

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: P776626

Luminaire Tested: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776626  
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: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K  
Description: 4 INCH SQUARE MEDIUM HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4666.2 lumens  
Efficiency: N/A  
Efficacy: 97.2 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

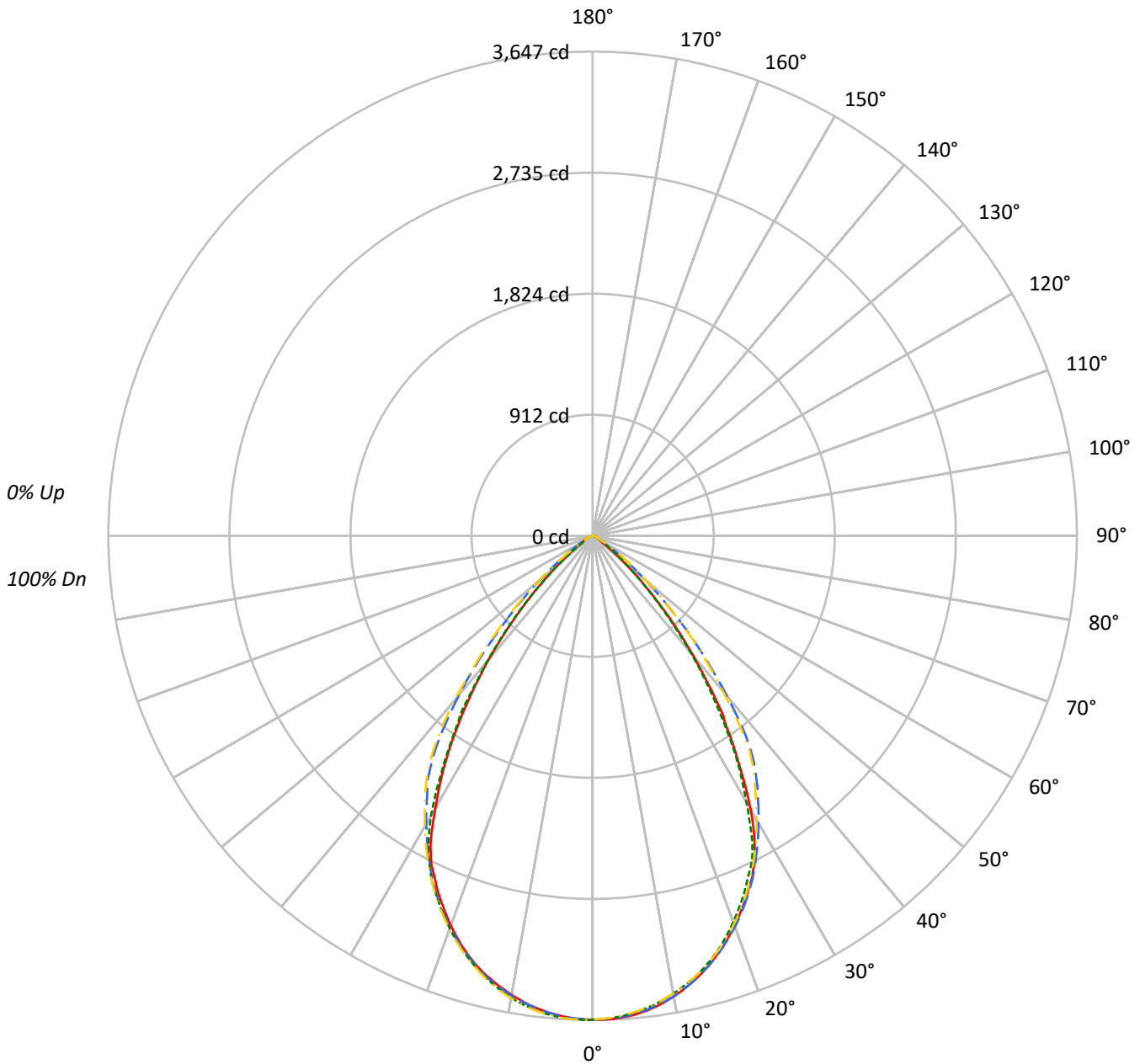
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**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	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°	360280	360280	360280	360280
5°	359305	357737	358193	359622
10°	353573	351425	352409	354597
15°	343559	341707	343518	345084
20°	328726	325644	328526	331072
25°	309928	304769	308008	312567
30°	271488	264446	270381	277480
35°	213044	208507	217195	220103
40°	151571	148332	157390	158951
45°	92649	90314	98240	98827
50°	45501	46931	50637	49007
55°	17043	23540	24815	19059
60°	12395	15696	15894	12573
65°	9776	12396	12606	10104
70°	7774	9941	10057	8179
75°	6034	7791	7791	6760
80°	3984	6091	5806	5294
85°	1588	4763	2608	3742

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 315°  
 Vertical Angle: 45°  
 Luminance: 142132 cd/sqm



TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	341.9	7.3
10°-20°	942.6	20.2
20°-30°	1297.3	27.8
30°-40°	1191.8	25.5
40°-50°	644.6	13.8
50°-60°	173.7	3.7
60°-70°	49.6	1.1
70°-80°	20.8	0.4
80°-90°	4.0	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°	2581.8	55.3
0°-40°	3773.7	80.9
0°-60°	4591.9	98.4
0°-90°	4666.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4666.2	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3645	3645	3645	3645	3645	
5°	3621	3606	3610	3624	3621	343
15°	3357	3339	3357	3372	3357	942
25°	2842	2794	2824	2866	2842	1290
35°	1766	1728	1800	1824	1766	1097
45°	663	646	703	707	663	523
55°	99	137	144	111	99	116
65°	42	53	54	43	42	42
75°	16	20	20	18	16	17
85°	1	4	2	3	1	2
90°	0	0	0	0	0	



TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3645.0	3645.0	3645.0	3645.0	3645.0	3645.0	3645.0	3645.0	3645.0	3645.0	3645.0
0.5°	3646.8	3645.4	3644.0	3642.6	3645.0	3642.6	3643.6	3644.0	3645.4	3645.4	3643.6
1°	3646.8	3644.5	3642.6	3641.7	3643.1	3640.8	3641.3	3641.7	3643.6	3644.5	3642.6
1.5°	3645.4	3642.6	3642.2	3639.4	3639.9	3637.1	3638.5	3638.9	3641.7	3642.2	3640.3
2°	3644.5	3641.3	3639.4	3637.1	3636.1	3634.3	3634.8	3635.7	3638.0	3639.9	3638.0
2.5°	3642.2	3638.9	3637.1	3633.8	3632.4	3630.1	3631.0	3631.5	3635.2	3636.6	3635.2
3°	3639.4	3634.8	3633.8	3630.6	3628.7	3625.5	3626.4	3627.3	3631.5	3633.8	3631.5
3.5°	3635.7	3631.0	3629.6	3626.4	3624.1	3620.4	3620.8	3622.2	3626.9	3629.6	3627.8
4°	3631.5	3626.4	3626.4	3621.7	3618.5	3615.2	3615.2	3617.1	3621.3	3625.5	3623.1
4.5°	3626.9	3620.8	3620.4	3616.6	3612.0	3608.3	3609.2	3611.1	3616.2	3620.8	3617.6
5°	3621.3	3614.8	3614.8	3610.1	3605.5	3601.8	3602.2	3604.6	3610.1	3614.3	3611.5
5.5°	3614.3	3608.3	3608.7	3603.6	3598.1	3593.9	3594.8	3597.1	3603.2	3608.7	3605.0
6°	3607.8	3600.4	3601.3	3596.2	3590.2	3585.5	3586.9	3589.7	3595.3	3601.3	3597.6
6.5°	3599.9	3592.5	3593.9	3588.8	3581.3	3576.7	3578.1	3580.9	3587.4	3594.3	3590.2
7°	3591.1	3583.2	3585.0	3579.5	3572.0	3566.9	3569.3	3572.5	3578.5	3586.0	3581.8
7.5°	3581.8	3573.9	3576.2	3571.1	3561.8	3557.2	3559.0	3562.8	3568.8	3577.2	3572.5
8°	3572.0	3563.7	3567.4	3560.0	3551.1	3545.6	3548.4	3551.6	3559.0	3567.4	3562.8
8.5°	3560.9	3553.0	3556.7	3548.8	3539.1	3534.9	3537.7	3540.9	3547.9	3556.7	3552.5
9°	3549.3	3541.9	3545.6	3537.7	3527.5	3522.3	3525.6	3529.3	3536.3	3545.6	3541.9
9.5°	3536.7	3528.4	3534.4	3526.1	3514.4	3509.8	3513.1	3516.8	3523.7	3534.4	3529.8
10°	3522.8	3515.4	3521.4	3512.6	3501.4	3496.8	3500.5	3504.2	3511.2	3522.3	3517.7
10.5°	3509.3	3501.0	3508.4	3499.1	3488.0	3483.3	3487.5	3490.8	3497.7	3509.8	3504.2
11°	3494.9	3486.6	3495.9	3485.2	3474.0	3469.4	3473.6	3476.8	3484.3	3496.3	3490.8
11.5°	3480.1	3471.7	3480.1	3470.8	3458.7	3454.1	3458.2	3463.8	3470.8	3482.4	3476.4
12°	3463.8	3455.5	3465.2	3455.0	3443.4	3439.2	3443.4	3448.5	3455.5	3468.9	3466.6
12.5°	3448.0	3438.7	3448.5	3439.2	3428.0	3423.9	3428.0	3433.6	3440.1	3453.1	3450.8
13°	3431.3	3422.0	3432.7	3422.5	3413.2	3408.5	3412.7	3418.3	3424.8	3437.8	3435.0
13.5°	3414.1	3403.9	3415.5	3405.3	3397.4	3393.2	3397.4	3403.4	3409.5	3422.5	3419.2
14°	3396.0	3386.2	3396.9	3387.6	3378.8	3374.2	3379.7	3384.8	3394.1	3407.1	3403.9
14.5°	3376.5	3366.3	3377.9	3369.5	3359.3	3355.1	3360.7	3365.8	3376.0	3391.8	3382.1
15°	3357.4	3346.8	3359.3	3350.9	3339.3	3336.1	3340.7	3347.2	3357.0	3373.2	3363.0
15.5°	3337.0	3326.8	3339.8	3330.5	3318.9	3315.2	3320.3	3326.8	3337.0	3354.2	3343.0
16°	3316.6	3305.9	3318.4	3309.6	3298.0	3294.7	3299.4	3306.8	3316.6	3334.2	3323.1
16.5°	3294.3	3285.4	3297.1	3288.7	3275.7	3272.4	3278.5	3285.4	3296.1	3313.3	3302.2
17°	3272.4	3262.2	3276.2	3267.3	3252.9	3250.6	3256.6	3264.1	3274.8	3292.4	3280.3
17.5°	3249.7	3239.9	3253.4	3244.6	3229.2	3227.8	3233.9	3240.9	3251.1	3271.0	3258.0
18°	3226.0	3216.2	3231.1	3220.9	3203.2	3203.7	3211.1	3218.1	3226.5	3248.7	3235.7
18.5°	3200.4	3191.6	3206.9	3197.7	3177.2	3178.6	3187.0	3193.9	3201.8	3225.1	3212.5
19°	3176.3	3166.5	3183.7	3173.0	3150.3	3152.6	3162.8	3168.9	3176.3	3200.4	3188.4
19.5°	3150.7	3141.4	3159.1	3146.6	3123.8	3126.1	3138.2	3143.3	3150.3	3174.9	3163.7
20°	3125.2	3115.4	3134.5	3119.6	3095.9	3098.2	3113.1	3116.8	3123.3	3148.9	3139.1
20.5°	3098.2	3089.0	3108.9	3092.2	3068.1	3070.4	3086.6	3089.4	3095.9	3122.4	3112.6
21°	3070.8	3061.1	3081.5	3063.9	3039.3	3042.0	3060.2	3061.6	3068.1	3094.5	3086.6



TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2987.2	2976.1	2999.3	2975.6	2951.9	2954.3	2977.0	2974.2	2981.2	3008.6	3004.9
23°	2956.1	2946.8	2970.5	2944.5	2920.8	2923.6	2948.7	2943.1	2951.9	2978.9	2976.1
23.5°	2927.3	2917.6	2940.3	2915.2	2888.3	2893.9	2918.5	2912.9	2920.8	2948.7	2945.9
24°	2897.6	2886.4	2911.1	2883.6	2854.8	2862.3	2887.8	2882.3	2889.2	2918.5	2915.2
24.5°	2870.6	2855.8	2879.9	2853.0	2823.7	2829.8	2855.3	2851.1	2856.2	2887.4	2883.6
25°	2841.8	2823.3	2847.9	2819.1	2794.5	2796.3	2823.3	2819.1	2824.2	2855.3	2852.1
25.5°	2804.2	2793.1	2814.9	2785.6	2765.2	2762.4	2789.8	2786.1	2794.0	2821.9	2819.5
26°	2770.3	2763.8	2780.5	2750.8	2735.9	2729.4	2756.4	2752.7	2765.7	2788.4	2787.0
26.5°	2733.6	2735.0	2747.5	2717.8	2693.2	2698.3	2721.5	2718.3	2730.8	2754.5	2752.7
27°	2689.9	2696.9	2713.2	2685.8	2648.1	2668.6	2686.7	2685.3	2685.3	2723.4	2718.3
27.5°	2644.4	2660.2	2678.3	2656.0	2605.9	2637.9	2651.4	2653.3	2645.4	2694.1	2683.4
28°	2596.6	2621.2	2642.1	2625.8	2547.8	2602.6	2615.6	2623.1	2596.1	2662.1	2648.1
28.5°	2546.4	2580.3	2607.3	2592.4	2488.8	2554.8	2579.9	2588.2	2539.9	2616.6	2613.3
29°	2494.4	2535.7	2570.6	2546.4	2432.1	2515.3	2544.1	2543.6	2483.2	2575.2	2577.1
29.5°	2437.3	2489.3	2535.7	2503.7	2374.1	2466.5	2506.5	2502.8	2425.2	2533.4	2541.8
30°	2378.7	2438.7	2500.0	2458.2	2317.0	2408.9	2470.2	2456.8	2369.0	2479.5	2505.5
30.5°	2317.0	2389.9	2463.3	2402.4	2261.2	2351.3	2432.6	2401.5	2311.4	2421.9	2469.3
31°	2254.7	2333.7	2426.1	2344.4	2205.9	2295.6	2394.5	2347.1	2257.0	2366.2	2432.1
31.5°	2191.5	2278.9	2388.9	2287.7	2150.2	2238.4	2356.0	2290.0	2202.7	2309.1	2394.1
32°	2127.0	2218.0	2351.3	2231.5	2095.8	2183.2	2318.8	2234.3	2147.9	2253.8	2357.4
32.5°	2064.7	2159.9	2316.5	2174.8	2038.2	2129.3	2280.7	2178.5	2092.1	2198.5	2319.7
33°	2003.9	2098.2	2282.6	2120.0	1980.2	2076.3	2245.0	2125.6	2036.9	2144.2	2284.4
33.5°	1943.5	2035.5	2246.3	2065.7	1917.5	2022.0	2210.1	2070.8	1980.6	2089.3	2253.3
34°	1884.5	1975.1	2205.0	2011.8	1856.2	1968.1	2176.2	2018.7	1922.1	2035.5	2221.3
34.5°	1825.0	1914.2	2169.2	1957.0	1791.1	1911.9	2140.4	1964.9	1860.8	1981.1	2174.3
35°	1765.6	1853.4	2132.5	1901.7	1728.0	1858.5	2101.0	1913.3	1800.0	1926.3	2127.0
35.5°	1707.5	1795.8	2093.1	1845.0	1664.3	1799.0	2057.3	1858.5	1739.1	1869.6	2086.1
36°	1671.8	1738.6	2046.6	1787.9	1604.4	1740.0	2013.2	1805.1	1677.8	1813.0	2035.5
36.5°	1606.7	1682.9	1993.2	1728.9	1543.5	1680.1	1957.0	1748.4	1616.9	1754.9	1979.3
37°	1540.3	1626.7	1943.0	1669.0	1485.5	1620.2	1900.8	1691.7	1555.2	1695.4	1921.7
37.5°	1473.9	1570.0	1889.1	1610.9	1428.4	1558.9	1840.4	1634.6	1497.1	1635.1	1863.6
38°	1407.4	1513.8	1826.4	1552.8	1372.6	1500.4	1774.9	1577.0	1440.4	1577.0	1804.6
38.5°	1348.0	1457.6	1761.4	1495.2	1316.4	1443.7	1709.8	1518.5	1384.2	1517.1	1745.6
39°	1289.0	1400.9	1698.2	1437.2	1262.5	1388.4	1644.8	1461.3	1328.0	1460.4	1685.2
39.5°	1231.4	1343.3	1635.5	1379.1	1205.9	1336.4	1582.6	1405.1	1273.2	1404.2	1625.3
40°	1174.7	1286.7	1572.8	1323.8	1149.6	1281.6	1521.3	1351.2	1219.8	1348.9	1564.9
40.5°	1120.4	1229.1	1510.1	1270.4	1093.0	1229.1	1462.3	1296.0	1164.0	1294.1	1505.5
41°	1066.0	1174.3	1446.9	1217.9	1038.6	1178.0	1404.7	1243.9	1108.8	1241.2	1444.1
41.5°	1012.2	1120.4	1384.2	1165.9	982.9	1127.4	1348.0	1192.8	1052.6	1189.6	1384.7
42°	960.1	1068.4	1324.3	1113.0	930.4	1073.9	1292.7	1141.8	998.7	1137.1	1323.8
42.5°	908.1	1016.3	1265.8	1061.9	879.3	1021.4	1239.3	1091.6	946.2	1085.5	1264.4
43°	857.5	966.2	1207.7	1010.3	829.6	970.4	1186.3	1040.5	895.1	1033.1	1204.0
43.5°	805.5	917.4	1151.0	959.2	780.8	920.6	1133.4	990.3	844.9	981.5	1146.4



TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	662.8	774.3	984.8	811.0	646.1	775.3	975.5	843.5	702.8	832.9	978.2
45.5°	618.3	727.4	930.4	765.0	602.9	731.6	924.8	795.7	658.2	785.9	926.2
46°	575.5	682.8	878.4	719.5	560.7	687.5	874.2	750.6	615.0	740.4	874.2
46.5°	533.7	639.2	827.7	676.8	521.2	645.2	825.9	706.0	573.2	696.8	824.5
47°	494.2	597.4	778.0	635.0	483.5	603.9	779.4	663.3	531.9	653.6	777.1
47.5°	457.5	556.5	730.2	593.6	448.2	563.9	734.4	620.6	493.3	610.8	730.7
48°	421.8	517.5	684.7	553.2	418.5	524.9	692.6	580.2	456.6	571.3	685.6
48.5°	388.3	480.8	641.0	514.7	388.8	487.7	650.8	541.6	424.6	531.9	641.9
49°	356.3	445.5	599.2	478.9	359.1	452.4	611.3	503.1	393.0	494.2	602.0
49.5°	325.2	411.6	559.7	443.6	329.8	421.8	573.7	466.8	360.9	458.0	559.7
50°	295.9	379.0	521.2	409.2	305.2	391.1	537.4	435.7	329.3	426.0	520.7
50.5°	268.9	347.4	483.1	376.2	282.4	360.5	503.1	404.6	303.8	393.4	484.5
51°	243.9	318.2	447.8	346.5	262.9	329.8	468.2	373.0	280.1	360.9	450.6
51.5°	220.6	290.8	413.9	318.7	244.3	304.7	438.0	341.9	258.7	328.9	419.0
52°	198.8	264.8	382.3	292.6	226.7	281.5	408.8	310.8	238.8	301.5	387.9
52.5°	178.8	239.7	351.2	269.4	210.0	260.1	379.0	284.7	221.1	276.8	356.7
53°	160.3	216.5	322.8	248.0	194.2	240.6	349.3	261.1	203.9	254.5	325.6
53.5°	144.9	195.6	295.9	229.0	179.8	223.0	319.6	239.7	188.1	234.1	297.3
54°	129.6	176.0	270.8	210.9	164.9	206.7	294.5	220.2	172.8	215.5	272.2
54.5°	114.3	157.5	246.7	194.2	150.5	190.9	270.8	202.1	157.9	197.9	249.0
55°	98.9	140.3	225.7	179.3	136.6	176.0	248.5	185.8	144.0	182.1	226.7
55.5°	88.7	127.7	205.3	164.4	124.0	162.1	227.6	170.5	130.1	167.2	206.2
56°	85.0	115.7	186.7	152.4	112.9	148.2	208.1	155.6	118.0	152.8	187.2
56.5°	81.8	103.1	169.5	139.8	105.0	134.7	190.0	142.1	108.2	139.4	170.0
57°	79.0	91.0	157.0	127.3	100.3	121.7	173.3	129.1	101.3	125.9	153.8
57.5°	75.7	78.5	144.0	114.7	96.6	110.1	157.9	116.6	97.5	113.3	139.4
58°	72.9	75.7	131.5	104.0	92.9	99.4	143.5	104.5	93.8	102.7	126.3
58.5°	70.1	72.9	118.9	94.8	89.6	91.5	131.0	94.8	90.1	94.3	114.3
59°	67.4	70.1	106.4	87.8	85.9	87.3	118.9	87.3	86.9	88.7	104.0
59.5°	65.0	67.4	97.1	84.1	82.7	83.6	108.7	83.1	83.6	85.5	95.2
60°	62.7	65.0	89.2	80.4	79.4	80.4	99.4	79.9	80.4	82.2	87.3
60.5°	59.9	62.7	81.8	77.6	76.2	77.6	91.0	76.6	77.1	79.0	79.9
61°	57.6	59.9	75.7	74.3	73.4	74.3	83.6	73.4	74.3	75.7	74.3
61.5°	55.7	58.1	70.1	71.5	70.6	71.5	77.1	70.6	71.5	72.9	68.7
62°	53.4	55.7	65.5	68.3	67.8	68.7	71.5	67.8	68.3	70.1	64.1
62.5°	51.1	53.4	60.9	66.0	65.0	66.0	66.9	65.0	66.0	67.4	59.9
63°	49.2	51.6	57.1	63.2	62.2	63.2	62.2	62.7	63.2	64.6	56.7
63.5°	47.4	49.2	53.9	60.4	59.9	60.9	58.5	59.9	60.9	62.2	53.4
64°	45.5	47.4	51.6	58.1	57.6	58.5	54.8	57.6	58.1	59.5	51.1
64.5°	43.7	45.5	49.7	55.7	55.3	56.2	52.0	55.3	55.7	57.1	48.8
65°	41.8	44.1	47.4	53.4	53.0	53.9	49.7	53.0	53.9	54.8	46.9
65.5°	40.4	42.3	45.5	51.6	50.6	51.6	47.8	50.6	51.6	52.5	45.1
66°	38.6	40.4	44.1	49.2	48.3	49.7	46.0	48.8	49.2	50.6	43.2





TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	33.9	35.8	39.0	43.2	42.7	43.7	40.9	42.7	43.2	44.6	38.1
68°	32.5	34.4	37.2	41.3	40.9	41.8	39.0	40.9	41.3	42.7	36.7
68.5°	31.1	32.5	35.8	39.9	39.0	39.9	37.6	39.0	39.5	40.9	35.3
69°	29.7	31.1	34.4	38.1	37.6	38.6	35.8	37.6	38.1	39.0	33.9
69.5°	28.3	29.7	33.0	36.7	35.8	36.7	34.4	35.8	36.2	37.2	32.5
70°	26.9	28.3	31.6	34.8	34.4	35.3	33.0	34.4	34.8	35.8	30.7
70.5°	25.5	27.4	30.2	33.4	32.5	33.9	31.1	32.5	33.0	33.9	29.7
71°	24.6	26.0	28.8	32.1	31.1	32.1	29.7	31.1	31.6	32.5	28.3
71.5°	23.2	24.6	27.4	30.2	29.7	30.7	28.3	29.7	29.7	30.7	26.9
72°	22.3	23.7	26.0	29.3	28.3	29.3	27.4	28.3	28.3	29.3	25.5
72.5°	20.9	22.3	25.1	27.9	26.9	27.9	26.0	26.9	26.9	27.9	24.6
73°	20.0	21.4	23.7	26.5	25.5	26.5	24.6	25.5	25.5	26.5	23.2
73.5°	18.6	20.0	22.3	25.1	24.2	25.1	23.7	24.2	24.2	25.1	22.3
74°	17.7	19.0	21.4	23.7	23.2	24.2	22.3	22.8	23.2	24.2	21.4
74.5°	16.7	18.1	20.4	22.8	21.8	22.8	21.4	21.8	21.8	22.8	20.0
75°	15.8	16.7	19.0	21.4	20.4	21.8	20.0	20.4	20.4	21.4	19.0
75.5°	14.9	15.8	18.1	20.4	19.5	20.4	19.0	19.5	19.5	20.4	18.1
76°	13.5	14.9	17.2	19.5	18.6	19.5	18.1	18.1	18.1	19.0	17.2
76.5°	12.5	13.9	16.3	18.1	17.2	18.6	17.2	17.2	17.2	18.1	15.8
77°	12.1	13.0	15.3	17.2	16.3	17.2	16.3	15.8	15.8	16.7	14.9
77.5°	11.1	12.1	14.4	16.3	15.3	16.3	15.3	14.9	14.9	15.8	13.9
78°	10.2	11.1	13.5	15.3	14.4	15.3	14.4	13.9	13.9	14.9	13.0
78.5°	9.3	10.2	12.5	14.4	13.5	14.4	13.5	13.0	13.0	13.5	12.5
79°	8.8	9.3	11.6	13.5	12.5	13.5	12.5	12.1	12.1	12.5	11.6
79.5°	7.9	8.4	11.1	12.5	11.6	12.5	11.6	11.1	11.1	11.6	10.7
80°	7.0	7.9	10.2	11.6	10.7	11.6	11.1	10.2	10.2	10.7	9.8
80.5°	6.5	7.0	9.3	10.7	10.2	10.7	10.2	9.3	9.3	9.8	9.3
81°	5.6	6.0	8.8	9.8	9.3	9.8	9.3	8.4	8.4	8.8	8.4
81.5°	5.1	5.6	7.9	8.8	8.4	9.3	8.8	7.4	7.4	7.9	7.9
82°	4.6	4.6	7.4	8.4	7.9	8.4	7.9	7.0	7.0	7.0	7.0
82.5°	3.7	4.2	6.5	7.4	7.0	7.9	7.4	6.0	6.0	6.0	6.5
83°	3.3	3.7	6.0	7.0	6.5	7.0	6.5	5.6	5.1	5.6	5.6
83.5°	2.3	2.8	5.1	6.0	6.0	6.5	6.0	4.6	4.6	4.6	5.1
84°	1.9	2.3	4.6	5.6	5.1	5.6	5.6	4.2	3.7	4.2	4.6
84.5°	1.9	1.9	4.2	4.6	4.6	5.1	4.6	3.7	3.3	3.3	4.2
85°	1.4	1.9	3.7	4.2	4.2	4.6	4.2	2.8	2.3	2.8	3.7
85.5°	0.9	1.4	3.3	3.7	3.3	3.7	3.7	2.3	1.9	2.3	2.8
86°	0.9	0.9	2.3	2.8	2.8	3.3	3.3	1.9	1.9	1.9	2.3
86.5°	0.9	0.9	1.9	2.3	2.3	2.8	2.8	1.9	1.4	1.4	1.9
87°	0.5	0.5	1.4	1.9	1.9	1.9	2.3	1.4	1.4	1.4	1.4
87.5°	0.0	0.5	0.9	1.4	1.4	1.4	1.9	0.9	0.9	0.9	0.9
88°	0.0	0.0	0.5	0.9	0.9	0.9	1.4	0.9	0.9	0.9	0.5
88.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5



TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**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: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3645.0	3645.0	3645.0	3645.0	3645.0	3645.0
0.5°	3644.0	3647.3	3645.4	3646.4	3645.4	3646.8
1°	3643.6	3646.8	3645.4	3646.4	3645.4	3646.8
1.5°	3642.2	3646.8	3645.4	3645.9	3645.4	3645.4
2°	3640.3	3645.4	3645.0	3645.0	3644.5	3644.5
2.5°	3638.0	3644.5	3643.1	3644.5	3642.6	3642.2
3°	3634.8	3642.2	3640.8	3641.7	3640.3	3639.4
3.5°	3631.0	3638.5	3638.0	3638.9	3637.1	3635.7
4°	3626.4	3634.3	3634.3	3635.2	3633.8	3631.5
4.5°	3621.3	3629.6	3630.1	3631.0	3629.2	3626.9
5°	3615.7	3624.5	3625.0	3625.9	3624.1	3621.3
5.5°	3609.2	3619.0	3619.4	3619.9	3618.0	3614.3
6°	3602.2	3612.0	3612.9	3613.8	3611.5	3607.8
6.5°	3594.3	3604.6	3606.0	3606.4	3604.1	3599.9
7°	3586.0	3596.7	3598.1	3599.0	3596.2	3591.1
7.5°	3576.7	3588.3	3590.2	3590.2	3587.4	3581.8
8°	3566.5	3578.1	3580.4	3581.3	3577.6	3572.0
8.5°	3556.2	3568.3	3570.6	3571.1	3567.4	3560.9
9°	3545.6	3556.7	3560.4	3560.9	3555.8	3549.3
9.5°	3533.5	3544.6	3548.4	3549.3	3545.1	3536.7
10°	3520.9	3533.0	3535.8	3537.7	3532.1	3522.8
10.5°	3507.5	3520.0	3523.3	3524.7	3519.1	3509.3
11°	3494.5	3505.6	3509.3	3510.7	3505.2	3494.9
11.5°	3480.1	3491.7	3494.9	3496.8	3490.8	3480.1
12°	3465.2	3475.9	3480.1	3481.9	3474.5	3463.8
12.5°	3448.5	3460.6	3464.3	3465.7	3459.2	3448.0
13°	3432.2	3444.3	3448.5	3450.3	3442.9	3431.3
13.5°	3416.0	3427.6	3431.8	3432.7	3425.3	3414.1
14°	3399.2	3410.4	3414.6	3414.1	3407.6	3396.0
14.5°	3386.2	3391.8	3396.5	3395.1	3389.0	3376.5
15°	3367.2	3372.3	3377.9	3376.0	3370.0	3357.4
15.5°	3347.2	3353.3	3357.0	3356.5	3350.0	3337.0
16°	3326.8	3332.8	3337.5	3337.0	3329.6	3316.6
16.5°	3305.9	3311.9	3317.0	3315.6	3309.1	3294.3
17°	3284.0	3289.6	3295.7	3293.8	3287.8	3272.4
17.5°	3261.8	3267.8	3273.4	3272.0	3265.0	3249.7
18°	3238.5	3244.1	3250.6	3249.2	3242.2	3226.0
18.5°	3214.8	3220.9	3227.4	3225.1	3217.6	3200.4
19°	3191.1	3196.7	3203.2	3201.8	3193.0	3176.3
19.5°	3165.6	3172.6	3178.1	3177.2	3168.4	3150.7
20°	3140.1	3147.5	3153.5	3152.6	3142.8	3125.2
20.5°	3114.0	3121.0	3127.5	3126.6	3116.4	3098.2
21°	3087.1	3094.5	3100.1	3100.6	3088.5	3070.8

TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3003.5	3010.9	3017.0	3018.4	3004.4	2987.2
23°	2975.2	2982.1	2987.7	2989.6	2975.2	2956.1
23.5°	2945.4	2952.4	2958.4	2959.8	2945.4	2927.3
24°	2914.3	2921.7	2928.2	2929.6	2915.7	2897.6
24.5°	2884.1	2892.5	2897.6	2898.5	2885.0	2870.6
25°	2853.5	2866.0	2865.5	2867.4	2853.5	2841.8
25.5°	2820.9	2829.8	2833.5	2835.3	2820.9	2804.2
26°	2788.0	2794.9	2803.3	2801.9	2790.3	2770.3
26.5°	2759.6	2759.6	2775.0	2769.4	2761.5	2733.6
27°	2728.0	2718.3	2736.9	2736.4	2732.2	2689.9
27.5°	2688.6	2677.4	2701.6	2702.0	2694.6	2644.4
28°	2653.7	2633.3	2664.9	2666.7	2657.0	2596.6
28.5°	2615.2	2586.8	2624.5	2632.8	2620.3	2546.4
29°	2575.2	2536.7	2583.6	2598.4	2578.9	2494.4
29.5°	2531.6	2486.0	2539.0	2563.1	2535.7	2437.3
30°	2487.4	2431.2	2493.0	2527.8	2489.7	2378.7
30.5°	2440.0	2373.2	2445.6	2492.1	2440.0	2317.0
31°	2391.3	2311.4	2393.6	2455.8	2389.4	2254.7
31.5°	2339.7	2252.8	2340.2	2419.1	2335.5	2191.5
32°	2287.2	2189.7	2285.4	2382.9	2280.7	2127.0
32.5°	2230.6	2125.6	2227.3	2350.4	2223.1	2064.7
33°	2172.0	2064.7	2166.5	2314.6	2162.7	2003.9
33.5°	2112.1	2003.4	2105.6	2276.5	2101.9	1943.5
34°	2052.6	1943.5	2044.8	2242.6	2041.0	1884.5
34.5°	1990.9	1882.2	1984.8	2202.7	1980.2	1825.0
35°	1931.4	1824.1	1924.0	2157.6	1919.3	1765.6
35.5°	1872.9	1766.0	1864.1	2113.5	1861.3	1707.5
36°	1814.8	1708.4	1806.9	2068.9	1804.1	1671.8
36.5°	1756.3	1675.0	1750.3	2019.2	1747.0	1606.7
37°	1700.1	1609.5	1693.6	1967.6	1691.3	1540.3
37.5°	1644.3	1542.2	1636.9	1914.2	1635.1	1473.9
38°	1589.1	1474.8	1580.2	1858.0	1579.3	1407.4
38.5°	1532.9	1407.4	1523.6	1800.9	1523.1	1348.0
39°	1476.7	1349.4	1466.9	1740.5	1466.9	1289.0
39.5°	1420.5	1289.9	1410.2	1681.0	1411.2	1231.4
40°	1363.8	1231.9	1352.2	1617.4	1352.6	1174.7
40.5°	1307.1	1175.7	1294.1	1553.3	1296.0	1120.4
41°	1250.4	1121.8	1237.9	1489.7	1240.7	1066.0
41.5°	1195.6	1066.0	1182.2	1426.0	1185.9	1012.2
42°	1142.2	1013.5	1128.7	1362.4	1132.9	960.1
42.5°	1089.3	962.0	1075.3	1301.1	1080.0	908.1
43°	1037.7	907.6	1024.2	1241.2	1028.9	857.5
43.5°	987.1	855.6	973.1	1182.6	977.8	805.5



TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	843.1	707.0	824.5	1016.8	832.9	662.8
45.5°	796.6	660.5	776.2	965.2	785.9	618.3
46°	750.6	615.5	729.7	914.1	740.4	575.5
46.5°	704.7	572.3	682.4	862.6	694.9	533.7
47°	661.0	530.9	638.7	812.9	652.2	494.2
47.5°	618.3	490.5	595.5	764.1	609.4	457.5
48°	576.9	452.0	553.7	718.1	568.6	421.8
48.5°	537.4	416.2	514.2	671.2	528.1	388.3
49°	498.9	381.8	476.1	627.1	491.4	356.3
49.5°	463.1	349.8	438.5	584.3	454.8	325.2
50°	430.1	318.7	404.1	542.5	418.5	295.9
50.5°	397.2	288.9	371.1	503.5	385.1	268.9
51°	364.2	262.0	338.6	465.9	353.5	243.9
51.5°	331.7	237.4	309.4	429.7	323.3	220.6
52°	301.9	214.6	282.0	395.8	295.0	198.8
52.5°	274.5	192.8	255.0	363.2	267.6	178.8
53°	248.5	172.8	230.9	332.6	241.5	160.3
53.5°	223.9	157.5	207.6	304.3	217.9	144.9
54°	200.7	141.7	186.7	275.5	196.0	129.6
54.5°	180.2	125.9	167.7	250.4	176.0	114.3
55°	161.2	110.6	151.9	226.7	159.8	98.9
55.5°	144.0	94.8	136.6	203.9	144.0	88.7
56°	126.8	87.3	120.8	183.0	128.2	85.0
56.5°	111.5	83.6	105.4	163.5	112.4	81.8
57°	98.0	80.4	89.6	150.0	96.6	79.0
57.5°	86.4	77.1	80.8	137.0	85.0	75.7
58°	77.6	74.3	77.6	123.6	77.6	72.9
58.5°	74.3	71.5	74.8	110.1	74.3	70.1
59°	71.1	68.7	72.0	97.1	71.5	67.4
59.5°	68.7	66.4	69.2	88.3	68.7	65.0
60°	66.0	63.6	66.4	80.8	66.4	62.7
60.5°	63.6	61.3	64.1	74.3	63.6	59.9
61°	61.3	59.0	61.8	68.7	61.3	57.6
61.5°	59.0	56.7	59.5	63.6	59.0	55.7
62°	56.7	54.8	57.1	59.5	56.7	53.4
62.5°	54.3	52.5	54.8	55.7	54.8	51.1
63°	52.5	50.6	53.0	52.5	52.5	49.2
63.5°	50.6	48.8	50.6	50.2	50.2	47.4
64°	48.3	46.9	48.8	48.3	48.3	45.5
64.5°	46.9	45.1	46.9	46.5	46.5	43.7
65°	45.1	43.2	45.1	44.6	44.6	41.8
65.5°	43.2	41.3	43.7	42.7	42.7	40.4
66°	41.3	39.9	41.8	41.3	41.3	38.6



TEST NUMBER: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	37.2	35.3	37.2	36.7	36.2	33.9
68°	35.3	33.9	35.3	34.8	34.8	32.5
68.5°	33.9	32.5	33.9	33.4	33.4	31.1
69°	32.5	31.1	32.5	32.1	32.1	29.7
69.5°	31.1	29.7	31.1	30.7	30.7	28.3
70°	29.7	28.3	30.2	29.3	29.3	26.9
70.5°	28.8	27.4	28.8	28.3	27.9	25.5
71°	27.4	26.0	27.4	26.9	26.5	24.6
71.5°	26.0	25.1	26.0	25.5	25.1	23.2
72°	25.1	23.7	25.1	24.6	24.2	22.3
72.5°	24.2	22.8	23.7	23.2	22.8	20.9
73°	22.8	21.4	22.8	22.3	21.4	20.0
73.5°	21.8	20.4	21.8	21.4	20.4	18.6
74°	20.9	19.5	20.4	20.0	19.5	17.7
74.5°	20.0	18.6	19.5	19.0	18.1	16.7
75°	18.6	17.7	18.6	18.1	17.2	15.8
75.5°	17.7	16.7	17.7	17.2	16.3	14.9
76°	16.7	15.8	16.7	16.3	15.3	13.5
76.5°	15.8	14.9	15.8	15.3	14.4	12.5
77°	14.9	13.9	14.9	13.9	13.5	12.1
77.5°	13.9	13.0	13.9	13.5	12.1	11.1
78°	13.0	12.1	13.0	12.5	11.1	10.2
78.5°	12.5	11.6	12.1	11.6	10.7	9.3
79°	11.6	10.7	11.1	10.7	9.8	8.8
79.5°	10.7	9.8	10.7	9.8	8.8	7.9
80°	9.8	9.3	9.8	9.3	7.9	7.0
80.5°	9.3	8.8	9.3	8.4	7.0	6.5
81°	8.4	7.9	8.4	7.9	6.5	5.6
81.5°	7.9	7.4	7.4	7.0	5.6	5.1
82°	7.0	6.5	7.0	6.5	4.6	4.6
82.5°	6.5	6.0	6.5	5.6	4.2	3.7
83°	6.0	5.6	5.6	5.1	3.7	3.3
83.5°	5.1	5.1	5.1	4.6	3.3	2.3
84°	4.6	4.6	4.6	4.2	2.3	1.9
84.5°	4.2	4.2	3.7	3.7	1.9	1.9
85°	3.7	3.3	3.3	2.8	1.9	1.4
85.5°	2.8	2.8	2.8	2.3	1.4	0.9
86°	2.3	2.3	2.3	1.9	0.9	0.9
86.5°	1.9	1.9	1.9	1.4	0.9	0.9
87°	1.4	1.4	1.4	0.9	0.5	0.5
87.5°	0.9	0.9	0.9	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: P776626

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQH-5000lm-3000K

**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°	3043.4	3032.8	3054.6	3034.6	3010.9	3012.8	3033.2	3032.8	3039.3	3066.2	3059.7
22°	3015.6	3004.9	3027.2	3005.3	2982.1	2984.0	3004.9	3003.5	3010.5	3037.4	3033.2



44°	756.2	869.1	1094.8	908.1	734.8	869.6	1079.5	940.6	794.8	931.3	1088.8
44.5°	708.8	821.2	1039.6	857.9	689.3	822.6	1027.0	891.4	748.3	881.6	1032.6



66.5°	37.2	39.0	42.3	47.4	46.5	47.4	44.1	46.5	47.4	48.3	41.3
67°	35.3	37.2	40.4	45.1	44.6	45.5	42.3	44.6	45.1	46.5	39.9



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°	3059.2	3066.7	3073.2	3073.6	3061.1	3043.4
22°	3031.8	3039.3	3045.3	3046.2	3033.2	3015.6



44°	938.3	805.9	922.5	1126.0	929.0	756.2
44.5°	890.9	755.7	873.3	1070.2	880.2	708.8



66.5°	39.9	38.1	39.9	39.5	39.5	37.2
67°	38.6	36.7	38.6	38.1	37.6	35.3



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)