

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: P776649

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

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776649
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-5000K
Description: 6 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5990.5 lumens
Efficiency: N/A
Efficacy: 124.8 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

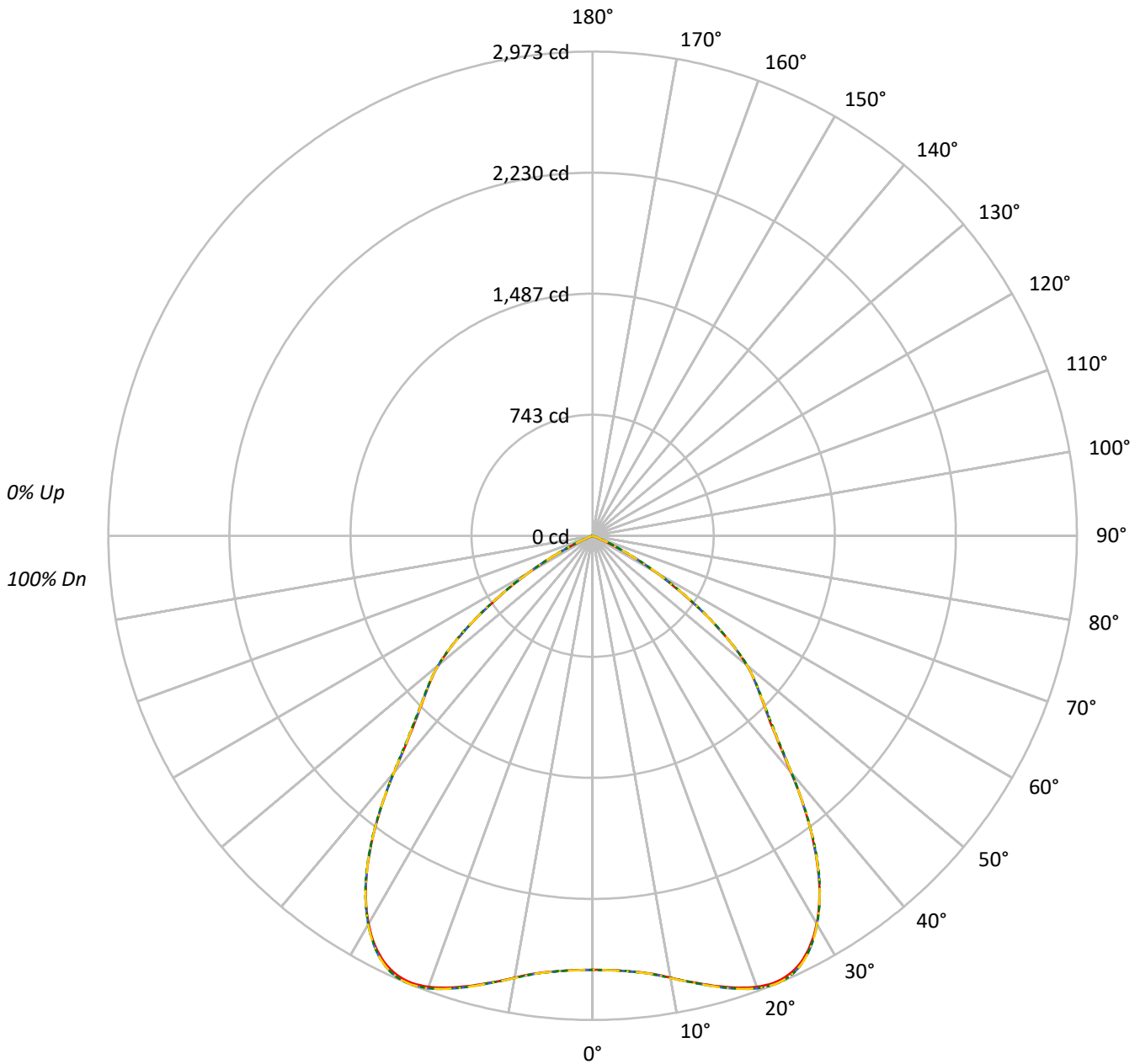
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	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°	146145	146145	146145	146145
5°	147743	147853	147743	147853
10°	153398	153454	153398	153454
15°	162294	162458	162294	162458
20°	171917	172402	171917	172402
25°	177633	178371	177633	178371
30°	174160	174375	174160	174375
35°	159893	160415	159893	160415
40°	135547	136098	135547	136098
45°	116097	116702	116097	116702
50°	105319	105566	105319	105566
55°	81096	81928	81096	81928
60°	48856	50402	48856	50402
65°	15306	19522	15306	19522
70°	80	785	80	785
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: 116702 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	258.6	4.3
10°-20°	814.1	13.6
20°-30°	1345.9	22.5
30°-40°	1477.3	24.7
40°-50°	1173.2	19.6
50°-60°	755.6	12.6
60°-70°	165.4	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°	2418.6	40.4
0°-40°	3895.9	65.0
0°-60°	5824.6	97.2
0°-90°	5990.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5990.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2666	2666	2666	2666	2666	
5°	2685	2687	2685	2687	2685	258
15°	2860	2862	2860	2862	2860	813
25°	2937	2949	2937	2949	2937	1343
35°	2389	2397	2389	2397	2389	1476
45°	1498	1505	1498	1505	1498	1170
55°	848	857	848	857	848	752
65°	118	150	118	150	118	150
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	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°	2665.9	2665.9	2665.9	2665.9	2665.9	2665.9	2665.9	2665.9	2665.9	2665.9	2665.9
0.5°	2664.9	2665.9	2666.4	2666.9	2666.4	2666.9	2666.4	2665.9	2664.9	2665.9	2666.4
1°	2665.9	2666.4	2666.9	2667.3	2666.9	2667.3	2666.9	2666.4	2665.9	2666.4	2666.9
1.5°	2666.9	2667.3	2667.8	2668.3	2667.8	2668.3	2667.8	2667.3	2666.9	2667.3	2667.8
2°	2668.3	2668.8	2669.3	2669.3	2668.8	2669.3	2669.3	2668.8	2668.3	2668.8	2669.3
2.5°	2669.8	2670.3	2671.2	2671.2	2670.7	2671.2	2671.2	2670.3	2669.8	2670.3	2671.2
3°	2672.2	2672.7	2673.2	2673.2	2672.7	2673.2	2673.2	2672.7	2672.2	2672.7	2673.2
3.5°	2674.6	2675.1	2676.1	2676.1	2675.6	2676.1	2676.1	2675.1	2674.6	2675.1	2676.1
4°	2677.5	2678.0	2679.0	2679.5	2679.0	2679.5	2679.0	2678.0	2677.5	2678.0	2679.0
4.5°	2680.9	2681.4	2682.4	2682.9	2682.4	2682.9	2682.4	2681.4	2680.9	2681.4	2682.4
5°	2684.8	2685.3	2686.3	2686.8	2686.3	2686.8	2686.3	2685.3	2684.8	2685.3	2686.3
5.5°	2688.7	2689.7	2690.6	2691.6	2691.1	2691.6	2690.6	2689.7	2688.7	2689.7	2690.6
6°	2693.6	2694.0	2695.5	2696.5	2696.0	2696.5	2695.5	2694.0	2693.6	2694.0	2695.5
6.5°	2698.9	2699.4	2700.8	2701.3	2700.8	2701.3	2700.8	2699.4	2698.9	2699.4	2700.8
7°	2704.7	2705.2	2706.7	2707.1	2706.7	2707.1	2706.7	2705.2	2704.7	2705.2	2706.7
7.5°	2711.5	2712.0	2713.5	2713.5	2713.0	2713.5	2713.5	2712.0	2711.5	2712.0	2713.5
8°	2718.3	2719.3	2720.7	2721.2	2720.7	2721.2	2720.7	2719.3	2718.3	2719.3	2720.7
8.5°	2726.6	2727.5	2729.5	2729.5	2729.0	2729.5	2729.5	2727.5	2726.6	2727.5	2729.5
9°	2735.8	2736.8	2738.2	2738.7	2737.7	2738.7	2738.2	2736.8	2735.8	2736.8	2738.2
9.5°	2745.5	2746.5	2747.9	2748.4	2746.9	2748.4	2747.9	2746.5	2745.5	2746.5	2747.9
10°	2755.7	2756.7	2758.1	2758.1	2756.7	2758.1	2758.1	2756.7	2755.7	2756.7	2758.1
10.5°	2765.9	2766.8	2767.8	2767.8	2766.8	2767.8	2767.8	2766.8	2765.9	2766.8	2767.8
11°	2776.1	2777.5	2778.5	2778.0	2777.0	2778.0	2778.5	2777.5	2776.1	2777.5	2778.5
11.5°	2786.8	2787.7	2788.7	2788.2	2787.2	2788.2	2788.7	2787.7	2786.8	2787.7	2788.7
12°	2796.9	2797.9	2798.9	2798.9	2797.9	2798.9	2798.9	2797.9	2796.9	2797.9	2798.9
12.5°	2807.1	2808.6	2809.6	2809.6	2808.6	2809.6	2809.6	2808.6	2807.1	2808.6	2809.6
13°	2817.3	2819.3	2820.2	2820.2	2819.3	2820.2	2820.2	2819.3	2817.3	2819.3	2820.2
13.5°	2828.0	2830.0	2831.4	2830.9	2830.0	2830.9	2831.4	2830.0	2828.0	2830.0	2831.4
14°	2838.2	2840.6	2842.6	2842.6	2840.6	2842.6	2842.6	2840.6	2838.2	2840.6	2842.6
14.5°	2848.9	2851.3	2853.3	2853.7	2851.8	2853.7	2853.3	2851.3	2848.9	2851.3	2853.3
15°	2859.6	2862.0	2864.4	2864.9	2862.5	2864.9	2864.4	2862.0	2859.6	2862.0	2864.4
15.5°	2869.8	2872.7	2875.6	2875.6	2873.2	2875.6	2875.6	2872.7	2869.8	2872.7	2875.6
16°	2880.0	2883.3	2886.3	2886.3	2883.8	2886.3	2886.3	2883.3	2880.0	2883.3	2886.3
16.5°	2889.7	2893.1	2896.5	2896.5	2894.0	2896.5	2896.5	2893.1	2889.7	2893.1	2896.5
17°	2899.9	2903.2	2906.6	2906.6	2903.7	2906.6	2906.6	2903.2	2899.9	2903.2	2906.6
17.5°	2909.1	2913.0	2916.4	2916.4	2913.4	2916.4	2916.4	2913.0	2909.1	2913.0	2916.4
18°	2917.8	2922.2	2925.6	2925.6	2923.2	2925.6	2925.6	2922.2	2917.8	2922.2	2925.6
18.5°	2926.1	2930.9	2934.3	2934.3	2931.9	2934.3	2934.3	2930.9	2926.1	2930.9	2934.3
19°	2933.8	2938.7	2942.6	2942.1	2940.1	2942.1	2942.6	2938.7	2933.8	2938.7	2942.6
19.5°	2940.6	2945.5	2950.3	2949.4	2947.9	2949.4	2950.3	2945.5	2940.6	2945.5	2950.3
20°	2946.9	2951.8	2957.1	2955.7	2955.2	2955.7	2957.1	2951.8	2946.9	2951.8	2957.1
20.5°	2952.3	2957.1	2962.5	2961.0	2961.0	2961.0	2962.5	2957.1	2952.3	2957.1	2962.5
21°	2956.2	2961.0	2966.8	2964.9	2965.9	2964.9	2966.8	2961.0	2956.2	2961.0	2966.8



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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°	2961.0	2965.4	2972.2	2969.8	2972.7	2969.8	2972.2	2965.4	2961.0	2965.4	2972.2
23°	2960.0	2963.9	2971.2	2968.3	2971.7	2968.3	2971.2	2963.9	2960.0	2963.9	2971.2
23.5°	2957.1	2961.0	2968.3	2964.9	2969.3	2964.9	2968.3	2961.0	2957.1	2961.0	2968.3
24°	2952.3	2956.2	2963.4	2960.5	2964.4	2960.5	2963.4	2956.2	2952.3	2956.2	2963.4
24.5°	2945.5	2949.4	2956.6	2954.2	2957.6	2954.2	2956.6	2949.4	2945.5	2949.4	2956.6
25°	2936.7	2941.1	2947.9	2946.0	2948.9	2946.0	2947.9	2941.1	2936.7	2941.1	2947.9
25.5°	2927.0	2930.9	2937.7	2936.3	2937.7	2936.3	2937.7	2930.9	2927.0	2930.9	2937.7
26°	2914.9	2918.8	2925.1	2924.6	2925.1	2924.6	2925.1	2918.8	2914.9	2918.8	2925.1
26.5°	2899.9	2904.2	2910.5	2911.0	2910.0	2911.0	2910.5	2904.2	2899.9	2904.2	2910.5
27°	2884.3	2888.7	2894.0	2895.5	2893.1	2895.5	2894.0	2888.7	2884.3	2888.7	2894.0
27.5°	2866.4	2870.7	2875.6	2878.0	2874.1	2878.0	2875.6	2870.7	2866.4	2870.7	2875.6
28°	2846.5	2850.8	2854.7	2858.6	2853.3	2858.6	2854.7	2850.8	2846.5	2850.8	2854.7
28.5°	2825.6	2829.0	2832.9	2837.7	2830.9	2837.7	2832.9	2829.0	2825.6	2829.0	2832.9
29°	2802.3	2805.7	2808.6	2814.4	2807.1	2814.4	2808.6	2805.7	2802.3	2805.7	2808.6
29.5°	2777.5	2780.4	2783.8	2788.7	2781.9	2788.7	2783.8	2780.4	2777.5	2780.4	2783.8
30°	2751.3	2753.3	2755.7	2761.5	2754.7	2761.5	2755.7	2753.3	2751.3	2753.3	2755.7
30.5°	2723.2	2724.1	2727.0	2732.9	2726.1	2732.9	2727.0	2724.1	2723.2	2724.1	2727.0
31°	2692.6	2693.6	2696.5	2701.8	2696.0	2701.8	2696.5	2693.6	2692.6	2693.6	2696.5
31.5°	2661.0	2661.0	2664.4	2668.8	2664.4	2668.8	2664.4	2661.0	2661.0	2661.0	2664.4
32°	2627.5	2627.1	2630.0	2634.3	2631.4	2634.3	2630.0	2627.1	2627.5	2627.1	2630.0
32.5°	2592.1	2591.1	2595.0	2597.9	2597.0	2597.9	2595.0	2591.1	2592.1	2591.1	2595.0
33°	2555.2	2554.2	2557.6	2560.1	2560.5	2560.1	2557.6	2554.2	2555.2	2554.2	2557.6
33.5°	2516.4	2514.4	2518.8	2520.3	2521.7	2520.3	2518.8	2514.4	2516.4	2514.4	2518.8
34°	2476.1	2474.1	2478.0	2478.5	2482.4	2478.5	2478.0	2474.1	2476.1	2474.1	2478.0
34.5°	2432.9	2432.9	2435.3	2435.8	2440.2	2435.8	2435.3	2432.9	2432.9	2432.9	2435.3
35°	2389.2	2388.7	2391.1	2392.1	2397.0	2392.1	2391.1	2388.7	2389.2	2388.7	2391.1
35.5°	2344.5	2344.5	2346.5	2347.5	2352.3	2347.5	2346.5	2344.5	2344.5	2344.5	2346.5
36°	2298.9	2298.9	2300.4	2301.8	2305.2	2301.8	2300.4	2298.9	2298.9	2298.9	2300.4
36.5°	2251.8	2252.3	2253.3	2254.3	2258.1	2254.3	2253.3	2252.3	2251.8	2252.3	2253.3
37°	2202.8	2203.8	2204.3	2205.7	2208.6	2205.7	2204.3	2203.8	2202.8	2203.8	2204.3
37.5°	2153.8	2154.3	2155.2	2156.7	2158.1	2156.7	2155.2	2154.3	2153.8	2154.3	2155.2
38°	2103.8	2103.8	2105.2	2106.2	2107.7	2106.2	2105.2	2103.8	2103.8	2103.8	2105.2
38.5°	2052.8	2052.8	2054.3	2055.2	2056.2	2055.2	2054.3	2052.8	2052.8	2052.8	2054.3
39°	2000.9	2000.9	2002.8	2004.3	2004.8	2004.3	2002.8	2000.9	2000.9	2000.9	2002.8
39.5°	1947.5	1948.0	1949.9	1952.8	1953.3	1952.8	1949.9	1948.0	1947.5	1948.0	1949.9
40°	1894.1	1894.6	1898.0	1900.4	1901.8	1900.4	1898.0	1894.6	1894.1	1894.6	1898.0
40.5°	1841.7	1842.6	1847.0	1851.4	1852.3	1851.4	1847.0	1842.6	1841.7	1842.6	1847.0
41°	1792.1	1793.6	1798.0	1802.8	1804.8	1802.8	1798.0	1793.6	1792.1	1793.6	1798.0
41.5°	1745.5	1747.5	1751.4	1756.2	1757.7	1756.2	1751.4	1747.5	1745.5	1747.5	1751.4
42°	1702.8	1703.8	1707.7	1711.1	1714.0	1711.1	1707.7	1703.8	1702.8	1703.8	1707.7
42.5°	1663.0	1663.5	1668.4	1671.8	1673.7	1671.8	1668.4	1663.5	1663.0	1663.5	1668.4
43°	1624.2	1624.7	1630.0	1633.9	1638.3	1633.9	1630.0	1624.7	1624.2	1624.7	1630.0
43.5°	1588.3	1589.7	1593.6	1597.5	1600.9	1597.5	1593.6	1589.7	1588.3	1589.7	1593.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1497.5	1497.5	1500.9	1502.4	1505.3	1502.4	1500.9	1497.5	1497.5	1497.5	1500.9
45.5°	1469.8	1469.8	1473.2	1474.7	1476.1	1474.7	1473.2	1469.8	1469.8	1469.8	1473.2
46°	1443.1	1443.6	1446.0	1448.0	1449.0	1448.0	1446.0	1443.6	1443.1	1443.6	1446.0
46.5°	1417.4	1417.4	1419.8	1421.3	1423.2	1421.3	1419.8	1417.4	1417.4	1417.4	1419.8
47°	1392.2	1392.2	1394.1	1396.0	1397.5	1396.0	1394.1	1392.2	1392.2	1392.2	1394.1
47.5°	1366.9	1366.9	1369.3	1370.8	1371.3	1370.8	1369.3	1366.9	1366.9	1366.9	1369.3
48°	1342.6	1342.2	1344.6	1346.0	1347.0	1346.0	1344.6	1342.2	1342.6	1342.2	1344.6
48.5°	1317.4	1317.4	1319.4	1321.3	1321.8	1321.3	1319.4	1317.4	1317.4	1317.4	1319.4
49°	1291.2	1291.7	1293.6	1295.1	1296.1	1295.1	1293.6	1291.7	1291.2	1291.7	1293.6
49.5°	1264.5	1264.0	1266.4	1267.9	1268.4	1267.9	1266.4	1264.0	1264.5	1264.0	1266.4
50°	1234.9	1234.9	1236.3	1237.8	1237.8	1237.8	1236.3	1234.9	1234.9	1234.9	1236.3
50.5°	1202.4	1202.4	1203.3	1205.3	1205.3	1205.3	1203.3	1202.4	1202.4	1202.4	1203.3
51°	1167.9	1167.4	1168.9	1170.3	1171.8	1170.3	1168.9	1167.4	1167.9	1167.4	1168.9
51.5°	1131.5	1131.0	1133.0	1134.9	1135.4	1134.9	1133.0	1131.0	1131.5	1131.0	1133.0
52°	1093.6	1094.1	1095.6	1097.0	1098.0	1097.0	1095.6	1094.1	1093.6	1094.1	1095.6
52.5°	1054.8	1054.3	1056.7	1058.7	1059.2	1058.7	1056.7	1054.3	1054.8	1054.3	1056.7
53°	1014.0	1014.5	1016.9	1019.4	1018.9	1019.4	1016.9	1014.5	1014.0	1014.5	1016.9
53.5°	973.3	973.7	976.6	978.6	979.6	978.6	976.6	973.7	973.3	973.7	976.6
54°	931.5	932.5	935.4	937.3	937.8	937.3	935.4	932.5	931.5	932.5	935.4
54.5°	890.2	890.2	894.1	896.6	897.5	896.6	894.1	890.2	890.2	890.2	894.1
55°	848.5	849.0	853.4	855.3	857.2	855.3	853.4	849.0	848.5	849.0	853.4
55.5°	805.8	806.8	811.1	814.0	816.0	814.0	811.1	806.8	805.8	806.8	811.1
56°	763.6	765.0	769.9	772.3	774.7	772.3	769.9	765.0	763.6	765.0	769.9
56.5°	721.8	723.3	728.1	731.0	733.5	731.0	728.1	723.3	721.8	723.3	728.1
57°	680.1	682.5	686.9	690.3	692.7	690.3	686.9	682.5	680.1	682.5	686.9
57.5°	639.3	641.7	646.1	650.0	652.4	650.0	646.1	641.7	639.3	641.7	646.1
58°	599.0	600.9	605.8	610.6	612.6	610.6	605.8	600.9	599.0	600.9	605.8
58.5°	558.7	561.6	566.5	572.3	573.8	572.3	566.5	561.6	558.7	561.6	566.5
59°	519.9	523.3	527.2	533.5	534.9	533.5	527.2	523.3	519.9	523.3	527.2
59.5°	482.5	484.9	489.3	495.6	497.1	495.6	489.3	484.9	482.5	484.9	489.3
60°	445.6	447.5	451.9	457.7	459.7	457.7	451.9	447.5	445.6	447.5	451.9
60.5°	408.7	410.7	415.0	420.9	423.8	420.9	415.0	410.7	408.7	410.7	415.0
61°	372.8	374.7	380.1	385.4	388.3	385.4	380.1	374.7	372.8	374.7	380.1
61.5°	336.4	340.3	345.6	351.0	355.3	351.0	345.6	340.3	336.4	340.3	345.6
62°	301.9	306.8	312.1	317.9	322.3	317.9	312.1	306.8	301.9	306.8	312.1
62.5°	267.5	273.8	279.6	285.4	290.3	285.4	279.6	273.8	267.5	273.8	279.6
63°	234.0	242.7	248.0	253.9	259.2	253.9	248.0	242.7	234.0	242.7	248.0
63.5°	201.9	213.1	218.9	224.3	230.1	224.3	218.9	213.1	201.9	213.1	218.9
64°	170.9	185.4	192.2	197.1	202.9	197.1	192.2	185.4	170.9	185.4	192.2
64.5°	143.2	160.2	166.5	170.9	176.7	170.9	166.5	160.2	143.2	160.2	166.5
65°	118.0	135.9	142.2	146.1	150.5	146.1	142.2	135.9	118.0	135.9	142.2
65.5°	94.2	114.6	119.9	121.8	125.7	121.8	119.9	114.6	94.2	114.6	119.9
66°	73.8	95.1	99.0	101.9	103.9	101.9	99.0	95.1	73.8	95.1	99.0



TEST NUMBER: P776649

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

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	22.8	44.2	47.6	50.5	53.4	50.5	47.6	44.2	22.8	44.2	47.6
68°	13.6	31.1	34.0	37.9	43.7	37.9	34.0	31.1	13.6	31.1	34.0
68.5°	8.3	20.4	24.3	26.7	34.0	26.7	24.3	20.4	8.3	20.4	24.3
69°	4.9	12.1	15.0	17.0	24.3	17.0	15.0	12.1	4.9	12.1	15.0
69.5°	2.9	7.8	8.7	8.7	14.6	8.7	8.7	7.8	2.9	7.8	8.7
70°	0.5	3.9	4.9	4.9	4.9	4.9	4.9	3.9	0.5	3.9	4.9
70.5°	0.5	1.5	2.9	2.9	1.9	2.9	2.9	1.5	0.5	1.5	2.9
71°	0.5	0.5	1.5	1.5	0.5	1.5	1.5	0.5	0.5	0.5	1.5
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: P776649
CATALOG NUMBER: HCDJBL54050CSD-HCD61TRC-5000lm-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776649

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2665.9	2665.9	2665.9	2665.9	2665.9	2665.9
0.5°	2666.9	2666.4	2666.9	2666.4	2665.9	2664.9
1°	2667.3	2666.9	2667.3	2666.9	2666.4	2665.9
1.5°	2668.3	2667.8	2668.3	2667.8	2667.3	2666.9
2°	2669.3	2668.8	2669.3	2669.3	2668.8	2668.3
2.5°	2671.2	2670.7	2671.2	2671.2	2670.3	2669.8
3°	2673.2	2672.7	2673.2	2673.2	2672.7	2672.2
3.5°	2676.1	2675.6	2676.1	2676.1	2675.1	2674.6
4°	2679.5	2679.0	2679.5	2679.0	2678.0	2677.5
4.5°	2682.9	2682.4	2682.9	2682.4	2681.4	2680.9
5°	2686.8	2686.8	2686.8	2686.3	2685.3	2684.8
5.5°	2691.6	2691.1	2691.6	2690.6	2689.7	2688.7
6°	2696.5	2696.0	2696.5	2695.5	2694.0	2693.6
6.5°	2701.3	2700.8	2701.3	2700.8	2699.4	2698.9
7°	2707.1	2706.7	2707.1	2706.7	2705.2	2704.7
7.5°	2713.5	2713.0	2713.5	2713.5	2712.0	2711.5
8°	2721.2	2720.7	2721.2	2720.7	2719.3	2718.3
8.5°	2729.5	2729.0	2729.5	2729.5	2727.5	2726.6
9°	2738.7	2737.7	2738.7	2738.2	2736.8	2735.8
9.5°	2748.4	2746.9	2748.4	2747.9	2746.5	2745.5
10°	2758.1	2756.7	2758.1	2758.1	2756.7	2755.7
10.5°	2767.8	2766.8	2767.8	2767.8	2766.8	2765.9
11°	2778.0	2777.0	2778.0	2778.5	2777.5	2776.1
11.5°	2788.2	2787.2	2788.2	2788.7	2787.7	2786.8
12°	2798.9	2797.9	2798.9	2798.9	2797.9	2796.9
12.5°	2809.6	2808.6	2809.6	2809.6	2808.6	2807.1
13°	2820.2	2819.3	2820.2	2820.2	2819.3	2817.3
13.5°	2830.9	2830.0	2830.9	2831.4	2830.0	2828.0
14°	2842.6	2840.6	2842.6	2842.6	2840.6	2838.2
14.5°	2853.7	2851.8	2853.7	2853.3	2851.3	2848.9
15°	2864.9	2862.5	2864.9	2864.4	2862.0	2859.6
15.5°	2875.6	2873.2	2875.6	2875.6	2872.7	2869.8
16°	2886.3	2883.8	2886.3	2886.3	2883.3	2880.0
16.5°	2896.5	2894.0	2896.5	2896.5	2893.1	2889.7
17°	2906.6	2903.7	2906.6	2906.6	2903.2	2899.9
17.5°	2916.4	2913.4	2916.4	2916.4	2913.0	2909.1
18°	2925.6	2923.2	2925.6	2925.6	2922.2	2917.8
18.5°	2934.3	2931.9	2934.3	2934.3	2930.9	2926.1
19°	2942.1	2940.1	2942.1	2942.6	2938.7	2933.8
19.5°	2949.4	2947.9	2949.4	2950.3	2945.5	2940.6
20°	2955.7	2955.2	2955.7	2957.1	2951.8	2946.9
20.5°	2961.0	2961.0	2961.0	2962.5	2957.1	2952.3
21°	2964.9	2965.9	2964.9	2966.8	2961.0	2956.2



TEST NUMBER: P776649

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2969.8	2972.7	2969.8	2972.2	2965.4	2961.0
23°	2968.3	2971.7	2968.3	2971.2	2963.9	2960.0
23.5°	2964.9	2969.3	2964.9	2968.3	2961.0	2957.1
24°	2960.5	2964.4	2960.5	2963.4	2956.2	2952.3
24.5°	2954.2	2957.6	2954.2	2956.6	2949.4	2945.5
25°	2946.0	2948.9	2946.0	2947.9	2941.1	2936.7
25.5°	2936.3	2937.7	2936.3	2937.7	2930.9	2927.0
26°	2924.6	2925.1	2924.6	2925.1	2918.8	2914.9
26.5°	2911.0	2910.0	2911.0	2910.5	2904.2	2899.9
27°	2895.5	2893.1	2895.5	2894.0	2888.7	2884.3
27.5°	2878.0	2874.1	2878.0	2875.6	2870.7	2866.4
28°	2858.6	2853.3	2858.6	2854.7	2850.8	2846.5
28.5°	2837.7	2830.9	2837.7	2832.9	2829.0	2825.6
29°	2814.4	2807.1	2814.4	2808.6	2805.7	2802.3
29.5°	2788.7	2781.9	2788.7	2783.8	2780.4	2777.5
30°	2761.5	2754.7	2761.5	2755.7	2753.3	2751.3
30.5°	2732.9	2726.1	2732.9	2727.0	2724.1	2723.2
31°	2701.8	2696.0	2701.8	2696.5	2693.6	2692.6
31.5°	2668.8	2664.4	2668.8	2664.4	2661.0	2661.0
32°	2634.3	2631.4	2634.3	2630.0	2627.1	2627.5
32.5°	2597.9	2597.0	2597.9	2595.0	2591.1	2592.1
33°	2560.1	2560.5	2560.1	2557.6	2554.2	2555.2
33.5°	2520.3	2521.7	2520.3	2518.8	2514.4	2516.4
34°	2478.5	2482.4	2478.5	2478.0	2474.1	2476.1
34.5°	2435.8	2440.2	2435.8	2435.3	2432.9	2432.9
35°	2392.1	2397.0	2392.1	2391.1	2388.7	2389.2
35.5°	2347.5	2352.3	2347.5	2346.5	2344.5	2344.5
36°	2301.8	2305.2	2301.8	2300.4	2298.9	2298.9
36.5°	2254.3	2258.1	2254.3	2253.3	2252.3	2251.8
37°	2205.7	2208.6	2205.7	2204.3	2203.8	2202.8
37.5°	2156.7	2158.1	2156.7	2155.2	2154.3	2153.8
38°	2106.2	2107.7	2106.2	2105.2	2103.8	2103.8
38.5°	2055.2	2056.2	2055.2	2054.3	2052.8	2052.8
39°	2004.3	2004.8	2004.3	2002.8	2000.9	2000.9
39.5°	1952.8	1953.3	1952.8	1949.9	1948.0	1947.5
40°	1900.4	1901.8	1900.4	1898.0	1894.6	1894.1
40.5°	1851.4	1852.3	1851.4	1847.0	1842.6	1841.7
41°	1802.8	1804.8	1802.8	1798.0	1793.6	1792.1
41.5°	1756.2	1757.7	1756.2	1751.4	1747.5	1745.5
42°	1711.1	1714.0	1711.1	1707.7	1703.8	1702.8
42.5°	1671.8	1673.7	1671.8	1668.4	1663.5	1663.0
43°	1633.9	1638.3	1633.9	1630.0	1624.7	1624.2
43.5°	1597.5	1600.9	1597.5	1593.6	1589.7	1588.3



TEST NUMBER: P776649

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1502.4	1505.3	1502.4	1500.9	1497.5	1497.5
45.5°	1474.7	1476.1	1474.7	1473.2	1469.8	1469.8
46°	1448.0	1449.0	1448.0	1446.0	1443.6	1443.1
46.5°	1421.3	1423.2	1421.3	1419.8	1417.4	1417.4
47°	1396.0	1397.5	1396.0	1394.1	1392.2	1392.2
47.5°	1370.8	1371.3	1370.8	1369.3	1366.9	1366.9
48°	1346.0	1347.0	1346.0	1344.6	1342.2	1342.6
48.5°	1321.3	1321.8	1321.3	1319.4	1317.4	1317.4
49°	1295.1	1296.1	1295.1	1293.6	1291.7	1291.2
49.5°	1267.9	1268.4	1267.9	1266.4	1264.0	1264.5
50°	1237.8	1237.8	1237.8	1236.3	1234.9	1234.9
50.5°	1205.3	1205.3	1205.3	1203.3	1202.4	1202.4
51°	1170.3	1171.8	1170.3	1168.9	1167.4	1167.9
51.5°	1134.9	1135.4	1134.9	1133.0	1131.0	1131.5
52°	1097.0	1098.0	1097.0	1095.6	1094.1	1093.6
52.5°	1058.7	1059.2	1058.7	1056.7	1054.3	1054.8
53°	1019.4	1018.9	1019.4	1016.9	1014.5	1014.0
53.5°	978.6	979.6	978.6	976.6	973.7	973.3
54°	937.3	937.8	937.3	935.4	932.5	931.5
54.5°	896.6	897.5	896.6	894.1	890.2	890.2
55°	855.3	857.2	855.3	853.4	849.0	848.5
55.5°	814.0	816.0	814.0	811.1	806.8	805.8
56°	772.3	774.7	772.3	769.9	765.0	763.6
56.5°	731.0	733.5	731.0	728.1	723.3	721.8
57°	690.3	692.7	690.3	686.9	682.5	680.1
57.5°	650.0	652.4	650.0	646.1	641.7	639.3
58°	610.6	612.6	610.6	605.8	600.9	599.0
58.5°	572.3	573.8	572.3	566.5	561.6	558.7
59°	533.5	534.9	533.5	527.2	523.3	519.9
59.5°	495.6	497.1	495.6	489.3	484.9	482.5
60°	457.7	459.7	457.7	451.9	447.5	445.6
60.5°	420.9	423.8	420.9	415.0	410.7	408.7
61°	385.4	388.3	385.4	380.1	374.7	372.8
61.5°	351.0	355.3	351.0	345.6	340.3	336.4
62°	317.9	322.3	317.9	312.1	306.8	301.9
62.5°	285.4	290.3	285.4	279.6	273.8	267.5
63°	253.9	259.2	253.9	248.0	242.7	234.0
63.5°	224.3	230.1	224.3	218.9	213.1	201.9
64°	197.1	202.9	197.1	192.2	185.4	170.9
64.5°	170.9	176.7	170.9	166.5	160.2	143.2
65°	146.1	150.5	146.1	142.2	135.9	118.0
65.5°	121.8	125.7	121.8	119.9	114.6	94.2
66°	101.9	103.9	101.9	99.0	95.1	73.8



TEST NUMBER: P776649

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

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	50.5	53.4	50.5	47.6	44.2	22.8
68°	37.9	43.7	37.9	34.0	31.1	13.6
68.5°	26.7	34.0	26.7	24.3	20.4	8.3
69°	17.0	24.3	17.0	15.0	12.1	4.9
69.5°	8.7	14.6	8.7	8.7	7.8	2.9
70°	4.9	4.9	4.9	4.9	3.9	0.5
70.5°	2.9	1.9	2.9	2.9	1.5	0.5
71°	1.5	0.5	1.5	1.5	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: P776649

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

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°	2959.6	2963.9	2970.2	2967.8	2969.8	2967.8	2970.2	2963.9	2959.6	2963.9	2970.2
22°	2961.0	2965.4	2972.2	2969.3	2971.7	2969.3	2972.2	2965.4	2961.0	2965.4	2972.2



44°	1555.7	1556.7	1560.6	1563.0	1566.9	1563.0	1560.6	1556.7	1555.7	1556.7	1560.6
44.5°	1526.1	1526.6	1530.0	1532.0	1534.4	1532.0	1530.0	1526.6	1526.1	1526.6	1530.0



66.5°	53.9	75.7	80.6	83.5	84.0	83.5	80.6	75.7	53.9	75.7	80.6
67°	37.4	59.7	62.6	65.5	66.0	65.5	62.6	59.7	37.4	59.7	62.6



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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Scaled Data Report



21.5°	2967.8	2969.8	2967.8	2970.2	2963.9	2959.6
22°	2969.3	2971.7	2969.3	2972.2	2965.4	2961.0



44°	1563.0	1566.9	1563.0	1560.6	1556.7	1555.7
44.5°	1532.0	1534.4	1532.0	1530.0	1526.6	1526.1



66.5°	83.5	84.0	83.5	80.6	75.7	53.9
67°	65.5	66.0	65.5	62.6	59.7	37.4

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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)