

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: P776629

Luminaire Tested: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776629  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2310613A001)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD4TSQH-5000lm-5000K  
Description: 4 INCH SQUARE MEDIUM HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

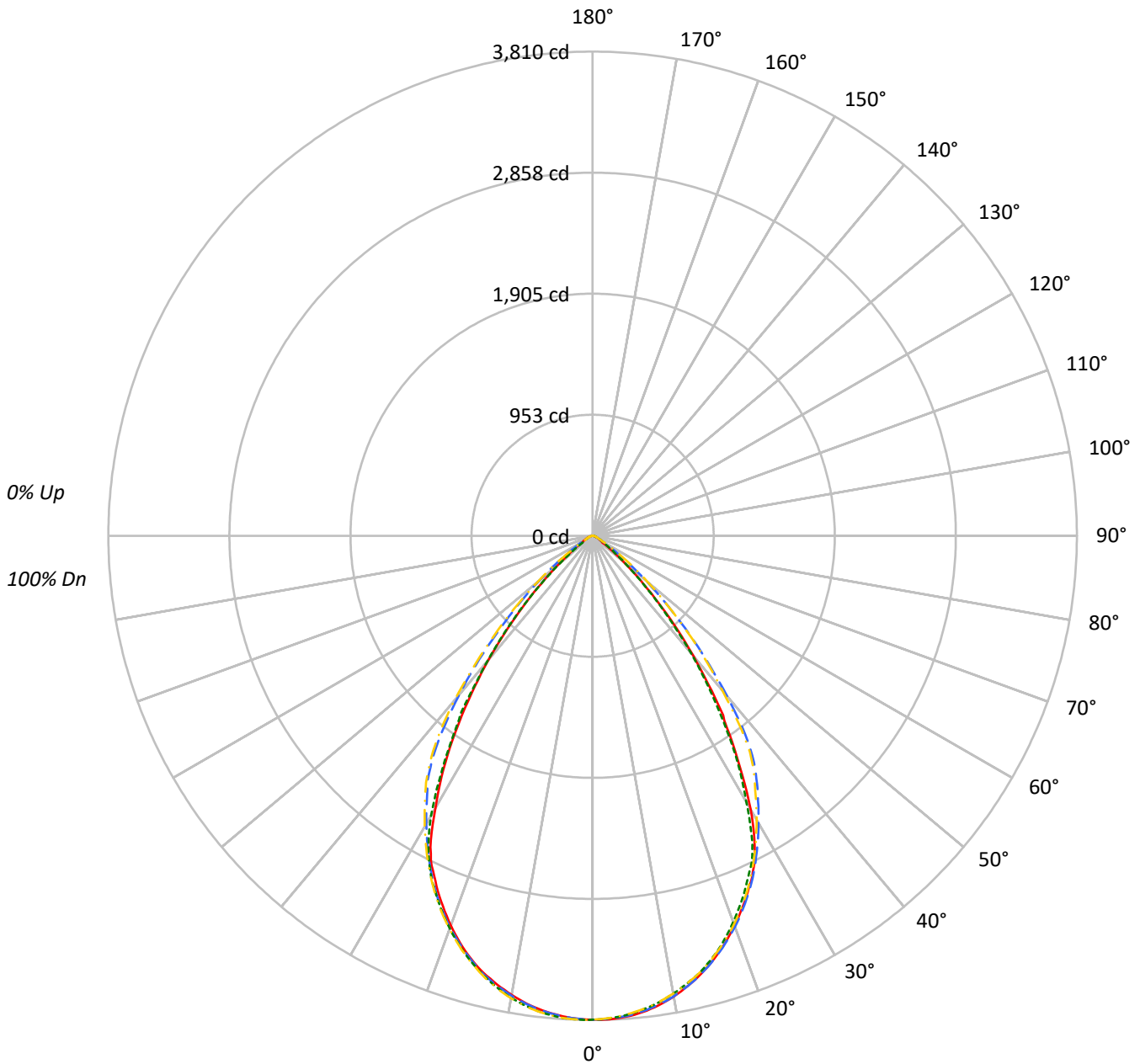
Lumens per Lamp: N/A  
Luminaire Lumens: 4874.9 lumens  
Efficiency: N/A  
Efficacy: 101.6 lumens/watt  
Spacing Criteria (0/90/45): 1.05 / 1.05 / 1.09  
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')  
CIE Type: Direct

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: P776629  
CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**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	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	88	85	84					84			
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	81	78	76					76			
4	94	85	79	74	92	84	78	74	82	77	73	80	76	72	78	74	71	70					70			
5	88	79	72	67	87	78	72	67	76	71	66	74	70	66	73	69	65	64					64			
6	83	73	66	61	82	72	66	61	71	65	61	69	64	60	68	63	60	58					58			
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55	54					54			
8	74	63	56	52	73	63	56	52	61	56	51	60	55	51	59	55	51	49					49			
9	70	59	52	48	69	58	52	48	57	52	48	57	51	47	56	51	47	46					46			
10	66	55	49	44	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

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

	0°	90°	180°	270°
0°	376391	376391	376391	376391
5°	375368	373731	374217	375706
10°	369381	367142	368166	370455
15°	358929	356985	358878	360515
20°	343421	340213	343221	345872
25°	323789	318391	321782	326537
30°	283632	276271	282468	289887
35°	222565	217823	226897	229949
40°	158358	154977	164422	166061
45°	96800	94354	102629	103244
50°	47531	49022	52913	51190
55°	17819	24591	25918	19904
60°	12948	16408	16605	13146
65°	10221	12934	13167	10548
70°	8121	10375	10519	8554
75°	6301	8173	8173	7027
80°	4155	6375	6091	5521
85°	1701	4990	2722	3856

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 315°  
 Vertical Angle: 45°  
 Luminance: 148493 cd/sqm



TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	357.2	7.3
10°-20°	984.8	20.2
20°-30°	1355.3	27.8
30°-40°	1245.1	25.5
40°-50°	673.4	13.8
50°-60°	181.4	3.7
60°-70°	51.8	1.1
70°-80°	21.7	0.4
80°-90°	4.2	0.1
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°	2697.3	55.3
0°-40°	3942.4	80.9
0°-60°	4797.2	98.4
0°-90°	4874.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4874.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3808	3808	3808	3808	3808	
5°	3783	3767	3772	3787	3783	358
15°	3508	3489	3507	3523	3508	984
25°	2969	2919	2950	2994	2969	1348
35°	1844	1805	1880	1906	1844	1146
45°	692	675	734	739	692	546
55°	103	143	150	116	103	121
65°	44	55	56	45	44	44
75°	16	21	21	18	16	18
85°	2	4	2	3	2	2
90°	0	0	0	0	0	



TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0	3808.0
0.5°	3809.9	3808.4	3807.0	3805.5	3808.0	3805.5	3806.5	3807.0	3808.4	3808.4	3806.5
1°	3809.9	3807.5	3805.5	3804.6	3806.0	3803.6	3804.1	3804.6	3806.5	3807.5	3805.5
1.5°	3808.4	3805.5	3805.0	3802.1	3802.6	3799.7	3801.2	3801.6	3804.6	3805.0	3803.1
2°	3807.5	3804.1	3802.1	3799.7	3798.7	3796.8	3797.3	3798.3	3800.7	3802.6	3800.7
2.5°	3805.0	3801.6	3799.7	3796.3	3794.9	3792.4	3793.4	3793.9	3797.8	3799.2	3797.8
3°	3802.1	3797.3	3796.3	3792.9	3791.0	3787.6	3788.5	3789.5	3793.9	3796.3	3793.9
3.5°	3798.3	3793.4	3791.9	3788.5	3786.1	3782.2	3782.7	3784.2	3789.0	3791.9	3790.0
4°	3793.9	3788.5	3788.5	3783.7	3780.3	3776.9	3776.9	3778.8	3783.2	3787.6	3785.1
4.5°	3789.0	3782.7	3782.2	3778.4	3773.5	3769.6	3770.6	3772.5	3777.9	3782.7	3779.3
5°	3783.2	3776.4	3776.4	3771.6	3766.7	3762.8	3763.3	3765.7	3771.6	3775.9	3773.0
5.5°	3775.9	3769.6	3770.1	3764.8	3758.9	3754.6	3755.5	3758.0	3764.3	3770.1	3766.2
6°	3769.1	3761.4	3762.3	3757.0	3750.7	3745.8	3747.3	3750.2	3756.0	3762.3	3758.5
6.5°	3760.9	3753.1	3754.6	3749.2	3741.5	3736.6	3738.1	3741.0	3747.8	3755.1	3750.7
7°	3751.7	3743.4	3745.4	3739.5	3731.8	3726.4	3728.9	3732.3	3738.6	3746.3	3742.0
7.5°	3742.0	3733.7	3736.1	3730.8	3721.1	3716.2	3718.2	3722.1	3728.4	3737.1	3732.3
8°	3731.8	3723.0	3726.9	3719.2	3709.9	3704.1	3707.0	3710.4	3718.2	3726.9	3722.1
8.5°	3720.1	3711.9	3715.8	3707.5	3697.3	3692.9	3695.9	3699.3	3706.5	3715.8	3711.4
9°	3708.0	3700.2	3704.1	3695.9	3685.2	3679.8	3683.2	3687.1	3694.4	3704.1	3700.2
9.5°	3694.9	3686.2	3692.5	3683.7	3671.6	3666.7	3670.1	3674.0	3681.3	3692.5	3687.6
10°	3680.3	3672.6	3678.9	3669.7	3658.0	3653.2	3657.0	3660.9	3668.2	3679.8	3675.0
10.5°	3666.3	3657.5	3665.3	3655.6	3643.9	3639.1	3643.4	3646.8	3654.1	3666.7	3660.9
11°	3651.2	3642.5	3652.2	3641.0	3629.4	3624.5	3628.9	3632.3	3640.1	3652.7	3646.8
11.5°	3635.7	3626.9	3635.7	3626.0	3613.4	3608.5	3612.9	3618.7	3626.0	3638.1	3631.8
12°	3618.7	3610.0	3620.2	3609.5	3597.3	3593.0	3597.3	3602.7	3610.0	3624.0	3621.6
12.5°	3602.2	3592.5	3602.7	3593.0	3581.3	3577.0	3581.3	3587.2	3594.0	3607.5	3605.1
13°	3584.7	3575.0	3586.2	3575.5	3565.8	3561.0	3565.3	3571.1	3577.9	3591.5	3588.6
13.5°	3566.8	3556.1	3568.2	3557.6	3549.3	3544.9	3549.3	3555.6	3561.9	3575.5	3572.1
14°	3547.8	3537.7	3548.8	3539.1	3529.9	3525.0	3530.9	3536.2	3545.9	3559.5	3556.1
14.5°	3527.5	3516.8	3528.9	3520.2	3509.5	3505.1	3511.0	3516.3	3527.0	3543.5	3533.3
15°	3507.6	3496.4	3509.5	3500.8	3488.6	3485.2	3490.1	3496.9	3507.1	3524.1	3513.4
15.5°	3486.2	3475.5	3489.1	3479.4	3467.3	3463.4	3468.7	3475.5	3486.2	3504.2	3492.5
16°	3464.9	3453.7	3466.8	3457.6	3445.5	3442.1	3446.9	3454.7	3464.9	3483.3	3471.7
16.5°	3441.6	3432.4	3444.5	3435.8	3422.2	3418.8	3425.1	3432.4	3443.5	3461.5	3449.8
17°	3418.8	3408.1	3422.6	3413.4	3398.4	3396.0	3402.3	3410.0	3421.2	3439.6	3427.0
17.5°	3395.0	3384.8	3398.9	3389.6	3373.6	3372.2	3378.5	3385.8	3396.4	3417.3	3403.7
18°	3370.2	3360.0	3375.6	3364.9	3346.5	3346.9	3354.7	3362.0	3370.7	3394.0	3380.4
18.5°	3343.5	3334.3	3350.3	3340.6	3319.3	3320.7	3329.5	3336.8	3345.0	3369.3	3356.2
19°	3318.3	3308.1	3326.1	3314.9	3291.1	3293.6	3304.2	3310.5	3318.3	3343.5	3330.9
19.5°	3291.6	3281.9	3300.4	3287.3	3263.5	3265.9	3278.5	3283.9	3291.1	3316.9	3305.2
20°	3264.9	3254.7	3274.6	3259.1	3234.4	3236.8	3252.3	3256.2	3263.0	3289.7	3279.5
20.5°	3236.8	3227.1	3247.9	3230.5	3205.2	3207.7	3224.7	3227.6	3234.4	3262.0	3251.8
21°	3208.2	3198.0	3219.3	3200.9	3175.2	3178.1	3197.0	3198.5	3205.2	3232.9	3224.7



TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	3120.8	3109.2	3133.4	3108.7	3083.9	3086.4	3110.1	3107.2	3114.5	3143.1	3139.2
23°	3088.3	3078.6	3103.3	3076.2	3051.4	3054.3	3080.5	3074.7	3083.9	3112.1	3109.2
23.5°	3058.2	3048.0	3071.8	3045.6	3017.4	3023.3	3049.0	3043.2	3051.4	3080.5	3077.6
24°	3027.1	3015.5	3041.2	3012.6	2982.5	2990.3	3017.0	3011.1	3018.4	3049.0	3045.6
24.5°	2999.0	2983.5	3008.7	2980.6	2950.0	2956.3	2983.0	2978.6	2984.0	3016.5	3012.6
25°	2968.9	2949.5	2975.2	2945.1	2919.4	2921.4	2949.5	2945.1	2950.5	2983.0	2979.6
25.5°	2929.6	2918.0	2940.8	2910.2	2888.8	2885.9	2914.6	2910.7	2918.9	2948.0	2945.6
26°	2894.2	2887.4	2904.9	2873.8	2858.3	2851.5	2879.6	2875.7	2889.3	2913.1	2911.7
26.5°	2855.8	2857.3	2870.4	2839.3	2813.6	2819.0	2843.2	2839.8	2852.9	2877.7	2875.7
27°	2810.2	2817.5	2834.5	2805.9	2766.6	2787.9	2806.8	2805.4	2805.4	2845.2	2839.8
27.5°	2762.7	2779.2	2798.1	2774.8	2722.4	2755.9	2770.0	2771.9	2763.6	2814.6	2803.4
28°	2712.7	2738.4	2760.2	2743.3	2661.7	2719.0	2732.6	2740.4	2712.2	2781.1	2766.6
28.5°	2660.3	2695.7	2723.9	2708.3	2600.1	2669.0	2695.2	2704.0	2653.5	2733.6	2730.2
29°	2605.9	2649.1	2685.5	2660.3	2540.9	2627.8	2657.9	2657.4	2594.3	2690.4	2692.3
29.5°	2546.2	2600.6	2649.1	2615.6	2480.2	2576.8	2618.5	2614.7	2533.6	2646.7	2655.4
30°	2485.1	2547.7	2611.8	2568.1	2420.6	2516.6	2580.7	2566.6	2474.9	2590.4	2617.6
30.5°	2420.6	2496.7	2573.4	2509.8	2362.3	2456.5	2541.4	2508.9	2414.7	2530.2	2579.7
31°	2355.5	2438.0	2534.6	2449.2	2304.6	2398.2	2501.6	2452.1	2358.0	2472.0	2540.9
31.5°	2289.5	2380.8	2495.8	2390.0	2246.3	2338.5	2461.3	2392.4	2301.2	2412.3	2501.1
32°	2222.1	2317.2	2456.5	2331.3	2189.6	2280.8	2422.5	2334.2	2243.9	2354.6	2462.8
32.5°	2157.0	2256.5	2420.1	2272.1	2129.4	2224.5	2382.7	2275.9	2185.7	2296.8	2423.5
33°	2093.5	2192.0	2384.6	2214.8	2068.7	2169.2	2345.3	2220.6	2127.9	2240.0	2386.6
33.5°	2030.4	2126.5	2346.8	2158.0	2003.2	2112.4	2308.9	2163.4	2069.2	2182.8	2354.1
34°	1968.8	2063.4	2303.6	2101.7	1939.2	2056.1	2273.5	2109.0	2008.1	2126.5	2320.6
34.5°	1906.6	1999.8	2266.2	2044.5	1871.2	1997.4	2236.1	2052.7	1944.0	2069.7	2271.6
35°	1844.5	1936.2	2227.9	1986.7	1805.2	1941.6	2194.9	1998.8	1880.4	2012.4	2222.1
35.5°	1783.9	1876.1	2186.7	1927.5	1738.7	1879.5	2149.3	1941.6	1816.9	1953.2	2179.4
36°	1746.5	1816.4	2138.1	1867.8	1676.1	1817.8	2103.2	1885.8	1752.8	1894.0	2126.5
36.5°	1678.6	1758.2	2082.3	1806.2	1612.6	1755.2	2044.5	1826.6	1689.2	1833.4	2067.8
37°	1609.2	1699.4	2029.9	1743.6	1551.9	1692.6	1985.7	1767.4	1624.7	1771.3	2007.6
37.5°	1539.8	1640.2	1973.6	1682.9	1492.2	1628.6	1922.7	1707.7	1564.0	1708.2	1946.9
38°	1470.4	1581.5	1908.1	1622.3	1434.0	1567.4	1854.2	1647.5	1504.8	1647.5	1885.3
38.5°	1408.3	1522.8	1840.2	1562.1	1375.3	1508.2	1786.3	1586.4	1446.1	1584.9	1823.7
39°	1346.6	1463.6	1774.2	1501.4	1319.0	1450.5	1718.4	1526.7	1387.4	1525.7	1760.6
39.5°	1286.5	1403.4	1708.7	1440.8	1259.8	1396.1	1653.3	1468.0	1330.1	1467.0	1698.0
40°	1227.3	1344.2	1643.1	1383.0	1201.1	1338.9	1589.3	1411.7	1274.3	1409.2	1634.9
40.5°	1170.5	1284.0	1577.6	1327.2	1141.9	1284.0	1527.6	1353.9	1216.1	1352.0	1572.8
41°	1113.7	1226.8	1511.6	1272.4	1085.1	1230.7	1467.5	1299.6	1158.4	1296.7	1508.7
41.5°	1057.4	1170.5	1446.1	1218.0	1026.8	1177.8	1408.3	1246.2	1099.6	1242.8	1446.6
42°	1003.1	1116.1	1383.5	1162.7	972.0	1122.0	1350.5	1192.8	1043.3	1188.0	1383.0
42.5°	948.7	1061.8	1322.4	1109.3	918.6	1067.1	1294.7	1140.4	988.5	1134.1	1320.9
43°	895.8	1009.4	1261.7	1055.5	866.7	1013.7	1239.4	1087.0	935.1	1079.3	1257.8
43.5°	841.5	958.4	1202.5	1002.1	815.7	961.8	1184.1	1034.6	882.7	1025.4	1197.7



TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	692.5	809.0	1028.8	847.3	675.0	809.9	1019.1	881.3	734.2	870.1	1022.0
45.5°	645.9	759.9	972.0	799.2	629.9	764.3	966.2	831.3	687.6	821.1	967.6
46°	601.3	713.4	917.7	751.7	585.7	718.2	913.3	784.2	642.5	773.5	913.3
46.5°	557.6	667.7	864.8	707.0	544.5	674.0	862.8	737.6	598.8	727.9	861.4
47°	516.3	624.1	812.8	663.4	505.2	630.9	814.3	693.0	555.6	682.8	811.9
47.5°	478.0	581.4	762.9	620.2	468.3	589.1	767.2	648.3	515.4	638.1	763.3
48°	440.6	540.6	715.3	578.0	437.2	548.4	723.5	606.1	477.0	596.9	716.3
48.5°	405.7	502.3	669.7	537.7	406.2	509.5	679.9	565.8	443.5	555.6	670.7
49°	372.2	465.4	626.0	500.3	375.1	472.7	638.6	525.6	410.5	516.3	628.9
49.5°	339.7	430.0	584.8	463.4	344.5	440.6	599.3	487.7	377.1	478.5	584.8
50°	309.1	396.0	544.5	427.5	318.8	408.6	561.5	455.2	344.1	445.0	544.0
50.5°	281.0	363.0	504.7	393.1	295.0	376.6	525.6	422.7	317.4	411.0	506.1
51°	254.8	332.4	467.8	362.0	274.7	344.5	489.2	389.7	292.6	377.1	470.7
51.5°	230.5	303.8	432.4	332.9	255.3	318.3	457.6	357.2	270.3	343.6	437.7
52°	207.7	276.6	399.4	305.7	236.8	294.1	427.0	324.6	249.4	314.9	405.2
52.5°	186.8	250.4	366.9	281.5	219.3	271.8	396.0	297.5	231.0	289.2	372.7
53°	167.4	226.1	337.3	259.1	202.8	251.4	364.9	272.7	213.0	265.9	340.2
53.5°	151.4	204.3	309.1	239.2	187.8	232.9	333.9	250.4	196.5	244.6	310.6
54°	135.4	183.9	282.9	220.3	172.3	215.9	307.7	230.0	180.5	225.2	284.4
54.5°	119.4	164.5	257.7	202.8	157.2	199.4	282.9	211.1	165.0	206.7	260.1
55°	103.4	146.6	235.8	187.3	142.7	183.9	259.6	194.1	150.4	190.2	236.8
55.5°	92.7	133.5	214.5	171.8	129.6	169.4	237.8	178.1	135.9	174.7	215.5
56°	88.8	120.8	195.1	159.2	117.9	154.8	217.4	162.6	123.3	159.7	195.6
56.5°	85.4	107.7	177.1	146.1	109.7	140.7	198.5	148.5	113.1	145.6	177.6
57°	82.5	95.1	164.0	133.0	104.8	127.1	181.0	134.9	105.8	131.5	160.6
57.5°	79.1	82.0	150.4	119.9	100.9	115.0	165.0	121.8	101.9	118.4	145.6
58°	76.2	79.1	137.3	108.7	97.1	103.8	150.0	109.2	98.0	107.2	132.0
58.5°	73.3	76.2	124.2	99.0	93.7	95.6	136.8	99.0	94.1	98.5	119.4
59°	70.4	73.3	111.1	91.7	89.8	91.2	124.2	91.2	90.7	92.7	108.7
59.5°	67.9	70.4	101.4	87.8	86.4	87.3	113.6	86.9	87.3	89.3	99.5
60°	65.5	67.9	93.2	84.0	83.0	84.0	103.8	83.5	84.0	85.9	91.2
60.5°	62.6	65.5	85.4	81.0	79.6	81.0	95.1	80.1	80.6	82.5	83.5
61°	60.2	62.6	79.1	77.6	76.7	77.6	87.3	76.7	77.6	79.1	77.6
61.5°	58.2	60.7	73.3	74.7	73.8	74.7	80.6	73.8	74.7	76.2	71.8
62°	55.8	58.2	68.4	71.3	70.9	71.8	74.7	70.9	71.3	73.3	67.0
62.5°	53.4	55.8	63.6	68.9	67.9	68.9	69.9	67.9	68.9	70.4	62.6
63°	51.4	53.9	59.7	66.0	65.0	66.0	65.0	65.5	66.0	67.5	59.2
63.5°	49.5	51.4	56.3	63.1	62.6	63.6	61.1	62.6	63.6	65.0	55.8
64°	47.6	49.5	53.9	60.7	60.2	61.1	57.3	60.2	60.7	62.1	53.4
64.5°	45.6	47.6	51.9	58.2	57.7	58.7	54.4	57.7	58.2	59.7	51.0
65°	43.7	46.1	49.5	55.8	55.3	56.3	51.9	55.3	56.3	57.3	49.0
65.5°	42.2	44.2	47.6	53.9	52.9	53.9	50.0	52.9	53.9	54.8	47.1
66°	40.3	42.2	46.1	51.4	50.5	51.9	48.0	51.0	51.4	52.9	45.1





TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	35.4	37.4	40.8	45.1	44.6	45.6	42.7	44.6	45.1	46.6	39.8
68°	34.0	35.9	38.8	43.2	42.7	43.7	40.8	42.7	43.2	44.6	38.3
68.5°	32.5	34.0	37.4	41.7	40.8	41.7	39.3	40.8	41.2	42.7	36.9
69°	31.1	32.5	35.9	39.8	39.3	40.3	37.4	39.3	39.8	40.8	35.4
69.5°	29.6	31.1	34.5	38.3	37.4	38.3	35.9	37.4	37.9	38.8	34.0
70°	28.1	29.6	33.0	36.4	35.9	36.9	34.5	35.9	36.4	37.4	32.0
70.5°	26.7	28.6	31.5	34.9	34.0	35.4	32.5	34.0	34.5	35.4	31.1
71°	25.7	27.2	30.1	33.5	32.5	33.5	31.1	32.5	33.0	34.0	29.6
71.5°	24.3	25.7	28.6	31.5	31.1	32.0	29.6	31.1	31.1	32.0	28.1
72°	23.3	24.7	27.2	30.6	29.6	30.6	28.6	29.6	29.6	30.6	26.7
72.5°	21.8	23.3	26.2	29.1	28.1	29.1	27.2	28.1	28.1	29.1	25.7
73°	20.9	22.3	24.7	27.7	26.7	27.7	25.7	26.7	26.7	27.7	24.3
73.5°	19.4	20.9	23.3	26.2	25.2	26.2	24.7	25.2	25.2	26.2	23.3
74°	18.4	19.9	22.3	24.7	24.3	25.2	23.3	23.8	24.3	25.2	22.3
74.5°	17.5	18.9	21.4	23.8	22.8	23.8	22.3	22.8	22.8	23.8	20.9
75°	16.5	17.5	19.9	22.3	21.4	22.8	20.9	21.4	21.4	22.3	19.9
75.5°	15.5	16.5	18.9	21.4	20.4	21.4	19.9	20.4	20.4	21.4	18.9
76°	14.1	15.5	18.0	20.4	19.4	20.4	18.9	18.9	18.9	19.9	18.0
76.5°	13.1	14.6	17.0	18.9	18.0	19.4	18.0	18.0	18.0	18.9	16.5
77°	12.6	13.6	16.0	18.0	17.0	18.0	17.0	16.5	16.5	17.5	15.5
77.5°	11.6	12.6	15.0	17.0	16.0	17.0	16.0	15.5	15.5	16.5	14.6
78°	10.7	11.6	14.1	16.0	15.0	16.0	15.0	14.6	14.6	15.5	13.6
78.5°	9.7	10.7	13.1	15.0	14.1	15.0	14.1	13.6	13.6	14.1	13.1
79°	9.2	9.7	12.1	14.1	13.1	14.1	13.1	12.6	12.6	13.1	12.1
79.5°	8.2	8.7	11.6	13.1	12.1	13.1	12.1	11.6	11.6	12.1	11.2
80°	7.3	8.2	10.7	12.1	11.2	12.1	11.6	10.7	10.7	11.2	10.2
80.5°	6.8	7.3	9.7	11.2	10.7	11.2	10.7	9.7	9.7	10.2	9.7
81°	5.8	6.3	9.2	10.2	9.7	10.2	9.7	8.7	8.7	9.2	8.7
81.5°	5.3	5.8	8.2	9.2	8.7	9.7	9.2	7.8	7.8	8.2	8.2
82°	4.9	4.9	7.8	8.7	8.2	8.7	8.2	7.3	7.3	7.3	7.3
82.5°	3.9	4.4	6.8	7.8	7.3	8.2	7.8	6.3	6.3	6.3	6.8
83°	3.4	3.9	6.3	7.3	6.8	7.3	6.8	5.8	5.3	5.8	5.8
83.5°	2.4	2.9	5.3	6.3	6.3	6.8	6.3	4.9	4.9	4.9	5.3
84°	1.9	2.4	4.9	5.8	5.3	5.8	5.8	4.4	3.9	4.4	4.9
84.5°	1.9	1.9	4.4	4.9	4.9	5.3	4.9	3.9	3.4	3.4	4.4
85°	1.5	1.9	3.9	4.4	4.4	4.9	4.4	2.9	2.4	2.9	3.9
85.5°	1.0	1.5	3.4	3.9	3.4	3.9	3.9	2.4	1.9	2.4	2.9
86°	1.0	1.0	2.4	2.9	2.9	3.4	3.4	1.9	1.9	1.9	2.4
86.5°	1.0	1.0	1.9	2.4	2.4	2.9	2.9	1.9	1.5	1.5	1.9
87°	0.5	0.5	1.5	1.9	1.9	1.9	2.4	1.5	1.5	1.5	1.5
87.5°	0.0	0.5	1.0	1.5	1.5	1.5	1.9	1.0	1.0	1.0	1.0
88°	0.0	0.0	0.5	1.0	1.0	1.0	1.5	1.0	1.0	1.0	0.5
88.5°	0.0	0.0	0.0	0.5	0.5	0.5	1.0	0.5	0.5	0.5	0.5



TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-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: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3808.0	<i>3808.0</i>	3808.0	3808.0	3808.0	3808.0
0.5°	<i>3807.0</i>	<i>3810.4</i>	<i>3808.4</i>	<i>3809.4</i>	<i>3808.4</i>	<i>3809.9</i>
1°	3806.5	<i>3809.9</i>	3808.4	3809.4	3808.4	3809.9
1.5°	3805.0	<i>3809.9</i>	3808.4	3808.9	3808.4	3808.4
2°	3803.1	<i>3808.4</i>	3808.0	3808.0	3807.5	3807.5
2.5°	3800.7	<i>3807.5</i>	3806.0	3807.5	3805.5	3805.0
3°	3797.3	<i>3805.0</i>	3803.6	3804.6	3803.1	3802.1
3.5°	3793.4	<i>3801.2</i>	3800.7	3801.6	3799.7	3798.3
4°	3788.5	<i>3796.8</i>	3796.8	3797.8	3796.3	3793.9
4.5°	3783.2	<i>3791.9</i>	3792.4	3793.4	3791.5	3789.0
5°	3777.4	<i>3786.6</i>	3787.1	3788.1	3786.1	3783.2
5.5°	3770.6	<i>3780.8</i>	3781.3	3781.8	3779.8	3775.9
6°	3763.3	<i>3773.5</i>	3774.5	3775.4	3773.0	3769.1
6.5°	3755.1	<i>3765.7</i>	3767.2	3767.7	3765.3	3760.9
7°	3746.3	<i>3757.5</i>	3758.9	3759.9	3757.0	3751.7
7.5°	3736.6	<i>3748.8</i>	3750.7	3750.7	3747.8	3742.0
8°	3725.9	<i>3738.1</i>	3740.5	3741.5	3737.6	3731.8
8.5°	3715.3	<i>3727.9</i>	3730.3	3730.8	3726.9	3720.1
9°	3704.1	<i>3715.8</i>	3719.6	3720.1	3714.8	3708.0
9.5°	3691.5	<i>3703.1</i>	3707.0	3708.0	3703.6	3694.9
10°	3678.4	<i>3691.0</i>	3693.9	3695.9	3690.0	3680.3
10.5°	3664.3	<i>3677.4</i>	3680.8	3682.3	3676.4	3666.3
11°	3650.7	<i>3662.4</i>	3666.3	3667.7	3661.9	3651.2
11.5°	3635.7	<i>3647.8</i>	3651.2	3653.2	3646.8	3635.7
12°	3620.2	<i>3631.3</i>	3635.7	3637.6	3629.9	3618.7
12.5°	3602.7	<i>3615.3</i>	3619.2	3620.6	3613.8	3602.2
13°	3585.7	<i>3598.3</i>	3602.7	3604.6	3596.9	3584.7
13.5°	3568.7	<i>3580.8</i>	3585.2	3586.2	3578.4	3566.8
14°	3551.2	<i>3562.9</i>	3567.3	3566.8	3560.0	3547.8
14.5°	3537.7	<i>3543.5</i>	3548.3	3546.9	3540.6	3527.5
15°	3517.8	<i>3523.1</i>	3528.9	3527.0	3520.7	3507.6
15.5°	3496.9	<i>3503.2</i>	3507.1	3506.6	3499.8	3486.2
16°	3475.5	<i>3481.9</i>	3486.7	3486.2	3478.5	3464.9
16.5°	3453.7	<i>3460.0</i>	3465.4	3463.9	3457.1	3441.6
17°	3430.9	<i>3436.7</i>	3443.0	3441.1	3434.8	3418.8
17.5°	3407.6	<i>3413.9</i>	3419.7	3418.3	3411.0	3395.0
18°	3383.3	<i>3389.2</i>	3396.0	3394.5	3387.2	3370.2
18.5°	3358.6	<i>3364.9</i>	3371.7	3369.3	3361.5	3343.5
19°	3333.8	<i>3339.7</i>	3346.5	3345.0	3335.8	3318.3
19.5°	3307.2	<i>3314.4</i>	3320.3	3319.3	3310.1	3291.6
20°	3280.5	<i>3288.2</i>	3294.5	3293.6	3283.4	3264.9
20.5°	3253.3	<i>3260.6</i>	3267.4	3266.4	3255.7	3236.8
21°	3225.1	<i>3232.9</i>	3238.7	3239.2	3226.6	3208.2

TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3137.8	3145.6	3151.9	3153.3	3138.8	3120.8
23°	3108.2	3115.5	3121.3	3123.2	3108.2	3088.3
23.5°	3077.1	3084.4	3090.7	3092.2	3077.1	3058.2
24°	3044.6	3052.4	3059.2	3060.6	3046.1	3027.1
24.5°	3013.1	3021.8	3027.1	3028.1	3014.0	2999.0
25°	2981.0	2994.1	2993.7	2995.6	2981.0	2968.9
25.5°	2947.1	2956.3	2960.2	2962.1	2947.1	2929.6
26°	2912.6	2919.9	2928.6	2927.2	2915.0	2894.2
26.5°	2883.0	2883.0	2899.0	2893.2	2885.0	2855.8
27°	2850.0	2839.8	2859.2	2858.8	2854.4	2810.2
27.5°	2808.8	2797.1	2822.4	2822.8	2815.1	2762.7
28°	2772.4	2751.0	2784.0	2786.0	2775.8	2712.7
28.5°	2732.1	2702.5	2741.8	2750.5	2737.4	2660.3
29°	2690.4	2650.1	2699.1	2714.6	2694.2	2605.9
29.5°	2644.8	2597.2	2652.5	2677.8	2649.1	2546.2
30°	2598.7	2539.9	2604.5	2640.9	2601.1	2485.1
30.5°	2549.2	2479.3	2555.0	2603.5	2549.2	2420.6
31°	2498.2	2414.7	2500.6	2565.7	2496.3	2355.5
31.5°	2444.3	2353.6	2444.8	2527.3	2440.0	2289.5
32°	2389.5	2287.6	2387.6	2489.5	2382.7	2222.1
32.5°	2330.3	2220.6	2326.9	2455.5	2322.5	2157.0
33°	2269.1	2157.0	2263.3	2418.1	2259.4	2093.5
33.5°	2206.5	2093.0	2199.8	2378.3	2195.9	2030.4
34°	2144.4	2030.4	2136.2	2342.9	2132.3	1968.8
34.5°	2079.9	1966.3	2073.6	2301.2	2068.7	1906.6
35°	2017.8	1905.7	2010.0	2254.1	2005.2	1844.5
35.5°	1956.6	1845.0	1947.4	2208.0	1944.5	1783.9
36°	1896.0	1784.8	1887.7	2161.4	1884.8	1746.5
36.5°	1834.8	1749.9	1828.5	2109.5	1825.1	1678.6
37°	1776.1	1681.5	1769.3	2055.6	1766.9	1609.2
37.5°	1717.9	1611.1	1710.1	1999.8	1708.2	1539.8
38°	1660.1	1540.7	1650.9	1941.1	1649.9	1470.4
38.5°	1601.4	1470.4	1591.7	1881.4	1591.2	1408.3
39°	1542.7	1409.7	1532.5	1818.3	1532.5	1346.6
39.5°	1484.0	1347.6	1473.3	1756.2	1474.3	1286.5
40°	1424.8	1287.0	1412.6	1689.7	1413.1	1227.3
40.5°	1365.6	1228.2	1352.0	1622.8	1353.9	1170.5
41°	1306.4	1171.9	1293.3	1556.3	1296.2	1113.7
41.5°	1249.1	1113.7	1235.0	1489.8	1238.9	1057.4
42°	1193.3	1058.9	1179.2	1423.3	1183.6	1003.1
42.5°	1138.0	1005.0	1123.4	1359.3	1128.3	948.7
43°	1084.1	948.2	1070.0	1296.7	1074.9	895.8
43.5°	1031.2	893.9	1016.7	1235.5	1021.5	841.5

TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	880.8	738.6	861.4	1062.3	870.1	692.5
45.5°	832.2	690.1	810.9	1008.4	821.1	645.9
46°	784.2	643.0	762.4	955.0	773.5	601.3
46.5°	736.2	597.9	712.9	901.2	726.0	557.6
47°	690.5	554.7	667.3	849.2	681.3	516.3
47.5°	645.9	512.5	622.1	798.3	636.7	478.0
48°	602.7	472.2	578.4	750.2	594.0	440.6
48.5°	561.5	434.8	537.2	701.2	551.8	405.7
49°	521.2	398.9	497.4	655.1	513.4	372.2
49.5°	483.8	365.4	458.1	610.5	475.1	339.7
50°	449.4	332.9	422.2	566.8	437.2	309.1
50.5°	414.9	301.8	387.7	526.0	402.3	281.0
51°	380.5	273.7	353.8	486.7	369.3	254.8
51.5°	346.5	248.0	323.2	448.9	337.8	230.5
52°	315.4	224.2	294.6	413.5	308.1	207.7
52.5°	286.8	201.4	266.4	379.5	279.5	186.8
53°	259.6	180.5	241.2	347.5	252.3	167.4
53.5°	233.9	164.5	216.9	317.9	227.6	151.4
54°	209.6	148.0	195.1	287.8	204.8	135.4
54.5°	188.3	131.5	175.2	261.6	183.9	119.4
55°	168.4	115.5	158.7	236.8	166.9	103.4
55.5°	150.4	99.0	142.7	213.0	150.4	92.7
56°	132.5	91.2	126.2	191.2	133.9	88.8
56.5°	116.5	87.3	110.2	170.8	117.4	85.4
57°	102.4	84.0	93.7	156.7	100.9	82.5
57.5°	90.3	80.6	84.4	143.2	88.8	79.1
58°	81.0	77.6	81.0	129.1	81.0	76.2
58.5°	77.6	74.7	78.1	115.0	77.6	73.3
59°	74.2	71.8	75.2	101.4	74.7	70.4
59.5°	71.8	69.4	72.3	92.2	71.8	67.9
60°	68.9	66.5	69.4	84.4	69.4	65.5
60.5°	66.5	64.1	67.0	77.6	66.5	62.6
61°	64.1	61.6	64.5	71.8	64.1	60.2
61.5°	61.6	59.2	62.1	66.5	61.6	58.2
62°	59.2	57.3	59.7	62.1	59.2	55.8
62.5°	56.8	54.8	57.3	58.2	57.3	53.4
63°	54.8	52.9	55.3	54.8	54.8	51.4
63.5°	52.9	51.0	52.9	52.4	52.4	49.5
64°	50.5	49.0	51.0	50.5	50.5	47.6
64.5°	49.0	47.1	49.0	48.5	48.5	45.6
65°	47.1	45.1	47.1	46.6	46.6	43.7
65.5°	45.1	43.2	45.6	44.6	44.6	42.2
66°	43.2	41.7	43.7	43.2	43.2	40.3



TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	38.8	36.9	38.8	38.3	37.9	35.4
68°	36.9	35.4	36.9	36.4	36.4	34.0
68.5°	35.4	34.0	35.4	34.9	34.9	32.5
69°	34.0	32.5	34.0	33.5	33.5	31.1
69.5°	32.5	31.1	32.5	32.0	32.0	29.6
70°	31.1	29.6	31.5	30.6	30.6	28.1
70.5°	30.1	28.6	30.1	29.6	29.1	26.7
71°	28.6	27.2	28.6	28.1	27.7	25.7
71.5°	27.2	26.2	27.2	26.7	26.2	24.3
72°	26.2	24.7	26.2	25.7	25.2	23.3
72.5°	25.2	23.8	24.7	24.3	23.8	21.8
73°	23.8	22.3	23.8	23.3	22.3	20.9
73.5°	22.8	21.4	22.8	22.3	21.4	19.4
74°	21.8	20.4	21.4	20.9	20.4	18.4
74.5°	20.9	19.4	20.4	19.9	18.9	17.5
75°	19.4	18.4	19.4	18.9	18.0	16.5
75.5°	18.4	17.5	18.4	18.0	17.0	15.5
76°	17.5	16.5	17.5	17.0	16.0	14.1
76.5°	16.5	15.5	16.5	16.0	15.0	13.1
77°	15.5	14.6	15.5	14.6	14.1	12.6
77.5°	14.6	13.6	14.6	14.1	12.6	11.6
78°	13.6	12.6	13.6	13.1	11.6	10.7
78.5°	13.1	12.1	12.6	12.1	11.2	9.7
79°	12.1	11.2	11.6	11.2	10.2	9.2
79.5°	11.2	10.2	11.2	10.2	9.2	8.2
80°	10.2	9.7	10.2	9.7	8.2	7.3
80.5°	9.7	9.2	9.7	8.7	7.3	6.8
81°	8.7	8.2	8.7	8.2	6.8	5.8
81.5°	8.2	7.8	7.8	7.3	5.8	5.3
82°	7.3	6.8	7.3	6.8	4.9	4.9
82.5°	6.8	6.3	6.8	5.8	4.4	3.9
83°	6.3	5.8	5.8	5.3	3.9	3.4
83.5°	5.3	5.3	5.3	4.9	3.4	2.4
84°	4.9	4.9	4.9	4.4	2.4	1.9
84.5°	4.4	4.4	3.9	3.9	1.9	1.9
85°	3.9	3.4	3.4	2.9	1.9	1.5
85.5°	2.9	2.9	2.9	2.4	1.5	1.0
86°	2.4	2.4	2.4	1.9	1.0	1.0
86.5°	1.9	1.9	1.9	1.5	1.0	1.0
87°	1.5	1.5	1.5	1.0	0.5	0.5
87.5°	1.0	1.0	1.0	0.5	0.5	0.0
88°	0.5	0.5	0.5	0.5	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776629

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-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



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°	3179.5	3168.4	3191.2	3170.3	3145.6	3147.5	3168.8	3168.4	3175.2	3203.3	3196.5
22°	3150.4	3139.2	3162.5	3139.7	3115.5	3117.4	3139.2	3137.8	3145.1	3173.2	3168.8



44°	790.0	908.0	1143.8	948.7	767.7	908.4	1127.8	982.7	830.3	973.0	1137.5
44.5°	740.5	858.0	1086.0	896.3	720.1	859.4	1072.9	931.2	781.8	921.1	1078.8



66.5°	38.8	40.8	44.2	49.5	48.5	49.5	46.1	48.5	49.5	50.5	43.2
67°	36.9	38.8	42.2	47.1	46.6	47.6	44.2	46.6	47.1	48.5	41.7



89°	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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°	3196.0	3203.8	3210.6	3211.1	3198.0	3179.5
22°	3167.4	3175.2	3181.5	3182.4	3168.8	3150.4



44°	980.3	842.0	963.8	1176.3	970.6	790.0
44.5°	930.8	789.5	912.3	1118.1	919.6	740.5



66.5°	41.7	39.8	41.7	41.2	41.2	38.8
67°	40.3	38.3	40.3	39.8	39.3	36.9



89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	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



(END OF REPORT)