

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: P776684

Luminaire Tested: HCDJBS4050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776684  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B061)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K  
Description: 6 INCH ROUND NARROW LENSED WALLWASH KIT  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5534.6 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.11 / 1.09 / 1.15  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

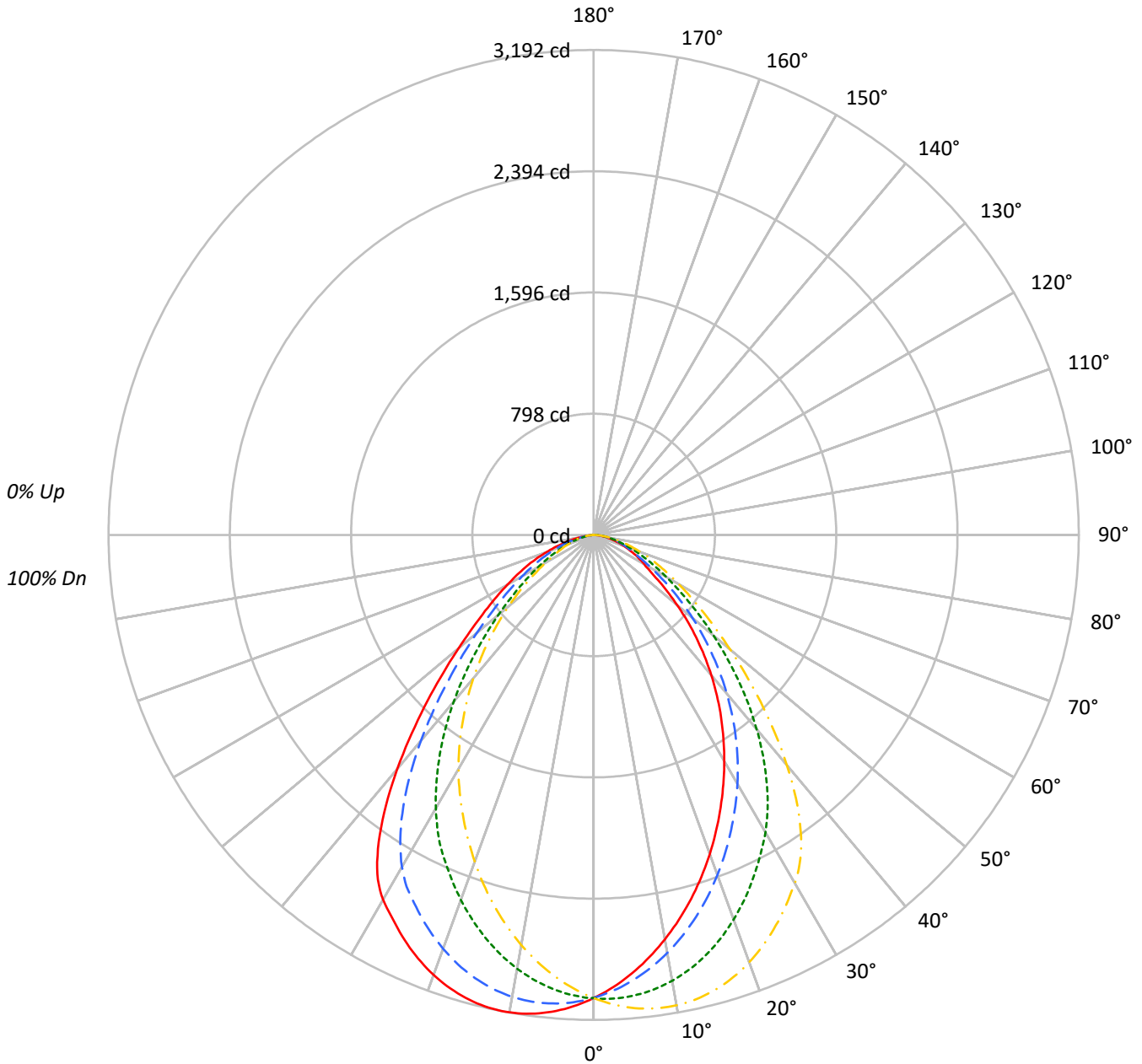
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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					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	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	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	78	70	64	86	76	69	64	74	68	63	72	67	62	70	65	61	60					60			
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53					53			
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	48					48			
7	71	59	51	46	70	58	51	46	57	50	45	55	49	45	54	49	45	43					43			
8	67	54	47	41	65	54	46	41	53	46	41	51	45	41	50	45	41	39					39			
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36					36			
10	59	47	40	35	58	46	39	35	45	39	35	44	39	34	44	38	34	33					33			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	167114	167114	167114	167114
5°	159360	167483	173360	165210
10°	150426	165851	177635	161392
15°	140693	162345	179757	155898
20°	130316	157105	179764	149066
25°	119590	150474	177984	141371
30°	108745	143066	175419	131482
35°	97681	132795	164959	118113
40°	86183	119424	143741	102506
45°	73876	103863	119974	85575
50°	61107	87682	98939	69669
55°	49269	72743	83275	56371
60°	41883	60357	71957	45819
65°	38033	50810	62899	37215
70°	33772	42635	53214	29717
75°	29611	35986	42256	23341
80°	24530	31096	28507	17458
85°	15284	29940	10064	9749

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 122532 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	285.9	5.2
10°-20°	790.5	14.3
20°-30°	1119.6	20.2
30°-40°	1192.8	21.6
40°-50°	957.4	17.3
50°-60°	621.5	11.2
60°-70°	360.5	6.5
70°-80°	169.5	3.1
80°-90°	36.9	0.7
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°	2196.0	39.7
0°-40°	3388.8	61.2
0°-60°	4967.7	89.8
0°-90°	5534.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5534.6	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3048	3048	3048	3048	3048	
5°	2896	3044	3150	3002	2896	270
15°	2479	2860	3167	2747	2479	694
25°	1977	2488	2942	2337	1977	908
35°	1460	1984	2465	1765	1460	911
45°	953	1340	1548	1104	953	734
55°	516	761	871	590	516	469
65°	293	392	485	287	293	291
75°	140	170	200	110	140	149
85°	24	48	16	16	24	32
90°	0	7	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°	3048.4	3048.4	3048.4	3048.4	3048.4	3048.4	3048.4	3048.4	3048.4	3048.4	3048.4
0.5°	3035.7	3035.7	3039.1	3044.5	3053.2	3056.1	3059.0	3060.5	3061.9	3058.1	3054.7
1°	3022.1	3024.1	3030.9	3040.6	3054.2	3061.9	3068.7	3072.6	3073.6	3068.7	3061.5
1.5°	3008.1	3012.0	3021.2	3036.2	3054.7	3067.8	3078.0	3083.8	3085.2	3078.5	3067.8
2°	2993.5	2998.8	3012.0	3030.9	3055.2	3072.6	3086.7	3094.5	3095.9	3087.7	3073.6
2.5°	2978.0	2985.3	3001.8	3025.1	3054.2	3076.5	3095.0	3104.7	3106.6	3096.4	3078.9
3°	2962.4	2971.7	2991.1	3019.2	3053.2	3080.4	3102.2	3114.4	3116.3	3104.7	3083.3
3.5°	2946.9	2957.1	2979.9	3012.4	3051.8	3083.3	3109.0	3123.6	3126.0	3111.9	3087.7
4°	2930.4	2942.5	2968.3	3005.2	3049.8	3086.2	3115.3	3132.3	3134.3	3119.2	3090.6
4.5°	2913.4	2927.5	2956.1	2997.4	3046.9	3088.2	3121.2	3140.1	3142.5	3125.5	3094.0
5°	2895.9	2911.5	2943.5	2988.7	3043.5	3089.1	3126.5	3147.9	3150.3	3131.4	3095.9
5.5°	2878.5	2895.5	2930.4	2980.4	3039.6	3090.1	3130.9	3154.7	3157.1	3136.7	3097.9
6°	2860.0	2878.9	2917.3	2970.7	3035.3	3090.1	3134.8	3160.5	3163.4	3141.1	3098.8
6.5°	2841.6	2862.0	2903.2	2961.0	3029.9	3089.6	3138.2	3165.8	3169.2	3145.4	3099.3
7°	2822.6	2844.5	2888.7	2950.3	3024.6	3088.6	3140.6	3170.7	3174.1	3148.3	3099.3
7.5°	2803.7	2826.5	2874.1	2939.1	3018.3	3087.2	3142.5	3175.0	3178.4	3151.3	3098.8
8°	2784.3	2808.6	2858.6	2928.0	3011.5	3084.8	3144.0	3178.4	3182.3	3153.2	3097.9
8.5°	2763.9	2790.1	2842.5	2916.3	3004.2	3081.8	3145.0	3181.8	3185.2	3154.7	3095.9
9°	2744.0	2770.7	2826.5	2903.7	2996.4	3078.5	3145.0	3183.8	3188.2	3155.6	3093.5
9.5°	2723.1	2751.3	2810.0	2890.6	2988.2	3074.6	3144.5	3185.7	3189.6	3156.1	3090.6
10°	2702.3	2732.4	2793.0	2877.0	2979.4	3069.7	3143.5	3186.7	3191.1	3155.6	3087.2
10.5°	2680.9	2712.9	2775.6	2863.4	2969.7	3064.9	3142.0	3187.2	3191.6	3154.2	3082.8
11°	2660.0	2692.6	2757.6	2848.9	2960.0	3059.0	3139.6	3186.7	3191.6	3152.7	3078.0
11.5°	2637.7	2671.7	2739.2	2834.3	2948.8	3052.7	3136.7	3185.7	3190.6	3150.3	3072.1
12°	2615.9	2651.3	2720.7	2818.8	2938.2	3045.4	3133.3	3184.3	3189.1	3147.4	3066.3
12.5°	2593.5	2629.4	2701.8	2802.7	2927.0	3038.2	3128.9	3181.8	3187.2	3144.0	3060.0
13°	2571.2	2609.1	2682.8	2786.7	2914.9	3029.9	3124.1	3178.9	3184.3	3139.6	3052.7
13.5°	2547.9	2587.2	2662.9	2770.7	2901.8	3021.2	3118.3	3175.5	3180.9	3135.2	3045.0
14°	2525.6	2565.4	2643.0	2753.7	2888.7	3012.0	3112.4	3171.2	3177.0	3129.9	3036.7
14.5°	2501.8	2542.6	2623.1	2735.8	2875.1	3001.8	3105.6	3166.3	3172.6	3123.6	3028.0
15°	2479.0	2520.7	2602.3	2718.3	2860.5	2991.1	3098.4	3161.0	3167.3	3116.8	3018.7
15.5°	2454.2	2497.4	2580.9	2699.3	2846.4	2980.4	3090.6	3154.7	3161.0	3109.5	3008.6
16°	2430.9	2474.6	2560.5	2681.4	2830.9	2968.7	3081.8	3147.9	3154.7	3101.8	2998.4
16.5°	2407.1	2451.3	2539.2	2662.0	2815.4	2956.6	3072.6	3140.6	3147.4	3093.5	2987.7
17°	2382.9	2428.5	2517.3	2642.6	2798.9	2944.0	3062.9	3132.3	3139.6	3084.8	2976.5
17.5°	2358.1	2404.7	2495.0	2622.7	2782.8	2930.9	3052.7	3124.1	3131.4	3075.1	2964.4
18°	2333.8	2381.4	2473.1	2602.8	2765.4	2916.3	3041.6	3114.4	3122.6	3065.3	2951.8
18.5°	2308.6	2357.1	2450.3	2581.9	2747.9	2902.2	3029.9	3104.7	3112.9	3054.7	2938.7
19°	2284.3	2333.4	2428.0	2561.0	2729.9	2887.7	3018.3	3094.5	3102.7	3043.5	2925.5
19.5°	2259.1	2308.6	2404.7	2540.1	2712.0	2872.6	3005.6	3083.8	3092.0	3031.9	2912.0
20°	2233.8	2284.8	2381.9	2519.3	2693.0	2857.1	2992.5	3072.1	3081.4	3020.2	2897.9
20.5°	2208.1	2260.1	2358.6	2496.9	2674.1	2840.6	2978.9	3060.0	3069.2	3007.6	2882.8
21°	2183.4	2235.3	2334.8	2475.6	2654.2	2824.1	2964.9	3047.9	3057.1	2994.0	2867.8



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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°	2106.2	2160.5	2263.0	2408.1	2595.0	2771.7	2920.7	3007.6	3017.8	2952.7	2820.2
23°	2080.5	2134.8	2238.7	2385.3	2573.6	2753.2	2904.7	2993.5	3003.7	2937.7	2803.2
23.5°	2055.2	2110.1	2214.9	2362.0	2552.8	2735.3	2888.2	2978.0	2989.1	2922.6	2786.2
24°	2029.5	2084.3	2190.2	2339.2	2530.9	2715.4	2871.7	2962.9	2974.1	2906.6	2768.8
24.5°	2003.3	2059.1	2165.4	2315.4	2509.6	2696.4	2854.7	2946.9	2958.6	2890.6	2750.8
25°	1977.1	2033.9	2141.1	2291.6	2487.7	2677.0	2836.7	2931.4	2942.5	2874.1	2731.9
25.5°	1951.3	2007.6	2116.4	2267.3	2465.9	2656.6	2819.2	2914.4	2926.5	2857.1	2713.9
26°	1925.6	1982.4	2091.1	2244.0	2443.1	2636.7	2801.3	2897.4	2909.5	2839.6	2695.5
26.5°	1899.9	1956.7	2066.9	2220.7	2421.2	2616.3	2782.4	2879.4	2892.1	2822.2	2677.0
27°	1873.7	1931.9	2042.1	2196.5	2397.9	2595.5	2762.9	2862.4	2874.6	2804.2	2659.5
27.5°	1847.5	1906.2	2017.4	2172.2	2375.6	2574.1	2744.0	2843.5	2857.1	2787.7	2641.1
28°	1821.2	1879.5	1992.1	2148.4	2352.3	2552.8	2724.6	2825.6	2839.6	2770.7	2621.2
28.5°	1796.0	1853.8	1967.4	2124.6	2330.0	2531.4	2704.7	2807.1	2823.1	2754.2	2598.9
29°	1769.8	1828.5	1942.1	2099.9	2306.7	2510.0	2684.8	2789.1	2807.1	2735.8	2574.6
29.5°	1743.6	1802.8	1916.9	2075.1	2283.8	2489.7	2665.9	2771.7	2789.6	2715.4	2549.4
30°	1717.9	1777.1	1891.6	2050.8	2260.1	2467.3	2646.9	2754.2	2771.2	2692.6	2522.7
30.5°	1692.1	1751.3	1865.9	2025.6	2235.8	2445.0	2626.1	2735.3	2751.3	2667.3	2494.5
31°	1665.9	1725.6	1840.7	1998.9	2210.5	2421.2	2605.2	2715.4	2729.0	2640.6	2463.9
31.5°	1640.2	1700.4	1814.5	1973.7	2184.3	2396.5	2581.9	2692.1	2704.2	2612.5	2432.9
32°	1614.0	1673.7	1788.7	1947.0	2158.1	2369.8	2556.6	2667.8	2677.5	2581.9	2401.3
32.5°	1588.3	1648.0	1763.0	1920.3	2130.5	2341.6	2529.5	2641.6	2647.9	2549.4	2367.8
33°	1563.0	1622.2	1736.3	1893.6	2101.8	2313.0	2502.3	2613.4	2615.9	2514.4	2332.9
33.5°	1537.3	1596.5	1710.6	1865.9	2073.7	2283.8	2472.2	2581.9	2580.9	2477.5	2296.9
34°	1511.6	1570.3	1683.9	1838.2	2044.0	2253.7	2441.6	2548.4	2543.5	2440.1	2261.0
34.5°	1485.8	1545.1	1657.7	1809.6	2014.4	2223.2	2409.1	2512.5	2505.7	2400.8	2222.2
35°	1459.6	1518.8	1631.0	1781.4	1984.3	2190.6	2374.6	2474.6	2464.9	2360.5	2183.8
35.5°	1434.9	1493.1	1604.3	1752.8	1953.8	2158.6	2339.2	2435.8	2423.2	2318.3	2144.5
36°	1409.6	1467.4	1577.6	1724.2	1923.2	2125.6	2302.8	2395.5	2380.4	2275.6	2104.2
36.5°	1383.9	1441.7	1550.9	1695.0	1892.1	2092.1	2264.9	2353.3	2335.8	2232.9	2063.5
37°	1357.7	1415.0	1523.7	1666.4	1861.1	2057.6	2226.6	2310.1	2290.2	2188.2	2021.2
37.5°	1332.4	1389.2	1497.0	1637.8	1829.5	2022.2	2186.3	2266.4	2244.5	2143.1	1979.0
38°	1306.7	1363.5	1469.3	1608.6	1797.0	1988.7	2146.0	2222.7	2197.9	2097.0	1936.8
38.5°	1281.0	1337.8	1443.1	1579.5	1765.9	1951.3	2105.2	2177.5	2151.3	2052.3	1894.5
39°	1255.7	1311.6	1416.4	1550.9	1733.4	1915.4	2064.0	2131.9	2103.3	2005.2	1851.8
39.5°	1230.0	1286.3	1389.2	1521.3	1701.4	1878.5	2021.2	2085.3	2056.2	1959.6	1809.6
40°	1204.3	1260.6	1361.6	1492.1	1668.8	1842.6	1978.5	2038.7	2008.6	1913.0	1765.4
40.5°	1179.1	1234.9	1335.4	1463.0	1635.3	1802.8	1936.3	1992.1	1961.0	1867.8	1722.7
41°	1153.3	1209.1	1308.2	1433.9	1602.8	1765.9	1893.6	1945.5	1913.5	1820.3	1680.0
41.5°	1128.1	1184.4	1281.5	1404.8	1569.8	1728.0	1850.9	1897.9	1865.4	1775.6	1637.8
42°	1102.4	1158.7	1254.8	1375.2	1537.3	1691.6	1806.7	1851.3	1818.8	1728.5	1594.6
42.5°	1077.6	1133.9	1228.6	1346.5	1504.3	1651.8	1764.0	1805.7	1772.7	1684.4	1553.8
43°	1052.4	1108.7	1201.9	1316.4	1470.8	1614.5	1721.3	1760.1	1726.1	1638.7	1511.6
43.5°	1027.1	1083.4	1175.7	1289.2	1437.8	1575.6	1679.0	1714.9	1680.5	1595.0	1470.3



TEST NUMBER: P776684

CATALOG NUMBER: HCDJBL54050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	952.9	1008.7	1097.0	1202.4	1339.7	1463.0	1552.8	1580.5	1547.5	1465.9	1350.9
45.5°	928.1	984.4	1071.3	1175.7	1306.7	1425.2	1511.6	1538.7	1504.3	1424.7	1312.5
46°	904.3	960.1	1046.1	1147.5	1275.2	1388.3	1471.3	1496.0	1462.5	1383.4	1274.7
46.5°	880.0	935.9	1020.3	1119.3	1242.6	1352.3	1431.5	1455.7	1420.8	1343.6	1237.3
47°	855.8	912.1	995.1	1090.7	1210.6	1316.4	1390.7	1413.5	1380.5	1304.8	1200.9
47.5°	832.0	887.8	970.3	1064.5	1179.1	1280.0	1352.3	1374.7	1341.2	1266.4	1165.9
48°	808.2	864.0	945.6	1037.3	1148.5	1245.1	1315.0	1335.8	1303.3	1229.5	1131.0
48.5°	784.9	840.7	920.8	1011.1	1117.4	1211.1	1277.6	1298.9	1266.4	1193.6	1097.5
49°	762.1	817.4	897.0	983.4	1087.3	1177.6	1241.7	1260.6	1229.5	1159.2	1064.0
49.5°	739.3	794.6	872.8	957.7	1057.2	1143.1	1206.2	1225.7	1195.1	1124.7	1032.5
50°	716.5	771.3	848.5	931.5	1028.1	1110.6	1171.3	1190.2	1160.1	1091.7	1001.4
50.5°	694.6	748.0	825.2	905.8	998.0	1078.6	1136.8	1156.7	1126.6	1059.2	971.3
51°	672.8	726.2	801.9	880.5	969.8	1047.0	1104.8	1123.2	1094.1	1028.1	941.7
51.5°	651.4	704.3	778.6	854.8	943.1	1016.4	1073.2	1091.2	1063.5	998.5	913.5
52°	630.5	683.0	756.3	830.0	915.0	985.9	1041.2	1060.1	1032.9	969.8	886.4
52.5°	610.2	661.1	733.4	805.8	887.3	955.8	1011.1	1031.0	1003.8	941.7	859.2
53°	590.3	640.3	711.6	781.5	861.1	927.6	981.5	1000.9	975.7	914.0	833.4
53.5°	570.4	619.4	688.8	758.2	834.9	899.5	953.3	972.8	947.5	888.3	808.7
54°	551.9	600.0	667.9	734.9	810.1	872.3	925.7	945.1	921.3	863.1	783.9
54.5°	533.5	580.5	647.5	712.1	784.9	845.6	898.0	918.4	895.6	838.3	760.6
55°	515.5	561.1	626.7	689.8	761.1	819.9	872.8	892.7	871.3	815.0	737.8
55.5°	498.0	542.7	606.3	668.4	737.3	795.1	846.5	867.4	846.5	791.2	716.0
56°	482.0	524.2	586.9	646.6	714.0	770.8	821.8	842.7	822.8	769.9	694.6
56.5°	466.0	506.3	567.0	626.2	691.7	747.0	797.5	818.4	800.0	747.5	673.3
57°	450.9	489.8	547.5	605.8	669.4	724.2	773.7	795.6	778.1	726.7	653.4
57.5°	436.4	472.8	528.1	585.4	648.5	701.4	751.4	772.8	756.3	705.8	633.5
58°	423.8	456.8	510.6	566.5	627.6	680.5	729.1	751.4	735.4	686.4	615.0
58.5°	411.1	440.7	492.7	547.5	607.7	659.7	707.7	730.1	715.0	666.5	596.1
59°	400.0	426.7	475.2	529.6	588.3	638.8	686.9	709.2	694.6	647.0	577.6
59.5°	389.8	412.6	458.2	511.1	568.9	618.4	665.5	688.8	675.2	628.6	560.2
60°	382.0	399.5	442.7	493.7	550.5	599.0	645.6	668.9	656.3	611.1	543.2
60.5°	373.8	386.9	426.7	477.2	532.5	580.1	626.7	649.5	637.8	592.2	526.2
61°	365.0	376.7	411.6	460.7	515.0	561.6	607.7	630.5	618.9	574.7	509.7
61.5°	356.3	367.0	397.5	444.1	498.0	543.7	589.3	612.1	601.4	558.2	493.2
62°	347.1	359.2	384.0	429.1	481.5	526.7	570.8	594.1	584.4	541.7	477.6
62.5°	337.8	350.5	370.4	413.6	465.0	509.2	552.9	576.2	567.0	524.7	461.6
63°	328.6	341.7	358.2	399.0	449.5	492.2	535.4	558.7	549.5	508.2	446.6
63.5°	319.9	333.0	345.6	384.4	434.0	476.7	518.4	541.2	533.0	492.2	431.5
64°	310.7	324.3	334.0	371.3	419.9	460.7	501.9	524.7	517.0	477.2	417.5
64.5°	301.9	315.0	322.8	357.7	405.8	445.6	485.4	508.7	500.5	461.1	403.4
65°	293.2	306.8	312.6	344.6	391.7	430.1	469.9	492.7	484.9	446.6	389.3
65.5°	284.4	298.5	302.4	332.0	377.6	416.0	454.3	476.7	468.9	431.0	375.2
66°	275.7	289.8	292.7	319.9	363.1	401.9	438.8	460.7	452.9	416.5	361.1





TEST NUMBER: P776684

CATALOG NUMBER: HCDJBL54050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	250.5	264.5	266.5	284.9	325.2	359.2	395.6	416.0	406.8	373.3	321.8
68°	242.7	256.3	258.7	274.7	312.6	346.1	381.5	401.4	391.7	358.7	308.7
68.5°	234.5	248.0	251.0	264.1	300.5	333.0	367.0	386.9	376.7	344.2	296.6
69°	226.7	240.3	243.7	253.9	288.8	319.9	353.4	372.3	361.1	330.1	284.4
69.5°	218.4	232.5	236.4	244.2	277.2	307.7	339.3	357.3	346.6	316.5	272.3
70°	210.7	224.7	229.1	234.9	266.0	295.1	326.2	343.7	332.0	302.4	260.2
70.5°	202.9	217.0	221.8	225.7	255.3	283.5	313.6	329.6	317.9	289.3	249.0
71°	195.6	209.2	214.5	217.0	244.6	271.8	301.0	316.5	303.9	276.7	237.8
71.5°	188.3	201.9	207.8	208.2	234.5	260.7	288.3	302.4	289.8	263.6	226.2
72°	181.1	194.6	200.5	200.5	224.3	249.5	276.2	289.8	276.2	251.0	215.5
72.5°	175.2	187.4	193.7	192.2	214.5	238.3	264.1	276.7	263.1	238.3	204.8
73°	168.0	180.1	186.9	184.9	205.3	228.1	252.4	264.1	250.0	226.2	194.2
73.5°	161.2	175.2	180.1	177.7	196.1	217.5	240.8	251.9	236.4	214.5	184.0
74°	153.9	168.4	176.2	170.9	187.4	207.8	229.6	239.8	224.3	202.9	173.8
74.5°	146.6	161.2	168.9	164.1	178.6	197.6	218.9	227.7	211.6	191.3	164.1
75°	139.8	153.9	162.1	157.8	169.9	187.9	208.2	216.0	199.5	180.1	154.4
75.5°	133.5	146.6	155.3	151.0	161.6	178.6	197.6	204.8	187.4	169.4	145.1
76°	126.7	139.8	148.0	144.7	153.9	169.9	186.9	193.7	175.2	158.7	135.9
76.5°	120.4	133.5	141.7	138.3	146.1	160.7	176.7	182.5	164.1	148.5	126.7
77°	114.1	126.7	135.4	132.5	138.8	151.9	167.0	171.8	152.9	138.3	118.4
77.5°	107.8	120.4	129.6	126.7	131.1	143.7	157.3	161.6	141.7	128.6	109.7
78°	101.5	114.1	123.3	121.4	124.3	135.4	148.0	151.9	131.1	118.9	101.9
78.5°	95.6	107.8	117.5	115.5	117.5	127.7	138.8	141.7	120.4	109.7	93.7
79°	89.3	101.9	111.6	110.2	111.2	119.9	130.1	132.0	110.2	101.0	85.9
79.5°	83.5	95.6	105.8	104.8	104.4	112.6	121.4	123.3	100.0	92.2	78.6
80°	77.7	89.8	100.0	99.5	98.5	105.3	113.1	114.1	90.3	83.5	71.4
80.5°	72.3	84.0	94.2	94.7	92.7	98.5	104.8	105.3	81.1	75.7	64.6
81°	66.5	78.2	88.8	89.3	86.9	91.7	97.1	96.6	71.8	68.0	57.8
81.5°	60.7	72.3	83.0	84.0	81.5	84.9	89.3	87.9	63.1	60.2	51.5
82°	55.3	67.0	77.7	79.1	76.2	78.6	81.5	79.1	54.9	53.4	46.1
82.5°	50.0	61.2	72.3	73.8	70.9	72.3	74.3	70.9	48.1	47.1	40.3
83°	44.7	55.8	67.0	68.9	66.0	67.0	67.5	63.1	41.3	40.8	34.9
83.5°	39.8	50.5	61.6	64.1	61.2	61.2	61.2	55.8	34.5	34.5	29.6
84°	34.5	45.1	56.8	59.2	56.3	55.3	54.4	49.0	27.7	28.2	23.8
84.5°	29.1	39.8	51.9	54.9	51.9	50.5	49.0	42.2	20.9	21.8	19.9
85°	24.3	34.5	47.1	50.0	47.6	45.6	43.7	35.9	16.0	17.0	15.5
85.5°	19.4	29.6	42.2	45.1	43.2	40.8	37.9	29.1	12.6	12.6	12.1
86°	16.5	24.8	37.9	40.8	38.8	36.4	32.5	22.8	9.7	9.2	8.7
86.5°	13.6	20.9	33.0	35.9	34.9	31.6	26.7	18.0	7.8	6.3	5.8
87°	10.7	17.5	28.6	31.6	30.6	26.7	22.3	14.1	5.8	3.9	3.4
87.5°	7.3	14.6	24.3	27.2	26.7	22.8	18.0	10.2	4.4	1.9	1.5
88°	5.3	11.2	19.9	22.8	22.8	18.4	14.1	6.8	2.9	1.0	0.5
88.5°	2.9	8.3	16.5	18.4	18.4	15.0	10.2	4.4	1.5	0.5	0.0



TEST NUMBER: P776684

CATALOG NUMBER: HCDJBS4050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.5	4.9	6.8	7.3	4.9	1.9	0.5	0.0	0.0	0.0



TEST NUMBER: P776684

CATALOG NUMBER: HCDJBL54050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3048.4	3048.4	3048.4	3048.4	3048.4	3048.4
0.5°	3050.8	3048.8	3042.5	3038.2	3035.3	3035.7
1°	3053.2	3045.9	3034.8	3026.5	3021.7	3022.1
1.5°	3055.2	3042.5	3026.5	3014.4	3007.6	3008.1
2°	3056.1	3038.2	3017.8	3002.2	2993.0	2993.5
2.5°	3057.1	3033.8	3008.6	2989.1	2978.5	2978.0
3°	3057.1	3028.5	2998.8	2976.0	2962.9	2962.4
3.5°	3056.1	3022.6	2988.7	2962.0	2946.9	2946.9
4°	3055.2	3016.3	2977.5	2947.9	2930.9	2930.4
4.5°	3053.7	3009.5	2966.3	2932.8	2914.4	2913.4
5°	3051.3	3002.2	2954.2	2917.8	2896.9	2895.9
5.5°	3048.4	2994.5	2942.1	2901.8	2878.9	2878.5
6°	3045.0	2985.7	2929.4	2885.7	2861.5	2860.0
6.5°	3041.1	2977.0	2915.8	2868.8	2843.0	2841.6
7°	3036.7	2967.3	2902.2	2851.8	2824.1	2822.6
7.5°	3031.4	2957.1	2887.7	2834.3	2804.7	2803.7
8°	3025.5	2946.4	2872.6	2816.3	2785.3	2784.3
8.5°	3019.2	2935.3	2857.6	2797.9	2765.4	2763.9
9°	3012.9	2923.6	2841.6	2779.4	2745.5	2744.0
9.5°	3005.6	2911.5	2825.6	2760.0	2724.1	2723.1
10°	2997.9	2899.3	2809.1	2740.6	2703.7	2702.3
10.5°	2989.1	2885.7	2792.1	2720.7	2682.4	2680.9
11°	2980.4	2872.2	2774.1	2700.3	2661.0	2660.0
11.5°	2970.7	2858.1	2756.1	2679.9	2639.2	2637.7
12°	2960.5	2843.5	2738.2	2659.1	2616.8	2615.9
12.5°	2950.3	2829.0	2719.3	2637.7	2594.5	2593.5
13°	2939.1	2812.9	2700.3	2615.9	2571.7	2571.2
13.5°	2928.0	2796.9	2680.9	2594.0	2549.4	2547.9
14°	2915.4	2780.9	2661.0	2572.2	2526.1	2525.6
14.5°	2902.7	2764.4	2641.1	2549.8	2502.8	2501.8
15°	2889.6	2746.9	2620.7	2527.0	2479.0	2479.0
15.5°	2876.0	2729.4	2599.8	2504.2	2454.7	2454.2
16°	2862.4	2711.5	2578.0	2480.9	2430.9	2430.9
16.5°	2847.4	2693.0	2556.6	2457.6	2407.1	2407.1
17°	2832.8	2674.6	2534.8	2433.8	2382.4	2382.9
17.5°	2817.3	2655.7	2513.0	2410.0	2358.1	2358.1
18°	2801.3	2635.8	2490.6	2386.3	2332.9	2333.8
18.5°	2785.3	2616.3	2467.8	2361.5	2308.6	2308.6
19°	2768.8	2596.0	2445.5	2337.2	2283.4	2284.3
19.5°	2752.3	2576.1	2422.2	2313.0	2258.1	2259.1
20°	2734.3	2555.2	2399.4	2288.2	2232.9	2233.8
20.5°	2716.8	2534.3	2376.1	2263.5	2207.1	2208.1
21°	2698.4	2513.0	2352.3	2237.7	2181.9	2183.4

TEST NUMBER: P776684

CATALOG NUMBER: HCDJBL54050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2642.1	2447.4	2280.4	2163.0	2104.7	2106.2
23°	2622.7	2425.6	2256.7	2137.2	2079.0	2080.5
23.5°	2602.8	2403.3	2232.4	2112.0	2053.3	2055.2
24°	2582.9	2381.4	2208.6	2087.3	2027.1	2029.5
24.5°	2562.5	2359.1	2184.8	2062.0	2001.3	2003.3
25°	2542.6	2337.2	2161.0	2035.3	1975.6	1977.1
25.5°	2522.7	2314.4	2135.8	2011.5	1949.9	1951.3
26°	2502.8	2292.1	2112.0	1984.8	1924.2	1925.6
26.5°	2482.4	2268.8	2087.7	1960.6	1897.9	1899.9
27°	2461.0	2243.6	2062.5	1934.8	1871.7	1873.7
27.5°	2437.7	2216.4	2035.8	1909.6	1846.0	1847.5
28°	2412.5	2190.2	2009.1	1882.9	1820.3	1821.2
28.5°	2386.3	2162.0	1981.9	1857.7	1794.5	1796.0
29°	2359.6	2134.8	1954.7	1831.4	1768.3	1769.8
29.5°	2331.9	2106.2	1927.6	1805.2	1742.6	1743.6
30°	2302.3	2077.1	1899.4	1777.1	1717.4	1717.9
30.5°	2272.7	2047.4	1871.2	1751.8	1691.6	1692.1
31°	2242.1	2017.8	1842.1	1724.2	1664.9	1665.9
31.5°	2211.0	1987.3	1813.0	1697.0	1639.2	1640.2
32°	2178.5	1956.2	1783.9	1668.8	1613.0	1614.0
32.5°	2146.0	1924.6	1754.7	1642.6	1586.8	1588.3
33°	2113.0	1893.6	1725.1	1614.9	1561.1	1563.0
33.5°	2079.5	1861.5	1695.0	1587.3	1534.9	1537.3
34°	2044.5	1830.0	1665.9	1559.6	1508.6	1511.6
34.5°	2009.1	1796.0	1635.3	1531.9	1481.9	1485.8
35°	1974.2	1764.9	1606.2	1504.3	1455.7	1459.6
35.5°	1938.7	1731.4	1575.6	1476.6	1430.0	1434.9
36°	1902.8	1698.9	1547.0	1448.9	1403.8	1409.6
36.5°	1865.4	1665.9	1516.9	1421.8	1377.6	1383.9
37°	1827.6	1632.9	1487.8	1394.1	1351.4	1357.7
37.5°	1790.2	1599.9	1457.2	1367.4	1325.6	1332.4
38°	1752.3	1565.9	1428.6	1339.2	1298.9	1306.7
38.5°	1714.5	1532.4	1398.5	1312.1	1273.2	1281.0
39°	1676.1	1499.4	1368.8	1285.4	1247.0	1255.7
39.5°	1637.8	1466.4	1338.8	1258.2	1221.3	1230.0
40°	1599.4	1432.4	1309.1	1230.0	1195.6	1204.3
40.5°	1561.1	1398.9	1279.0	1202.4	1169.8	1179.1
41°	1523.2	1365.4	1249.0	1175.2	1144.6	1153.3
41.5°	1484.4	1332.4	1219.3	1148.5	1118.9	1128.1
42°	1447.0	1299.4	1190.7	1122.3	1093.6	1102.4
42.5°	1409.1	1266.4	1161.6	1096.5	1068.9	1077.6
43°	1371.8	1233.4	1132.9	1070.3	1044.1	1052.4
43.5°	1334.4	1200.4	1104.8	1044.6	1019.4	1027.1

TEST NUMBER: P776684

CATALOG NUMBER: HCDJBL54050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1227.1	1103.8	1021.8	968.4	944.6	952.9
45.5°	1192.2	1072.7	994.1	943.6	919.8	928.1
46°	1158.2	1042.7	967.9	919.4	896.1	904.3
46.5°	1123.7	1012.1	941.2	894.6	871.8	880.0
47°	1089.7	982.9	915.0	870.8	848.5	855.8
47.5°	1057.7	953.3	888.8	847.0	825.7	832.0
48°	1026.2	924.7	862.6	822.8	802.9	808.2
48.5°	995.1	897.0	836.8	799.5	779.6	784.9
49°	965.0	869.4	812.6	776.7	757.7	762.1
49.5°	934.9	843.6	788.3	753.4	735.9	739.3
50°	906.7	816.9	764.0	731.0	713.5	716.5
50.5°	878.1	791.2	739.8	708.7	691.7	694.6
51°	850.4	766.5	716.5	686.4	671.3	672.8
51.5°	824.7	742.7	694.1	664.5	650.4	651.4
52°	799.5	718.9	672.3	644.1	630.1	630.5
52.5°	773.7	695.6	650.4	623.3	609.7	610.2
53°	749.5	673.3	629.1	602.4	589.8	590.3
53.5°	725.7	651.4	608.2	582.0	569.9	570.4
54°	702.9	630.1	587.8	562.1	550.5	551.9
54.5°	680.1	609.7	568.4	542.7	531.5	533.5
55°	659.2	589.8	549.5	523.8	513.6	515.5
55.5°	637.8	570.4	530.1	505.3	495.1	498.0
56°	617.4	551.4	512.1	487.3	478.1	482.0
56.5°	597.5	533.0	494.1	469.9	460.7	466.0
57°	578.6	515.0	476.7	452.9	444.1	450.9
57.5°	559.7	497.5	460.2	436.4	428.6	436.4
58°	541.7	480.6	443.7	420.8	413.6	423.8
58.5°	523.8	464.5	428.1	405.3	399.5	411.1
59°	506.3	448.5	412.6	390.8	385.9	400.0
59.5°	489.8	433.0	398.0	376.7	373.3	389.8
60°	473.3	417.9	383.5	362.6	361.6	382.0
60.5°	457.7	402.9	368.9	349.5	350.5	373.8
61°	442.7	388.8	355.8	336.9	339.8	365.0
61.5°	427.2	374.7	342.2	324.7	330.6	356.3
62°	413.1	361.6	329.6	313.6	322.3	347.1
62.5°	398.5	348.0	317.5	302.4	314.1	337.8
63°	384.4	334.9	304.8	291.2	305.8	328.6
63.5°	369.9	322.3	293.2	281.1	297.6	319.9
64°	357.3	310.2	282.0	271.3	289.3	310.7
64.5°	344.2	298.5	271.3	262.1	281.1	301.9
65°	331.0	286.9	260.7	252.9	273.3	293.2
65.5°	318.4	275.2	250.0	244.2	265.5	284.4
66°	306.3	264.1	240.3	235.9	257.3	275.7



TEST NUMBER: P776684

CATALOG NUMBER: HCDJBL54050CSD-HCD62TRH-HCD62TRLWW-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	270.9	232.5	212.1	213.6	234.5	250.5
68°	259.2	222.8	203.4	206.8	226.7	242.7
68.5°	248.5	213.1	195.1	200.5	218.9	234.5
69°	237.8	203.9	186.9	193.7	211.6	226.7
69.5°	227.2	194.6	179.1	187.4	203.9	218.4
70°	217.0	185.4	172.3	181.1	197.1	210.7
70.5°	206.8	177.2	165.0	174.3	189.8	202.9
71°	197.6	169.4	158.2	168.0	182.5	195.6
71.5°	187.9	161.2	151.4	162.1	175.2	188.3
72°	178.1	153.4	144.2	156.3	168.4	181.1
72.5°	169.4	145.6	137.9	150.5	162.1	175.2
73°	160.7	137.9	131.5	144.7	155.3	168.0
73.5°	151.9	130.1	125.7	138.3	149.0	161.2
74°	143.2	123.3	119.9	132.5	142.2	153.9
74.5°	135.4	116.5	114.6	126.7	135.9	146.6
75°	127.7	110.2	109.2	120.9	129.6	139.8
75.5°	119.9	103.9	103.9	115.5	123.3	133.5
76°	112.6	97.6	98.5	109.7	117.0	126.7
76.5°	105.3	91.7	93.7	103.9	111.2	120.4
77°	98.5	85.9	88.8	98.5	104.8	114.1
77.5°	91.7	80.6	84.0	93.2	99.0	107.8
78°	85.4	75.2	79.1	87.9	93.2	101.5
78.5°	78.6	69.9	74.3	82.5	87.4	95.6
79°	72.8	64.6	69.9	77.2	81.5	89.3
79.5°	67.0	59.7	65.0	71.8	75.7	83.5
80°	61.2	55.3	60.7	67.0	70.4	77.7
80.5°	55.8	51.0	56.3	62.1	64.6	72.3
81°	50.5	46.6	51.9	57.3	59.2	66.5
81.5°	45.6	42.2	47.1	52.4	53.9	60.7
82°	41.3	37.9	43.2	47.6	48.5	55.3
82.5°	36.4	34.0	38.8	42.7	43.2	50.0
83°	31.6	30.1	34.5	38.3	37.9	44.7
83.5°	27.2	26.2	30.6	34.0	33.0	39.8
84°	22.8	22.3	26.2	29.6	28.2	34.5
84.5°	18.9	18.9	22.3	25.7	23.8	29.1
85°	15.5	15.5	18.4	21.4	19.9	24.3
85.5°	11.6	12.1	14.6	17.5	17.0	19.4
86°	8.7	8.3	10.7	14.1	14.1	16.5
86.5°	5.8	4.9	7.3	10.2	11.2	13.6
87°	2.9	1.9	3.4	6.8	8.3	10.7
87.5°	1.0	0.5	1.0	2.9	5.3	7.3
88°	0.0	0.0	0.0	0.5	2.9	5.3
88.5°	0.0	0.0	0.0	0.0	1.0	2.9



TEST NUMBER: P776684

CATALOG NUMBER: HCDJBL54050CSD-HCD62TRH-HCD62TRLWW-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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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°	2157.6	2210.5	2311.0	2452.8	2634.8	2807.1	2950.8	3034.8	3044.5	2980.9	2852.3
22°	2132.4	2185.8	2287.2	2430.9	2614.9	2789.1	2935.7	3021.2	3031.4	2966.8	2836.7



44°	1002.4	1058.2	1149.0	1260.1	1405.3	1538.7	1636.3	1668.3	1634.9	1550.4	1430.0
44.5°	977.6	1033.9	1122.7	1231.5	1372.7	1499.9	1593.6	1624.2	1591.6	1507.7	1390.7



66.5°	267.0	281.1	283.5	307.7	350.5	387.4	424.2	445.6	436.9	402.4	347.6
67°	258.7	272.8	274.7	296.6	337.4	373.3	410.2	431.0	421.8	387.8	334.9



89°	1.5	5.3	12.6	14.6	14.6	11.6	6.8	2.4	0.5	0.0	0.0
89.5°	0.0	2.9	8.7	10.7	11.2	8.3	4.4	1.0	0.0	0.0	0.0



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21.5°	2680.4	2491.1	2327.5	2213.0	2155.7	2157.6
22°	2661.0	2469.8	2304.7	2188.2	2130.5	2132.4



44°	1298.0	1167.9	1077.1	1018.4	994.1	1002.4
44.5°	1262.5	1136.3	1049.4	993.6	969.4	977.6



66.5°	294.2	253.4	230.6	228.1	249.5	267.0
67°	282.0	243.2	221.3	220.9	241.7	258.7

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Scaled Data Report



89°	0.0	0.0	0.0	0.0	0.5	1.5
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)