

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: P776479

Luminaire Tested: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776479
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B065-HCD82TRMB)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD82TRMB-4000lm-5000K
Description: 8 INCH ROUND NARROW MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

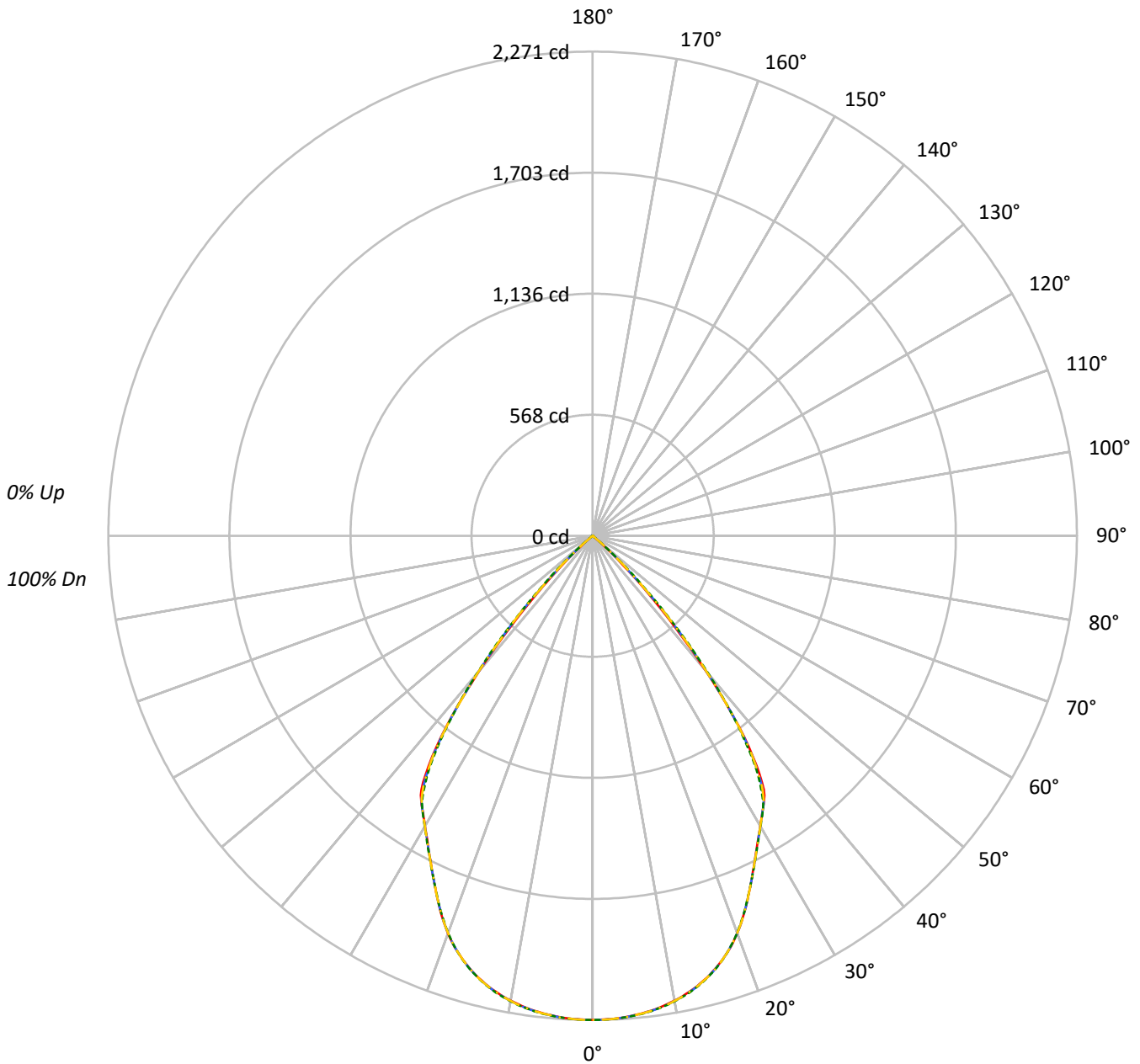
Lumens per Lamp: N/A
Luminaire Lumens: 2701.3 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.08
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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: P776479
CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

Luminous Intensity Polar Plot



0% Up
100% Dn



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR	0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	99	98	97	96	95	93
	1	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93	93	91	89	87	86	85	84
	2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86	86	85	82	86	83	81	79
	3	101	95	89	85	99	93	88	85	91	86	83	88	85	82	86	83	81	79	79	79	76	82	78	75	73
	4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	81	77	74	73	73	73	69	75	72	69	67
	5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	69	67	67	67	64	71	67	63	62
	6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62	62	62	59	66	62	59	57
	7	81	71	64	60	79	70	64	60	69	63	59	68	63	59	66	62	59	57	57	57	55	62	58	55	53
	8	76	66	60	55	75	66	60	55	64	59	55	63	58	55	62	58	55	53	53	53	51	59	54	51	49
	9	72	62	56	51	71	61	55	51	60	55	51	60	55	51	59	54	51	49	49	49	47	55	51	47	46
	10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46	46	46	44	51	47	46	45

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	69343	69343	69343	69343
5°	69179	69244	69179	69244
10°	68637	68736	68637	68736
15°	67314	67377	67314	67377
20°	64459	64391	64459	64391
25°	59541	59595	59541	59595
30°	55429	55513	55429	55513
35°	50882	49846	50882	49846
40°	32832	33745	32832	33745
45°	12051	14490	12051	14490
50°	1382	2218	1382	2218
55°	218	218	218	218
60°	122	122	122	122
65°	87	87	87	87
70°	71	71	71	71
75°	47	47	47	47
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 14490 cd/sqm



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.2	7.9
10°-20°	597.5	22.1
20°-30°	814.4	30.1
30°-40°	804.1	29.8
40°-50°	263.3	9.7
50°-60°	6.2	0.2
60°-70°	1.2	0.0
70°-80°	0.4	0.0
80°-90°	0.0	0.0
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°	1626.0	60.2
0°-40°	2430.2	90.0
0°-60°	2699.7	99.9
0°-90°	2701.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2701.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2271	2271	2271	2271	2271	
5°	2257	2259	2257	2259	2257	214
15°	2130	2132	2130	2132	2130	597
25°	1768	1769	1768	1769	1768	814
35°	1365	1337	1365	1337	1365	807
45°	279	336	279	336	279	247
55°	4	4	4	4	4	5
65°	1	1	1	1	1	1
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2271.3	2271.3	2271.3	2271.3	2271.3	2271.3	2271.3	2271.3	2271.3	2271.3	2271.3
0.5°	2270.8	2270.8	2271.3	2270.8	2271.3	2270.8	2271.3	2270.8	2270.8	2270.8	2271.3
1°	2270.4	2270.4	2270.8	2270.4	2271.3	2270.4	2270.8	2270.4	2270.4	2270.4	2270.8
1.5°	2269.6	2270.0	2270.0	2270.0	2270.4	2270.0	2270.0	2270.0	2269.6	2270.0	2270.0
2°	2268.8	2268.8	2269.2	2269.2	2269.6	2269.2	2269.2	2268.8	2268.8	2268.8	2269.2
2.5°	2267.6	2268.0	2268.0	2268.0	2268.4	2268.0	2268.0	2268.0	2267.6	2268.0	2268.0
3°	2266.3	2266.3	2266.8	2266.8	2267.2	2266.8	2266.8	2266.3	2266.3	2266.3	2266.8
3.5°	2264.7	2264.7	2265.1	2265.1	2265.5	2265.1	2265.1	2264.7	2264.7	2264.7	2265.1
4°	2262.7	2262.7	2263.1	2263.1	2263.9	2263.1	2263.1	2262.7	2262.7	2262.7	2263.1
4.5°	2260.2	2260.2	2260.6	2261.0	2261.4	2261.0	2260.6	2260.2	2260.2	2260.2	2260.6
5°	2257.3	2257.7	2258.2	2258.6	2259.4	2258.6	2258.2	2257.7	2257.3	2257.7	2258.2
5.5°	2254.9	2254.9	2255.3	2255.7	2256.5	2255.7	2255.3	2254.9	2254.9	2254.9	2255.3
6°	2251.6	2251.6	2252.4	2252.8	2253.7	2252.8	2252.4	2251.6	2251.6	2251.6	2252.4
6.5°	2247.9	2248.3	2249.2	2249.6	2250.4	2249.6	2249.2	2248.3	2247.9	2248.3	2249.2
7°	2244.2	2244.2	2245.5	2245.9	2246.7	2245.9	2245.5	2244.2	2244.2	2244.2	2245.5
7.5°	2240.2	2240.2	2241.4	2241.8	2242.6	2241.8	2241.4	2240.2	2240.2	2240.2	2241.4
8°	2235.6	2236.1	2236.9	2237.7	2238.5	2237.7	2236.9	2236.1	2235.6	2236.1	2236.9
8.5°	2230.7	2231.1	2232.0	2232.8	2233.6	2232.8	2232.0	2231.1	2230.7	2231.1	2232.0
9°	2225.4	2225.8	2227.1	2227.9	2228.7	2227.9	2227.1	2225.8	2225.4	2225.8	2227.1
9.5°	2219.7	2220.1	2221.3	2222.6	2223.4	2222.6	2221.3	2220.1	2219.7	2220.1	2221.3
10°	2214.0	2214.4	2215.2	2216.4	2217.2	2216.4	2215.2	2214.4	2214.0	2214.4	2215.2
10.5°	2207.4	2207.8	2209.0	2210.3	2211.1	2210.3	2209.0	2207.8	2207.4	2207.8	2209.0
11°	2200.9	2201.3	2202.5	2203.3	2204.1	2203.3	2202.5	2201.3	2200.9	2201.3	2202.5
11.5°	2193.5	2193.9	2195.1	2196.0	2197.2	2196.0	2195.1	2193.9	2193.5	2193.9	2195.1
12°	2186.1	2186.1	2187.4	2188.6	2189.4	2188.6	2187.4	2186.1	2186.1	2186.1	2187.4
12.5°	2177.9	2177.9	2179.2	2180.4	2181.2	2180.4	2179.2	2177.9	2177.9	2177.9	2179.2
13°	2169.4	2169.8	2170.6	2171.8	2172.2	2171.8	2170.6	2169.8	2169.4	2169.8	2170.6
13.5°	2159.9	2160.4	2161.6	2162.4	2163.2	2162.4	2161.6	2160.4	2159.9	2160.4	2161.6
14°	2150.5	2150.9	2151.8	2152.6	2153.4	2152.6	2151.8	2150.9	2150.5	2150.9	2151.8
14.5°	2140.3	2140.7	2141.5	2142.3	2143.2	2142.3	2141.5	2140.7	2140.3	2140.7	2141.5
15°	2129.7	2129.7	2130.5	2131.3	2131.7	2131.3	2130.5	2129.7	2129.7	2129.7	2130.5
15.5°	2118.2	2118.2	2119.0	2119.8	2120.2	2119.8	2119.0	2118.2	2118.2	2118.2	2119.0
16°	2105.9	2106.3	2106.7	2107.1	2108.0	2107.1	2106.7	2106.3	2105.9	2106.3	2106.7
16.5°	2093.6	2093.6	2094.1	2094.5	2094.9	2094.5	2094.1	2093.6	2093.6	2093.6	2094.1
17°	2080.1	2080.1	2080.5	2081.0	2081.4	2081.0	2080.5	2080.1	2080.1	2080.1	2080.5
17.5°	2065.8	2065.8	2066.2	2066.2	2066.6	2066.2	2066.2	2065.8	2065.8	2065.8	2066.2
18°	2051.5	2051.1	2051.1	2051.1	2051.5	2051.1	2051.1	2051.1	2051.5	2051.1	2051.1
18.5°	2035.5	2035.5	2035.1	2035.1	2035.1	2035.1	2035.1	2035.5	2035.5	2035.5	2035.1
19°	2019.2	2019.2	2018.8	2018.3	2018.3	2018.3	2018.8	2019.2	2019.2	2019.2	2018.8
19.5°	2002.0	2001.6	2001.2	2000.7	2000.7	2000.7	2001.2	2001.6	2002.0	2001.6	2001.2
20°	1984.0	1983.6	1983.2	1982.3	1981.9	1982.3	1983.2	1983.6	1984.0	1983.6	1983.2
20.5°	1964.7	1964.3	1963.5	1962.7	1962.3	1962.7	1963.5	1964.3	1964.7	1964.3	1963.5
21°	1944.7	1944.7	1943.9	1942.2	1941.4	1942.2	1943.9	1944.7	1944.7	1944.7	1943.9

TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1880.4	1880.4	1879.6	1878.4	1878.4	1878.4	1879.6	1880.4	1880.4	1880.4	1879.6
23°	1857.9	1857.9	1857.5	1856.3	1856.3	1856.3	1857.5	1857.9	1857.9	1857.9	1857.5
23.5°	1835.0	1835.4	1835.0	1834.2	1834.2	1834.2	1835.0	1835.4	1835.0	1835.4	1835.0
24°	1812.1	1812.5	1812.5	1812.1	1812.5	1812.1	1812.5	1812.5	1812.1	1812.5	1812.5
24.5°	1790.0	1790.0	1790.4	1790.0	1790.8	1790.0	1790.4	1790.0	1790.0	1790.0	1790.4
25°	1767.5	1767.9	1768.3	1768.3	1769.1	1768.3	1768.3	1767.9	1767.5	1767.9	1768.3
25.5°	1746.2	1746.2	1746.6	1747.0	1747.8	1747.0	1746.6	1746.2	1746.2	1746.2	1746.6
26°	1724.9	1725.3	1725.7	1726.2	1727.0	1726.2	1725.7	1725.3	1724.9	1725.3	1725.7
26.5°	1704.1	1704.5	1704.9	1705.3	1706.5	1705.3	1704.9	1704.5	1704.1	1704.5	1704.9
27°	1684.0	1684.0	1684.8	1684.8	1686.0	1684.8	1684.8	1684.0	1684.0	1684.0	1684.8
27.5°	1663.9	1664.4	1664.8	1665.6	1666.4	1665.6	1664.8	1664.4	1663.9	1664.4	1664.8
28°	1644.3	1644.7	1645.5	1645.9	1647.2	1645.9	1645.5	1644.7	1644.3	1644.7	1645.5
28.5°	1625.5	1626.3	1626.7	1627.1	1628.3	1627.1	1626.7	1626.3	1625.5	1626.3	1626.7
29°	1607.5	1607.9	1608.3	1608.7	1609.9	1608.7	1608.3	1607.9	1607.5	1607.9	1608.3
29.5°	1589.5	1589.9	1590.7	1591.1	1591.9	1591.1	1590.7	1589.9	1589.5	1589.9	1590.7
30°	1572.3	1572.3	1573.1	1573.5	1574.7	1573.5	1573.1	1572.3	1572.3	1572.3	1573.1
30.5°	1555.1	1555.5	1555.9	1556.7	1557.5	1556.7	1555.9	1555.5	1555.1	1555.5	1555.9
31°	1538.7	1539.1	1540.0	1540.4	1541.6	1540.4	1540.0	1539.1	1538.7	1539.1	1540.0
31.5°	1523.2	1523.6	1523.6	1524.0	1524.8	1524.0	1523.6	1523.6	1523.2	1523.6	1523.6
32°	1508.0	1508.0	1508.0	1507.6	1508.4	1507.6	1508.0	1508.0	1508.0	1508.0	1508.0
32.5°	1493.3	1492.9	1492.1	1490.4	1488.8	1490.4	1492.1	1492.9	1493.3	1492.9	1492.1
33°	1477.3	1476.5	1472.4	1468.3	1463.8	1468.3	1472.4	1476.5	1477.3	1476.5	1472.4
33.5°	1460.1	1456.1	1448.3	1441.3	1435.6	1441.3	1448.3	1456.1	1460.1	1456.1	1448.3
34°	1435.6	1430.3	1419.6	1410.6	1404.5	1410.6	1419.6	1430.3	1435.6	1430.3	1419.6
34.5°	1403.3	1398.8	1386.9	1378.3	1372.2	1378.3	1386.9	1398.8	1403.3	1398.8	1386.9
35°	1365.2	1360.7	1350.1	1343.1	1337.4	1343.1	1350.1	1360.7	1365.2	1360.7	1350.1
35.5°	1323.5	1321.0	1311.2	1303.8	1298.1	1303.8	1311.2	1321.0	1323.5	1321.0	1311.2
36°	1278.9	1276.8	1268.6	1261.3	1255.1	1261.3	1268.6	1276.8	1278.9	1276.8	1268.6
36.5°	1231.4	1229.8	1222.8	1215.0	1208.5	1215.0	1222.8	1229.8	1231.4	1229.8	1222.8
37°	1178.2	1177.0	1172.9	1167.1	1160.6	1167.1	1172.9	1177.0	1178.2	1177.0	1172.9
37.5°	1123.3	1121.7	1120.1	1116.4	1111.1	1116.4	1120.1	1121.7	1123.3	1121.7	1120.1
38°	1065.2	1062.8	1063.6	1063.2	1060.7	1063.2	1063.6	1062.8	1065.2	1062.8	1063.6
38.5°	1008.8	1005.1	1005.9	1007.9	1010.0	1007.9	1005.9	1005.1	1008.8	1005.1	1005.9
39°	947.8	946.6	947.4	952.3	957.6	952.3	947.4	946.6	947.8	946.6	947.4
39.5°	887.2	888.0	889.7	895.8	903.2	895.8	889.7	888.0	887.2	888.0	889.7
40°	823.8	827.9	831.6	839.7	846.7	839.7	831.6	827.9	823.8	827.9	831.6
40.5°	762.8	768.5	775.5	784.5	790.6	784.5	775.5	768.5	762.8	768.5	775.5
41°	700.2	708.0	719.4	729.7	735.8	729.7	719.4	708.0	700.2	708.0	719.4
41.5°	640.9	649.0	663.0	675.2	681.0	675.2	663.0	649.0	640.9	649.0	663.0
42°	582.8	590.1	606.5	621.2	626.5	621.2	606.5	590.1	582.8	590.1	606.5
42.5°	526.3	535.3	553.7	568.4	573.3	568.4	553.7	535.3	526.3	535.3	553.7
43°	471.8	482.1	500.5	516.0	521.4	516.0	500.5	482.1	471.8	482.1	500.5
43.5°	421.1	430.9	448.9	464.9	472.3	464.9	448.9	430.9	421.1	430.9	448.9



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	279.1	287.7	306.5	325.3	335.6	325.3	306.5	287.7	279.1	287.7	306.5
45.5°	236.1	246.4	265.6	285.2	294.6	285.2	265.6	246.4	236.1	246.4	265.6
46°	198.5	207.1	228.8	248.0	259.5	248.0	228.8	207.1	198.5	207.1	228.8
46.5°	164.5	173.5	194.0	212.4	224.7	212.4	194.0	173.5	164.5	173.5	194.0
47°	137.9	143.2	160.4	178.8	189.5	178.8	160.4	143.2	137.9	143.2	160.4
47.5°	112.5	115.8	131.4	147.3	154.3	147.3	131.4	115.8	112.5	115.8	131.4
48°	89.6	92.9	104.8	119.1	126.5	119.1	104.8	92.9	89.6	92.9	104.8
48.5°	72.0	73.7	83.9	94.5	101.1	94.5	83.9	73.7	72.0	73.7	83.9
49°	54.0	56.1	64.7	74.9	78.6	74.9	64.7	56.1	54.0	56.1	64.7
49.5°	40.9	41.7	47.5	56.5	61.4	56.5	47.5	41.7	40.9	41.7	47.5
50°	29.1	28.2	36.0	44.2	46.7	44.2	36.0	28.2	29.1	28.2	36.0
50.5°	18.0	19.6	25.4	33.1	37.6	33.1	25.4	19.6	18.0	19.6	25.4
51°	9.8	13.1	17.6	22.1	28.6	22.1	17.6	13.1	9.8	13.1	17.6
51.5°	7.8	8.2	11.5	14.3	21.3	14.3	11.5	8.2	7.8	8.2	11.5
52°	6.5	7.0	7.4	9.0	13.9	9.0	7.4	7.0	6.5	7.0	7.4
52.5°	5.3	6.1	6.1	7.0	6.5	7.0	6.1	6.1	5.3	6.1	6.1
53°	5.3	5.3	5.7	5.7	5.3	5.7	5.7	5.3	5.3	5.3	5.7
53.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
54°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
54.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
55°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
55.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
56°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
56.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
57°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
57.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
58°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
58.5°	2.5	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.5	2.9	2.9
59°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
59.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
60°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
60.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
61°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
61.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
62°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
62.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
63°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
63.5°	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.6	1.6
64°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
64.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
65°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
65.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
66°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
68°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
68.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
69°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
69.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
70.5°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8	0.8
71°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
77°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
77.5°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
78°	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2271.3	2271.3	2271.3	2271.3	2271.3	2271.3
0.5°	2270.8	2271.3	2270.8	2271.3	2270.8	2270.8
1°	2270.4	2271.3	2270.4	2270.8	2270.4	2270.4
1.5°	2270.0	2270.4	2270.0	2270.0	2270.0	2269.6
2°	2269.2	2269.6	2269.2	2269.2	2268.8	2268.8
2.5°	2268.0	2268.4	2268.0	2268.0	2268.0	2267.6
3°	2266.8	2267.2	2266.8	2266.8	2266.3	2266.3
3.5°	2265.1	2265.5	2265.1	2265.1	2264.7	2264.7
4°	2263.1	2263.9	2263.1	2263.1	2262.7	2262.7
4.5°	2261.0	2261.4	2261.0	2260.6	2260.2	2260.2
5°	2258.6	2259.4	2258.6	2258.2	2257.7	2257.3
5.5°	2255.7	2256.5	2255.7	2255.3	2254.9	2254.9
6°	2252.8	2253.7	2252.8	2252.4	2251.6	2251.6
6.5°	2249.6	2250.4	2249.6	2249.2	2248.3	2247.9
7°	2245.9	2246.7	2245.9	2245.5	2244.2	2244.2
7.5°	2241.8	2242.6	2241.8	2241.4	2240.2	2240.2
8°	2237.7	2238.5	2237.7	2236.9	2236.1	2235.6
8.5°	2232.8	2233.6	2232.8	2232.0	2231.1	2230.7
9°	2227.9	2228.7	2227.9	2227.1	2225.8	2225.4
9.5°	2222.6	2223.4	2222.6	2221.3	2220.1	2219.7
10°	2216.4	2217.2	2216.4	2215.2	2214.4	2214.0
10.5°	2210.3	2211.1	2210.3	2209.0	2207.8	2207.4
11°	2203.3	2204.1	2203.3	2202.5	2201.3	2200.9
11.5°	2196.0	2197.2	2196.0	2195.1	2193.9	2193.5
12°	2188.6	2189.4	2188.6	2187.4	2186.1	2186.1
12.5°	2180.4	2181.2	2180.4	2179.2	2177.9	2177.9
13°	2171.8	2172.2	2171.8	2170.6	2169.8	2169.4
13.5°	2162.4	2163.2	2162.4	2161.6	2160.4	2159.9
14°	2152.6	2153.4	2152.6	2151.8	2150.9	2150.5
14.5°	2142.3	2143.2	2142.3	2141.5	2140.7	2140.3
15°	2131.3	2131.7	2131.3	2130.5	2129.7	2129.7
15.5°	2119.8	2120.2	2119.8	2119.0	2118.2	2118.2
16°	2107.1	2108.0	2107.1	2106.7	2106.3	2105.9
16.5°	2094.5	2094.9	2094.5	2094.1	2093.6	2093.6
17°	2081.0	2081.4	2081.0	2080.5	2080.1	2080.1
17.5°	2066.2	2066.6	2066.2	2066.2	2065.8	2065.8
18°	2051.1	2051.5	2051.1	2051.1	2051.1	2051.5
18.5°	2035.1	2035.1	2035.1	2035.1	2035.5	2035.5
19°	2018.3	2018.3	2018.3	2018.8	2019.2	2019.2
19.5°	2000.7	2000.7	2000.7	2001.2	2001.6	2002.0
20°	1982.3	1981.9	1982.3	1983.2	1983.6	1984.0
20.5°	1962.7	1962.3	1962.7	1963.5	1964.3	1964.7
21°	1942.2	1941.4	1942.2	1943.9	1944.7	1944.7

TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1878.4	1878.4	1878.4	1879.6	1880.4	1880.4
23°	1856.3	1856.3	1856.3	1857.5	1857.9	1857.9
23.5°	1834.2	1834.2	1834.2	1835.0	1835.4	1835.0
24°	1812.1	1812.5	1812.1	1812.5	1812.5	1812.1
24.5°	1790.0	1790.8	1790.0	1790.4	1790.0	1790.0
25°	1768.3	1769.1	1768.3	1768.3	1767.9	1767.5
25.5°	1747.0	1747.8	1747.0	1746.6	1746.2	1746.2
26°	1726.2	1727.0	1726.2	1725.7	1725.3	1724.9
26.5°	1705.3	1706.5	1705.3	1704.9	1704.5	1704.1
27°	1684.8	1686.0	1684.8	1684.8	1684.0	1684.0
27.5°	1665.6	1666.4	1665.6	1664.8	1664.4	1663.9
28°	1645.9	1647.2	1645.9	1645.5	1644.7	1644.3
28.5°	1627.1	1628.3	1627.1	1626.7	1626.3	1625.5
29°	1608.7	1609.9	1608.7	1608.3	1607.9	1607.5
29.5°	1591.1	1591.9	1591.1	1590.7	1589.9	1589.5
30°	1573.5	1574.7	1573.5	1573.1	1572.3	1572.3
30.5°	1556.7	1557.5	1556.7	1555.9	1555.5	1555.1
31°	1540.4	1541.6	1540.4	1540.0	1539.1	1538.7
31.5°	1524.0	1524.8	1524.0	1523.6	1523.6	1523.2
32°	1507.6	1508.4	1507.6	1508.0	1508.0	1508.0
32.5°	1490.4	1488.8	1490.4	1492.1	1492.9	1493.3
33°	1468.3	1463.8	1468.3	1472.4	1476.5	1477.3
33.5°	1441.3	1435.6	1441.3	1448.3	1456.1	1460.1
34°	1410.6	1404.5	1410.6	1419.6	1430.3	1435.6
34.5°	1378.3	1372.2	1378.3	1386.9	1398.8	1403.3
35°	1343.1	1337.4	1343.1	1350.1	1360.7	1365.2
35.5°	1303.8	1298.1	1303.8	1311.2	1321.0	1323.5
36°	1261.3	1255.1	1261.3	1268.6	1276.8	1278.9
36.5°	1215.0	1208.5	1215.0	1222.8	1229.8	1231.4
37°	1167.1	1160.6	1167.1	1172.9	1177.0	1178.2
37.5°	1116.4	1111.1	1116.4	1120.1	1121.7	1123.3
38°	1063.2	1060.7	1063.2	1063.6	1062.8	1065.2
38.5°	1007.9	1010.0	1007.9	1005.9	1005.1	1008.8
39°	952.3	957.6	952.3	947.4	946.6	947.8
39.5°	895.8	903.2	895.8	889.7	888.0	887.2
40°	839.7	846.7	839.7	831.6	827.9	823.8
40.5°	784.5	790.6	784.5	775.5	768.5	762.8
41°	729.7	735.8	729.7	719.4	708.0	700.2
41.5°	675.2	681.0	675.2	663.0	649.0	640.9
42°	621.2	626.5	621.2	606.5	590.1	582.8
42.5°	568.4	573.3	568.4	553.7	535.3	526.3
43°	516.0	521.4	516.0	500.5	482.1	471.8
43.5°	464.9	472.3	464.9	448.9	430.9	421.1



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	325.3	335.6	325.3	306.5	287.7	279.1
45.5°	285.2	294.6	285.2	265.6	246.4	236.1
46°	248.0	259.5	248.0	228.8	207.1	198.5
46.5°	212.4	224.7	212.4	194.0	173.5	164.5
47°	178.8	189.5	178.8	160.4	143.2	137.9
47.5°	147.3	154.3	147.3	131.4	115.8	112.5
48°	119.1	126.5	119.1	104.8	92.9	89.6
48.5°	94.5	101.1	94.5	83.9	73.7	72.0
49°	74.9	78.6	74.9	64.7	56.1	54.0
49.5°	56.5	61.4	56.5	47.5	41.7	40.9
50°	44.2	46.7	44.2	36.0	28.2	29.1
50.5°	33.1	37.6	33.1	25.4	19.6	18.0
51°	22.1	28.6	22.1	17.6	13.1	9.8
51.5°	14.3	21.3	14.3	11.5	8.2	7.8
52°	9.0	13.9	9.0	7.4	7.0	6.5
52.5°	7.0	6.5	7.0	6.1	6.1	5.3
53°	5.7	5.3	5.7	5.7	5.3	5.3
53.5°	4.9	4.9	4.9	4.9	4.9	4.9
54°	4.5	4.5	4.5	4.5	4.5	4.5
54.5°	4.5	4.5	4.5	4.5	4.5	4.5
55°	4.1	4.1	4.1	4.1	4.1	4.1
55.5°	4.1	4.1	4.1	4.1	4.1	4.1
56°	3.7	3.7	3.7	3.7	3.7	3.7
56.5°	3.3	3.3	3.3	3.3	3.3	3.3
57°	3.3	3.3	3.3	3.3	3.3	3.3
57.5°	2.9	2.9	2.9	2.9	2.9	2.9
58°	2.9	2.9	2.9	2.9	2.9	2.9
58.5°	2.9	2.9	2.9	2.9	2.9	2.5
59°	2.5	2.5	2.5	2.5	2.5	2.5
59.5°	2.5	2.5	2.5	2.5	2.5	2.5
60°	2.0	2.0	2.0	2.0	2.0	2.0
60.5°	2.0	2.0	2.0	2.0	2.0	2.0
61°	2.0	2.0	2.0	2.0	2.0	2.0
61.5°	1.6	1.6	1.6	1.6	1.6	1.6
62°	1.6	1.6	1.6	1.6	1.6	1.6
62.5°	1.6	1.6	1.6	1.6	1.6	1.6
63°	1.6	1.6	1.6	1.6	1.6	1.6
63.5°	1.6	1.6	1.6	1.6	1.6	1.2
64°	1.2	1.2	1.2	1.2	1.2	1.2
64.5°	1.2	1.2	1.2	1.2	1.2	1.2
65°	1.2	1.2	1.2	1.2	1.2	1.2
65.5°	1.2	1.2	1.2	1.2	1.2	1.2
66°	1.2	1.2	1.2	1.2	1.2	1.2



TEST NUMBER: P776479

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.8	0.8	0.8	0.8	0.8	0.8
68°	0.8	0.8	0.8	0.8	0.8	0.8
68.5°	0.8	0.8	0.8	0.8	0.8	0.8
69°	0.8	0.8	0.8	0.8	0.8	0.8
69.5°	0.8	0.8	0.8	0.8	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8	0.8
70.5°	0.8	0.8	0.8	0.8	0.8	0.4
71°	0.4	0.4	0.4	0.4	0.4	0.4
71.5°	0.4	0.4	0.4	0.4	0.4	0.4
72°	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.4	0.4	0.4	0.4	0.4	0.4
73°	0.4	0.4	0.4	0.4	0.4	0.4
73.5°	0.4	0.4	0.4	0.4	0.4	0.4
74°	0.4	0.4	0.4	0.4	0.4	0.4
74.5°	0.4	0.4	0.4	0.4	0.4	0.4
75°	0.4	0.4	0.4	0.4	0.4	0.4
75.5°	0.4	0.4	0.4	0.4	0.4	0.4
76°	0.4	0.4	0.4	0.4	0.4	0.4
76.5°	0.4	0.4	0.4	0.4	0.4	0.4
77°	0.4	0.4	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4	0.0
78°	0.4	0.4	0.4	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	0.0
81.5°	0.0	0.0	0.0	0.0	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776479
CATALOG NUMBER: HCDJBL3040CSD-HCD82TRMB-4000lm-5000K

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°	1923.8	1923.4	1922.6	1921.4	1920.9	1921.4	1922.6	1923.4	1923.8	1923.4	1922.6
22°	1902.5	1902.1	1901.3	1900.1	1899.7	1900.1	1901.3	1902.1	1902.5	1902.1	1901.3



44°	372.0	379.8	398.6	415.4	425.2	415.4	398.6	379.8	372.0	379.8	398.6
44.5°	324.9	332.3	351.1	369.5	379.4	369.5	351.1	332.3	324.9	332.3	351.1



66.5°	0.8	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
67°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8



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





21.5°	1921.4	1920.9	1921.4	1922.6	1923.4	1923.8
22°	1900.1	1899.7	1900.1	1901.3	1902.1	1902.5



44°	415.4	425.2	415.4	398.6	379.8	372.0
44.5°	369.5	379.4	369.5	351.1	332.3	324.9

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

Scaled Data Report



66.5°	1.2	1.2	1.2	1.2	0.8	0.8
67°	0.8	0.8	0.8	0.8	0.8	0.8

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	0.0	0.0
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)