

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: P776791

Luminaire Tested: HCDJBS4050CSD-HCD82TRMW-5000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776791
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B064-HCD82TRMW)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD82TRMW-5000lm-3000K
Description: 8 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

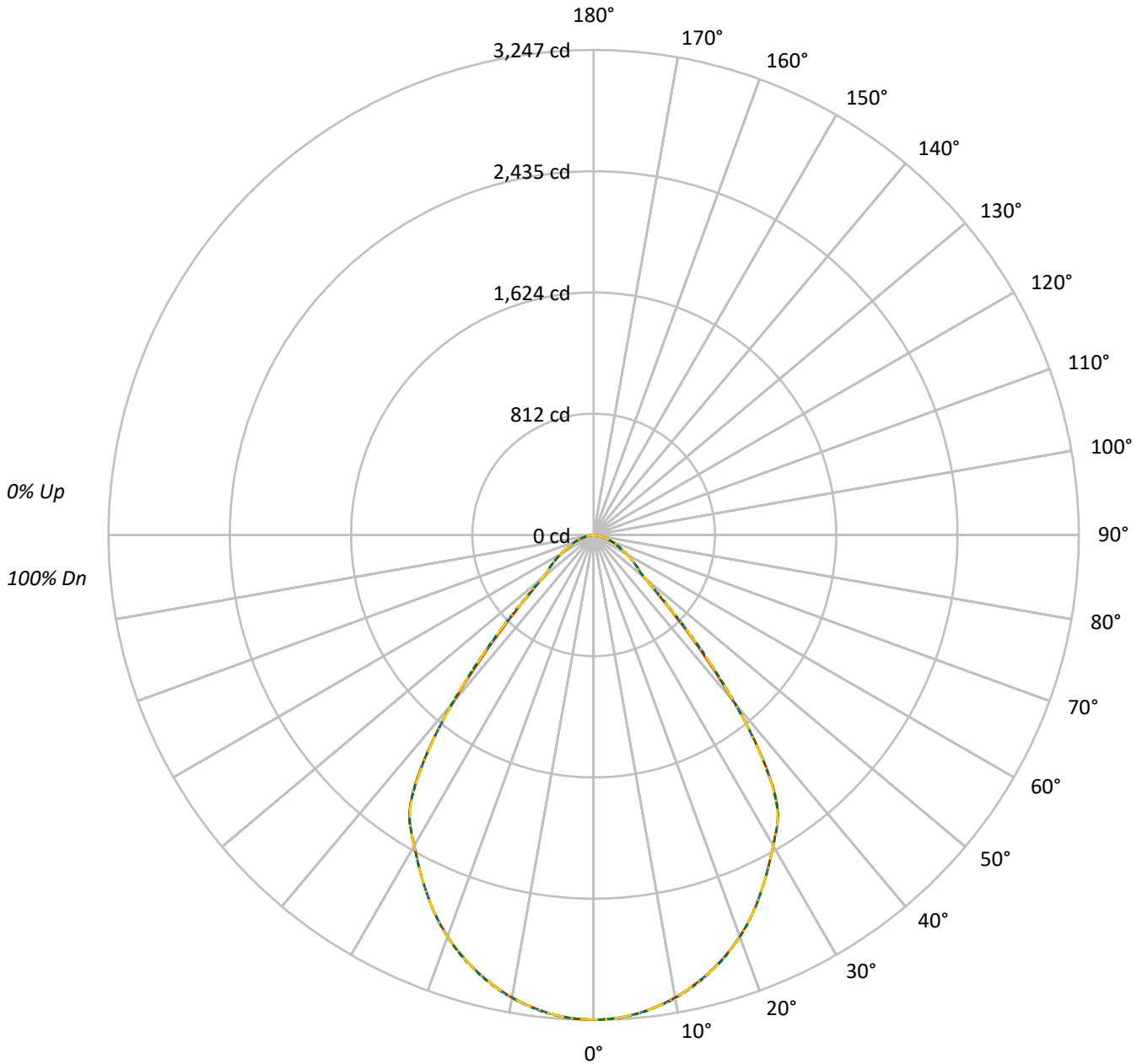
Lumens per Lamp: N/A
Luminaire Lumens: 4893.7 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.12 / 1.12
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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: P776791
CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-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	108	105	103	109	106	103	101	102	100	98	98	96	95	95	93	92	90	90	90	90	90	90		
	2	105	99	93	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81	81	81	81	81	81		
	3	98	90	84	79	96	88	83	78	86	81	77	83	79	75	81	77	74	72	72	72	72	72	72		
	4	91	82	75	70	89	81	74	70	79	73	69	76	72	68	74	70	67	65	65	65	65	65	65		
	5	86	75	68	63	84	74	68	63	72	67	62	71	65	61	69	64	61	59	59	59	59	59	59		
	6	80	69	62	57	79	69	62	57	67	61	56	65	60	56	64	59	55	54	54	54	54	54	54		
	7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49	49	49	49	49	49		
	8	71	60	52	47	69	59	52	47	58	52	47	57	51	47	55	50	47	45	45	45	45	45	45		
	9	67	55	48	44	66	55	48	44	54	48	43	53	47	43	52	47	43	42	42	42	42	42	42		
	10	63	52	45	40	62	51	45	40	50	44	40	49	44	40	49	44	40	38	38	38	38	38	38		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	99077	99077	99077	99077
5°	98671	98757	98671	98757
10°	97477	97623	97477	97623
15°	95565	95710	95565	95710
20°	92946	93037	92946	93037
25°	89087	89104	89087	89104
30°	84724	84724	84724	84724
35°	78712	78555	78712	78555
40°	58176	58861	58176	58861
45°	34200	35867	34200	35867
50°	20932	21198	20932	21198
55°	17938	17964	17938	17964
60°	15302	15442	15302	15442
65°	12996	13300	12996	13300
70°	11042	11533	11042	11533
75°	9213	9920	9213	9920
80°	7349	8334	7349	8334
85°	4554	6340	4554	6340

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 36147 cd/sqm



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.0	6.2
10°-20°	851.3	17.4
20°-30°	1215.7	24.8
30°-40°	1269.4	25.9
40°-50°	659.3	13.5
50°-60°	302.3	6.2
60°-70°	183.3	3.7
70°-80°	87.9	1.8
80°-90°	19.7	0.4
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°	2372.0	48.5
0°-40°	3641.3	74.4
0°-60°	4602.9	94.1
0°-90°	4893.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4893.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3245	3245	3245	3245	3245	
5°	3220	3222	3220	3222	3220	305
15°	3024	3028	3024	3028	3024	851
25°	2645	2645	2645	2645	2645	1215
35°	2112	2108	2112	2108	2112	1271
45°	792	831	792	831	792	644
55°	337	338	337	338	337	301
65°	180	184	180	184	180	180
75°	78	84	78	84	78	84
85°	13	18	13	18	13	17
90°	0	0	0	0	0	



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3245.2	3245.2	3245.2	3245.2	3245.2	3245.2	3245.2	3245.2	3245.2	3245.2	3245.2
0.5°	3244.7	3243.8	3244.7	3244.7	3246.6	3244.7	3244.7	3243.8	3244.7	3243.8	3244.7
1°	3244.3	3243.4	3244.3	3244.3	3245.7	3244.3	3244.3	3243.4	3244.3	3243.4	3244.3
1.5°	3242.9	3242.0	3242.9	3242.9	3244.7	3242.9	3242.9	3242.0	3242.9	3242.0	3242.9
2°	3241.0	3240.1	3241.0	3241.0	3242.9	3241.0	3241.0	3240.1	3241.0	3240.1	3241.0
2.5°	3238.7	3237.8	3238.7	3239.2	3240.6	3239.2	3238.7	3237.8	3238.7	3237.8	3238.7
3°	3235.9	3235.0	3235.9	3236.4	3238.2	3236.4	3235.9	3235.0	3235.9	3235.0	3235.9
3.5°	3232.7	3231.7	3232.7	3233.1	3235.0	3233.1	3232.7	3231.7	3232.7	3231.7	3232.7
4°	3228.5	3228.0	3228.9	3229.4	3231.3	3229.4	3228.9	3228.0	3228.5	3228.0	3228.9
4.5°	3224.3	3223.8	3224.8	3225.2	3227.1	3225.2	3224.8	3223.8	3224.3	3223.8	3224.8
5°	3219.6	3218.7	3219.6	3220.6	3222.4	3220.6	3219.6	3218.7	3219.6	3218.7	3219.6
5.5°	3214.1	3213.6	3214.5	3215.5	3217.3	3215.5	3214.5	3213.6	3214.1	3213.6	3214.5
6°	3208.5	3207.6	3209.0	3209.9	3211.3	3209.9	3209.0	3207.6	3208.5	3207.6	3209.0
6.5°	3202.0	3201.5	3202.9	3203.8	3205.2	3203.8	3202.9	3201.5	3202.0	3201.5	3202.9
7°	3195.5	3194.5	3195.9	3196.9	3198.7	3196.9	3195.9	3194.5	3195.5	3194.5	3195.9
7.5°	3188.0	3187.1	3189.0	3189.9	3191.8	3189.9	3189.0	3187.1	3188.0	3187.1	3189.0
8°	3180.1	3179.7	3181.1	3182.0	3184.3	3182.0	3181.1	3179.7	3180.1	3179.7	3181.1
8.5°	3171.8	3171.3	3173.2	3174.1	3175.9	3174.1	3173.2	3171.3	3171.8	3171.3	3173.2
9°	3163.4	3162.9	3164.3	3165.7	3167.6	3165.7	3164.3	3162.9	3163.4	3162.9	3164.3
9.5°	3153.6	3153.6	3155.0	3156.4	3158.3	3156.4	3155.0	3153.6	3153.6	3153.6	3155.0
10°	3144.3	3143.9	3145.7	3147.1	3149.0	3147.1	3145.7	3143.9	3144.3	3143.9	3145.7
10.5°	3134.1	3133.6	3135.5	3136.9	3139.2	3136.9	3135.5	3133.6	3134.1	3133.6	3135.5
11°	3123.4	3123.4	3124.8	3126.7	3128.5	3126.7	3124.8	3123.4	3123.4	3123.4	3124.8
11.5°	3112.7	3112.3	3114.1	3115.5	3117.4	3115.5	3114.1	3112.3	3112.7	3112.3	3114.1
12°	3101.1	3101.1	3102.5	3104.4	3106.2	3104.4	3102.5	3101.1	3101.1	3101.1	3102.5
12.5°	3089.0	3089.0	3090.9	3092.7	3094.1	3092.7	3090.9	3089.0	3089.0	3089.0	3090.9
13°	3076.9	3076.9	3078.8	3080.2	3082.0	3080.2	3078.8	3076.9	3076.9	3076.9	3078.8
13.5°	3063.9	3063.9	3065.8	3068.1	3069.0	3068.1	3065.8	3063.9	3063.9	3063.9	3065.8
14°	3051.4	3050.9	3052.8	3054.6	3056.0	3054.6	3052.8	3050.9	3051.4	3050.9	3052.8
14.5°	3037.4	3037.4	3039.3	3041.1	3042.5	3041.1	3039.3	3037.4	3037.4	3037.4	3039.3
15°	3023.5	3023.9	3025.8	3027.2	3028.1	3027.2	3025.8	3023.9	3023.5	3023.9	3025.8
15.5°	3009.1	3009.5	3011.4	3012.8	3013.7	3012.8	3011.4	3009.5	3009.1	3009.5	3011.4
16°	2994.7	2994.7	2996.5	2997.9	2998.8	2997.9	2996.5	2994.7	2994.7	2994.7	2996.5
16.5°	2979.8	2979.8	2981.6	2982.6	2984.0	2982.6	2981.6	2979.8	2979.8	2979.8	2981.6
17°	2964.0	2964.0	2965.8	2967.2	2968.2	2967.2	2965.8	2964.0	2964.0	2964.0	2965.8
17.5°	2947.7	2948.2	2950.0	2951.0	2951.9	2951.0	2950.0	2948.2	2947.7	2948.2	2950.0
18°	2931.4	2931.4	2933.3	2934.2	2935.1	2934.2	2933.3	2931.4	2931.4	2931.4	2933.3
18.5°	2914.7	2914.7	2916.6	2917.0	2917.9	2917.0	2916.6	2914.7	2914.7	2914.7	2916.6
19°	2897.0	2897.0	2898.9	2899.8	2900.3	2899.8	2898.9	2897.0	2897.0	2897.0	2898.9
19.5°	2878.9	2879.4	2880.8	2881.7	2882.2	2881.7	2880.8	2879.4	2878.9	2879.4	2880.8
20°	2860.8	2860.8	2862.2	2862.6	2863.6	2862.6	2862.2	2860.8	2860.8	2860.8	2862.2
20.5°	2841.7	2841.7	2843.1	2843.1	2844.0	2843.1	2843.1	2841.7	2841.7	2841.7	2843.1
21°	2822.2	2822.2	2823.6	2823.6	2824.0	2823.6	2823.6	2822.2	2822.2	2822.2	2823.6



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2759.4	2759.4	2760.4	2759.9	2760.8	2759.9	2760.4	2759.4	2759.4	2759.4	2760.4
23°	2737.6	2737.6	2738.0	2738.0	2738.5	2738.0	2738.0	2737.6	2737.6	2737.6	2738.0
23.5°	2715.3	2715.3	2715.7	2715.3	2715.7	2715.3	2715.7	2715.3	2715.3	2715.3	2715.7
24°	2692.5	2692.0	2692.5	2692.0	2692.5	2692.0	2692.5	2692.0	2692.5	2692.0	2692.5
24.5°	2668.3	2668.3	2669.2	2668.8	2668.8	2668.8	2669.2	2668.3	2668.3	2668.3	2669.2
25°	2644.6	2644.6	2645.1	2645.1	2645.1	2645.1	2645.1	2644.6	2644.6	2644.6	2645.1
25.5°	2620.9	2620.4	2621.4	2620.9	2620.9	2620.9	2621.4	2620.4	2620.9	2620.4	2621.4
26°	2596.7	2596.3	2596.7	2597.2	2596.7	2597.2	2596.7	2596.3	2596.7	2596.3	2596.7
26.5°	2572.1	2572.6	2572.6	2572.6	2572.6	2572.6	2572.6	2572.6	2572.1	2572.6	2572.6
27°	2547.9	2547.9	2548.4	2548.4	2547.9	2548.4	2548.4	2547.9	2547.9	2547.9	2548.4
27.5°	2523.3	2523.3	2524.2	2524.2	2523.3	2524.2	2524.2	2523.3	2523.3	2523.3	2524.2
28°	2499.1	2499.1	2500.0	2499.6	2499.6	2499.6	2500.0	2499.1	2499.1	2499.1	2500.0
28.5°	2474.9	2474.9	2475.9	2475.4	2474.9	2475.4	2475.9	2474.9	2474.9	2474.9	2475.9
29°	2450.3	2451.2	2451.7	2451.2	2451.2	2451.2	2451.7	2451.2	2450.3	2451.2	2451.7
29.5°	2426.6	2427.1	2428.0	2428.0	2427.1	2428.0	2428.0	2427.1	2426.6	2427.1	2428.0
30°	2403.3	2403.8	2404.3	2404.3	2403.3	2404.3	2404.3	2403.8	2403.3	2403.8	2404.3
30.5°	2380.1	2381.0	2381.5	2381.0	2379.6	2381.0	2381.5	2381.0	2380.1	2381.0	2381.5
31°	2357.3	2357.8	2358.7	2358.3	2357.8	2358.3	2358.7	2357.8	2357.3	2357.8	2358.7
31.5°	2335.5	2335.5	2335.9	2335.5	2334.5	2335.5	2335.9	2335.5	2335.5	2335.5	2335.9
32°	2312.7	2312.7	2312.7	2312.2	2312.2	2312.2	2312.7	2312.7	2312.7	2312.7	2312.7
32.5°	2289.9	2288.1	2287.6	2287.1	2289.5	2287.1	2287.6	2288.1	2289.9	2288.1	2287.6
33°	2264.8	2260.2	2259.2	2257.8	2265.7	2257.8	2259.2	2260.2	2264.8	2260.2	2259.2
33.5°	2234.1	2227.2	2227.6	2224.8	2235.1	2224.8	2227.6	2227.2	2234.1	2227.2	2227.6
34°	2197.4	2189.5	2192.3	2186.7	2198.8	2186.7	2192.3	2189.5	2197.4	2189.5	2192.3
34.5°	2157.9	2146.7	2151.4	2145.8	2157.0	2145.8	2151.4	2146.7	2157.9	2146.7	2151.4
35°	2111.9	2101.6	2104.0	2100.3	2107.7	2100.3	2104.0	2101.6	2111.9	2101.6	2104.0
35.5°	2060.3	2054.7	2051.9	2048.7	2053.8	2048.7	2051.9	2054.7	2060.3	2054.7	2051.9
36°	2003.6	2004.5	1996.1	1992.4	2000.3	1992.4	1996.1	2004.5	2003.6	2004.5	1996.1
36.5°	1944.1	1948.2	1937.1	1932.9	1941.3	1932.9	1937.1	1948.2	1944.1	1948.2	1937.1
37°	1882.7	1886.4	1876.2	1870.6	1880.8	1870.6	1876.2	1886.4	1882.7	1886.4	1876.2
37.5°	1819.0	1819.0	1812.0	1806.9	1816.2	1806.9	1812.0	1819.0	1819.0	1819.0	1812.0
38°	1752.5	1747.9	1746.5	1742.3	1751.1	1742.3	1746.5	1747.9	1752.5	1747.9	1746.5
38.5°	1683.3	1674.9	1678.6	1675.4	1684.2	1675.4	1678.6	1674.9	1683.3	1674.9	1678.6
39°	1610.8	1602.9	1608.4	1608.0	1617.3	1608.0	1608.4	1602.9	1610.8	1602.9	1608.4
39.5°	1536.8	1531.3	1537.8	1539.6	1548.0	1539.6	1537.8	1531.3	1536.8	1531.3	1537.8
40°	1459.7	1461.1	1467.6	1472.7	1476.9	1472.7	1467.6	1461.1	1459.7	1461.1	1467.6
40.5°	1382.5	1389.5	1396.5	1405.3	1405.7	1405.3	1396.5	1389.5	1382.5	1389.5	1396.5
41°	1307.7	1319.3	1328.1	1338.3	1335.1	1338.3	1328.1	1319.3	1307.7	1319.3	1328.1
41.5°	1233.7	1247.2	1259.8	1271.9	1264.9	1271.9	1259.8	1247.2	1233.7	1247.2	1259.8
42°	1163.1	1177.0	1191.9	1204.9	1197.5	1204.9	1191.9	1177.0	1163.1	1177.0	1191.9
42.5°	1094.8	1108.2	1124.5	1139.8	1131.0	1139.8	1124.5	1108.2	1094.8	1108.2	1124.5
43°	1028.3	1041.8	1059.9	1075.2	1067.8	1075.2	1059.9	1041.8	1028.3	1041.8	1059.9
43.5°	965.1	977.1	996.7	1013.4	1005.5	1013.4	996.7	977.1	965.1	977.1	996.7



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	792.1	800.5	821.9	837.2	830.7	837.2	821.9	800.5	792.1	800.5	821.9
45.5°	741.5	748.9	769.3	783.8	778.6	783.8	769.3	748.9	741.5	748.9	769.3
46°	693.6	701.9	719.6	733.1	728.9	733.1	719.6	701.9	693.6	701.9	719.6
46.5°	649.9	659.2	671.7	685.7	682.4	685.7	671.7	659.2	649.9	659.2	671.7
47°	609.0	619.7	628.5	642.0	638.7	642.0	628.5	619.7	609.0	619.7	628.5
47.5°	572.7	583.9	588.5	601.5	597.8	601.5	588.5	583.9	572.7	583.9	588.5
48°	540.2	549.9	552.7	565.7	560.6	565.7	552.7	549.9	540.2	549.9	552.7
48.5°	510.9	518.8	521.1	532.3	526.2	532.3	521.1	518.8	510.9	518.8	521.1
49°	484.4	490.4	492.8	502.1	496.5	502.1	492.8	490.4	484.4	490.4	492.8
49.5°	461.6	465.8	468.6	475.6	469.0	475.6	468.6	465.8	461.6	465.8	468.6
50°	440.7	444.4	447.7	452.3	446.3	452.3	447.7	444.4	440.7	444.4	447.7
50.5°	423.5	426.3	429.1	432.8	426.7	432.8	429.1	426.3	423.5	426.3	429.1
51°	409.1	411.9	413.3	416.1	410.9	416.1	413.3	411.9	409.1	411.9	413.3
51.5°	397.0	399.3	400.7	401.6	398.4	401.6	400.7	399.3	397.0	399.3	400.7
52°	387.7	388.6	389.6	390.0	388.2	390.0	389.6	388.6	387.7	388.6	389.6
52.5°	378.9	379.3	379.8	379.8	379.8	379.8	379.8	379.3	378.9	379.3	379.8
53°	370.5	371.0	371.0	371.0	371.4	371.0	371.0	371.0	370.5	371.0	371.0
53.5°	362.6	362.6	362.6	362.1	363.1	362.1	362.6	362.6	362.6	362.6	362.6
54°	354.2	354.2	354.2	353.8	354.7	353.8	354.2	354.2	354.2	354.2	354.2
54.5°	345.9	345.9	345.9	345.4	346.3	345.4	345.9	345.9	345.9	345.9	345.9
55°	337.0	337.0	337.0	337.0	337.5	337.0	337.0	337.0	337.0	337.0	337.0
55.5°	328.2	328.2	328.7	328.2	328.7	328.2	328.7	328.2	328.2	328.2	328.7
56°	319.4	319.4	319.8	319.8	319.8	319.8	319.8	319.4	319.4	319.4	319.8
56.5°	310.5	311.0	311.0	311.0	311.0	311.0	311.0	310.5	311.0	311.0	311.0
57°	301.7	302.2	302.2	302.2	302.2	302.2	302.2	301.7	302.2	302.2	302.2
57.5°	292.9	293.3	293.8	293.8	293.8	293.8	293.8	293.3	292.9	293.3	293.8
58°	284.0	285.0	285.0	285.4	285.4	285.4	285.0	285.0	284.0	285.0	285.0
58.5°	275.2	276.6	276.6	277.1	277.1	277.1	276.6	276.6	275.2	276.6	276.6
59°	266.8	268.2	268.7	268.7	268.7	268.7	268.7	268.2	266.8	268.2	268.7
59.5°	258.9	260.3	260.8	260.8	260.8	260.8	260.8	260.3	258.9	260.3	260.8
60°	250.6	252.4	252.9	253.4	252.9	253.4	252.9	252.4	250.6	252.4	252.9
60.5°	242.7	244.5	245.4	245.4	245.4	245.4	244.5	242.7	244.5	244.5	245.4
61°	235.2	237.1	238.0	238.0	238.0	238.0	237.1	235.2	237.1	237.1	238.0
61.5°	227.8	229.6	230.6	231.0	231.0	230.6	229.6	227.8	229.6	229.6	230.6
62°	220.3	222.2	223.6	223.6	223.6	223.6	222.2	220.3	222.2	222.2	223.6
62.5°	213.4	215.2	216.6	216.6	216.6	216.6	215.2	213.4	215.2	215.2	216.6
63°	205.9	208.3	210.1	210.1	210.1	210.1	208.3	205.9	208.3	208.3	210.1
63.5°	199.4	201.8	203.1	203.6	203.6	203.6	203.1	199.4	201.8	201.8	203.1
64°	192.9	194.8	196.6	197.1	197.1	196.6	194.8	192.9	194.8	194.8	196.6
64.5°	186.4	188.3	190.6	190.6	190.6	190.6	188.3	186.4	188.3	188.3	190.6
65°	179.9	181.8	184.1	184.6	184.1	184.6	181.8	179.9	181.8	181.8	184.1
65.5°	173.9	175.7	178.0	178.5	178.5	178.5	175.7	173.9	175.7	175.7	178.0
66°	167.8	169.7	172.0	172.5	172.5	172.5	169.7	167.8	169.7	169.7	172.0



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	150.2	152.5	154.8	155.7	155.3	155.7	154.8	152.5	150.2	152.5	154.8
68°	144.6	146.9	149.7	150.2	150.2	150.2	149.7	146.9	144.6	146.9	149.7
68.5°	139.5	141.3	144.1	144.6	144.6	144.6	144.1	141.3	139.5	141.3	144.1
69°	133.9	136.2	139.0	139.5	139.5	139.5	139.0	136.2	133.9	136.2	139.0
69.5°	128.8	130.6	133.9	134.3	134.3	134.3	133.9	130.6	128.8	130.6	133.9
70°	123.7	125.5	128.8	129.2	129.2	129.2	128.8	125.5	123.7	125.5	128.8
70.5°	118.5	120.4	123.7	124.1	124.1	124.1	123.7	120.4	118.5	120.4	123.7
71°	113.9	115.8	118.5	119.5	119.5	119.5	118.5	115.8	113.9	115.8	118.5
71.5°	108.8	110.6	113.9	114.8	114.8	114.8	113.9	110.6	108.8	110.6	113.9
72°	104.1	106.0	109.2	110.2	110.2	110.2	109.2	106.0	104.1	106.0	109.2
72.5°	99.5	101.3	104.6	105.5	105.5	105.5	104.6	101.3	99.5	101.3	104.6
73°	94.8	96.7	99.9	100.9	100.9	100.9	99.9	96.7	94.8	96.7	99.9
73.5°	90.6	92.5	95.8	96.7	96.7	96.7	95.8	92.5	90.6	92.5	95.8
74°	86.5	88.3	91.1	92.5	92.0	92.5	91.1	88.3	86.5	88.3	91.1
74.5°	82.3	83.7	86.9	88.3	87.9	88.3	86.9	83.7	82.3	83.7	86.9
75°	78.1	79.5	82.7	84.1	84.1	84.1	82.7	79.5	78.1	79.5	82.7
75.5°	73.9	75.8	78.6	80.0	80.0	80.0	78.6	75.8	73.9	75.8	78.6
76°	70.2	71.6	74.8	76.2	75.8	76.2	74.8	71.6	70.2	71.6	74.8
76.5°	66.0	67.9	70.7	72.1	72.1	72.1	70.7	67.9	66.0	67.9	70.7
77°	62.3	64.2	66.9	68.3	68.3	68.3	66.9	64.2	62.3	64.2	66.9
77.5°	59.0	60.4	63.2	64.6	64.6	64.6	63.2	60.4	59.0	60.4	63.2
78°	55.3	56.7	59.5	61.4	60.9	61.4	59.5	56.7	55.3	56.7	59.5
78.5°	51.6	53.0	56.2	57.6	57.6	57.6	56.2	53.0	51.6	53.0	56.2
79°	48.3	49.7	52.5	54.4	53.9	54.4	52.5	49.7	48.3	49.7	52.5
79.5°	45.1	46.0	49.3	50.7	50.7	50.7	49.3	46.0	45.1	46.0	49.3
80°	41.8	42.8	46.0	47.4	47.4	47.4	46.0	42.8	41.8	42.8	46.0
80.5°	38.6	39.5	42.8	44.2	44.2	44.2	42.8	39.5	38.6	39.5	42.8
81°	35.3	36.3	39.5	40.9	40.9	40.9	39.5	36.3	35.3	36.3	39.5
81.5°	32.5	33.0	36.3	38.1	38.1	38.1	36.3	33.0	32.5	33.0	36.3
82°	29.3	30.2	33.0	34.9	34.9	34.9	33.0	30.2	29.3	30.2	33.0
82.5°	26.5	27.0	30.2	32.1	32.1	32.1	30.2	27.0	26.5	27.0	30.2
83°	23.7	24.2	27.4	29.3	28.8	29.3	27.4	24.2	23.7	24.2	27.4
83.5°	20.9	21.4	24.6	26.0	26.0	26.0	24.6	21.4	20.9	21.4	24.6
84°	18.1	18.6	21.8	23.2	23.2	23.2	21.8	18.6	18.1	18.6	21.8
84.5°	15.3	15.8	19.1	20.9	20.9	20.9	19.1	15.8	15.3	15.8	19.1
85°	13.0	13.5	16.7	18.1	18.1	18.1	16.7	13.5	13.0	13.5	16.7
85.5°	10.7	11.2	14.4	15.3	15.3	15.3	14.4	11.2	10.7	11.2	14.4
86°	8.4	9.3	12.1	13.0	13.0	13.0	12.1	9.3	8.4	9.3	12.1
86.5°	6.5	7.4	9.8	10.7	10.7	10.7	9.8	7.4	6.5	7.4	9.8
87°	5.1	5.6	7.4	8.4	8.4	8.4	7.4	5.6	5.1	5.6	7.4
87.5°	3.7	4.2	5.6	6.5	6.0	6.5	5.6	4.2	3.7	4.2	5.6
88°	2.3	2.8	4.2	4.6	3.7	4.6	4.2	2.8	2.3	2.8	4.2
88.5°	1.4	1.9	2.8	3.3	2.3	3.3	2.8	1.9	1.4	1.9	2.8



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-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	0.5	0.5	0.0	0.5	0.5	0.0	0.0	0.0	0.5



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBLS4050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3245.2	3245.2	3245.2	3245.2	3245.2	3245.2
0.5°	3244.7	3246.6	3244.7	3244.7	3243.8	3244.7
1°	3244.3	3245.7	3244.3	3244.3	3243.4	3244.3
1.5°	3242.9	3244.7	3242.9	3242.9	3242.0	3242.9
2°	3241.0	3242.9	3241.0	3241.0	3240.1	3241.0
2.5°	3239.2	3240.6	3239.2	3238.7	3237.8	3238.7
3°	3236.4	3238.2	3236.4	3235.9	3235.0	3235.9
3.5°	3233.1	3235.0	3233.1	3232.7	3231.7	3232.7
4°	3229.4	3231.3	3229.4	3228.9	3228.0	3228.5
4.5°	3225.2	3227.1	3225.2	3224.8	3223.8	3224.3
5°	3220.6	3222.4	3220.6	3219.6	3218.7	3219.6
5.5°	3215.5	3217.3	3215.5	3214.5	3213.6	3214.1
6°	3209.9	3211.3	3209.9	3209.0	3207.6	3208.5
6.5°	3203.8	3205.2	3203.8	3202.9	3201.5	3202.0
7°	3196.9	3198.7	3196.9	3195.9	3194.5	3195.5
7.5°	3189.9	3191.8	3189.9	3189.0	3187.1	3188.0
8°	3182.0	3184.3	3182.0	3181.1	3179.7	3180.1
8.5°	3174.1	3175.9	3174.1	3173.2	3171.3	3171.8
9°	3165.7	3167.6	3165.7	3164.3	3162.9	3163.4
9.5°	3156.4	3158.3	3156.4	3155.0	3153.6	3153.6
10°	3147.1	3149.0	3147.1	3145.7	3143.9	3144.3
10.5°	3136.9	3139.2	3136.9	3135.5	3133.6	3134.1
11°	3126.7	3128.5	3126.7	3124.8	3123.4	3123.4
11.5°	3115.5	3117.4	3115.5	3114.1	3112.3	3112.7
12°	3104.4	3106.2	3104.4	3102.5	3101.1	3101.1
12.5°	3092.7	3094.1	3092.7	3090.9	3089.0	3089.0
13°	3080.2	3082.0	3080.2	3078.8	3076.9	3076.9
13.5°	3068.1	3069.0	3068.1	3065.8	3063.9	3063.9
14°	3054.6	3056.0	3054.6	3052.8	3050.9	3051.4
14.5°	3041.1	3042.5	3041.1	3039.3	3037.4	3037.4
15°	3027.2	3028.1	3027.2	3025.8	3023.9	3023.5
15.5°	3012.8	3013.7	3012.8	3011.4	3009.5	3009.1
16°	2997.9	2998.8	2997.9	2996.5	2994.7	2994.7
16.5°	2982.6	2984.0	2982.6	2981.6	2979.8	2979.8
17°	2967.2	2968.2	2967.2	2965.8	2964.0	2964.0
17.5°	2951.0	2951.9	2951.0	2950.0	2948.2	2947.7
18°	2934.2	2935.1	2934.2	2933.3	2931.4	2931.4
18.5°	2917.0	2917.9	2917.0	2916.6	2914.7	2914.7
19°	2899.8	2900.3	2899.8	2898.9	2897.0	2897.0
19.5°	2881.7	2882.2	2881.7	2880.8	2879.4	2878.9
20°	2862.6	2863.6	2862.6	2862.2	2860.8	2860.8
20.5°	2843.1	2844.0	2843.1	2843.1	2841.7	2841.7
21°	2823.6	2824.0	2823.6	2823.6	2822.2	2822.2



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2759.9	2760.8	2759.9	2760.4	2759.4	2759.4
23°	2738.0	2738.5	2738.0	2738.0	2737.6	2737.6
23.5°	2715.3	2715.7	2715.3	2715.7	2715.3	2715.3
24°	2692.0	2692.5	2692.0	2692.5	2692.0	2692.5
24.5°	2668.8	2668.8	2668.8	2669.2	2668.3	2668.3
25°	2645.1	2645.1	2645.1	2645.1	2644.6	2644.6
25.5°	2620.9	2620.9	2620.9	2621.4	2620.4	2620.9
26°	2597.2	2596.7	2597.2	2596.7	2596.3	2596.7
26.5°	2572.6	2572.6	2572.6	2572.6	2572.6	2572.1
27°	2548.4	2547.9	2548.4	2548.4	2547.9	2547.9
27.5°	2524.2	2523.3	2524.2	2524.2	2523.3	2523.3
28°	2499.6	2499.6	2499.6	2500.0	2499.1	2499.1
28.5°	2475.4	2474.9	2475.4	2475.9	2474.9	2474.9
29°	2451.2	2451.2	2451.2	2451.7	2451.2	2450.3
29.5°	2428.0	2427.1	2428.0	2428.0	2427.1	2426.6
30°	2404.3	2403.3	2404.3	2404.3	2403.8	2403.3
30.5°	2381.0	2379.6	2381.0	2381.5	2381.0	2380.1
31°	2358.3	2357.8	2358.3	2358.7	2357.8	2357.3
31.5°	2335.5	2334.5	2335.5	2335.9	2335.5	2335.5
32°	2312.2	2312.2	2312.2	2312.7	2312.7	2312.7
32.5°	2287.1	2289.5	2287.1	2287.6	2288.1	2289.9
33°	2257.8	2265.7	2257.8	2259.2	2260.2	2264.8
33.5°	2224.8	2235.1	2224.8	2227.6	2227.2	2234.1
34°	2186.7	2198.8	2186.7	2192.3	2189.5	2197.4
34.5°	2145.8	2157.0	2145.8	2151.4	2146.7	2157.9
35°	2100.3	2107.7	2100.3	2104.0	2101.6	2111.9
35.5°	2048.7	2053.8	2048.7	2051.9	2054.7	2060.3
36°	1992.4	2000.3	1992.4	1996.1	2004.5	2003.6
36.5°	1932.9	1941.3	1932.9	1937.1	1948.2	1944.1
37°	1870.6	1880.8	1870.6	1876.2	1886.4	1882.7
37.5°	1806.9	1816.2	1806.9	1812.0	1819.0	1819.0
38°	1742.3	1751.1	1742.3	1746.5	1747.9	1752.5
38.5°	1675.4	1684.2	1675.4	1678.6	1674.9	1683.3
39°	1608.0	1617.3	1608.0	1608.4	1602.9	1610.8
39.5°	1539.6	1548.0	1539.6	1537.8	1531.3	1536.8
40°	1472.7	1476.9	1472.7	1467.6	1461.1	1459.7
40.5°	1405.3	1405.7	1405.3	1396.5	1389.5	1382.5
41°	1338.3	1335.1	1338.3	1328.1	1319.3	1307.7
41.5°	1271.9	1264.9	1271.9	1259.8	1247.2	1233.7
42°	1204.9	1197.5	1204.9	1191.9	1177.0	1163.1
42.5°	1139.8	1131.0	1139.8	1124.5	1108.2	1094.8
43°	1075.2	1067.8	1075.2	1059.9	1041.8	1028.3
43.5°	1013.4	1005.5	1013.4	996.7	977.1	965.1



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	837.2	830.7	837.2	821.9	800.5	792.1
45.5°	783.8	778.6	783.8	769.3	748.9	741.5
46°	733.1	728.9	733.1	719.6	701.9	693.6
46.5°	685.7	682.4	685.7	671.7	659.2	649.9
47°	642.0	638.7	642.0	628.5	619.7	609.0
47.5°	601.5	597.8	601.5	588.5	583.9	572.7
48°	565.7	560.6	565.7	552.7	549.9	540.2
48.5°	532.3	526.2	532.3	521.1	518.8	510.9
49°	502.1	496.5	502.1	492.8	490.4	484.4
49.5°	475.6	469.0	475.6	468.6	465.8	461.6
50°	452.3	446.3	452.3	447.7	444.4	440.7
50.5°	432.8	426.7	432.8	429.1	426.3	423.5
51°	416.1	410.9	416.1	413.3	411.9	409.1
51.5°	401.6	398.4	401.6	400.7	399.3	397.0
52°	390.0	388.2	390.0	389.6	388.6	387.7
52.5°	379.8	379.8	379.8	379.8	379.3	378.9
53°	371.0	371.4	371.0	371.0	371.0	370.5
53.5°	362.1	363.1	362.1	362.6	362.6	362.6
54°	353.8	354.7	353.8	354.2	354.2	354.2
54.5°	345.4	346.3	345.4	345.9	345.9	345.9
55°	337.0	337.5	337.0	337.0	337.0	337.0
55.5°	328.2	328.7	328.2	328.7	328.2	328.2
56°	319.8	319.8	319.8	319.8	319.4	319.4
56.5°	311.0	311.0	311.0	311.0	311.0	310.5
57°	302.2	302.2	302.2	302.2	302.2	301.7
57.5°	293.8	293.8	293.8	293.8	293.3	292.9
58°	285.4	285.4	285.4	285.0	285.0	284.0
58.5°	277.1	277.1	277.1	276.6	276.6	275.2
59°	268.7	268.7	268.7	268.7	268.2	266.8
59.5°	260.8	260.8	260.8	260.8	260.3	258.9
60°	253.4	252.9	253.4	252.9	252.4	250.6
60.5°	245.4	245.4	245.4	245.4	244.5	242.7
61°	238.0	238.0	238.0	238.0	237.1	235.2
61.5°	231.0	231.0	231.0	230.6	229.6	227.8
62°	223.6	223.6	223.6	223.6	222.2	220.3
62.5°	216.6	216.6	216.6	216.6	215.2	213.4
63°	210.1	210.1	210.1	210.1	208.3	205.9
63.5°	203.6	203.6	203.6	203.1	201.8	199.4
64°	197.1	197.1	197.1	196.6	194.8	192.9
64.5°	190.6	190.6	190.6	190.6	188.3	186.4
65°	184.6	184.1	184.6	184.1	181.8	179.9
65.5°	178.5	178.5	178.5	178.0	175.7	173.9
66°	172.5	172.5	172.5	172.0	169.7	167.8



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	155.7	155.3	155.7	154.8	152.5	150.2
68°	150.2	150.2	150.2	149.7	146.9	144.6
68.5°	144.6	144.6	144.6	144.1	141.3	139.5
69°	139.5	139.5	139.5	139.0	136.2	133.9
69.5°	134.3	134.3	134.3	133.9	130.6	128.8
70°	129.2	129.2	129.2	128.8	125.5	123.7
70.5°	124.1	124.1	124.1	123.7	120.4	118.5
71°	119.5	119.5	119.5	118.5	115.8	113.9
71.5°	114.8	114.4	114.8	113.9	110.6	108.8
72°	110.2	109.7	110.2	109.2	106.0	104.1
72.5°	105.5	105.1	105.5	104.6	101.3	99.5
73°	100.9	100.9	100.9	99.9	96.7	94.8
73.5°	96.7	96.7	96.7	95.8	92.5	90.6
74°	92.5	92.0	92.5	91.1	88.3	86.5
74.5°	88.3	87.9	88.3	86.9	83.7	82.3
75°	84.1	84.1	84.1	82.7	79.5	78.1
75.5°	80.0	80.0	80.0	78.6	75.8	73.9
76°	76.2	75.8	76.2	74.8	71.6	70.2
76.5°	72.1	72.1	72.1	70.7	67.9	66.0
77°	68.3	68.3	68.3	66.9	64.2	62.3
77.5°	64.6	64.6	64.6	63.2	60.4	59.0
78°	61.4	60.9	61.4	59.5	56.7	55.3
78.5°	57.6	57.6	57.6	56.2	53.0	51.6
79°	54.4	53.9	54.4	52.5	49.7	48.3
79.5°	50.7	50.7	50.7	49.3	46.0	45.1
80°	47.4	47.4	47.4	46.0	42.8	41.8
80.5°	44.2	44.2	44.2	42.8	39.5	38.6
81°	40.9	40.9	40.9	39.5	36.3	35.3
81.5°	38.1	38.1	38.1	36.3	33.0	32.5
82°	34.9	34.9	34.9	33.0	30.2	29.3
82.5°	32.1	32.1	32.1	30.2	27.0	26.5
83°	29.3	28.8	29.3	27.4	24.2	23.7
83.5°	26.0	26.0	26.0	24.6	21.4	20.9
84°	23.2	23.2	23.2	21.8	18.6	18.1
84.5°	20.9	20.9	20.9	19.1	15.8	15.3
85°	18.1	18.1	18.1	16.7	13.5	13.0
85.5°	15.3	15.3	15.3	14.4	11.2	10.7
86°	13.0	13.0	13.0	12.1	9.3	8.4
86.5°	10.7	10.7	10.7	9.8	7.4	6.5
87°	8.4	8.4	8.4	7.4	5.6	5.1
87.5°	6.5	6.0	6.5	5.6	4.2	3.7
88°	4.6	3.7	4.6	4.2	2.8	2.3
88.5°	3.3	2.3	3.3	2.8	1.9	1.4



TEST NUMBER: P776791

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMW-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.5	0.0	0.5	0.5	0.0	0.0



Report Generated By 670245859 / DESKTOP-T8S5UU9

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

Scaled Data Report





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

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

Scaled Data Report



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

Scaled Data Report





21.5°	2801.7	2802.2	2803.1	2803.1	2803.6	2803.1	2803.1	2802.2	2801.7	2802.2	2803.1
22°	2781.3	2781.3	2781.7	2781.7	2782.7	2781.7	2781.7	2781.3	2781.3	2781.3	2781.7



44°	904.6	914.9	936.2	952.0	945.1	952.0	936.2	914.9	904.6	914.9	936.2
44.5°	847.4	855.8	877.7	893.9	886.5	893.9	877.7	855.8	847.4	855.8	877.7



66.5°	161.3	163.6	166.0	166.4	166.9	166.4	166.0	163.6	161.3	163.6	166.0
67°	155.7	157.6	160.4	161.3	161.3	161.3	160.4	157.6	155.7	157.6	160.4



89°	0.5	0.9	1.4	2.3	1.4	2.3	1.4	0.9	0.5	0.9	1.4
89.5°	0.0	0.5	0.9	1.4	0.5	1.4	0.9	0.5	0.0	0.5	0.9

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°	2803.1	2803.6	2803.1	2803.1	2802.2	2801.7
22°	2781.7	2782.7	2781.7	2781.7	2781.3	2781.3

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

Scaled Data Report



44°	952.0	945.1	952.0	936.2	914.9	904.6
44.5°	893.9	886.5	893.9	877.7	855.8	847.4



66.5°	166.4	166.9	166.4	166.0	163.6	161.3
67°	161.3	161.3	161.3	160.4	157.6	155.7

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

Scaled Data Report



89°	2.3	1.4	2.3	1.4	0.9	0.5
89.5°	1.4	0.5	1.4	0.9	0.5	0.0

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

Scaled Data Report



(END OF REPORT)