

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: P776668

Luminaire Tested: HCDJBS4050CSD-HCD61TRMW-5000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776668
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B037)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD61TRMW-5000lm-4000K
Description: 6 INCH ROUND SHALLOW-WIDE MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

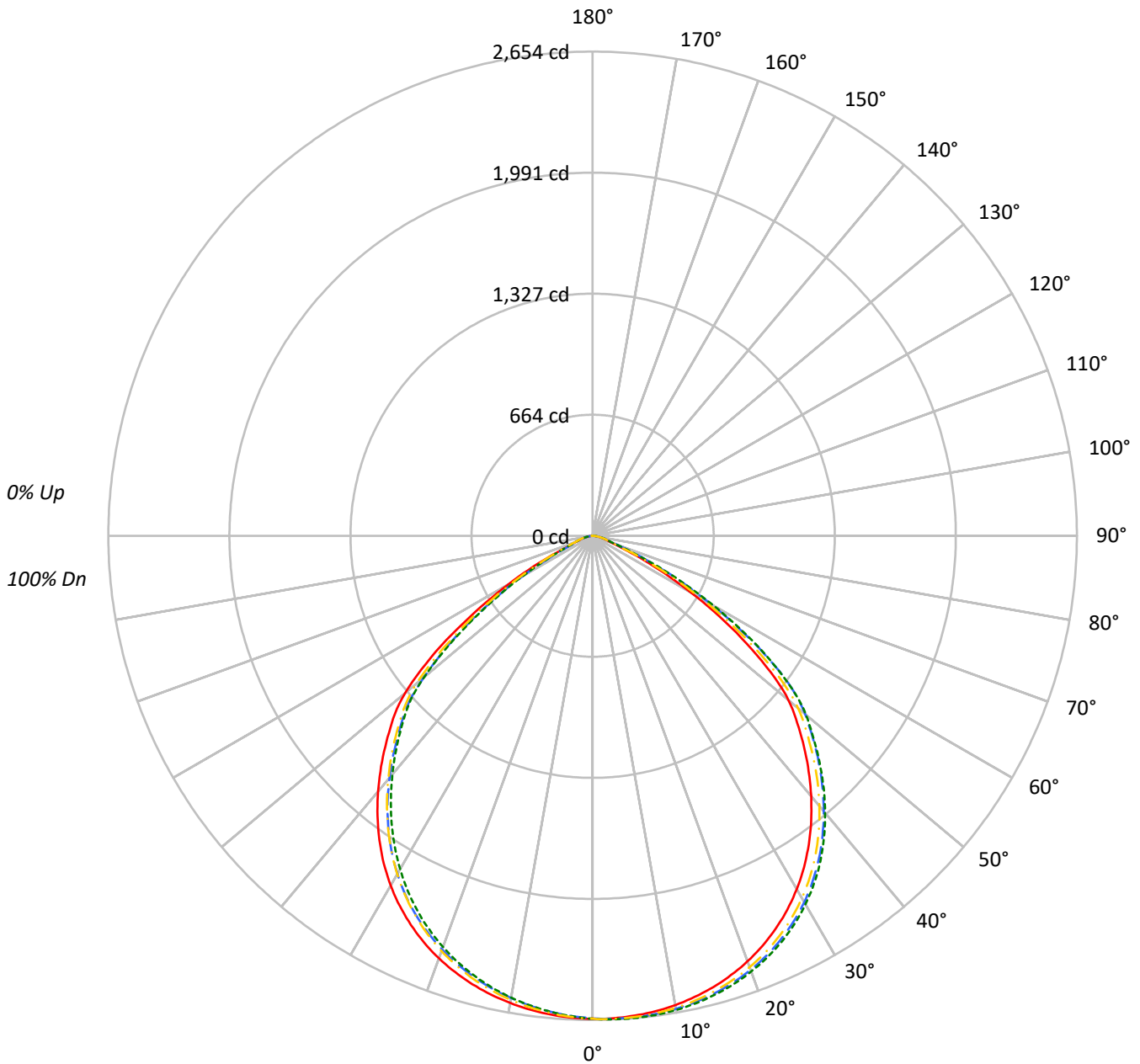
Lumens per Lamp: N/A
Luminaire Lumens: 5841.0 lumens
Efficiency: N/A
Efficacy: 121.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.24 / 1.32
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P776668
CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89			89
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77			77
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67			67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59			59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52			52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46			46
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41			41
8	65	53	45	40	64	52	45	39	51	44	39	50	44	39	49	43	39	37			37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34			34
10	57	45	38	33	56	44	37	33	44	37	32	43	37	32	42	36	32	30			30

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	145098	145098	145098	145098
5°	145311	146048	144992	144177
10°	145416	146936	144781	143100
15°	145302	147719	144433	141772
20°	144813	148296	143752	139930
25°	143694	148412	142448	137300
30°	141598	147649	140116	133578
35°	138210	145605	136356	128512
40°	133350	141837	130881	122186
45°	127036	136378	123959	114795
50°	119510	130205	114290	102871
55°	98558	113411	89775	76843
60°	68383	83425	58625	48395
65°	37034	49266	27980	24750
70°	17631	20933	15403	15339
75°	14191	16013	11755	12348
80°	10734	13133	7987	9376
85°	6604	10504	3334	5409

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 140201 cd/sqm



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL4050CSD-HCD61TRMW-5000lm-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.7	4.3
10°-20°	719.7	12.3
20°-30°	1087.6	18.6
30°-40°	1279.1	21.9
40°-50°	1245.6	21.3
50°-60°	878.7	15.0
60°-70°	294.4	5.0
70°-80°	71.1	1.2
80°-90°	14.1	0.2
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°	2058.0	35.2
0°-40°	3337.1	57.1
0°-60°	5461.4	93.5
0°-90°	5841.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5841.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2647	2647	2647	2647	2647	
5°	2641	2654	2635	2620	2641	251
15°	2560	2603	2545	2498	2560	722
25°	2376	2454	2355	2270	2376	1094
35°	2065	2176	2038	1920	2065	1289
45°	1639	1759	1599	1481	1639	1263
55°	1031	1187	939	804	1031	914
65°	286	380	216	191	286	307
75°	67	76	56	58	67	72
85°	10	17	5	9	10	14
90°	0	0	0	0	0	



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2646.8	2646.8	2646.8	2646.8	2646.8	2646.8	2646.8	2646.8	2646.8	2646.8	2646.8
0.5°	2648.2	2647.7	2646.3	2643.9	2649.2	2649.6	2649.2	2649.2	2647.7	2645.8	2643.4
1°	2648.2	2648.2	2647.7	2645.8	2650.6	2650.6	2650.1	2649.2	2647.3	2644.9	2641.5
1.5°	2648.2	2648.7	2648.2	2647.3	2651.6	2651.6	2650.6	2648.7	2645.8	2643.0	2639.6
2°	2647.7	2648.7	2649.2	2648.7	2652.5	2652.0	2650.6	2648.2	2644.9	2641.5	2637.2
2.5°	2646.8	2648.7	2649.6	2649.6	2653.5	2652.0	2650.6	2647.7	2643.9	2639.6	2635.3
3°	2646.3	2648.7	2650.1	2650.6	2653.5	2652.5	2650.6	2646.8	2642.0	2637.7	2632.4
3.5°	2644.9	2648.7	2650.6	2651.6	2654.0	2652.5	2650.1	2645.8	2640.6	2635.3	2629.6
4°	2643.9	2647.7	2650.1	2652.0	2654.0	2652.5	2649.6	2644.9	2639.1	2632.9	2626.7
4.5°	2642.0	2646.8	2650.1	2652.5	2654.4	2652.0	2649.2	2643.0	2636.7	2630.0	2622.9
5°	2640.6	2645.8	2649.6	2652.5	2654.0	2651.6	2647.7	2641.5	2634.8	2627.2	2620.0
5.5°	2638.6	2644.9	2648.7	2652.0	2653.5	2650.6	2646.8	2639.6	2632.4	2624.3	2616.2
6°	2636.7	2643.0	2648.2	2652.0	2652.5	2649.6	2645.8	2637.7	2629.6	2621.0	2612.3
6.5°	2634.3	2641.5	2646.8	2651.6	2651.6	2648.7	2643.9	2635.3	2626.7	2617.1	2608.0
7°	2632.0	2639.6	2645.3	2650.6	2650.6	2646.8	2642.5	2632.9	2623.8	2613.8	2603.7
7.5°	2629.1	2637.7	2643.9	2649.6	2649.2	2645.3	2640.6	2630.0	2620.5	2609.9	2598.9
8°	2626.2	2635.3	2642.0	2648.7	2647.7	2643.4	2638.2	2627.2	2617.1	2605.6	2594.6
8.5°	2622.9	2632.9	2640.6	2647.7	2645.8	2641.5	2635.3	2624.3	2613.3	2601.3	2589.4
9°	2619.5	2630.0	2638.2	2645.8	2643.9	2639.1	2632.9	2621.0	2609.5	2596.6	2584.6
9.5°	2615.7	2627.2	2635.8	2643.9	2642.0	2636.7	2630.5	2617.6	2605.2	2591.8	2578.9
10°	2612.3	2623.8	2633.4	2642.0	2639.6	2633.9	2627.2	2613.3	2600.9	2587.0	2573.6
10.5°	2608.0	2620.5	2630.5	2640.1	2636.7	2630.5	2623.8	2609.5	2596.1	2581.7	2567.4
11°	2603.7	2616.6	2627.2	2637.2	2633.9	2627.6	2620.5	2605.2	2591.3	2576.5	2561.6
11.5°	2598.9	2612.8	2624.3	2634.8	2630.5	2623.8	2616.6	2600.9	2586.5	2570.7	2555.4
12°	2594.2	2608.5	2620.5	2632.0	2627.2	2620.5	2612.8	2596.1	2581.3	2565.0	2549.2
12.5°	2588.9	2604.2	2616.6	2628.6	2623.8	2616.6	2608.5	2591.3	2575.5	2558.8	2542.5
13°	2583.6	2599.4	2612.8	2625.3	2620.0	2612.8	2604.2	2586.0	2569.8	2552.6	2535.3
13.5°	2577.9	2595.1	2608.5	2621.9	2616.2	2608.0	2599.4	2580.8	2564.0	2545.9	2528.2
14°	2572.2	2589.9	2604.2	2618.1	2611.9	2603.7	2594.6	2575.0	2557.8	2539.2	2521.0
14.5°	2566.4	2584.6	2599.4	2614.3	2607.1	2598.9	2589.4	2569.3	2551.1	2532.0	2512.9
15°	2560.2	2578.9	2594.6	2609.5	2602.8	2594.2	2584.1	2563.1	2544.9	2525.3	2505.2
15.5°	2553.5	2573.1	2589.4	2605.2	2598.0	2588.4	2578.4	2556.9	2537.7	2517.6	2497.1
16°	2546.8	2566.9	2584.1	2600.4	2592.7	2583.2	2572.2	2550.2	2531.0	2510.0	2488.9
16.5°	2539.6	2560.7	2577.9	2596.1	2587.0	2577.4	2566.4	2543.5	2523.4	2501.9	2480.3
17°	2532.0	2554.0	2572.6	2590.3	2581.7	2571.2	2560.2	2536.3	2515.7	2493.7	2471.2
17.5°	2524.3	2547.3	2566.4	2585.1	2575.5	2565.0	2553.5	2528.6	2507.6	2485.1	2462.2
18°	2516.7	2540.1	2560.2	2579.3	2569.3	2558.8	2546.3	2521.0	2499.5	2476.5	2453.1
18.5°	2508.6	2532.9	2553.5	2573.1	2562.6	2551.6	2539.2	2513.3	2491.3	2467.4	2443.0
19°	2499.9	2525.3	2546.3	2566.9	2556.4	2544.9	2532.0	2505.2	2482.3	2458.3	2433.5
19.5°	2491.3	2517.2	2539.2	2560.7	2549.2	2537.3	2524.3	2496.6	2473.2	2448.8	2423.4
20°	2482.3	2509.0	2531.5	2554.0	2542.0	2529.6	2516.7	2488.0	2464.1	2438.7	2412.9
20.5°	2473.2	2500.9	2524.3	2546.8	2534.4	2521.5	2508.1	2478.9	2454.5	2428.7	2401.9
21°	2463.6	2491.8	2516.2	2539.6	2526.7	2513.3	2499.5	2469.3	2444.9	2418.6	2391.4

TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2432.5	2464.1	2490.4	2516.7	2501.4	2487.0	2472.2	2440.2	2413.4	2385.6	2356.9
23°	2422.0	2454.5	2481.3	2508.1	2492.3	2477.9	2462.6	2429.6	2401.9	2374.2	2344.0
23.5°	2411.0	2444.0	2471.7	2499.5	2483.2	2468.4	2452.6	2418.6	2390.9	2362.2	2332.1
24°	2399.5	2433.5	2461.7	2490.9	2473.6	2458.3	2442.1	2407.6	2378.9	2350.2	2319.2
24.5°	2388.0	2422.5	2451.6	2481.3	2463.6	2447.8	2431.6	2396.2	2367.0	2337.3	2306.2
25°	2375.6	2411.0	2441.1	2471.7	2453.6	2437.3	2421.0	2384.7	2355.0	2324.9	2292.9
25.5°	2363.2	2399.5	2430.6	2461.7	2443.0	2426.3	2409.6	2372.2	2342.1	2312.0	2278.5
26°	2350.2	2387.6	2419.1	2451.6	2432.0	2415.3	2398.1	2359.8	2329.2	2298.6	2264.6
26.5°	2337.8	2375.6	2408.1	2441.1	2421.0	2403.3	2386.6	2347.4	2315.8	2284.2	2250.3
27°	2323.9	2362.7	2396.2	2430.1	2409.6	2391.9	2374.2	2334.0	2302.4	2270.9	2235.5
27.5°	2310.5	2350.2	2384.2	2419.1	2397.6	2379.4	2361.2	2320.6	2288.5	2256.5	2220.6
28°	2296.2	2337.3	2372.2	2407.6	2385.2	2366.5	2348.8	2307.2	2274.2	2241.2	2204.9
28.5°	2282.3	2323.5	2359.3	2396.2	2372.7	2353.6	2335.4	2293.3	2259.4	2226.4	2189.5
29°	2267.5	2309.6	2346.4	2383.7	2359.8	2340.2	2321.5	2279.0	2244.5	2210.6	2173.3
29.5°	2252.2	2295.7	2332.5	2371.3	2346.4	2326.3	2307.7	2264.2	2228.8	2194.8	2157.0
30°	2236.9	2280.9	2319.2	2358.4	2332.5	2312.9	2293.8	2248.9	2213.5	2178.5	2139.8
30.5°	2221.6	2266.1	2305.3	2345.0	2318.7	2298.1	2278.5	2233.5	2197.2	2161.8	2122.6
31°	2205.3	2251.2	2290.5	2332.1	2304.3	2283.3	2263.7	2217.8	2180.9	2145.1	2105.4
31.5°	2189.1	2235.5	2275.6	2317.7	2289.5	2268.0	2248.9	2201.5	2164.2	2127.8	2087.2
32°	2172.3	2219.2	2260.3	2303.4	2274.7	2252.7	2232.6	2184.8	2147.0	2110.2	2069.0
32.5°	2155.1	2203.4	2245.0	2288.5	2258.9	2236.9	2216.3	2168.0	2129.8	2092.0	2049.9
33°	2137.9	2186.7	2228.8	2273.7	2243.1	2220.2	2200.1	2151.3	2112.1	2073.8	2031.2
33.5°	2120.2	2169.5	2212.5	2257.9	2226.9	2203.4	2183.3	2133.6	2093.4	2054.7	2012.6
34°	2102.0	2152.7	2196.2	2242.6	2210.6	2186.7	2166.1	2115.4	2074.8	2035.5	1992.5
34.5°	2084.3	2135.0	2179.0	2226.4	2193.4	2169.5	2148.4	2097.2	2056.1	2016.4	1972.9
35°	2065.2	2117.3	2161.8	2209.6	2175.7	2151.8	2130.7	2079.1	2037.5	1996.8	1952.3
35.5°	2046.5	2098.7	2144.1	2192.9	2158.0	2134.1	2112.1	2059.9	2017.8	1976.2	1931.8
36°	2026.5	2080.0	2125.9	2175.7	2140.3	2114.9	2093.9	2040.8	1997.8	1956.1	1910.2
36.5°	2007.3	2061.4	2107.8	2158.0	2121.6	2095.8	2074.8	2021.2	1977.2	1935.1	1889.2
37°	1988.2	2042.2	2088.6	2140.3	2102.5	2076.7	2055.2	2001.6	1957.1	1914.1	1867.7
37.5°	1967.6	2023.1	2070.5	2121.6	2082.9	2057.1	2035.5	1981.0	1936.5	1893.0	1846.1
38°	1947.1	2003.0	2050.8	2103.0	2063.8	2037.5	2015.9	1960.5	1916.0	1871.5	1823.7
38.5°	1926.5	1982.9	2031.2	2083.8	2043.2	2017.4	1995.4	1939.9	1894.0	1849.5	1800.7
39°	1905.4	1962.4	2011.1	2064.7	2023.6	1996.3	1974.8	1918.4	1872.4	1827.0	1778.2
39.5°	1884.9	1941.8	1991.1	2044.6	2002.5	1975.8	1953.8	1896.8	1850.9	1804.1	1755.3
40°	1863.4	1921.2	1970.5	2024.5	1982.0	1954.7	1932.7	1875.8	1828.9	1781.6	1731.8
40.5°	1841.4	1899.7	1949.9	2004.0	1960.5	1933.2	1911.2	1853.8	1806.9	1758.6	1709.4
41°	1819.8	1878.2	1928.4	1983.4	1939.4	1911.2	1889.7	1831.8	1784.0	1735.2	1685.0
41.5°	1797.8	1856.7	1906.9	1961.9	1917.9	1889.7	1867.2	1808.8	1761.5	1712.2	1661.5
42°	1775.4	1835.1	1885.4	1940.8	1895.9	1867.7	1845.2	1786.4	1738.5	1688.8	1637.6
42.5°	1752.9	1813.1	1863.8	1919.3	1873.4	1845.2	1823.7	1763.9	1715.6	1665.4	1613.7
43°	1730.4	1790.7	1841.4	1897.8	1850.9	1822.7	1800.7	1740.9	1692.6	1641.0	1588.8
43.5°	1707.9	1768.2	1819.4	1875.3	1828.4	1800.2	1777.3	1718.0	1669.2	1617.0	1564.9



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL4050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1638.6	1699.8	1751.4	1808.4	1759.1	1730.4	1707.9	1647.2	1598.9	1545.8	1494.1
45.5°	1615.1	1676.4	1729.0	1785.4	1735.7	1707.0	1684.5	1623.7	1575.4	1522.8	1471.2
46°	1591.7	1652.9	1705.5	1762.4	1712.7	1683.1	1660.6	1600.3	1551.5	1499.4	1448.7
46.5°	1567.8	1629.5	1682.1	1739.0	1688.8	1659.6	1636.7	1576.4	1528.1	1476.0	1425.7
47°	1544.8	1606.5	1658.7	1715.6	1664.9	1636.7	1613.7	1553.4	1505.6	1453.5	1401.3
47.5°	1521.9	1583.1	1635.7	1692.1	1641.9	1613.7	1590.7	1530.5	1482.7	1429.1	1375.5
48°	1498.9	1559.7	1611.8	1668.2	1619.4	1590.3	1567.8	1507.5	1457.8	1402.8	1347.3
48.5°	1475.0	1536.7	1588.8	1645.3	1596.0	1568.3	1544.4	1483.1	1431.5	1374.1	1315.3
49°	1452.5	1513.7	1565.4	1621.8	1573.0	1544.4	1521.4	1455.9	1403.7	1342.5	1281.3
49.5°	1427.2	1489.8	1542.9	1597.9	1550.1	1521.4	1497.0	1428.1	1373.1	1308.6	1244.5
50°	1401.3	1465.9	1519.5	1575.0	1526.7	1495.6	1470.2	1398.5	1340.1	1272.7	1207.6
50.5°	1373.1	1439.6	1495.1	1552.0	1500.8	1468.8	1442.5	1366.9	1305.7	1237.3	1170.8
51°	1341.1	1411.4	1468.8	1528.6	1473.6	1439.1	1412.3	1333.0	1270.3	1199.5	1132.1
51.5°	1305.2	1379.8	1440.6	1503.7	1444.9	1405.2	1378.9	1296.1	1231.6	1161.3	1093.3
52°	1268.9	1346.3	1410.9	1476.9	1412.3	1370.7	1343.0	1256.9	1191.9	1122.0	1053.6
52.5°	1231.1	1310.5	1377.9	1448.7	1377.0	1335.8	1307.6	1216.7	1151.7	1082.3	1014.4
53°	1192.3	1272.7	1343.5	1418.6	1341.6	1298.5	1268.9	1175.6	1110.6	1040.7	974.7
53.5°	1152.2	1233.5	1306.2	1386.0	1303.8	1260.7	1230.1	1133.0	1068.9	999.6	935.0
54°	1112.5	1194.7	1267.0	1350.7	1265.5	1222.5	1189.9	1090.9	1025.9	958.9	895.8
54.5°	1071.8	1154.1	1225.3	1312.9	1225.8	1184.2	1149.3	1049.3	983.3	917.8	855.6
55°	1031.2	1112.9	1183.7	1272.7	1186.6	1144.5	1107.2	1005.3	939.3	875.2	815.0
55.5°	990.0	1069.9	1141.2	1231.6	1145.9	1103.9	1065.6	963.2	896.3	834.1	775.8
56°	949.9	1027.3	1097.6	1189.0	1104.8	1062.2	1023.5	920.2	852.8	793.0	736.1
56.5°	907.8	984.3	1053.2	1145.9	1062.7	1020.2	980.9	879.1	810.2	751.8	696.8
57°	867.1	940.3	1008.2	1102.4	1020.2	978.1	937.9	837.5	768.6	711.7	658.6
57.5°	826.0	897.2	964.7	1058.4	976.6	936.0	895.8	796.8	727.5	671.5	621.3
58°	784.4	853.2	921.2	1015.4	934.1	892.9	853.7	755.7	686.8	631.8	584.0
58.5°	743.7	809.2	876.7	971.9	890.5	848.9	812.1	715.0	646.6	593.5	547.1
59°	703.5	767.2	833.2	928.8	847.0	805.4	770.0	674.4	608.4	554.8	511.8
59.5°	663.8	725.1	791.1	886.7	804.0	761.9	728.9	636.1	571.1	518.0	477.8
60°	623.7	683.5	749.9	844.2	760.9	719.3	688.2	596.9	534.7	481.6	445.3
60.5°	584.5	643.3	708.8	802.5	718.8	676.8	648.1	559.6	499.3	449.6	412.8
61°	547.6	603.6	666.7	760.5	677.7	635.1	608.8	521.8	464.4	417.5	380.2
61.5°	509.8	564.8	627.5	721.2	637.5	594.5	570.1	486.4	431.9	386.0	347.7
62°	474.4	527.1	589.2	679.6	597.4	554.3	531.4	453.4	399.4	353.9	315.2
62.5°	440.0	490.7	551.9	640.4	557.7	514.6	493.6	419.9	366.4	321.9	287.4
63°	407.0	455.8	515.1	601.7	519.4	477.3	459.6	386.9	333.8	294.6	261.1
63.5°	374.5	421.4	478.8	563.4	482.1	442.4	425.2	353.9	300.8	269.3	236.7
64°	343.9	388.8	444.3	525.6	447.7	408.0	390.8	320.9	270.7	244.9	214.3
64.5°	314.2	357.3	410.8	488.3	413.7	373.1	356.8	291.3	242.0	221.9	193.7
65°	285.5	327.6	378.8	452.9	379.8	338.6	322.4	263.5	215.7	200.9	175.5
65.5°	258.3	298.9	348.2	418.5	345.3	308.0	291.3	237.2	190.8	181.3	159.3
66°	232.4	273.1	318.5	384.5	311.4	278.4	262.6	212.8	169.8	164.5	145.9



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	167.9	202.8	237.2	290.3	228.1	202.3	188.4	152.6	123.4	124.4	116.2
68°	155.0	182.7	213.3	262.6	203.3	180.8	168.8	137.7	114.8	115.3	109.5
68.5°	142.5	166.4	191.3	235.8	182.2	161.2	151.6	125.3	109.5	107.6	104.7
69°	129.6	153.5	172.2	211.4	162.1	144.4	137.3	115.3	105.2	102.4	100.4
69.5°	116.7	141.1	159.3	188.4	145.4	130.1	124.8	108.1	100.9	98.0	96.6
70°	110.0	128.2	146.4	167.4	130.6	119.1	115.3	102.8	96.1	93.7	92.3
70.5°	105.2	115.7	133.9	154.0	119.6	110.0	108.1	98.5	91.8	89.4	88.5
71°	100.9	107.6	121.5	140.1	110.5	104.7	103.3	94.2	87.0	85.6	84.7
71.5°	96.6	101.9	108.6	126.7	104.3	100.4	99.0	89.9	82.7	81.3	80.4
72°	92.3	97.6	103.3	113.4	100.0	96.1	95.2	85.6	78.4	77.0	76.5
72.5°	87.5	93.3	99.5	106.2	95.7	91.8	90.9	81.3	74.1	73.2	72.7
73°	83.2	89.0	95.2	101.9	91.8	88.0	86.6	77.0	70.3	69.3	68.9
73.5°	78.9	84.7	90.9	97.6	87.5	83.7	82.7	73.2	66.5	65.5	65.5
74°	75.1	80.4	86.6	93.7	83.2	79.9	78.4	68.9	62.7	61.7	61.7
74.5°	70.8	76.5	82.7	89.4	79.4	75.6	74.6	65.0	58.8	57.9	58.3
75°	67.0	72.2	78.4	85.1	75.6	71.7	70.8	61.2	55.5	54.5	55.0
75.5°	63.1	68.4	74.6	81.3	71.7	67.9	67.0	57.9	52.1	51.2	51.7
76°	59.3	64.6	70.3	77.0	67.9	64.6	63.1	54.0	48.8	47.8	48.8
76.5°	56.0	60.7	67.0	73.2	64.1	60.7	59.8	50.7	45.4	44.5	45.4
77°	52.1	57.4	63.1	69.3	60.7	57.4	56.4	47.3	42.1	41.6	42.6
77.5°	48.8	53.6	59.3	65.5	57.4	54.0	53.1	44.0	39.2	38.7	39.7
78°	45.9	50.2	56.0	62.2	54.0	50.7	49.7	41.1	36.3	35.9	36.8
78.5°	42.6	46.9	52.6	58.3	50.7	47.8	46.4	38.3	33.5	32.5	34.0
79°	39.7	44.0	49.3	55.0	47.3	44.5	43.5	35.4	30.6	29.7	31.6
79.5°	36.8	40.7	45.9	52.1	44.5	42.1	40.7	32.5	27.7	27.3	28.7
80°	34.0	37.8	43.0	48.8	41.6	39.2	37.8	29.7	25.3	24.4	25.8
80.5°	31.1	34.9	40.2	45.4	38.7	36.3	34.9	26.8	23.0	22.0	23.4
81°	28.7	32.0	37.3	42.6	35.9	33.5	32.0	24.4	20.6	19.6	21.5
81.5°	26.3	29.7	34.4	39.7	33.0	31.1	29.2	21.5	18.2	17.2	19.1
82°	23.4	26.8	31.6	36.8	30.1	28.2	26.8	19.6	16.3	14.8	16.7
82.5°	21.0	24.4	29.2	34.4	27.7	25.8	24.4	17.2	13.9	12.9	14.8
83°	19.1	22.0	26.8	31.6	25.3	23.4	22.0	14.8	12.0	11.0	12.9
83.5°	16.7	20.1	24.4	29.2	23.4	21.0	19.6	12.9	10.0	9.1	11.0
84°	14.8	17.7	22.0	26.8	21.0	19.1	17.7	11.0	8.1	7.2	9.1
84.5°	12.9	15.8	19.6	24.4	18.7	16.7	15.3	9.1	6.7	5.7	7.7
85°	10.5	13.4	17.7	22.0	16.7	14.8	13.4	7.7	5.3	4.8	6.2
85.5°	8.6	11.5	15.3	19.6	14.8	12.9	11.5	6.2	3.8	3.8	4.8
86°	7.2	9.6	13.4	17.7	12.9	11.0	10.0	5.3	3.3	2.9	3.3
86.5°	5.3	7.7	12.0	15.8	11.0	9.1	8.1	3.8	2.4	1.9	1.9
87°	4.3	6.2	10.0	13.9	9.1	7.7	6.7	2.9	1.4	1.0	1.0
87.5°	3.3	5.3	8.6	12.0	7.2	5.7	5.3	1.9	1.0	0.5	0.0
88°	2.4	4.3	6.7	10.0	5.7	4.3	3.8	1.0	0.5	0.0	0.0
88.5°	1.4	2.9	5.3	8.1	4.3	2.9	2.4	0.5	0.0	0.0	0.0



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.5	1.4	3.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2646.8	2646.8	2646.8	2646.8	2646.8	2646.8
0.5°	2640.1	2645.8	2646.8	2646.8	2648.2	2648.2
1°	2637.7	2643.9	2644.9	2645.3	2647.7	2648.2
1.5°	2634.8	2641.5	2643.0	2643.9	2646.8	2648.2
2°	2632.0	2639.1	2641.0	2642.0	2645.8	2647.7
2.5°	2629.1	2636.3	2638.6	2640.1	2644.4	2646.8
3°	2625.7	2633.4	2636.3	2638.2	2643.0	2646.3
3.5°	2622.4	2630.5	2633.4	2635.3	2641.5	2644.9
4°	2619.0	2627.2	2630.5	2632.9	2639.1	2643.9
4.5°	2615.2	2623.8	2627.2	2630.0	2637.2	2642.0
5°	2610.9	2620.0	2623.3	2626.7	2634.8	2640.6
5.5°	2606.6	2616.2	2620.0	2623.3	2632.4	2638.6
6°	2601.8	2611.9	2616.2	2620.0	2629.6	2636.7
6.5°	2597.0	2607.6	2612.3	2616.2	2626.7	2634.3
7°	2592.3	2602.8	2608.0	2612.3	2623.3	2632.0
7.5°	2587.0	2598.0	2603.3	2608.0	2620.0	2629.1
8°	2581.7	2593.2	2598.5	2603.7	2616.6	2626.2
8.5°	2576.0	2587.9	2593.7	2598.9	2612.8	2622.9
9°	2570.3	2582.7	2588.4	2594.2	2608.5	2619.5
9.5°	2564.5	2576.9	2583.2	2588.9	2604.2	2615.7
10°	2557.8	2570.7	2577.4	2583.6	2599.4	2612.3
10.5°	2551.6	2565.0	2571.7	2577.9	2594.6	2608.0
11°	2544.4	2558.3	2565.5	2572.2	2589.4	2603.7
11.5°	2537.7	2551.6	2558.8	2565.9	2584.6	2598.9
12°	2530.6	2544.9	2552.1	2559.7	2579.3	2594.2
12.5°	2522.9	2537.7	2545.4	2553.0	2573.1	2588.9
13°	2514.8	2530.1	2538.2	2546.3	2567.4	2583.6
13.5°	2507.1	2522.4	2530.6	2539.2	2560.7	2577.9
14°	2499.0	2514.8	2522.9	2532.0	2554.0	2572.2
14.5°	2490.4	2506.6	2514.8	2523.9	2547.3	2566.4
15°	2481.8	2498.0	2507.1	2516.7	2540.6	2560.2
15.5°	2472.7	2489.4	2498.5	2508.1	2532.9	2553.5
16°	2463.6	2480.3	2489.9	2499.5	2525.3	2546.8
16.5°	2454.0	2471.2	2480.3	2490.9	2517.2	2539.6
17°	2444.0	2461.7	2471.2	2481.8	2509.0	2532.0
17.5°	2434.4	2451.6	2461.7	2472.7	2500.9	2524.3
18°	2423.9	2442.1	2451.6	2463.1	2492.3	2516.7
18.5°	2413.4	2431.1	2441.6	2453.1	2483.2	2508.6
19°	2402.4	2421.0	2431.1	2443.0	2473.6	2499.9
19.5°	2390.9	2410.0	2420.6	2432.5	2464.1	2491.3
20°	2379.4	2398.6	2409.6	2422.0	2454.5	2482.3
20.5°	2367.9	2387.6	2397.6	2411.0	2444.5	2473.2
21°	2356.0	2375.1	2386.1	2399.5	2433.9	2463.6

TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2317.7	2337.8	2349.8	2363.6	2400.9	2432.5
23°	2304.8	2325.4	2336.4	2350.7	2389.5	2422.0
23.5°	2290.9	2312.0	2323.5	2337.8	2377.5	2411.0
24°	2277.1	2298.1	2310.1	2324.4	2365.6	2399.5
24.5°	2263.2	2284.2	2296.2	2311.0	2353.1	2388.0
25°	2248.4	2269.9	2281.9	2297.6	2339.7	2375.6
25.5°	2233.5	2255.5	2267.0	2283.3	2326.3	2363.2
26°	2218.7	2240.2	2252.7	2268.9	2312.9	2350.2
26.5°	2202.9	2225.4	2237.4	2253.6	2299.1	2337.8
27°	2187.2	2209.6	2222.1	2238.3	2284.7	2323.9
27.5°	2171.4	2193.8	2205.8	2223.5	2270.4	2310.5
28°	2155.1	2177.6	2190.0	2207.7	2255.5	2296.2
28.5°	2137.9	2160.8	2173.8	2191.5	2240.2	2282.3
29°	2120.7	2144.1	2156.5	2174.7	2224.9	2267.5
29.5°	2103.5	2126.9	2139.8	2158.5	2208.7	2252.2
30°	2085.3	2110.2	2122.1	2140.8	2192.4	2236.9
30.5°	2067.6	2092.0	2104.4	2124.0	2176.2	2221.6
31°	2048.9	2073.8	2086.7	2105.8	2159.4	2205.3
31.5°	2029.8	2056.1	2069.0	2088.2	2142.2	2189.1
32°	2010.7	2037.5	2050.4	2069.5	2124.5	2172.3
32.5°	1991.5	2018.3	2031.2	2051.3	2106.8	2155.1
33°	1971.5	1999.7	2013.1	2032.7	2088.6	2137.9
33.5°	1951.4	1980.5	1993.9	2013.5	2070.0	2120.2
34°	1931.3	1960.5	1974.3	1993.9	2051.3	2102.0
34.5°	1910.2	1940.4	1954.2	1974.8	2032.2	2084.3
35°	1889.7	1920.3	1934.6	1954.2	2013.1	2065.2
35.5°	1868.1	1899.7	1914.5	1934.1	1993.5	2046.5
36°	1847.1	1879.1	1894.0	1913.6	1973.4	2026.5
36.5°	1825.1	1858.6	1873.9	1893.0	1953.3	2007.3
37°	1803.6	1837.5	1852.8	1872.4	1932.2	1988.2
37.5°	1781.1	1816.0	1831.8	1851.4	1912.1	1967.6
38°	1759.1	1794.5	1810.8	1829.9	1891.1	1947.1
38.5°	1735.7	1773.4	1789.2	1807.9	1870.1	1926.5
39°	1713.7	1751.0	1768.2	1786.8	1848.1	1905.4
39.5°	1690.2	1729.0	1746.7	1765.3	1826.5	1884.9
40°	1667.3	1707.4	1724.7	1743.3	1805.0	1863.4
40.5°	1644.3	1685.4	1702.7	1720.8	1783.0	1841.4
41°	1620.9	1662.5	1680.2	1698.8	1761.0	1819.8
41.5°	1597.0	1640.0	1658.2	1676.4	1738.1	1797.8
42°	1573.5	1617.5	1635.7	1653.9	1716.1	1775.4
42.5°	1549.6	1595.0	1613.2	1631.4	1693.1	1752.9
43°	1526.7	1572.6	1590.7	1608.9	1670.6	1730.4
43.5°	1502.7	1549.1	1568.3	1585.5	1647.7	1707.9



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1435.3	1480.7	1499.9	1516.6	1578.3	1638.6
45.5°	1412.8	1458.3	1476.9	1493.7	1554.4	1615.1
46°	1388.9	1435.3	1454.4	1471.2	1531.4	1591.7
46.5°	1364.0	1412.8	1431.5	1447.7	1508.0	1567.8
47°	1337.3	1389.9	1409.5	1425.3	1485.5	1544.8
47.5°	1306.6	1364.5	1386.0	1402.3	1462.6	1521.9
48°	1273.2	1339.2	1360.7	1377.4	1439.6	1498.9
48.5°	1236.8	1310.5	1334.4	1351.6	1416.2	1475.0
49°	1199.5	1278.4	1307.6	1325.3	1391.3	1452.5
49.5°	1161.7	1243.5	1274.6	1294.7	1366.0	1427.2
50°	1123.9	1206.2	1240.2	1260.7	1338.2	1401.3
50.5°	1084.3	1167.5	1201.4	1223.4	1306.6	1373.1
51°	1044.6	1128.7	1163.2	1185.2	1271.3	1341.1
51.5°	1004.9	1088.6	1122.5	1145.9	1233.5	1305.2
52°	964.7	1048.9	1083.3	1105.8	1195.2	1268.9
52.5°	925.5	1007.7	1043.1	1065.1	1156.5	1231.1
53°	885.3	965.6	1001.5	1024.5	1117.7	1192.3
53.5°	846.5	925.0	958.5	982.4	1077.6	1152.2
54°	807.3	883.9	917.8	941.2	1037.4	1112.5
54.5°	768.1	844.6	876.2	900.1	996.7	1071.8
55°	729.8	804.0	834.1	860.9	955.6	1031.2
55.5°	691.6	764.3	793.9	820.2	914.9	990.0
56°	654.8	725.5	753.8	780.5	874.3	949.9
56.5°	619.4	686.8	714.1	741.8	834.1	907.8
57°	582.5	649.0	675.3	704.0	793.9	867.1
57.5°	547.1	612.2	637.1	664.8	754.7	826.0
58°	511.8	575.4	599.8	627.5	715.5	784.4
58.5°	479.2	540.5	564.8	592.1	676.8	743.7
59°	447.2	506.5	530.4	556.2	639.9	703.5
59.5°	415.6	473.0	497.4	521.8	603.1	663.8
60°	383.6	441.4	464.9	488.3	567.2	623.7
60.5°	352.0	409.4	433.8	455.3	532.3	584.5
61°	320.0	379.3	403.7	423.8	496.9	547.6
61.5°	292.2	351.1	375.4	392.7	463.0	509.8
62°	265.4	324.3	347.7	364.0	430.0	474.4
62.5°	241.1	298.0	321.4	335.7	397.9	440.0
63°	218.1	273.6	296.5	308.5	366.8	407.0
63.5°	198.0	250.6	273.1	283.6	337.7	374.5
64°	178.9	229.1	251.1	259.7	309.0	343.9
64.5°	162.6	209.0	229.6	237.7	281.2	314.2
65°	149.2	190.8	210.4	216.7	255.4	285.5
65.5°	137.3	173.6	192.3	197.5	231.5	258.3
66°	127.2	161.7	175.5	179.8	210.0	232.4



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	105.7	126.3	139.2	139.2	160.7	167.9
68°	101.9	114.3	127.2	131.0	149.7	155.0
68.5°	97.6	107.6	115.3	122.4	138.2	142.5
69°	93.7	103.3	108.1	113.8	127.2	129.6
69.5°	89.9	99.5	103.3	105.2	115.7	116.7
70°	86.1	95.7	99.5	101.4	108.6	110.0
70.5°	82.3	91.4	95.7	97.1	103.3	105.2
71°	78.4	87.5	91.8	93.3	99.0	100.9
71.5°	74.6	83.7	88.0	89.4	94.7	96.6
72°	70.8	79.9	83.7	85.6	90.4	92.3
72.5°	67.4	76.0	79.9	81.8	86.6	87.5
73°	64.1	72.2	76.0	78.0	82.3	83.2
73.5°	60.3	68.9	72.7	74.1	78.4	78.9
74°	56.9	65.0	68.9	70.3	74.1	75.1
74.5°	54.0	61.7	65.5	66.5	70.3	70.8
75°	50.7	58.3	62.2	63.1	66.5	67.0
75.5°	47.8	55.0	58.8	59.8	62.7	63.1
76°	44.5	52.1	55.5	56.4	59.3	59.3
76.5°	41.6	48.8	52.1	53.1	55.5	56.0
77°	39.2	45.9	49.3	49.7	52.1	52.1
77.5°	36.3	43.0	45.9	46.4	48.8	48.8
78°	34.0	40.2	43.0	43.5	45.4	45.9
78.5°	31.1	37.3	40.2	40.7	42.6	42.6
79°	28.7	34.9	37.3	37.8	39.7	39.7
79.5°	26.3	32.0	34.9	34.9	36.3	36.8
80°	23.9	29.7	32.0	32.5	34.0	34.0
80.5°	21.5	27.3	29.7	29.7	31.1	31.1
81°	19.6	24.9	27.3	27.3	28.2	28.7
81.5°	17.2	22.5	24.9	24.9	25.8	26.3
82°	15.3	20.6	22.5	22.5	23.4	23.4
82.5°	13.4	18.2	20.6	20.6	21.0	21.0
83°	11.5	16.3	18.2	18.2	18.7	19.1
83.5°	9.6	14.3	16.3	16.3	16.3	16.7
84°	7.7	12.4	14.3	14.3	14.3	14.8
84.5°	5.7	10.5	12.4	12.4	12.4	12.9
85°	4.3	8.6	10.5	10.5	10.0	10.5
85.5°	2.9	6.7	8.6	8.6	8.6	8.6
86°	1.4	4.8	6.7	7.2	7.2	7.2
86.5°	0.5	3.3	5.3	5.3	5.7	5.3
87°	0.0	1.9	3.3	3.8	4.3	4.3
87.5°	0.0	1.0	1.9	2.4	3.3	3.3
88°	0.0	0.0	1.0	1.0	2.4	2.4
88.5°	0.0	0.0	0.0	0.5	1.4	1.4



TEST NUMBER: P776668

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRMW-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



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°	2453.6	2482.7	2507.6	2532.5	2518.6	2504.7	2490.9	2460.2	2434.4	2407.6	2379.9
22°	2443.0	2473.6	2499.0	2524.8	2510.5	2496.6	2481.8	2450.2	2423.9	2397.1	2368.4



44°	1685.4	1745.7	1797.4	1853.8	1805.5	1776.8	1754.3	1694.5	1645.7	1593.1	1541.0
44.5°	1661.5	1722.3	1773.9	1831.3	1782.1	1754.3	1730.9	1671.1	1621.8	1569.7	1517.6



66.5°	209.0	247.7	290.3	353.0	281.7	251.6	235.3	190.8	151.1	149.2	134.4
67°	188.0	224.3	263.1	320.4	253.5	225.7	210.9	170.3	135.8	135.8	124.4



89°	1.0	1.9	3.8	6.7	2.9	1.4	1.0	0.0	0.0	0.0	0.0
89.5°	0.5	1.0	2.4	4.8	1.4	0.5	0.5	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





21.5°	2343.6	2363.2	2374.2	2387.6	2423.4	2453.6
22°	2330.6	2351.2	2362.2	2375.6	2412.4	2443.0



44°	1480.3	1526.2	1545.3	1563.0	1624.7	1685.4
44.5°	1457.8	1503.2	1522.4	1539.6	1601.3	1661.5



66.5°	118.6	149.7	163.6	163.6	189.9	209.0
67°	111.4	137.7	151.1	149.7	172.2	188.0

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

Scaled Data Report



89°	0.0	0.0	0.0	0.0	0.5	1.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.5

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

Scaled Data Report



(END OF REPORT)