

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: P776816

Luminaire Tested: HCDJBS4050CSD-HCD8TRMW-5000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776816
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-HCD8TRMW-5000lm-3000K
Description: 8 INCH ROUND MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

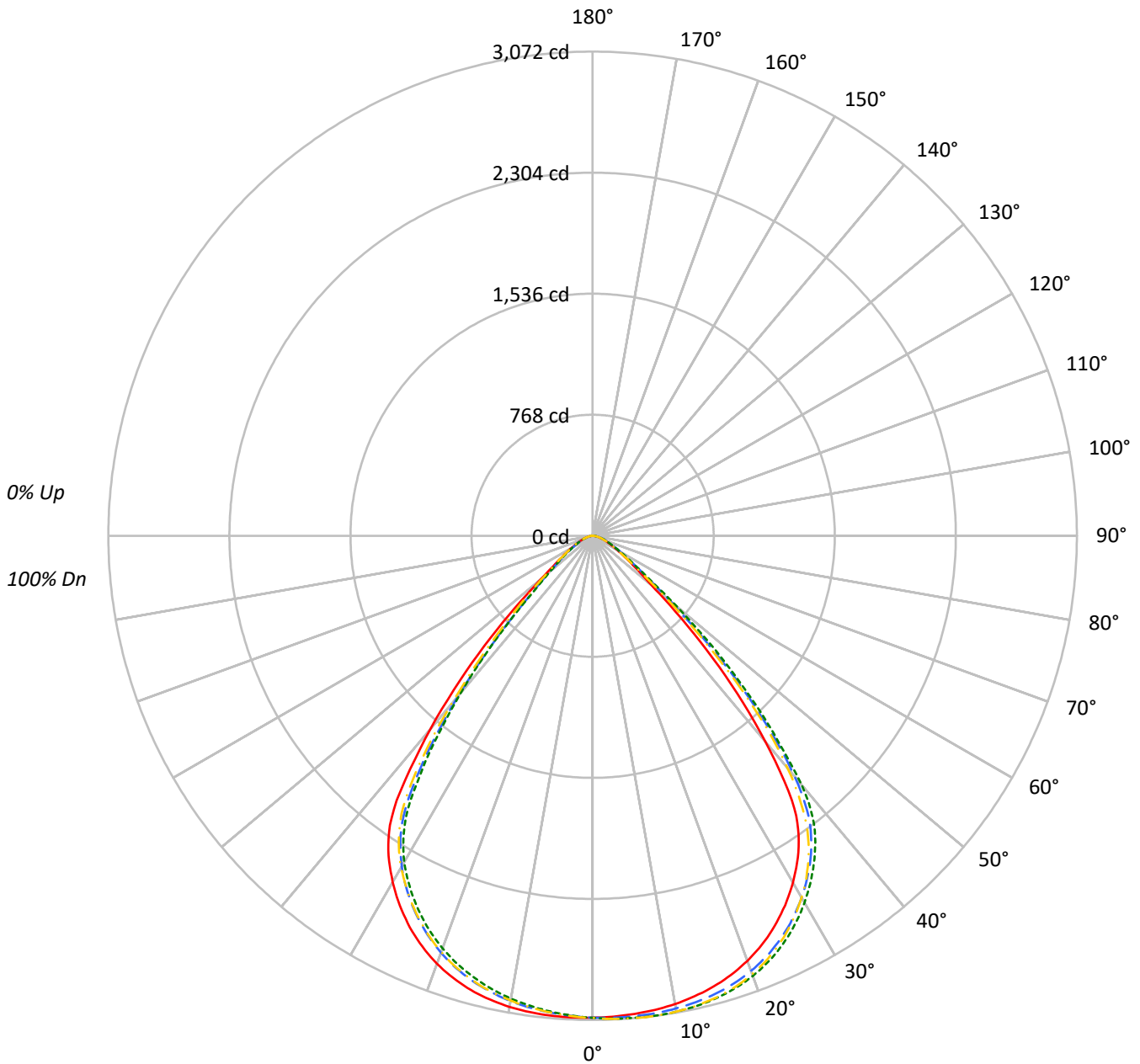
Lumens per Lamp: N/A
Luminaire Lumens: 4954.1 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.22 / 1.18
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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: P776816
CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P776816

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TRMW-5000lm-3000K

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	100	100	100	100		
	1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91	91	91	91	91	91		
	2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	84	82	82	82	82	82	82		
	3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	81	78	75	74	74	74	74	74	74		
	4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66	66	66	66	66	66		
	5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60	60	60	60	60	60		
	6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55	55	55	55	55	55		
	7	76	65	58	53	74	64	57	52	63	56	52	61	56	52	60	55	51	50	50	50	50	50	50		
	8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46	46	46	46	46	46		
	9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42	42	42	42	42	42		
	10	63	52	45	41	62	51	45	41	51	45	40	50	44	40	49	44	40	39	39	39	39	39	39		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	93377	93377	93377	93377
5°	93335	94104	93663	92878
10°	93506	95047	94098	92427
15°	93602	95994	94294	91737
20°	93242	96546	93846	90480
25°	92031	96256	92358	88134
30°	89565	94757	89417	84259
35°	84701	91607	83508	73639
40°	68008	82152	63843	51719
45°	44139	57895	39485	28755
50°	23383	32891	20338	16633
55°	15255	17480	12977	11620
60°	10948	12169	9385	8738
65°	8488	9399	7318	6942
70°	6838	7757	5891	5597
75°	5638	6629	4707	4435
80°	4483	5802	3516	3270
85°	3258	5360	1962	1611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 59100 cd/sqm



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.4	5.9
10°-20°	838.3	16.9
20°-30°	1257.5	25.4
30°-40°	1361.1	27.5
40°-50°	775.2	15.6
50°-60°	257.3	5.2
60°-70°	113.6	2.3
70°-80°	49.5	1.0
80°-90°	11.0	0.2
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°	2386.3	48.2
0°-40°	3747.4	75.6
0°-60°	4780.0	96.5
0°-90°	4954.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4954.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3058	3058	3058	3058	3058	
5°	3046	3071	3056	3031	3046	290
15°	2961	3037	2983	2902	2961	835
25°	2732	2857	2742	2616	2732	1256
35°	2273	2458	2241	1976	2273	1383
45°	1022	1341	914	666	1022	795
55°	287	328	244	218	287	267
65°	118	130	101	96	118	119
75°	48	56	40	38	48	51
85°	9	15	6	5	9	11
90°	0	2	0	0	0	



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3058.5	3058.5	3058.5	3058.5	3058.5	3058.5	3058.5	3058.5	3058.5	3058.5	3058.5
0.5°	3057.1	3058.0	3058.0	3058.5	3060.4	3061.8	3063.1	3061.3	3058.5	3057.1	3055.7
1°	3056.6	3058.0	3058.5	3059.4	3062.2	3063.6	3064.5	3062.2	3059.0	3056.6	3054.3
1.5°	3055.7	3057.6	3059.4	3060.8	3063.6	3065.5	3065.9	3063.1	3059.0	3056.2	3052.9
2°	3054.8	3057.6	3059.9	3062.2	3065.0	3067.3	3067.3	3064.1	3059.0	3055.2	3051.1
2.5°	3053.9	3057.1	3060.4	3063.1	3066.4	3068.3	3068.3	3064.5	3059.0	3054.3	3049.2
3°	3052.5	3056.6	3060.4	3064.1	3067.8	3070.1	3069.2	3065.0	3059.0	3052.9	3047.4
3.5°	3050.6	3056.2	3060.4	3065.0	3068.7	3071.0	3070.6	3065.0	3058.0	3052.0	3045.0
4°	3049.2	3055.2	3060.4	3065.5	3069.6	3072.0	3071.0	3065.5	3057.6	3050.6	3042.7
4.5°	3047.8	3053.9	3059.9	3065.9	3070.1	3072.9	3071.5	3065.5	3057.1	3048.7	3040.4
5°	3045.5	3052.5	3059.4	3065.9	3070.6	3073.4	3072.0	3065.0	3056.2	3046.9	3037.6
5.5°	3043.6	3051.5	3059.0	3066.4	3070.6	3073.8	3072.0	3064.5	3055.2	3045.0	3034.8
6°	3041.3	3049.7	3058.0	3066.4	3071.0	3074.3	3072.4	3064.1	3053.9	3042.7	3031.6
6.5°	3039.0	3048.3	3057.1	3065.9	3071.0	3074.3	3072.4	3063.1	3052.5	3040.4	3028.3
7°	3036.7	3046.0	3056.2	3065.5	3071.0	3074.3	3072.0	3062.2	3050.6	3037.6	3024.6
7.5°	3033.9	3044.1	3054.8	3065.0	3070.6	3074.3	3071.5	3061.3	3048.7	3034.8	3020.9
8°	3030.6	3041.8	3053.4	3064.1	3070.1	3073.8	3070.6	3059.9	3046.4	3032.0	3016.7
8.5°	3027.4	3039.5	3051.5	3063.1	3069.2	3073.4	3069.6	3058.0	3044.1	3028.3	3012.5
9°	3024.1	3036.7	3049.7	3061.8	3068.3	3072.9	3068.7	3056.2	3041.3	3025.1	3007.9
9.5°	3020.4	3033.4	3047.8	3060.8	3067.3	3071.5	3067.3	3053.9	3038.5	3020.9	3002.8
10°	3016.2	3030.2	3045.0	3059.0	3065.9	3070.6	3065.5	3051.5	3035.3	3016.7	2997.2
10.5°	3012.1	3026.9	3042.7	3057.6	3064.1	3068.7	3063.6	3048.7	3031.6	3012.1	2992.1
11°	3007.9	3023.2	3039.9	3055.2	3062.2	3066.9	3061.3	3046.0	3027.4	3006.9	2986.5
11.5°	3002.8	3019.0	3037.1	3053.4	3060.4	3065.0	3059.0	3042.7	3023.2	3002.3	2980.5
12°	2997.7	3014.8	3033.9	3051.1	3058.0	3062.7	3056.2	3039.0	3018.6	2996.7	2973.5
12.5°	2992.5	3010.7	3030.2	3048.3	3055.2	3060.4	3052.9	3034.8	3013.4	2990.7	2967.0
13°	2986.5	3005.6	3026.5	3045.0	3052.5	3057.6	3049.7	3030.2	3008.3	2984.2	2959.6
13.5°	2980.9	3000.4	3022.3	3042.2	3048.7	3054.3	3045.5	3025.5	3002.8	2977.7	2952.1
14°	2974.9	2994.9	3018.1	3038.5	3045.5	3050.6	3041.3	3020.4	2996.7	2970.7	2943.8
14.5°	2968.4	2989.3	3013.4	3034.8	3041.3	3046.9	3037.1	3014.8	2990.2	2963.3	2935.9
15°	2961.4	2983.7	3008.8	3030.6	3037.1	3042.7	3032.5	3008.8	2983.3	2954.9	2927.1
15.5°	2954.0	2977.2	3003.2	3026.0	3032.0	3038.1	3027.4	3002.8	2975.8	2946.6	2917.8
16°	2946.1	2970.7	2997.7	3020.9	3027.4	3033.0	3021.8	2995.8	2967.9	2937.7	2908.0
16.5°	2938.2	2963.7	2991.6	3015.8	3021.8	3027.8	3015.3	2988.4	2959.6	2928.4	2898.3
17°	2929.4	2956.3	2985.6	3010.2	3015.8	3022.3	3008.8	2980.5	2951.2	2918.7	2887.1
17.5°	2921.0	2948.4	2978.6	3004.2	3009.7	3016.2	3001.8	2972.1	2941.9	2908.9	2876.4
18°	2911.7	2940.5	2971.6	2997.2	3003.2	3009.7	2994.4	2963.3	2932.2	2897.8	2864.8
18.5°	2902.0	2931.7	2963.7	2990.7	2995.8	3002.3	2986.0	2954.5	2921.9	2886.6	2853.2
19°	2891.3	2922.9	2955.9	2983.3	2987.9	2994.4	2977.7	2944.7	2911.7	2875.0	2840.7
19.5°	2880.6	2913.6	2947.5	2975.4	2980.0	2987.0	2969.3	2934.5	2900.1	2863.0	2827.2
20°	2869.9	2903.4	2937.7	2967.0	2971.6	2978.1	2960.0	2923.3	2888.5	2850.0	2813.7
20.5°	2858.3	2893.1	2928.9	2958.2	2962.4	2968.9	2949.8	2912.2	2876.4	2836.9	2800.3
21°	2846.2	2882.5	2919.2	2949.4	2953.1	2959.1	2939.1	2900.1	2863.4	2823.0	2784.9



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2807.2	2846.7	2886.2	2918.2	2921.0	2927.5	2904.3	2861.6	2822.1	2778.9	2738.5
23°	2793.3	2834.2	2874.6	2907.1	2909.9	2915.4	2891.8	2847.2	2807.2	2762.6	2721.3
23.5°	2778.4	2821.2	2862.0	2895.5	2897.8	2903.8	2877.8	2832.8	2791.0	2745.9	2704.1
24°	2763.6	2807.2	2848.6	2882.9	2884.8	2890.8	2864.4	2817.4	2775.2	2728.7	2686.5
24.5°	2747.8	2793.3	2836.0	2869.9	2871.3	2877.4	2850.0	2801.7	2758.9	2711.5	2667.9
25°	2732.0	2778.0	2821.6	2856.5	2857.4	2863.4	2835.1	2785.4	2741.7	2693.0	2648.8
25.5°	2715.3	2762.6	2807.2	2842.5	2843.0	2849.0	2819.3	2768.2	2723.6	2673.5	2629.3
26°	2697.6	2746.8	2791.4	2828.1	2828.6	2834.2	2803.0	2750.6	2704.6	2654.0	2608.9
26.5°	2680.0	2730.1	2776.6	2812.8	2812.3	2818.4	2785.9	2732.0	2686.0	2634.9	2588.9
27°	2661.8	2713.4	2760.3	2797.5	2796.5	2801.7	2768.7	2713.4	2666.5	2614.0	2567.1
27.5°	2643.3	2695.3	2743.1	2781.2	2779.8	2784.9	2750.6	2693.9	2646.5	2593.1	2545.3
28°	2624.2	2677.6	2726.4	2764.5	2762.6	2767.3	2732.0	2674.4	2625.6	2572.2	2522.5
28.5°	2603.8	2658.6	2707.8	2746.8	2744.5	2749.6	2712.5	2653.5	2604.3	2549.4	2499.7
29°	2583.4	2639.6	2689.7	2729.2	2726.4	2730.6	2692.0	2632.1	2582.4	2526.7	2475.1
29.5°	2562.0	2619.1	2670.2	2711.1	2707.4	2711.1	2671.6	2609.8	2559.7	2503.0	2449.1
30°	2540.6	2599.1	2651.2	2691.6	2687.9	2691.1	2650.2	2587.5	2536.4	2479.3	2422.2
30.5°	2517.4	2578.2	2630.3	2672.5	2667.4	2670.7	2628.9	2564.8	2511.8	2453.3	2393.9
31°	2494.6	2556.4	2609.8	2652.1	2646.5	2649.8	2606.1	2540.2	2488.1	2426.8	2365.1
31.5°	2471.4	2532.7	2588.5	2631.2	2624.7	2627.5	2582.9	2514.6	2461.7	2399.9	2334.4
32°	2447.3	2510.9	2566.2	2609.4	2604.3	2605.6	2558.3	2488.1	2435.2	2372.0	2302.4
32.5°	2421.7	2486.7	2543.4	2588.0	2581.0	2582.4	2532.3	2460.7	2407.8	2341.4	2268.0
33°	2395.2	2462.1	2520.6	2565.7	2557.8	2558.3	2505.3	2432.9	2379.5	2308.9	2230.8
33.5°	2366.4	2437.0	2497.0	2542.5	2533.7	2533.7	2478.4	2402.7	2348.3	2273.6	2189.5
34°	2337.7	2410.1	2471.9	2519.3	2509.5	2507.6	2448.7	2371.6	2315.8	2235.9	2143.0
34.5°	2306.1	2380.8	2444.9	2494.6	2484.0	2480.2	2419.4	2338.6	2280.5	2189.5	2091.9
35°	2272.6	2351.1	2418.0	2469.6	2457.9	2452.4	2387.8	2303.3	2240.6	2140.7	2035.7
35.5°	2235.0	2318.6	2388.3	2443.1	2431.0	2423.6	2354.8	2262.9	2194.6	2087.8	1974.0
36°	2196.5	2284.2	2358.1	2415.7	2403.6	2393.9	2318.1	2218.3	2145.4	2027.4	1908.5
36.5°	2152.3	2248.0	2325.1	2387.8	2373.4	2360.9	2279.1	2171.4	2089.2	1961.9	1841.1
37°	2101.2	2205.7	2290.7	2357.2	2341.8	2325.1	2237.3	2122.6	2024.6	1893.2	1772.4
37.5°	2040.9	2158.8	2252.7	2323.3	2305.6	2285.6	2191.3	2067.3	1953.1	1821.2	1699.9
38°	1975.8	2105.9	2209.0	2285.6	2266.6	2244.3	2143.0	2011.1	1879.2	1745.9	1626.1
38.5°	1908.0	2046.0	2160.7	2244.3	2222.9	2198.3	2093.8	1950.3	1804.9	1669.8	1550.8
39°	1840.2	1980.5	2109.6	2197.8	2176.0	2150.5	2039.9	1889.0	1736.2	1593.6	1476.1
39.5°	1773.3	1914.5	2053.9	2149.5	2122.1	2095.7	1983.7	1820.7	1669.3	1519.7	1401.3
40°	1706.4	1850.4	1993.9	2094.7	2061.3	2040.4	1922.4	1752.9	1601.9	1447.7	1326.0
40.5°	1636.3	1788.7	1928.9	2035.7	1988.4	1979.1	1861.1	1680.4	1531.8	1375.3	1252.2
41°	1566.6	1723.6	1860.6	1972.1	1913.6	1918.2	1797.5	1608.4	1458.9	1301.0	1179.3
41.5°	1496.5	1657.2	1791.0	1904.3	1837.0	1852.3	1732.9	1536.0	1386.9	1227.1	1109.1
42°	1426.4	1587.5	1720.8	1831.4	1765.0	1782.6	1666.0	1466.8	1315.4	1158.4	1037.6
42.5°	1356.7	1514.2	1648.8	1755.7	1698.5	1710.2	1594.0	1393.9	1245.7	1089.6	968.9
43°	1289.4	1441.2	1574.1	1677.2	1631.2	1638.6	1518.8	1322.3	1178.8	1024.6	905.2
43.5°	1222.5	1369.2	1501.1	1601.0	1560.6	1565.7	1444.5	1250.3	1113.3	961.9	842.5



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1022.3	1157.9	1276.8	1368.8	1340.9	1352.1	1216.9	1041.8	914.5	785.9	679.5
45.5°	958.2	1088.2	1201.1	1296.8	1269.8	1281.5	1139.8	974.0	851.8	729.7	631.2
46°	895.0	1019.0	1124.9	1222.0	1201.6	1209.9	1071.1	907.6	791.0	678.1	588.5
46.5°	834.2	951.2	1052.9	1152.8	1134.2	1138.4	998.1	842.5	733.9	626.1	548.1
47°	774.7	885.3	981.4	1084.1	1066.9	1068.3	931.3	781.2	680.4	580.1	511.4
47.5°	715.3	820.2	917.3	1018.6	998.6	998.6	866.7	721.3	628.0	537.8	477.5
48°	662.8	759.9	854.2	954.9	931.3	931.7	805.8	665.1	578.7	499.3	447.3
48.5°	612.6	702.3	793.8	895.0	866.7	866.2	744.1	611.2	532.7	463.1	424.1
49°	567.1	647.9	738.5	834.2	805.4	801.2	687.9	562.5	490.9	437.1	400.4
49.5°	525.8	600.6	686.5	777.0	747.8	739.4	635.4	518.3	453.8	411.1	376.7
50°	492.3	555.5	638.6	720.8	692.5	679.0	586.6	478.9	428.2	385.0	353.0
50.5°	462.1	516.5	592.7	667.0	639.1	624.7	538.8	444.0	402.7	359.0	329.3
51°	434.7	481.6	551.3	617.3	585.7	573.1	497.4	417.6	377.1	333.5	314.4
51.5°	409.7	452.4	513.2	571.3	540.2	529.0	459.4	390.6	351.6	317.7	300.5
52°	387.8	425.0	478.4	528.6	496.5	487.7	432.4	363.7	326.5	303.8	287.0
52.5°	366.9	401.3	447.7	490.0	457.5	451.0	405.5	337.2	311.7	290.3	273.1
53°	347.0	379.0	418.5	455.6	431.5	423.1	379.0	320.0	297.7	276.4	260.1
53.5°	328.8	358.6	392.5	424.5	405.9	395.7	352.1	305.6	283.8	262.9	247.6
54°	314.9	339.1	367.9	395.3	379.9	367.9	325.6	291.7	270.3	249.9	235.9
54.5°	301.0	323.3	346.5	370.2	353.9	340.5	310.3	277.3	256.8	237.8	224.8
55°	286.6	308.4	327.9	347.0	328.4	323.3	295.9	263.4	243.8	226.2	214.1
55.5°	273.1	294.5	313.0	327.9	312.6	308.9	281.5	250.3	231.8	215.5	204.8
56°	260.1	280.5	298.2	312.6	298.7	294.0	267.1	237.3	221.1	205.8	195.5
56.5°	247.6	267.1	284.7	298.2	283.8	279.6	253.6	225.7	210.9	196.5	187.2
57°	235.5	254.1	270.3	283.8	269.4	265.7	241.1	215.0	200.6	188.1	179.3
57.5°	224.8	241.5	257.3	269.9	255.9	251.7	229.0	205.3	191.8	180.2	171.9
58°	214.1	229.9	244.3	255.9	242.9	239.2	217.8	195.5	183.5	172.3	164.9
58.5°	204.8	219.2	232.7	243.4	230.8	227.6	207.6	186.7	175.6	165.3	157.9
59°	195.5	209.5	221.5	231.3	219.7	216.4	197.9	178.4	168.1	158.4	151.4
59.5°	187.6	200.2	211.3	220.2	209.0	206.2	188.6	170.9	160.7	151.9	145.4
60°	179.3	191.4	201.6	209.9	199.3	196.5	180.2	164.0	153.7	145.8	139.8
60.5°	171.4	183.0	192.8	200.2	190.4	187.6	172.8	157.0	147.7	139.8	134.2
61°	164.9	175.6	184.4	190.9	182.1	179.3	165.3	150.5	141.2	134.2	129.1
61.5°	158.4	167.7	176.5	182.5	174.2	171.9	158.4	144.4	135.2	129.1	124.0
62°	151.9	161.6	169.1	174.6	166.7	164.0	151.9	138.4	129.6	123.5	119.4
62.5°	145.4	155.1	163.0	166.7	159.8	157.5	145.4	132.8	124.5	118.9	114.7
63°	138.9	149.1	156.5	160.7	152.8	150.5	139.8	127.7	119.4	114.3	110.1
63.5°	133.3	142.6	150.5	154.2	146.8	144.4	134.2	122.6	114.7	109.6	105.9
64°	127.7	136.6	144.0	148.2	140.7	138.9	128.7	117.5	109.6	105.0	101.7
64.5°	122.6	131.0	137.5	142.1	135.2	133.3	124.0	112.9	105.4	101.3	97.5
65°	117.5	125.4	132.4	136.1	130.1	128.2	118.9	108.2	101.3	96.6	93.8
65.5°	112.4	120.8	126.8	131.0	124.5	123.1	114.3	104.0	97.1	92.9	90.1
66°	108.2	115.7	122.2	125.9	119.8	118.4	109.6	99.9	92.9	89.2	86.4



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	95.2	102.2	108.2	111.5	106.4	105.0	97.5	88.2	81.7	78.5	76.2
68°	91.0	98.0	104.0	107.3	102.2	100.8	93.8	84.5	78.5	75.2	72.9
68.5°	87.3	93.8	99.9	103.1	98.0	96.6	89.6	80.8	75.2	72.0	70.1
69°	83.6	90.1	95.7	98.9	94.3	92.9	86.4	77.6	72.0	68.7	66.9
69.5°	80.4	86.4	92.0	94.8	90.6	89.2	82.7	74.3	68.7	66.0	64.1
70°	76.6	82.7	88.2	91.0	86.9	85.5	79.4	71.1	66.0	62.7	61.3
70.5°	73.4	79.4	84.5	87.3	83.1	82.2	76.2	67.8	62.7	59.9	58.5
71°	70.1	75.7	81.3	84.1	79.9	79.0	72.9	65.0	59.9	57.1	55.7
71.5°	66.9	72.5	78.0	80.4	76.6	75.7	70.1	62.2	57.1	54.3	52.9
72°	64.1	69.7	74.8	77.1	73.4	72.5	66.9	59.5	54.3	51.6	50.6
72.5°	61.3	66.4	71.5	73.8	70.6	69.2	64.1	56.7	52.0	49.2	47.8
73°	58.5	63.6	68.3	71.1	67.3	66.4	61.3	53.9	49.2	46.9	45.5
73.5°	55.7	60.4	65.5	67.8	64.6	63.6	58.5	51.6	46.9	44.1	43.2
74°	52.9	57.6	62.7	65.0	61.8	60.8	55.7	48.8	44.6	41.8	40.9
74.5°	50.2	54.8	59.5	62.2	59.0	58.1	53.4	46.4	42.3	39.5	39.0
75°	47.8	52.5	57.1	59.5	56.2	55.3	50.6	44.1	39.9	37.6	36.7
75.5°	45.1	49.7	54.3	56.7	53.9	52.9	48.3	41.8	37.6	35.3	34.4
76°	42.7	46.9	51.6	54.3	51.1	50.6	46.0	39.5	35.3	33.0	32.5
76.5°	40.4	44.6	49.2	51.6	48.8	47.8	43.7	37.2	33.4	31.1	30.2
77°	38.1	42.3	46.4	49.2	46.4	45.5	41.3	35.3	31.1	28.8	28.3
77.5°	35.8	39.9	44.1	46.4	44.1	43.2	39.0	33.0	29.3	26.9	26.0
78°	33.9	37.6	41.8	44.1	41.8	40.9	36.7	30.7	26.9	25.1	24.2
78.5°	31.6	35.3	39.5	42.3	39.5	39.0	34.8	28.8	25.1	23.2	22.3
79°	29.7	33.4	37.6	39.9	37.2	36.7	32.5	26.9	23.2	21.4	20.9
79.5°	27.4	31.1	35.3	37.6	35.3	34.8	30.2	25.1	21.8	19.5	19.0
80°	25.5	29.3	33.0	35.3	33.0	32.5	28.3	23.2	20.0	17.6	17.2
80.5°	23.7	26.9	31.1	33.4	31.1	30.2	26.5	21.4	18.1	16.3	15.8
81°	21.8	25.1	28.8	31.1	29.3	28.8	24.6	19.5	16.7	14.4	13.9
81.5°	20.0	23.2	26.9	29.3	26.9	26.5	22.8	17.6	14.9	13.0	12.5
82°	18.6	21.4	25.1	27.4	25.1	24.6	21.4	16.3	13.5	11.6	11.1
82.5°	16.7	19.5	23.2	25.5	23.7	23.2	19.5	14.4	12.1	10.2	9.8
83°	15.3	18.1	21.4	23.7	21.8	21.4	17.6	13.0	10.7	8.8	8.4
83.5°	13.5	16.3	20.0	21.8	20.0	19.5	16.3	11.6	9.3	7.4	7.4
84°	12.1	14.9	18.1	20.4	18.6	18.1	14.9	10.2	7.9	6.0	6.0
84.5°	10.7	13.0	16.7	18.6	16.7	16.3	13.5	8.8	6.5	4.6	5.1
85°	9.3	11.6	14.9	17.2	15.3	14.9	11.6	7.4	5.6	3.7	3.7
85.5°	7.9	10.2	13.5	15.8	13.9	13.5	10.2	6.0	4.2	2.8	2.8
86°	6.5	8.8	11.6	13.9	12.5	12.1	9.3	5.1	3.3	2.3	1.9
86.5°	5.1	7.4	10.2	12.5	11.1	10.7	7.9	4.2	2.3	1.4	0.9
87°	4.2	6.0	9.3	11.1	9.8	9.3	6.5	3.3	1.9	0.9	0.0
87.5°	3.3	4.6	7.9	9.8	8.4	7.9	5.6	2.3	0.9	0.5	0.0
88°	2.3	3.7	6.5	8.4	7.0	7.0	4.6	1.9	0.5	0.0	0.0
88.5°	1.4	2.8	5.6	7.0	6.0	5.6	3.3	0.9	0.0	0.0	0.0



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.5	2.3	3.7	2.3	2.3	0.5	0.0	0.0	0.0	0.0



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3058.5	3058.5	3058.5	3058.5	3058.5	3058.5
0.5°	3054.8	3057.1	3057.6	3059.4	3059.0	3057.1
1°	3052.9	3054.8	3055.2	3057.6	3057.6	3056.6
1.5°	3050.6	3052.0	3052.9	3055.2	3055.7	3055.7
2°	3048.3	3049.7	3050.1	3052.9	3054.3	3054.8
2.5°	3045.5	3046.9	3047.4	3050.6	3052.5	3053.9
3°	3043.2	3044.1	3044.6	3047.8	3050.1	3052.5
3.5°	3039.9	3040.8	3041.3	3045.5	3048.3	3050.6
4°	3037.1	3037.6	3038.5	3042.7	3046.4	3049.2
4.5°	3033.9	3034.3	3034.8	3039.9	3044.1	3047.8
5°	3030.2	3030.6	3031.1	3036.7	3041.8	3045.5
5.5°	3026.5	3026.9	3027.4	3033.9	3039.0	3043.6
6°	3022.3	3022.3	3023.2	3030.2	3036.2	3041.3
6.5°	3018.1	3018.6	3019.0	3026.5	3033.0	3039.0
7°	3013.4	3013.9	3014.8	3022.7	3030.2	3036.7
7.5°	3008.8	3009.3	3009.7	3019.0	3026.9	3033.9
8°	3004.2	3003.7	3005.1	3014.4	3023.2	3030.6
8.5°	2998.6	2998.6	3000.0	3010.2	3019.5	3027.4
9°	2993.5	2993.0	2994.4	3005.6	3015.8	3024.1
9.5°	2987.4	2987.9	2988.4	3000.0	3011.6	3020.4
10°	2981.4	2981.4	2982.8	2994.9	3006.9	3016.2
10.5°	2975.4	2974.9	2976.3	2989.3	3002.3	3012.1
11°	2968.4	2968.4	2969.8	2983.7	2997.2	3007.9
11.5°	2961.4	2961.4	2962.4	2977.7	2992.1	3002.8
12°	2954.0	2954.0	2955.4	2971.2	2986.5	2997.7
12.5°	2946.6	2946.1	2947.5	2964.2	2980.0	2992.5
13°	2938.7	2938.2	2939.1	2956.8	2974.0	2986.5
13.5°	2930.3	2929.8	2931.2	2949.4	2967.5	2980.9
14°	2921.5	2921.0	2922.4	2941.5	2960.5	2974.9
14.5°	2912.2	2912.2	2913.1	2933.1	2953.1	2968.4
15°	2902.9	2902.4	2903.8	2924.3	2945.2	2961.4
15.5°	2893.1	2892.2	2893.6	2914.5	2937.3	2954.0
16°	2882.5	2882.5	2882.9	2904.8	2928.4	2946.1
16.5°	2871.8	2871.8	2872.2	2894.5	2919.6	2938.2
17°	2860.2	2860.6	2861.1	2883.9	2909.9	2929.4
17.5°	2849.0	2849.0	2849.0	2873.2	2900.1	2921.0
18°	2836.5	2837.4	2836.9	2861.1	2889.4	2911.7
18.5°	2823.9	2824.4	2823.9	2849.0	2878.8	2902.0
19°	2810.9	2811.4	2810.9	2836.0	2867.1	2891.3
19.5°	2797.0	2798.9	2797.5	2823.5	2855.1	2880.6
20°	2783.1	2784.9	2782.6	2809.1	2842.5	2869.9
20.5°	2768.7	2770.1	2768.2	2795.6	2830.0	2858.3
21°	2753.3	2755.2	2752.9	2780.7	2817.0	2846.2



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2705.0	2706.9	2704.1	2733.4	2773.8	2807.2
23°	2687.4	2690.2	2686.5	2717.1	2758.0	2793.3
23.5°	2669.3	2672.5	2669.3	2699.5	2742.2	2778.4
24°	2650.7	2654.4	2650.7	2681.8	2725.5	2763.6
24.5°	2632.1	2635.8	2631.7	2664.2	2708.8	2747.8
25°	2612.1	2616.3	2612.1	2644.7	2691.1	2732.0
25.5°	2592.2	2596.8	2592.2	2625.6	2673.5	2715.3
26°	2570.8	2576.4	2572.2	2605.6	2654.9	2697.6
26.5°	2550.4	2555.9	2550.8	2585.7	2636.3	2680.0
27°	2528.1	2534.1	2529.0	2564.8	2616.3	2661.8
27.5°	2505.8	2511.8	2507.2	2543.4	2596.4	2643.3
28°	2482.6	2489.1	2484.0	2521.1	2575.9	2624.2
28.5°	2457.9	2466.3	2461.2	2498.8	2555.0	2603.8
29°	2431.0	2441.7	2437.0	2476.1	2533.2	2583.4
29.5°	2403.1	2416.6	2412.0	2452.8	2510.4	2562.0
30°	2374.8	2390.1	2385.0	2429.1	2488.1	2540.6
30.5°	2344.6	2361.3	2356.7	2404.1	2464.9	2517.4
31°	2313.0	2331.6	2326.0	2377.1	2441.2	2494.6
31.5°	2279.6	2299.1	2295.4	2349.3	2416.6	2471.4
32°	2243.4	2264.7	2262.9	2319.1	2389.7	2447.3
32.5°	2205.3	2228.0	2229.0	2288.0	2362.3	2421.7
33°	2163.9	2188.1	2192.7	2254.5	2333.0	2395.2
33.5°	2115.6	2145.8	2152.3	2219.7	2302.4	2366.4
34°	2060.8	2096.6	2107.3	2181.6	2270.3	2337.7
34.5°	1999.5	2039.9	2052.0	2139.3	2235.5	2306.1
35°	1935.9	1975.8	1988.8	2090.6	2198.8	2272.6
35.5°	1869.9	1909.4	1921.0	2035.3	2157.9	2235.0
36°	1802.1	1845.8	1849.0	1975.4	2110.1	2196.5
36.5°	1737.1	1784.5	1776.1	1910.3	2056.2	2152.3
37°	1672.1	1720.4	1704.6	1843.5	1995.8	2101.2
37.5°	1606.1	1649.8	1635.8	1771.0	1929.4	2040.9
38°	1538.3	1576.4	1569.0	1696.2	1860.6	1975.8
38.5°	1464.9	1502.1	1497.9	1622.4	1790.0	1908.0
39°	1392.5	1431.0	1427.8	1548.1	1719.0	1840.2
39.5°	1318.2	1363.7	1356.7	1474.7	1644.7	1773.3
40°	1246.6	1297.7	1287.5	1398.0	1572.2	1706.4
40.5°	1173.7	1232.7	1218.3	1323.3	1499.3	1636.3
41°	1103.1	1164.9	1152.8	1249.9	1428.2	1566.6
41.5°	1034.4	1096.6	1087.8	1183.0	1359.5	1496.5
42°	965.6	1028.8	1022.3	1114.7	1289.8	1426.4
42.5°	897.3	964.2	959.6	1050.2	1216.9	1356.7
43°	831.9	902.9	899.2	987.9	1148.6	1289.4
43.5°	771.9	841.1	839.8	928.5	1082.2	1222.5

TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	616.3	666.0	681.8	766.8	894.6	1022.3
45.5°	572.7	613.6	635.4	719.0	837.9	958.2
46°	532.7	566.6	592.2	673.9	783.6	895.0
46.5°	497.9	526.7	552.2	631.7	733.9	834.2
47°	467.3	492.3	515.6	591.7	685.1	774.7
47.5°	438.9	462.1	482.6	553.6	640.5	715.3
48°	417.1	436.1	452.9	518.3	598.2	662.8
48.5°	395.7	412.9	426.4	486.3	560.1	612.6
49°	373.9	391.5	401.3	456.1	523.9	567.1
49.5°	352.1	370.2	378.5	428.2	490.0	525.8
50°	330.7	350.2	357.2	401.3	459.4	492.3
50.5°	316.3	332.6	338.1	377.1	431.0	462.1
51°	302.4	317.7	321.9	354.9	405.0	434.7
51.5°	288.9	304.2	307.9	334.9	380.4	409.7
52°	275.4	290.8	294.5	319.1	358.1	387.8
52.5°	262.4	277.3	281.0	305.6	338.6	366.9
53°	249.9	263.8	267.5	291.7	322.3	347.0
53.5°	237.8	251.7	254.5	277.7	308.4	328.8
54°	227.1	239.7	242.5	264.3	294.0	314.9
54.5°	216.9	228.5	231.8	251.7	280.1	301.0
55°	207.2	218.3	221.1	239.7	266.6	286.6
55.5°	198.3	208.5	211.3	229.0	254.1	273.1
56°	189.5	199.3	201.6	218.3	242.0	260.1
56.5°	181.6	190.9	193.2	208.5	230.8	247.6
57°	174.2	182.5	184.9	199.7	220.2	235.5
57.5°	167.2	175.1	177.0	190.9	210.4	224.8
58°	159.8	167.7	170.0	183.0	201.1	214.1
58.5°	153.7	161.2	164.0	175.1	192.3	204.8
59°	147.2	155.1	157.5	167.7	183.9	195.5
59.5°	141.7	149.1	151.4	161.6	176.5	187.6
60°	136.1	143.1	145.4	155.6	169.1	179.3
60.5°	130.5	137.5	138.9	149.6	163.0	171.4
61°	125.4	131.9	133.3	143.5	157.0	164.9
61.5°	120.8	126.8	128.2	137.5	150.5	158.4
62°	116.1	122.2	123.5	132.4	144.4	151.9
62.5°	111.5	117.0	118.4	127.3	138.4	145.4
63°	106.8	112.4	113.8	122.2	132.8	138.9
63.5°	102.6	108.2	109.6	117.0	127.7	133.3
64°	98.9	104.0	105.0	112.9	122.2	127.7
64.5°	94.8	99.9	101.3	108.2	117.5	122.6
65°	91.0	96.1	97.1	104.0	112.9	117.5
65.5°	87.3	92.0	93.4	99.9	108.2	112.4
66°	84.1	88.2	89.2	96.1	104.0	108.2



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	73.8	78.0	79.0	85.0	91.5	95.2
68°	71.1	74.8	75.7	81.3	87.8	91.0
68.5°	67.8	71.5	72.5	78.0	84.1	87.3
69°	65.0	68.7	69.7	74.8	80.4	83.6
69.5°	62.2	65.5	66.4	71.5	77.1	80.4
70°	59.5	62.7	63.6	68.7	73.8	76.6
70.5°	56.7	59.9	60.8	65.5	70.6	73.4
71°	53.9	57.1	58.1	62.7	67.3	70.1
71.5°	51.6	54.8	55.3	59.9	64.6	66.9
72°	49.2	52.0	52.5	57.1	61.3	64.1
72.5°	46.4	49.7	50.2	54.3	58.5	61.3
73°	44.1	46.9	47.8	52.0	55.7	58.5
73.5°	42.3	44.6	45.1	49.2	52.9	55.7
74°	39.5	42.3	42.7	46.9	50.6	52.9
74.5°	37.6	39.9	40.4	44.1	47.8	50.2
75°	35.3	37.6	38.6	41.8	45.5	47.8
75.5°	33.4	35.8	36.2	39.5	42.7	45.1
76°	31.1	33.4	33.9	37.6	40.9	42.7
76.5°	29.3	31.6	32.0	35.3	38.6	40.4
77°	27.4	29.3	29.7	33.0	36.2	38.1
77.5°	25.1	27.4	27.9	31.1	33.9	35.8
78°	23.7	25.5	26.0	28.8	31.6	33.9
78.5°	21.8	23.7	24.2	26.9	29.7	31.6
79°	20.0	21.8	22.3	25.1	27.4	29.7
79.5°	18.6	20.4	20.4	23.2	25.5	27.4
80°	16.7	18.6	19.0	21.4	23.7	25.5
80.5°	15.3	17.2	17.2	19.5	21.8	23.7
81°	13.5	15.3	15.8	18.1	20.0	21.8
81.5°	12.1	13.9	14.4	16.3	18.1	20.0
82°	10.7	12.5	13.0	14.9	16.7	18.6
82.5°	9.3	11.1	11.6	13.5	14.9	16.7
83°	7.9	9.8	9.8	11.6	13.5	15.3
83.5°	7.0	8.4	8.4	10.2	11.6	13.5
84°	5.6	7.0	7.4	8.8	10.2	12.1
84.5°	4.2	5.6	6.0	7.9	8.8	10.7
85°	3.3	4.6	4.6	6.5	7.4	9.3
85.5°	1.9	3.3	3.7	5.1	6.0	7.9
86°	0.9	2.3	2.3	4.2	5.1	6.5
86.5°	0.0	0.9	0.9	2.8	4.2	5.1
87°	0.0	0.0	0.0	1.9	3.3	4.2
87.5°	0.0	0.0	0.0	0.9	2.3	3.3
88°	0.0	0.0	0.0	0.0	1.4	2.3
88.5°	0.0	0.0	0.0	0.0	0.9	1.4



TEST NUMBER: P776816

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRMW-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

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°	2833.7	2870.9	2908.5	2939.6	2942.8	2948.9	2928.0	2888.0	2850.0	2809.1	2770.1
22°	2820.2	2859.2	2897.3	2929.4	2932.2	2938.7	2916.4	2874.6	2836.5	2793.8	2754.7



44°	1155.6	1298.2	1427.8	1522.5	1487.7	1495.1	1369.7	1181.6	1047.4	903.8	784.9
44.5°	1087.8	1228.0	1353.4	1448.2	1413.4	1425.0	1293.1	1110.5	980.9	842.5	730.6



66.5°	103.6	111.0	117.5	120.8	115.2	113.3	105.4	95.7	89.2	85.5	83.1
67°	99.4	106.4	112.4	116.1	110.5	109.1	101.3	92.0	85.5	81.7	79.4



89°	0.5	2.3	4.2	6.0	4.6	4.6	2.3	0.5	0.0	0.0	0.0
89.5°	0.0	1.4	3.3	4.6	3.7	3.3	1.4	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°	2738.0	2739.4	2737.1	2765.0	2803.0	2833.7
22°	2721.3	2723.6	2720.8	2750.1	2788.2	2820.2



44°	717.1	781.2	784.0	870.9	1016.2	1155.6
44.5°	664.6	721.8	730.1	818.4	954.0	1087.8



66.5°	80.4	85.0	85.9	92.0	99.4	103.6
67°	77.1	81.3	82.2	88.7	95.7	99.4

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

Scaled Data Report



89°	0.0	0.0	0.0	0.0	0.0	0.5
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)