

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: P776827

Luminaire Tested: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776827
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B005-HCD4TSQC)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K
Description: 8 INCH SQUARE MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4638.4 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.15
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')
CIE Type: Direct

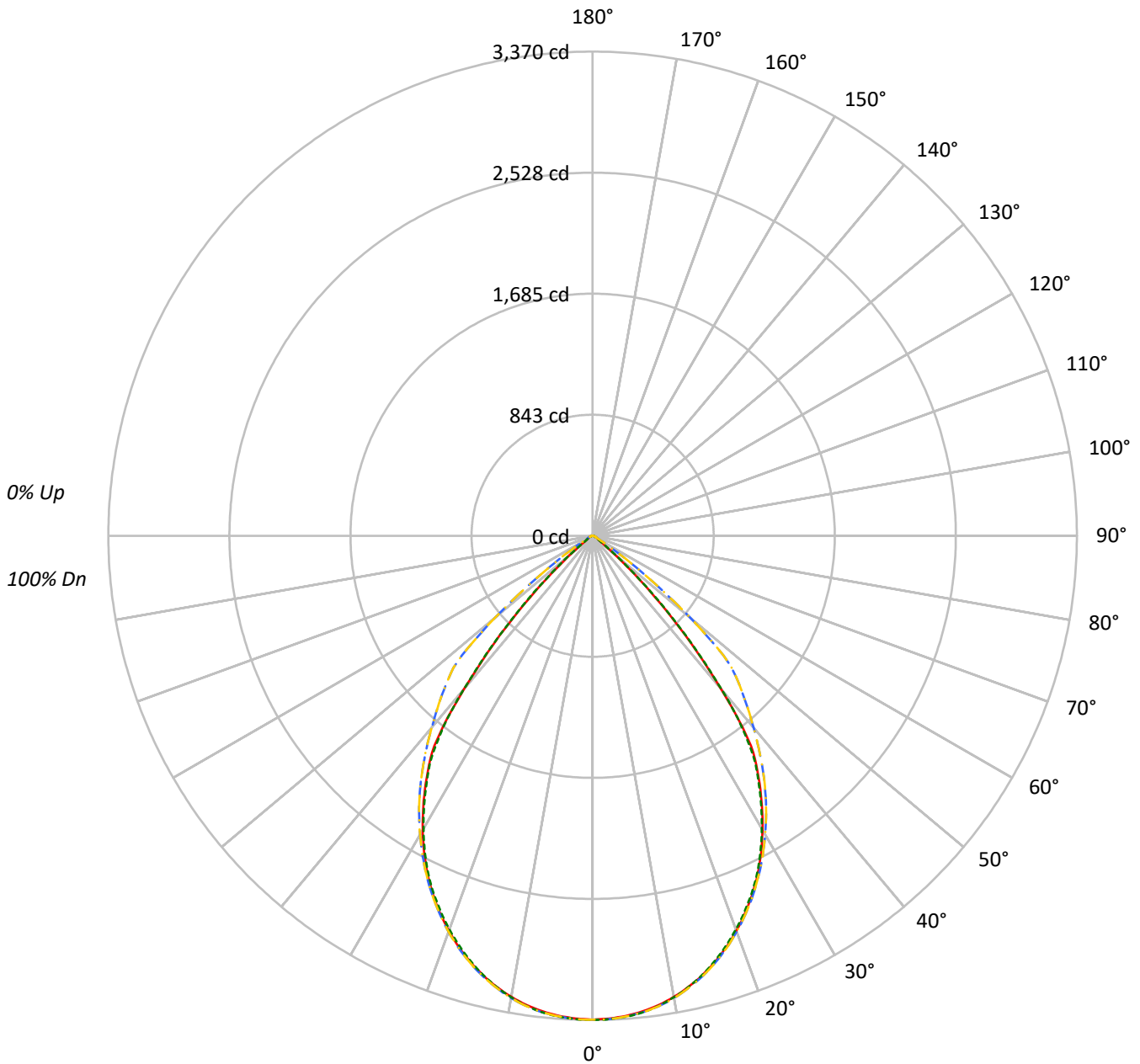
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

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																			
1	113	110	107	104	110	107	105	103	103	101	99	100	98	97	96	95	94	92																			
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84																			
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76																			
4	94	85	79	74	92	84	78	73	82	77	72	80	75	72	78	74	71	69																			
5	88	78	72	67	86	77	71	66	76	70	66	74	69	65	72	68	65	63																			
6	83	72	66	61	81	72	65	60	70	64	60	69	63	60	67	63	59	58																			
7	78	67	60	55	76	66	60	55	65	59	55	64	59	55	63	58	54	53																			
8	73	62	56	51	72	62	55	51	61	55	51	59	54	50	58	54	50	48																			
9	69	58	51	47	68	58	51	47	57	51	47	56	50	46	55	50	46	45																			
10	65	54	48	43	64	54	48	43	53	47	43	52	47	43	51	46	43	41																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	80774	80774	80774	80774
5°	80391	80562	80391	80562
10°	79346	79415	79346	79415
15°	77454	77360	77454	77360
20°	74659	74383	74659	74383
25°	70808	70572	70808	70572
30°	65485	65183	65485	65183
35°	58518	58214	58518	58214
40°	43459	43694	43459	43694
45°	22774	23347	22774	23347
50°	7390	7987	7390	7987
55°	2446	2249	2446	2249
60°	1856	1741	1856	1741
65°	1418	1367	1418	1367
70°	1122	1094	1122	1094
75°	917	917	917	917
80°	718	787	718	787
85°	523	523	523	523

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 48407 cd/sqm



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.7	6.8
10°-20°	877.6	18.9
20°-30°	1229.4	26.5
30°-40°	1262.8	27.2
40°-50°	765.0	16.5
50°-60°	143.8	3.1
60°-70°	27.9	0.6
70°-80°	12.5	0.3
80°-90°	2.7	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°	2423.7	52.3
0°-40°	3686.6	79.5
0°-60°	4595.3	99.1
0°-90°	4638.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4638.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3369	3369	3369	3369	3369	
5°	3340	3347	3340	3347	3340	316
15°	3120	3116	3120	3116	3120	877
25°	2676	2667	2676	2667	2676	1226
35°	1999	1989	1999	1989	1999	1221
45°	672	688	672	688	672	537
55°	58	54	58	54	58	67
65°	25	24	25	24	25	26
75°	10	10	10	10	10	11
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3368.6	3368.6	3368.6	3368.6	3368.6	3368.6	3368.6	3368.6	3368.6	3368.6	3368.6
0.5°	3365.3	3366.8	3369.1	3370.5	3369.6	3370.5	3369.1	3366.8	3365.3	3366.8	3369.1
1°	3364.9	3366.3	3368.2	3369.6	3369.1	3369.6	3368.2	3366.3	3364.9	3366.3	3368.2
1.5°	3363.5	3364.9	3367.2	3368.6	3368.2	3368.6	3367.2	3364.9	3363.5	3364.9	3367.2
2°	3361.6	3363.0	3365.3	3367.2	3366.3	3367.2	3365.3	3363.0	3361.6	3363.0	3365.3
2.5°	3359.2	3360.6	3363.5	3364.9	3364.4	3364.9	3363.5	3360.6	3359.2	3360.6	3363.5
3°	3356.4	3358.3	3360.6	3362.5	3362.0	3362.5	3360.6	3358.3	3356.4	3358.3	3360.6
3.5°	3353.1	3355.0	3357.8	3359.7	3359.2	3359.7	3357.8	3355.0	3353.1	3355.0	3357.8
4°	3349.3	3351.2	3354.0	3356.4	3355.9	3356.4	3354.0	3351.2	3349.3	3351.2	3354.0
4.5°	3345.1	3346.5	3349.8	3352.1	3351.7	3352.1	3349.8	3346.5	3345.1	3346.5	3349.8
5°	3339.9	3341.8	3345.5	3347.9	3347.0	3347.9	3345.5	3341.8	3339.9	3341.8	3345.5
5.5°	3334.7	3336.6	3340.3	3342.7	3341.3	3342.7	3340.3	3336.6	3334.7	3336.6	3340.3
6°	3328.1	3330.4	3334.7	3337.0	3335.6	3337.0	3334.7	3330.4	3328.1	3330.4	3334.7
6.5°	3321.5	3324.3	3328.6	3330.4	3328.6	3330.4	3328.6	3324.3	3321.5	3324.3	3328.6
7°	3314.4	3317.2	3321.5	3322.9	3321.0	3322.9	3321.5	3317.2	3314.4	3317.2	3321.5
7.5°	3306.4	3309.7	3313.9	3314.9	3312.5	3314.9	3313.9	3309.7	3306.4	3309.7	3313.9
8°	3297.9	3301.7	3305.9	3306.4	3304.0	3306.4	3305.9	3301.7	3297.9	3301.7	3305.9
8.5°	3288.9	3292.7	3297.0	3296.5	3294.1	3296.5	3297.0	3292.7	3288.9	3292.7	3297.0
9°	3279.5	3283.3	3287.5	3286.6	3283.8	3286.6	3287.5	3283.3	3279.5	3283.3	3287.5
9.5°	3269.6	3273.4	3277.6	3275.7	3272.9	3275.7	3277.6	3273.4	3269.6	3273.4	3277.6
10°	3258.8	3263.5	3266.8	3264.9	3261.6	3264.9	3266.8	3263.5	3258.8	3263.5	3266.8
10.5°	3247.4	3252.2	3255.5	3253.1	3249.8	3253.1	3255.5	3252.2	3247.4	3252.2	3255.5
11°	3235.7	3240.8	3243.7	3240.8	3237.1	3240.8	3243.7	3240.8	3235.7	3240.8	3243.7
11.5°	3223.4	3228.6	3230.9	3227.6	3223.9	3227.6	3230.9	3228.6	3223.4	3228.6	3230.9
12°	3210.2	3215.8	3217.7	3214.4	3210.7	3214.4	3217.7	3215.8	3210.2	3215.8	3217.7
12.5°	3196.5	3202.6	3204.1	3200.3	3196.0	3200.3	3204.1	3202.6	3196.5	3202.6	3204.1
13°	3182.4	3188.5	3189.9	3185.7	3181.4	3185.7	3189.9	3188.5	3182.4	3188.5	3189.9
13.5°	3167.7	3173.9	3174.8	3170.6	3165.9	3170.6	3174.8	3173.9	3167.7	3173.9	3174.8
14°	3152.2	3159.3	3159.7	3155.0	3149.8	3155.0	3159.7	3159.3	3152.2	3159.3	3159.7
14.5°	3136.6	3143.2	3143.7	3138.5	3133.3	3138.5	3143.7	3143.2	3136.6	3143.2	3143.7
15°	3120.1	3127.2	3127.7	3121.5	3116.3	3121.5	3127.7	3127.2	3120.1	3127.2	3127.7
15.5°	3103.1	3110.7	3110.2	3104.1	3098.4	3104.1	3110.2	3110.7	3103.1	3110.7	3110.2
16°	3085.7	3093.2	3092.8	3086.2	3080.5	3086.2	3092.8	3093.2	3085.7	3093.2	3092.8
16.5°	3067.8	3075.3	3074.4	3067.8	3061.6	3067.8	3074.4	3075.3	3067.8	3075.3	3074.4
17°	3049.4	3056.9	3056.0	3048.4	3042.3	3048.4	3056.0	3056.9	3049.4	3056.9	3056.0
17.5°	3030.0	3038.1	3036.6	3029.1	3022.5	3029.1	3036.6	3038.1	3030.0	3038.1	3036.6
18°	3010.2	3018.2	3016.4	3008.8	3001.7	3008.8	3016.4	3018.2	3010.2	3018.2	3016.4
18.5°	2990.0	2998.0	2996.6	2988.5	2980.5	2988.5	2996.6	2998.0	2990.0	2998.0	2996.6
19°	2969.2	2977.7	2975.8	2967.3	2959.3	2967.3	2975.8	2977.7	2969.2	2977.7	2975.8
19.5°	2947.5	2956.5	2954.1	2945.6	2937.1	2945.6	2954.1	2956.5	2947.5	2956.5	2954.1
20°	2925.8	2934.8	2932.4	2923.9	2915.0	2923.9	2932.4	2934.8	2925.8	2934.8	2932.4
20.5°	2903.6	2912.6	2910.2	2900.8	2891.9	2900.8	2910.2	2912.6	2903.6	2912.6	2910.2
21°	2880.5	2889.5	2887.6	2877.7	2868.3	2877.7	2887.6	2889.5	2880.5	2889.5	2887.6



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2808.4	2818.3	2815.9	2805.6	2796.6	2805.6	2815.9	2818.3	2808.4	2818.3	2815.9
23°	2783.4	2793.3	2791.4	2780.6	2771.6	2780.6	2791.4	2793.3	2783.4	2793.3	2791.4
23.5°	2757.5	2768.3	2766.4	2755.6	2747.1	2755.6	2766.4	2768.3	2757.5	2768.3	2766.4
24°	2731.5	2741.9	2740.9	2730.1	2721.6	2730.1	2740.9	2741.9	2731.5	2741.9	2740.9
24.5°	2704.2	2715.5	2715.0	2704.6	2694.7	2704.6	2715.0	2715.5	2704.2	2715.5	2715.0
25°	2676.3	2688.6	2688.1	2678.7	2667.4	2678.7	2688.1	2688.6	2676.3	2688.6	2688.1
25.5°	2648.5	2661.2	2661.2	2651.3	2640.0	2651.3	2661.2	2661.2	2648.5	2661.2	2661.2
26°	2619.3	2632.9	2633.9	2624.9	2611.7	2624.9	2633.9	2632.9	2619.3	2632.9	2633.9
26.5°	2590.0	2604.2	2606.1	2597.1	2582.0	2597.1	2606.1	2604.2	2590.0	2604.2	2606.1
27°	2559.4	2574.9	2577.8	2568.8	2551.4	2568.8	2577.8	2574.9	2559.4	2574.9	2577.8
27.5°	2529.2	2545.2	2549.5	2539.6	2520.7	2539.6	2549.5	2545.2	2529.2	2545.2	2549.5
28°	2497.6	2514.6	2520.7	2509.4	2488.2	2509.4	2520.7	2514.6	2497.6	2514.6	2520.7
28.5°	2465.5	2483.5	2491.0	2478.7	2455.2	2478.7	2491.0	2483.5	2465.5	2483.5	2491.0
29°	2432.0	2452.8	2461.8	2447.6	2422.1	2447.6	2461.8	2452.8	2432.0	2452.8	2461.8
29.5°	2398.6	2421.2	2432.5	2415.1	2388.2	2415.1	2432.5	2421.2	2398.6	2421.2	2432.5
30°	2365.1	2388.7	2401.9	2382.5	2354.2	2382.5	2401.9	2388.7	2365.1	2388.7	2401.9
30.5°	2330.7	2355.6	2371.7	2349.0	2319.3	2349.0	2371.7	2355.6	2330.7	2355.6	2371.7
31°	2294.8	2322.2	2340.6	2316.0	2284.4	2316.0	2340.6	2322.2	2294.8	2322.2	2340.6
31.5°	2259.9	2288.7	2309.9	2282.1	2248.6	2282.1	2309.9	2288.7	2259.9	2288.7	2309.9
32°	2224.1	2254.3	2278.8	2248.1	2212.3	2248.1	2278.8	2254.3	2224.1	2254.3	2278.8
32.5°	2187.8	2219.4	2247.2	2212.8	2176.0	2212.8	2247.2	2219.4	2187.8	2219.4	2247.2
33°	2151.0	2184.5	2215.1	2178.8	2139.7	2178.8	2215.1	2184.5	2151.0	2184.5	2215.1
33.5°	2114.2	2150.0	2182.6	2143.9	2102.4	2143.9	2182.6	2150.0	2114.2	2150.0	2182.6
34°	2076.0	2114.7	2149.6	2109.0	2064.7	2109.0	2149.6	2114.7	2076.0	2114.7	2149.6
34.5°	2038.3	2078.8	2116.5	2074.1	2026.5	2074.1	2116.5	2078.8	2038.3	2078.8	2116.5
35°	1999.1	2043.0	2083.5	2038.3	1988.7	2038.3	2083.5	2043.0	1999.1	2043.0	2083.5
35.5°	1961.4	2007.6	2049.1	2002.9	1951.0	2002.9	2049.1	2007.6	1961.4	2007.6	2049.1
36°	1922.2	1971.3	2014.7	1967.0	1906.2	1967.0	2014.7	1971.3	1922.2	1971.3	2014.7
36.5°	1880.3	1934.0	1981.2	1930.7	1855.7	1930.7	1981.2	1934.0	1880.3	1934.0	1981.2
37°	1829.8	1897.7	1946.8	1894.4	1800.1	1894.4	1946.8	1897.7	1829.8	1897.7	1946.8
37.5°	1763.8	1860.5	1912.8	1857.6	1742.6	1857.6	1912.8	1860.5	1763.8	1860.5	1912.8
38°	1697.3	1823.7	1877.4	1821.3	1681.3	1821.3	1877.4	1823.7	1697.3	1823.7	1877.4
38.5°	1623.7	1786.4	1843.5	1781.2	1618.5	1781.2	1843.5	1786.4	1623.7	1786.4	1843.5
39°	1547.3	1747.8	1809.5	1734.5	1548.3	1734.5	1809.5	1747.8	1547.3	1747.8	1809.5
39.5°	1467.6	1691.6	1776.0	1682.2	1474.2	1682.2	1776.0	1691.6	1467.6	1691.6	1776.0
40°	1388.4	1631.3	1742.1	1625.1	1395.9	1625.1	1742.1	1631.3	1388.4	1631.3	1742.1
40.5°	1309.2	1562.9	1708.6	1564.3	1318.6	1564.3	1708.6	1562.9	1309.2	1562.9	1708.6
41°	1234.2	1492.1	1676.1	1499.2	1244.1	1499.2	1676.1	1492.1	1234.2	1492.1	1676.1
41.5°	1159.7	1419.5	1644.5	1430.8	1170.0	1430.8	1644.5	1419.5	1159.7	1419.5	1644.5
42°	1087.0	1346.9	1612.9	1359.2	1098.4	1359.2	1612.9	1346.9	1087.0	1346.9	1612.9
42.5°	1014.4	1275.2	1581.7	1287.5	1025.7	1287.5	1581.7	1275.2	1014.4	1275.2	1581.7
43°	942.7	1202.6	1550.6	1215.3	955.5	1215.3	1550.6	1202.6	942.7	1202.6	1550.6
43.5°	870.6	1131.8	1520.0	1144.6	884.7	1144.6	1520.0	1131.8	870.6	1131.8	1520.0



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	671.6	926.2	1427.5	942.3	688.5	942.3	1427.5	926.2	671.6	926.2	1427.5
45.5°	609.3	858.8	1396.9	875.3	628.6	875.3	1396.9	858.8	609.3	858.8	1396.9
46°	551.3	793.7	1365.8	809.3	571.1	809.3	1365.8	793.7	551.3	793.7	1365.8
46.5°	494.2	730.5	1333.7	745.1	512.6	745.1	1333.7	730.5	494.2	730.5	1333.7
47°	438.1	668.3	1288.9	682.4	456.0	682.4	1288.9	668.3	438.1	668.3	1288.9
47.5°	384.4	608.4	1234.2	623.9	405.6	623.9	1234.2	608.4	384.4	608.4	1234.2
48°	338.6	550.4	1169.1	566.4	361.2	566.4	1169.1	550.4	338.6	550.4	1169.1
48.5°	296.6	495.2	1100.2	510.7	319.7	510.7	1100.2	495.2	296.6	495.2	1100.2
49°	259.4	441.4	1028.1	456.0	282.0	456.0	1028.1	441.4	259.4	441.4	1028.1
49.5°	226.8	389.5	954.0	407.0	246.6	407.0	954.0	389.5	226.8	389.5	954.0
50°	198.1	341.0	879.1	359.8	214.1	359.8	879.1	341.0	198.1	341.0	879.1
50.5°	171.2	297.1	805.0	316.4	183.5	316.4	805.0	297.1	171.2	297.1	805.0
51°	146.7	258.0	731.9	275.9	154.2	275.9	731.9	258.0	146.7	258.0	731.9
51.5°	126.9	223.5	663.5	239.1	129.7	239.1	663.5	223.5	126.9	223.5	663.5
52°	107.1	193.4	600.8	207.0	110.4	207.0	600.8	193.4	107.1	193.4	600.8
52.5°	90.1	166.5	539.5	177.3	97.1	177.3	539.5	166.5	90.1	166.5	539.5
53°	77.8	142.0	482.4	150.0	84.4	150.0	482.4	142.0	77.8	142.0	482.4
53.5°	66.5	121.2	426.3	124.5	71.2	124.5	426.3	121.2	66.5	121.2	426.3
54°	63.7	101.4	374.9	101.9	58.5	101.9	374.9	101.4	63.7	101.4	374.9
54.5°	60.8	84.9	325.9	84.4	55.6	84.4	325.9	84.9	60.8	84.9	325.9
55°	58.5	70.3	282.5	70.7	53.8	70.7	282.5	70.3	58.5	70.3	282.5
55.5°	56.1	59.9	243.3	60.8	51.4	60.8	243.3	59.9	56.1	59.9	243.3
56°	53.8	55.2	208.0	53.3	49.5	53.3	208.0	55.2	53.8	55.2	208.0
56.5°	51.4	52.8	176.4	49.5	47.6	49.5	176.4	52.8	51.4	52.8	176.4
57°	49.5	50.9	150.0	47.6	45.7	47.6	150.0	50.9	49.5	50.9	150.0
57.5°	47.2	49.0	126.9	45.7	43.9	45.7	126.9	49.0	47.2	49.0	126.9
58°	45.3	47.2	108.0	44.3	42.4	44.3	108.0	47.2	45.3	47.2	108.0
58.5°	43.4	45.3	91.0	42.4	40.6	42.4	91.0	45.3	43.4	45.3	91.0
59°	42.0	43.9	77.3	41.0	39.1	41.0	77.3	43.9	42.0	43.9	77.3
59.5°	40.1	42.4	65.6	39.6	37.7	39.6	65.6	42.4	40.1	42.4	65.6
60°	38.7	40.6	55.2	38.2	36.3	38.2	55.2	40.6	38.7	40.6	55.2
60.5°	36.8	39.1	49.0	36.8	34.4	36.8	49.0	39.1	36.8	39.1	49.0
61°	35.4	37.7	44.3	35.8	33.5	35.8	44.3	37.7	35.4	37.7	44.3
61.5°	34.0	36.3	40.6	34.4	32.1	34.4	40.6	36.3	34.0	36.3	40.6
62°	32.5	35.4	38.2	33.0	30.7	33.0	38.2	35.4	32.5	35.4	38.2
62.5°	31.1	34.0	36.3	32.1	29.7	32.1	36.3	34.0	31.1	34.0	36.3
63°	29.7	32.5	34.9	31.1	28.3	31.1	34.9	32.5	29.7	32.5	34.9
63.5°	28.8	31.6	33.5	29.7	27.4	29.7	33.5	31.6	28.8	31.6	33.5
64°	27.4	30.2	32.5	28.8	25.9	28.8	32.5	30.2	27.4	30.2	32.5
64.5°	26.4	29.2	31.1	27.8	25.0	27.8	31.1	29.2	26.4	29.2	31.1
65°	25.0	28.3	30.2	26.9	24.1	26.9	30.2	28.3	25.0	28.3	30.2
65.5°	24.1	26.9	28.8	25.9	23.1	25.9	28.8	26.9	24.1	26.9	28.8
66°	23.1	25.9	27.8	25.0	22.2	25.0	27.8	25.9	23.1	25.9	27.8



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	20.3	23.1	25.0	22.2	19.3	22.2	25.0	23.1	20.3	23.1	25.0
68°	19.3	22.2	24.1	21.2	18.9	21.2	24.1	22.2	19.3	22.2	24.1
68.5°	18.4	21.2	23.1	20.8	17.9	20.8	23.1	21.2	18.4	21.2	23.1
69°	17.9	20.3	22.2	19.8	17.0	19.8	22.2	20.3	17.9	20.3	22.2
69.5°	17.0	19.8	21.2	18.9	16.5	18.9	21.2	19.8	17.0	19.8	21.2
70°	16.0	18.9	20.3	18.4	15.6	18.4	20.3	18.9	16.0	18.9	20.3
70.5°	15.6	17.9	19.8	17.4	15.1	17.4	19.8	17.9	15.6	17.9	19.8
71°	14.6	17.4	18.9	17.0	14.6	17.0	18.9	17.4	14.6	17.4	18.9
71.5°	14.1	16.5	17.9	16.0	13.7	16.0	17.9	16.5	14.1	16.5	17.9
72°	13.2	16.0	17.4	15.6	13.2	15.6	17.4	16.0	13.2	16.0	17.4
72.5°	12.7	15.1	16.5	14.6	12.7	14.6	16.5	15.1	12.7	15.1	16.5
73°	12.3	14.6	15.6	14.1	11.8	14.1	15.6	14.6	12.3	14.6	15.6
73.5°	11.3	13.7	15.1	13.7	11.3	13.7	15.1	13.7	11.3	13.7	15.1
74°	10.8	13.2	14.1	12.7	10.8	12.7	14.1	13.2	10.8	13.2	14.1
74.5°	10.4	12.7	13.7	12.3	10.4	12.3	13.7	12.7	10.4	12.7	13.7
75°	9.9	11.8	12.7	11.8	9.9	11.8	12.7	11.8	9.9	11.8	12.7
75.5°	9.4	11.3	12.3	11.3	9.4	11.3	12.3	11.3	9.4	11.3	12.3
76°	9.0	10.8	11.8	10.4	9.0	10.4	11.8	10.8	9.0	10.8	11.8
76.5°	8.5	9.9	10.8	9.9	8.5	9.9	10.8	9.9	8.5	9.9	10.8
77°	7.5	9.4	10.4	9.4	8.0	9.4	10.4	9.4	7.5	9.4	10.4
77.5°	7.1	9.0	9.9	9.0	7.5	9.0	9.9	9.0	7.1	9.0	9.9
78°	7.1	8.5	9.0	8.5	7.1	8.5	9.0	8.5	7.1	8.5	9.0
78.5°	6.6	8.0	8.5	8.0	6.6	8.0	8.5	8.0	6.6	8.0	8.5
79°	6.1	7.5	8.0	7.5	6.1	7.5	8.0	7.5	6.1	7.5	8.0
79.5°	5.7	6.6	7.5	7.1	5.7	7.1	7.5	6.6	5.7	6.6	7.5
80°	5.2	6.1	7.1	6.6	5.2	6.6	7.1	6.1	5.2	6.1	7.1
80.5°	4.7	5.7	6.6	6.1	4.7	6.1	6.6	5.7	4.7	5.7	6.6
81°	4.2	5.2	6.1	5.7	4.2	5.7	6.1	5.2	4.2	5.2	6.1
81.5°	4.2	4.7	5.7	5.2	4.2	5.2	5.7	4.7	4.2	4.7	5.7
82°	3.8	4.2	5.2	4.7	4.2	4.7	5.2	4.2	3.8	4.2	5.2
82.5°	3.3	3.8	4.7	4.2	3.8	4.2	4.7	3.8	3.3	3.8	4.7
83°	2.8	3.8	4.2	3.8	3.3	3.8	4.2	3.8	2.8	3.8	4.2
83.5°	2.8	3.3	3.8	3.8	2.8	3.8	3.8	3.3	2.8	3.3	3.8
84°	2.4	2.8	3.3	3.3	2.8	3.3	3.3	2.8	2.4	2.8	3.3
84.5°	1.9	2.4	2.8	2.8	2.4	2.8	2.8	2.4	1.9	2.4	2.8
85°	1.9	1.9	2.4	2.4	1.9	2.4	2.4	1.9	1.9	1.9	2.4
85.5°	1.4	1.4	1.9	1.9	1.4	1.9	1.9	1.4	1.4	1.4	1.9
86°	0.9	1.4	1.9	1.9	1.4	1.9	1.9	1.4	0.9	1.4	1.9
86.5°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	1.4
87°	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.9	0.9
87.5°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.9
88°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
88.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

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: P776827

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TSQH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3368.6	3368.6	3368.6	3368.6	3368.6	3368.6
0.5°	3370.5	3369.6	3370.5	3369.1	3366.8	3365.3
1°	3369.6	3369.1	3369.6	3368.2	3366.3	3364.9
1.5°	3368.6	3368.2	3368.6	3367.2	3364.9	3363.5
2°	3367.2	3366.3	3367.2	3365.3	3363.0	3361.6
2.5°	3364.9	3364.4	3364.9	3363.5	3360.6	3359.2
3°	3362.5	3362.0	3362.5	3360.6	3358.3	3356.4
3.5°	3359.7	3359.2	3359.7	3357.8	3355.0	3353.1
4°	3356.4	3355.9	3356.4	3354.0	3351.2	3349.3
4.5°	3352.1	3351.7	3352.1	3349.8	3346.5	3345.1
5°	3347.9	3347.0	3347.9	3345.5	3341.8	3339.9
5.5°	3342.7	3341.3	3342.7	3340.3	3336.6	3334.7
6°	3337.0	3335.6	3337.0	3334.7	3330.4	3328.1
6.5°	3330.4	3328.6	3330.4	3328.6	3324.3	3321.5
7°	3322.9	3321.0	3322.9	3321.5	3317.2	3314.4
7.5°	3314.9	3312.5	3314.9	3313.9	3309.7	3306.4
8°	3306.4	3304.0	3306.4	3305.9	3301.7	3297.9
8.5°	3296.5	3294.1	3296.5	3297.0	3292.7	3288.9
9°	3286.6	3283.8	3286.6	3287.5	3283.3	3279.5
9.5°	3275.7	3272.9	3275.7	3277.6	3273.4	3269.6
10°	3264.9	3261.6	3264.9	3266.8	3263.5	3258.8
10.5°	3253.1	3249.8	3253.1	3255.5	3252.2	3247.4
11°	3240.8	3237.1	3240.8	3243.7	3240.8	3235.7
11.5°	3227.6	3223.9	3227.6	3230.9	3228.6	3223.4
12°	3214.4	3210.7	3214.4	3217.7	3215.8	3210.2
12.5°	3200.3	3196.0	3200.3	3204.1	3202.6	3196.5
13°	3185.7	3181.4	3185.7	3189.9	3188.5	3182.4
13.5°	3170.6	3165.9	3170.6	3174.8	3173.9	3167.7
14°	3155.0	3149.8	3155.0	3159.7	3159.3	3152.2
14.5°	3138.5	3133.3	3138.5	3143.7	3143.2	3136.6
15°	3121.5	3116.3	3121.5	3127.7	3127.2	3120.1
15.5°	3104.1	3098.4	3104.1	3110.2	3110.7	3103.1
16°	3086.2	3080.5	3086.2	3092.8	3093.2	3085.7
16.5°	3067.8	3061.6	3067.8	3074.4	3075.3	3067.8
17°	3048.4	3042.3	3048.4	3056.0	3056.9	3049.4
17.5°	3029.1	3022.5	3029.1	3036.6	3038.1	3030.0
18°	3008.8	3001.7	3008.8	3016.4	3018.2	3010.2
18.5°	2988.5	2980.5	2988.5	2996.6	2998.0	2990.0
19°	2967.3	2959.3	2967.3	2975.8	2977.7	2969.2
19.5°	2945.6	2937.1	2945.6	2954.1	2956.5	2947.5
20°	2923.9	2915.0	2923.9	2932.4	2934.8	2925.8
20.5°	2900.8	2891.9	2900.8	2910.2	2912.6	2903.6
21°	2877.7	2868.3	2877.7	2887.6	2889.5	2880.5



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2805.6	2796.6	2805.6	2815.9	2818.3	2808.4
23°	2780.6	2771.6	2780.6	2791.4	2793.3	2783.4
23.5°	2755.6	2747.1	2755.6	2766.4	2768.3	2757.5
24°	2730.1	2721.6	2730.1	2740.9	2741.9	2731.5
24.5°	2704.6	2694.7	2704.6	2715.0	2715.5	2704.2
25°	2678.7	2667.4	2678.7	2688.1	2688.6	2676.3
25.5°	2651.3	2640.0	2651.3	2661.2	2661.2	2648.5
26°	2624.9	2611.7	2624.9	2633.9	2632.9	2619.3
26.5°	2597.1	2582.0	2597.1	2606.1	2604.2	2590.0
27°	2568.8	2551.4	2568.8	2577.8	2574.9	2559.4
27.5°	2539.6	2520.7	2539.6	2549.5	2545.2	2529.2
28°	2509.4	2488.2	2509.4	2520.7	2514.6	2497.6
28.5°	2478.7	2455.2	2478.7	2491.0	2483.5	2465.5
29°	2447.6	2422.1	2447.6	2461.8	2452.8	2432.0
29.5°	2415.1	2388.2	2415.1	2432.5	2421.2	2398.6
30°	2382.5	2354.2	2382.5	2401.9	2388.7	2365.1
30.5°	2349.0	2319.3	2349.0	2371.7	2355.6	2330.7
31°	2316.0	2284.4	2316.0	2340.6	2322.2	2294.8
31.5°	2282.1	2248.6	2282.1	2309.9	2288.7	2259.9
32°	2248.1	2212.3	2248.1	2278.8	2254.3	2224.1
32.5°	2212.8	2176.0	2212.8	2247.2	2219.4	2187.8
33°	2178.8	2139.7	2178.8	2215.1	2184.5	2151.0
33.5°	2143.9	2102.4	2143.9	2182.6	2150.0	2114.2
34°	2109.0	2064.7	2109.0	2149.6	2114.7	2076.0
34.5°	2074.1	2026.5	2074.1	2116.5	2078.8	2038.3
35°	2038.3	1988.7	2038.3	2083.5	2043.0	1999.1
35.5°	2002.9	1951.0	2002.9	2049.1	2007.6	1961.4
36°	1967.0	1906.2	1967.0	2014.7	1971.3	1922.2
36.5°	1930.7	1855.7	1930.7	1981.2	1934.0	1880.3
37°	1894.4	1800.1	1894.4	1946.8	1897.7	1829.8
37.5°	1857.6	1742.6	1857.6	1912.8	1860.5	1763.8
38°	1821.3	1681.3	1821.3	1877.4	1823.7	1697.3
38.5°	1781.2	1618.5	1781.2	1843.5	1786.4	1623.7
39°	1734.5	1548.3	1734.5	1809.5	1747.8	1547.3
39.5°	1682.2	1474.2	1682.2	1776.0	1691.6	1467.6
40°	1625.1	1395.9	1625.1	1742.1	1631.3	1388.4
40.5°	1564.3	1318.6	1564.3	1708.6	1562.9	1309.2
41°	1499.2	1244.1	1499.2	1676.1	1492.1	1234.2
41.5°	1430.8	1170.0	1430.8	1644.5	1419.5	1159.7
42°	1359.2	1098.4	1359.2	1612.9	1346.9	1087.0
42.5°	1287.5	1025.7	1287.5	1581.7	1275.2	1014.4
43°	1215.3	955.5	1215.3	1550.6	1202.6	942.7
43.5°	1144.6	884.7	1144.6	1520.0	1131.8	870.6



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	942.3	688.5	942.3	1427.5	926.2	671.6
45.5°	875.3	628.6	875.3	1396.9	858.8	609.3
46°	809.3	571.1	809.3	1365.8	793.7	551.3
46.5°	745.1	512.6	745.1	1333.7	730.5	494.2
47°	682.4	456.0	682.4	1288.9	668.3	438.1
47.5°	623.9	405.6	623.9	1234.2	608.4	384.4
48°	566.4	361.2	566.4	1169.1	550.4	338.6
48.5°	510.7	319.7	510.7	1100.2	495.2	296.6
49°	456.0	282.0	456.0	1028.1	441.4	259.4
49.5°	407.0	246.6	407.0	954.0	389.5	226.8
50°	359.8	214.1	359.8	879.1	341.0	198.1
50.5°	316.4	183.5	316.4	805.0	297.1	171.2
51°	275.9	154.2	275.9	731.9	258.0	146.7
51.5°	239.1	129.7	239.1	663.5	223.5	126.9
52°	207.0	110.4	207.0	600.8	193.4	107.1
52.5°	177.3	97.1	177.3	539.5	166.5	90.1
53°	150.0	84.4	150.0	482.4	142.0	77.8
53.5°	124.5	71.2	124.5	426.3	121.2	66.5
54°	101.9	58.5	101.9	374.9	101.4	63.7
54.5°	84.4	55.6	84.4	325.9	84.9	60.8
55°	70.7	53.8	70.7	282.5	70.3	58.5
55.5°	60.8	51.4	60.8	243.3	59.9	56.1
56°	53.3	49.5	53.3	208.0	55.2	53.8
56.5°	49.5	47.6	49.5	176.4	52.8	51.4
57°	47.6	45.7	47.6	150.0	50.9	49.5
57.5°	45.7	43.9	45.7	126.9	49.0	47.2
58°	44.3	42.4	44.3	108.0	47.2	45.3
58.5°	42.4	40.6	42.4	91.0	45.3	43.4
59°	41.0	39.1	41.0	77.3	43.9	42.0
59.5°	39.6	37.7	39.6	65.6	42.4	40.1
60°	38.2	36.3	38.2	55.2	40.6	38.7
60.5°	36.8	34.4	36.8	49.0	39.1	36.8
61°	35.8	33.5	35.8	44.3	37.7	35.4
61.5°	34.4	32.1	34.4	40.6	36.3	34.0
62°	33.0	30.7	33.0	38.2	35.4	32.5
62.5°	32.1	29.7	32.1	36.3	34.0	31.1
63°	31.1	28.3	31.1	34.9	32.5	29.7
63.5°	29.7	27.4	29.7	33.5	31.6	28.8
64°	28.8	25.9	28.8	32.5	30.2	27.4
64.5°	27.8	25.0	27.8	31.1	29.2	26.4
65°	26.9	24.1	26.9	30.2	28.3	25.0
65.5°	25.9	23.1	25.9	28.8	26.9	24.1
66°	25.0	22.2	25.0	27.8	25.9	23.1



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	22.2	19.3	22.2	25.0	23.1	20.3
68°	21.2	18.9	21.2	24.1	22.2	19.3
68.5°	20.8	17.9	20.8	23.1	21.2	18.4
69°	19.8	17.0	19.8	22.2	20.3	17.9
69.5°	18.9	16.5	18.9	21.2	19.8	17.0
70°	18.4	15.6	18.4	20.3	18.9	16.0
70.5°	17.4	15.1	17.4	19.8	17.9	15.6
71°	17.0	14.6	17.0	18.9	17.4	14.6
71.5°	16.0	13.7	16.0	17.9	16.5	14.1
72°	15.6	13.2	15.6	17.4	16.0	13.2
72.5°	14.6	12.7	14.6	16.5	15.1	12.7
73°	14.1	11.8	14.1	15.6	14.6	12.3
73.5°	13.7	11.3	13.7	15.1	13.7	11.3
74°	12.7	10.8	12.7	14.1	13.2	10.8
74.5°	12.3	10.4	12.3	13.7	12.7	10.4
75°	11.8	9.9	11.8	12.7	11.8	9.9
75.5°	11.3	9.4	11.3	12.3	11.3	9.4
76°	10.4	9.0	10.4	11.8	10.8	9.0
76.5°	9.9	8.5	9.9	10.8	9.9	8.5
77°	9.4	8.0	9.4	10.4	9.4	7.5
77.5°	9.0	7.5	9.0	9.9	9.0	7.1
78°	8.5	7.1	8.5	9.0	8.5	7.1
78.5°	8.0	6.6	8.0	8.5	8.0	6.6
79°	7.5	6.1	7.5	8.0	7.5	6.1
79.5°	7.1	5.7	7.1	7.5	6.6	5.7
80°	6.6	5.7	6.6	7.1	6.1	5.2
80.5°	6.1	5.2	6.1	6.6	5.7	4.7
81°	5.7	4.7	5.7	6.1	5.2	4.2
81.5°	5.2	4.2	5.2	5.7	4.7	4.2
82°	4.7	4.2	4.7	5.2	4.2	3.8
82.5°	4.2	3.8	4.2	4.7	3.8	3.3
83°	3.8	3.3	3.8	4.2	3.8	2.8
83.5°	3.8	2.8	3.8	3.8	3.3	2.8
84°	3.3	2.8	3.3	3.3	2.8	2.4
84.5°	2.8	2.4	2.8	2.8	2.4	1.9
85°	2.4	1.9	2.4	2.4	1.9	1.9
85.5°	1.9	1.9	1.9	1.9	1.4	1.4
86°	1.9	1.4	1.9	1.9	1.4	0.9
86.5°	1.4	1.4	1.4	1.4	0.9	0.9
87°	0.9	0.9	0.9	0.9	0.9	0.5
87.5°	0.9	0.9	0.9	0.9	0.5	0.5
88°	0.5	0.5	0.5	0.5	0.5	0.5
88.5°	0.5	0.5	0.5	0.5	0.0	0.0



TEST NUMBER: P776827

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQH-5000lm-3500K

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

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

Scaled Data Report



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°	2857.4	2866.4	2864.0	2854.1	2845.2	2854.1	2864.0	2866.4	2857.4	2866.4	2864.0
22°	2832.4	2842.8	2840.0	2830.1	2820.6	2830.1	2840.0	2842.8	2832.4	2842.8	2840.0



44°	801.3	1063.0	1488.8	1076.7	815.9	1076.7	1488.8	1063.0	801.3	1063.0	1488.8
44.5°	736.2	995.5	1458.7	1009.2	748.4	1009.2	1458.7	995.5	736.2	995.5	1458.7



66.5°	22.2	25.0	26.9	24.1	21.2	24.1	26.9	25.0	22.2	25.0	26.9
67°	21.2	24.1	25.9	23.1	20.3	23.1	25.9	24.1	21.2	24.1	25.9



89°	0.0	0.0	0.0	0.0	0.5	0.0	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	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°	2854.1	2845.2	2854.1	2864.0	2866.4	2857.4
22°	2830.1	2820.6	2830.1	2840.0	2842.8	2832.4



44°	1076.7	815.9	1076.7	1488.8	1063.0	801.3
44.5°	1009.2	748.4	1009.2	1458.7	995.5	736.2

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

Scaled Data Report



66.5°	24.1	21.2	24.1	26.9	25.0	22.2
67°	23.1	20.3	23.1	25.9	24.1	21.2

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

Scaled Data Report



89°	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

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

Scaled Data Report



(END OF REPORT)