

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: P776482

Luminaire Tested: HCDJBL3040CSD-HCD82TRMW-4000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776482  
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: HCDJBS3040CSD-HCD82TRMW-4000lm-3500K  
Description: 8 INCH ROUND NARROW MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4185.9 lumens  
Efficiency: N/A  
Efficacy: 108.7 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

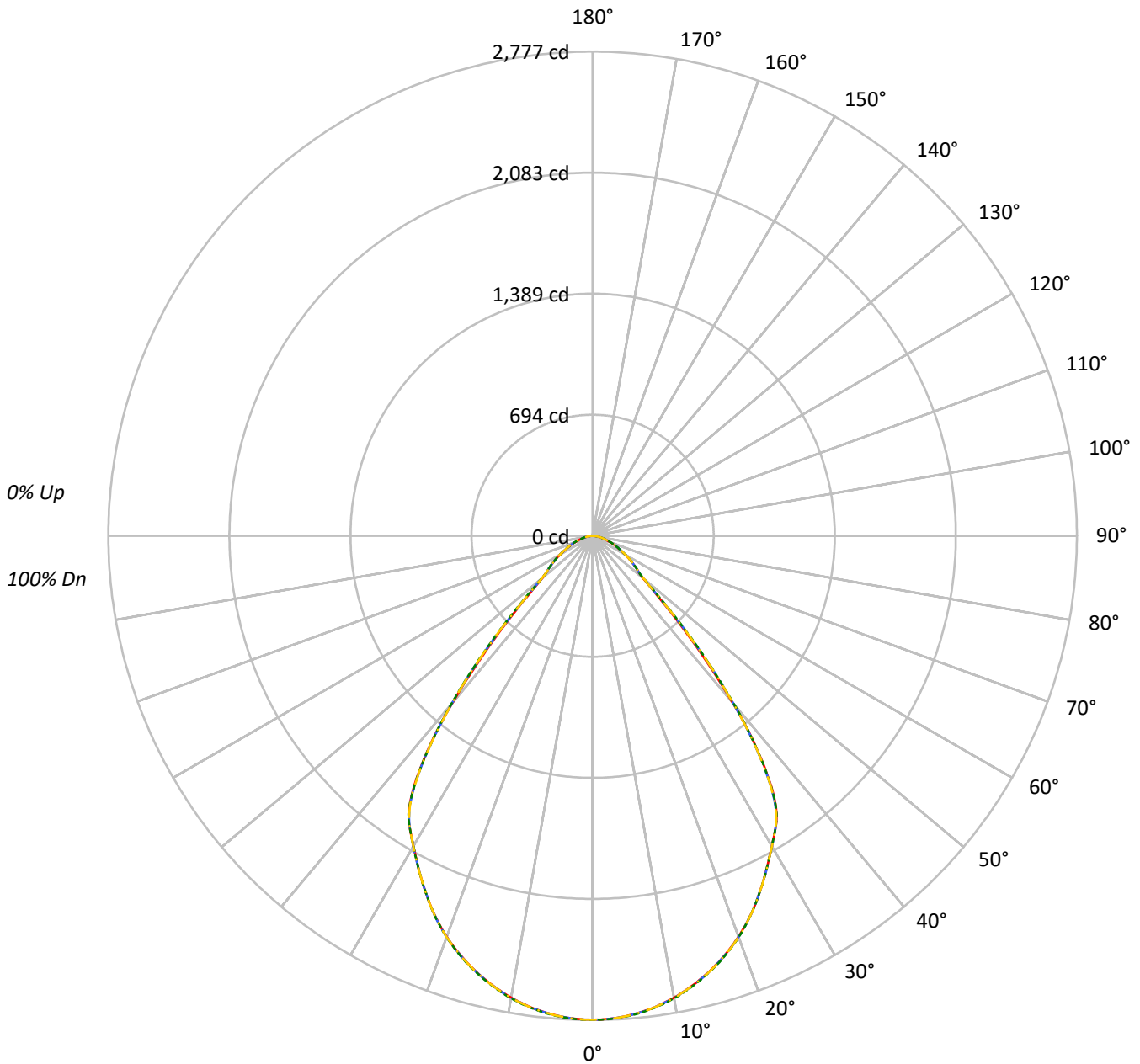
Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	84746	84746	84746	84746
5°	84398	84472	84398	84472
10°	83378	83502	83378	83502
15°	81740	81866	81740	81866
20°	79502	79580	79502	79580
25°	76202	76216	76202	76216
30°	72470	72470	72470	72470
35°	67326	67191	67326	67191
40°	49758	50348	49758	50348
45°	29256	30681	29256	30681
50°	17901	18129	17901	18129
55°	15346	15367	15346	15367
60°	13085	13207	13085	13207
65°	11118	11378	11118	11378
70°	9444	9864	9444	9864
75°	7880	8493	7880	8493
80°	6294	7138	6294	7138
85°	3888	5430	3888	5430

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 30919 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	260.9	6.2
10°-20°	728.2	17.4
20°-30°	1039.8	24.8
30°-40°	1085.8	25.9
40°-50°	564.0	13.5
50°-60°	258.5	6.2
60°-70°	156.8	3.7
70°-80°	75.1	1.8
80°-90°	16.8	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°	2028.9	48.5
0°-40°	3114.6	74.4
0°-60°	3937.1	94.1
0°-90°	4185.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4185.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2776	2776	2776	2776	2776	
5°	2754	2756	2754	2756	2754	261
15°	2586	2590	2586	2590	2586	728
25°	2262	2262	2262	2262	2262	1040
35°	1806	1803	1806	1803	1806	1088
45°	678	711	678	711	678	551
55°	288	289	288	289	288	258
65°	154	158	154	158	154	154
75°	67	72	67	72	67	72
85°	11	16	11	16	11	15
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°	2775.8	2775.8	2775.8	2775.8	2775.8	2775.8	2775.8	2775.8	2775.8	2775.8	2775.8
0.5°	2775.4	2774.6	2775.4	2775.4	2777.0	2775.4	2775.4	2774.6	2775.4	2774.6	2775.4
1°	2775.0	2774.2	2775.0	2775.0	2776.2	2775.0	2775.0	2774.2	2775.0	2774.2	2775.0
1.5°	2773.8	2773.0	2773.8	2773.8	2775.4	2773.8	2773.8	2773.0	2773.8	2773.0	2773.8
2°	2772.2	2771.4	2772.2	2772.2	2773.8	2772.2	2772.2	2771.4	2772.2	2771.4	2772.2
2.5°	2770.2	2769.5	2770.2	2770.6	2771.8	2770.6	2770.2	2769.5	2770.2	2769.5	2770.2
3°	2767.9	2767.1	2767.9	2768.3	2769.8	2768.3	2767.9	2767.1	2767.9	2767.1	2767.9
3.5°	2765.1	2764.3	2765.1	2765.5	2767.1	2765.5	2765.1	2764.3	2765.1	2764.3	2765.1
4°	2761.5	2761.1	2761.9	2762.3	2763.9	2762.3	2761.9	2761.1	2761.5	2761.1	2761.9
4.5°	2757.9	2757.5	2758.3	2758.7	2760.3	2758.7	2758.3	2757.5	2757.9	2757.5	2758.3
5°	2753.9	2753.1	2753.9	2754.7	2756.3	2754.7	2753.9	2753.1	2753.9	2753.1	2753.9
5.5°	2749.2	2748.8	2749.6	2750.4	2752.0	2750.4	2749.6	2748.8	2749.2	2748.8	2749.6
6°	2744.4	2743.6	2744.8	2745.6	2746.8	2745.6	2744.8	2743.6	2744.4	2743.6	2744.8
6.5°	2738.8	2738.4	2739.6	2740.4	2741.6	2740.4	2739.6	2738.4	2738.8	2738.4	2739.6
7°	2733.3	2732.5	2733.7	2734.5	2736.0	2734.5	2733.7	2732.5	2733.3	2732.5	2733.7
7.5°	2726.9	2726.1	2727.7	2728.5	2730.1	2728.5	2727.7	2726.1	2726.9	2726.1	2727.7
8°	2720.1	2719.7	2720.9	2721.7	2723.7	2721.7	2720.9	2719.7	2720.1	2719.7	2720.9
8.5°	2713.0	2712.6	2714.2	2715.0	2716.6	2715.0	2714.2	2712.6	2713.0	2712.6	2714.2
9°	2705.8	2705.4	2706.6	2707.8	2709.4	2707.8	2706.6	2705.4	2705.8	2705.4	2706.6
9.5°	2697.5	2697.5	2698.7	2699.9	2701.5	2699.9	2698.7	2697.5	2697.5	2697.5	2698.7
10°	2689.5	2689.1	2690.7	2691.9	2693.5	2691.9	2690.7	2689.1	2689.5	2689.1	2690.7
10.5°	2680.8	2680.4	2682.0	2683.2	2685.2	2683.2	2682.0	2680.4	2680.8	2680.4	2682.0
11°	2671.6	2671.6	2672.8	2674.4	2676.0	2674.4	2672.8	2671.6	2671.6	2671.6	2672.8
11.5°	2662.5	2662.1	2663.7	2664.9	2666.5	2664.9	2663.7	2662.1	2662.5	2662.1	2663.7
12°	2652.5	2652.5	2653.7	2655.3	2656.9	2655.3	2653.7	2652.5	2652.5	2652.5	2653.7
12.5°	2642.2	2642.2	2643.8	2645.4	2646.6	2645.4	2643.8	2642.2	2642.2	2642.2	2643.8
13°	2631.9	2631.9	2633.5	2634.7	2636.2	2634.7	2633.5	2631.9	2631.9	2631.9	2633.5
13.5°	2620.7	2620.7	2622.3	2624.3	2625.1	2624.3	2622.3	2620.7	2620.7	2620.7	2622.3
14°	2610.0	2609.6	2611.2	2612.8	2614.0	2612.8	2611.2	2609.6	2610.0	2609.6	2611.2
14.5°	2598.1	2598.1	2599.7	2601.3	2602.4	2601.3	2599.7	2598.1	2598.1	2598.1	2599.7
15°	2586.1	2586.5	2588.1	2589.3	2590.1	2589.3	2588.1	2586.5	2586.1	2586.5	2588.1
15.5°	2573.8	2574.2	2575.8	2577.0	2577.8	2577.0	2575.8	2574.2	2573.8	2574.2	2575.8
16°	2561.5	2561.5	2563.1	2564.3	2565.1	2564.3	2563.1	2561.5	2561.5	2561.5	2563.1
16.5°	2548.8	2548.8	2550.4	2551.2	2552.3	2551.2	2550.4	2548.8	2548.8	2548.8	2550.4
17°	2535.2	2535.2	2536.8	2538.0	2538.8	2538.0	2536.8	2535.2	2535.2	2535.2	2536.8
17.5°	2521.3	2521.7	2523.3	2524.1	2524.9	2524.1	2523.3	2521.7	2521.3	2521.7	2523.3
18°	2507.4	2507.4	2509.0	2509.8	2510.6	2509.8	2509.0	2507.4	2507.4	2507.4	2509.0
18.5°	2493.1	2493.1	2494.7	2495.1	2495.9	2495.1	2494.7	2493.1	2493.1	2493.1	2494.7
19°	2478.0	2478.0	2479.6	2480.4	2480.8	2480.4	2479.6	2478.0	2478.0	2478.0	2479.6
19.5°	2462.5	2462.9	2464.1	2464.9	2465.3	2464.9	2464.1	2462.9	2462.5	2462.9	2464.1
20°	2447.0	2447.0	2448.2	2448.6	2449.4	2448.6	2448.2	2447.0	2447.0	2447.0	2448.2
20.5°	2430.7	2430.7	2431.9	2431.9	2432.7	2431.9	2431.9	2430.7	2430.7	2430.7	2431.9
21°	2414.0	2414.0	2415.2	2415.2	2415.6	2415.2	2415.2	2414.0	2414.0	2414.0	2415.2



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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°	2360.3	2360.3	2361.1	2360.7	2361.5	2360.7	2361.1	2360.3	2360.3	2360.3	2361.1
23°	2341.6	2341.6	2342.0	2342.0	2342.4	2342.0	2342.0	2341.6	2341.6	2341.6	2342.0
23.5°	2322.5	2322.5	2322.9	2322.5	2322.9	2322.5	2322.9	2322.5	2322.5	2322.5	2322.9
24°	2303.0	2302.6	2303.0	2302.6	2303.0	2302.6	2303.0	2302.6	2303.0	2302.6	2303.0
24.5°	2282.4	2282.4	2283.2	2282.8	2282.8	2282.8	2283.2	2282.4	2282.4	2282.4	2283.2
25°	2262.1	2262.1	2262.5	2262.5	2262.5	2262.5	2262.5	2262.1	2262.1	2262.1	2262.5
25.5°	2241.8	2241.4	2242.2	2241.8	2241.8	2241.8	2242.2	2241.4	2241.8	2241.4	2242.2
26°	2221.1	2220.7	2221.1	2221.5	2221.1	2221.5	2221.1	2220.7	2221.1	2220.7	2221.1
26.5°	2200.1	2200.5	2200.5	2200.5	2200.5	2200.5	2200.5	2200.5	2200.1	2200.5	2200.5
27°	2179.4	2179.4	2179.8	2179.8	2179.4	2179.8	2179.8	2179.4	2179.4	2179.4	2179.8
27.5°	2158.3	2158.3	2159.1	2159.1	2158.3	2159.1	2159.1	2158.3	2158.3	2158.3	2159.1
28°	2137.6	2137.6	2138.4	2138.0	2138.0	2138.0	2138.4	2137.6	2137.6	2137.6	2138.4
28.5°	2116.9	2116.9	2117.7	2117.3	2116.9	2117.3	2117.7	2116.9	2116.9	2116.9	2117.7
29°	2095.9	2096.7	2097.1	2096.7	2096.7	2096.7	2097.1	2096.7	2095.9	2096.7	2097.1
29.5°	2075.6	2076.0	2076.8	2076.8	2076.0	2076.8	2076.8	2076.0	2075.6	2076.0	2076.8
30°	2055.7	2056.1	2056.5	2056.5	2055.7	2056.5	2056.5	2056.1	2055.7	2056.1	2056.5
30.5°	2035.8	2036.6	2037.0	2036.6	2035.4	2036.6	2037.0	2036.6	2035.8	2036.6	2037.0
31°	2016.4	2016.7	2017.5	2017.1	2016.7	2017.1	2017.5	2016.7	2016.4	2016.7	2017.5
31.5°	1997.7	1997.7	1998.1	1997.7	1996.9	1997.7	1998.1	1997.7	1997.7	1997.7	1998.1
32°	1978.2	1978.2	1978.2	1977.8	1977.8	1977.8	1978.2	1978.2	1978.2	1978.2	1978.2
32.5°	1958.7	1957.1	1956.7	1956.3	1958.3	1956.3	1956.7	1957.1	1958.7	1957.1	1956.7
33°	1937.2	1933.2	1932.5	1931.3	1938.0	1931.3	1932.5	1933.2	1937.2	1933.2	1932.5
33.5°	1911.0	1905.0	1905.4	1903.0	1911.8	1903.0	1905.4	1905.0	1911.0	1905.0	1905.4
34°	1879.6	1872.8	1875.2	1870.4	1880.8	1870.4	1875.2	1872.8	1879.6	1872.8	1875.2
34.5°	1845.8	1836.2	1840.2	1835.4	1845.0	1835.4	1840.2	1836.2	1845.8	1836.2	1840.2
35°	1806.4	1797.7	1799.6	1796.5	1802.8	1796.5	1799.6	1797.7	1806.4	1797.7	1799.6
35.5°	1762.3	1757.5	1755.1	1752.3	1756.7	1752.3	1755.1	1757.5	1762.3	1757.5	1755.1
36°	1713.8	1714.6	1707.4	1704.2	1711.0	1704.2	1707.4	1714.6	1713.8	1714.6	1707.4
36.5°	1662.9	1666.4	1656.9	1653.3	1660.5	1653.3	1656.9	1666.4	1662.9	1666.4	1656.9
37°	1610.4	1613.6	1604.8	1600.0	1608.8	1600.0	1604.8	1613.6	1610.4	1613.6	1604.8
37.5°	1555.9	1555.9	1549.9	1545.6	1553.5	1545.6	1549.9	1555.9	1555.9	1555.9	1549.9
38°	1499.0	1495.1	1493.9	1490.3	1497.8	1490.3	1493.9	1495.1	1499.0	1495.1	1493.9
38.5°	1439.8	1432.6	1435.8	1433.0	1440.6	1433.0	1435.8	1432.6	1439.8	1432.6	1435.8
39°	1377.8	1371.0	1375.8	1375.4	1383.3	1375.4	1375.8	1371.0	1377.8	1371.0	1375.8
39.5°	1314.5	1309.8	1315.3	1316.9	1324.1	1316.9	1315.3	1309.8	1314.5	1309.8	1315.3
40°	1248.5	1249.7	1255.3	1259.7	1263.3	1259.7	1255.3	1249.7	1248.5	1249.7	1255.3
40.5°	1182.5	1188.5	1194.5	1202.0	1202.4	1202.0	1194.5	1188.5	1182.5	1188.5	1194.5
41°	1118.5	1128.5	1136.0	1144.8	1142.0	1144.8	1136.0	1128.5	1118.5	1128.5	1136.0
41.5°	1055.3	1066.8	1077.6	1087.9	1081.9	1087.9	1077.6	1066.8	1055.3	1066.8	1077.6
42°	994.9	1006.8	1019.5	1030.6	1024.3	1030.6	1019.5	1006.8	994.9	1006.8	1019.5
42.5°	936.4	947.9	961.9	975.0	967.4	975.0	961.9	947.9	936.4	947.9	961.9
43°	879.5	891.1	906.6	919.7	913.3	919.7	906.6	891.1	879.5	891.1	906.6
43.5°	825.5	835.8	852.5	866.8	860.1	866.8	852.5	835.8	825.5	835.8	852.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	677.6	684.7	703.0	716.1	710.6	716.1	703.0	684.7	677.6	684.7	703.0
45.5°	634.2	640.6	658.1	670.4	666.0	670.4	658.1	640.6	634.2	640.6	658.1
46°	593.3	600.4	615.5	627.1	623.5	627.1	615.5	600.4	593.3	600.4	615.5
46.5°	555.9	563.8	574.6	586.5	583.7	586.5	574.6	563.8	555.9	563.8	574.6
47°	520.9	530.0	537.6	549.1	546.3	549.1	537.6	530.0	520.9	530.0	537.6
47.5°	489.9	499.4	503.4	514.5	511.3	514.5	503.4	499.4	489.9	499.4	503.4
48°	462.0	470.4	472.8	483.9	479.5	483.9	472.8	470.4	462.0	470.4	472.8
48.5°	437.0	443.7	445.7	455.3	450.1	455.3	445.7	443.7	437.0	443.7	445.7
49°	414.3	419.5	421.5	429.4	424.7	429.4	421.5	419.5	414.3	419.5	421.5
49.5°	394.8	398.4	400.8	406.8	401.2	406.8	400.8	398.4	394.8	398.4	400.8
50°	376.9	380.1	382.9	386.9	381.7	386.9	382.9	380.1	376.9	380.1	382.9
50.5°	362.2	364.6	367.0	370.2	365.0	370.2	367.0	364.6	362.2	364.6	367.0
51°	349.9	352.3	353.5	355.9	351.5	355.9	353.5	352.3	349.9	352.3	353.5
51.5°	339.6	341.6	342.8	343.5	340.8	343.5	342.8	341.6	339.6	341.6	342.8
52°	331.6	332.4	333.2	333.6	332.0	333.6	333.2	332.4	331.6	332.4	333.2
52.5°	324.1	324.5	324.9	324.9	324.9	324.9	324.9	324.5	324.1	324.5	324.9
53°	316.9	317.3	317.3	317.3	317.7	317.3	317.3	317.3	316.9	317.3	317.3
53.5°	310.1	310.1	310.1	309.7	310.5	309.7	310.1	310.1	310.1	310.1	310.1
54°	303.0	303.0	303.0	302.6	303.4	302.6	303.0	303.0	303.0	303.0	303.0
54.5°	295.8	295.8	295.8	295.4	296.2	295.4	295.8	295.8	295.8	295.8	295.8
55°	288.3	288.3	288.3	288.3	288.7	288.3	288.3	288.3	288.3	288.3	288.3
55.5°	280.7	280.7	281.1	280.7	281.1	280.7	281.1	280.7	280.7	280.7	281.1
56°	273.2	273.2	273.6	273.6	273.6	273.6	273.6	273.2	273.2	273.2	273.6
56.5°	265.6	266.0	266.0	266.0	266.0	266.0	266.0	266.0	265.6	266.0	266.0
57°	258.1	258.5	258.5	258.5	258.5	258.5	258.5	258.5	258.1	258.5	258.5
57.5°	250.5	250.9	251.3	251.3	251.3	251.3	251.3	250.9	250.5	250.9	251.3
58°	242.9	243.7	243.7	244.1	244.1	244.1	243.7	243.7	242.9	243.7	243.7
58.5°	235.4	236.6	236.6	237.0	237.0	237.0	236.6	236.6	235.4	236.6	236.6
59°	228.2	229.4	229.8	229.8	229.8	229.8	229.8	229.4	228.2	229.4	229.8
59.5°	221.5	222.7	223.1	223.1	223.1	223.1	223.1	222.7	221.5	222.7	223.1
60°	214.3	215.9	216.3	216.7	216.3	216.7	216.3	215.9	214.3	215.9	216.3
60.5°	207.6	209.2	209.9	209.9	209.9	209.9	209.9	209.2	207.6	209.2	209.9
61°	201.2	202.8	203.6	203.6	203.6	203.6	203.6	202.8	201.2	202.8	203.6
61.5°	194.8	196.4	197.2	197.6	197.6	197.6	197.2	196.4	194.8	196.4	197.2
62°	188.5	190.1	191.3	191.3	191.3	191.3	191.3	190.1	188.5	190.1	191.3
62.5°	182.5	184.1	185.3	185.3	185.3	185.3	185.3	184.1	182.5	184.1	185.3
63°	176.1	178.1	179.7	179.7	179.7	179.7	179.7	178.1	176.1	178.1	179.7
63.5°	170.6	172.6	173.8	174.2	174.2	174.2	173.8	172.6	170.6	172.6	173.8
64°	165.0	166.6	168.2	168.6	168.6	168.6	168.2	166.6	165.0	166.6	168.2
64.5°	159.4	161.0	163.0	163.0	163.0	163.0	163.0	161.0	159.4	161.0	163.0
65°	153.9	155.5	157.5	157.9	157.5	157.9	157.5	155.5	153.9	155.5	157.5
65.5°	148.7	150.3	152.3	152.7	152.7	152.7	152.3	150.3	148.7	150.3	152.3
66°	143.5	145.1	147.1	147.5	147.5	147.5	147.1	145.1	143.5	145.1	147.1





TEST NUMBER: P776482

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMW-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	128.4	130.4	132.4	133.2	132.8	133.2	132.4	130.4	128.4	130.4	132.4
68°	123.7	125.6	128.0	128.4	128.4	128.4	128.0	125.6	123.7	125.6	128.0
68.5°	119.3	120.9	123.3	123.7	123.7	123.7	123.3	120.9	119.3	120.9	123.3
69°	114.5	116.5	118.9	119.3	119.3	119.3	118.9	116.5	114.5	116.5	118.9
69.5°	110.1	111.7	114.5	114.9	114.9	114.9	114.5	111.7	110.1	111.7	114.5
70°	105.8	107.4	110.1	110.5	110.5	110.5	110.1	107.4	105.8	107.4	110.1
70.5°	101.4	103.0	105.8	106.2	106.2	106.2	105.8	103.0	101.4	103.0	105.8
71°	97.4	99.0	101.4	102.2	102.2	102.2	101.4	99.0	97.4	99.0	101.4
71.5°	93.0	94.6	97.4	98.2	97.8	98.2	97.4	94.6	93.0	94.6	97.4
72°	89.1	90.7	93.4	94.2	93.8	94.2	93.4	90.7	89.1	90.7	93.4
72.5°	85.1	86.7	89.5	90.3	89.9	90.3	89.5	86.7	85.1	86.7	89.5
73°	81.1	82.7	85.5	86.3	86.3	86.3	85.5	82.7	81.1	82.7	85.5
73.5°	77.5	79.1	81.9	82.7	82.7	82.7	81.9	79.1	77.5	79.1	81.9
74°	74.0	75.5	77.9	79.1	78.7	79.1	77.9	75.5	74.0	75.5	77.9
74.5°	70.4	71.6	74.4	75.5	75.2	75.5	74.4	71.6	70.4	71.6	74.4
75°	66.8	68.0	70.8	72.0	72.0	72.0	70.8	68.0	66.8	68.0	70.8
75.5°	63.2	64.8	67.2	68.4	68.4	68.4	67.2	64.8	63.2	64.8	67.2
76°	60.0	61.2	64.0	65.2	64.8	65.2	64.0	61.2	60.0	61.2	64.0
76.5°	56.5	58.1	60.4	61.6	61.6	61.6	60.4	58.1	56.5	58.1	60.4
77°	53.3	54.9	57.3	58.5	58.5	58.5	57.3	54.9	53.3	54.9	57.3
77.5°	50.5	51.7	54.1	55.3	55.3	55.3	54.1	51.7	50.5	51.7	54.1
78°	47.3	48.5	50.9	52.5	52.1	52.5	50.9	48.5	47.3	48.5	50.9
78.5°	44.1	45.3	48.1	49.3	49.3	49.3	48.1	45.3	44.1	45.3	48.1
79°	41.4	42.5	44.9	46.5	46.1	46.5	44.9	42.5	41.4	42.5	44.9
79.5°	38.6	39.4	42.1	43.3	43.3	43.3	42.1	39.4	38.6	39.4	42.1
80°	35.8	36.6	39.4	40.6	40.6	40.6	39.4	36.6	35.8	36.6	39.4
80.5°	33.0	33.8	36.6	37.8	37.8	37.8	36.6	33.8	33.0	33.8	36.6
81°	30.2	31.0	33.8	35.0	35.0	35.0	33.8	31.0	30.2	31.0	33.8
81.5°	27.8	28.2	31.0	32.6	32.6	32.6	31.0	28.2	27.8	28.2	31.0
82°	25.1	25.8	28.2	29.8	29.8	29.8	28.2	25.8	25.1	25.8	28.2
82.5°	22.7	23.1	25.8	27.4	27.4	27.4	25.8	23.1	22.7	23.1	25.8
83°	20.3	20.7	23.5	25.1	24.7	25.1	23.5	20.7	20.3	20.7	23.5
83.5°	17.9	18.3	21.1	22.3	22.3	22.3	21.1	18.3	17.9	18.3	21.1
84°	15.5	15.9	18.7	19.9	19.9	19.9	18.7	15.9	15.5	15.9	18.7
84.5°	13.1	13.5	16.3	17.9	17.9	17.9	16.3	13.5	13.1	13.5	16.3
85°	11.1	11.5	14.3	15.5	15.5	15.5	14.3	11.5	11.1	11.5	14.3
85.5°	9.1	9.5	12.3	13.1	13.1	13.1	12.3	9.5	9.1	9.5	12.3
86°	7.2	8.0	10.3	11.1	11.1	11.1	10.3	8.0	7.2	8.0	10.3
86.5°	5.6	6.4	8.4	9.1	9.1	9.1	8.4	6.4	5.6	6.4	8.4
87°	4.4	4.8	6.4	7.2	7.2	7.2	6.4	4.8	4.4	4.8	6.4
87.5°	3.2	3.6	4.8	5.6	5.2	5.6	4.8	3.6	3.2	3.6	4.8
88°	2.0	2.4	3.6	4.0	3.2	4.0	3.6	2.4	2.0	2.4	3.6
88.5°	1.2	1.6	2.4	2.8	2.0	2.8	2.4	1.6	1.2	1.6	2.4



TEST NUMBER: P776482  
CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMW-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.4	0.4	0.0	0.4	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776482

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMW-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2775.8	2775.8	2775.8	2775.8	2775.8	2775.8
0.5°	2775.4	2777.0	2775.4	2775.4	2774.6	2775.4
1°	2775.0	2776.2	2775.0	2775.0	2774.2	2775.0
1.5°	2773.8	2775.4	2773.8	2773.8	2773.0	2773.8
2°	2772.2	2773.8	2772.2	2772.2	2771.4	2772.2
2.5°	2770.6	2771.8	2770.6	2770.2	2769.5	2770.2
3°	2768.3	2769.8	2768.3	2767.9	2767.1	2767.9
3.5°	2765.5	2767.1	2765.5	2765.1	2764.3	2765.1
4°	2762.3	2763.9	2762.3	2761.9	2761.1	2761.5
4.5°	2758.7	2760.3	2758.7	2758.3	2757.5	2757.9
5°	2754.7	2756.3	2754.7	2753.9	2753.1	2753.9
5.5°	2750.4	2752.0	2750.4	2749.6	2748.8	2749.2
6°	2745.6	2746.8	2745.6	2744.8	2743.6	2744.4
6.5°	2740.4	2741.6	2740.4	2739.6	2738.4	2738.8
7°	2734.5	2736.0	2734.5	2733.7	2732.5	2733.3
7.5°	2728.5	2730.1	2728.5	2727.7	2726.1	2726.9
8°	2721.7	2723.7	2721.7	2720.9	2719.7	2720.1
8.5°	2715.0	2716.6	2715.0	2714.2	2712.6	2713.0
9°	2707.8	2709.4	2707.8	2706.6	2705.4	2705.8
9.5°	2699.9	2701.5	2699.9	2698.7	2697.5	2697.5
10°	2691.9	2693.5	2691.9	2690.7	2689.1	2689.5
10.5°	2683.2	2685.2	2683.2	2682.0	2680.4	2680.8
11°	2674.4	2676.0	2674.4	2672.8	2671.6	2671.6
11.5°	2664.9	2666.5	2664.9	2663.7	2662.1	2662.5
12°	2655.3	2656.9	2655.3	2653.7	2652.5	2652.5
12.5°	2645.4	2646.6	2645.4	2643.8	2642.2	2642.2
13°	2634.7	2636.2	2634.7	2633.5	2631.9	2631.9
13.5°	2624.3	2625.1	2624.3	2622.3	2620.7	2620.7
14°	2612.8	2614.0	2612.8	2611.2	2609.6	2610.0
14.5°	2601.3	2602.4	2601.3	2599.7	2598.1	2598.1
15°	2589.3	2590.1	2589.3	2588.1	2586.5	2586.1
15.5°	2577.0	2577.8	2577.0	2575.8	2574.2	2573.8
16°	2564.3	2565.1	2564.3	2563.1	2561.5	2561.5
16.5°	2551.2	2552.3	2551.2	2550.4	2548.8	2548.8
17°	2538.0	2538.8	2538.0	2536.8	2535.2	2535.2
17.5°	2524.1	2524.9	2524.1	2523.3	2521.7	2521.3
18°	2509.8	2510.6	2509.8	2509.0	2507.4	2507.4
18.5°	2495.1	2495.9	2495.1	2494.7	2493.1	2493.1
19°	2480.4	2480.8	2480.4	2479.6	2478.0	2478.0
19.5°	2464.9	2465.3	2464.9	2464.1	2462.9	2462.5
20°	2448.6	2449.4	2448.6	2448.2	2447.0	2447.0
20.5°	2431.9	2432.7	2431.9	2431.9	2430.7	2430.7
21°	2415.2	2415.6	2415.2	2415.2	2414.0	2414.0



TEST NUMBER: P776482

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMW-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2360.7	2361.5	2360.7	2361.1	2360.3	2360.3
23°	2342.0	2342.4	2342.0	2342.0	2341.6	2341.6
23.5°	2322.5	2322.9	2322.5	2322.9	2322.5	2322.5
24°	2302.6	2303.0	2302.6	2303.0	2302.6	2303.0
24.5°	2282.8	2282.8	2282.8	2283.2	2282.4	2282.4
25°	2262.5	2262.5	2262.5	2262.5	2262.1	2262.1
25.5°	2241.8	2241.8	2241.8	2242.2	2241.4	2241.8
26°	2221.5	2221.1	2221.5	2221.1	2220.7	2221.1
26.5°	2200.5	2200.5	2200.5	2200.5	2200.5	2200.1
27°	2179.8	2179.4	2179.8	2179.8	2179.4	2179.4
27.5°	2159.1	2158.3	2159.1	2159.1	2158.3	2158.3
28°	2138.0	2138.0	2138.0	2138.4	2137.6	2137.6
28.5°	2117.3	2116.9	2117.3	2117.7	2116.9	2116.9
29°	2096.7	2096.7	2096.7	2097.1	2096.7	2095.9
29.5°	2076.8	2076.0	2076.8	2076.8	2076.0	2075.6
30°	2056.5	2055.7	2056.5	2056.5	2056.1	2055.7
30.5°	2036.6	2035.4	2036.6	2037.0	2036.6	2035.8
31°	2017.1	2016.7	2017.1	2017.5	2016.7	2016.4
31.5°	1997.7	1996.9	1997.7	1998.1	1997.7	1997.7
32°	1977.8	1977.8	1977.8	1978.2	1978.2	1978.2
32.5°	1956.3	1958.3	1956.3	1956.7	1957.1	1958.7
33°	1931.3	1938.0	1931.3	1932.5	1933.2	1937.2
33.5°	1903.0	1911.8	1903.0	1905.4	1905.0	1911.0
34°	1870.4	1880.8	1870.4	1875.2	1872.8	1879.6
34.5°	1835.4	1845.0	1835.4	1840.2	1836.2	1845.8
35°	1796.5	1802.8	1796.5	1799.6	1797.7	1806.4
35.5°	1752.3	1756.7	1752.3	1755.1	1757.5	1762.3
36°	1704.2	1711.0	1704.2	1707.4	1714.6	1713.8
36.5°	1653.3	1660.5	1653.3	1656.9	1666.4	1662.9
37°	1600.0	1608.8	1600.0	1604.8	1613.6	1610.4
37.5°	1545.6	1553.5	1545.6	1549.9	1555.9	1555.9
38°	1490.3	1497.8	1490.3	1493.9	1495.1	1499.0
38.5°	1433.0	1440.6	1433.0	1435.8	1432.6	1439.8
39°	1375.4	1383.3	1375.4	1375.8	1371.0	1377.8
39.5°	1316.9	1324.1	1316.9	1315.3	1309.8	1314.5
40°	1259.7	1263.3	1259.7	1255.3	1249.7	1248.5
40.5°	1202.0	1202.4	1202.0	1194.5	1188.5	1182.5
41°	1144.8	1142.0	1144.8	1136.0	1128.5	1118.5
41.5°	1087.9	1081.9	1087.9	1077.6	1066.8	1055.3
42°	1030.6	1024.3	1030.6	1019.5	1006.8	994.9
42.5°	975.0	967.4	975.0	961.9	947.9	936.4
43°	919.7	913.3	919.7	906.6	891.1	879.5
43.5°	866.8	860.1	866.8	852.5	835.8	825.5



TEST NUMBER: P776482

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMW-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	716.1	710.6	716.1	703.0	684.7	677.6
45.5°	670.4	666.0	670.4	658.1	640.6	634.2
46°	627.1	623.5	627.1	615.5	600.4	593.3
46.5°	586.5	583.7	586.5	574.6	563.8	555.9
47°	549.1	546.3	549.1	537.6	530.0	520.9
47.5°	514.5	511.3	514.5	503.4	499.4	489.9
48°	483.9	479.5	483.9	472.8	470.4	462.0
48.5°	455.3	450.1	455.3	445.7	443.7	437.0
49°	429.4	424.7	429.4	421.5	419.5	414.3
49.5°	406.8	401.2	406.8	400.8	398.4	394.8
50°	386.9	381.7	386.9	382.9	380.1	376.9
50.5°	370.2	365.0	370.2	367.0	364.6	362.2
51°	355.9	351.5	355.9	353.5	352.3	349.9
51.5°	343.5	340.8	343.5	342.8	341.6	339.6
52°	333.6	332.0	333.6	333.2	332.4	331.6
52.5°	324.9	324.9	324.9	324.9	324.5	324.1
53°	317.3	317.7	317.3	317.3	317.3	316.9
53.5°	309.7	310.5	309.7	310.1	310.1	310.1
54°	302.6	303.4	302.6	303.0	303.0	303.0
54.5°	295.4	296.2	295.4	295.8	295.8	295.8
55°	288.3	288.7	288.3	288.3	288.3	288.3
55.5°	280.7	281.1	280.7	281.1	280.7	280.7
56°	273.6	273.6	273.6	273.6	273.2	273.2
56.5°	266.0	266.0	266.0	266.0	266.0	265.6
57°	258.5	258.5	258.5	258.5	258.5	258.1
57.5°	251.3	251.3	251.3	251.3	250.9	250.5
58°	244.1	244.1	244.1	243.7	243.7	242.9
58.5°	237.0	237.0	237.0	236.6	236.6	235.4
59°	229.8	229.8	229.8	229.8	229.4	228.2
59.5°	223.1	223.1	223.1	223.1	222.7	221.5
60°	216.7	216.3	216.7	216.3	215.9	214.3
60.5°	209.9	209.9	209.9	209.9	209.2	207.6
61°	203.6	203.6	203.6	203.6	202.8	201.2
61.5°	197.6	197.6	197.6	197.2	196.4	194.8
62°	191.3	191.3	191.3	191.3	190.1	188.5
62.5°	185.3	185.3	185.3	185.3	184.1	182.5
63°	179.7	179.7	179.7	179.7	178.1	176.1
63.5°	174.2	174.2	174.2	173.8	172.6	170.6
64°	168.6	168.6	168.6	168.2	166.6	165.0
64.5°	163.0	163.0	163.0	163.0	161.0	159.4
65°	157.9	157.5	157.9	157.5	155.5	153.9
65.5°	152.7	152.7	152.7	152.3	150.3	148.7
66°	147.5	147.5	147.5	147.1	145.1	143.5



TEST NUMBER: P776482

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMW-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	133.2	132.8	133.2	132.4	130.4	128.4
68°	128.4	128.4	128.4	128.0	125.6	123.7
68.5°	123.7	123.7	123.7	123.3	120.9	119.3
69°	119.3	119.3	119.3	118.9	116.5	114.5
69.5°	114.9	114.9	114.9	114.5	111.7	110.1
70°	110.5	110.5	110.5	110.1	107.4	105.8
70.5°	106.2	106.2	106.2	105.8	103.0	101.4
71°	102.2	102.2	102.2	101.4	99.0	97.4
71.5°	98.2	97.8	98.2	97.4	94.6	93.0
72°	94.2	93.8	94.2	93.4	90.7	89.1
72.5°	90.3	89.9	90.3	89.5	86.7	85.1
73°	86.3	86.3	86.3	85.5	82.7	81.1
73.5°	82.7	82.7	82.7	81.9	79.1	77.5
74°	79.1	78.7	79.1	77.9	75.5	74.0
74.5°	75.5	75.2	75.5	74.4	71.6	70.4
75°	72.0	72.0	72.0	70.8	68.0	66.8
75.5°	68.4	68.4	68.4	67.2	64.8	63.2
76°	65.2	64.8	65.2	64.0	61.2	60.0
76.5°	61.6	61.6	61.6	60.4	58.1	56.5
77°	58.5	58.5	58.5	57.3	54.9	53.3
77.5°	55.3	55.3	55.3	54.1	51.7	50.5
78°	52.5	52.1	52.5	50.9	48.5	47.3
78.5°	49.3	49.3	49.3	48.1	45.3	44.1
79°	46.5	46.1	46.5	44.9	42.5	41.4
79.5°	43.3	43.3	43.3	42.1	39.4	38.6
80°	40.6	40.6	40.6	39.4	36.6	35.8
80.5°	37.8	37.8	37.8	36.6	33.8	33.0
81°	35.0	35.0	35.0	33.8	31.0	30.2
81.5°	32.6	32.6	32.6	31.0	28.2	27.8
82°	29.8	29.8	29.8	28.2	25.8	25.1
82.5°	27.4	27.4	27.4	25.8	23.1	22.7
83°	25.1	24.7	25.1	23.5	20.7	20.3
83.5°	22.3	22.3	22.3	21.1	18.3	17.9
84°	19.9	19.9	19.9	18.7	15.9	15.5
84.5°	17.9	17.9	17.9	16.3	13.5	13.1
85°	15.5	15.5	15.5	14.3	11.5	11.1
85.5°	13.1	13.1	13.1	12.3	9.5	9.1
86°	11.1	11.1	11.1	10.3	8.0	7.2
86.5°	9.1	9.1	9.1	8.4	6.4	5.6
87°	7.2	7.2	7.2	6.4	4.8	4.4
87.5°	5.6	5.2	5.6	4.8	3.6	3.2
88°	4.0	3.2	4.0	3.6	2.4	2.0
88.5°	2.8	2.0	2.8	2.4	1.6	1.2



TEST NUMBER: P776482

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMW-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.4	0.0	0.4	0.4	0.0	0.0

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

Scaled Data Report



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Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





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

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Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2396.5	2396.9	2397.7	2397.7	2398.1	2397.7	2397.7	2396.9	2396.5	2396.9	2397.7
22°	2379.0	2379.0	2379.4	2379.4	2380.2	2379.4	2379.4	2379.0	2379.0	2379.0	2379.4



44°	773.8	782.5	800.8	814.3	808.4	814.3	800.8	782.5	773.8	782.5	800.8
44.5°	724.9	732.0	750.7	764.6	758.3	764.6	750.7	732.0	724.9	732.0	750.7



66.5°	138.0	140.0	142.0	142.3	142.7	142.3	142.0	140.0	138.0	140.0	142.0
67°	133.2	134.8	137.2	138.0	138.0	138.0	137.2	134.8	133.2	134.8	137.2



89°	0.4	0.8	1.2	2.0	1.2	2.0	1.2	0.8	0.4	0.8	1.2
89.5°	0.0	0.4	0.8	1.2	0.4	1.2	0.8	0.4	0.0	0.4	0.8



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21.5°	2397.7	2398.1	2397.7	2397.7	2396.9	2396.5
22°	2379.4	2380.2	2379.4	2379.4	2379.0	2379.0



44°	814.3	808.4	814.3	800.8	782.5	773.8
44.5°	764.6	758.3	764.6	750.7	732.0	724.9



66.5°	142.3	142.7	142.3	142.0	140.0	138.0
67°	138.0	138.0	138.0	137.2	134.8	133.2

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Peachtree City, GA 30269

Scaled Data Report



89°	2.0	1.2	2.0	1.2	0.8	0.4
89.5°	1.2	0.4	1.2	0.8	0.4	0.0

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1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)