

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: P776284

Luminaire Tested: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776284  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156A001)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS3040CSD-HCD42TRMW-4000lm-5000K  
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

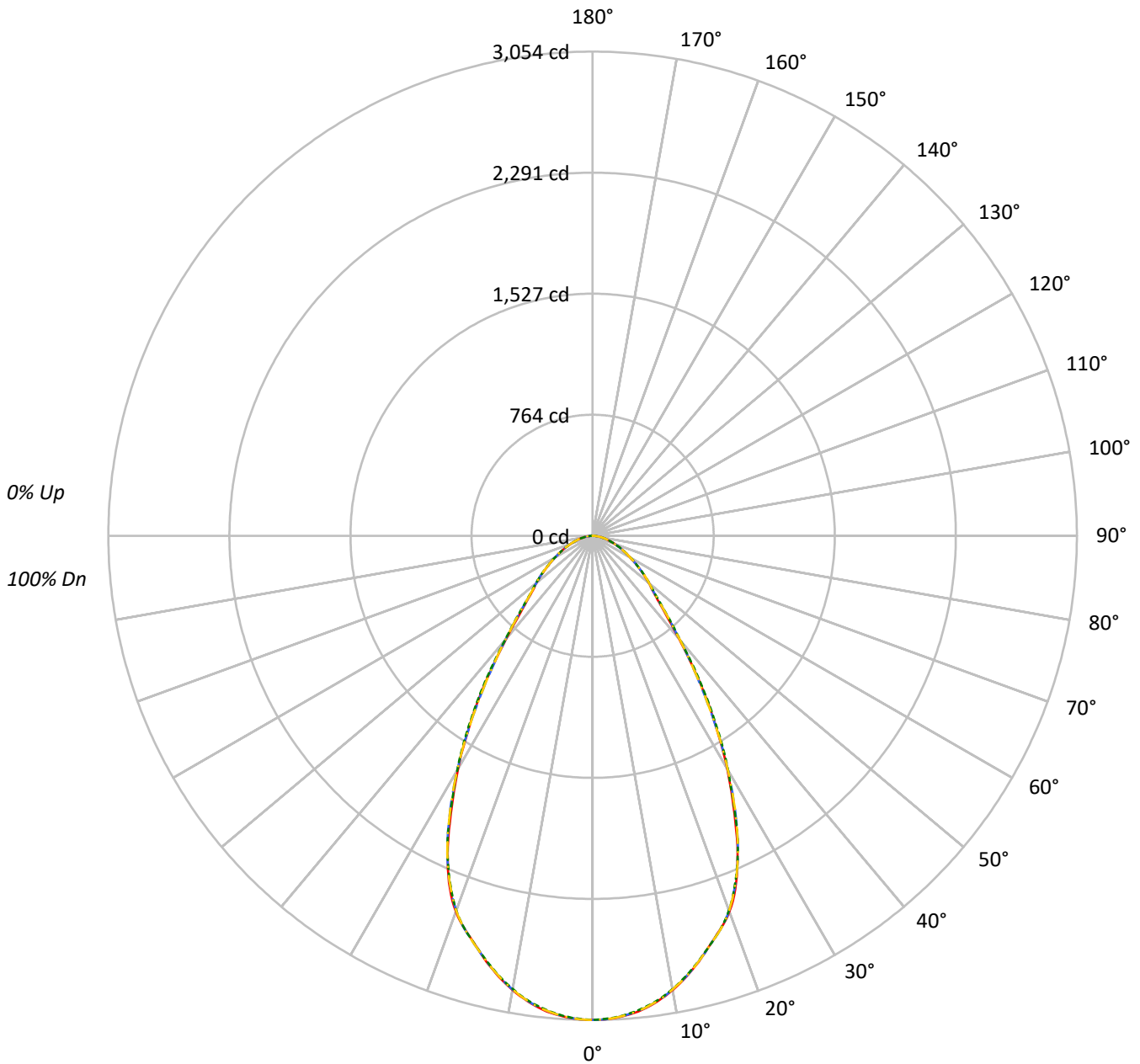
Lumens per Lamp: N/A  
Luminaire Lumens: 3943.7 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 0.97 / 0.95  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.5  
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: P776284  
CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71								
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58								
6	80	69	62	57	78	68	61	56	67	60	56	65	60	55	64	59	55	53								
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49								
8	71	60	52	48	70	59	52	47	58	52	47	57	51	47	56	51	47	45								
9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42								
10	63	52	45	41	62	52	45	41	51	45	41	50	44	41	49	44	40	39								

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

	0°	90°	180°	270°
0°	384358	384358	384358	384358
5°	381644	380823	381644	380823
10°	371783	370952	371783	370952
15°	355338	354921	355338	354921
20°	337870	336665	337870	336665
25°	299882	300854	299882	300854
30°	246722	248030	246722	248030
35°	191413	193487	191413	193487
40°	139035	141450	139035	141450
45°	105256	107891	105256	107891
50°	90650	91374	90650	91374
55°	78791	79691	78791	79691
60°	68865	69494	68865	69494
65°	60540	61016	60540	61016
70°	53428	53722	53428	53722
75°	46923	46923	46923	46923
80°	40585	40296	40585	40296
85°	32489	32489	32489	32489

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 107891 cd/sqm



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	284.5	7.2
10°-20°	766.1	19.4
20°-30°	981.1	24.9
30°-40°	777.4	19.7
40°-50°	476.0	12.1
50°-60°	325.4	8.3
60°-70°	203.7	5.2
70°-80°	103.2	2.6
80°-90°	26.1	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°	2031.8	51.5
0°-40°	2809.2	71.2
0°-60°	3610.7	91.6
0°-90°	3943.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3943.7	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	3054	3054	3054	3054	3054	
5°	3021	3014	3021	3014	3021	285
15°	2727	2724	2727	2724	2727	766
25°	2160	2167	2160	2167	2160	979
35°	1246	1259	1246	1259	1246	776
45°	591	606	591	606	591	470
55°	359	363	359	363	359	324
65°	203	205	203	205	203	203
75°	96	96	96	96	96	103
85°	22	22	22	22	22	26
90°	0	1	0	1	0	



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3054.1	3054.1	3054.1	3054.1	3054.1	3054.1	3054.1	3054.1	3054.1	3054.1	3054.1
0.5°	3054.5	3054.1	3053.3	3052.9	3051.7	3052.9	3053.3	3054.1	3054.5	3054.1	3053.3
1°	3053.3	3052.9	3052.5	3052.1	3050.5	3052.1	3052.5	3052.9	3053.3	3052.9	3052.5
1.5°	3051.7	3050.9	3050.9	3050.0	3048.8	3050.0	3050.9	3050.9	3051.7	3050.9	3050.9
2°	3049.2	3048.8	3048.0	3047.6	3046.0	3047.6	3048.0	3048.8	3049.2	3048.8	3048.0
2.5°	3046.4	3045.5	3044.7	3044.3	3042.3	3044.3	3044.7	3045.5	3046.4	3045.5	3044.7
3°	3042.3	3041.5	3040.6	3039.8	3037.8	3039.8	3040.6	3041.5	3042.3	3041.5	3040.6
3.5°	3037.8	3037.0	3035.7	3034.9	3033.7	3034.9	3035.7	3037.0	3037.8	3037.0	3035.7
4°	3032.5	3032.1	3030.4	3029.6	3027.6	3029.6	3030.4	3032.1	3032.5	3032.1	3030.4
4.5°	3026.7	3025.9	3024.3	3023.5	3021.0	3023.5	3024.3	3025.9	3026.7	3025.9	3024.3
5°	3021.0	3019.8	3018.1	3017.3	3014.5	3017.3	3018.1	3019.8	3021.0	3019.8	3018.1
5.5°	3014.9	3012.0	3010.0	3009.1	3006.7	3009.1	3010.0	3012.0	3014.9	3012.0	3010.0
6°	3005.5	3003.8	3001.8	3000.6	2997.3	3000.6	3001.8	3003.8	3005.5	3003.8	3001.8
6.5°	2996.1	2994.8	2992.4	2991.1	2987.9	2991.1	2992.4	2994.8	2996.1	2994.8	2992.4
7°	2986.2	2984.6	2983.4	2981.3	2978.5	2981.3	2983.4	2984.6	2986.2	2984.6	2983.4
7.5°	2975.2	2973.6	2971.9	2971.1	2968.2	2971.1	2971.9	2973.6	2975.2	2973.6	2971.9
8°	2963.3	2962.1	2960.5	2959.2	2957.6	2959.2	2960.5	2962.1	2963.3	2962.1	2960.5
8.5°	2951.1	2949.4	2947.8	2946.6	2944.9	2946.6	2947.8	2949.4	2951.1	2949.4	2947.8
9°	2938.0	2936.7	2934.7	2933.5	2931.8	2933.5	2934.7	2936.7	2938.0	2936.7	2934.7
9.5°	2923.7	2922.8	2920.8	2919.6	2917.9	2919.6	2920.8	2922.8	2923.7	2922.8	2920.8
10°	2909.3	2908.1	2906.5	2904.8	2902.8	2904.8	2906.5	2908.1	2909.3	2908.1	2906.5
10.5°	2893.4	2892.6	2890.5	2889.3	2887.7	2889.3	2890.5	2892.6	2893.4	2892.6	2890.5
11°	2877.4	2876.6	2875.0	2873.4	2871.3	2873.4	2875.0	2876.6	2877.4	2876.6	2875.0
11.5°	2860.7	2859.9	2858.2	2856.6	2854.9	2856.6	2858.2	2859.9	2860.7	2859.9	2858.2
12°	2843.5	2842.7	2841.4	2839.4	2837.8	2839.4	2841.4	2842.7	2843.5	2842.7	2841.4
12.5°	2825.5	2824.7	2823.5	2821.4	2819.4	2821.4	2823.5	2824.7	2825.5	2824.7	2823.5
13°	2807.1	2806.3	2805.0	2803.4	2801.4	2803.4	2805.0	2806.3	2807.1	2806.3	2805.0
13.5°	2787.9	2787.0	2786.2	2784.6	2783.0	2784.6	2786.2	2787.0	2787.9	2787.0	2786.2
14°	2768.2	2767.8	2767.0	2765.4	2763.7	2765.4	2767.0	2767.8	2768.2	2767.8	2767.0
14.5°	2747.8	2747.4	2747.0	2745.3	2743.7	2745.3	2747.0	2747.4	2747.8	2747.4	2747.0
15°	2727.3	2727.3	2726.5	2725.7	2724.1	2725.7	2726.5	2727.3	2727.3	2727.3	2726.5
15.5°	2706.1	2706.1	2706.9	2706.1	2705.2	2706.1	2706.9	2706.1	2706.1	2706.1	2706.9
16°	2685.6	2686.0	2687.2	2686.8	2686.0	2686.8	2687.2	2686.0	2685.6	2686.0	2687.2
16.5°	2665.2	2666.0	2667.6	2667.6	2667.2	2667.6	2667.6	2666.0	2665.2	2666.0	2667.6
17°	2645.9	2646.8	2648.4	2648.0	2648.4	2648.0	2648.4	2646.8	2645.9	2646.8	2648.4
17.5°	2627.1	2627.9	2629.2	2628.8	2628.4	2628.8	2629.2	2627.9	2627.1	2627.9	2629.2
18°	2608.7	2609.1	2609.9	2609.1	2608.3	2609.1	2609.9	2609.1	2608.7	2609.1	2609.9
18.5°	2589.1	2589.1	2589.1	2588.3	2587.0	2588.3	2589.1	2589.1	2589.1	2589.1	2589.1
19°	2569.0	2567.8	2567.0	2565.8	2564.5	2565.8	2567.0	2567.8	2569.0	2567.8	2567.0
19.5°	2547.0	2545.3	2542.9	2542.0	2540.8	2542.0	2542.9	2545.3	2547.0	2545.3	2542.9
20°	2522.8	2520.8	2516.3	2516.7	2513.8	2516.7	2516.3	2520.8	2522.8	2520.8	2516.3
20.5°	2496.2	2493.0	2487.6	2489.3	2486.0	2489.3	2487.6	2493.0	2496.2	2493.0	2487.6
21°	2468.4	2463.5	2457.4	2459.4	2455.3	2459.4	2457.4	2463.5	2468.4	2463.5	2457.4



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2366.6	2361.7	2357.6	2357.2	2355.1	2357.2	2357.6	2361.7	2366.6	2361.7	2357.6
23°	2327.7	2323.6	2322.8	2320.0	2319.1	2320.0	2322.8	2323.6	2327.7	2323.6	2322.8
23.5°	2288.0	2284.4	2286.4	2281.5	2283.5	2281.5	2286.4	2284.4	2288.0	2284.4	2286.4
24°	2246.7	2243.9	2248.8	2242.2	2245.9	2242.2	2248.8	2243.9	2246.7	2243.9	2248.8
24.5°	2204.2	2203.0	2209.1	2202.6	2207.5	2202.6	2209.1	2203.0	2204.2	2203.0	2209.1
25°	2159.6	2160.4	2167.8	2162.9	2166.6	2162.9	2167.8	2160.4	2159.6	2160.4	2167.8
25.5°	2113.4	2118.7	2125.3	2123.2	2124.0	2123.2	2125.3	2118.7	2113.4	2118.7	2125.3
26°	2066.0	2075.4	2081.5	2081.9	2078.6	2081.9	2081.5	2075.4	2066.0	2075.4	2081.5
26.5°	2017.3	2031.2	2036.1	2039.0	2031.6	2039.0	2036.1	2031.2	2017.3	2031.2	2036.1
27°	1969.8	1985.4	1990.3	1994.8	1983.7	1994.8	1990.3	1985.4	1969.8	1985.4	1990.3
27.5°	1923.2	1937.9	1943.7	1949.4	1935.1	1949.4	1943.7	1937.9	1923.2	1937.9	1943.7
28°	1876.6	1890.5	1896.2	1901.9	1886.4	1901.9	1896.2	1890.5	1876.6	1890.5	1896.2
28.5°	1831.2	1842.2	1848.8	1853.7	1839.4	1853.7	1848.8	1842.2	1831.2	1842.2	1848.8
29°	1786.2	1793.5	1801.3	1804.6	1794.8	1804.6	1801.3	1793.5	1786.2	1793.5	1801.3
29.5°	1742.0	1745.7	1754.3	1755.5	1751.0	1755.5	1754.3	1745.7	1742.0	1745.7	1754.3
30°	1697.8	1696.6	1706.0	1706.4	1706.8	1706.4	1706.0	1696.6	1697.8	1696.6	1706.0
30.5°	1652.0	1649.2	1658.2	1659.0	1665.1	1659.0	1658.2	1649.2	1652.0	1649.2	1658.2
31°	1606.6	1600.5	1609.9	1611.5	1620.9	1611.5	1609.9	1600.5	1606.6	1600.5	1609.9
31.5°	1560.0	1553.9	1561.6	1564.5	1576.4	1564.5	1561.6	1553.9	1560.0	1553.9	1561.6
32°	1512.5	1506.8	1513.8	1518.3	1530.5	1518.3	1513.8	1506.8	1512.5	1506.8	1513.8
32.5°	1466.7	1461.8	1466.7	1472.5	1484.7	1472.5	1466.7	1461.8	1466.7	1461.8	1466.7
33°	1420.5	1416.8	1418.5	1426.7	1438.1	1426.7	1418.5	1416.8	1420.5	1416.8	1418.5
33.5°	1379.2	1371.8	1370.6	1380.8	1391.1	1380.8	1370.6	1371.8	1379.2	1371.8	1370.6
34°	1334.6	1326.9	1323.2	1335.9	1346.5	1335.9	1323.2	1326.9	1334.6	1326.9	1323.2
34.5°	1290.5	1282.3	1277.0	1290.5	1302.3	1290.5	1277.0	1282.3	1290.5	1282.3	1277.0
35°	1245.9	1238.9	1233.2	1246.7	1259.4	1246.7	1233.2	1238.9	1245.9	1238.9	1233.2
35.5°	1202.5	1196.0	1189.8	1203.3	1217.2	1203.3	1189.8	1196.0	1202.5	1196.0	1189.8
36°	1160.0	1153.0	1147.7	1161.6	1175.9	1161.6	1147.7	1153.0	1160.0	1153.0	1147.7
36.5°	1117.8	1111.7	1106.8	1120.3	1133.8	1120.3	1106.8	1111.7	1117.8	1111.7	1106.8
37°	1075.3	1070.8	1066.7	1080.2	1092.1	1080.2	1066.7	1070.8	1075.3	1070.8	1066.7
37.5°	1034.0	1031.1	1028.3	1041.8	1050.4	1041.8	1028.3	1031.1	1034.0	1031.1	1028.3
38°	993.1	992.7	991.5	1004.1	1009.0	1004.1	991.5	992.7	993.1	992.7	991.5
38.5°	954.6	955.5	956.3	967.3	969.4	967.3	956.3	955.5	954.6	955.5	956.3
39°	917.4	919.5	921.1	931.7	931.3	931.7	921.1	919.5	917.4	919.5	921.1
39.5°	881.0	884.7	887.6	896.6	895.3	896.6	887.6	884.7	881.0	884.7	887.6
40°	846.3	850.3	855.3	862.6	861.0	862.6	855.3	850.3	846.3	850.3	855.3
40.5°	813.5	817.6	824.2	829.5	829.1	829.5	824.2	817.6	813.5	817.6	824.2
41°	782.0	786.1	794.7	798.4	799.6	798.4	794.7	786.1	782.0	786.1	794.7
41.5°	752.2	756.7	766.5	768.5	772.2	768.5	766.5	756.7	752.2	756.7	766.5
42°	724.4	728.9	739.5	740.7	745.6	740.7	739.5	728.9	724.4	728.9	739.5
42.5°	698.2	702.7	714.1	714.6	719.9	714.6	714.1	702.7	698.2	702.7	714.1
43°	673.2	678.2	689.2	690.0	694.9	690.0	689.2	678.2	673.2	678.2	689.2
43.5°	650.3	655.2	665.9	666.3	670.8	666.3	665.9	655.2	650.3	655.2	665.9



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	591.4	595.5	602.1	604.1	606.2	604.1	602.1	595.5	591.4	595.5	602.1
45.5°	574.3	577.5	583.7	585.7	587.3	585.7	583.7	577.5	574.3	577.5	583.7
46°	557.9	560.8	566.1	568.9	569.8	568.9	566.1	560.8	557.9	560.8	566.1
46.5°	542.8	545.2	549.3	552.6	553.4	552.6	549.3	545.2	542.8	545.2	549.3
47°	528.5	530.1	534.2	537.4	538.7	537.4	534.2	530.1	528.5	530.1	534.2
47.5°	515.0	516.2	519.9	523.5	525.2	523.5	519.9	516.2	515.0	516.2	519.9
48°	502.3	503.9	507.6	510.9	512.5	510.9	507.6	503.9	502.3	503.9	507.6
48.5°	492.0	492.9	495.7	499.0	500.2	499.0	495.7	492.9	492.0	492.9	495.7
49°	482.2	482.6	485.1	487.5	488.8	487.5	485.1	482.6	482.2	482.6	485.1
49.5°	472.8	473.2	474.9	476.9	477.3	476.9	474.9	473.2	472.8	473.2	474.9
50°	463.0	463.4	464.6	466.3	466.7	466.3	464.6	463.4	463.0	463.4	464.6
50.5°	453.2	453.6	454.4	456.1	456.1	456.1	454.4	453.6	453.2	453.6	454.4
51°	442.1	443.0	444.2	445.8	445.8	445.8	444.2	443.0	442.1	443.0	444.2
51.5°	431.5	431.9	433.6	435.6	436.0	435.6	433.6	431.9	431.5	431.9	433.6
52°	420.5	421.3	422.9	425.0	425.4	425.0	422.9	421.3	420.5	421.3	422.9
52.5°	409.4	410.2	412.3	413.9	414.7	413.9	412.3	410.2	409.4	410.2	412.3
53°	399.2	400.0	401.7	403.3	404.1	403.3	401.7	400.0	399.2	400.0	401.7
53.5°	388.6	389.4	391.0	393.1	393.9	393.1	391.0	389.4	388.6	389.4	391.0
54°	378.8	379.2	380.8	382.4	383.2	382.4	380.8	379.2	378.8	379.2	380.8
54.5°	368.9	369.3	371.0	372.6	373.4	372.6	371.0	369.3	368.9	369.3	371.0
55°	359.1	359.9	361.6	362.8	363.2	362.8	361.6	359.9	359.1	359.9	361.6
55.5°	349.7	350.5	352.2	353.4	353.8	353.4	352.2	350.5	349.7	350.5	352.2
56°	340.7	341.5	342.8	344.0	344.4	344.0	342.8	341.5	340.7	341.5	342.8
56.5°	331.7	332.5	333.8	335.0	335.4	335.0	333.8	332.5	331.7	332.5	333.8
57°	322.7	323.5	324.8	326.0	326.4	326.0	324.8	323.5	322.7	323.5	324.8
57.5°	313.7	314.9	316.2	317.0	317.8	317.0	316.2	314.9	313.7	314.9	316.2
58°	305.9	306.4	307.6	308.8	309.2	308.8	307.6	306.4	305.9	306.4	307.6
58.5°	297.8	298.2	299.4	300.2	300.6	300.2	299.4	298.2	297.8	298.2	299.4
59°	289.6	290.0	290.8	291.6	292.4	291.6	290.8	290.0	289.6	290.0	290.8
59.5°	281.4	281.8	282.6	283.9	284.3	283.9	282.6	281.8	281.4	281.8	282.6
60°	273.6	274.0	274.9	275.7	276.1	275.7	274.9	274.0	273.6	274.0	274.9
60.5°	265.9	266.3	267.1	267.9	268.3	267.9	267.1	266.3	265.9	266.3	267.1
61°	258.5	258.9	259.7	260.5	261.0	260.5	259.7	258.9	258.5	258.9	259.7
61.5°	251.1	251.5	252.4	253.2	253.6	253.2	252.4	251.5	251.1	251.5	252.4
62°	244.2	244.2	245.0	245.8	245.8	245.8	245.0	244.2	244.2	244.2	245.0
62.5°	236.8	237.2	237.6	238.5	238.9	238.5	237.6	237.2	236.8	237.2	237.6
63°	229.9	230.3	230.7	231.5	231.5	231.5	230.7	230.3	229.9	230.3	230.7
63.5°	222.9	223.3	223.7	224.6	225.0	224.6	223.7	223.3	222.9	223.3	223.7
64°	216.4	216.8	217.2	217.6	218.0	217.6	217.2	216.8	216.4	216.8	217.2
64.5°	209.8	210.2	210.6	211.1	211.5	211.1	210.6	210.2	209.8	210.2	210.6
65°	203.3	203.7	204.1	204.5	204.9	204.5	204.1	203.7	203.3	203.7	204.1
65.5°	197.1	197.1	197.6	198.4	198.4	198.4	197.6	197.1	197.1	197.1	197.6
66°	190.6	191.0	191.4	191.8	192.2	191.8	191.4	191.0	190.6	191.0	191.4





TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	172.6	173.0	173.4	173.8	173.8	173.8	173.4	173.0	172.6	173.0	173.4
68°	166.9	167.3	167.7	168.1	168.1	168.1	167.7	167.3	166.9	167.3	167.7
68.5°	161.2	161.6	162.0	162.0	162.4	162.0	162.0	161.6	161.2	161.6	162.0
69°	155.8	155.8	155.8	156.7	156.7	156.7	155.8	155.8	155.8	155.8	155.8
69.5°	150.1	150.5	150.5	150.9	151.3	150.9	150.5	150.5	150.1	150.5	150.5
70°	145.2	145.6	145.2	145.6	146.0	145.6	145.2	145.6	145.2	145.6	145.2
70.5°	139.9	140.3	140.3	140.3	140.7	140.3	140.3	140.3	139.9	140.3	140.3
71°	135.0	135.0	135.0	135.0	135.4	135.0	135.0	135.0	135.0	135.0	135.0
71.5°	129.7	129.7	130.1	130.1	130.1	130.1	130.1	129.7	129.7	129.7	130.1
72°	124.8	124.8	124.8	125.2	125.2	125.2	124.8	124.8	124.8	124.8	124.8
72.5°	119.8	119.8	119.8	120.3	120.3	120.3	119.8	119.8	119.8	119.8	119.8
73°	114.9	114.9	114.9	115.3	115.3	115.3	114.9	114.9	114.9	114.9	114.9
73.5°	110.0	110.0	110.4	110.4	110.4	110.4	110.4	110.0	110.0	110.0	110.4
74°	105.5	105.5	105.5	105.9	105.9	105.9	105.5	105.5	105.5	105.5	105.5
74.5°	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0
75°	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5	96.5
75.5°	92.0	92.0	92.0	92.0	92.4	92.0	92.0	92.0	92.0	92.0	92.0
76°	87.9	87.5	87.5	87.9	87.9	87.9	87.5	87.5	87.9	87.5	87.5
76.5°	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4
77°	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3
77.5°	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3	75.3
78°	71.2	71.2	71.2	71.2	71.2	71.2	71.2	71.2	71.2	71.2	71.2
78.5°	67.5	67.5	67.1	67.1	67.5	67.1	67.1	67.5	67.5	67.5	67.1
79°	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4	63.4
79.5°	59.7	59.7	59.3	59.7	59.7	59.7	59.3	59.7	59.7	59.7	59.3
80°	56.0	56.0	55.6	55.6	55.6	55.6	55.6	56.0	56.0	56.0	55.6
80.5°	52.4	52.4	52.4	52.4	52.4	52.4	52.4	52.4	52.4	52.4	52.4
81°	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
81.5°	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
82°	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7	41.7
82.5°	38.4	38.4	38.4	38.4	38.0	38.4	38.4	38.4	38.4	38.4	38.4
83°	35.2	35.2	35.2	34.8	34.8	34.8	35.2	35.2	35.2	35.2	35.2
83.5°	31.9	31.9	31.9	31.5	31.5	31.5	31.9	31.9	31.9	31.9	31.9
84°	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
84.5°	25.8	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.8	25.4	25.4
85°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
85.5°	19.6	19.2	19.6	19.2	19.6	19.2	19.6	19.2	19.6	19.2	19.6
86°	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4	16.4
86.5°	13.9	13.5	13.5	13.5	13.9	13.5	13.5	13.5	13.9	13.5	13.5
87°	11.0	11.0	11.0	10.6	11.0	10.6	11.0	11.0	11.0	11.0	11.0
87.5°	8.2	8.2	8.2	8.2	8.6	8.2	8.2	8.2	8.2	8.2	8.2
88°	5.3	5.7	5.7	6.1	6.1	6.1	5.7	5.7	5.3	5.7	5.7
88.5°	3.3	3.3	3.7	4.1	4.9	4.1	3.7	3.3	3.3	3.3	3.7



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-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	0.4	0.8	1.2	0.8	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3054.1	3054.1	3054.1	3054.1	3054.1	3054.1
0.5°	3052.9	3051.7	3052.9	3053.3	3054.1	3054.5
1°	3052.1	3050.5	3052.1	3052.5	3052.9	3053.3
1.5°	3050.0	3048.8	3050.0	3050.9	3050.9	3051.7
2°	3047.6	3046.0	3047.6	3048.0	3048.8	3049.2
2.5°	3044.3	3042.3	3044.3	3044.7	3045.5	3046.4
3°	3039.8	3037.8	3039.8	3040.6	3041.5	3042.3
3.5°	3034.9	3033.7	3034.9	3035.7	3037.0	3037.8
4°	3029.6	3027.6	3029.6	3030.4	3032.1	3032.5
4.5°	3023.5	3021.0	3023.5	3024.3	3025.9	3026.7
5°	3017.3	3014.5	3017.3	3018.1	3019.8	3021.0
5.5°	3009.1	3006.7	3009.1	3010.0	3012.0	3014.9
6°	3000.6	2997.3	3000.6	3001.8	3003.8	3005.5
6.5°	2991.1	2987.9	2991.1	2992.4	2994.8	2996.1
7°	2981.3	2978.5	2981.3	2983.4	2984.6	2986.2
7.5°	2971.1	2968.2	2971.1	2971.9	2973.6	2975.2
8°	2959.2	2957.6	2959.2	2960.5	2962.1	2963.3
8.5°	2946.6	2944.9	2946.6	2947.8	2949.4	2951.1
9°	2933.5	2931.8	2933.5	2934.7	2936.7	2938.0
9.5°	2919.6	2917.9	2919.6	2920.8	2922.8	2923.7
10°	2904.8	2902.8	2904.8	2906.5	2908.1	2909.3
10.5°	2889.3	2887.7	2889.3	2890.5	2892.6	2893.4
11°	2873.4	2871.3	2873.4	2875.0	2876.6	2877.4
11.5°	2856.6	2854.9	2856.6	2858.2	2859.9	2860.7
12°	2839.4	2837.8	2839.4	2841.4	2842.7	2843.5
12.5°	2821.4	2819.4	2821.4	2823.5	2824.7	2825.5
13°	2803.4	2801.4	2803.4	2805.0	2806.3	2807.1
13.5°	2784.6	2783.0	2784.6	2786.2	2787.0	2787.9
14°	2765.4	2763.7	2765.4	2767.0	2767.8	2768.2
14.5°	2745.3	2743.7	2745.3	2747.0	2747.4	2747.8
15°	2725.7	2724.1	2725.7	2726.5	2727.3	2727.3
15.5°	2706.1	2705.2	2706.1	2706.9	2706.1	2706.1
16°	2686.8	2686.0	2686.8	2687.2	2686.0	2685.6
16.5°	2667.6	2667.2	2667.6	2667.6	2666.0	2665.2
17°	2648.0	2648.4	2648.0	2648.4	2646.8	2645.9
17.5°	2628.8	2628.4	2628.8	2629.2	2627.9	2627.1
18°	2609.1	2608.3	2609.1	2609.9	2609.1	2608.7
18.5°	2588.3	2587.0	2588.3	2589.1	2589.1	2589.1
19°	2565.8	2564.5	2565.8	2567.0	2567.8	2569.0
19.5°	2542.0	2540.8	2542.0	2542.9	2545.3	2547.0
20°	2516.7	2513.8	2516.7	2516.3	2520.8	2522.8
20.5°	2489.3	2486.0	2489.3	2487.6	2493.0	2496.2
21°	2459.4	2455.3	2459.4	2457.4	2463.5	2468.4



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2357.2	2355.1	2357.2	2357.6	2361.7	2366.6
23°	2320.0	2319.1	2320.0	2322.8	2323.6	2327.7
23.5°	2281.5	2283.5	2281.5	2286.4	2284.4	2288.0
24°	2242.2	2245.9	2242.2	2248.8	2243.9	2246.7
24.5°	2202.6	2207.5	2202.6	2209.1	2203.0	2204.2
25°	2162.9	2166.6	2162.9	2167.8	2160.4	2159.6
25.5°	2123.2	2124.0	2123.2	2125.3	2118.7	2113.4
26°	2081.9	2078.6	2081.9	2081.5	2075.4	2066.0
26.5°	2039.0	2031.6	2039.0	2036.1	2031.2	2017.3
27°	1994.8	1983.7	1994.8	1990.3	1985.4	1969.8
27.5°	1949.4	1935.1	1949.4	1943.7	1937.9	1923.2
28°	1901.9	1886.4	1901.9	1896.2	1890.5	1876.6
28.5°	1853.7	1839.4	1853.7	1848.8	1842.2	1831.2
29°	1804.6	1794.8	1804.6	1801.3	1793.5	1786.2
29.5°	1755.5	1751.0	1755.5	1754.3	1745.7	1742.0
30°	1706.4	1706.8	1706.4	1706.0	1696.6	1697.8
30.5°	1659.0	1665.1	1659.0	1658.2	1649.2	1652.0
31°	1611.5	1620.9	1611.5	1609.9	1600.5	1606.6
31.5°	1564.5	1576.4	1564.5	1561.6	1553.9	1560.0
32°	1518.3	1530.5	1518.3	1513.8	1506.8	1512.5
32.5°	1472.5	1484.7	1472.5	1466.7	1461.8	1466.7
33°	1426.7	1438.1	1426.7	1418.5	1416.8	1420.5
33.5°	1380.8	1391.1	1380.8	1370.6	1371.8	1379.2
34°	1335.9	1346.5	1335.9	1323.2	1326.9	1334.6
34.5°	1290.5	1302.3	1290.5	1277.0	1282.3	1290.5
35°	1246.7	1259.4	1246.7	1233.2	1238.9	1245.9
35.5°	1203.3	1217.2	1203.3	1189.8	1196.0	1202.5
36°	1161.6	1175.9	1161.6	1147.7	1153.0	1160.0
36.5°	1120.3	1133.8	1120.3	1106.8	1111.7	1117.8
37°	1080.2	1092.1	1080.2	1066.7	1070.8	1075.3
37.5°	1041.8	1050.4	1041.8	1028.3	1031.1	1034.0
38°	1004.1	1009.0	1004.1	991.5	992.7	993.1
38.5°	967.3	969.4	967.3	956.3	955.5	954.6
39°	931.7	931.3	931.7	921.1	919.5	917.4
39.5°	896.6	895.3	896.6	887.6	884.7	881.0
40°	862.6	861.0	862.6	855.3	850.3	846.3
40.5°	829.5	829.1	829.5	824.2	817.6	813.5
41°	798.4	799.6	798.4	794.7	786.1	782.0
41.5°	768.5	772.2	768.5	766.5	756.7	752.2
42°	740.7	745.6	740.7	739.5	728.9	724.4
42.5°	714.6	719.9	714.6	714.1	702.7	698.2
43°	690.0	694.9	690.0	689.2	678.2	673.2
43.5°	666.3	670.8	666.3	665.9	655.2	650.3



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	604.1	606.2	604.1	602.1	595.5	591.4
45.5°	585.7	587.3	585.7	583.7	577.5	574.3
46°	568.9	569.8	568.9	566.1	560.8	557.9
46.5°	552.6	553.4	552.6	549.3	545.2	542.8
47°	537.4	538.7	537.4	534.2	530.1	528.5
47.5°	523.5	525.2	523.5	519.9	516.2	515.0
48°	510.9	512.5	510.9	507.6	503.9	502.3
48.5°	499.0	500.2	499.0	495.7	492.9	492.0
49°	487.5	488.8	487.5	485.1	482.6	482.2
49.5°	476.9	477.3	476.9	474.9	473.2	472.8
50°	466.3	466.7	466.3	464.6	463.4	463.0
50.5°	456.1	456.1	456.1	454.4	453.6	453.2
51°	445.8	445.8	445.8	444.2	443.0	442.1
51.5°	435.6	436.0	435.6	433.6	431.9	431.5
52°	425.0	425.4	425.0	422.9	421.3	420.5
52.5°	413.9	414.7	413.9	412.3	410.2	409.4
53°	403.3	404.1	403.3	401.7	400.0	399.2
53.5°	393.1	393.9	393.1	391.0	389.4	388.6
54°	382.4	383.2	382.4	380.8	379.2	378.8
54.5°	372.6	373.4	372.6	371.0	369.3	368.9
55°	362.8	363.2	362.8	361.6	359.9	359.1
55.5°	353.4	353.8	353.4	352.2	350.5	349.7
56°	344.0	344.4	344.0	342.8	341.5	340.7
56.5°	335.0	335.4	335.0	333.8	332.5	331.7
57°	326.0	326.4	326.0	324.8	323.5	322.7
57.5°	317.0	317.8	317.0	316.2	314.9	313.7
58°	308.8	309.2	308.8	307.6	306.4	305.9
58.5°	300.2	300.6	300.2	299.4	298.2	297.8
59°	291.6	292.4	291.6	290.8	290.0	289.6
59.5°	283.9	284.3	283.9	282.6	281.8	281.4
60°	275.7	276.1	275.7	274.9	274.0	273.6
60.5°	267.9	268.3	267.9	267.1	266.3	265.9
61°	260.5	261.0	260.5	259.7	258.9	258.5
61.5°	253.2	253.6	253.2	252.4	251.5	251.1
62°	245.8	245.8	245.8	245.0	244.2	244.2
62.5°	238.5	238.9	238.5	237.6	237.2	236.8
63°	231.5	231.5	231.5	230.7	230.3	229.9
63.5°	224.6	225.0	224.6	223.7	223.3	222.9
64°	217.6	218.0	217.6	217.2	216.8	216.4
64.5°	211.1	211.5	211.1	210.6	210.2	209.8
65°	204.5	204.9	204.5	204.1	203.7	203.3
65.5°	198.4	198.4	198.4	197.6	197.1	197.1
66°	191.8	192.2	191.8	191.4	191.0	190.6



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	173.8	173.8	173.8	173.4	173.0	172.6
68°	168.1	168.1	168.1	167.7	167.3	166.9
68.5°	162.0	162.4	162.0	162.0	161.6	161.2
69°	156.7	156.7	156.7	155.8	155.8	155.8
69.5°	150.9	151.3	150.9	150.5	150.5	150.1
70°	145.6	146.0	145.6	145.2	145.6	145.2
70.5°	140.3	140.7	140.3	140.3	140.3	139.9
71°	135.0	135.4	135.0	135.0	135.0	135.0
71.5°	130.1	130.1	130.1	130.1	129.7	129.7
72°	125.2	125.2	125.2	124.8	124.8	124.8
72.5°	120.3	120.3	120.3	119.8	119.8	119.8
73°	115.3	115.3	115.3	114.9	114.9	114.9
73.5°	110.4	110.4	110.4	110.4	110.0	110.0
74°	105.9	105.9	105.9	105.5	105.5	105.5
74.5°	101.0	101.0	101.0	101.0	101.0	101.0
75°	96.5	96.5	96.5	96.5	96.5	96.5
75.5°	92.0	92.4	92.0	92.0	92.0	92.0
76°	87.9	87.9	87.9	87.5	87.5	87.9
76.5°	83.4	83.4	83.4	83.4	83.4	83.4
77°	79.3	79.3	79.3	79.3	79.3	79.3
77.5°	75.3	75.3	75.3	75.3	75.3	75.3
78°	71.2	71.2	71.2	71.2	71.2	71.2
78.5°	67.1	67.5	67.1	67.1	67.5	67.5
79°	63.4	63.4	63.4	63.4	63.4	63.4
79.5°	59.7	59.7	59.7	59.3	59.7	59.7
80°	55.6	55.6	55.6	55.6	56.0	56.0
80.5°	52.4	52.4	52.4	52.4	52.4	52.4
81°	48.7	48.7	48.7	48.7	48.7	48.7
81.5°	45.0	45.0	45.0	45.0	45.0	45.0
82°	41.7	41.7	41.7	41.7	41.7	41.7
82.5°	38.4	38.0	38.4	38.4	38.4	38.4
83°	34.8	34.8	34.8	35.2	35.2	35.2
83.5°	31.5	31.5	31.5	31.9	31.9	31.9
84°	28.6	28.6	28.6	28.6	28.6	28.6
84.5°	25.4	25.4	25.4	25.4	25.4	25.8
85°	22.5	22.5	22.5	22.5	22.5	22.5
85.5°	19.2	19.6	19.2	19.6	19.2	19.6
86°	16.4	16.4	16.4	16.4	16.4	16.4
86.5°	13.5	13.9	13.5	13.5	13.5	13.9
87°	10.6	11.0	10.6	11.0	11.0	11.0
87.5°	8.2	8.6	8.2	8.2	8.2	8.2
88°	6.1	6.1	6.1	5.7	5.7	5.3
88.5°	4.1	4.9	4.1	3.7	3.3	3.3



TEST NUMBER: P776284

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.8	1.2	0.8	0.4	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°	2436.1	2432.0	2425.1	2427.1	2423.0	2427.1	2425.1	2432.0	2436.1	2432.0	2425.1
22°	2402.2	2398.1	2391.9	2392.8	2388.7	2392.8	2391.9	2398.1	2402.2	2398.1	2391.9



44°	629.1	634.0	643.4	644.2	648.3	644.2	643.4	634.0	629.1	634.0	643.4
44.5°	609.4	614.3	622.5	623.8	626.6	623.8	622.5	614.3	609.4	614.3	622.5



66.5°	184.5	184.9	185.3	185.7	186.1	185.7	185.3	184.9	184.5	184.9	185.3
67°	178.7	178.7	179.1	179.6	180.0	179.6	179.1	178.7	178.7	178.7	179.1



89°	1.2	1.6	2.5	2.9	3.3	2.9	2.5	1.6	1.2	1.6	2.5
89.5°	0.0	0.4	1.2	1.6	2.0	1.6	1.2	0.4	0.0	0.4	1.2



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

Scaled Data Report





21.5°	2427.1	2423.0	2427.1	2425.1	2432.0	2436.1
22°	2392.8	2388.7	2392.8	2391.9	2398.1	2402.2



44°	644.2	648.3	644.2	643.4	634.0	629.1
44.5°	623.8	626.6	623.8	622.5	614.3	609.4



66.5°	185.7	186.1	185.7	185.3	184.9	184.5
67°	179.6	180.0	179.6	179.1	178.7	178.7

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

Scaled Data Report



89°	2.9	3.3	2.9	2.5	1.6	1.2
89.5°	1.6	2.0	1.6	1.2	0.4	0.0

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

Scaled Data Report



(END OF REPORT)