.3	6.8	9.7	9.7	9.7	10.7	11.6	10.7	2.9	7.3	6.8
87°	3.9	5.3	7.8	7.8	7.8	8.3	8.7	7.8	1.9	4.9	4.9
87.5°	2.9	3.9	5.8	5.8	6.3	6.3	6.3	5.3	1.5	2.9	2.9
88°	1.9	2.9	3.9	4.4	4.9	4.4	3.9	2.9	1.0	1.5	1.5
88.5°	1.0	1.5	2.4	2.4	2.9	2.4	1.9	1.5	0.5	0.5	0.5



TEST NUMBER: P776659

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

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: P776659

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2763.1	2763.1	2763.1	2763.1	2763.1	2763.1
0.5°	2763.6	2762.6	2758.7	2756.3	2755.3	2756.3
1°	2764.1	2760.2	2753.9	2750.5	2748.5	2749.5
1.5°	2763.6	2757.3	2749.5	2743.7	2741.3	2742.7
2°	2763.6	2754.4	2744.2	2736.9	2733.5	2735.4
2.5°	2762.6	2751.0	2738.4	2730.1	2725.7	2727.2
3°	2761.6	2747.1	2732.5	2722.3	2717.5	2719.4
3.5°	2760.2	2742.7	2726.2	2714.6	2709.2	2711.2
4°	2758.3	2738.4	2719.9	2706.3	2700.5	2702.0
4.5°	2755.8	2733.5	2713.1	2697.6	2690.8	2693.2
5°	2753.4	2728.6	2705.8	2688.8	2681.1	2683.5
5.5°	2750.5	2722.8	2698.1	2679.6	2671.4	2673.8
6°	2747.1	2717.0	2689.8	2669.9	2661.2	2663.6
6.5°	2743.2	2710.7	2681.6	2660.2	2650.5	2653.4
7°	2739.3	2704.4	2673.3	2650.0	2639.3	2642.7
7.5°	2734.5	2697.1	2664.1	2639.3	2628.2	2631.6
8°	2730.1	2689.8	2654.9	2628.7	2617.0	2619.9
8.5°	2724.8	2682.5	2644.7	2617.5	2604.9	2608.3
9°	2719.4	2674.3	2635.0	2606.3	2592.7	2596.6
9.5°	2713.6	2665.5	2624.3	2594.2	2580.1	2584.0
10°	2707.3	2657.3	2613.6	2582.1	2567.5	2571.4
10.5°	2700.5	2648.1	2602.5	2569.9	2554.9	2558.8
11°	2693.7	2638.9	2591.3	2557.3	2541.8	2545.7
11.5°	2686.4	2628.7	2579.6	2544.2	2528.2	2532.1
12°	2679.1	2618.5	2567.5	2531.1	2514.1	2518.5
12.5°	2670.9	2608.3	2554.9	2517.0	2500.0	2504.4
13°	2662.6	2597.6	2542.3	2503.4	2486.0	2490.3
13.5°	2653.9	2586.0	2529.7	2489.4	2470.9	2475.8
14°	2644.7	2574.8	2516.1	2475.3	2456.4	2461.2
14.5°	2635.5	2562.7	2502.5	2460.7	2441.3	2446.2
15°	2625.3	2550.5	2488.9	2445.7	2425.8	2431.1
15.5°	2615.1	2538.4	2474.3	2430.2	2410.3	2415.6
16°	2604.9	2525.3	2459.8	2414.6	2394.7	2400.1
16.5°	2594.2	2512.2	2444.7	2399.1	2378.2	2384.0
17°	2583.0	2498.6	2429.7	2383.1	2362.2	2367.5
17.5°	2571.4	2485.0	2414.1	2366.6	2345.2	2351.5
18°	2559.3	2470.4	2398.6	2350.1	2328.7	2334.5
18.5°	2547.1	2455.9	2382.1	2333.1	2311.7	2318.0
19°	2534.5	2440.8	2366.1	2316.1	2294.3	2300.6
19.5°	2521.4	2425.8	2349.6	2298.6	2276.8	2283.1
20°	2508.3	2410.3	2332.6	2281.6	2259.3	2266.1
20.5°	2494.7	2394.7	2315.1	2263.7	2241.4	2247.7
21°	2480.6	2378.2	2297.7	2245.2	2222.9	2229.7

TEST NUMBER: P776659

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2436.9	2328.2	2243.3	2189.9	2167.6	2174.9
23°	2421.4	2310.3	2224.8	2171.0	2148.6	2155.9
23.5°	2406.4	2293.3	2206.4	2152.0	2129.7	2137.0
24°	2390.4	2274.8	2187.0	2132.6	2109.8	2117.6
24.5°	2373.9	2256.9	2168.1	2113.2	2089.9	2097.7
25°	2357.4	2238.0	2148.2	2093.3	2070.5	2078.3
25.5°	2340.4	2219.5	2128.8	2072.9	2050.6	2058.4
26°	2323.4	2201.1	2108.4	2052.6	2030.2	2038.5
26.5°	2305.4	2181.2	2089.0	2032.7	2009.8	2018.1
27°	2287.9	2161.3	2068.1	2012.3	1989.5	1997.7
27.5°	2270.5	2141.9	2047.7	1991.4	1968.6	1976.8
28°	2252.0	2122.0	2026.3	1970.0	1947.2	1956.0
28.5°	2234.1	2102.1	2006.0	1949.2	1926.8	1935.1
29°	2214.7	2081.2	1984.6	1927.8	1905.0	1914.2
29.5°	2195.7	2060.8	1963.2	1906.5	1883.6	1892.9
30°	2176.3	2040.4	1941.9	1884.6	1861.8	1871.0
30.5°	2157.4	2019.1	1920.0	1862.8	1840.5	1849.2
31°	2137.5	1997.7	1897.7	1840.9	1818.1	1827.3
31.5°	2117.1	1976.4	1876.4	1818.6	1796.3	1805.5
32°	2096.7	1954.5	1854.0	1796.3	1773.5	1783.2
32.5°	2076.8	1933.2	1831.7	1774.0	1751.6	1760.9
33°	2055.9	1911.8	1809.4	1751.6	1728.8	1738.0
33.5°	2035.1	1889.5	1787.1	1728.8	1706.5	1715.7
34°	2014.2	1867.1	1764.3	1706.0	1683.7	1692.9
34.5°	1992.9	1844.8	1741.0	1683.2	1660.9	1669.6
35°	1971.5	1822.5	1718.1	1659.9	1637.1	1646.3
35.5°	1950.1	1799.7	1695.8	1636.6	1614.8	1623.5
36°	1928.8	1777.8	1672.5	1613.8	1591.5	1600.2
36.5°	1906.9	1754.5	1649.7	1590.5	1567.7	1576.9
37°	1884.6	1731.7	1625.9	1566.7	1544.4	1553.1
37.5°	1862.8	1709.4	1603.1	1543.4	1521.1	1529.3
38°	1840.5	1686.1	1579.3	1519.6	1497.3	1505.1
38.5°	1818.1	1662.8	1556.5	1496.3	1473.5	1481.8
39°	1795.8	1640.5	1533.2	1473.0	1449.7	1458.5
39.5°	1773.5	1617.2	1509.9	1449.3	1426.0	1433.7
40°	1750.7	1593.9	1486.1	1425.0	1401.7	1409.0
40.5°	1728.3	1571.1	1462.8	1401.7	1377.9	1385.2
41°	1705.5	1547.3	1439.6	1377.9	1353.2	1360.9
41.5°	1682.7	1524.5	1415.8	1354.1	1328.9	1336.2
42°	1659.9	1501.7	1392.5	1330.3	1305.1	1311.4
42.5°	1637.1	1478.9	1369.7	1306.6	1280.8	1287.2
43°	1614.8	1456.1	1346.4	1282.8	1256.6	1262.9
43.5°	1591.5	1432.3	1323.6	1259.0	1232.3	1238.1

TEST NUMBER: P776659

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1523.5	1363.8	1253.7	1188.1	1159.5	1163.4
45.5°	1500.7	1341.0	1230.9	1164.4	1134.8	1138.6
46°	1478.4	1319.2	1208.5	1141.5	1110.5	1113.9
46.5°	1456.5	1297.3	1186.2	1117.8	1086.2	1088.2
47°	1434.7	1275.5	1163.4	1094.5	1061.9	1062.9
47.5°	1412.9	1253.2	1141.1	1071.2	1038.2	1038.7
48°	1392.0	1232.8	1119.2	1047.9	1013.9	1013.9
48.5°	1370.6	1211.0	1096.9	1025.1	989.1	989.1
49°	1348.3	1189.1	1075.5	1002.7	965.4	963.9
49.5°	1324.5	1167.3	1054.2	979.9	941.6	939.6
50°	1300.3	1144.5	1032.3	957.1	917.3	914.4
50.5°	1274.5	1120.7	1009.5	934.8	894.0	889.6
51°	1248.3	1096.9	987.7	912.5	869.7	863.9
51.5°	1221.1	1072.1	965.4	890.1	846.5	840.1
52°	1193.5	1047.4	942.6	868.3	823.2	815.4
52.5°	1164.4	1021.7	919.3	845.5	799.4	791.1
53°	1135.7	995.9	896.0	823.2	776.6	766.9
53.5°	1105.1	969.7	872.7	800.3	753.3	742.6
54°	1074.6	943.5	848.9	778.5	730.5	717.8
54.5°	1044.0	917.3	825.1	755.7	707.6	694.1
55°	1013.9	890.6	800.8	732.9	685.3	670.3
55.5°	982.4	863.0	777.0	710.1	662.0	646.0
56°	951.3	836.3	752.8	687.7	639.7	623.2
56.5°	920.7	809.6	729.0	664.9	617.4	599.4
57°	890.1	782.4	704.2	642.6	595.0	576.1
57.5°	859.1	755.2	680.0	619.3	572.7	552.8
58°	829.0	728.5	656.2	597.5	551.4	530.5
58.5°	799.4	701.8	632.4	574.7	529.0	508.2
59°	768.8	675.1	608.6	552.3	507.2	485.4
59.5°	739.7	648.4	584.8	530.5	485.8	463.5
60°	710.6	622.7	561.6	508.6	464.5	441.7
60.5°	681.9	597.0	538.3	486.8	443.1	419.8
61°	653.3	571.7	515.4	465.5	422.3	398.5
61.5°	625.6	547.5	492.6	444.6	401.9	378.1
62°	599.4	523.2	470.3	423.7	382.0	357.2
62.5°	572.2	499.4	448.5	402.8	362.1	336.8
63°	546.0	475.6	427.1	382.5	342.7	317.4
63.5°	520.3	453.3	405.8	362.6	323.2	298.5
64°	495.5	431.0	384.9	342.7	304.8	279.6
64.5°	471.8	409.6	364.5	323.2	286.4	262.1
65°	448.5	388.3	344.6	304.3	269.4	245.1
65.5°	426.6	367.9	325.2	285.4	251.9	228.1
66°	405.3	347.5	305.8	267.4	235.4	212.6



TEST NUMBER: P776659

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	343.1	291.7	252.4	216.0	188.8	171.8
68°	324.2	274.2	235.4	200.9	175.2	163.1
68.5°	306.3	257.7	219.9	185.9	164.5	153.9
69°	288.8	241.7	203.8	171.3	154.3	145.1
69.5°	272.3	226.7	189.3	160.2	144.1	135.9
70°	256.3	211.6	176.2	149.0	133.5	131.5
70.5°	241.2	197.5	165.0	137.8	123.3	126.7
71°	226.2	184.4	153.9	126.7	118.4	121.3
71.5°	212.6	171.3	142.7	117.9	114.1	116.0
72°	199.0	160.7	131.5	110.2	109.2	110.2
72.5°	186.4	150.0	120.4	102.9	103.9	104.8
73°	173.8	139.3	111.1	96.1	98.5	99.5
73.5°	162.1	128.1	102.9	90.3	93.7	94.2
74°	150.9	118.9	95.1	85.4	88.8	89.3
74.5°	140.8	109.7	87.8	81.1	84.0	84.0
75°	130.6	101.4	81.5	77.2	79.6	79.6
75.5°	120.9	93.2	75.2	72.8	74.7	74.7
76°	111.6	85.9	69.9	68.9	70.4	70.4
76.5°	103.4	78.6	64.6	65.0	66.0	66.0
77°	95.1	71.8	59.7	61.2	62.1	61.6
77.5°	87.4	66.0	55.3	57.3	58.2	57.8
78°	79.6	59.7	51.0	53.9	54.4	53.4
78.5°	72.8	54.4	47.1	50.5	50.5	50.0
79°	66.0	49.5	43.7	47.1	46.6	46.1
79.5°	60.2	44.7	40.3	43.7	43.2	42.7
80°	54.4	40.3	37.4	40.3	39.8	39.3
80.5°	48.5	36.4	34.9	37.4	36.4	35.9
81°	44.2	32.5	32.0	34.5	33.0	32.5
81.5°	39.8	29.1	29.6	31.5	30.1	29.6
82°	34.9	26.2	26.7	28.6	26.7	26.7
82.5°	30.6	23.3	24.3	25.7	23.8	23.8
83°	25.7	20.4	21.8	23.3	20.9	20.9
83.5°	22.3	18.0	19.4	20.9	18.0	18.0
84°	18.9	15.5	17.5	18.4	16.0	15.5
84.5°	16.0	13.6	15.0	16.0	13.6	13.1
85°	13.1	11.6	13.1	13.6	11.2	10.7
85.5°	10.7	9.2	10.7	11.6	8.7	8.3
86°	8.3	7.8	8.7	9.2	7.3	6.3
86.5°	6.3	5.8	6.8	7.3	5.8	5.3
87°	4.4	4.4	4.9	5.3	4.4	3.9
87.5°	2.9	2.4	2.9	3.4	2.9	2.9
88°	1.9	1.0	1.5	1.9	1.9	1.9
88.5°	0.5	0.5	0.5	0.5	1.0	1.0



TEST NUMBER: P776659

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

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°	2211.7	2245.2	2304.9	2390.4	2504.4	2596.1	2653.9	2674.3	2662.2	2623.3	2556.3
22°	2193.3	2227.3	2287.5	2373.9	2490.8	2584.0	2643.7	2663.6	2651.0	2611.2	2543.7



44°	1212.4	1255.1	1325.0	1429.8	1593.4	1746.3	1858.9	1903.1	1890.0	1830.3	1719.1
44.5°	1188.1	1230.9	1301.2	1406.5	1569.6	1723.0	1836.1	1880.7	1868.1	1808.4	1696.8



66.5°	197.5	248.0	300.9	356.2	425.2	468.8	497.5	502.3	477.1	465.0	430.0
67°	183.5	231.0	282.0	335.4	402.8	445.1	472.2	476.1	450.9	442.6	409.2



89°	0.5	0.5	1.0	1.0	1.9	1.5	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°	2466.6	2361.7	2280.2	2226.8	2204.5	2211.7
22°	2451.5	2345.2	2261.7	2208.8	2186.0	2193.3



44°	1568.7	1409.5	1299.8	1235.2	1207.6	1212.4
44.5°	1545.4	1386.6	1277.0	1211.4	1183.8	1188.1



66.5°	383.4	328.6	287.3	249.0	219.4	197.5
67°	362.1	309.2	269.4	233.0	203.8	183.5

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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)