

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: P776228

Luminaire Tested: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776228
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156A001)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K
Description: 4 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3004.4 lumens
Efficiency: N/A
Efficacy: 105.4 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.97 / 0.95
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

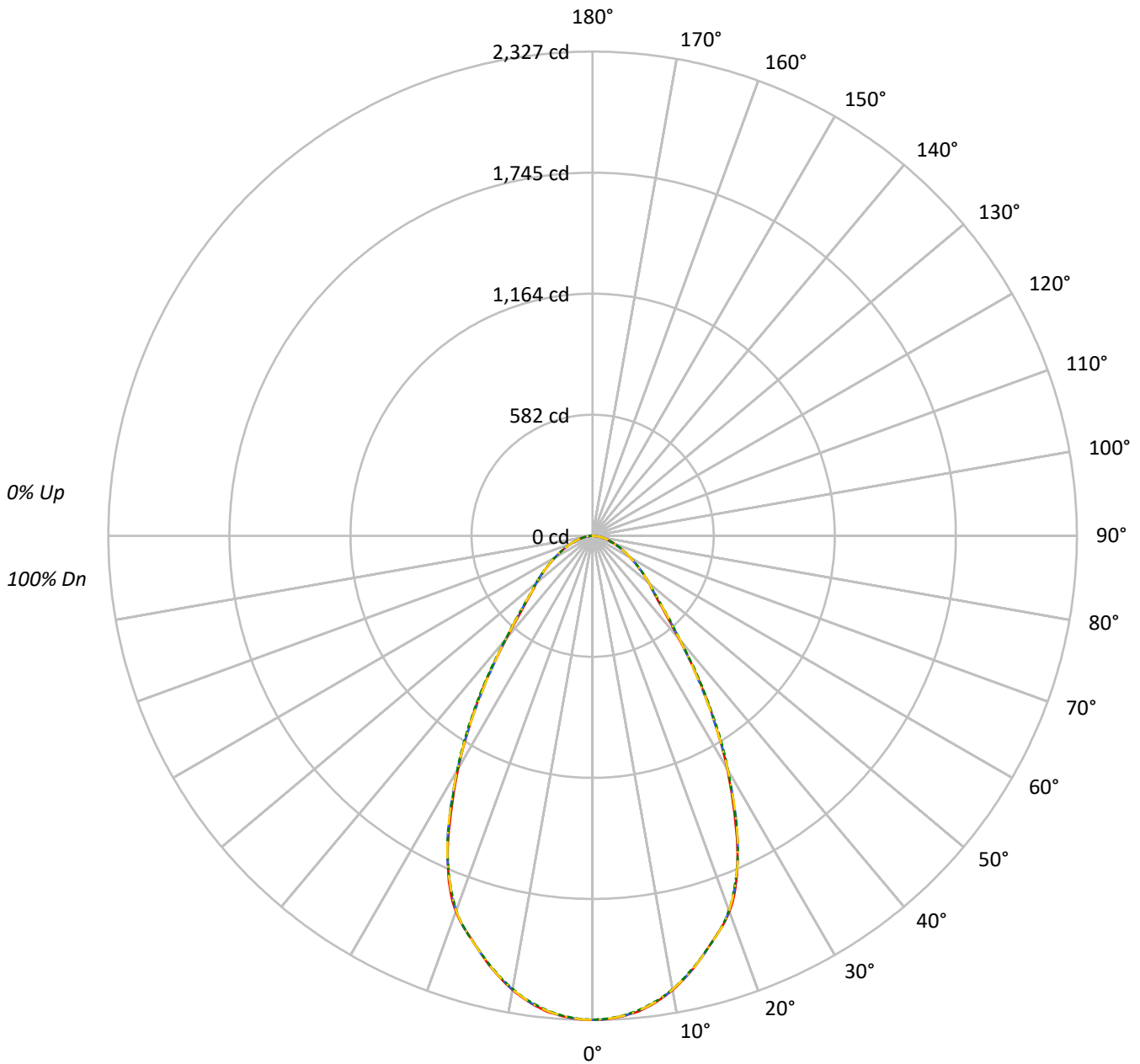
Input Watts (W): 28.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71								
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64								
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58								
6	80	69	62	57	78	68	61	56	67	60	56	65	60	55	64	59	55	53								
7	75	64	57	52	74	63	56	52	62	56	51	61	55	51	59	54	51	49								
8	71	60	52	48	70	59	52	47	58	52	47	57	51	47	56	51	47	45								
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	52	45	41	51	45	41	50	44	41	49	44	40	39								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	292815	292815	292815	292815
5°	290737	290118	290737	290118
10°	283236	282598	283236	282598
15°	270702	270376	270702	270376
20°	257393	256483	257393	256483
25°	228452	229188	228452	229188
30°	187955	188958	187955	188958
35°	145814	147397	145814	147397
40°	105915	107755	105915	107755
45°	80197	82190	80197	82190
50°	69054	69602	69054	69602
55°	60031	60711	60031	60711
60°	52479	52932	52479	52932
65°	46127	46484	46127	46484
70°	40696	40917	40696	40917
75°	35739	35739	35739	35739
80°	30946	30729	30946	30729
85°	24692	24692	24692	24692

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 82190 cd/sqm



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.8	7.2
10°-20°	583.6	19.4
20°-30°	747.4	24.9
30°-40°	592.3	19.7
40°-50°	362.7	12.1
50°-60°	247.9	8.3
60°-70°	155.2	5.2
70°-80°	78.6	2.6
80°-90°	19.9	0.7
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°	1547.8	51.5
0°-40°	2140.1	71.2
0°-60°	2750.7	91.6
0°-90°	3004.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3004.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2327	2327	2327	2327	2327	
5°	2301	2296	2301	2296	2301	217
15°	2078	2075	2078	2075	2078	584
25°	1645	1650	1645	1650	1645	746
35°	949	959	949	959	949	592
45°	451	462	451	462	451	358
55°	274	277	274	277	274	247
65°	155	156	155	156	155	155
75°	74	74	74	74	74	79
85°	17	17	17	17	17	20
90°	0	1	0	1	0	



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2326.7	2326.7	2326.7	2326.7	2326.7	2326.7	2326.7	2326.7	2326.7	2326.7	2326.7
0.5°	2327.0	2326.7	2326.1	2325.8	2324.8	2325.8	2326.1	2326.7	2327.0	2326.7	2326.1
1°	2326.1	2325.8	2325.4	2325.1	2323.9	2325.1	2325.4	2325.8	2326.1	2325.8	2325.4
1.5°	2324.8	2324.2	2324.2	2323.6	2322.6	2323.6	2324.2	2324.2	2324.8	2324.2	2324.2
2°	2322.9	2322.6	2322.0	2321.7	2320.5	2321.7	2322.0	2322.6	2322.9	2322.6	2322.0
2.5°	2320.8	2320.1	2319.5	2319.2	2317.7	2319.2	2319.5	2320.1	2320.8	2320.1	2319.5
3°	2317.7	2317.0	2316.4	2315.8	2314.2	2315.8	2316.4	2317.0	2317.7	2317.0	2316.4
3.5°	2314.2	2313.6	2312.7	2312.0	2311.1	2312.0	2312.7	2313.6	2314.2	2313.6	2312.7
4°	2310.2	2309.9	2308.6	2308.0	2306.4	2308.0	2308.6	2309.9	2310.2	2309.9	2308.6
4.5°	2305.8	2305.2	2303.9	2303.3	2301.4	2303.3	2303.9	2305.2	2305.8	2305.2	2303.9
5°	2301.4	2300.5	2299.3	2298.6	2296.5	2298.6	2299.3	2300.5	2301.4	2300.5	2299.3
5.5°	2296.8	2294.6	2293.0	2292.4	2290.5	2292.4	2293.0	2294.6	2296.8	2294.6	2293.0
6°	2289.6	2288.4	2286.8	2285.9	2283.4	2285.9	2286.8	2288.4	2289.6	2288.4	2286.8
6.5°	2282.4	2281.5	2279.6	2278.7	2276.2	2278.7	2279.6	2281.5	2282.4	2281.5	2279.6
7°	2275.0	2273.7	2272.8	2271.2	2269.0	2271.2	2272.8	2273.7	2275.0	2273.7	2272.8
7.5°	2266.6	2265.3	2264.1	2263.4	2261.3	2263.4	2264.1	2265.3	2266.6	2265.3	2264.1
8°	2257.5	2256.6	2255.3	2254.4	2253.2	2254.4	2255.3	2256.6	2257.5	2256.6	2255.3
8.5°	2248.2	2246.9	2245.7	2244.7	2243.5	2244.7	2245.7	2246.9	2248.2	2246.9	2245.7
9°	2238.2	2237.3	2235.7	2234.8	2233.5	2234.8	2235.7	2237.3	2238.2	2237.3	2235.7
9.5°	2227.3	2226.7	2225.1	2224.2	2222.9	2224.2	2225.1	2226.7	2227.3	2226.7	2225.1
10°	2216.4	2215.4	2214.2	2213.0	2211.4	2213.0	2214.2	2215.4	2216.4	2215.4	2214.2
10.5°	2204.2	2203.6	2202.0	2201.1	2199.9	2201.1	2202.0	2203.6	2204.2	2203.6	2202.0
11°	2192.1	2191.5	2190.2	2189.0	2187.4	2189.0	2190.2	2191.5	2192.1	2191.5	2190.2
11.5°	2179.3	2178.7	2177.4	2176.2	2174.9	2176.2	2177.4	2178.7	2179.3	2178.7	2177.4
12°	2166.2	2165.6	2164.7	2163.1	2161.9	2163.1	2164.7	2165.6	2166.2	2165.6	2164.7
12.5°	2152.5	2151.9	2150.9	2149.4	2147.8	2149.4	2150.9	2151.9	2152.5	2151.9	2150.9
13°	2138.5	2137.9	2136.9	2135.7	2134.1	2135.7	2136.9	2137.9	2138.5	2137.9	2136.9
13.5°	2123.8	2123.2	2122.6	2121.3	2120.1	2121.3	2122.6	2123.2	2123.8	2123.2	2122.6
14°	2108.9	2108.6	2107.9	2106.7	2105.5	2106.7	2107.9	2108.6	2108.9	2108.6	2107.9
14.5°	2093.3	2093.0	2092.7	2091.4	2090.2	2091.4	2092.7	2093.0	2093.3	2093.0	2092.7
15°	2077.7	2077.7	2077.1	2076.5	2075.2	2076.5	2077.1	2077.7	2077.7	2077.7	2077.1
15.5°	2061.5	2061.5	2062.1	2061.5	2060.9	2061.5	2062.1	2061.5	2061.5	2061.5	2062.1
16°	2045.9	2046.3	2047.2	2046.9	2046.3	2046.9	2047.2	2046.3	2045.9	2046.3	2047.2
16.5°	2030.4	2031.0	2032.2	2032.2	2031.9	2032.2	2032.2	2031.0	2030.4	2031.0	2032.2
17°	2015.7	2016.3	2017.6	2017.3	2017.6	2017.3	2017.6	2016.3	2015.7	2016.3	2017.6
17.5°	2001.4	2002.0	2002.9	2002.6	2002.3	2002.6	2002.9	2002.0	2001.4	2002.0	2002.9
18°	1987.4	1987.7	1988.3	1987.7	1987.0	1987.7	1988.3	1987.7	1987.4	1987.7	1988.3
18.5°	1972.4	1972.4	1972.4	1971.8	1970.8	1971.8	1972.4	1972.4	1972.4	1972.4	1972.4
19°	1957.1	1956.2	1955.6	1954.6	1953.7	1954.6	1955.6	1956.2	1957.1	1956.2	1955.6
19.5°	1940.3	1939.1	1937.2	1936.6	1935.6	1936.6	1937.2	1939.1	1940.3	1939.1	1937.2
20°	1921.9	1920.4	1916.9	1917.3	1915.1	1917.3	1916.9	1920.4	1921.9	1920.4	1916.9
20.5°	1901.7	1899.2	1895.1	1896.4	1893.9	1896.4	1895.1	1899.2	1901.7	1899.2	1895.1
21°	1880.5	1876.7	1872.1	1873.6	1870.5	1873.6	1872.1	1876.7	1880.5	1876.7	1872.1



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1802.9	1799.2	1796.0	1795.7	1794.2	1795.7	1796.0	1799.2	1802.9	1799.2	1796.0
23°	1773.3	1770.2	1769.6	1767.4	1766.8	1767.4	1769.6	1770.2	1773.3	1770.2	1769.6
23.5°	1743.1	1740.3	1741.8	1738.1	1739.6	1738.1	1741.8	1740.3	1743.1	1740.3	1741.8
24°	1711.6	1709.4	1713.2	1708.2	1711.0	1708.2	1713.2	1709.4	1711.6	1709.4	1713.2
24.5°	1679.2	1678.3	1682.9	1677.9	1681.7	1677.9	1682.9	1678.3	1679.2	1678.3	1682.9
25°	1645.2	1645.9	1651.5	1647.7	1650.5	1647.7	1651.5	1645.9	1645.2	1645.9	1651.5
25.5°	1610.0	1614.1	1619.1	1617.5	1618.1	1617.5	1619.1	1614.1	1610.0	1614.1	1619.1
26°	1573.9	1581.0	1585.7	1586.0	1583.5	1586.0	1585.7	1581.0	1573.9	1581.0	1585.7
26.5°	1536.8	1547.4	1551.1	1553.3	1547.7	1553.3	1551.1	1547.4	1536.8	1547.4	1551.1
27°	1500.6	1512.5	1516.2	1519.7	1511.2	1519.7	1516.2	1512.5	1500.6	1512.5	1516.2
27.5°	1465.1	1476.3	1480.7	1485.1	1474.2	1485.1	1480.7	1476.3	1465.1	1476.3	1480.7
28°	1429.6	1440.2	1444.6	1448.9	1437.1	1448.9	1444.6	1440.2	1429.6	1440.2	1444.6
28.5°	1395.0	1403.4	1408.4	1412.2	1401.2	1412.2	1408.4	1403.4	1395.0	1403.4	1408.4
29°	1360.7	1366.3	1372.3	1374.8	1367.3	1374.8	1372.3	1366.3	1360.7	1366.3	1372.3
29.5°	1327.1	1329.9	1336.4	1337.4	1333.9	1337.4	1336.4	1329.9	1327.1	1329.9	1336.4
30°	1293.4	1292.5	1299.7	1300.0	1300.3	1300.0	1299.7	1292.5	1293.4	1292.5	1299.7
30.5°	1258.5	1256.4	1263.2	1263.8	1268.5	1263.8	1263.2	1256.4	1258.5	1256.4	1263.2
31°	1223.9	1219.3	1226.4	1227.7	1234.9	1227.7	1226.4	1219.3	1223.9	1219.3	1226.4
31.5°	1188.4	1183.8	1189.7	1191.9	1200.9	1191.9	1189.7	1183.8	1188.4	1183.8	1189.7
32°	1152.3	1147.9	1153.2	1156.6	1166.0	1156.6	1153.2	1147.9	1152.3	1147.9	1153.2
32.5°	1117.4	1113.6	1117.4	1121.7	1131.1	1121.7	1117.4	1113.6	1117.4	1113.6	1117.4
33°	1082.2	1079.4	1080.6	1086.8	1095.6	1086.8	1080.6	1079.4	1082.2	1079.4	1080.6
33.5°	1050.7	1045.1	1044.2	1051.9	1059.7	1051.9	1044.2	1045.1	1050.7	1045.1	1044.2
34°	1016.7	1010.8	1008.0	1017.7	1025.8	1017.7	1008.0	1010.8	1016.7	1010.8	1008.0
34.5°	983.1	976.9	972.8	983.1	992.1	983.1	972.8	976.9	983.1	976.9	972.8
35°	949.1	943.8	939.5	949.7	959.4	949.7	939.5	943.8	949.1	943.8	939.5
35.5°	916.1	911.1	906.4	916.7	927.3	916.7	906.4	911.1	916.1	911.1	906.4
36°	883.7	878.4	874.3	884.9	895.8	884.9	874.3	878.4	883.7	878.4	874.3
36.5°	851.6	846.9	843.2	853.5	863.7	853.5	843.2	846.9	851.6	846.9	843.2
37°	819.2	815.8	812.6	822.9	832.0	822.9	812.6	815.8	819.2	815.8	812.6
37.5°	787.7	785.5	783.4	793.6	800.2	793.6	783.4	785.5	787.7	785.5	783.4
38°	756.6	756.2	755.3	765.0	768.7	765.0	755.3	756.2	756.6	756.2	755.3
38.5°	727.3	727.9	728.5	736.9	738.5	736.9	728.5	727.9	727.3	727.9	728.5
39°	698.9	700.5	701.7	709.8	709.5	709.8	701.7	700.5	698.9	700.5	701.7
39.5°	671.2	674.0	676.2	683.0	682.1	683.0	676.2	674.0	671.2	674.0	676.2
40°	644.7	647.8	651.5	657.2	655.9	657.2	651.5	647.8	644.7	647.8	651.5
40.5°	619.8	622.9	627.9	631.9	631.6	631.9	627.9	622.9	619.8	622.9	627.9
41°	595.8	598.9	605.4	608.2	609.2	608.2	605.4	598.9	595.8	598.9	605.4
41.5°	573.0	576.5	583.9	585.5	588.3	585.5	583.9	576.5	573.0	576.5	583.9
42°	551.8	555.3	563.4	564.3	568.0	564.3	563.4	555.3	551.8	555.3	563.4
42.5°	531.9	535.3	544.0	544.4	548.4	544.4	544.0	535.3	531.9	535.3	544.0
43°	512.9	516.6	525.0	525.7	529.4	525.7	525.0	516.6	512.9	516.6	525.0
43.5°	495.4	499.2	507.3	507.6	511.0	507.6	507.3	499.2	495.4	499.2	507.3



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	450.6	453.7	458.7	460.2	461.8	460.2	458.7	453.7	450.6	453.7	458.7
45.5°	437.5	440.0	444.6	446.2	447.5	446.2	444.6	440.0	437.5	440.0	444.6
46°	425.0	427.2	431.2	433.4	434.1	433.4	431.2	427.2	425.0	427.2	431.2
46.5°	413.5	415.4	418.5	421.0	421.6	421.0	418.5	415.4	413.5	415.4	418.5
47°	402.6	403.8	406.9	409.4	410.4	409.4	406.9	403.8	402.6	403.8	406.9
47.5°	392.3	393.2	396.0	398.8	400.1	398.8	396.0	393.2	392.3	393.2	396.0
48°	382.6	383.9	386.7	389.2	390.4	389.2	386.7	383.9	382.6	383.9	386.7
48.5°	374.9	375.5	377.7	380.1	381.1	380.1	377.7	375.5	374.9	375.5	377.7
49°	367.4	367.7	369.6	371.4	372.4	371.4	369.6	367.7	367.4	367.7	369.6
49.5°	360.2	360.5	361.8	363.3	363.6	363.3	361.8	360.5	360.2	360.5	361.8
50°	352.7	353.0	354.0	355.2	355.5	355.2	354.0	353.0	352.7	353.0	354.0
50.5°	345.2	345.6	346.2	347.4	347.4	347.4	346.2	345.6	345.2	345.6	346.2
51°	336.8	337.5	338.4	339.6	339.6	339.6	338.4	337.5	336.8	337.5	338.4
51.5°	328.7	329.0	330.3	331.8	332.2	331.8	330.3	329.0	328.7	329.0	330.3
52°	320.3	320.9	322.2	323.7	324.1	323.7	322.2	320.9	320.3	320.9	322.2
52.5°	311.9	312.5	314.1	315.3	316.0	315.3	314.1	312.5	311.9	312.5	314.1
53°	304.1	304.7	306.0	307.2	307.9	307.2	306.0	304.7	304.1	304.7	306.0
53.5°	296.0	296.6	297.9	299.4	300.1	299.4	297.9	296.6	296.0	296.6	297.9
54°	288.5	288.8	290.1	291.3	292.0	291.3	290.1	288.8	288.5	288.8	290.1
54.5°	281.1	281.4	282.6	283.9	284.5	283.9	282.6	281.4	281.1	281.4	282.6
55°	273.6	274.2	275.5	276.4	276.7	276.4	275.5	274.2	273.6	274.2	275.5
55.5°	266.4	267.0	268.3	269.2	269.5	269.2	268.3	267.0	266.4	267.0	268.3
56°	259.6	260.2	261.1	262.1	262.4	262.1	261.1	260.2	259.6	260.2	261.1
56.5°	252.7	253.3	254.3	255.2	255.5	255.2	254.3	253.3	252.7	253.3	254.3
57°	245.8	246.5	247.4	248.3	248.7	248.3	247.4	246.5	245.8	246.5	247.4
57.5°	239.0	239.9	240.9	241.5	242.1	241.5	240.9	239.9	239.0	239.9	240.9
58°	233.1	233.4	234.3	235.3	235.6	235.3	234.3	233.4	233.1	233.4	234.3
58.5°	226.8	227.2	228.1	228.7	229.0	228.7	228.1	227.2	226.8	227.2	228.1
59°	220.6	220.9	221.5	222.2	222.8	222.2	221.5	220.9	220.6	220.9	221.5
59.5°	214.4	214.7	215.3	216.2	216.6	216.2	215.3	214.7	214.4	214.7	215.3
60°	208.5	208.8	209.4	210.0	210.3	210.0	209.4	208.8	208.5	208.8	209.4
60.5°	202.5	202.8	203.5	204.1	204.4	204.1	203.5	202.8	202.5	202.8	203.5
61°	196.9	197.2	197.9	198.5	198.8	198.5	197.9	197.2	196.9	197.2	197.9
61.5°	191.3	191.6	192.3	192.9	193.2	192.9	192.3	191.6	191.3	191.6	192.3
62°	186.0	186.0	186.6	187.3	187.3	187.3	186.6	186.0	186.0	186.0	186.6
62.5°	180.4	180.7	181.0	181.7	182.0	181.7	181.0	180.7	180.4	180.7	181.0
63°	175.1	175.4	175.7	176.4	176.4	176.4	175.7	175.4	175.1	175.4	175.7
63.5°	169.8	170.1	170.4	171.1	171.4	171.1	170.4	170.1	169.8	170.1	170.4
64°	164.8	165.1	165.5	165.8	166.1	165.8	165.5	165.1	164.8	165.1	165.5
64.5°	159.8	160.2	160.5	160.8	161.1	160.8	160.5	160.2	159.8	160.2	160.5
65°	154.9	155.2	155.5	155.8	156.1	155.8	155.5	155.2	154.9	155.2	155.5
65.5°	150.2	150.2	150.5	151.1	151.1	151.1	150.5	150.2	150.2	150.2	150.5
66°	145.2	145.5	145.8	146.1	146.5	146.1	145.8	145.5	145.2	145.5	145.8



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	131.5	131.8	132.1	132.4	132.4	132.4	132.1	131.8	131.5	131.8	132.1
68°	127.1	127.4	127.8	128.1	128.1	128.1	127.8	127.4	127.1	127.4	127.8
68.5°	122.8	123.1	123.4	123.4	123.7	123.4	123.4	123.1	122.8	123.1	123.4
69°	118.7	118.7	118.7	119.3	119.3	119.3	118.7	118.7	118.7	118.7	118.7
69.5°	114.4	114.7	114.7	115.0	115.3	115.0	114.7	114.7	114.4	114.7	114.7
70°	110.6	110.9	110.6	110.9	111.2	110.9	110.6	110.9	110.6	110.9	110.6
70.5°	106.6	106.9	106.9	106.9	107.2	106.9	106.9	106.9	106.6	106.9	106.9
71°	102.8	102.8	102.8	102.8	103.1	102.8	102.8	102.8	102.8	102.8	102.8
71.5°	98.8	98.8	99.1	99.1	99.1	99.1	99.1	98.8	98.8	98.8	99.1
72°	95.0	95.0	95.0	95.3	95.3	95.3	95.0	95.0	95.0	95.0	95.0
72.5°	91.3	91.3	91.3	91.6	91.6	91.6	91.3	91.3	91.3	91.3	91.3
73°	87.6	87.6	87.6	87.9	87.9	87.9	87.6	87.6	87.6	87.6	87.6
73.5°	83.8	83.8	84.1	84.1	84.1	84.1	84.1	83.8	83.8	83.8	84.1
74°	80.4	80.4	80.4	80.7	80.7	80.7	80.4	80.4	80.4	80.4	80.4
74.5°	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0	77.0
75°	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5
75.5°	70.1	70.1	70.1	70.1	70.4	70.1	70.1	70.1	70.1	70.1	70.1
76°	67.0	66.7	66.7	67.0	67.0	67.0	66.7	66.7	67.0	66.7	66.7
76.5°	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6	63.6
77°	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4
77.5°	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3	57.3
78°	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2	54.2
78.5°	51.4	51.4	51.1	51.1	51.4	51.1	51.1	51.4	51.4	51.4	51.1
79°	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
79.5°	45.5	45.5	45.2	45.5	45.5	45.5	45.2	45.5	45.5	45.5	45.2
80°	42.7	42.7	42.4	42.4	42.4	42.4	42.4	42.7	42.7	42.7	42.4
80.5°	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9
81°	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1
81.5°	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3
82°	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8	31.8
82.5°	29.3	29.3	29.3	29.3	29.0	29.3	29.3	29.3	29.3	29.3	29.3
83°	26.8	26.8	26.8	26.5	26.5	26.5	26.8	26.8	26.8	26.8	26.8
83.5°	24.3	24.3	24.3	24.0	24.0	24.0	24.3	24.3	24.3	24.3	24.3
84°	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8
84.5°	19.6	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.6	19.3	19.3
85°	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
85.5°	15.0	14.6	15.0	14.6	15.0	14.6	15.0	14.6	15.0	14.6	15.0
86°	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
86.5°	10.6	10.3	10.3	10.3	10.6	10.3	10.3	10.3	10.6	10.3	10.3
87°	8.4	8.4	8.4	8.1	8.4	8.1	8.4	8.4	8.4	8.4	8.4
87.5°	6.2	6.2	6.2	6.2	6.5	6.2	6.2	6.2	6.2	6.2	6.2
88°	4.1	4.4	4.4	4.7	4.7	4.7	4.4	4.4	4.1	4.4	4.4
88.5°	2.5	2.5	2.8	3.1	3.7	3.1	2.8	2.5	2.5	2.5	2.8



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.3	0.6	0.9	0.6	0.3	0.0	0.0	0.0	0.3



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2326.7	2326.7	2326.7	2326.7	2326.7	2326.7
0.5°	2325.8	2324.8	2325.8	2326.1	2326.7	2327.0
1°	2325.1	2323.9	2325.1	2325.4	2325.8	2326.1
1.5°	2323.6	2322.6	2323.6	2324.2	2324.2	2324.8
2°	2321.7	2320.5	2321.7	2322.0	2322.6	2322.9
2.5°	2319.2	2317.7	2319.2	2319.5	2320.1	2320.8
3°	2315.8	2314.2	2315.8	2316.4	2317.0	2317.7
3.5°	2312.0	2311.1	2312.0	2312.7	2313.6	2314.2
4°	2308.0	2306.4	2308.0	2308.6	2309.9	2310.2
4.5°	2303.3	2301.4	2303.3	2303.9	2305.2	2305.8
5°	2298.6	2296.5	2298.6	2299.3	2300.5	2301.4
5.5°	2292.4	2290.5	2292.4	2293.0	2294.6	2296.8
6°	2285.9	2283.4	2285.9	2286.8	2288.4	2289.6
6.5°	2278.7	2276.2	2278.7	2279.6	2281.5	2282.4
7°	2271.2	2269.0	2271.2	2272.8	2273.7	2275.0
7.5°	2263.4	2261.3	2263.4	2264.1	2265.3	2266.6
8°	2254.4	2253.2	2254.4	2255.3	2256.6	2257.5
8.5°	2244.7	2243.5	2244.7	2245.7	2246.9	2248.2
9°	2234.8	2233.5	2234.8	2235.7	2237.3	2238.2
9.5°	2224.2	2222.9	2224.2	2225.1	2226.7	2227.3
10°	2213.0	2211.4	2213.0	2214.2	2215.4	2216.4
10.5°	2201.1	2199.9	2201.1	2202.0	2203.6	2204.2
11°	2189.0	2187.4	2189.0	2190.2	2191.5	2192.1
11.5°	2176.2	2174.9	2176.2	2177.4	2178.7	2179.3
12°	2163.1	2161.9	2163.1	2164.7	2165.6	2166.2
12.5°	2149.4	2147.8	2149.4	2150.9	2151.9	2152.5
13°	2135.7	2134.1	2135.7	2136.9	2137.9	2138.5
13.5°	2121.3	2120.1	2121.3	2122.6	2123.2	2123.8
14°	2106.7	2105.5	2106.7	2107.9	2108.6	2108.9
14.5°	2091.4	2090.2	2091.4	2092.7	2093.0	2093.3
15°	2076.5	2075.2	2076.5	2077.1	2077.7	2077.7
15.5°	2061.5	2060.9	2061.5	2062.1	2061.5	2061.5
16°	2046.9	2046.3	2046.9	2047.2	2046.3	2045.9
16.5°	2032.2	2031.9	2032.2	2032.2	2031.0	2030.4
17°	2017.3	2017.6	2017.3	2017.6	2016.3	2015.7
17.5°	2002.6	2002.3	2002.6	2002.9	2002.0	2001.4
18°	1987.7	1987.0	1987.7	1988.3	1987.7	1987.4
18.5°	1971.8	1970.8	1971.8	1972.4	1972.4	1972.4
19°	1954.6	1953.7	1954.6	1955.6	1956.2	1957.1
19.5°	1936.6	1935.6	1936.6	1937.2	1939.1	1940.3
20°	1917.3	1915.1	1917.3	1916.9	1920.4	1921.9
20.5°	1896.4	1893.9	1896.4	1895.1	1899.2	1901.7
21°	1873.6	1870.5	1873.6	1872.1	1876.7	1880.5



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1795.7	1794.2	1795.7	1796.0	1799.2	1802.9
23°	1767.4	1766.8	1767.4	1769.6	1770.2	1773.3
23.5°	1738.1	1739.6	1738.1	1741.8	1740.3	1743.1
24°	1708.2	1711.0	1708.2	1713.2	1709.4	1711.6
24.5°	1677.9	1681.7	1677.9	1682.9	1678.3	1679.2
25°	1647.7	1650.5	1647.7	1651.5	1645.9	1645.2
25.5°	1617.5	1618.1	1617.5	1619.1	1614.1	1610.0
26°	1586.0	1583.5	1586.0	1585.7	1581.0	1573.9
26.5°	1553.3	1547.7	1553.3	1551.1	1547.4	1536.8
27°	1519.7	1511.2	1519.7	1516.2	1512.5	1500.6
27.5°	1485.1	1474.2	1485.1	1480.7	1476.3	1465.1
28°	1448.9	1437.1	1448.9	1444.6	1440.2	1429.6
28.5°	1412.2	1401.2	1412.2	1408.4	1403.4	1395.0
29°	1374.8	1367.3	1374.8	1372.3	1366.3	1360.7
29.5°	1337.4	1333.9	1337.4	1336.4	1329.9	1327.1
30°	1300.0	1300.3	1300.0	1299.7	1292.5	1293.4
30.5°	1263.8	1268.5	1263.8	1263.2	1256.4	1258.5
31°	1227.7	1234.9	1227.7	1226.4	1219.3	1223.9
31.5°	1191.9	1200.9	1191.9	1189.7	1183.8	1188.4
32°	1156.6	1166.0	1156.6	1153.2	1147.9	1152.3
32.5°	1121.7	1131.1	1121.7	1117.4	1113.6	1117.4
33°	1086.8	1095.6	1086.8	1080.6	1079.4	1082.2
33.5°	1051.9	1059.7	1051.9	1044.2	1045.1	1050.7
34°	1017.7	1025.8	1017.7	1008.0	1010.8	1016.7
34.5°	983.1	992.1	983.1	972.8	976.9	983.1
35°	949.7	959.4	949.7	939.5	943.8	949.1
35.5°	916.7	927.3	916.7	906.4	911.1	916.1
36°	884.9	895.8	884.9	874.3	878.4	883.7
36.5°	853.5	863.7	853.5	843.2	846.9	851.6
37°	822.9	832.0	822.9	812.6	815.8	819.2
37.5°	793.6	800.2	793.6	783.4	785.5	787.7
38°	765.0	768.7	765.0	755.3	756.2	756.6
38.5°	736.9	738.5	736.9	728.5	727.9	727.3
39°	709.8	709.5	709.8	701.7	700.5	698.9
39.5°	683.0	682.1	683.0	676.2	674.0	671.2
40°	657.2	655.9	657.2	651.5	647.8	644.7
40.5°	631.9	631.6	631.9	627.9	622.9	619.8
41°	608.2	609.2	608.2	605.4	598.9	595.8
41.5°	585.5	588.3	585.5	583.9	576.5	573.0
42°	564.3	568.0	564.3	563.4	555.3	551.8
42.5°	544.4	548.4	544.4	544.0	535.3	531.9
43°	525.7	529.4	525.7	525.0	516.6	512.9
43.5°	507.6	511.0	507.6	507.3	499.2	495.4



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	460.2	461.8	460.2	458.7	453.7	450.6
45.5°	446.2	447.5	446.2	444.6	440.0	437.5
46°	433.4	434.1	433.4	431.2	427.2	425.0
46.5°	421.0	421.6	421.0	418.5	415.4	413.5
47°	409.4	410.4	409.4	406.9	403.8	402.6
47.5°	398.8	400.1	398.8	396.0	393.2	392.3
48°	389.2	390.4	389.2	386.7	383.9	382.6
48.5°	380.1	381.1	380.1	377.7	375.5	374.9
49°	371.4	372.4	371.4	369.6	367.7	367.4
49.5°	363.3	363.6	363.3	361.8	360.5	360.2
50°	355.2	355.5	355.2	354.0	353.0	352.7
50.5°	347.4	347.4	347.4	346.2	345.6	345.2
51°	339.6	339.6	339.6	338.4	337.5	336.8
51.5°	331.8	332.2	331.8	330.3	329.0	328.7
52°	323.7	324.1	323.7	322.2	320.9	320.3
52.5°	315.3	316.0	315.3	314.1	312.5	311.9
53°	307.2	307.9	307.2	306.0	304.7	304.1
53.5°	299.4	300.1	299.4	297.9	296.6	296.0
54°	291.3	292.0	291.3	290.1	288.8	288.5
54.5°	283.9	284.5	283.9	282.6	281.4	281.1
55°	276.4	276.7	276.4	275.5	274.2	273.6
55.5°	269.2	269.5	269.2	268.3	267.0	266.4
56°	262.1	262.4	262.1	261.1	260.2	259.6
56.5°	255.2	255.5	255.2	254.3	253.3	252.7
57°	248.3	248.7	248.3	247.4	246.5	245.8
57.5°	241.5	242.1	241.5	240.9	239.9	239.0
58°	235.3	235.6	235.3	234.3	233.4	233.1
58.5°	228.7	229.0	228.7	228.1	227.2	226.8
59°	222.2	222.8	222.2	221.5	220.9	220.6
59.5°	216.2	216.6	216.2	215.3	214.7	214.4
60°	210.0	210.3	210.0	209.4	208.8	208.5
60.5°	204.1	204.4	204.1	203.5	202.8	202.5
61°	198.5	198.8	198.5	197.9	197.2	196.9
61.5°	192.9	193.2	192.9	192.3	191.6	191.3
62°	187.3	187.3	187.3	186.6	186.0	186.0
62.5°	181.7	182.0	181.7	181.0	180.7	180.4
63°	176.4	176.4	176.4	175.7	175.4	175.1
63.5°	171.1	171.4	171.1	170.4	170.1	169.8
64°	165.8	166.1	165.8	165.5	165.1	164.8
64.5°	160.8	161.1	160.8	160.5	160.2	159.8
65°	155.8	156.1	155.8	155.5	155.2	154.9
65.5°	151.1	151.1	151.1	150.5	150.2	150.2
66°	146.1	146.5	146.1	145.8	145.5	145.2



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	132.4	132.4	132.4	132.1	131.8	131.5
68°	128.1	128.1	128.1	127.8	127.4	127.1
68.5°	123.4	123.7	123.4	123.4	123.1	122.8
69°	119.3	119.3	119.3	118.7	118.7	118.7
69.5°	115.0	115.3	115.0	114.7	114.7	114.4
70°	110.9	111.2	110.9	110.6	110.9	110.6
70.5°	106.9	107.2	106.9	106.9	106.9	106.6
71°	102.8	103.1	102.8	102.8	102.8	102.8
71.5°	99.1	99.1	99.1	99.1	98.8	98.8
72°	95.3	95.3	95.3	95.0	95.0	95.0
72.5°	91.6	91.6	91.6	91.3	91.3	91.3
73°	87.9	87.9	87.9	87.6	87.6	87.6
73.5°	84.1	84.1	84.1	84.1	83.8	83.8
74°	80.7	80.7	80.7	80.4	80.4	80.4
74.5°	77.0	77.0	77.0	77.0	77.0	77.0
75°	73.5	73.5	73.5	73.5	73.5	73.5
75.5°	70.1	70.4	70.1	70.1	70.1	70.1
76°	67.0	67.0	67.0	66.7	66.7	67.0
76.5°	63.6	63.6	63.6	63.6	63.6	63.6
77°	60.4	60.4	60.4	60.4	60.4	60.4
77.5°	57.3	57.3	57.3	57.3	57.3	57.3
78°	54.2	54.2	54.2	54.2	54.2	54.2
78.5°	51.1	51.4	51.1	51.1	51.4	51.4
79°	48.3	48.3	48.3	48.3	48.3	48.3
79.5°	45.5	45.5	45.5	45.2	45.5	45.5
80°	42.4	42.4	42.4	42.4	42.7	42.7
80.5°	39.9	39.9	39.9	39.9	39.9	39.9
81°	37.1	37.1	37.1	37.1	37.1	37.1
81.5°	34.3	34.3	34.3	34.3	34.3	34.3
82°	31.8	31.8	31.8	31.8	31.8	31.8
82.5°	29.3	29.0	29.3	29.3	29.3	29.3
83°	26.5	26.5	26.5	26.8	26.8	26.8
83.5°	24.0	24.0	24.0	24.3	24.3	24.3
84°	21.8	21.8	21.8	21.8	21.8	21.8
84.5°	19.3	19.3	19.3	19.3	19.3	19.6
85°	17.1	17.1	17.1	17.1	17.1	17.1
85.5°	14.6	15.0	14.6	15.0	14.6	15.0
86°	12.5	12.5	12.5	12.5	12.5	12.5
86.5°	10.3	10.6	10.3	10.3	10.3	10.6
87°	8.1	8.4	8.1	8.4	8.4	8.4
87.5°	6.2	6.5	6.2	6.2	6.2	6.2
88°	4.7	4.7	4.7	4.4	4.4	4.1
88.5°	3.1	3.7	3.1	2.8	2.5	2.5



TEST NUMBER: P776228

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRMW-3000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.6	0.9	0.6	0.3	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°	1855.9	1852.8	1847.5	1849.0	1845.9	1849.0	1847.5	1852.8	1855.9	1852.8	1847.5
22°	1830.0	1826.9	1822.2	1822.8	1819.7	1822.8	1822.2	1826.9	1830.0	1826.9	1822.2



44°	479.2	483.0	490.1	490.8	493.9	490.8	490.1	483.0	479.2	483.0	490.1
44.5°	464.3	468.0	474.2	475.2	477.4	475.2	474.2	468.0	464.3	468.0	474.2



66.5°	140.5	140.8	141.2	141.5	141.8	141.5	141.2	140.8	140.5	140.8	141.2
67°	136.2	136.2	136.5	136.8	137.1	136.8	136.5	136.2	136.2	136.2	136.5



89°	0.9	1.2	1.9	2.2	2.5	2.2	1.9	1.2	0.9	1.2	1.9
89.5°	0.0	0.3	0.9	1.2	1.6	1.2	0.9	0.3	0.0	0.3	0.9

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

Scaled Data Report





21.5°	1849.0	1845.9	1849.0	1847.5	1852.8	1855.9
22°	1822.8	1819.7	1822.8	1822.2	1826.9	1830.0



44°	490.8	493.9	490.8	490.1	483.0	479.2
44.5°	475.2	477.4	475.2	474.2	468.0	464.3



66.5°	141.5	141.8	141.5	141.2	140.8	140.5
67°	136.8	137.1	136.8	136.5	136.2	136.2

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

Scaled Data Report



89°	2.2	2.5	2.2	1.9	1.2	0.9
89.5°	1.2	1.6	1.2	0.9	0.3	0.0

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

Scaled Data Report



(END OF REPORT)