

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: P776837

Luminaire Tested: HCDJBS4050CSD-HCD8TSQMB-5000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776837
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B024-HCD8TSQMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD8TSQMB-5000lm-3500K
Description: 8 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

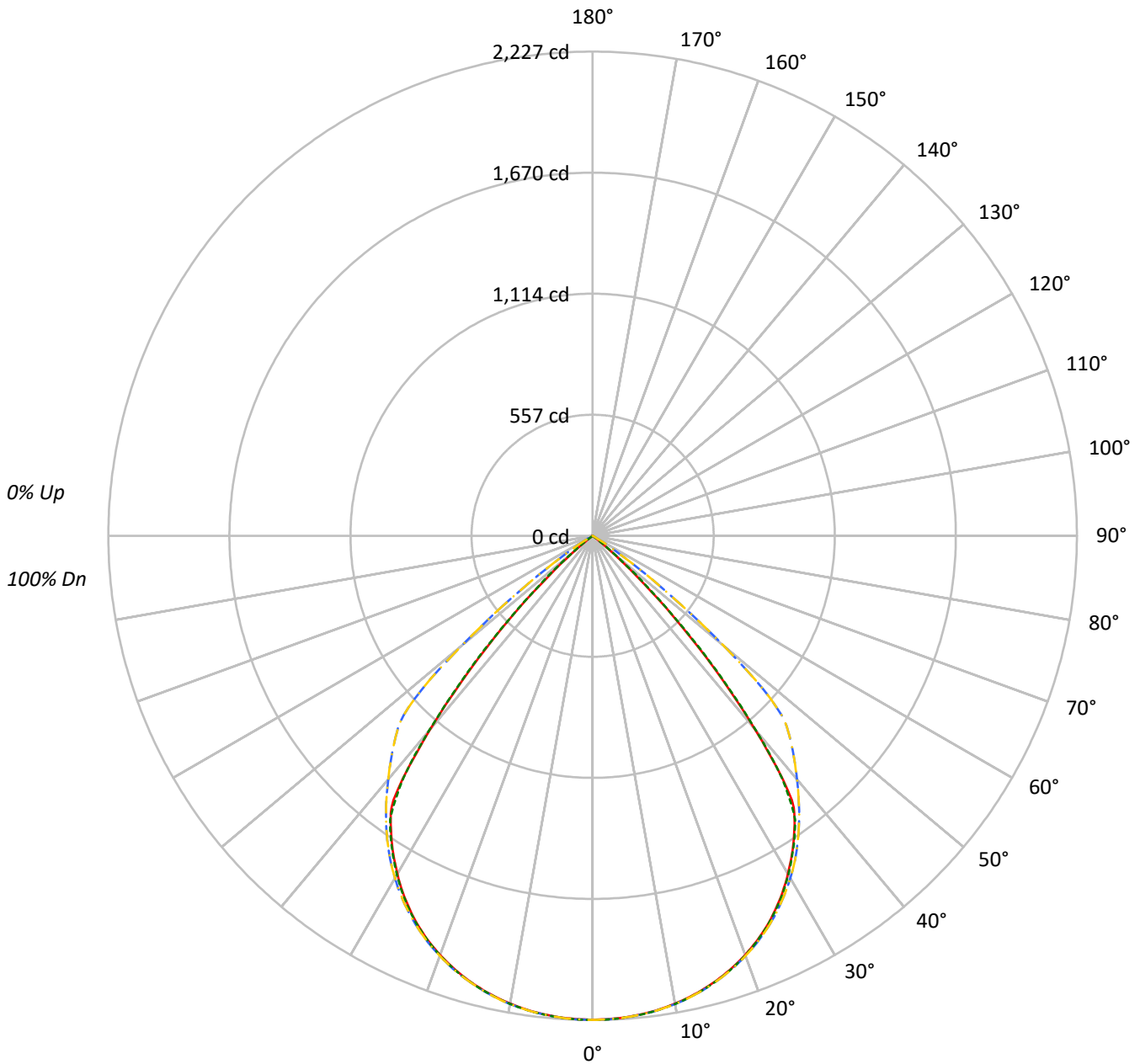
Lumens per Lamp: N/A
Luminaire Lumens: 3459.9 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.28
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')

CIE Type: Direct
Input Watts (W): 48
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: P776837
CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

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			
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92					92			
2	106	101	96	92	104	99	95	91	96	92	89	92	90	87	90	87	85	84					84			
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	77	76					76			
4	93	85	78	73	91	84	78	73	81	76	72	79	75	71	77	74	70	69					69			
5	88	78	71	66	86	77	71	66	75	70	65	73	68	65	72	67	64	62					62			
6	82	72	65	60	81	71	64	60	69	64	59	68	63	59	67	62	58	57					57			
7	77	66	59	55	76	66	59	54	64	58	54	63	58	54	62	57	53	52					52			
8	72	62	55	50	71	61	54	50	60	54	50	59	53	49	58	53	49	47					47			
9	68	57	50	46	67	57	50	46	56	50	45	55	49	45	54	49	45	44					44			
10	64	53	47	42	63	53	46	42	52	46	42	51	46	42	50	45	42	40					40			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	53388	53388	53388	53388
5°	53330	53366	53330	53366
10°	53201	53235	53201	53235
15°	52896	52940	52896	52940
20°	52349	52397	52349	52397
25°	51369	51433	51369	51433
30°	49725	49830	49725	49830
35°	47380	47518	47380	47518
40°	36316	36626	36316	36626
45°	18007	18471	18007	18471
50°	3958	4820	3958	4820
55°	59	79	59	79
60°	43	67	43	67
65°	51	51	51	51
70°	35	35	35	35
75°	46	46	46	46
80°	0	0	0	0
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 43131 cd/sqm



TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.6	6.1
10°-20°	601.4	17.4
20°-30°	895.5	25.9
30°-40°	1012.9	29.3
40°-50°	646.4	18.7
50°-60°	91.7	2.7
60°-70°	1.0	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°	1707.5	49.4
0°-40°	2720.4	78.6
0°-60°	3458.6	100.0
0°-90°	3459.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3459.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2226	2226	2226	2226	2226	
5°	2216	2217	2216	2217	2216	211
15°	2131	2133	2131	2133	2131	601
25°	1942	1944	1942	1944	1942	892
35°	1619	1623	1619	1623	1619	982
45°	531	545	531	545	531	424
55°	1	2	1	2	1	13
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: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2226.5	2226.5	2226.5	2226.5	2226.5	2226.5	2226.5	2226.5	2226.5	2226.5	2226.5
0.5°	2225.5	2226.0	2226.5	2227.0	2227.0	2227.0	2226.5	2226.0	2225.5	2226.0	2226.5
1°	2225.1	2225.5	2226.0	2226.5	2226.5	2226.5	2226.0	2225.5	2225.1	2225.5	2226.0
1.5°	2224.6	2225.1	2225.5	2226.0	2226.0	2226.0	2225.5	2225.1	2224.6	2225.1	2225.5
2°	2224.1	2224.1	2225.1	2225.5	2225.1	2225.5	2225.1	2224.1	2224.1	2224.1	2225.1
2.5°	2223.2	2223.7	2224.1	2224.6	2224.6	2224.6	2224.1	2223.7	2223.2	2223.7	2224.1
3°	2222.2	2222.2	2223.2	2223.7	2223.2	2223.7	2223.2	2222.2	2222.2	2222.2	2223.2
3.5°	2220.8	2221.3	2221.8	2222.2	2222.2	2222.2	2221.8	2221.3	2220.8	2221.3	2221.8
4°	2219.4	2219.9	2220.4	2220.8	2220.4	2220.8	2220.4	2219.9	2219.4	2219.9	2220.4
4.5°	2217.5	2218.0	2218.5	2218.9	2218.9	2218.9	2218.5	2218.0	2217.5	2218.0	2218.5
5°	2215.6	2216.1	2217.1	2217.1	2217.1	2217.1	2217.1	2216.1	2215.6	2216.1	2217.1
5.5°	2213.8	2214.2	2214.7	2215.2	2214.7	2215.2	2214.7	2214.2	2213.8	2214.2	2214.7
6°	2211.4	2211.9	2212.3	2212.8	2212.8	2212.8	2212.3	2211.9	2211.4	2211.9	2212.3
6.5°	2209.0	2209.5	2210.0	2210.5	2210.0	2210.5	2210.0	2209.5	2209.0	2209.5	2210.0
7°	2206.2	2206.7	2207.6	2207.6	2207.6	2207.6	2207.6	2206.7	2206.2	2206.7	2207.6
7.5°	2203.4	2203.9	2204.3	2204.8	2204.3	2204.8	2204.3	2203.9	2203.4	2203.9	2204.3
8°	2200.1	2200.6	2201.5	2201.5	2201.5	2201.5	2201.5	2200.6	2200.1	2200.6	2201.5
8.5°	2196.8	2197.3	2198.2	2198.2	2197.7	2198.2	2198.2	2197.3	2196.8	2197.3	2198.2
9°	2193.0	2193.5	2194.4	2194.9	2194.4	2194.9	2194.4	2193.5	2193.0	2193.5	2194.4
9.5°	2189.2	2189.7	2190.6	2191.1	2190.2	2191.1	2190.6	2189.7	2189.2	2189.7	2190.6
10°	2185.0	2185.9	2186.9	2186.9	2186.4	2186.9	2186.9	2185.9	2185.0	2185.9	2186.9
10.5°	2180.7	2181.7	2182.6	2182.6	2182.2	2182.6	2182.6	2181.7	2180.7	2181.7	2182.6
11°	2176.0	2177.0	2178.4	2177.9	2177.4	2177.9	2178.4	2177.0	2176.0	2177.0	2178.4
11.5°	2171.3	2172.3	2173.7	2173.2	2172.7	2173.2	2173.7	2172.3	2171.3	2172.3	2173.7
12°	2166.1	2167.1	2168.5	2168.5	2167.5	2168.5	2168.5	2167.1	2166.1	2167.1	2168.5
12.5°	2160.9	2161.9	2163.3	2163.3	2162.4	2163.3	2163.3	2161.9	2160.9	2161.9	2163.3
13°	2155.3	2156.7	2158.1	2158.1	2157.2	2158.1	2158.1	2156.7	2155.3	2156.7	2158.1
13.5°	2149.6	2151.0	2152.4	2152.4	2151.5	2152.4	2152.4	2151.0	2149.6	2151.0	2152.4
14°	2143.5	2144.9	2146.3	2146.3	2145.4	2146.3	2146.3	2144.9	2143.5	2144.9	2146.3
14.5°	2137.4	2138.8	2140.2	2140.2	2139.2	2140.2	2140.2	2138.8	2137.4	2138.8	2140.2
15°	2130.8	2132.2	2134.1	2133.6	2132.6	2133.6	2134.1	2132.2	2130.8	2132.2	2134.1
15.5°	2124.2	2125.6	2127.5	2127.0	2126.0	2127.0	2127.5	2125.6	2124.2	2125.6	2127.5
16°	2117.1	2118.5	2120.4	2120.4	2119.0	2120.4	2120.4	2118.5	2117.1	2118.5	2120.4
16.5°	2110.0	2111.4	2113.3	2113.3	2111.9	2113.3	2113.3	2111.4	2110.0	2111.4	2113.3
17°	2102.0	2103.9	2106.2	2105.8	2104.3	2105.8	2106.2	2103.9	2102.0	2103.9	2106.2
17.5°	2094.4	2096.3	2098.2	2098.2	2096.8	2098.2	2098.2	2096.3	2094.4	2096.3	2098.2
18°	2086.4	2088.3	2090.7	2090.2	2088.3	2090.2	2090.7	2088.3	2086.4	2088.3	2090.7
18.5°	2077.9	2080.3	2082.2	2081.7	2079.8	2081.7	2082.2	2080.3	2077.9	2080.3	2082.2
19°	2069.4	2071.8	2073.7	2073.2	2071.3	2073.2	2073.7	2071.8	2069.4	2071.8	2073.7
19.5°	2060.5	2062.8	2065.2	2064.7	2062.8	2064.7	2065.2	2062.8	2060.5	2062.8	2065.2
20°	2051.5	2053.9	2056.2	2055.8	2053.4	2055.8	2056.2	2053.9	2051.5	2053.9	2056.2
20.5°	2041.6	2044.4	2047.3	2046.3	2044.0	2046.3	2047.3	2044.4	2041.6	2044.4	2047.3
21°	2031.7	2035.0	2037.8	2036.9	2034.1	2036.9	2037.8	2035.0	2031.7	2035.0	2037.8



TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2000.6	2004.4	2007.7	2006.2	2002.9	2006.2	2007.7	2004.4	2000.6	2004.4	2007.7
23°	1989.3	1993.5	1997.3	1995.4	1991.6	1995.4	1997.3	1993.5	1989.3	1993.5	1997.3
23.5°	1978.0	1982.7	1986.4	1984.1	1980.3	1984.1	1986.4	1982.7	1978.0	1982.7	1986.4
24°	1966.6	1970.9	1975.1	1972.8	1968.5	1972.8	1975.1	1970.9	1966.6	1970.9	1975.1
24.5°	1954.4	1959.1	1963.8	1961.0	1956.7	1961.0	1963.8	1959.1	1954.4	1959.1	1963.8
25°	1941.6	1947.3	1952.0	1948.7	1944.0	1948.7	1952.0	1947.3	1941.6	1947.3	1952.0
25.5°	1928.4	1935.0	1940.2	1936.4	1931.3	1936.4	1940.2	1935.0	1928.4	1935.0	1940.2
26°	1915.7	1922.3	1928.0	1923.7	1918.5	1923.7	1928.0	1922.3	1915.7	1922.3	1928.0
26.5°	1901.5	1909.1	1915.2	1910.5	1904.9	1910.5	1915.2	1909.1	1901.5	1909.1	1915.2
27°	1887.9	1895.4	1902.5	1896.8	1890.7	1896.8	1902.5	1895.4	1887.9	1895.4	1902.5
27.5°	1873.7	1881.7	1889.3	1883.2	1876.6	1883.2	1889.3	1881.7	1873.7	1881.7	1889.3
28°	1858.6	1867.6	1875.6	1869.0	1861.9	1869.0	1875.6	1867.6	1858.6	1867.6	1875.6
28.5°	1843.5	1853.0	1861.9	1854.9	1846.8	1854.9	1861.9	1853.0	1843.5	1853.0	1861.9
29°	1828.0	1837.9	1847.8	1839.8	1831.8	1839.8	1847.8	1837.9	1828.0	1837.9	1847.8
29.5°	1812.4	1822.8	1833.2	1824.7	1815.7	1824.7	1833.2	1822.8	1812.4	1822.8	1833.2
30°	1795.9	1807.2	1818.5	1809.6	1799.7	1809.6	1818.5	1807.2	1795.9	1807.2	1818.5
30.5°	1779.4	1791.7	1803.5	1793.5	1783.6	1793.5	1803.5	1791.7	1779.4	1791.7	1803.5
31°	1762.9	1775.2	1787.9	1777.5	1767.1	1777.5	1787.9	1775.2	1762.9	1775.2	1787.9
31.5°	1745.9	1759.1	1772.3	1761.5	1749.7	1761.5	1772.3	1759.1	1745.9	1759.1	1772.3
32°	1728.9	1742.6	1756.3	1745.0	1732.7	1745.0	1756.3	1742.6	1728.9	1742.6	1756.3
32.5°	1711.5	1725.6	1739.8	1728.0	1715.3	1728.0	1739.8	1725.6	1711.5	1725.6	1739.8
33°	1693.6	1708.7	1723.3	1711.0	1697.8	1711.0	1723.3	1708.7	1693.6	1708.7	1723.3
33.5°	1675.2	1691.2	1705.8	1694.0	1679.9	1694.0	1705.8	1691.2	1675.2	1691.2	1705.8
34°	1656.3	1674.2	1688.4	1676.6	1661.5	1676.6	1688.4	1674.2	1656.3	1674.2	1688.4
34.5°	1637.4	1656.3	1670.9	1658.7	1642.6	1658.7	1670.9	1656.3	1637.4	1656.3	1670.9
35°	1618.6	1638.4	1652.5	1640.7	1623.3	1640.7	1652.5	1638.4	1618.6	1638.4	1652.5
35.5°	1598.8	1620.5	1634.6	1622.8	1603.5	1622.8	1634.6	1620.5	1598.8	1620.5	1634.6
36°	1579.0	1602.1	1616.2	1604.4	1571.9	1604.4	1616.2	1602.1	1579.0	1602.1	1616.2
36.5°	1555.4	1582.7	1597.4	1585.6	1537.0	1585.6	1597.4	1582.7	1555.4	1582.7	1597.4
37°	1522.8	1563.4	1578.5	1566.7	1496.0	1566.7	1578.5	1563.4	1522.8	1563.4	1578.5
37.5°	1473.3	1544.1	1559.2	1546.9	1456.3	1546.9	1559.2	1544.1	1473.3	1544.1	1559.2
38°	1419.6	1524.7	1539.8	1524.7	1411.1	1524.7	1539.8	1524.7	1419.6	1524.7	1539.8
38.5°	1355.9	1504.0	1520.5	1493.1	1359.2	1493.1	1520.5	1504.0	1355.9	1504.0	1520.5
39°	1291.3	1476.6	1501.6	1456.3	1301.2	1456.3	1501.6	1476.6	1291.3	1476.6	1501.6
39.5°	1225.7	1439.4	1481.8	1418.1	1236.6	1418.1	1481.8	1439.4	1225.7	1439.4	1481.8
40°	1160.2	1391.3	1462.0	1376.6	1170.1	1376.6	1462.0	1391.3	1160.2	1391.3	1462.0
40.5°	1094.1	1335.1	1443.1	1330.0	1102.2	1330.0	1443.1	1335.1	1094.1	1335.1	1443.1
41°	1027.2	1274.3	1423.8	1278.1	1037.1	1278.1	1423.8	1274.3	1027.2	1274.3	1423.8
41.5°	962.6	1213.0	1404.9	1221.0	972.9	1221.0	1404.9	1213.0	962.6	1213.0	1404.9
42°	897.0	1151.2	1386.1	1159.2	910.2	1159.2	1386.1	1151.2	897.0	1151.2	1386.1
42.5°	833.8	1089.9	1367.2	1096.5	848.0	1096.5	1367.2	1089.9	833.8	1089.9	1367.2
43°	770.6	1027.2	1348.3	1032.8	784.8	1032.8	1348.3	1027.2	770.6	1027.2	1348.3
43.5°	708.8	964.5	1329.0	971.5	722.0	971.5	1329.0	964.5	708.8	964.5	1329.0



TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	531.0	780.5	1271.9	792.3	544.7	792.3	1271.9	780.5	531.0	780.5	1271.9
45.5°	474.9	721.6	1252.6	732.4	490.0	732.4	1252.6	721.6	474.9	721.6	1252.6
46°	422.1	663.6	1227.6	674.4	437.7	674.4	1227.6	663.6	422.1	663.6	1227.6
46.5°	370.7	606.0	1198.4	617.3	386.7	617.3	1198.4	606.0	370.7	606.0	1198.4
47°	319.8	549.4	1157.3	561.2	341.9	561.2	1157.3	549.4	319.8	549.4	1157.3
47.5°	271.2	494.3	1111.6	507.0	303.7	507.0	1111.6	494.3	271.2	494.3	1111.6
48°	228.7	442.4	1056.4	454.6	266.0	454.6	1056.4	442.4	228.7	442.4	1056.4
48.5°	190.1	392.4	996.0	404.6	228.3	404.6	996.0	392.4	190.1	392.4	996.0
49°	160.3	342.9	927.7	357.0	190.5	357.0	927.7	342.9	160.3	342.9	927.7
49.5°	132.5	294.8	858.3	312.7	157.0	312.7	858.3	294.8	132.5	294.8	858.3
50°	106.1	249.5	786.7	274.0	129.2	274.0	786.7	249.5	106.1	249.5	786.7
50.5°	84.4	208.9	716.4	237.7	101.9	237.7	716.4	208.9	84.4	208.9	716.4
51°	63.2	174.5	648.0	202.8	77.3	202.8	648.0	174.5	63.2	174.5	648.0
51.5°	45.3	145.7	584.3	170.3	60.8	170.3	584.3	145.7	45.3	145.7	584.3
52°	27.4	118.4	522.1	140.5	48.6	140.5	522.1	118.4	27.4	118.4	522.1
52.5°	9.9	95.3	462.2	113.7	36.3	113.7	462.2	95.3	9.9	95.3	462.2
53°	5.7	74.0	405.1	90.5	24.5	90.5	405.1	74.0	5.7	74.0	405.1
53.5°	4.2	54.7	354.7	68.9	14.1	68.9	354.7	54.7	4.2	54.7	354.7
54°	2.8	37.7	307.0	50.5	3.8	50.5	307.0	37.7	2.8	37.7	307.0
54.5°	1.4	20.8	262.7	37.7	1.9	37.7	262.7	20.8	1.4	20.8	262.7
55°	1.4	7.1	222.6	25.5	1.9	25.5	222.6	7.1	1.4	7.1	222.6
55.5°	1.4	4.2	184.4	15.6	1.9	15.6	184.4	4.2	1.4	4.2	184.4
56°	1.4	3.3	150.9	9.4	1.4	9.4	150.9	3.3	1.4	3.3	150.9
56.5°	1.4	1.9	124.5	3.8	1.4	3.8	124.5	1.9	1.4	1.9	124.5
57°	1.4	1.4	99.5	2.4	1.4	2.4	99.5	1.4	1.4	1.4	99.5
57.5°	1.4	1.4	77.3	1.4	1.4	1.4	77.3	1.4	1.4	1.4	77.3
58°	1.4	1.4	57.5	1.4	1.4	1.4	57.5	1.4	1.4	1.4	57.5
58.5°	0.9	0.9	41.5	1.4	1.4	1.4	41.5	0.9	0.9	0.9	41.5
59°	0.9	0.9	31.6	0.9	1.4	0.9	31.6	0.9	0.9	0.9	31.6
59.5°	0.9	0.9	23.1	0.9	1.4	0.9	23.1	0.9	0.9	0.9	23.1
60°	0.9	0.9	15.1	0.9	1.4	0.9	15.1	0.9	0.9	0.9	15.1
60.5°	0.9	0.9	9.0	0.9	0.9	0.9	9.0	0.9	0.9	0.9	9.0
61°	0.9	0.9	5.7	0.9	0.9	0.9	5.7	0.9	0.9	0.9	5.7
61.5°	0.9	0.9	3.3	0.9	0.9	0.9	3.3	0.9	0.9	0.9	3.3
62°	0.9	0.9	1.4	0.9	0.9	0.9	1.4	0.9	0.9	0.9	1.4
62.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
63°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
63.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
64°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
64.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
65°	0.9	0.9	0.5	0.9	0.9	0.5	0.9	0.9	0.9	0.9	0.5
65.5°	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5
66°	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5



TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
68°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
68.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
69°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
69.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
77°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
77.5°	0.0	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.0	0.5	0.0
78°	0.0	0.0	0.0	0.0	0.5	0.0	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: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

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



TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2226.5	2226.5	2226.5	2226.5	2226.5	2226.5
0.5°	2227.0	2227.0	2227.0	2226.5	2226.0	2225.5
1°	2226.5	2226.5	2226.5	2226.0	2225.5	2225.1
1.5°	2226.0	2226.0	2226.0	2225.5	2225.1	2224.6
2°	2225.5	2225.1	2225.5	2225.1	2224.1	2224.1
2.5°	2224.6	2224.6	2224.6	2224.1	2223.7	2223.2
3°	2223.7	2223.2	2223.7	2223.2	2222.2	2222.2
3.5°	2222.2	2222.2	2222.2	2221.8	2221.3	2220.8
4°	2220.8	2220.4	2220.8	2220.4	2219.9	2219.4
4.5°	2218.9	2218.9	2218.9	2218.5	2218.0	2217.5
5°	2217.1	2217.1	2217.1	2217.1	2216.1	2215.6
5.5°	2215.2	2214.7	2215.2	2214.7	2214.2	2213.8
6°	2212.8	2212.8	2212.8	2212.3	2211.9	2211.4
6.5°	2210.5	2210.0	2210.5	2210.0	2209.5	2209.0
7°	2207.6	2207.6	2207.6	2207.6	2206.7	2206.2
7.5°	2204.8	2204.3	2204.8	2204.3	2203.9	2203.4
8°	2201.5	2201.5	2201.5	2201.5	2200.6	2200.1
8.5°	2198.2	2197.7	2198.2	2198.2	2197.3	2196.8
9°	2194.9	2194.4	2194.9	2194.4	2193.5	2193.0
9.5°	2191.1	2190.2	2191.1	2190.6	2189.7	2189.2
10°	2186.9	2186.4	2186.9	2186.9	2185.9	2185.0
10.5°	2182.6	2182.2	2182.6	2182.6	2181.7	2180.7
11°	2177.9	2177.4	2177.9	2178.4	2177.0	2176.0
11.5°	2173.2	2172.7	2173.2	2173.7	2172.3	2171.3
12°	2168.5	2167.5	2168.5	2168.5	2167.1	2166.1
12.5°	2163.3	2162.4	2163.3	2163.3	2161.9	2160.9
13°	2158.1	2157.2	2158.1	2158.1	2156.7	2155.3
13.5°	2152.4	2151.5	2152.4	2152.4	2151.0	2149.6
14°	2146.3	2145.4	2146.3	2146.3	2144.9	2143.5
14.5°	2140.2	2139.2	2140.2	2140.2	2138.8	2137.4
15°	2133.6	2132.6	2133.6	2134.1	2132.2	2130.8
15.5°	2127.0	2126.0	2127.0	2127.5	2125.6	2124.2
16°	2120.4	2119.0	2120.4	2120.4	2118.5	2117.1
16.5°	2113.3	2111.9	2113.3	2113.3	2111.4	2110.0
17°	2105.8	2104.3	2105.8	2106.2	2103.9	2102.0
17.5°	2098.2	2096.8	2098.2	2098.2	2096.3	2094.4
18°	2090.2	2088.3	2090.2	2090.7	2088.3	2086.4
18.5°	2081.7	2079.8	2081.7	2082.2	2080.3	2077.9
19°	2073.2	2071.3	2073.2	2073.7	2071.8	2069.4
19.5°	2064.7	2062.8	2064.7	2065.2	2062.8	2060.5
20°	2055.8	2053.4	2055.8	2056.2	2053.9	2051.5
20.5°	2046.3	2044.0	2046.3	2047.3	2044.4	2041.6
21°	2036.9	2034.1	2036.9	2037.8	2035.0	2031.7

TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2006.2	2002.9	2006.2	2007.7	2004.4	2000.6
23°	1995.4	1991.6	1995.4	1997.3	1993.5	1989.3
23.5°	1984.1	1980.3	1984.1	1986.4	1982.7	1978.0
24°	1972.8	1968.5	1972.8	1975.1	1970.9	1966.6
24.5°	1961.0	1956.7	1961.0	1963.8	1959.1	1954.4
25°	1948.7	1944.0	1948.7	1952.0	1947.3	1941.6
25.5°	1936.4	1931.3	1936.4	1940.2	1935.0	1928.4
26°	1923.7	1918.5	1923.7	1928.0	1922.3	1915.7
26.5°	1910.5	1904.9	1910.5	1915.2	1909.1	1901.5
27°	1896.8	1890.7	1896.8	1902.5	1895.4	1887.9
27.5°	1883.2	1876.6	1883.2	1889.3	1881.7	1873.7
28°	1869.0	1861.9	1869.0	1875.6	1867.6	1858.6
28.5°	1854.9	1846.8	1854.9	1861.9	1853.0	1843.5
29°	1839.8	1831.8	1839.8	1847.8	1837.9	1828.0
29.5°	1824.7	1815.7	1824.7	1833.2	1822.8	1812.4
30°	1809.6	1799.7	1809.6	1818.5	1807.2	1795.9
30.5°	1793.5	1783.6	1793.5	1803.5	1791.7	1779.4
31°	1777.5	1767.1	1777.5	1787.9	1775.2	1762.9
31.5°	1761.5	1749.7	1761.5	1772.3	1759.1	1745.9
32°	1745.0	1732.7	1745.0	1756.3	1742.6	1728.9
32.5°	1728.0	1715.3	1728.0	1739.8	1725.6	1711.5
33°	1711.0	1697.8	1711.0	1723.3	1708.7	1693.6
33.5°	1694.0	1679.9	1694.0	1705.8	1691.2	1675.2
34°	1676.6	1661.5	1676.6	1688.4	1674.2	1656.3
34.5°	1658.7	1642.6	1658.7	1670.9	1656.3	1637.4
35°	1640.7	1623.3	1640.7	1652.5	1638.4	1618.6
35.5°	1622.8	1603.5	1622.8	1634.6	1620.5	1598.8
36°	1604.4	1571.9	1604.4	1616.2	1602.1	1579.0
36.5°	1585.6	1537.0	1585.6	1597.4	1582.7	1555.4
37°	1566.7	1496.0	1566.7	1578.5	1563.4	1522.8
37.5°	1546.9	1456.3	1546.9	1559.2	1544.1	1473.3
38°	1524.7	1411.1	1524.7	1539.8	1524.7	1419.6
38.5°	1493.1	1359.2	1493.1	1520.5	1504.0	1355.9
39°	1456.3	1301.2	1456.3	1501.6	1476.6	1291.3
39.5°	1418.1	1236.6	1418.1	1481.8	1439.4	1225.7
40°	1376.6	1170.1	1376.6	1462.0	1391.3	1160.2
40.5°	1330.0	1102.2	1330.0	1443.1	1335.1	1094.1
41°	1278.1	1037.1	1278.1	1423.8	1274.3	1027.2
41.5°	1221.0	972.9	1221.0	1404.9	1213.0	962.6
42°	1159.2	910.2	1159.2	1386.1	1151.2	897.0
42.5°	1096.5	848.0	1096.5	1367.2	1089.9	833.8
43°	1032.8	784.8	1032.8	1348.3	1027.2	770.6
43.5°	971.5	722.0	971.5	1329.0	964.5	708.8



TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	792.3	544.7	792.3	1271.9	780.5	531.0
45.5°	732.4	490.0	732.4	1252.6	721.6	474.9
46°	674.4	437.7	674.4	1227.6	663.6	422.1
46.5°	617.3	386.7	617.3	1198.4	606.0	370.7
47°	561.2	341.9	561.2	1157.3	549.4	319.8
47.5°	507.0	303.7	507.0	1111.6	494.3	271.2
48°	454.6	266.0	454.6	1056.4	442.4	228.7
48.5°	404.6	228.3	404.6	996.0	392.4	190.1
49°	357.0	190.5	357.0	927.7	342.9	160.3
49.5°	312.7	157.0	312.7	858.3	294.8	132.5
50°	274.0	129.2	274.0	786.7	249.5	106.1
50.5°	237.7	101.9	237.7	716.4	208.9	84.4
51°	202.8	77.3	202.8	648.0	174.5	63.2
51.5°	170.3	60.8	170.3	584.3	145.7	45.3
52°	140.5	48.6	140.5	522.1	118.4	27.4
52.5°	113.7	36.3	113.7	462.2	95.3	9.9
53°	90.5	24.5	90.5	405.1	74.0	5.7
53.5°	68.9	14.1	68.9	354.7	54.7	4.2
54°	50.5	3.8	50.5	307.0	37.7	2.8
54.5°	37.7	1.9	37.7	262.7	20.8	1.4
55°	25.5	1.9	25.5	222.6	7.1	1.4
55.5°	15.6	1.9	15.6	184.4	4.2	1.4
56°	9.4	1.4	9.4	150.9	3.3	1.4
56.5°	3.8	1.4	3.8	124.5	1.9	1.4
57°	2.4	1.4	2.4	99.5	1.4	1.4
57.5°	1.4	1.4	1.4	77.3	1.4	1.4
58°	1.4	1.4	1.4	57.5	1.4	1.4
58.5°	1.4	1.4	1.4	41.5	0.9	0.9
59°	0.9	1.4	0.9	31.6	0.9	0.9
59.5°	0.9	1.4	0.9	23.1	0.9	0.9
60°	0.9	1.4	0.9	15.1	0.9	0.9
60.5°	0.9	0.9	0.9	9.0	0.9	0.9
61°	0.9	0.9	0.9	5.7	0.9	0.9
61.5°	0.9	0.9	0.9	3.3	0.9	0.9
62°	0.9	0.9	0.9	1.4	0.9	0.9
62.5°	0.9	0.9	0.9	0.9	0.9	0.9
63°	0.9	0.9	0.9	0.9	0.9	0.9
63.5°	0.9	0.9	0.9	0.9	0.9	0.9
64°	0.9	0.9	0.9	0.9	0.9	0.9
64.5°	0.9	0.9	0.9	0.9	0.9	0.9
65°	0.9	0.9	0.9	0.5	0.9	0.9
65.5°	0.5	0.9	0.5	0.5	0.5	0.5
66°	0.5	0.9	0.5	0.5	0.5	0.5



TEST NUMBER: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.5	0.5	0.5	0.5	0.5	0.5
68°	0.5	0.5	0.5	0.5	0.5	0.5
68.5°	0.5	0.5	0.5	0.5	0.5	0.5
69°	0.5	0.5	0.5	0.5	0.5	0.5
69.5°	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5
70.5°	0.5	0.5	0.5	0.5	0.5	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.5	0.5	0.5	0.0	0.5	0.5
77°	0.5	0.5	0.5	0.0	0.5	0.5
77.5°	0.5	0.5	0.5	0.0	0.5	0.0
78°	0.0	0.5	0.0	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: P776837

CATALOG NUMBER: HCDJBL54050CSD-HCD8TSQMB-5000lm-3500K

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°	2021.8	2025.1	2027.9	2027.0	2024.2	2027.0	2027.9	2025.1	2021.8	2025.1	2027.9
22°	2011.4	2014.7	2018.0	2016.6	2013.8	2016.6	2018.0	2014.7	2011.4	2014.7	2018.0



44°	647.5	902.7	1310.1	911.2	661.2	911.2	1310.1	902.7	647.5	902.7	1310.1
44.5°	588.6	841.4	1291.3	851.3	602.3	851.3	1291.3	841.4	588.6	841.4	1291.3



66.5°	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5
67°	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5



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°	2027.0	2024.2	2027.0	2027.9	2025.1	2021.8
22°	2016.6	2013.8	2016.6	2018.0	2014.7	2011.4



44°	911.2	661.2	911.2	1310.1	902.7	647.5
44.5°	851.3	602.3	851.3	1291.3	841.4	588.6

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

Scaled Data Report



66.5°	0.5	0.9	0.5	0.5	0.5	0.5
67°	0.5	0.9	0.5	0.5	0.5	0.5

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)