

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: P776646

Luminaire Tested: HCDJBS4050CSD-HCD61TRC-5000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776646
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B035-HCD61TRC)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD61TRC-5000lm-3000K
Description: 6 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

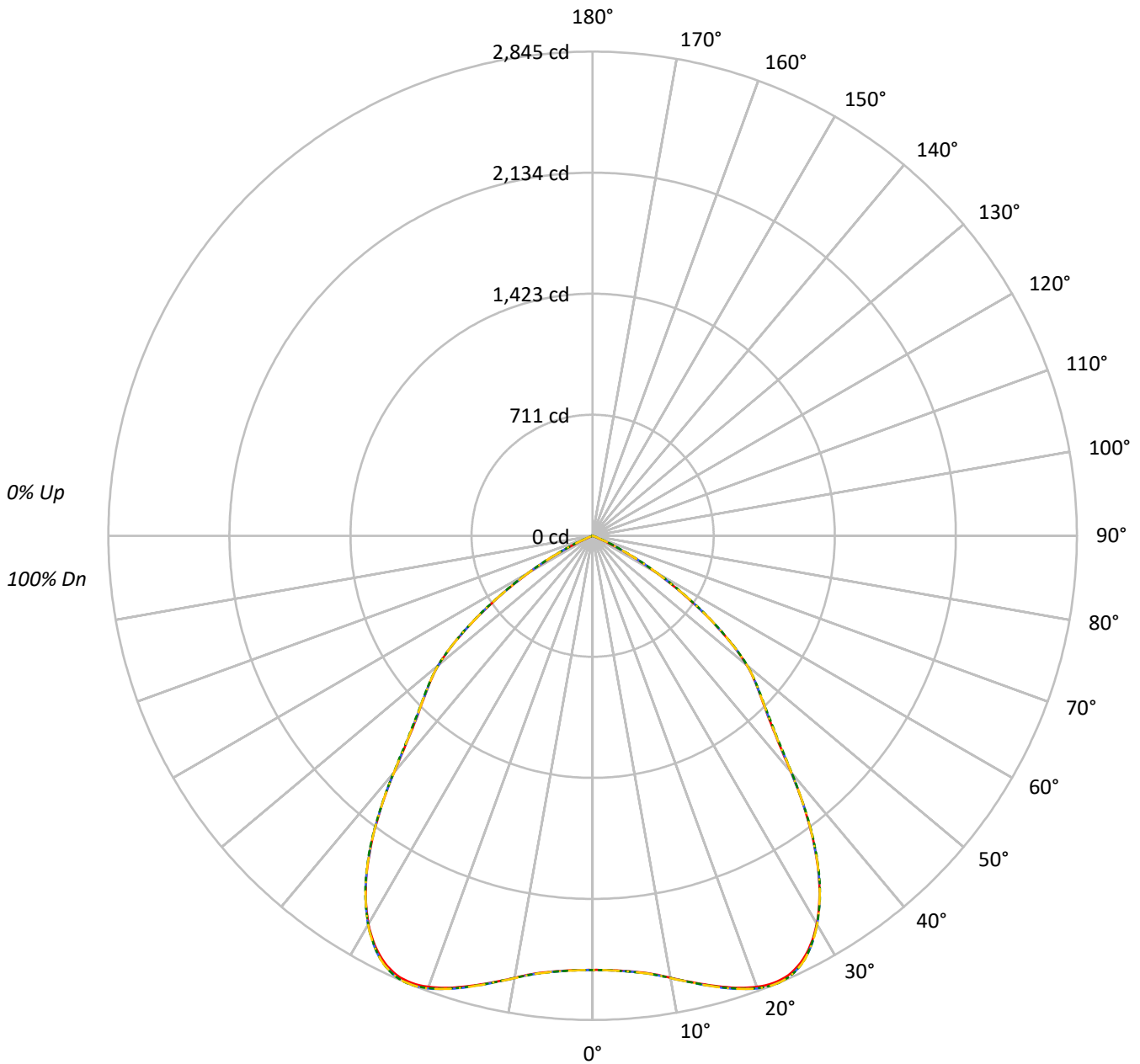
Lumens per Lamp: N/A
Luminaire Lumens: 5734.1 lumens
Efficiency: N/A
Efficacy: 119.5 lumens/watt
Spacing Criteria (0/90/45): 1.39 / 1.39 / 1.3
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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



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Luminous Intensity Polar Plot





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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								
1	112	108	105	103	109	106	103	101	102	100	98	98	97	95	95	93	92	90								
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	80								
3	97	88	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71								
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	63								
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56								
6	78	66	59	53	76	65	58	53	64	57	52	62	56	52	61	56	52	50								
7	72	61	53	48	71	60	53	47	58	52	47	57	51	47	56	51	47	45								
8	68	56	48	43	66	55	48	43	54	47	43	53	47	42	52	46	42	40								
9	63	51	44	39	62	51	44	39	50	43	39	49	43	39	48	42	38	37								
10	60	48	40	36	58	47	40	36	46	40	35	45	39	35	44	39	35	34								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	139890	139890	139890	139890
5°	141421	141525	141421	141525
10°	146830	146886	146830	146886
15°	155347	155506	155347	155506
20°	164561	165022	164561	165022
25°	170030	170738	170030	170738
30°	166709	166912	166709	166912
35°	153046	153548	153046	153548
40°	129743	130273	129743	130273
45°	111128	111702	111128	111702
50°	100807	101046	100807	101046
55°	77627	78420	77627	78420
60°	46762	48242	46762	48242
65°	14645	18679	14645	18679
70°	80	737	80	737
75°	0	106	0	106
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 111702 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.5	4.3
10°-20°	779.2	13.6
20°-30°	1288.3	22.5
30°-40°	1414.1	24.7
40°-50°	1122.9	19.6
50°-60°	723.2	12.6
60°-70°	158.3	2.8
70°-80°	0.5	0.0
80°-90°	0.0	0.0
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°	2315.1	40.4
0°-40°	3729.1	65.0
0°-60°	5575.3	97.2
0°-90°	5734.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5734.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2552	2552	2552	2552	2552	
5°	2570	2572	2570	2572	2570	247
15°	2737	2740	2737	2740	2737	778
25°	2811	2823	2811	2823	2811	1285
35°	2287	2294	2287	2294	2287	1413
45°	1433	1441	1433	1441	1433	1120
55°	812	820	812	820	812	719
65°	113	144	113	144	113	144
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2551.8	2551.8	2551.8	2551.8	2551.8	2551.8	2551.8	2551.8	2551.8	2551.8	2551.8
0.5°	2550.9	2551.8	2552.2	2552.7	2552.2	2552.7	2552.2	2551.8	2550.9	2551.8	2552.2
1°	2551.8	2552.2	2552.7	2553.2	2552.7	2553.2	2552.7	2552.2	2551.8	2552.2	2552.7
1.5°	2552.7	2553.2	2553.6	2554.1	2553.6	2554.1	2553.6	2553.2	2552.7	2553.2	2553.6
2°	2554.1	2554.6	2555.0	2555.0	2554.6	2555.0	2555.0	2554.6	2554.1	2554.6	2555.0
2.5°	2555.5	2556.0	2556.9	2556.9	2556.4	2556.9	2556.9	2556.0	2555.5	2556.0	2556.9
3°	2557.8	2558.3	2558.7	2558.7	2558.3	2558.7	2558.7	2558.3	2557.8	2558.3	2558.7
3.5°	2560.1	2560.6	2561.5	2561.5	2561.1	2561.5	2561.5	2560.6	2560.1	2560.6	2561.5
4°	2562.9	2563.4	2564.3	2564.8	2564.3	2564.8	2564.3	2563.4	2562.9	2563.4	2564.3
4.5°	2566.2	2566.6	2567.6	2568.0	2567.6	2568.0	2567.6	2566.6	2566.2	2566.6	2567.6
5°	2569.9	2570.4	2571.3	2571.8	2571.8	2571.8	2571.3	2570.4	2569.9	2570.4	2571.3
5.5°	2573.6	2574.5	2575.5	2576.4	2575.9	2576.4	2575.5	2574.5	2573.6	2574.5	2575.5
6°	2578.3	2578.7	2580.1	2581.1	2580.6	2581.1	2580.1	2578.7	2578.3	2578.7	2580.1
6.5°	2583.4	2583.8	2585.2	2585.7	2585.2	2585.7	2585.2	2583.8	2583.4	2583.8	2585.2
7°	2589.0	2589.4	2590.8	2591.3	2590.8	2591.3	2590.8	2589.4	2589.0	2589.4	2590.8
7.5°	2595.5	2595.9	2597.3	2597.3	2596.8	2597.3	2597.3	2595.9	2595.5	2595.9	2597.3
8°	2602.0	2602.9	2604.3	2604.7	2604.3	2604.7	2604.3	2602.9	2602.0	2602.9	2604.3
8.5°	2609.9	2610.8	2612.6	2612.6	2612.2	2612.6	2612.6	2610.8	2609.9	2610.8	2612.6
9°	2618.7	2619.6	2621.0	2621.5	2620.5	2621.5	2621.0	2619.6	2618.7	2619.6	2621.0
9.5°	2628.0	2628.9	2630.3	2630.8	2629.4	2630.8	2630.3	2628.9	2628.0	2628.9	2630.3
10°	2637.7	2638.7	2640.1	2640.1	2638.7	2640.1	2640.1	2638.7	2637.7	2638.7	2640.1
10.5°	2647.5	2648.4	2649.4	2649.4	2648.4	2649.4	2649.4	2648.4	2647.5	2648.4	2649.4
11°	2657.3	2658.6	2659.6	2659.1	2658.2	2659.1	2659.6	2658.6	2657.3	2658.6	2659.6
11.5°	2667.5	2668.4	2669.3	2668.9	2667.9	2668.9	2669.3	2668.4	2667.5	2668.4	2669.3
12°	2677.2	2678.2	2679.1	2679.1	2678.2	2679.1	2679.1	2678.2	2677.2	2678.2	2679.1
12.5°	2687.0	2688.4	2689.3	2689.3	2688.4	2689.3	2689.3	2688.4	2687.0	2688.4	2689.3
13°	2696.7	2698.6	2699.5	2699.5	2698.6	2699.5	2699.5	2698.6	2696.7	2698.6	2699.5
13.5°	2707.0	2708.8	2710.2	2709.8	2708.8	2709.8	2710.2	2708.8	2707.0	2708.8	2710.2
14°	2716.7	2719.0	2720.9	2720.9	2719.0	2720.9	2720.9	2719.0	2716.7	2719.0	2720.9
14.5°	2726.9	2729.3	2731.1	2731.6	2729.7	2731.6	2731.1	2729.3	2726.9	2729.3	2731.1
15°	2737.2	2739.5	2741.8	2742.3	2740.0	2742.3	2741.8	2739.5	2737.2	2739.5	2741.8
15.5°	2746.9	2749.7	2752.5	2752.5	2750.2	2752.5	2752.5	2749.7	2746.9	2749.7	2752.5
16°	2756.7	2759.9	2762.7	2762.7	2760.4	2762.7	2762.7	2759.9	2756.7	2759.9	2762.7
16.5°	2766.0	2769.2	2772.5	2772.5	2770.2	2772.5	2772.5	2769.2	2766.0	2769.2	2772.5
17°	2775.7	2779.0	2782.2	2782.2	2779.5	2782.2	2782.2	2779.0	2775.7	2779.0	2782.2
17.5°	2784.6	2788.3	2791.5	2791.5	2788.7	2791.5	2791.5	2788.3	2784.6	2788.3	2791.5
18°	2792.9	2797.1	2800.4	2800.4	2798.0	2800.4	2800.4	2797.1	2792.9	2797.1	2800.4
18.5°	2800.8	2805.5	2808.7	2808.7	2806.4	2808.7	2808.7	2805.5	2800.8	2805.5	2808.7
19°	2808.3	2812.9	2816.6	2816.2	2814.3	2816.2	2816.6	2812.9	2808.3	2812.9	2816.6
19.5°	2814.8	2819.4	2824.1	2823.1	2821.7	2823.1	2824.1	2819.4	2814.8	2819.4	2824.1
20°	2820.8	2825.4	2830.6	2829.2	2828.7	2829.2	2830.6	2825.4	2820.8	2825.4	2830.6
20.5°	2825.9	2830.6	2835.7	2834.3	2834.3	2834.3	2835.7	2830.6	2825.9	2830.6	2835.7
21°	2829.6	2834.3	2839.9	2838.0	2838.9	2838.0	2839.9	2834.3	2829.6	2834.3	2839.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2834.3	2838.5	2845.0	2842.6	2845.4	2842.6	2845.0	2838.5	2834.3	2838.5	2845.0
23°	2833.3	2837.1	2844.0	2841.2	2844.5	2841.2	2844.0	2837.1	2833.3	2837.1	2844.0
23.5°	2830.6	2834.3	2841.2	2838.0	2842.2	2838.0	2841.2	2834.3	2830.6	2834.3	2841.2
24°	2825.9	2829.6	2836.6	2833.8	2837.5	2833.8	2836.6	2829.6	2825.9	2829.6	2836.6
24.5°	2819.4	2823.1	2830.1	2827.8	2831.0	2827.8	2830.1	2823.1	2819.4	2823.1	2830.1
25°	2811.0	2815.2	2821.7	2819.9	2822.7	2819.9	2821.7	2815.2	2811.0	2815.2	2821.7
25.5°	2801.8	2805.5	2812.0	2810.6	2812.0	2810.6	2812.0	2805.5	2801.8	2805.5	2812.0
26°	2790.1	2793.9	2799.9	2799.4	2799.9	2799.4	2799.9	2793.9	2790.1	2793.9	2799.9
26.5°	2775.7	2779.9	2786.0	2786.4	2785.5	2786.4	2786.0	2779.9	2775.7	2779.9	2786.0
27°	2760.9	2765.0	2770.2	2771.6	2769.2	2771.6	2770.2	2765.0	2760.9	2765.0	2770.2
27.5°	2743.7	2747.9	2752.5	2754.8	2751.1	2754.8	2752.5	2747.9	2743.7	2747.9	2752.5
28°	2724.6	2728.8	2732.5	2736.2	2731.1	2736.2	2732.5	2728.8	2724.6	2728.8	2732.5
28.5°	2704.6	2707.9	2711.6	2716.3	2709.8	2716.3	2711.6	2707.9	2704.6	2707.9	2711.6
29°	2682.3	2685.6	2688.4	2694.0	2687.0	2694.0	2688.4	2685.6	2682.3	2685.6	2688.4
29.5°	2658.6	2661.4	2664.7	2669.3	2662.8	2669.3	2664.7	2661.4	2658.6	2661.4	2664.7
30°	2633.6	2635.4	2637.7	2643.3	2636.8	2643.3	2637.7	2635.4	2633.6	2635.4	2637.7
30.5°	2606.6	2607.5	2610.3	2615.9	2609.4	2615.9	2610.3	2607.5	2606.6	2607.5	2610.3
31°	2577.3	2578.3	2581.1	2586.2	2580.6	2586.2	2581.1	2578.3	2577.3	2578.3	2581.1
31.5°	2547.1	2547.1	2550.4	2554.6	2550.4	2554.6	2550.4	2547.1	2547.1	2547.1	2550.4
32°	2515.1	2514.6	2517.4	2521.6	2518.8	2521.6	2517.4	2514.6	2515.1	2514.6	2517.4
32.5°	2481.2	2480.2	2483.9	2486.7	2485.8	2486.7	2483.9	2480.2	2481.2	2480.2	2483.9
33°	2445.8	2444.9	2448.2	2450.5	2451.0	2450.5	2448.2	2444.9	2445.8	2444.9	2448.2
33.5°	2408.7	2406.8	2411.0	2412.4	2413.8	2412.4	2411.0	2406.8	2408.7	2406.8	2411.0
34°	2370.1	2368.2	2372.0	2372.4	2376.1	2372.4	2372.0	2368.2	2370.1	2368.2	2372.0
34.5°	2328.8	2328.8	2331.1	2331.5	2335.7	2331.5	2331.1	2328.8	2328.8	2328.8	2331.1
35°	2286.9	2286.5	2288.8	2289.7	2294.4	2289.7	2288.8	2286.5	2286.9	2286.5	2288.8
35.5°	2244.2	2244.2	2246.0	2247.0	2251.6	2247.0	2246.0	2244.2	2244.2	2244.2	2246.0
36°	2200.5	2200.5	2201.9	2203.3	2206.6	2203.3	2201.9	2200.5	2200.5	2200.5	2201.9
36.5°	2155.4	2155.9	2156.8	2157.8	2161.5	2157.8	2156.8	2155.9	2155.4	2155.9	2156.8
37°	2108.5	2109.4	2109.9	2111.3	2114.1	2111.3	2109.9	2109.4	2108.5	2109.4	2109.9
37.5°	2061.6	2062.1	2063.0	2064.4	2065.8	2064.4	2063.0	2062.1	2061.6	2062.1	2063.0
38°	2013.7	2013.7	2015.1	2016.1	2017.4	2016.1	2015.1	2013.7	2013.7	2013.7	2015.1
38.5°	1964.9	1964.9	1966.3	1967.3	1968.2	1967.3	1966.3	1964.9	1964.9	1964.9	1966.3
39°	1915.2	1915.2	1917.1	1918.5	1918.9	1918.5	1917.1	1915.2	1915.2	1915.2	1917.1
39.5°	1864.1	1864.6	1866.4	1869.2	1869.7	1869.2	1866.4	1864.6	1864.1	1864.6	1866.4
40°	1813.0	1813.5	1816.7	1819.0	1820.4	1819.0	1816.7	1813.5	1813.0	1813.5	1816.7
40.5°	1762.8	1763.8	1767.9	1772.1	1773.0	1772.1	1767.9	1763.8	1762.8	1763.8	1767.9
41°	1715.4	1716.8	1721.0	1725.7	1727.5	1725.7	1721.0	1716.8	1715.4	1716.8	1721.0
41.5°	1670.8	1672.7	1676.4	1681.1	1682.4	1681.1	1676.4	1672.7	1670.8	1672.7	1676.4
42°	1629.9	1630.9	1634.6	1637.8	1640.6	1637.8	1634.6	1630.9	1629.9	1630.9	1634.6
42.5°	1591.8	1592.3	1597.0	1600.2	1602.1	1600.2	1597.0	1592.3	1591.8	1592.3	1597.0
43°	1554.7	1555.1	1560.2	1564.0	1568.1	1564.0	1560.2	1555.1	1554.7	1555.1	1560.2
43.5°	1520.3	1521.7	1525.4	1529.1	1532.4	1529.1	1525.4	1521.7	1520.3	1521.7	1525.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1433.4	1433.4	1436.7	1438.0	1440.8	1438.0	1436.7	1433.4	1433.4	1433.4	1436.7
45.5°	1406.9	1406.9	1410.2	1411.6	1413.0	1411.6	1410.2	1406.9	1406.9	1406.9	1410.2
46°	1381.4	1381.8	1384.1	1386.0	1386.9	1386.0	1384.1	1381.8	1381.4	1381.8	1384.1
46.5°	1356.7	1356.7	1359.1	1360.5	1362.3	1360.5	1359.1	1356.7	1356.7	1356.7	1359.1
47°	1332.6	1332.6	1334.4	1336.3	1337.7	1336.3	1334.4	1332.6	1332.6	1332.6	1334.4
47.5°	1308.4	1308.4	1310.7	1312.1	1312.6	1312.1	1310.7	1308.4	1308.4	1308.4	1310.7
48°	1285.2	1284.7	1287.0	1288.4	1289.4	1288.4	1287.0	1284.7	1285.2	1284.7	1287.0
48.5°	1261.0	1261.0	1262.9	1264.7	1265.2	1264.7	1262.9	1261.0	1261.0	1261.0	1262.9
49°	1235.9	1236.4	1238.3	1239.6	1240.6	1239.6	1238.3	1236.4	1235.9	1236.4	1238.3
49.5°	1210.4	1209.9	1212.2	1213.6	1214.1	1213.6	1212.2	1209.9	1210.4	1209.9	1212.2
50°	1182.0	1182.0	1183.4	1184.8	1184.8	1184.8	1183.4	1182.0	1182.0	1182.0	1183.4
50.5°	1150.9	1150.9	1151.8	1153.7	1153.7	1153.7	1151.8	1150.9	1150.9	1150.9	1151.8
51°	1117.9	1117.4	1118.8	1120.2	1121.6	1120.2	1118.8	1117.4	1117.9	1117.4	1118.8
51.5°	1083.1	1082.6	1084.5	1086.3	1086.8	1086.3	1084.5	1082.6	1083.1	1082.6	1084.5
52°	1046.8	1047.3	1048.7	1050.1	1051.0	1050.1	1048.7	1047.3	1046.8	1047.3	1048.7
52.5°	1009.7	1009.2	1011.5	1013.4	1013.8	1013.4	1011.5	1009.2	1009.7	1009.2	1011.5
53°	970.6	971.1	973.4	975.7	975.3	975.7	973.4	971.1	970.6	971.1	973.4
53.5°	931.6	932.1	934.8	936.7	937.6	936.7	934.8	932.1	931.6	932.1	934.8
54°	891.6	892.6	895.4	897.2	897.7	897.2	895.4	892.6	891.6	892.6	895.4
54.5°	852.1	852.1	855.9	858.2	859.1	858.2	855.9	852.1	852.1	852.1	855.9
55°	812.2	812.6	816.8	818.7	820.5	818.7	816.8	812.6	812.2	812.6	816.8
55.5°	771.3	772.2	776.4	779.2	781.1	779.2	776.4	772.2	771.3	772.2	776.4
56°	730.9	732.3	736.9	739.2	741.6	739.2	736.9	732.3	730.9	732.3	736.9
56.5°	690.9	692.3	697.0	699.7	702.1	699.7	697.0	692.3	690.9	692.3	697.0
57°	651.0	653.3	657.5	660.7	663.0	660.7	657.5	653.3	651.0	653.3	657.5
57.5°	611.9	614.2	618.4	622.1	624.5	622.1	618.4	614.2	611.9	614.2	618.4
58°	573.4	575.2	579.9	584.5	586.4	584.5	579.9	575.2	573.4	575.2	579.9
58.5°	534.8	537.6	542.2	547.8	549.2	547.8	542.2	537.6	534.8	537.6	542.2
59°	497.6	500.9	504.6	510.6	512.0	510.6	504.6	500.9	497.6	500.9	504.6
59.5°	461.8	464.2	468.4	474.4	475.8	474.4	468.4	464.2	461.8	464.2	468.4
60°	426.5	428.4	432.6	438.2	440.0	438.2	432.6	428.4	426.5	428.4	432.6
60.5°	391.2	393.1	397.3	402.8	405.6	402.8	397.3	393.1	391.2	393.1	397.3
61°	356.8	358.7	363.8	368.9	371.7	368.9	363.8	358.7	356.8	358.7	363.8
61.5°	322.0	325.7	330.8	335.9	340.1	335.9	330.8	325.7	322.0	325.7	330.8
62°	289.0	293.6	298.8	304.3	308.5	304.3	298.8	293.6	289.0	293.6	298.8
62.5°	256.0	262.1	267.6	273.2	277.9	273.2	267.6	262.1	256.0	262.1	267.6
63°	224.0	232.3	237.4	243.0	248.1	243.0	237.4	232.3	224.0	232.3	237.4
63.5°	193.3	204.0	209.6	214.7	220.2	214.7	209.6	204.0	193.3	204.0	209.6
64°	163.6	177.5	184.0	188.6	194.2	188.6	184.0	177.5	163.6	177.5	184.0
64.5°	137.1	153.3	159.4	163.6	169.1	163.6	159.4	153.3	137.1	153.3	159.4
65°	112.9	130.1	136.1	139.9	144.0	139.9	136.1	130.1	112.9	130.1	136.1
65.5°	90.1	109.7	114.8	116.6	120.3	116.6	114.8	109.7	90.1	109.7	114.8
66°	70.6	91.1	94.8	97.6	99.4	97.6	94.8	91.1	70.6	91.1	94.8



TEST NUMBER: P776646

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	21.8	42.3	45.5	48.3	51.1	48.3	45.5	42.3	21.8	42.3	45.5
68°	13.0	29.7	32.5	36.2	41.8	36.2	32.5	29.7	13.0	29.7	32.5
68.5°	7.9	19.5	23.2	25.6	32.5	25.6	23.2	19.5	7.9	19.5	23.2
69°	4.6	11.6	14.4	16.3	23.2	16.3	14.4	11.6	4.6	11.6	14.4
69.5°	2.8	7.4	8.4	8.4	13.9	8.4	8.4	7.4	2.8	7.4	8.4
70°	0.5	3.7	4.6	4.6	4.6	4.6	4.6	3.7	0.5	3.7	4.6
70.5°	0.5	1.4	2.8	2.8	1.9	2.8	2.8	1.4	0.5	1.4	2.8
71°	0.5	0.5	1.4	1.4	0.5	1.4	1.4	0.5	0.5	0.5	1.4
71.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
75.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776646
CATALOG NUMBER: HCDJBL54050CSD-HCD61TRC-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: P776646

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2551.8	2551.8	2551.8	2551.8	2551.8	2551.8
0.5°	2552.7	2552.2	2552.7	2552.2	2551.8	2550.9
1°	2553.2	2552.7	2553.2	2552.7	2552.2	2551.8
1.5°	2554.1	2553.6	2554.1	2553.6	2553.2	2552.7
2°	2555.0	2554.6	2555.0	2555.0	2554.6	2554.1
2.5°	2556.9	2556.4	2556.9	2556.9	2556.0	2555.5
3°	2558.7	2558.3	2558.7	2558.7	2558.3	2557.8
3.5°	2561.5	2561.1	2561.5	2561.5	2560.6	2560.1
4°	2564.8	2564.3	2564.8	2564.3	2563.4	2562.9
4.5°	2568.0	2567.6	2568.0	2567.6	2566.6	2566.2
5°	2571.8	2571.8	2571.8	2571.3	2570.4	2569.9
5.5°	2576.4	2575.9	2576.4	2575.5	2574.5	2573.6
6°	2581.1	2580.6	2581.1	2580.1	2578.7	2578.3
6.5°	2585.7	2585.2	2585.7	2585.2	2583.8	2583.4
7°	2591.3	2590.8	2591.3	2590.8	2589.4	2589.0
7.5°	2597.3	2596.8	2597.3	2597.3	2595.9	2595.5
8°	2604.7	2604.3	2604.7	2604.3	2602.9	2602.0
8.5°	2612.6	2612.2	2612.6	2612.6	2610.8	2609.9
9°	2621.5	2620.5	2621.5	2621.0	2619.6	2618.7
9.5°	2630.8	2629.4	2630.8	2630.3	2628.9	2628.0
10°	2640.1	2638.7	2640.1	2640.1	2638.7	2637.7
10.5°	2649.4	2648.4	2649.4	2649.4	2648.4	2647.5
11°	2659.1	2658.2	2659.1	2659.6	2658.6	2657.3
11.5°	2668.9	2667.9	2668.9	2669.3	2668.4	2667.5
12°	2679.1	2678.2	2679.1	2679.1	2678.2	2677.2
12.5°	2689.3	2688.4	2689.3	2689.3	2688.4	2687.0
13°	2699.5	2698.6	2699.5	2699.5	2698.6	2696.7
13.5°	2709.8	2708.8	2709.8	2710.2	2708.8	2707.0
14°	2720.9	2719.0	2720.9	2720.9	2719.0	2716.7
14.5°	2731.6	2729.7	2731.6	2731.1	2729.3	2726.9
15°	2742.3	2740.0	2742.3	2741.8	2739.5	2737.2
15.5°	2752.5	2750.2	2752.5	2752.5	2749.7	2746.9
16°	2762.7	2760.4	2762.7	2762.7	2759.9	2756.7
16.5°	2772.5	2770.2	2772.5	2772.5	2769.2	2766.0
17°	2782.2	2779.5	2782.2	2782.2	2779.0	2775.7
17.5°	2791.5	2788.7	2791.5	2791.5	2788.3	2784.6
18°	2800.4	2798.0	2800.4	2800.4	2797.1	2792.9
18.5°	2808.7	2806.4	2808.7	2808.7	2805.5	2800.8
19°	2816.2	2814.3	2816.2	2816.6	2812.9	2808.3
19.5°	2823.1	2821.7	2823.1	2824.1	2819.4	2814.8
20°	2829.2	2828.7	2829.2	2830.6	2825.4	2820.8
20.5°	2834.3	2834.3	2834.3	2835.7	2830.6	2825.9
21°	2838.0	2838.9	2838.0	2839.9	2834.3	2829.6



TEST NUMBER: P776646

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2842.6	2845.4	2842.6	2845.0	2838.5	2834.3
23°	2841.2	2844.5	2841.2	2844.0	2837.1	2833.3
23.5°	2838.0	2842.2	2838.0	2841.2	2834.3	2830.6
24°	2833.8	2837.5	2833.8	2836.6	2829.6	2825.9
24.5°	2827.8	2831.0	2827.8	2830.1	2823.1	2819.4
25°	2819.9	2822.7	2819.9	2821.7	2815.2	2811.0
25.5°	2810.6	2812.0	2810.6	2812.0	2805.5	2801.8
26°	2799.4	2799.9	2799.4	2799.9	2793.9	2790.1
26.5°	2786.4	2785.5	2786.4	2786.0	2779.9	2775.7
27°	2771.6	2769.2	2771.6	2770.2	2765.0	2760.9
27.5°	2754.8	2751.1	2754.8	2752.5	2747.9	2743.7
28°	2736.2	2731.1	2736.2	2732.5	2728.8	2724.6
28.5°	2716.3	2709.8	2716.3	2711.6	2707.9	2704.6
29°	2694.0	2687.0	2694.0	2688.4	2685.6	2682.3
29.5°	2669.3	2662.8	2669.3	2664.7	2661.4	2658.6
30°	2643.3	2636.8	2643.3	2637.7	2635.4	2633.6
30.5°	2615.9	2609.4	2615.9	2610.3	2607.5	2606.6
31°	2586.2	2580.6	2586.2	2581.1	2578.3	2577.3
31.5°	2554.6	2550.4	2554.6	2550.4	2547.1	2547.1
32°	2521.6	2518.8	2521.6	2517.4	2514.6	2515.1
32.5°	2486.7	2485.8	2486.7	2483.9	2480.2	2481.2
33°	2450.5	2451.0	2450.5	2448.2	2444.9	2445.8
33.5°	2412.4	2413.8	2412.4	2411.0	2406.8	2408.7
34°	2372.4	2376.1	2372.4	2372.0	2368.2	2370.1
34.5°	2331.5	2335.7	2331.5	2331.1	2328.8	2328.8
35°	2289.7	2294.4	2289.7	2288.8	2286.5	2286.9
35.5°	2247.0	2251.6	2247.0	2246.0	2244.2	2244.2
36°	2203.3	2206.6	2203.3	2201.9	2200.5	2200.5
36.5°	2157.8	2161.5	2157.8	2156.8	2155.9	2155.4
37°	2111.3	2114.1	2111.3	2109.9	2109.4	2108.5
37.5°	2064.4	2065.8	2064.4	2063.0	2062.1	2061.6
38°	2016.1	2017.4	2016.1	2015.1	2013.7	2013.7
38.5°	1967.3	1968.2	1967.3	1966.3	1964.9	1964.9
39°	1918.5	1918.9	1918.5	1917.1	1915.2	1915.2
39.5°	1869.2	1869.7	1869.2	1866.4	1864.6	1864.1
40°	1819.0	1820.4	1819.0	1816.7	1813.5	1813.0
40.5°	1772.1	1773.0	1772.1	1767.9	1763.8	1762.8
41°	1725.7	1727.5	1725.7	1721.0	1716.8	1715.4
41.5°	1681.1	1682.4	1681.1	1676.4	1672.7	1670.8
42°	1637.8	1640.6	1637.8	1634.6	1630.9	1629.9
42.5°	1600.2	1602.1	1600.2	1597.0	1592.3	1591.8
43°	1564.0	1568.1	1564.0	1560.2	1555.1	1554.7
43.5°	1529.1	1532.4	1529.1	1525.4	1521.7	1520.3



TEST NUMBER: P776646

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1438.0	1440.8	1438.0	1436.7	1433.4	1433.4
45.5°	1411.6	1413.0	1411.6	1410.2	1406.9	1406.9
46°	1386.0	1386.9	1386.0	1384.1	1381.8	1381.4
46.5°	1360.5	1362.3	1360.5	1359.1	1356.7	1356.7
47°	1336.3	1337.7	1336.3	1334.4	1332.6	1332.6
47.5°	1312.1	1312.6	1312.1	1310.7	1308.4	1308.4
48°	1288.4	1289.4	1288.4	1287.0	1284.7	1285.2
48.5°	1264.7	1265.2	1264.7	1262.9	1261.0	1261.0
49°	1239.6	1240.6	1239.6	1238.3	1236.4	1235.9
49.5°	1213.6	1214.1	1213.6	1212.2	1209.9	1210.4
50°	1184.8	1184.8	1184.8	1183.4	1182.0	1182.0
50.5°	1153.7	1153.7	1153.7	1151.8	1150.9	1150.9
51°	1120.2	1121.6	1120.2	1118.8	1117.4	1117.9
51.5°	1086.3	1086.8	1086.3	1084.5	1082.6	1083.1
52°	1050.1	1051.0	1050.1	1048.7	1047.3	1046.8
52.5°	1013.4	1013.8	1013.4	1011.5	1009.2	1009.7
53°	975.7	975.3	975.7	973.4	971.1	970.6
53.5°	936.7	937.6	936.7	934.8	932.1	931.6
54°	897.2	897.7	897.2	895.4	892.6	891.6
54.5°	858.2	859.1	858.2	855.9	852.1	852.1
55°	818.7	820.5	818.7	816.8	812.6	812.2
55.5°	779.2	781.1	779.2	776.4	772.2	771.3
56°	739.2	741.6	739.2	736.9	732.3	730.9
56.5°	699.7	702.1	699.7	697.0	692.3	690.9
57°	660.7	663.0	660.7	657.5	653.3	651.0
57.5°	622.1	624.5	622.1	618.4	614.2	611.9
58°	584.5	586.4	584.5	579.9	575.2	573.4
58.5°	547.8	549.2	547.8	542.2	537.6	534.8
59°	510.6	512.0	510.6	504.6	500.9	497.6
59.5°	474.4	475.8	474.4	468.4	464.2	461.8
60°	438.2	440.0	438.2	432.6	428.4	426.5
60.5°	402.8	405.6	402.8	397.3	393.1	391.2
61°	368.9	371.7	368.9	363.8	358.7	356.8
61.5°	335.9	340.1	335.9	330.8	325.7	322.0
62°	304.3	308.5	304.3	298.8	293.6	289.0
62.5°	273.2	277.9	273.2	267.6	262.1	256.0
63°	243.0	248.1	243.0	237.4	232.3	224.0
63.5°	214.7	220.2	214.7	209.6	204.0	193.3
64°	188.6	194.2	188.6	184.0	177.5	163.6
64.5°	163.6	169.1	163.6	159.4	153.3	137.1
65°	139.9	144.0	139.9	136.1	130.1	112.9
65.5°	116.6	120.3	116.6	114.8	109.7	90.1
66°	97.6	99.4	97.6	94.8	91.1	70.6



TEST NUMBER: P776646
 CATALOG NUMBER: HCDJBL54050CSD-HCD61TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	48.3	51.1	48.3	45.5	42.3	21.8
68°	36.2	41.8	36.2	32.5	29.7	13.0
68.5°	25.6	32.5	25.6	23.2	19.5	7.9
69°	16.3	23.2	16.3	14.4	11.6	4.6
69.5°	8.4	13.9	8.4	8.4	7.4	2.8
70°	4.6	4.6	4.6	4.6	3.7	0.5
70.5°	2.8	1.9	2.8	2.8	1.4	0.5
71°	1.4	0.5	1.4	1.4	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.0	0.0
75.5°	0.5	0.5	0.5	0.0	0.0	0.0
76°	0.0	0.5	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776646

CATALOG NUMBER: HCDJBL54050CSD-HCD61TRC-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

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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270° - · - 135°-315°

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Scaled Data Report



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Scaled Data Report





21.5°	2832.9	2837.1	2843.1	2840.8	2842.6	2840.8	2843.1	2837.1	2832.9	2837.1	2843.1
22°	2834.3	2838.5	2845.0	2842.2	2844.5	2842.2	2845.0	2838.5	2834.3	2838.5	2845.0



44°	1489.2	1490.1	1493.8	1496.1	1499.8	1496.1	1493.8	1490.1	1489.2	1490.1	1493.8
44.5°	1460.8	1461.3	1464.5	1466.4	1468.7	1466.4	1464.5	1461.3	1460.8	1461.3	1464.5



66.5°	51.6	72.5	77.1	79.9	80.4	79.9	77.1	72.5	51.6	72.5	77.1
67°	35.8	57.2	59.9	62.7	63.2	62.7	59.9	57.2	35.8	57.2	59.9



89°	0.0	0.0	0.0	0.0	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

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21.5°	2840.8	2842.6	2840.8	2843.1	2837.1	2832.9
22°	2842.2	2844.5	2842.2	2845.0	2838.5	2834.3



44°	1496.1	1499.8	1496.1	1493.8	1490.1	1489.2
44.5°	1466.4	1468.7	1466.4	1464.5	1461.3	1460.8

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66.5°	79.9	80.4	79.9	77.1	72.5	51.6
67°	62.7	63.2	62.7	59.9	57.2	35.8

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Scaled Data Report



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

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Scaled Data Report



(END OF REPORT)