

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: P776273

Luminaire Tested: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776273
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B054)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K
Description: 4 INCH ROUND NARROW LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3942.5 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.07
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

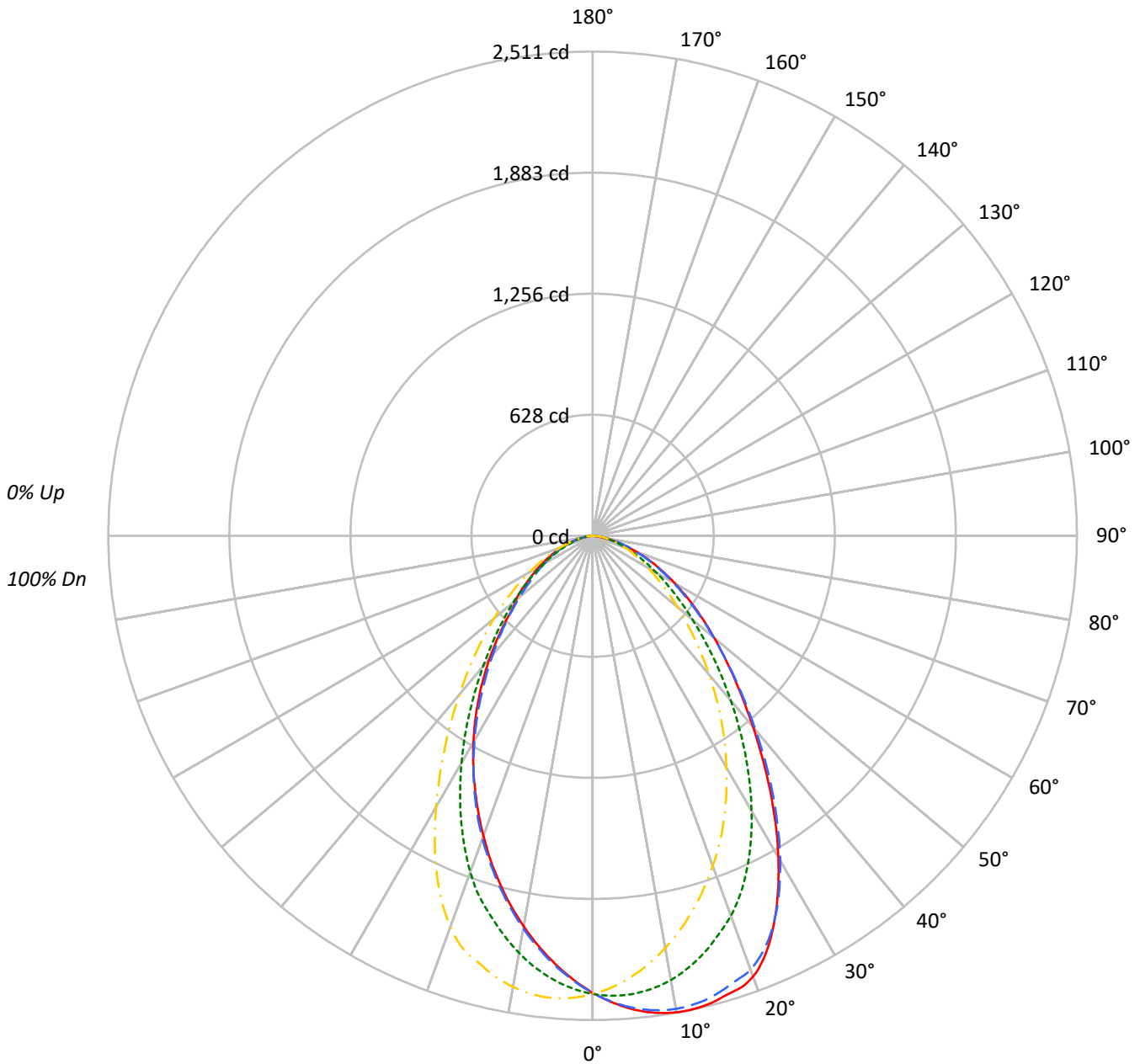
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88								
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77								
3	95	86	79	74	93	85	78	73	82	77	72	79	75	71	77	73	70	68								
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60								
5	82	71	63	57	80	70	63	57	68	62	57	66	60	56	64	59	56	54								
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50	48								
7	72	60	52	47	70	59	52	46	58	51	46	56	50	46	55	50	45	44								
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40								
9	63	51	44	39	62	51	44	39	50	43	38	49	43	38	48	42	38	36								
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°	298767	298767	298767	298767
5°	311619	301336	281591	292026
10°	320730	298891	262867	280719
15°	324889	291561	242807	265947
20°	325763	280871	221742	248394
25°	308783	263473	200541	224314
30°	279884	239500	179600	197517
35°	245953	211862	158197	170319
40°	212519	183063	136406	144998
45°	184119	156016	115223	123392
50°	161055	132431	101751	104981
55°	141521	112602	90420	88840
60°	123811	95721	79688	74428
65°	107233	81325	70188	61910
70°	87611	68625	59278	50999
75°	65643	58155	47993	42303
80°	39426	50804	34135	33555
85°	15162	47073	12274	19782

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 188995 cd/sqm



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.9	5.6
10°-20°	606.9	15.4
20°-30°	822.2	20.9
30°-40°	799.2	20.3
40°-50°	632.6	16.0
50°-60°	443.0	11.2
60°-70°	268.6	6.8
70°-80°	123.1	3.1
80°-90°	25.1	0.6
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°	1651.0	41.9
0°-40°	2450.1	62.1
0°-60°	3525.7	89.4
0°-90°	3942.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3942.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2374	2374	2374	2374	2374	
5°	2467	2385	2229	2312	2467	237
15°	2494	2238	1864	2041	2494	704
25°	2224	1897	1444	1615	2224	1015
35°	1601	1379	1030	1109	1601	999
45°	1034	877	647	693	1034	802
55°	645	513	412	405	645	579
65°	360	273	236	208	360	357
75°	135	120	99	87	135	146
85°	10	33	8	14	10	18
90°	0	4	0	0	0	



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2374.0	2374.0	2374.0	2374.0	2374.0	2374.0	2374.0	2374.0	2374.0	2374.0	2374.0
0.5°	2381.2	2382.5	2381.6	2380.4	2379.2	2374.8	2371.6	2370.4	2357.1	2356.7	2359.1
1°	2392.5	2394.1	2392.9	2388.1	2382.1	2372.8	2365.1	2359.9	2344.2	2344.2	2347.4
1.5°	2403.4	2405.4	2402.2	2394.5	2384.5	2370.8	2358.3	2349.8	2330.9	2330.1	2334.9
2°	2413.9	2416.7	2411.5	2401.4	2386.1	2367.5	2351.0	2338.5	2317.6	2316.0	2321.6
2.5°	2423.9	2427.6	2420.7	2407.4	2387.7	2364.3	2343.0	2327.7	2303.5	2301.9	2308.3
3°	2433.6	2437.2	2429.6	2412.7	2388.1	2359.9	2334.5	2315.2	2289.0	2287.4	2295.0
3.5°	2442.9	2446.9	2437.2	2417.5	2388.5	2355.5	2325.7	2303.5	2274.5	2272.1	2280.9
4°	2451.3	2455.8	2444.9	2421.5	2387.7	2350.2	2316.4	2290.6	2260.0	2256.8	2266.8
4.5°	2459.4	2464.2	2451.7	2425.2	2386.9	2345.0	2306.7	2277.3	2244.3	2241.1	2251.9
5°	2466.7	2472.7	2458.2	2428.4	2385.3	2338.5	2296.2	2264.0	2229.0	2224.9	2237.4
5.5°	2473.5	2480.3	2464.2	2430.8	2383.3	2332.1	2285.8	2250.3	2212.5	2208.4	2221.3
6°	2479.9	2487.2	2469.5	2433.2	2380.4	2324.4	2274.1	2235.8	2196.7	2191.5	2206.0
6.5°	2485.6	2493.6	2474.3	2434.8	2377.2	2317.2	2262.8	2221.3	2180.2	2175.0	2189.5
7°	2490.8	2499.3	2478.3	2435.6	2373.6	2308.7	2250.7	2206.8	2163.3	2157.7	2172.6
7.5°	2495.7	2504.5	2482.0	2435.6	2368.8	2300.3	2238.6	2191.5	2146.4	2139.9	2156.1
8°	2499.3	2508.9	2485.2	2435.6	2363.9	2291.0	2225.7	2175.8	2129.1	2121.8	2139.1
8.5°	2502.9	2513.0	2487.6	2434.8	2358.7	2281.7	2212.5	2159.7	2111.3	2104.5	2122.2
9°	2505.7	2516.6	2489.6	2433.2	2352.6	2271.3	2198.8	2144.0	2093.6	2086.0	2104.5
9.5°	2508.1	2519.4	2490.4	2430.8	2346.2	2260.8	2185.1	2127.5	2075.1	2067.4	2086.4
10°	2509.8	2521.4	2491.2	2428.0	2338.9	2249.5	2171.0	2111.3	2057.0	2048.9	2068.2
10.5°	2510.6	2523.0	2490.8	2424.8	2331.3	2238.2	2156.1	2094.0	2038.4	2030.0	2050.1
11°	2511.0	2523.9	2490.4	2421.1	2322.8	2226.1	2140.7	2076.7	2019.9	2011.0	2031.6
11.5°	2511.0	2524.3	2489.2	2416.3	2314.0	2214.1	2125.8	2059.4	2001.0	1991.7	2012.6
12°	2510.2	2524.3	2487.2	2411.5	2304.7	2201.2	2110.1	2042.0	1982.0	1972.4	1993.3
12.5°	2508.9	2523.5	2484.8	2405.8	2294.6	2187.5	2094.0	2023.9	1962.7	1952.2	1974.4
13°	2506.9	2521.8	2481.6	2399.8	2284.6	2174.2	2077.9	2005.8	1943.3	1932.9	1955.4
13.5°	2504.1	2520.2	2478.3	2392.9	2273.7	2160.5	2061.4	1987.3	1923.6	1912.7	1935.7
14°	2501.3	2517.0	2473.9	2384.9	2262.4	2145.6	2044.1	1968.7	1903.9	1892.2	1916.0
14.5°	2497.7	2513.8	2469.1	2376.8	2250.3	2130.7	2026.7	1949.8	1883.7	1872.4	1895.8
15°	2493.6	2510.2	2463.4	2368.4	2237.8	2115.0	2009.4	1930.9	1863.6	1851.5	1875.7
15.5°	2488.4	2505.3	2457.4	2359.5	2225.3	2099.7	1991.7	1911.5	1843.4	1831.4	1855.1
16°	2482.8	2500.5	2450.5	2349.8	2211.6	2083.5	1973.2	1892.2	1823.3	1810.8	1835.0
16.5°	2478.3	2494.8	2443.3	2339.8	2197.9	2067.4	1955.0	1872.4	1802.8	1790.3	1814.4
17°	2474.7	2489.6	2436.0	2329.3	2183.4	2050.5	1936.9	1853.1	1782.2	1768.5	1794.3
17.5°	2471.5	2486.0	2428.4	2317.6	2169.3	2033.6	1918.0	1833.0	1761.3	1747.6	1773.7
18°	2468.3	2482.8	2422.3	2307.1	2154.8	2016.3	1898.6	1812.8	1740.3	1726.6	1752.8
18.5°	2462.2	2479.1	2416.7	2296.6	2140.7	1999.3	1879.7	1792.7	1719.4	1705.7	1732.3
19°	2454.6	2473.9	2411.1	2287.0	2126.6	1982.0	1860.4	1772.5	1698.4	1684.7	1712.5
19.5°	2444.1	2465.8	2403.8	2276.9	2112.5	1965.1	1841.8	1752.4	1677.1	1663.8	1692.0
20°	2432.4	2456.2	2394.1	2265.6	2097.2	1947.0	1821.7	1732.3	1655.7	1642.4	1671.0
20.5°	2419.1	2444.5	2382.5	2252.3	2080.3	1929.2	1802.8	1711.3	1634.4	1621.1	1649.7
21°	2403.4	2431.6	2368.8	2238.6	2062.2	1909.5	1782.2	1690.4	1613.8	1600.1	1627.9



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2346.2	2382.5	2322.0	2187.1	2005.8	1849.5	1721.4	1627.9	1549.8	1536.5	1563.1
23°	2323.6	2362.7	2304.3	2168.9	1984.8	1828.5	1700.0	1606.6	1528.4	1515.5	1540.9
23.5°	2300.3	2342.2	2285.0	2149.6	1964.3	1807.6	1679.1	1585.6	1507.9	1494.2	1518.3
24°	2276.1	2320.0	2265.2	2129.1	1942.5	1785.0	1657.3	1564.7	1486.5	1473.2	1496.2
24.5°	2250.3	2296.2	2243.5	2107.3	1920.4	1762.9	1635.6	1542.9	1465.2	1451.9	1474.0
25°	2223.7	2271.3	2220.9	2085.2	1897.4	1740.3	1613.0	1521.6	1444.2	1430.9	1451.9
25.5°	2196.7	2245.1	2196.7	2062.6	1874.5	1717.3	1591.3	1500.2	1423.3	1409.2	1428.9
26°	2168.9	2218.5	2172.2	2038.8	1851.1	1694.4	1569.5	1478.9	1402.7	1387.4	1406.3
26.5°	2139.9	2191.5	2146.8	2015.1	1826.9	1670.6	1546.9	1457.1	1381.4	1366.5	1383.8
27°	2111.3	2162.9	2120.2	1990.1	1801.9	1646.9	1524.4	1435.4	1360.8	1345.1	1361.2
27.5°	2081.9	2133.9	2092.8	1964.7	1777.4	1623.5	1501.4	1414.0	1339.5	1323.8	1338.3
28°	2050.9	2103.7	2063.8	1938.1	1752.0	1600.1	1478.9	1392.7	1318.9	1302.4	1315.3
28.5°	2020.3	2073.1	2034.0	1911.5	1727.0	1575.5	1456.3	1370.5	1298.4	1281.1	1292.7
29°	1989.3	2042.4	2005.0	1884.5	1700.8	1551.0	1433.3	1348.7	1277.8	1259.7	1270.2
29.5°	1957.4	2011.4	1975.6	1856.3	1674.6	1527.2	1410.8	1327.4	1256.9	1238.8	1247.6
30°	1926.0	1979.2	1945.0	1828.9	1648.1	1502.6	1387.4	1306.0	1235.9	1217.4	1224.7
30.5°	1893.8	1947.4	1913.5	1800.3	1621.5	1477.7	1364.5	1284.3	1215.0	1196.5	1202.5
31°	1861.2	1914.7	1882.1	1770.9	1595.7	1453.5	1341.9	1262.5	1194.5	1175.1	1180.4
31.5°	1829.3	1881.7	1850.7	1741.9	1568.3	1428.5	1318.9	1241.2	1173.9	1153.8	1158.6
32°	1796.3	1848.3	1818.5	1711.7	1541.3	1404.3	1296.4	1219.8	1153.4	1133.2	1136.4
32.5°	1763.3	1814.8	1786.2	1681.9	1514.3	1379.8	1273.0	1198.5	1132.4	1112.3	1113.9
33°	1730.6	1781.8	1754.4	1652.1	1486.9	1354.8	1250.4	1177.5	1111.9	1091.3	1091.7
33.5°	1697.6	1748.8	1723.4	1621.9	1460.3	1330.2	1227.9	1155.4	1091.3	1070.4	1070.8
34°	1665.4	1715.3	1690.8	1591.3	1432.9	1304.8	1205.3	1134.4	1070.8	1049.4	1048.6
34.5°	1633.2	1681.5	1658.1	1561.0	1405.5	1280.3	1182.8	1113.5	1049.8	1028.9	1027.3
35°	1600.9	1648.5	1625.5	1530.8	1379.0	1256.1	1159.8	1092.5	1029.7	1008.7	1005.5
35.5°	1568.7	1615.8	1593.3	1501.0	1351.6	1231.5	1138.1	1071.2	1009.5	988.6	985.0
36°	1536.1	1583.2	1561.4	1471.2	1324.6	1206.9	1115.9	1050.6	989.0	968.5	964.0
36.5°	1505.0	1551.0	1529.6	1441.0	1297.2	1182.4	1093.3	1030.1	968.9	948.3	943.5
37°	1473.2	1517.9	1497.8	1412.0	1271.4	1159.0	1070.8	1009.5	948.3	928.2	922.9
37.5°	1442.6	1485.7	1466.8	1382.6	1244.0	1134.4	1048.6	989.0	929.0	908.8	902.8
38°	1411.6	1454.3	1434.5	1352.4	1218.2	1110.7	1027.3	969.3	908.8	889.1	882.6
38.5°	1381.8	1422.9	1403.9	1324.2	1192.0	1086.9	1004.7	948.7	889.1	869.4	863.7
39°	1352.0	1391.8	1372.9	1294.8	1166.3	1063.9	983.0	929.0	869.8	850.0	844.0
39.5°	1323.0	1361.6	1343.9	1267.4	1139.7	1040.2	961.2	908.8	850.0	831.1	824.6
40°	1293.6	1331.8	1313.7	1238.0	1114.3	1016.8	940.3	889.1	830.3	811.7	805.7
40.5°	1265.8	1302.8	1284.3	1211.4	1089.3	993.0	918.9	868.5	811.3	792.8	787.6
41°	1238.0	1273.0	1255.3	1183.6	1063.9	971.3	898.4	849.2	792.4	774.3	769.0
41.5°	1210.2	1245.6	1227.1	1156.2	1039.0	947.9	877.8	829.5	773.5	755.7	751.3
42°	1183.6	1217.4	1198.9	1128.8	1015.2	925.7	857.7	810.9	754.5	738.0	734.4
42.5°	1157.8	1190.0	1171.9	1103.8	991.4	904.4	837.5	791.6	736.4	720.7	717.5
43°	1132.0	1163.8	1145.3	1078.0	967.6	883.0	818.2	773.1	717.9	703.4	700.2
43.5°	1107.0	1137.6	1118.3	1052.6	944.3	861.7	798.4	754.1	699.8	686.9	683.2



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1034.5	1061.9	1042.2	978.5	876.6	800.9	742.0	701.4	647.4	639.7	635.3
45.5°	1011.2	1038.1	1017.6	954.8	854.8	781.1	724.3	684.8	630.5	624.8	620.0
46°	988.6	1014.8	993.8	931.8	833.5	762.2	706.6	668.3	614.3	609.5	604.7
46.5°	966.4	991.4	970.1	908.8	812.5	742.9	689.7	651.8	598.6	594.6	589.4
47°	944.7	968.5	947.5	886.3	791.6	723.9	672.4	635.7	583.7	580.5	574.5
47.5°	923.7	946.3	924.5	864.5	771.5	705.8	655.4	620.0	569.6	566.8	560.0
48°	902.4	924.1	902.0	842.0	751.3	687.3	638.9	604.7	557.1	553.1	546.3
48.5°	881.4	903.2	880.6	821.4	732.0	669.9	622.4	589.4	546.3	539.8	532.2
49°	861.7	882.2	859.3	800.9	713.0	652.6	606.7	574.9	536.6	526.9	518.9
49.5°	842.0	861.7	838.7	780.7	694.5	635.7	590.6	560.4	527.7	514.8	505.6
50°	822.6	842.0	818.6	760.6	676.4	619.2	575.3	546.3	519.7	503.6	492.7
50.5°	803.7	821.8	798.0	740.8	658.3	602.7	560.4	532.6	511.6	492.3	479.4
51°	784.8	802.5	778.3	721.9	640.5	587.0	545.5	519.3	502.4	482.2	467.3
51.5°	766.2	783.5	759.4	703.4	624.0	571.6	531.4	506.4	491.5	472.9	455.6
52°	748.1	764.6	740.4	684.4	607.1	556.3	516.9	493.9	479.4	462.1	443.5
52.5°	730.4	746.1	721.9	666.7	590.6	541.4	503.2	481.8	467.7	451.2	431.9
53°	713.0	728.4	703.4	649.4	574.5	526.5	489.5	470.5	456.4	440.3	420.6
53.5°	695.3	710.2	685.7	631.7	558.8	512.0	476.2	458.8	444.7	429.4	409.3
54°	678.4	692.9	667.9	614.7	543.4	497.9	463.3	448.4	433.5	419.0	398.4
54.5°	661.5	675.2	650.2	598.2	527.7	484.2	450.4	438.7	423.0	408.5	387.9
55°	645.0	658.7	634.1	581.7	513.2	470.9	438.3	428.6	412.1	398.8	377.9
55.5°	628.4	641.7	617.2	566.0	498.7	457.2	426.2	418.6	402.0	387.9	367.8
56°	612.3	625.2	600.6	549.9	484.6	443.9	414.1	408.1	391.6	377.9	358.1
56.5°	596.6	609.1	584.5	534.6	470.9	431.5	402.4	398.0	381.5	368.6	349.3
57°	581.3	593.4	568.8	519.7	456.8	418.6	391.2	387.9	371.4	359.3	340.4
57.5°	565.2	577.3	553.5	504.8	443.5	406.5	380.3	378.3	362.2	349.7	331.9
58°	550.3	561.6	537.8	490.3	430.2	394.4	369.8	368.6	352.5	340.8	323.1
58.5°	535.4	546.3	522.9	475.8	418.2	382.7	359.3	358.9	343.6	331.9	314.6
59°	520.5	531.8	508.4	461.7	405.3	371.0	349.3	349.7	334.4	323.1	305.8
59.5°	506.0	516.1	493.5	448.0	392.8	359.7	340.0	340.8	325.5	314.2	297.7
60°	491.9	502.4	479.4	434.7	380.3	348.9	330.7	331.9	316.6	305.4	289.6
60.5°	477.8	487.9	465.3	421.0	369.0	338.8	321.5	323.1	307.8	296.9	281.6
61°	463.7	473.8	451.6	408.5	357.3	328.3	312.2	314.2	299.3	288.8	273.5
61.5°	450.0	459.2	437.5	395.6	346.5	317.8	302.9	305.4	290.9	280.4	265.9
62°	436.7	446.4	424.6	383.1	335.6	307.4	294.9	296.9	282.8	272.3	258.2
62.5°	423.8	432.7	411.7	371.0	324.7	297.3	286.4	288.8	274.3	264.3	250.6
63°	410.5	419.4	398.4	358.9	313.8	287.6	278.4	280.4	266.7	257.0	242.9
63.5°	397.6	406.1	385.9	347.3	302.9	278.4	270.3	272.3	258.6	249.0	235.7
64°	385.1	393.2	373.4	335.6	292.5	269.1	263.1	264.3	251.0	241.7	228.4
64.5°	372.6	380.7	361.4	324.3	282.8	260.2	255.4	256.6	243.3	234.1	221.6
65°	360.1	368.6	349.3	313.0	273.1	251.4	248.2	249.4	235.7	226.8	214.3
65.5°	347.7	355.7	337.2	302.5	263.5	242.9	240.5	241.7	227.6	219.6	207.5
66°	334.8	344.0	325.9	292.1	254.2	234.5	233.7	234.1	220.0	212.3	201.0



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	297.7	308.2	292.1	261.0	227.6	211.1	212.3	212.3	197.0	191.0	181.3
68°	285.6	296.5	281.2	251.4	219.2	203.4	205.9	205.1	189.7	184.1	174.8
68.5°	273.1	284.8	270.7	242.1	210.7	196.2	199.0	197.8	182.5	176.9	168.8
69°	261.4	273.1	260.6	232.4	202.6	188.9	192.6	191.0	175.2	170.4	162.8
69.5°	249.8	261.9	250.6	223.6	194.6	182.5	185.7	183.7	168.0	163.6	156.7
70°	238.1	250.6	240.5	214.3	186.5	175.6	179.7	176.9	161.1	157.1	150.7
70.5°	227.2	239.7	230.8	205.5	178.9	169.2	173.2	170.4	154.7	150.7	145.0
71°	215.9	229.2	221.2	197.0	171.6	163.2	167.2	163.6	147.8	143.8	139.0
71.5°	205.1	218.3	211.9	188.5	164.4	157.1	161.1	157.1	141.4	137.8	133.3
72°	194.2	208.3	203.0	180.5	157.5	151.1	155.1	150.7	135.0	131.7	127.7
72.5°	184.1	198.6	193.8	172.8	150.7	145.4	149.5	144.2	128.5	125.3	122.1
73°	174.0	188.5	184.9	165.2	144.2	139.4	143.4	138.2	122.1	119.6	116.8
73.5°	163.6	179.3	176.4	157.1	137.8	134.1	137.8	131.7	116.0	113.6	111.6
74°	153.9	169.6	167.6	149.9	131.7	128.9	132.1	126.1	110.0	107.6	106.4
74.5°	143.8	160.3	159.5	144.6	125.7	123.7	126.9	120.0	104.3	101.9	100.7
75°	135.0	151.5	151.5	137.8	119.6	118.4	121.3	114.4	98.7	96.3	95.9
75.5°	126.1	142.6	143.0	130.9	114.0	113.6	116.0	108.8	93.1	91.0	90.6
76°	117.2	135.0	135.8	123.7	108.8	108.8	110.8	103.1	87.4	85.4	85.8
76.5°	108.4	126.9	128.5	116.8	103.1	103.9	105.5	97.5	81.8	80.2	81.0
77°	99.9	118.8	121.7	110.4	98.3	99.1	100.3	92.3	76.5	74.9	76.1
77.5°	91.4	110.8	114.4	104.3	93.1	94.7	95.1	87.0	71.3	70.1	71.7
78°	83.4	103.1	107.2	98.7	88.2	90.2	90.6	81.8	66.5	64.9	67.3
78.5°	75.7	96.3	100.3	93.1	83.4	85.4	85.4	76.5	61.2	60.0	62.4
79°	68.1	89.0	93.9	87.4	78.6	81.0	81.0	71.3	56.4	55.2	58.0
79.5°	61.2	82.2	87.4	81.8	74.1	76.9	76.1	66.5	51.6	50.8	54.0
80°	54.4	75.3	81.0	76.5	70.1	72.5	71.7	61.6	47.1	45.9	49.6
80.5°	48.3	69.3	74.9	71.7	65.7	68.5	67.3	57.2	42.3	41.5	45.5
81°	42.3	63.2	69.3	66.9	61.6	64.5	62.8	52.4	38.3	37.5	41.5
81.5°	36.7	57.6	63.7	62.0	57.6	60.4	58.4	47.9	33.8	33.4	37.9
82°	31.0	52.0	58.0	57.6	53.6	56.4	54.4	43.5	29.8	29.4	34.2
82.5°	25.8	46.3	52.8	53.2	50.0	52.4	50.0	39.5	25.4	25.4	30.6
83°	21.4	41.1	47.9	48.7	46.3	48.7	45.9	35.5	20.9	21.4	27.0
83.5°	17.3	36.3	43.1	44.7	42.7	45.1	42.3	31.4	17.3	18.1	23.4
84°	14.1	31.0	38.7	40.7	39.1	41.1	38.7	27.4	13.7	15.3	20.1
84.5°	12.1	26.6	34.2	37.1	35.9	37.9	35.0	23.4	10.5	12.9	17.3
85°	10.5	22.2	30.2	33.4	32.6	34.2	31.8	20.1	8.5	10.9	14.1
85.5°	8.5	18.1	26.6	29.8	29.4	31.0	28.2	17.3	7.3	8.9	11.3
86°	6.8	14.5	23.0	26.6	26.2	27.4	24.6	14.9	6.0	7.3	8.1
86.5°	5.6	12.1	19.7	23.0	23.0	23.8	21.4	12.9	4.8	5.2	5.6
87°	4.8	9.7	16.5	20.1	20.1	20.5	18.1	10.5	3.6	3.6	3.2
87.5°	3.6	7.3	14.1	17.3	17.3	17.3	14.9	8.5	2.4	2.0	1.2
88°	2.8	4.8	11.7	14.5	14.1	14.5	12.1	6.4	1.6	0.8	0.4
88.5°	2.0	3.2	8.9	11.7	11.3	11.3	9.3	4.4	0.4	0.4	0.0



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.8	2.4	4.4	3.6	3.2	1.6	0.4	0.0	0.4	0.0



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2374.0	2374.0	2374.0	2374.0	2374.0	2374.0
0.5°	2363.1	2372.0	2376.4	2382.9	2388.9	2381.2
1°	2354.3	2367.1	2376.8	2387.3	2397.4	2392.5
1.5°	2344.6	2361.9	2376.4	2391.7	2405.4	2403.4
2°	2334.9	2356.7	2375.2	2395.3	2413.1	2413.9
2.5°	2324.4	2350.2	2374.0	2398.6	2420.3	2423.9
3°	2313.6	2343.8	2371.6	2401.0	2426.8	2433.6
3.5°	2301.9	2336.5	2369.2	2403.4	2432.8	2442.9
4°	2290.2	2328.9	2365.5	2404.6	2437.6	2451.3
4.5°	2278.1	2320.4	2361.9	2405.4	2442.5	2459.4
5°	2265.2	2311.6	2357.5	2405.8	2447.3	2466.7
5.5°	2251.9	2302.7	2352.2	2405.4	2450.9	2473.5
6°	2238.6	2292.6	2347.0	2404.6	2453.8	2479.9
6.5°	2224.9	2282.1	2341.0	2403.0	2456.2	2485.6
7°	2210.0	2271.3	2334.1	2400.6	2458.2	2490.8
7.5°	2195.5	2260.0	2326.9	2397.8	2459.8	2495.7
8°	2180.6	2248.7	2319.2	2394.5	2460.2	2499.3
8.5°	2164.9	2236.2	2310.7	2390.9	2460.2	2502.9
9°	2149.2	2223.3	2301.9	2386.5	2459.8	2505.7
9.5°	2132.7	2210.0	2292.6	2381.2	2459.0	2508.1
10°	2116.2	2196.7	2283.0	2375.6	2457.4	2509.8
10.5°	2099.3	2182.6	2272.9	2369.6	2455.4	2510.6
11°	2082.3	2168.5	2261.6	2362.7	2452.6	2511.0
11.5°	2065.0	2153.6	2249.9	2355.5	2448.9	2511.0
12°	2047.3	2137.9	2238.6	2347.8	2444.9	2510.2
12.5°	2029.6	2122.6	2226.6	2339.3	2440.5	2508.9
13°	2011.4	2106.9	2213.7	2330.5	2435.6	2506.9
13.5°	1992.5	2090.8	2200.4	2321.6	2430.0	2504.1
14°	1973.6	2073.9	2186.7	2311.2	2423.5	2501.3
14.5°	1954.6	2057.8	2173.8	2301.1	2417.5	2497.7
15°	1936.5	2041.2	2160.1	2291.4	2409.8	2493.6
15.5°	1917.6	2025.1	2147.6	2283.0	2403.8	2488.4
16°	1899.0	2008.6	2135.1	2275.3	2399.0	2482.8
16.5°	1880.1	1992.5	2122.6	2266.4	2394.1	2478.3
17°	1861.2	1976.0	2108.1	2256.0	2388.5	2474.7
17.5°	1841.8	1958.3	2091.6	2242.7	2380.8	2471.5
18°	1822.5	1939.3	2073.9	2228.6	2370.0	2468.3
18.5°	1802.4	1919.6	2054.9	2212.5	2357.1	2462.2
19°	1781.4	1898.2	2035.2	2195.5	2342.6	2454.6
19.5°	1760.1	1876.9	2015.1	2177.0	2327.7	2444.1
20°	1738.3	1854.7	1994.5	2157.7	2310.3	2432.4
20.5°	1715.7	1833.0	1972.4	2137.5	2292.6	2419.1
21°	1693.6	1809.6	1949.8	2115.8	2272.9	2403.4

TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1624.3	1739.1	1880.1	2046.9	2206.8	2346.2
23°	1600.9	1714.9	1855.5	2022.7	2182.2	2323.6
23.5°	1576.8	1690.4	1830.1	1996.9	2156.9	2300.3
24°	1553.0	1665.4	1805.2	1971.1	2129.9	2276.1
24.5°	1528.8	1640.4	1779.0	1943.8	2102.9	2250.3
25°	1505.0	1615.4	1752.8	1916.4	2074.3	2223.7
25.5°	1480.9	1590.5	1725.8	1888.6	2046.1	2196.7
26°	1456.7	1565.1	1698.8	1860.0	2016.7	2168.9
26.5°	1432.9	1539.3	1672.6	1831.4	1987.7	2139.9
27°	1408.8	1513.5	1644.8	1801.9	1957.9	2111.3
27.5°	1384.6	1487.7	1617.4	1772.5	1926.8	2081.9
28°	1360.4	1461.9	1588.8	1742.3	1895.8	2050.9
28.5°	1336.7	1435.8	1561.4	1712.5	1865.6	2020.3
29°	1312.5	1410.8	1534.1	1682.7	1835.0	1989.3
29.5°	1288.3	1385.0	1505.9	1652.1	1803.6	1957.4
30°	1264.5	1359.2	1477.7	1623.5	1772.1	1926.0
30.5°	1240.8	1333.4	1449.5	1593.3	1740.7	1893.8
31°	1217.0	1308.5	1421.7	1563.1	1710.1	1861.2
31.5°	1193.6	1282.7	1394.3	1533.6	1679.1	1829.3
32°	1169.5	1257.3	1366.5	1504.2	1647.3	1796.3
32.5°	1146.9	1232.3	1339.1	1474.4	1616.2	1763.3
33°	1123.5	1206.9	1311.7	1446.6	1585.2	1730.6
33.5°	1100.2	1182.0	1285.1	1417.6	1554.2	1697.6
34°	1077.6	1157.4	1258.1	1389.0	1524.8	1665.4
34.5°	1055.1	1132.8	1231.9	1360.8	1493.8	1633.2
35°	1032.5	1108.6	1205.7	1333.0	1464.0	1600.9
35.5°	1010.3	1084.1	1179.5	1305.2	1434.1	1568.7
36°	988.6	1061.1	1155.0	1279.0	1405.1	1536.1
36.5°	966.8	1037.3	1129.6	1250.8	1376.5	1505.0
37°	945.1	1014.4	1105.8	1225.1	1347.1	1473.2
37.5°	924.5	991.0	1080.8	1198.9	1318.9	1442.6
38°	903.6	968.9	1057.1	1173.5	1290.7	1411.6
38.5°	883.4	946.7	1033.3	1147.3	1262.9	1381.8
39°	863.7	924.9	1010.3	1123.1	1236.7	1352.0
39.5°	843.2	903.2	987.8	1098.6	1209.8	1323.0
40°	823.4	882.6	964.8	1074.4	1183.2	1293.6
40.5°	804.5	861.7	943.1	1049.8	1157.4	1265.8
41°	785.6	842.0	921.3	1026.9	1132.0	1238.0
41.5°	766.6	821.8	900.4	1003.5	1107.0	1210.2
42°	748.9	802.5	879.4	981.3	1082.5	1183.6
42.5°	730.8	783.1	858.5	959.2	1058.3	1157.8
43°	713.4	765.0	838.3	937.4	1034.5	1132.0
43.5°	696.1	746.1	818.2	915.7	1011.6	1107.0

TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	647.0	693.3	760.6	853.6	944.7	1034.5
45.5°	631.3	676.0	742.5	833.5	923.3	1011.2
46°	615.6	659.5	723.9	813.8	902.4	988.6
46.5°	600.2	642.9	706.6	794.4	881.4	966.4
47°	584.9	626.8	688.5	775.1	861.3	944.7
47.5°	570.4	611.1	671.6	756.6	841.2	923.7
48°	555.9	595.8	654.6	738.0	821.8	902.4
48.5°	541.8	580.5	637.7	719.9	802.5	881.4
49°	527.3	565.6	621.6	702.6	783.9	861.7
49.5°	513.6	550.7	605.5	685.2	765.4	842.0
50°	500.3	536.2	589.4	667.5	746.9	822.6
50.5°	487.0	522.1	574.1	650.6	729.2	803.7
51°	474.2	508.0	558.8	634.5	711.4	784.8
51.5°	461.3	493.9	543.8	618.0	694.5	766.2
52°	448.4	481.0	528.9	602.3	676.8	748.1
52.5°	435.9	467.7	514.8	586.5	660.3	730.4
53°	423.8	454.8	500.3	570.8	643.8	713.0
53.5°	411.7	441.9	486.6	555.9	627.2	695.3
54°	400.0	429.0	472.9	540.6	611.1	678.4
54.5°	388.8	416.9	459.7	525.7	595.8	661.5
55°	377.5	404.9	446.4	511.2	579.7	645.0
55.5°	366.2	393.2	433.5	497.1	564.8	628.4
56°	355.7	381.5	420.2	483.0	549.5	612.3
56.5°	345.6	370.2	408.1	469.3	534.6	596.6
57°	335.6	358.5	395.6	455.6	519.7	581.3
57.5°	325.5	348.1	383.5	442.3	505.2	565.2
58°	315.4	336.8	371.8	429.0	490.7	550.3
58.5°	305.4	326.3	360.6	416.5	477.0	535.4
59°	296.1	315.8	348.9	403.7	462.9	520.5
59.5°	286.8	305.8	338.0	391.2	449.6	506.0
60°	278.4	295.7	326.7	379.1	435.9	491.9
60.5°	269.5	286.0	316.2	367.0	423.0	477.8
61°	261.0	276.8	305.4	355.3	409.3	463.7
61.5°	252.6	267.1	295.3	343.6	397.2	450.0
62°	244.5	257.8	285.2	331.9	384.7	436.7
62.5°	236.5	249.0	275.1	321.1	372.2	423.8
63°	228.8	240.5	265.5	309.8	359.7	410.5
63.5°	221.2	232.0	256.2	299.3	348.1	397.6
64°	213.9	223.6	246.5	288.4	336.4	385.1
64.5°	207.1	215.5	237.7	278.0	324.7	372.6
65°	200.2	207.9	228.8	267.9	313.4	360.1
65.5°	193.8	199.8	220.4	257.8	302.5	347.7
66°	187.3	192.2	211.5	247.8	291.7	334.8



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	168.8	170.8	186.9	219.6	258.6	297.7
68°	163.2	164.0	179.3	210.7	248.2	285.6
68.5°	157.1	157.5	172.0	201.8	237.7	273.1
69°	151.5	151.1	164.8	193.0	227.2	261.4
69.5°	145.8	144.2	157.1	184.9	217.1	249.8
70°	140.2	138.6	150.3	176.9	207.5	238.1
70.5°	135.0	133.3	143.8	168.8	197.8	227.2
71°	129.7	127.7	137.8	160.7	188.1	215.9
71.5°	124.1	122.1	131.3	153.1	178.9	205.1
72°	119.2	116.8	124.9	145.8	169.6	194.2
72.5°	114.4	111.6	118.4	138.6	160.7	184.1
73°	108.8	106.4	112.8	131.7	152.3	174.0
73.5°	103.9	101.5	106.8	124.5	143.0	163.6
74°	99.1	96.7	101.1	117.6	135.4	153.9
74.5°	94.7	91.8	95.9	110.8	127.7	143.8
75°	89.8	87.0	90.6	104.3	120.0	135.0
75.5°	85.4	82.6	85.4	97.9	112.4	126.1
76°	81.0	78.2	80.6	91.4	105.1	117.2
76.5°	76.5	73.7	75.3	85.8	97.9	108.4
77°	72.1	69.7	70.9	79.8	91.0	99.9
77.5°	68.1	65.7	66.1	74.1	84.2	91.4
78°	63.7	61.6	61.6	68.9	77.8	83.4
78.5°	59.6	57.6	57.6	63.2	71.3	75.7
79°	55.6	54.0	53.6	58.4	65.3	68.1
79.5°	51.6	50.0	49.1	53.2	59.2	61.2
80°	47.5	46.3	45.5	48.7	53.6	54.4
80.5°	43.9	43.1	41.5	44.3	47.9	48.3
81°	40.3	39.5	38.3	39.9	42.7	42.3
81.5°	36.7	35.9	34.6	35.5	37.5	36.7
82°	33.0	32.6	31.0	31.8	32.6	31.0
82.5°	29.4	29.4	27.8	28.2	27.8	25.8
83°	26.2	26.2	24.6	24.6	23.4	21.4
83.5°	22.6	22.6	21.4	21.4	19.7	17.3
84°	19.3	19.7	18.5	18.1	16.1	14.1
84.5°	16.1	16.5	15.7	15.3	13.7	12.1
85°	12.9	13.7	13.3	12.9	10.9	10.5
85.5°	9.7	11.3	10.5	10.5	8.5	8.5
86°	6.8	8.5	8.1	8.1	6.0	6.8
86.5°	4.0	5.6	5.2	5.6	4.4	5.6
87°	2.0	2.8	3.2	4.0	3.2	4.8
87.5°	0.4	0.8	1.2	2.0	2.0	3.6
88°	0.0	0.0	0.0	0.4	1.2	2.8
88.5°	0.0	0.0	0.0	0.0	0.4	2.0



TEST NUMBER: P776273

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-4000K

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°	2385.3	2416.7	2354.7	2222.5	2044.1	1889.8	1762.5	1669.8	1592.5	1578.4	1607.0
22°	2365.9	2400.6	2338.9	2205.2	2025.1	1870.0	1741.9	1648.9	1571.1	1557.4	1584.8



44°	1082.1	1111.5	1092.1	1026.1	921.7	841.2	779.5	736.4	682.0	671.1	667.5
44.5°	1057.9	1086.5	1067.6	1002.7	899.2	820.6	760.6	718.3	665.1	655.8	651.4



66.5°	322.3	332.4	314.2	281.2	244.9	226.4	226.4	227.2	212.3	205.1	194.2
67°	309.8	319.9	303.3	271.1	236.1	218.7	219.2	219.6	204.6	198.2	187.7



89°	1.2	2.4	6.4	9.3	8.5	8.5	6.4	2.8	0.0	0.4	0.0
89.5°	0.4	1.6	4.0	6.8	6.0	5.6	3.6	1.2	0.0	0.4	0.0

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

Scaled Data Report





21.5°	1671.0	1786.2	1927.2	2094.0	2252.3	2385.3
22°	1648.1	1763.3	1903.9	2071.1	2229.8	2365.9

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

Scaled Data Report



44°	679.6	727.9	798.9	894.3	988.6	1082.1
44.5°	663.1	710.2	779.9	873.8	966.4	1057.9



66.5°	180.9	184.9	203.0	238.1	280.4	322.3
67°	174.8	177.7	195.0	228.8	269.5	309.8

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	0.4	1.2
89.5°	0.0	0.0	0.0	0.0	0.0	0.4

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

Scaled Data Report



(END OF REPORT)