

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: P776506

Luminaire Tested: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776506  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2310613A001)  
Test Lab:  
Issue Date: 2/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K  
Description: 8 INCH ROUND MEDIUM MATTE WHITE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

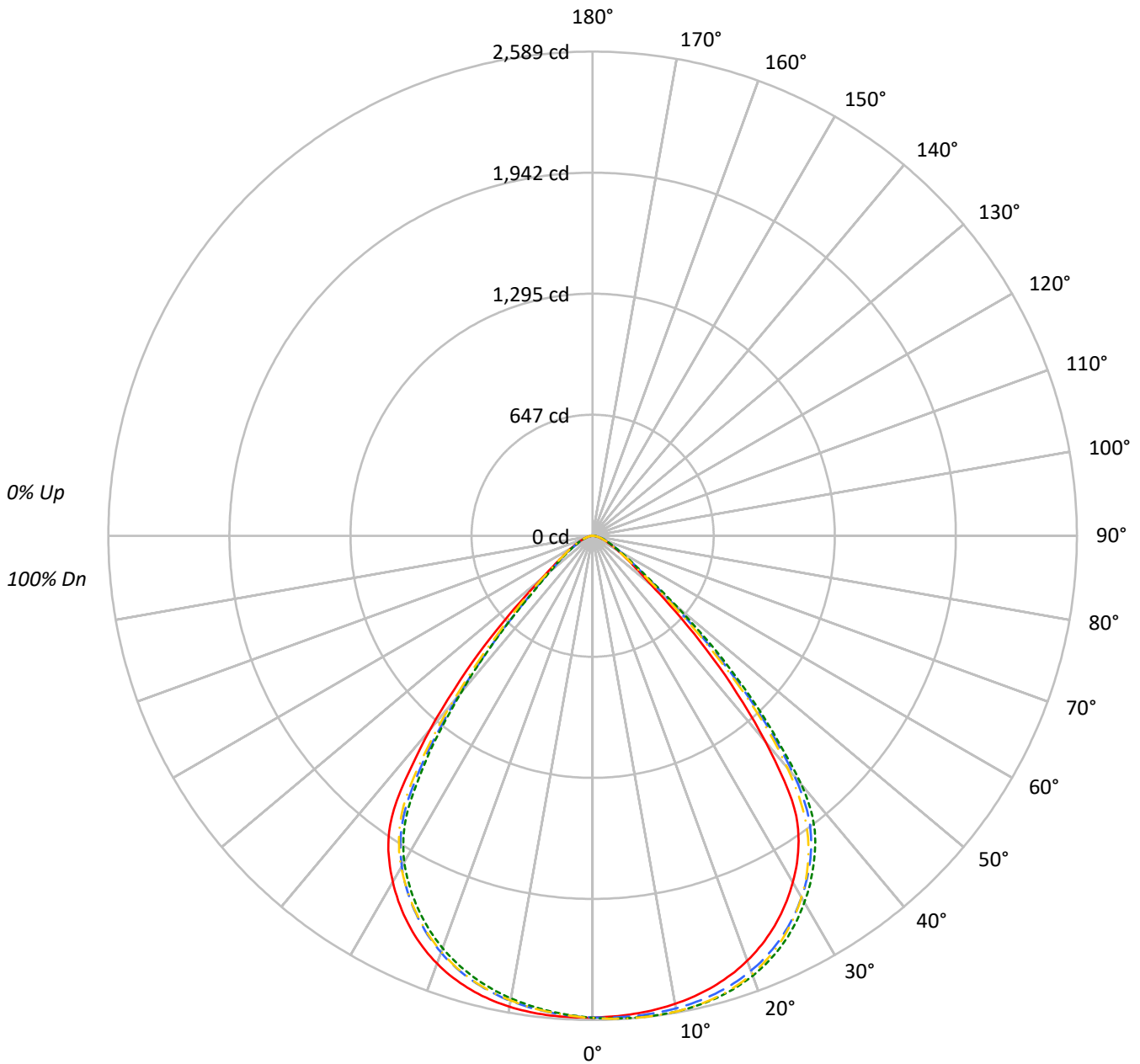
Lumens per Lamp: N/A  
Luminaire Lumens: 4173.9 lumens  
Efficiency: N/A  
Efficacy: 108.4 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.22 / 1.18  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.5  
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: P776506  
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91								
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	84	82								
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	81	78	75	74								
4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66								
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60								
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55								
7	76	65	58	53	74	64	57	52	63	56	52	61	56	52	60	55	51	50								
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46								
9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42								
10	63	52	45	41	62	51	45	41	51	45	40	50	44	40	49	44	40	39								

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

	0°	90°	180°	270°
0°	78670	78670	78670	78670
5°	78637	79284	78913	78251
10°	78780	80079	79280	77872
15°	78860	80877	79442	77289
20°	78557	81341	79067	76230
25°	77536	81097	77812	74255
30°	75460	79835	75336	70990
35°	71362	77184	70356	62044
40°	57299	69215	53792	43573
45°	37188	48776	33267	24226
50°	19702	27714	17137	14016
55°	12849	14728	10933	9789
60°	9220	10252	7907	7358
65°	7152	7918	6162	5852
70°	5766	6534	4963	4713
75°	4754	5580	3975	3739
80°	3780	4888	2954	2760
85°	2732	4519	1646	1366

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 49791 cd/sqm



TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.7	5.9
10°-20°	706.3	16.9
20°-30°	1059.5	25.4
30°-40°	1146.8	27.5
40°-50°	653.1	15.6
50°-60°	216.8	5.2
60°-70°	95.7	2.3
70°-80°	41.7	1.0
80°-90°	9.3	0.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2010.5	48.2
0°-40°	3157.2	75.6
0°-60°	4027.2	96.5
0°-90°	4173.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4173.9	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2577	2577	2577	2577	2577	
5°	2566	2587	2575	2553	2566	244
15°	2495	2559	2513	2445	2495	704
25°	2302	2407	2310	2204	2302	1058
35°	1915	2071	1888	1665	1915	1166
45°	861	1130	770	561	861	670
55°	241	277	205	184	241	225
65°	99	110	85	81	99	101
75°	40	47	34	32	40	43
85°	8	13	5	4	8	9
90°	0	2	0	0	0	



TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2576.8	2576.8	2576.8	2576.8	2576.8	2576.8	2576.8	2576.8	2576.8	2576.8	2576.8
0.5°	2575.6	2576.4	2576.4	2576.8	2578.4	2579.6	2580.7	2579.2	2576.8	2575.6	2574.5
1°	2575.3	2576.4	2576.8	2577.6	2580.0	2581.1	2581.9	2580.0	2577.2	2575.3	2573.3
1.5°	2574.5	2576.0	2577.6	2578.8	2581.1	2582.7	2583.1	2580.7	2577.2	2574.9	2572.1
2°	2573.7	2576.0	2578.0	2580.0	2582.3	2584.3	2584.3	2581.5	2577.2	2574.1	2570.6
2.5°	2572.9	2575.6	2578.4	2580.7	2583.5	2585.0	2585.0	2581.9	2577.2	2573.3	2569.0
3°	2571.7	2575.3	2578.4	2581.5	2584.7	2586.6	2585.8	2582.3	2577.2	2572.1	2567.4
3.5°	2570.2	2574.9	2578.4	2582.3	2585.4	2587.4	2587.0	2582.3	2576.4	2571.3	2565.5
4°	2569.0	2574.1	2578.4	2582.7	2586.2	2588.2	2587.4	2582.7	2576.0	2570.2	2563.5
4.5°	2567.8	2572.9	2578.0	2583.1	2586.6	2589.0	2587.8	2582.7	2575.6	2568.6	2561.6
5°	2565.9	2571.7	2577.6	2583.1	2587.0	2589.3	2588.2	2582.3	2574.9	2567.0	2559.2
5.5°	2564.3	2571.0	2577.2	2583.5	2587.0	2589.7	2588.2	2581.9	2574.1	2565.5	2556.9
6°	2562.3	2569.4	2576.4	2583.5	2587.4	2590.1	2588.6	2581.5	2572.9	2563.5	2554.1
6.5°	2560.4	2568.2	2575.6	2583.1	2587.4	2590.1	2588.6	2580.7	2571.7	2561.6	2551.4
7°	2558.4	2566.3	2574.9	2582.7	2587.4	2590.1	2588.2	2580.0	2570.2	2559.2	2548.3
7.5°	2556.1	2564.7	2573.7	2582.3	2587.0	2590.1	2587.8	2579.2	2568.6	2556.9	2545.1
8°	2553.3	2562.7	2572.5	2581.5	2586.6	2589.7	2587.0	2578.0	2566.6	2554.5	2541.6
8.5°	2550.6	2560.8	2571.0	2580.7	2585.8	2589.3	2586.2	2576.4	2564.7	2551.4	2538.1
9°	2547.9	2558.4	2569.4	2579.6	2585.0	2589.0	2585.4	2574.9	2562.3	2548.6	2534.2
9.5°	2544.7	2555.7	2567.8	2578.8	2584.3	2587.8	2584.3	2572.9	2560.0	2545.1	2529.9
10°	2541.2	2553.0	2565.5	2577.2	2583.1	2587.0	2582.7	2571.0	2557.3	2541.6	2525.2
10.5°	2537.7	2550.2	2563.5	2576.0	2581.5	2585.4	2581.1	2568.6	2554.1	2537.7	2520.9
11°	2534.2	2547.1	2561.2	2574.1	2580.0	2583.9	2579.2	2566.3	2550.6	2533.4	2516.2
11.5°	2529.9	2543.6	2558.8	2572.5	2578.4	2582.3	2577.2	2563.5	2547.1	2529.5	2511.1
12°	2525.6	2540.0	2556.1	2570.6	2576.4	2580.3	2574.9	2560.4	2543.2	2524.8	2505.2
12.5°	2521.3	2536.5	2553.0	2568.2	2574.1	2578.4	2572.1	2556.9	2538.9	2519.7	2499.7
13°	2516.2	2532.2	2549.8	2565.5	2571.7	2576.0	2569.4	2553.0	2534.6	2514.2	2493.5
13.5°	2511.5	2527.9	2546.3	2563.1	2568.6	2573.3	2565.9	2549.0	2529.9	2508.7	2487.2
14°	2506.4	2523.2	2542.8	2560.0	2565.9	2570.2	2562.3	2544.7	2524.8	2502.9	2480.2
14.5°	2500.9	2518.5	2538.9	2556.9	2562.3	2567.0	2558.8	2540.0	2519.3	2496.6	2473.5
15°	2495.0	2513.8	2535.0	2553.3	2558.8	2563.5	2554.9	2535.0	2513.4	2489.6	2466.1
15.5°	2488.8	2508.3	2530.3	2549.4	2554.5	2559.6	2550.6	2529.9	2507.2	2482.5	2458.3
16°	2482.1	2502.9	2525.6	2545.1	2550.6	2555.3	2545.9	2524.0	2500.5	2475.1	2450.0
16.5°	2475.5	2497.0	2520.5	2540.8	2545.9	2551.0	2540.4	2517.7	2493.5	2467.3	2441.8
17°	2468.0	2490.7	2515.4	2536.1	2540.8	2546.3	2535.0	2511.1	2486.4	2459.0	2432.4
17.5°	2461.0	2484.1	2509.5	2531.0	2535.7	2541.2	2529.1	2504.0	2478.6	2450.8	2423.4
18°	2453.2	2477.4	2503.6	2525.2	2530.3	2535.7	2522.8	2496.6	2470.4	2441.4	2413.6
18.5°	2444.9	2470.0	2497.0	2519.7	2524.0	2529.5	2515.8	2489.2	2461.8	2432.0	2403.9
19°	2435.9	2462.6	2490.3	2513.4	2517.3	2522.8	2508.7	2481.0	2453.2	2422.3	2393.3
19.5°	2426.9	2454.7	2483.3	2506.8	2510.7	2516.6	2501.7	2472.3	2443.4	2412.1	2381.9
20°	2417.9	2446.1	2475.1	2499.7	2503.6	2509.1	2493.9	2463.0	2433.6	2401.1	2370.6
20.5°	2408.2	2437.5	2467.6	2492.3	2495.8	2501.3	2485.3	2453.6	2423.4	2390.2	2359.3
21°	2398.0	2428.5	2459.4	2484.9	2488.0	2493.1	2476.3	2443.4	2412.5	2378.4	2346.3



TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2365.1	2398.4	2431.6	2458.6	2461.0	2466.5	2446.9	2410.9	2377.6	2341.3	2307.2
23°	2353.4	2387.8	2421.9	2449.3	2451.6	2456.3	2436.3	2398.8	2365.1	2327.6	2292.7
23.5°	2340.9	2376.9	2411.3	2439.5	2441.4	2446.5	2424.6	2386.6	2351.4	2313.5	2278.2
24°	2328.3	2365.1	2399.9	2428.9	2430.5	2435.6	2413.3	2373.7	2338.1	2299.0	2263.4
24.5°	2315.0	2353.4	2389.4	2417.9	2419.1	2424.2	2401.1	2360.4	2324.4	2284.5	2247.7
25°	2301.7	2340.5	2377.3	2406.6	2407.4	2412.5	2388.6	2346.7	2309.9	2268.9	2231.7
25.5°	2287.6	2327.6	2365.1	2394.9	2395.3	2400.3	2375.3	2332.3	2294.7	2252.4	2215.2
26°	2272.8	2314.2	2351.8	2382.7	2383.1	2387.8	2361.6	2317.4	2278.6	2236.0	2198.0
26.5°	2257.9	2300.2	2339.3	2369.8	2369.4	2374.5	2347.1	2301.7	2263.0	2219.9	2181.2
27°	2242.6	2286.1	2325.6	2356.9	2356.1	2360.4	2332.6	2286.1	2246.6	2202.3	2162.8
27.5°	2227.0	2270.8	2311.1	2343.2	2342.0	2346.3	2317.4	2269.6	2229.7	2184.7	2144.4
28°	2210.9	2255.9	2297.0	2329.1	2327.6	2331.5	2301.7	2253.2	2212.1	2167.1	2125.2
28.5°	2193.7	2239.9	2281.4	2314.2	2312.3	2316.6	2285.3	2235.6	2194.1	2147.9	2106.1
29°	2176.5	2223.9	2266.1	2299.4	2297.0	2300.6	2268.1	2217.6	2175.7	2128.8	2085.3
29.5°	2158.5	2206.6	2249.7	2284.1	2281.0	2284.1	2250.9	2198.8	2156.5	2108.8	2063.4
30°	2140.5	2189.8	2233.6	2267.7	2264.6	2267.3	2232.9	2180.0	2137.0	2088.9	2040.7
30.5°	2120.9	2172.2	2216.0	2251.6	2247.3	2250.1	2214.9	2160.9	2116.2	2066.9	2016.8
31°	2101.8	2153.8	2198.8	2234.4	2229.7	2232.5	2195.7	2140.1	2096.3	2044.6	1992.6
31.5°	2082.2	2133.9	2180.8	2216.8	2211.3	2213.7	2176.1	2118.6	2074.0	2021.9	1966.8
32°	2061.9	2115.5	2162.0	2198.4	2194.1	2195.3	2155.4	2096.3	2051.7	1998.5	1939.8
32.5°	2040.3	2095.1	2142.9	2180.4	2174.5	2175.7	2133.5	2073.2	2028.6	1972.6	1910.8
33°	2018.0	2074.4	2123.7	2161.6	2155.0	2155.4	2110.8	2049.7	2004.7	1945.2	1879.5
33.5°	1993.8	2053.2	2103.7	2142.1	2134.6	2134.6	2088.1	2024.3	1978.5	1915.5	1844.7
34°	1969.5	2030.5	2082.6	2122.5	2114.3	2112.7	2063.0	1998.1	1951.1	1883.8	1805.5
34.5°	1942.9	2005.9	2059.9	2101.8	2092.8	2089.6	2038.4	1970.3	1921.4	1844.7	1762.5
35°	1914.7	1980.8	2037.2	2080.6	2070.9	2066.2	2011.8	1940.5	1887.7	1803.6	1715.1
35.5°	1883.0	1953.5	2012.2	2058.3	2048.2	2041.9	1984.0	1906.5	1849.0	1759.0	1663.1
36°	1850.5	1924.5	1986.7	2035.2	2025.1	2016.8	1953.1	1868.9	1807.5	1708.1	1607.9
36.5°	1813.4	1894.0	1958.9	2011.8	1999.6	1989.1	1920.2	1829.4	1760.1	1652.9	1551.2
37°	1770.3	1858.4	1930.0	1985.9	1973.0	1958.9	1885.0	1788.3	1705.8	1595.0	1493.3
37.5°	1719.4	1818.8	1897.9	1957.4	1942.5	1925.7	1846.2	1741.8	1645.5	1534.4	1432.2
38°	1664.7	1774.2	1861.1	1925.7	1909.6	1890.8	1805.5	1694.4	1583.3	1471.0	1370.0
38.5°	1607.5	1723.8	1820.4	1890.8	1872.8	1852.1	1764.1	1643.1	1520.7	1406.8	1306.6
39°	1550.4	1668.6	1777.4	1851.7	1833.3	1811.8	1718.7	1591.5	1462.7	1342.6	1243.6
39.5°	1494.0	1613.0	1730.4	1811.0	1787.9	1765.6	1671.3	1534.0	1406.4	1280.4	1180.6
40°	1437.7	1559.0	1679.9	1764.8	1736.7	1719.1	1619.7	1476.8	1349.7	1219.7	1117.2
40.5°	1378.6	1507.0	1625.1	1715.1	1675.2	1667.4	1568.0	1415.8	1290.6	1158.7	1055.0
41°	1319.9	1452.2	1567.6	1661.5	1612.2	1616.1	1514.4	1355.1	1229.1	1096.1	993.6
41.5°	1260.8	1396.2	1508.9	1604.4	1547.7	1560.6	1460.0	1294.1	1168.5	1033.9	934.5
42°	1201.7	1337.5	1449.8	1543.0	1487.0	1501.9	1403.7	1235.8	1108.2	975.9	874.2
42.5°	1143.0	1275.7	1389.2	1479.2	1431.0	1440.8	1343.0	1174.3	1049.5	918.0	816.3
43°	1086.3	1214.3	1326.2	1413.0	1374.3	1380.6	1279.6	1114.1	993.2	863.2	762.7
43.5°	1029.9	1153.6	1264.7	1348.9	1314.8	1319.1	1217.0	1053.4	938.0	810.4	709.8



TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	861.3	975.6	1075.7	1153.2	1129.7	1139.1	1025.3	877.7	770.5	662.1	572.5
45.5°	807.3	916.9	1011.9	1092.6	1069.9	1079.6	960.3	820.6	717.7	614.8	531.8
46°	754.1	858.5	947.8	1029.6	1012.3	1019.4	902.4	764.6	666.4	571.3	495.8
46.5°	702.8	801.4	887.1	971.2	955.6	959.1	840.9	709.8	618.3	527.5	461.8
47°	652.7	745.9	826.9	913.3	898.9	900.0	784.6	658.2	573.3	488.8	430.8
47.5°	602.6	691.1	772.9	858.2	841.3	841.3	730.2	607.7	529.1	453.1	402.3
48°	558.4	640.2	719.6	804.5	784.6	785.0	678.9	560.4	487.6	420.7	376.8
48.5°	516.1	591.7	668.8	754.1	730.2	729.8	626.9	515.0	448.8	390.1	357.3
49°	477.8	545.9	622.2	702.8	678.5	675.0	579.5	473.9	413.6	368.2	337.3
49.5°	443.0	506.0	578.4	654.7	630.0	623.0	535.3	436.7	382.3	346.3	317.4
50°	414.8	468.0	538.1	607.3	583.5	572.1	494.2	403.4	360.8	324.4	297.4
50.5°	389.4	435.1	499.3	561.9	538.5	526.3	453.9	374.1	339.3	302.5	277.4
51°	366.3	405.8	464.5	520.1	493.5	482.9	419.1	351.8	317.7	281.0	264.9
51.5°	345.1	381.1	432.4	481.3	455.1	445.7	387.0	329.1	296.2	267.7	253.2
52°	326.7	358.1	403.1	445.3	418.3	410.9	364.3	306.4	275.1	255.9	241.8
52.5°	309.1	338.1	377.2	412.8	385.4	380.0	341.6	284.1	262.6	244.6	230.1
53°	292.3	319.3	352.6	383.9	363.5	356.5	319.3	269.6	250.8	232.8	219.1
53.5°	277.1	302.1	330.7	357.7	342.0	333.4	296.6	257.5	239.1	221.5	208.6
54°	265.3	285.7	309.9	333.0	320.1	309.9	274.3	245.7	227.7	210.5	198.8
54.5°	253.6	272.4	291.9	311.9	298.2	286.8	261.4	233.6	216.4	200.4	189.4
55°	241.4	259.8	276.3	292.3	276.7	272.4	249.3	221.9	205.4	190.6	180.4
55.5°	230.1	248.1	263.7	276.3	263.4	260.2	237.1	210.9	195.3	181.6	172.6
56°	219.1	236.4	251.2	263.4	251.6	247.7	225.0	200.0	186.3	173.4	164.7
56.5°	208.6	225.0	239.9	251.2	239.1	235.6	213.7	190.2	177.7	165.5	157.7
57°	198.4	214.1	227.7	239.1	227.0	223.8	203.1	181.2	169.0	158.5	151.0
57.5°	189.4	203.5	216.8	227.4	215.6	212.1	192.9	173.0	161.6	151.8	144.8
58°	180.4	193.7	205.8	215.6	204.7	201.5	183.5	164.7	154.6	145.2	138.9
58.5°	172.6	184.7	196.0	205.1	194.5	191.7	174.9	157.3	147.9	139.3	133.0
59°	164.7	176.5	186.7	194.9	185.1	182.4	166.7	150.3	141.7	133.4	127.6
59.5°	158.1	168.7	178.0	185.5	176.1	173.7	158.9	144.0	135.4	128.0	122.5
60°	151.0	161.2	169.8	176.9	167.9	165.5	151.8	138.1	129.5	122.9	117.8
60.5°	144.4	154.2	162.4	168.7	160.4	158.1	145.6	132.3	124.4	117.8	113.1
61°	138.9	147.9	155.4	160.8	153.4	151.0	139.3	126.8	119.0	113.1	108.8
61.5°	133.4	141.3	148.7	153.8	146.7	144.8	133.4	121.7	113.9	108.8	104.5
62°	128.0	136.2	142.4	147.1	140.5	138.1	128.0	116.6	109.2	104.1	100.6
62.5°	122.5	130.7	137.4	140.5	134.6	132.7	122.5	111.9	104.9	100.2	96.7
63°	117.0	125.6	131.9	135.4	128.7	126.8	117.8	107.6	100.6	96.3	92.7
63.5°	112.3	120.1	126.8	129.9	123.7	121.7	113.1	103.3	96.7	92.4	89.2
64°	107.6	115.0	121.3	124.8	118.6	117.0	108.4	99.0	92.4	88.4	85.7
64.5°	103.3	110.4	115.8	119.7	113.9	112.3	104.5	95.1	88.8	85.3	82.2
65°	99.0	105.7	111.5	114.7	109.6	108.0	100.2	91.2	85.3	81.4	79.0
65.5°	94.7	101.7	106.8	110.4	104.9	103.7	96.3	87.7	81.8	78.3	75.9
66°	91.2	97.4	102.9	106.0	101.0	99.8	92.4	84.1	78.3	75.1	72.8





TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	80.2	86.1	91.2	93.9	89.6	88.4	82.2	74.4	68.9	66.1	64.2
68°	76.7	82.6	87.7	90.4	86.1	84.9	79.0	71.2	66.1	63.4	61.4
68.5°	73.6	79.0	84.1	86.9	82.6	81.4	75.5	68.1	63.4	60.7	59.1
69°	70.4	75.9	80.6	83.4	79.4	78.3	72.8	65.3	60.7	57.9	56.3
69.5°	67.7	72.8	77.5	79.8	76.3	75.1	69.7	62.6	57.9	55.6	54.0
70°	64.6	69.7	74.4	76.7	73.2	72.0	66.9	59.9	55.6	52.8	51.7
70.5°	61.8	66.9	71.2	73.6	70.0	69.3	64.2	57.1	52.8	50.5	49.3
71°	59.1	63.8	68.5	70.8	67.3	66.5	61.4	54.8	50.5	48.1	47.0
71.5°	56.3	61.0	65.7	67.7	64.6	63.8	59.1	52.4	48.1	45.8	44.6
72°	54.0	58.7	63.0	65.0	61.8	61.0	56.3	50.1	45.8	43.4	42.7
72.5°	51.7	56.0	60.3	62.2	59.5	58.3	54.0	47.7	43.8	41.5	40.3
73°	49.3	53.6	57.5	59.9	56.7	56.0	51.7	45.4	41.5	39.5	38.3
73.5°	47.0	50.9	55.2	57.1	54.4	53.6	49.3	43.4	39.5	37.2	36.4
74°	44.6	48.5	52.8	54.8	52.0	51.3	47.0	41.1	37.6	35.2	34.4
74.5°	42.3	46.2	50.1	52.4	49.7	48.9	45.0	39.1	35.6	33.3	32.9
75°	40.3	44.2	48.1	50.1	47.3	46.6	42.7	37.2	33.7	31.7	30.9
75.5°	38.0	41.9	45.8	47.7	45.4	44.6	40.7	35.2	31.7	29.7	29.0
76°	36.0	39.5	43.4	45.8	43.0	42.7	38.7	33.3	29.7	27.8	27.4
76.5°	34.0	37.6	41.5	43.4	41.1	40.3	36.8	31.3	28.2	26.2	25.4
77°	32.1	35.6	39.1	41.5	39.1	38.3	34.8	29.7	26.2	24.3	23.9
77.5°	30.1	33.7	37.2	39.1	37.2	36.4	32.9	27.8	24.7	22.7	21.9
78°	28.6	31.7	35.2	37.2	35.2	34.4	30.9	25.8	22.7	21.1	20.3
78.5°	26.6	29.7	33.3	35.6	33.3	32.9	29.3	24.3	21.1	19.6	18.8
79°	25.0	28.2	31.7	33.7	31.3	30.9	27.4	22.7	19.6	18.0	17.6
79.5°	23.1	26.2	29.7	31.7	29.7	29.3	25.4	21.1	18.4	16.4	16.0
80°	21.5	24.7	27.8	29.7	27.8	27.4	23.9	19.6	16.8	14.9	14.5
80.5°	20.0	22.7	26.2	28.2	26.2	25.4	22.3	18.0	15.3	13.7	13.3
81°	18.4	21.1	24.3	26.2	24.7	24.3	20.7	16.4	14.1	12.1	11.7
81.5°	16.8	19.6	22.7	24.7	22.7	22.3	19.2	14.9	12.5	11.0	10.6
82°	15.7	18.0	21.1	23.1	21.1	20.7	18.0	13.7	11.3	9.8	9.4
82.5°	14.1	16.4	19.6	21.5	20.0	19.6	16.4	12.1	10.2	8.6	8.2
83°	12.9	15.3	18.0	20.0	18.4	18.0	14.9	11.0	9.0	7.4	7.0
83.5°	11.3	13.7	16.8	18.4	16.8	16.4	13.7	9.8	7.8	6.3	6.3
84°	10.2	12.5	15.3	17.2	15.7	15.3	12.5	8.6	6.7	5.1	5.1
84.5°	9.0	11.0	14.1	15.7	14.1	13.7	11.3	7.4	5.5	3.9	4.3
85°	7.8	9.8	12.5	14.5	12.9	12.5	9.8	6.3	4.7	3.1	3.1
85.5°	6.7	8.6	11.3	13.3	11.7	11.3	8.6	5.1	3.5	2.3	2.3
86°	5.5	7.4	9.8	11.7	10.6	10.2	7.8	4.3	2.7	2.0	1.6
86.5°	4.3	6.3	8.6	10.6	9.4	9.0	6.7	3.5	2.0	1.2	0.8
87°	3.5	5.1	7.8	9.4	8.2	7.8	5.5	2.7	1.6	0.8	0.0
87.5°	2.7	3.9	6.7	8.2	7.0	6.7	4.7	2.0	0.8	0.4	0.0
88°	2.0	3.1	5.5	7.0	5.9	5.9	3.9	1.6	0.4	0.0	0.0
88.5°	1.2	2.3	4.7	5.9	5.1	4.7	2.7	0.8	0.0	0.0	0.0



TEST NUMBER: P776506  
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.4	2.0	3.1	2.0	2.0	0.4	0.0	0.0	0.0	0.0



TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2576.8	2576.8	2576.8	2576.8	2576.8	2576.8
0.5°	2573.7	2575.6	2576.0	2577.6	2577.2	2575.6
1°	2572.1	2573.7	2574.1	2576.0	2576.0	2575.3
1.5°	2570.2	2571.3	2572.1	2574.1	2574.5	2574.5
2°	2568.2	2569.4	2569.8	2572.1	2573.3	2573.7
2.5°	2565.9	2567.0	2567.4	2570.2	2571.7	2572.9
3°	2563.9	2564.7	2565.1	2567.8	2569.8	2571.7
3.5°	2561.2	2562.0	2562.3	2565.9	2568.2	2570.2
4°	2558.8	2559.2	2560.0	2563.5	2566.6	2569.0
4.5°	2556.1	2556.5	2556.9	2561.2	2564.7	2567.8
5°	2553.0	2553.3	2553.7	2558.4	2562.7	2565.9
5.5°	2549.8	2550.2	2550.6	2556.1	2560.4	2564.3
6°	2546.3	2546.3	2547.1	2553.0	2558.0	2562.3
6.5°	2542.8	2543.2	2543.6	2549.8	2555.3	2560.4
7°	2538.9	2539.3	2540.0	2546.7	2553.0	2558.4
7.5°	2535.0	2535.3	2535.7	2543.6	2550.2	2556.1
8°	2531.0	2530.6	2531.8	2539.6	2547.1	2553.3
8.5°	2526.3	2526.3	2527.5	2536.1	2544.0	2550.6
9°	2522.0	2521.6	2522.8	2532.2	2540.8	2547.9
9.5°	2517.0	2517.3	2517.7	2527.5	2537.3	2544.7
10°	2511.9	2511.9	2513.0	2523.2	2533.4	2541.2
10.5°	2506.8	2506.4	2507.6	2518.5	2529.5	2537.7
11°	2500.9	2500.9	2502.1	2513.8	2525.2	2534.2
11.5°	2495.0	2495.0	2495.8	2508.7	2520.9	2529.9
12°	2488.8	2488.8	2490.0	2503.3	2516.2	2525.6
12.5°	2482.5	2482.1	2483.3	2497.4	2510.7	2521.3
13°	2475.9	2475.5	2476.3	2491.1	2505.6	2516.2
13.5°	2468.8	2468.4	2469.6	2484.9	2500.1	2511.5
14°	2461.4	2461.0	2462.2	2478.2	2494.3	2506.4
14.5°	2453.6	2453.6	2454.3	2471.2	2488.0	2500.9
15°	2445.7	2445.3	2446.5	2463.7	2481.3	2495.0
15.5°	2437.5	2436.7	2437.9	2455.5	2474.7	2488.8
16°	2428.5	2428.5	2428.9	2447.3	2467.3	2482.1
16.5°	2419.5	2419.5	2419.9	2438.7	2459.8	2475.5
17°	2409.7	2410.1	2410.5	2429.7	2451.6	2468.0
17.5°	2400.3	2400.3	2400.3	2420.7	2443.4	2461.0
18°	2389.8	2390.6	2390.2	2410.5	2434.4	2453.2
18.5°	2379.2	2379.6	2379.2	2400.3	2425.4	2444.9
19°	2368.3	2368.6	2368.3	2389.4	2415.6	2435.9
19.5°	2356.5	2358.1	2356.9	2378.8	2405.4	2426.9
20°	2344.8	2346.3	2344.4	2366.7	2394.9	2417.9
20.5°	2332.6	2333.8	2332.3	2355.3	2384.3	2408.2
21°	2319.7	2321.3	2319.3	2342.8	2373.3	2398.0



TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2279.0	2280.6	2278.2	2302.9	2336.9	2365.1
23°	2264.2	2266.5	2263.4	2289.2	2323.6	2353.4
23.5°	2248.9	2251.6	2248.9	2274.3	2310.3	2340.9
24°	2233.2	2236.4	2233.2	2259.5	2296.2	2328.3
24.5°	2217.6	2220.7	2217.2	2244.6	2282.2	2315.0
25°	2200.8	2204.3	2200.8	2228.2	2267.3	2301.7
25.5°	2183.9	2187.9	2183.9	2212.1	2252.4	2287.6
26°	2165.9	2170.6	2167.1	2195.3	2236.8	2272.8
26.5°	2148.7	2153.4	2149.1	2178.5	2221.1	2257.9
27°	2129.9	2135.0	2130.7	2160.9	2204.3	2242.6
27.5°	2111.2	2116.2	2112.3	2142.9	2187.5	2227.0
28°	2091.6	2097.1	2092.8	2124.1	2170.2	2210.9
28.5°	2070.9	2077.9	2073.6	2105.3	2152.6	2193.7
29°	2048.2	2057.2	2053.2	2086.1	2134.2	2176.5
29.5°	2024.7	2036.0	2032.1	2066.5	2115.1	2158.5
30°	2000.8	2013.7	2009.4	2046.6	2096.3	2140.5
30.5°	1975.4	1989.5	1985.5	2025.5	2076.7	2120.9
31°	1948.8	1964.4	1959.7	2002.8	2056.8	2101.8
31.5°	1920.6	1937.0	1933.9	1979.3	2036.0	2082.2
32°	1890.1	1908.1	1906.5	1953.8	2013.3	2061.9
32.5°	1858.0	1877.1	1877.9	1927.6	1990.2	2040.3
33°	1823.1	1843.5	1847.4	1899.5	1965.6	2018.0
33.5°	1782.4	1807.9	1813.4	1870.1	1939.8	1993.8
34°	1736.3	1766.4	1775.4	1838.0	1912.8	1969.5
34.5°	1684.6	1718.7	1728.8	1802.4	1883.4	1942.9
35°	1631.0	1664.7	1675.6	1761.3	1852.5	1914.7
35.5°	1575.4	1608.7	1618.5	1714.8	1818.1	1883.0
36°	1518.3	1555.1	1557.8	1664.3	1777.8	1850.5
36.5°	1463.5	1503.4	1496.4	1609.5	1732.4	1813.4
37°	1408.7	1449.4	1436.1	1553.1	1681.5	1770.3
37.5°	1353.2	1390.0	1378.2	1492.1	1625.5	1719.4
38°	1296.0	1328.1	1321.9	1429.1	1567.6	1664.7
38.5°	1234.2	1265.5	1262.0	1366.9	1508.1	1607.5
39°	1173.2	1205.6	1202.9	1304.3	1448.3	1550.4
39.5°	1110.6	1148.9	1143.0	1242.4	1385.7	1494.0
40°	1050.3	1093.3	1084.7	1177.9	1324.6	1437.7
40.5°	988.9	1038.6	1026.4	1114.9	1263.2	1378.6
41°	929.4	981.4	971.2	1053.0	1203.3	1319.9
41.5°	871.5	923.9	916.5	996.7	1145.4	1260.8
42°	813.5	866.8	861.3	939.2	1086.7	1201.7
42.5°	756.0	812.4	808.5	884.8	1025.3	1143.0
43°	700.8	760.7	757.6	832.3	967.7	1086.3
43.5°	650.4	708.7	707.5	782.2	911.8	1029.9



TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	519.3	561.1	574.5	646.1	753.7	861.3
45.5°	482.5	516.9	535.3	605.8	705.9	807.3
46°	448.8	477.4	498.9	567.8	660.2	754.1
46.5°	419.5	443.8	465.3	532.2	618.3	702.8
47°	393.7	414.8	434.4	498.5	577.2	652.7
47.5°	369.8	389.4	406.6	466.5	539.6	602.6
48°	351.4	367.4	381.5	436.7	504.0	558.4
48.5°	333.4	347.9	359.2	409.7	471.9	516.1
49°	315.0	329.9	338.1	384.3	441.4	477.8
49.5°	296.6	311.9	318.9	360.8	412.8	443.0
50°	278.6	295.1	300.9	338.1	387.0	414.8
50.5°	266.5	280.2	284.9	317.7	363.1	389.4
51°	254.7	267.7	271.2	299.0	341.2	366.3
51.5°	243.4	256.3	259.4	282.1	320.5	345.1
52°	232.1	245.0	248.1	268.8	301.7	326.7
52.5°	221.1	233.6	236.7	257.5	285.3	309.1
53°	210.5	222.3	225.4	245.7	271.6	292.3
53.5°	200.4	212.1	214.4	234.0	259.8	277.1
54°	191.4	201.9	204.3	222.7	247.7	265.3
54.5°	182.7	192.5	195.3	212.1	236.0	253.6
55°	174.5	183.9	186.3	201.9	224.6	241.4
55.5°	167.1	175.7	178.0	192.9	214.1	230.1
56°	159.7	167.9	169.8	183.9	203.9	219.1
56.5°	153.0	160.8	162.8	175.7	194.5	208.6
57°	146.7	153.8	155.7	168.3	185.5	198.4
57.5°	140.9	147.5	149.1	160.8	177.3	189.4
58°	134.6	141.3	143.2	154.2	169.4	180.4
58.5°	129.5	135.8	138.1	147.5	162.0	172.6
59°	124.0	130.7	132.7	141.3	155.0	164.7
59.5°	119.4	125.6	127.6	136.2	148.7	158.1
60°	114.7	120.5	122.5	131.1	142.4	151.0
60.5°	110.0	115.8	117.0	126.0	137.4	144.4
61°	105.7	111.1	112.3	120.9	132.3	138.9
61.5°	101.7	106.8	108.0	115.8	126.8	133.4
62°	97.8	102.9	104.1	111.5	121.7	128.0
62.5°	93.9	98.6	99.8	107.2	116.6	122.5
63°	90.0	94.7	95.9	102.9	111.9	117.0
63.5°	86.5	91.2	92.4	98.6	107.6	112.3
64°	83.4	87.7	88.4	95.1	102.9	107.6
64.5°	79.8	84.1	85.3	91.2	99.0	103.3
65°	76.7	81.0	81.8	87.7	95.1	99.0
65.5°	73.6	77.5	78.7	84.1	91.2	94.7
66°	70.8	74.4	75.1	81.0	87.7	91.2



TEST NUMBER: P776506

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	62.2	65.7	66.5	71.6	77.1	80.2
68°	59.9	63.0	63.8	68.5	74.0	76.7
68.5°	57.1	60.3	61.0	65.7	70.8	73.6
69°	54.8	57.9	58.7	63.0	67.7	70.4
69.5°	52.4	55.2	56.0	60.3	65.0	67.7
70°	50.1	52.8	53.6	57.9	62.2	64.6
70.5°	47.7	50.5	51.3	55.2	59.5	61.8
71°	45.4	48.1	48.9	52.8	56.7	59.1
71.5°	43.4	46.2	46.6	50.5	54.4	56.3
72°	41.5	43.8	44.2	48.1	51.7	54.0
72.5°	39.1	41.9	42.3	45.8	49.3	51.7
73°	37.2	39.5	40.3	43.8	47.0	49.3
73.5°	35.6	37.6	38.0	41.5	44.6	47.0
74°	33.3	35.6	36.0	39.5	42.7	44.6
74.5°	31.7	33.7	34.0	37.2	40.3	42.3
75°	29.7	31.7	32.5	35.2	38.3	40.3
75.5°	28.2	30.1	30.5	33.3	36.0	38.0
76°	26.2	28.2	28.6	31.7	34.4	36.0
76.5°	24.7	26.6	27.0	29.7	32.5	34.0
77°	23.1	24.7	25.0	27.8	30.5	32.1
77.5°	21.1	23.1	23.5	26.2	28.6	30.1
78°	20.0	21.5	21.9	24.3	26.6	28.6
78.5°	18.4	20.0	20.3	22.7	25.0	26.6
79°	16.8	18.4	18.8	21.1	23.1	25.0
79.5°	15.7	17.2	17.2	19.6	21.5	23.1
80°	14.1	15.7	16.0	18.0	20.0	21.5
80.5°	12.9	14.5	14.5	16.4	18.4	20.0
81°	11.3	12.9	13.3	15.3	16.8	18.4
81.5°	10.2	11.7	12.1	13.7	15.3	16.8
82°	9.0	10.6	11.0	12.5	14.1	15.7
82.5°	7.8	9.4	9.8	11.3	12.5	14.1
83°	6.7	8.2	8.2	9.8	11.3	12.9
83.5°	5.9	7.0	7.0	8.6	9.8	11.3
84°	4.7	5.9	6.3	7.4	8.6	10.2
84.5°	3.5	4.7	5.1	6.7	7.4	9.0
85°	2.7	3.9	3.9	5.5	6.3	7.8
85.5°	1.6	2.7	3.1	4.3	5.1	6.7
86°	0.8	2.0	2.0	3.5	4.3	5.5
86.5°	0.0	0.8	0.8	2.3	3.5	4.3
87°	0.0	0.0	0.0	1.6	2.7	3.5
87.5°	0.0	0.0	0.0	0.8	2.0	2.7
88°	0.0	0.0	0.0	0.0	1.2	2.0
88.5°	0.0	0.0	0.0	0.0	0.8	1.2



TEST NUMBER: P776506  
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRMW-4000lm-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



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°	2387.4	2418.7	2450.4	2476.6	2479.4	2484.5	2466.9	2433.2	2401.1	2366.7	2333.8
22°	2376.1	2408.9	2441.0	2468.0	2470.4	2475.9	2457.1	2421.9	2389.8	2353.8	2320.9



44°	973.6	1093.7	1202.9	1282.7	1253.4	1259.7	1154.0	995.5	882.4	761.5	661.3
44.5°	916.5	1034.6	1140.3	1220.1	1190.8	1200.6	1089.4	935.6	826.5	709.8	615.5



66.5°	87.3	93.5	99.0	101.7	97.0	95.5	88.8	80.6	75.1	72.0	70.0
67°	83.7	89.6	94.7	97.8	93.1	92.0	85.3	77.5	72.0	68.9	66.9



89°	0.4	2.0	3.5	5.1	3.9	3.9	2.0	0.4	0.0	0.0	0.0
89.5°	0.0	1.2	2.7	3.9	3.1	2.7	1.2	0.0	0.0	0.0	0.0



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

Scaled Data Report





21.5°	2306.8	2308.0	2306.0	2329.5	2361.6	2387.4
22°	2292.7	2294.7	2292.3	2317.0	2349.1	2376.1



44°	604.2	658.2	660.5	733.7	856.2	973.6
44.5°	560.0	608.1	615.2	689.5	803.8	916.5

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

Scaled Data Report



66.5°	67.7	71.6	72.4	77.5	83.7	87.3
67°	65.0	68.5	69.3	74.7	80.6	83.7

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

Scaled Data Report



89°	0.0	0.0	0.0	0.0	0.0	0.4
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report



(END OF REPORT)