

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



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: P776655

Luminaire Tested: HCDJBS4050CSD-HCD61TRH-HCD61TRLWW-5000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776655
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-2700K
Description: 6 INCH ROUND SHALLOW-WIDE LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5518.7 lumens
Efficiency: N/A
Efficacy: 115.0 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

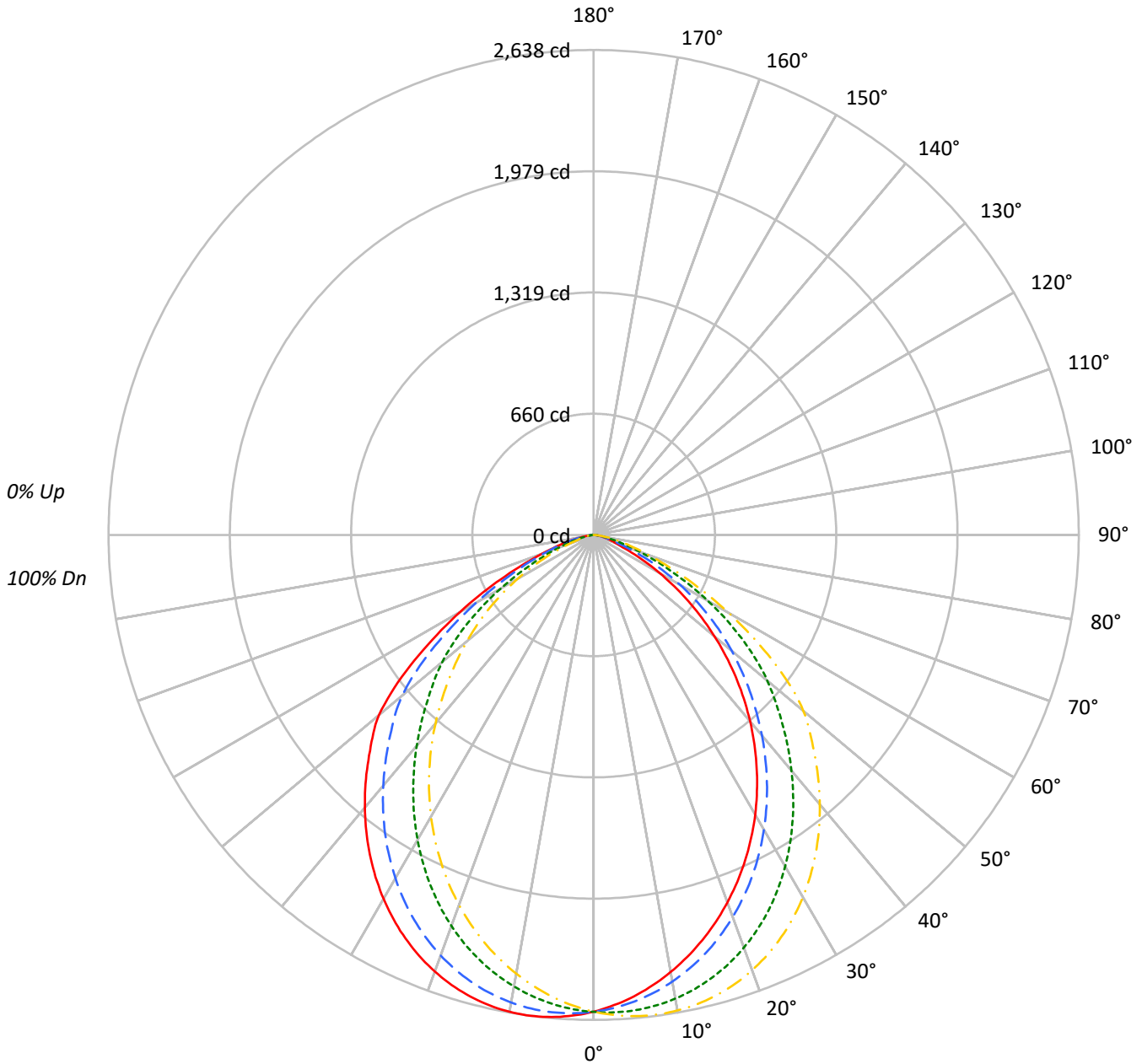
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	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°	142193	142193	142193	142193
5°	138625	142807	144865	140953
10°	134366	142560	146641	138853
15°	129518	141465	147492	135880
20°	124097	139353	147409	131991
25°	118005	136169	146500	127072
30°	111182	131799	144661	121247
35°	103423	126291	141964	114492
40°	94649	119789	138502	107072
45°	84668	112469	134332	99258
50°	73209	105071	129898	91622
55°	60136	94056	113697	79902
60°	45457	78579	92010	64085
65°	29848	60279	68853	47281
70°	19795	42203	47540	31832
75°	15822	27217	33000	20164
80°	11649	16700	19857	11933
85°	6290	9749	4277	6856

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 135247 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	244.3	4.4
10°-20°	687.6	12.5
20°-30°	1003.3	18.2
30°-40°	1135.6	20.6
40°-50°	1074.4	19.5
50°-60°	815.7	14.8
60°-70°	408.7	7.4
70°-80°	129.5	2.3
80°-90°	19.6	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°	1935.2	35.1
0°-40°	3070.8	55.6
0°-60°	4960.9	89.9
0°-90°	5518.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5518.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2594	2594	2594	2594	2594	
5°	2519	2595	2632	2561	2519	237
15°	2282	2493	2599	2394	2282	641
25°	1951	2251	2422	2101	1951	896
35°	1545	1887	2121	1711	1545	964
45°	1092	1451	1733	1280	1092	840
55°	629	984	1190	836	629	563
65°	230	465	531	364	230	239
75°	75	128	156	95	75	81
85°	10	16	7	11	10	14
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°	2593.8	2593.8	2593.8	2593.8	2593.8	2593.8	2593.8	2593.8	2593.8	2593.8	2593.8
0.5°	2587.4	2589.2	2591.0	2592.4	2596.5	2597.0	2597.9	2598.3	2598.8	2598.8	2597.0
1°	2581.0	2584.2	2587.4	2591.5	2597.9	2600.1	2602.4	2603.8	2603.8	2602.9	2599.2
1.5°	2574.6	2578.7	2583.7	2589.7	2598.8	2603.3	2607.0	2608.8	2608.8	2606.5	2601.5
2°	2567.8	2572.8	2579.6	2587.8	2599.2	2605.6	2610.6	2613.4	2612.9	2610.2	2602.9
2.5°	2560.1	2566.4	2575.1	2585.6	2599.2	2607.9	2614.3	2617.5	2617.5	2613.4	2604.7
3°	2552.8	2560.1	2570.1	2582.8	2599.2	2609.7	2617.9	2621.6	2620.7	2615.6	2605.6
3.5°	2545.0	2553.2	2565.1	2579.6	2598.8	2611.5	2620.7	2625.2	2624.3	2617.9	2606.1
4°	2536.4	2545.9	2559.6	2576.5	2597.9	2612.4	2623.4	2628.4	2627.5	2620.2	2606.5
4.5°	2528.2	2538.2	2553.7	2572.8	2597.0	2613.4	2625.7	2631.6	2630.2	2621.6	2606.5
5°	2519.1	2530.4	2547.3	2568.7	2595.1	2613.8	2627.5	2633.9	2632.5	2622.9	2606.1
5.5°	2509.9	2521.8	2540.9	2564.2	2593.3	2614.3	2628.9	2636.1	2634.3	2623.8	2605.6
6°	2500.4	2513.1	2533.6	2559.6	2591.0	2613.8	2630.2	2638.0	2635.7	2624.3	2604.2
6.5°	2490.8	2504.5	2526.8	2554.6	2588.8	2613.4	2631.1	2639.3	2637.1	2624.3	2602.9
7°	2480.8	2495.4	2519.1	2549.1	2585.6	2612.4	2631.6	2640.2	2637.5	2624.3	2601.1
7.5°	2470.3	2485.8	2511.3	2543.2	2582.4	2611.1	2631.6	2640.7	2638.0	2623.4	2598.8
8°	2459.4	2475.8	2503.1	2536.8	2578.7	2609.7	2631.6	2641.2	2638.0	2622.5	2596.5
8.5°	2448.4	2465.7	2494.4	2530.4	2575.1	2607.9	2631.1	2641.2	2637.5	2621.1	2593.3
9°	2437.5	2455.7	2485.3	2523.6	2570.5	2606.1	2629.8	2640.7	2637.1	2619.7	2590.1
9.5°	2425.7	2444.8	2476.2	2516.8	2566.0	2603.3	2628.9	2639.8	2635.7	2617.5	2586.9
10°	2413.8	2433.9	2467.1	2509.0	2561.0	2600.6	2627.0	2638.4	2634.3	2615.2	2582.8
10.5°	2402.0	2422.5	2457.1	2501.3	2556.0	2597.0	2625.2	2637.1	2632.5	2612.0	2578.7
11°	2389.7	2411.1	2446.6	2493.1	2550.0	2593.3	2622.9	2635.2	2629.8	2609.3	2574.2
11.5°	2376.9	2399.2	2436.1	2484.4	2544.1	2589.7	2620.2	2632.5	2627.5	2605.6	2569.2
12°	2364.1	2386.9	2425.7	2475.3	2537.7	2585.1	2617.0	2630.2	2624.3	2602.0	2564.2
12.5°	2350.9	2374.6	2414.3	2466.7	2531.4	2580.6	2613.4	2627.0	2621.1	2597.9	2558.2
13°	2337.7	2361.9	2402.9	2456.6	2524.1	2575.5	2609.7	2623.4	2617.5	2593.3	2552.3
13.5°	2324.1	2349.1	2391.0	2447.1	2516.8	2570.5	2605.6	2619.7	2612.9	2588.3	2546.4
14°	2310.4	2335.9	2379.2	2437.0	2509.0	2564.6	2601.1	2615.6	2608.8	2582.8	2539.6
14.5°	2296.3	2322.7	2366.9	2426.6	2500.8	2558.7	2596.0	2611.1	2603.8	2577.4	2532.7
15°	2282.1	2308.6	2354.1	2415.2	2492.6	2551.9	2591.0	2606.1	2598.8	2571.4	2525.4
15.5°	2267.6	2294.4	2340.9	2404.2	2483.5	2545.5	2585.6	2601.1	2593.3	2565.1	2517.7
16°	2253.0	2280.3	2328.2	2392.4	2474.4	2538.2	2579.6	2595.1	2586.9	2558.2	2509.5
16.5°	2237.9	2265.7	2314.5	2381.0	2465.3	2530.9	2573.3	2589.2	2581.0	2551.4	2501.3
17°	2222.5	2251.2	2300.4	2368.2	2455.7	2523.2	2566.9	2583.3	2574.2	2544.1	2492.6
17.5°	2207.4	2236.1	2286.2	2355.9	2445.2	2515.0	2559.6	2576.5	2567.3	2536.4	2484.0
18°	2191.5	2220.6	2272.1	2343.2	2434.3	2506.7	2552.3	2569.2	2559.6	2528.2	2474.4
18.5°	2176.0	2205.6	2257.1	2330.0	2423.8	2497.6	2544.6	2561.9	2552.3	2519.5	2464.8
19°	2159.6	2189.6	2242.5	2316.3	2412.4	2488.5	2536.4	2554.1	2544.1	2510.8	2454.8
19.5°	2143.2	2174.2	2227.0	2302.2	2401.0	2479.0	2528.2	2545.9	2535.5	2502.2	2444.3
20°	2127.2	2157.8	2212.0	2288.5	2388.7	2468.9	2520.0	2537.3	2526.8	2492.6	2433.9
20.5°	2109.9	2141.4	2196.0	2273.9	2376.4	2458.5	2510.8	2528.6	2517.7	2482.6	2422.5
21°	2093.1	2124.5	2180.1	2259.4	2364.1	2448.4	2501.3	2519.5	2508.6	2472.6	2411.5



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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°	2041.6	2073.5	2130.4	2212.9	2324.5	2414.3	2470.8	2490.3	2478.5	2440.7	2376.0
23°	2023.8	2055.7	2113.6	2196.9	2310.4	2402.4	2460.3	2479.9	2467.6	2429.3	2363.2
23.5°	2006.0	2038.4	2096.7	2180.5	2296.3	2390.1	2449.3	2468.9	2456.6	2417.5	2350.5
24°	1987.8	2020.6	2078.9	2164.1	2281.7	2377.4	2437.5	2458.0	2445.7	2405.1	2337.3
24.5°	1969.1	2002.4	2060.7	2146.8	2266.6	2364.1	2425.7	2446.6	2433.4	2392.8	2323.6
25°	1950.9	1983.7	2042.9	2130.0	2251.2	2351.4	2413.8	2434.8	2422.0	2380.5	2309.9
25.5°	1932.2	1965.5	2025.2	2112.6	2235.7	2337.3	2401.5	2422.9	2409.2	2367.8	2295.8
26°	1913.5	1946.8	2006.9	2094.9	2220.2	2323.1	2388.7	2410.6	2396.9	2354.1	2281.7
26.5°	1894.4	1928.1	1987.4	2076.7	2203.8	2309.0	2375.5	2397.4	2383.7	2340.9	2267.1
27°	1875.3	1909.0	1969.1	2058.9	2186.9	2294.4	2361.9	2384.6	2371.0	2326.8	2252.1
27.5°	1855.7	1889.4	1950.0	2040.2	2170.5	2279.4	2348.7	2371.4	2357.3	2313.1	2237.0
28°	1836.1	1869.8	1930.9	2021.5	2153.2	2263.9	2334.5	2357.8	2343.2	2299.0	2221.1
28.5°	1816.5	1850.2	1910.8	2002.4	2135.9	2248.4	2320.0	2343.6	2329.1	2284.0	2205.6
29°	1796.9	1831.1	1891.2	1983.7	2118.6	2232.9	2305.4	2330.0	2314.5	2268.9	2189.6
29.5°	1776.9	1811.0	1871.6	1964.6	2100.3	2216.1	2290.8	2314.9	2299.9	2253.9	2173.2
30°	1756.4	1790.5	1852.0	1945.0	2082.1	2200.1	2275.3	2300.4	2285.3	2238.4	2156.4
30.5°	1735.9	1770.5	1831.1	1924.9	2063.9	2182.8	2259.4	2285.3	2270.3	2222.5	2139.5
31°	1715.4	1750.0	1811.0	1905.3	2045.2	2165.5	2243.4	2270.3	2254.8	2206.5	2122.7
31.5°	1694.9	1729.5	1790.1	1884.8	2026.1	2147.7	2227.5	2254.3	2238.4	2190.1	2104.9
32°	1673.9	1709.0	1769.6	1864.3	2006.5	2130.9	2211.1	2238.4	2222.9	2173.7	2087.6
32.5°	1652.9	1688.0	1748.6	1844.3	1987.4	2112.6	2194.7	2222.0	2207.0	2156.8	2069.8
33°	1631.5	1666.6	1728.1	1823.8	1968.2	2094.0	2177.3	2205.6	2190.1	2140.0	2052.1
33.5°	1610.6	1645.7	1706.7	1802.4	1948.2	2075.7	2160.0	2189.2	2173.2	2122.7	2034.3
34°	1589.2	1624.7	1685.7	1781.9	1928.1	2057.1	2142.3	2172.3	2155.9	2104.9	2015.1
34.5°	1567.3	1603.3	1663.9	1760.5	1907.2	2037.5	2124.5	2154.6	2138.6	2087.1	1996.5
35°	1545.4	1581.4	1642.9	1739.1	1887.1	2018.3	2106.7	2137.3	2121.3	2069.4	1977.8
35.5°	1524.0	1560.0	1620.6	1718.1	1866.6	1999.2	2088.0	2119.5	2104.0	2051.6	1959.1
36°	1502.1	1538.1	1599.6	1696.7	1845.7	1979.2	2069.8	2101.7	2086.2	2032.9	1939.5
36.5°	1480.3	1516.3	1577.8	1674.8	1824.7	1959.1	2051.1	2083.5	2067.5	2015.1	1920.4
37°	1457.9	1493.9	1555.0	1652.9	1803.3	1939.1	2032.0	2064.8	2049.3	1996.0	1900.8
37.5°	1435.6	1472.1	1533.6	1631.1	1781.9	1918.6	2012.4	2046.1	2030.6	1977.3	1880.7
38°	1412.8	1449.7	1511.7	1609.2	1760.9	1898.1	1993.3	2027.5	2012.0	1957.7	1860.7
38.5°	1391.0	1427.9	1489.4	1587.3	1739.1	1877.1	1973.2	2008.3	1993.3	1939.1	1841.6
39°	1369.1	1405.1	1467.5	1565.0	1717.6	1856.1	1953.6	1989.2	1973.7	1919.5	1821.1
39.5°	1345.9	1383.2	1445.2	1543.1	1696.2	1835.2	1933.6	1969.6	1955.0	1899.9	1801.0
40°	1322.6	1360.4	1423.3	1520.8	1673.9	1813.8	1913.1	1950.0	1935.4	1880.3	1780.1
40.5°	1300.3	1337.7	1400.1	1498.5	1651.1	1792.8	1892.6	1930.0	1915.4	1860.7	1760.0
41°	1277.5	1314.9	1378.2	1476.2	1629.3	1770.5	1871.6	1909.9	1895.8	1840.2	1739.1
41.5°	1254.3	1292.6	1355.4	1453.4	1607.8	1749.1	1851.1	1889.9	1876.2	1820.6	1718.5
42°	1231.0	1269.3	1333.1	1431.5	1584.6	1727.2	1830.2	1869.4	1855.7	1800.1	1697.6
42.5°	1208.3	1247.0	1311.2	1409.2	1563.2	1705.8	1809.2	1848.9	1835.6	1780.1	1676.6
43°	1185.5	1224.2	1288.5	1386.9	1540.4	1683.9	1787.8	1828.4	1815.1	1759.1	1655.7
43.5°	1162.3	1201.4	1266.1	1364.5	1518.5	1662.1	1766.8	1807.8	1795.1	1738.6	1634.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1092.1	1132.6	1198.7	1297.6	1450.7	1595.5	1701.7	1744.5	1732.7	1676.6	1571.4
45.5°	1068.9	1110.3	1177.3	1275.7	1429.7	1573.2	1680.3	1723.6	1712.2	1655.7	1550.4
46°	1045.6	1087.1	1154.5	1253.4	1406.5	1550.4	1658.4	1702.6	1691.2	1635.6	1529.9
46.5°	1021.5	1064.8	1132.6	1231.5	1384.1	1529.0	1637.5	1682.1	1671.6	1615.6	1509.9
47°	997.8	1041.5	1110.3	1209.6	1361.8	1507.1	1616.5	1661.6	1652.0	1596.0	1489.8
47.5°	975.0	1018.7	1088.4	1187.8	1340.9	1485.7	1596.0	1642.0	1632.0	1575.9	1469.3
48°	951.8	996.4	1066.1	1165.9	1318.5	1464.8	1575.0	1622.0	1612.4	1556.4	1449.7
48.5°	928.5	973.6	1044.3	1144.9	1297.6	1443.8	1555.0	1601.9	1592.3	1535.9	1428.8
49°	904.8	951.3	1022.4	1123.5	1275.7	1421.9	1533.6	1581.0	1571.4	1514.0	1407.4
49.5°	882.1	929.0	1001.0	1102.1	1253.8	1400.5	1512.2	1560.0	1549.1	1490.7	1383.7
50°	858.4	906.2	979.6	1079.8	1232.0	1378.2	1488.9	1535.4	1523.1	1465.2	1360.0
50.5°	835.1	883.9	957.2	1058.8	1210.1	1354.1	1463.4	1509.0	1495.8	1436.5	1333.1
51°	811.0	862.0	935.8	1036.5	1186.9	1328.5	1437.0	1479.8	1463.4	1406.5	1306.2
51.5°	788.7	839.7	914.4	1014.2	1162.7	1303.5	1409.2	1449.3	1432.4	1375.5	1276.6
52°	765.4	817.4	892.5	991.9	1139.0	1276.2	1379.1	1416.5	1400.1	1343.1	1246.1
52.5°	742.6	795.5	871.1	968.6	1113.5	1248.4	1348.1	1382.8	1365.5	1309.4	1214.6
53°	719.9	773.6	849.3	945.8	1087.5	1220.1	1315.8	1348.6	1332.2	1275.7	1183.7
53.5°	697.1	751.8	826.9	922.6	1062.5	1191.0	1283.0	1314.4	1296.2	1241.1	1151.3
54°	673.8	729.9	805.1	898.5	1036.1	1160.9	1250.6	1280.3	1260.2	1206.4	1119.4
54.5°	651.5	708.0	783.2	875.7	1011.0	1131.7	1216.9	1244.7	1224.7	1171.8	1087.1
55°	629.2	686.6	761.3	852.9	984.1	1101.7	1183.7	1210.1	1189.6	1137.2	1055.2
55.5°	606.4	665.2	738.5	829.2	958.1	1071.6	1149.0	1175.0	1153.1	1101.7	1021.9
56°	585.0	643.3	716.7	805.5	931.3	1040.2	1115.3	1139.5	1116.7	1065.7	989.6
56.5°	562.7	621.4	694.8	781.8	904.8	1009.2	1080.7	1103.9	1081.6	1031.0	956.8
57°	540.8	600.0	672.5	758.1	877.5	978.2	1047.4	1067.9	1045.6	996.9	924.9
57.5°	518.9	578.6	650.2	734.4	851.5	947.7	1012.8	1032.9	1010.5	961.3	892.1
58°	498.0	557.7	628.7	710.7	824.2	916.2	980.5	997.8	976.4	926.7	860.2
58.5°	477.0	536.2	606.4	687.5	797.3	885.7	946.3	963.2	941.3	893.0	828.7
59°	455.6	515.7	585.0	663.4	770.0	854.7	912.6	928.5	906.7	860.2	796.9
59.5°	435.1	494.8	563.1	640.1	744.0	824.2	879.8	893.9	872.5	826.5	765.4
60°	414.6	474.3	542.2	617.3	716.7	794.1	847.0	860.2	839.2	794.1	735.8
60.5°	394.1	453.3	520.8	594.1	690.2	763.6	813.7	826.9	806.4	762.2	705.3
61°	374.1	433.7	499.3	570.9	663.4	734.4	781.8	794.1	773.6	731.7	676.1
61.5°	354.9	413.7	478.8	548.1	637.8	705.7	750.4	761.3	741.7	701.2	647.9
62°	335.3	394.1	458.8	525.8	611.4	677.5	720.3	729.9	710.3	671.6	620.1
62.5°	316.2	374.5	437.8	503.4	586.4	648.8	688.0	698.0	679.3	642.4	592.3
63°	298.0	355.8	417.8	481.1	560.9	620.1	657.9	667.0	649.7	613.2	565.4
63.5°	280.2	336.7	397.7	459.3	536.2	593.7	628.3	636.9	618.7	585.9	539.9
64°	262.4	318.5	377.7	437.4	511.6	565.9	600.5	607.8	588.2	560.4	515.3
64.5°	246.0	300.7	358.1	416.0	488.0	539.4	571.8	578.6	559.0	534.0	491.1
65°	230.1	283.4	339.0	395.0	464.7	513.9	544.0	551.3	530.8	508.9	467.5
65.5°	214.1	265.6	319.8	375.0	442.4	488.9	517.6	523.9	501.6	483.9	445.1
66°	199.6	249.2	300.7	354.0	420.1	463.8	492.1	497.1	474.3	460.2	423.3



TEST NUMBER: P776655

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	161.3	200.9	246.9	296.1	357.2	396.8	419.6	423.3	400.9	395.0	364.5
68°	153.1	185.9	230.1	278.4	336.2	375.9	398.7	401.4	379.1	374.1	344.9
68.5°	144.4	171.8	213.7	260.2	317.6	354.9	377.7	380.0	356.7	353.1	325.3
69°	136.2	160.4	198.2	243.3	298.9	334.0	356.7	358.6	334.4	332.6	308.0
69.5°	127.6	149.4	183.2	226.0	280.7	313.9	335.3	337.1	314.8	313.9	290.7
70°	123.5	138.5	169.5	210.9	263.3	295.7	316.6	318.9	296.6	296.1	274.3
70.5°	118.9	127.1	158.6	195.9	246.9	278.4	299.3	301.2	279.3	279.7	259.2
71°	113.9	116.2	147.6	181.3	231.4	261.5	282.0	283.8	262.9	263.3	244.2
71.5°	108.9	111.2	136.2	168.1	216.0	245.1	265.2	267.0	246.9	247.9	229.6
72°	103.4	106.6	125.3	157.2	201.4	230.5	249.7	252.0	231.9	232.8	216.0
72.5°	98.4	102.1	114.4	146.2	187.3	215.5	235.1	236.9	217.8	219.1	202.7
73°	93.4	97.0	105.7	135.3	174.5	201.8	221.0	223.2	204.1	205.0	190.0
73.5°	88.4	92.5	98.0	123.9	162.2	188.6	206.8	209.6	191.8	192.7	178.1
74°	83.8	87.9	91.1	113.0	150.4	176.3	194.5	196.8	179.1	180.4	166.8
74.5°	78.8	83.4	85.2	104.3	139.0	164.0	182.2	184.5	167.2	168.6	155.8
75°	74.7	78.8	79.7	96.1	128.5	152.6	170.9	172.7	155.8	157.6	144.9
75.5°	70.2	74.7	75.2	88.4	118.9	142.1	159.5	161.7	144.9	146.7	134.9
76°	66.1	70.2	70.6	81.6	109.3	131.7	148.5	150.8	133.9	136.2	125.3
76.5°	62.0	66.1	67.0	74.7	100.7	122.1	138.5	140.3	123.9	126.7	116.2
77°	57.9	62.0	62.9	68.8	92.5	113.0	128.5	130.8	113.9	117.1	107.5
77.5°	54.2	58.3	59.2	63.3	84.7	104.3	119.4	121.2	104.8	108.0	99.3
78°	50.1	54.2	55.6	58.3	77.5	96.1	110.3	112.1	95.7	99.3	91.1
78.5°	46.9	50.6	51.9	53.3	70.6	87.9	101.6	103.4	86.6	91.6	83.4
79°	43.3	46.9	48.7	48.7	64.2	80.6	93.4	94.8	78.4	83.4	76.1
79.5°	40.1	43.3	45.6	44.6	58.3	73.4	85.7	87.0	70.6	76.1	69.3
80°	36.9	40.1	42.4	41.0	52.9	66.5	77.9	79.3	62.9	68.8	62.4
80.5°	33.7	36.9	39.2	37.4	47.8	60.1	70.6	72.0	55.1	62.0	56.0
81°	30.5	33.7	36.0	34.2	43.3	54.2	63.8	65.2	48.7	55.6	50.1
81.5°	27.8	31.0	33.3	31.4	39.2	48.7	57.0	58.3	42.8	49.7	45.1
82°	25.1	27.8	30.5	28.7	35.1	43.7	50.6	52.4	36.4	44.6	40.1
82.5°	22.3	25.1	27.8	26.0	31.0	39.2	45.6	46.9	30.1	39.6	35.1
83°	19.6	22.3	25.1	23.7	26.9	34.6	40.5	41.9	24.1	34.6	30.1
83.5°	16.9	19.6	22.3	21.4	23.7	30.1	35.5	36.9	19.1	29.2	25.1
84°	14.6	16.9	20.0	19.1	20.5	25.5	30.1	31.4	14.1	24.1	21.4
84.5°	12.3	14.6	17.8	16.9	17.8	21.9	25.1	26.4	10.0	20.0	17.8
85°	10.0	12.3	15.5	15.0	15.5	18.2	21.0	21.4	6.8	16.4	14.6
85.5°	7.7	10.0	13.7	13.2	13.2	15.5	17.3	17.3	4.6	12.8	11.4
86°	5.9	8.2	11.4	11.4	10.9	12.3	14.1	13.2	3.2	9.6	8.7
86.5°	5.0	6.4	9.1	9.1	9.1	10.0	10.9	10.0	2.7	6.8	6.4
87°	3.6	5.0	7.3	7.3	7.3	7.7	8.2	7.3	1.8	4.6	4.6
87.5°	2.7	3.6	5.5	5.5	5.9	5.9	5.9	5.0	1.4	2.7	2.7
88°	1.8	2.7	3.6	4.1	4.6	4.1	3.6	2.7	0.9	1.4	1.4
88.5°	0.9	1.4	2.3	2.3	2.7	2.3	1.8	1.4	0.5	0.5	0.5



TEST NUMBER: P776655

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-2700K

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: P776655

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2593.8	2593.8	2593.8	2593.8	2593.8	2593.8
0.5°	2594.2	2593.3	2589.7	2587.4	2586.5	2587.4
1°	2594.7	2591.0	2585.1	2581.9	2580.1	2581.0
1.5°	2594.2	2588.3	2581.0	2575.5	2573.3	2574.6
2°	2594.2	2585.6	2576.0	2569.2	2566.0	2567.8
2.5°	2593.3	2582.4	2570.5	2562.8	2558.7	2560.1
3°	2592.4	2578.7	2565.1	2555.5	2550.9	2552.8
3.5°	2591.0	2574.6	2559.1	2548.2	2543.2	2545.0
4°	2589.2	2570.5	2553.2	2540.5	2535.0	2536.4
4.5°	2586.9	2566.0	2546.8	2532.3	2525.9	2528.2
5°	2584.7	2561.4	2540.0	2524.1	2516.8	2519.1
5.5°	2581.9	2556.0	2532.7	2515.4	2507.7	2509.9
6°	2578.7	2550.5	2525.0	2506.3	2498.1	2500.4
6.5°	2575.1	2544.6	2517.2	2497.2	2488.1	2490.8
7°	2571.4	2538.6	2509.5	2487.6	2477.6	2480.8
7.5°	2566.9	2531.8	2500.8	2477.6	2467.1	2470.3
8°	2562.8	2525.0	2492.2	2467.6	2456.6	2459.4
8.5°	2557.8	2518.1	2482.6	2457.1	2445.2	2448.4
9°	2552.8	2510.4	2473.5	2446.6	2433.9	2437.5
9.5°	2547.3	2502.2	2463.5	2435.2	2422.0	2425.7
10°	2541.4	2494.4	2453.4	2423.8	2410.2	2413.8
10.5°	2535.0	2485.8	2443.0	2412.4	2398.3	2402.0
11°	2528.6	2477.1	2432.5	2400.6	2386.0	2389.7
11.5°	2521.8	2467.6	2421.6	2388.3	2373.3	2376.9
12°	2515.0	2458.0	2410.2	2376.0	2360.0	2364.1
12.5°	2507.2	2448.4	2398.3	2362.8	2346.8	2350.9
13°	2499.5	2438.4	2386.5	2350.0	2333.6	2337.7
13.5°	2491.3	2427.5	2374.6	2336.8	2319.5	2324.1
14°	2482.6	2417.0	2361.9	2323.6	2305.8	2310.4
14.5°	2473.9	2405.6	2349.1	2309.9	2291.7	2296.3
15°	2464.4	2394.2	2336.4	2295.8	2277.1	2282.1
15.5°	2454.8	2382.8	2322.7	2281.2	2262.5	2267.6
16°	2445.2	2370.5	2309.0	2266.6	2248.0	2253.0
16.5°	2435.2	2358.2	2294.9	2252.1	2232.5	2237.9
17°	2424.7	2345.5	2280.8	2237.0	2217.4	2222.5
17.5°	2413.8	2332.7	2266.2	2221.5	2201.5	2207.4
18°	2402.4	2319.0	2251.6	2206.0	2186.0	2191.5
18.5°	2391.0	2305.4	2236.1	2190.1	2170.1	2176.0
19°	2379.2	2291.2	2221.1	2174.2	2153.7	2159.6
19.5°	2366.9	2277.1	2205.6	2157.8	2137.3	2143.2
20°	2354.6	2262.5	2189.6	2141.8	2120.9	2127.2
20.5°	2341.8	2248.0	2173.2	2125.0	2104.0	2109.9
21°	2328.6	2232.5	2156.8	2107.6	2086.7	2093.1

TEST NUMBER: P776655

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2287.6	2185.5	2105.8	2055.7	2034.7	2041.6
23°	2273.0	2168.7	2088.5	2037.9	2017.0	2023.8
23.5°	2258.9	2152.7	2071.2	2020.2	1999.2	2006.0
24°	2243.9	2135.4	2053.0	2001.9	1980.5	1987.8
24.5°	2228.4	2118.6	2035.2	1983.7	1961.8	1969.1
25°	2212.9	2100.8	2016.5	1965.0	1943.6	1950.9
25.5°	2196.9	2083.5	1998.3	1945.9	1924.9	1932.2
26°	2181.0	2066.2	1979.2	1926.8	1905.8	1913.5
26.5°	2164.1	2047.5	1960.9	1908.1	1886.7	1894.4
27°	2147.7	2028.8	1941.3	1888.9	1867.5	1875.3
27.5°	2131.3	2010.6	1922.2	1869.4	1847.9	1855.7
28°	2114.0	1991.9	1902.2	1849.3	1827.9	1836.1
28.5°	2097.2	1973.2	1883.0	1829.7	1808.8	1816.5
29°	2078.9	1953.6	1863.0	1809.7	1788.3	1796.9
29.5°	2061.2	1934.5	1842.9	1789.6	1768.2	1776.9
30°	2042.9	1915.4	1822.9	1769.1	1747.7	1756.4
30.5°	2025.2	1895.3	1802.4	1748.6	1727.7	1735.9
31°	2006.5	1875.3	1781.4	1728.1	1706.7	1715.4
31.5°	1987.4	1855.2	1761.4	1707.2	1686.2	1694.9
32°	1968.2	1834.7	1740.4	1686.2	1664.8	1673.9
32.5°	1949.5	1814.7	1719.5	1665.2	1644.3	1652.9
33°	1930.0	1794.6	1698.5	1644.3	1622.9	1631.5
33.5°	1910.4	1773.7	1677.5	1622.9	1601.9	1610.6
34°	1890.8	1752.7	1656.1	1601.5	1580.5	1589.2
34.5°	1870.7	1731.8	1634.3	1580.0	1559.1	1567.3
35°	1850.7	1710.8	1612.8	1558.2	1536.8	1545.4
35.5°	1830.6	1689.4	1591.9	1536.3	1515.8	1524.0
36°	1810.6	1668.9	1570.0	1514.9	1493.9	1502.1
36.5°	1790.1	1647.0	1548.6	1493.0	1471.6	1480.3
37°	1769.1	1625.6	1526.3	1470.7	1449.7	1457.9
37.5°	1748.6	1604.6	1504.9	1448.8	1427.9	1435.6
38°	1727.7	1582.8	1482.5	1426.5	1405.5	1412.8
38.5°	1706.7	1560.9	1461.1	1404.6	1383.2	1391.0
39°	1685.7	1540.0	1439.3	1382.8	1360.9	1369.1
39.5°	1664.8	1518.1	1417.4	1360.4	1338.6	1345.9
40°	1643.4	1496.2	1395.1	1337.7	1315.8	1322.6
40.5°	1622.4	1474.8	1373.2	1315.8	1293.5	1300.3
41°	1601.0	1452.5	1351.3	1293.5	1270.2	1277.5
41.5°	1579.6	1431.1	1329.0	1271.1	1247.5	1254.3
42°	1558.2	1409.6	1307.1	1248.8	1225.1	1231.0
42.5°	1536.8	1388.2	1285.7	1226.5	1202.3	1208.3
43°	1515.8	1366.8	1263.9	1204.2	1179.6	1185.5
43.5°	1493.9	1344.5	1242.4	1181.8	1156.8	1162.3

TEST NUMBER: P776655

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1430.2	1280.3	1176.8	1115.3	1088.4	1092.1
45.5°	1408.7	1258.8	1155.4	1093.0	1065.2	1068.9
46°	1387.8	1238.3	1134.5	1071.6	1042.4	1045.6
46.5°	1367.3	1217.8	1113.5	1049.3	1019.6	1021.5
47°	1346.8	1197.3	1092.1	1027.4	996.9	997.8
47.5°	1326.3	1176.4	1071.1	1005.5	974.5	975.0
48°	1306.7	1157.2	1050.6	983.7	951.8	951.8
48.5°	1286.6	1136.7	1029.7	962.2	928.5	928.5
49°	1265.7	1116.2	1009.6	941.3	906.2	904.8
49.5°	1243.4	1095.7	989.6	919.9	883.9	882.1
50°	1220.6	1074.3	969.1	898.5	861.1	858.4
50.5°	1196.4	1052.0	947.7	877.5	839.2	835.1
51°	1171.8	1029.7	927.2	856.5	816.4	811.0
51.5°	1146.3	1006.4	906.2	835.6	794.6	788.7
52°	1120.3	983.2	884.8	815.1	772.7	765.4
52.5°	1093.0	959.1	862.9	793.7	750.4	742.6
53°	1066.1	934.9	841.1	772.7	729.0	719.9
53.5°	1037.4	910.3	819.2	751.3	707.1	697.1
54°	1008.7	885.7	796.9	730.8	685.7	673.8
54.5°	980.0	861.1	774.5	709.4	664.3	651.5
55°	951.8	836.0	751.8	688.0	643.3	629.2
55.5°	922.1	810.1	729.4	666.6	621.4	606.4
56°	893.0	785.0	706.6	645.6	600.5	585.0
56.5°	864.3	760.0	684.3	624.2	579.5	562.7
57°	835.6	734.4	661.1	603.2	558.6	540.8
57.5°	806.4	708.9	638.3	581.4	537.6	518.9
58°	778.2	683.9	616.0	560.9	517.6	498.0
58.5°	750.4	658.8	593.7	539.4	496.6	477.0
59°	721.7	633.7	571.3	518.5	476.1	455.6
59.5°	694.3	608.7	549.0	498.0	456.1	435.1
60°	667.0	584.5	527.1	477.5	436.0	414.6
60.5°	640.1	560.4	505.3	457.0	416.0	394.1
61°	613.2	536.7	483.9	436.9	396.4	374.1
61.5°	587.3	513.9	462.4	417.3	377.2	354.9
62°	562.7	491.1	441.5	397.7	358.6	335.3
62.5°	537.2	468.8	421.0	378.2	339.9	316.2
63°	512.6	446.5	400.9	359.0	321.7	298.0
63.5°	488.4	425.5	380.9	340.3	303.4	280.2
64°	465.2	404.6	361.3	321.7	286.1	262.4
64.5°	442.8	384.5	342.2	303.4	268.8	246.0
65°	421.0	364.5	323.5	285.7	252.9	230.1
65.5°	400.5	345.4	305.3	267.9	236.5	214.1
66°	380.4	326.2	287.0	251.0	221.0	199.6



TEST NUMBER: P776655

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	322.1	273.8	236.9	202.7	177.2	161.3
68°	304.3	257.4	221.0	188.6	164.5	153.1
68.5°	287.5	241.9	206.4	174.5	154.5	144.4
69°	271.1	226.9	191.4	160.8	144.9	136.2
69.5°	255.6	212.8	177.7	150.4	135.3	127.6
70°	240.6	198.6	165.4	139.9	125.3	123.5
70.5°	226.4	185.4	154.9	129.4	115.7	118.9
71°	212.3	173.1	144.4	118.9	111.2	113.9
71.5°	199.6	160.8	133.9	110.7	107.1	108.9
72°	186.8	150.8	123.5	103.4	102.5	103.4
72.5°	175.0	140.8	113.0	96.6	97.5	98.4
73°	163.1	130.8	104.3	90.2	92.5	93.4
73.5°	152.2	120.3	96.6	84.7	87.9	88.4
74°	141.7	111.6	89.3	80.2	83.4	83.8
74.5°	132.1	103.0	82.5	76.1	78.8	78.8
75°	122.6	95.2	76.5	72.4	74.7	74.7
75.5°	113.4	87.5	70.6	68.3	70.2	70.2
76°	104.8	80.6	65.6	64.7	66.1	66.1
76.5°	97.0	73.8	60.6	61.1	62.0	62.0
77°	89.3	67.4	56.0	57.4	58.3	57.9
77.5°	82.0	62.0	51.9	53.8	54.7	54.2
78°	74.7	56.0	47.8	50.6	51.0	50.1
78.5°	68.3	51.0	44.2	47.4	47.4	46.9
79°	62.0	46.5	41.0	44.2	43.7	43.3
79.5°	56.5	41.9	37.8	41.0	40.5	40.1
80°	51.0	37.8	35.1	37.8	37.4	36.9
80.5°	45.6	34.2	32.8	35.1	34.2	33.7
81°	41.5	30.5	30.1	32.3	31.0	30.5
81.5°	37.4	27.3	27.8	29.6	28.2	27.8
82°	32.8	24.6	25.1	26.9	25.1	25.1
82.5°	28.7	21.9	22.8	24.1	22.3	22.3
83°	24.1	19.1	20.5	21.9	19.6	19.6
83.5°	21.0	16.9	18.2	19.6	16.9	16.9
84°	17.8	14.6	16.4	17.3	15.0	14.6
84.5°	15.0	12.8	14.1	15.0	12.8	12.3
85°	12.3	10.9	12.3	12.8	10.5	10.0
85.5°	10.0	8.7	10.0	10.9	8.2	7.7
86°	7.7	7.3	8.2	8.7	6.8	5.9
86.5°	5.9	5.5	6.4	6.8	5.5	5.0
87°	4.1	4.1	4.6	5.0	4.1	3.6
87.5°	2.7	2.3	2.7	3.2	2.7	2.7
88°	1.8	0.9	1.4	1.8	1.8	1.8
88.5°	0.5	0.5	0.5	0.5	0.9	0.9



TEST NUMBER: P776655

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRH-HCD61TRLWW-5000lm-2700K

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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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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°	2076.2	2107.6	2163.7	2243.9	2350.9	2437.0	2491.3	2510.4	2499.0	2462.6	2399.7
22°	2058.9	2090.8	2147.3	2228.4	2338.2	2425.7	2481.7	2500.4	2488.5	2451.2	2387.8



44°	1138.1	1178.2	1243.8	1342.2	1495.8	1639.3	1745.0	1786.4	1774.1	1718.1	1613.8
44.5°	1115.3	1155.4	1221.5	1320.3	1473.4	1617.4	1723.6	1765.5	1753.6	1697.6	1592.8



66.5°	185.4	232.8	282.5	334.4	399.1	440.1	467.0	471.6	447.9	436.5	403.7
67°	172.2	216.9	264.7	314.8	378.2	417.8	443.3	447.0	423.3	415.5	384.1



89°	0.5	0.5	0.9	0.9	1.8	1.4	0.9	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°	2315.4	2217.0	2140.4	2090.3	2069.4	2076.2
22°	2301.3	2201.5	2123.1	2073.5	2052.1	2058.9



44°	1472.5	1323.1	1220.1	1159.5	1133.5	1138.1
44.5°	1450.7	1301.7	1198.7	1137.2	1111.2	1115.3



66.5°	359.9	308.4	269.7	233.7	205.9	185.4
67°	339.9	290.2	252.9	218.7	191.4	172.2

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Scaled Data Report



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)