

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: P775847

Luminaire Tested: HCDJBL510CSD-HCD82TRH-1000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P775847  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B063-HCD82TRH)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL510CSD-HCD82TRH-1000lm-3500K  
Description: 8 INCH ROUND NARROW HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

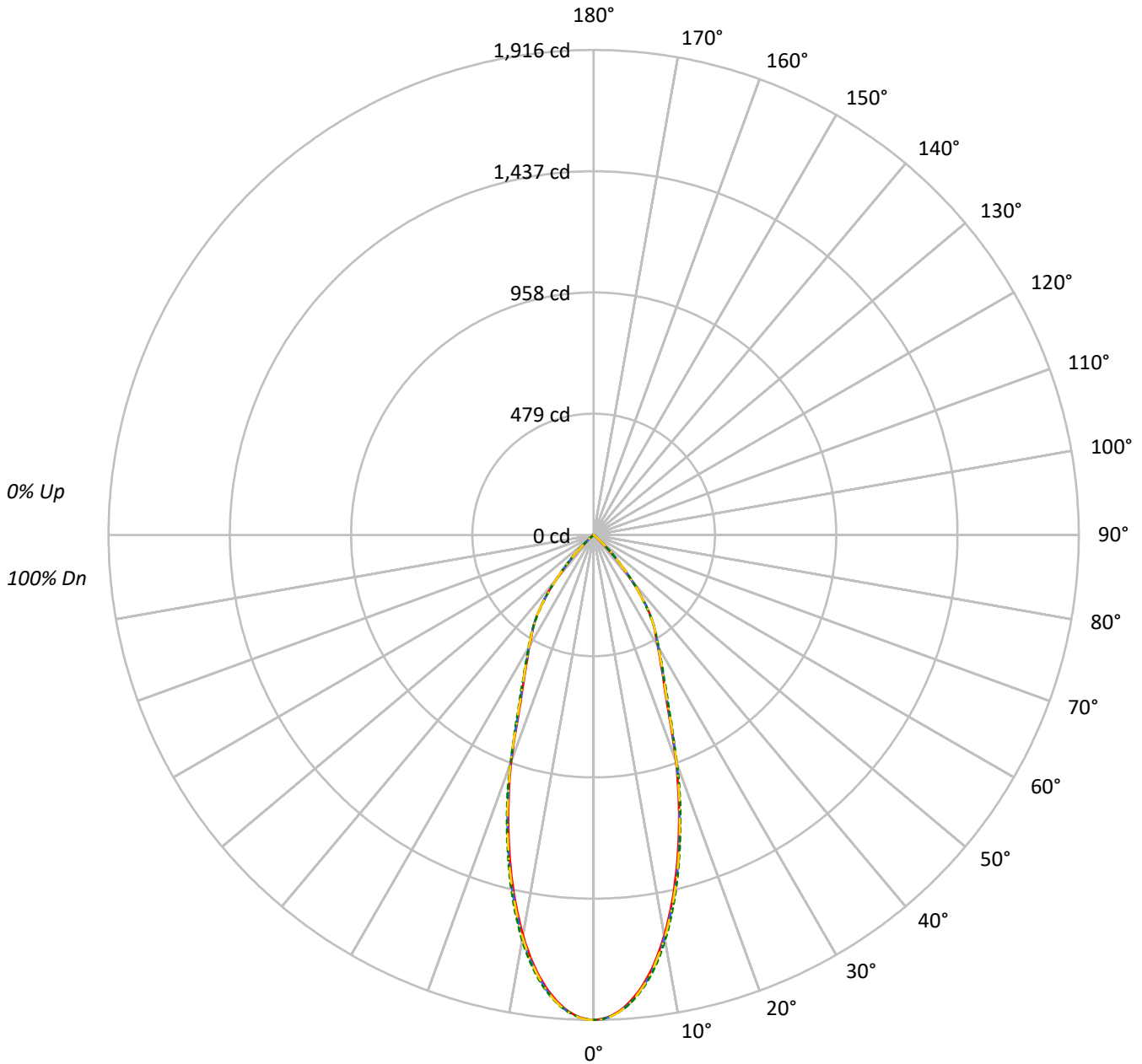
Lumens per Lamp: N/A  
Luminaire Lumens: 1154.3 lumens  
Efficiency: N/A  
Efficacy: 115.4 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.65 / 0.67  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 10  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P775847  
CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

### Luminous Intensity Polar Plot





TEST NUMBER: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94																			
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88																			
3	103	97	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	82																			
4	98	91	86	82	97	90	85	82	88	84	81	86	82	80	84	81	79	77																			
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	72																			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	70	68																			
7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64																			
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61																			
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57																			
10	74	65	60	56	74	65	60	56	64	59	56	63	59	56	63	58	56	54																			

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

	0°	90°	180°	270°
0°	58508	58508	58508	58508
5°	56164	56421	56164	56421
10°	49800	50424	49800	50424
15°	40701	41358	40701	41358
20°	30878	31265	30878	31265
25°	22263	22866	22263	22866
30°	17859	18134	17859	18134
35°	14621	14495	14621	14495
40°	9171	9366	9171	9366
45°	3493	4054	3493	4054
50°	522	731	522	731
55°	112	117	112	117
60°	67	67	67	67
65°	43	43	43	43
70°	27	36	27	36
75°	24	24	24	24
80°	18	18	18	18
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 4054 cd/sqm



TEST NUMBER: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.3	14.6
10°-20°	357.1	30.9
20°-30°	313.6	27.2
30°-40°	236.8	20.5
40°-50°	74.6	6.5
50°-60°	2.9	0.2
60°-70°	0.7	0.1
70°-80°	0.2	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°	839.0	72.7
0°-40°	1075.9	93.2
0°-60°	1153.4	99.9
0°-90°	1154.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1154.3	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1916	1916	1916	1916	1916	
5°	1833	1841	1833	1841	1833	168
15°	1288	1308	1288	1308	1288	354
25°	661	679	661	679	661	311
35°	392	389	392	389	392	236
45°	81	94	81	94	81	71
55°	2	2	2	2	2	2
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: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1916.4	1916.4	1916.4	1916.4	1916.4	1916.4	1916.4	1916.4	1916.4	1916.4	1916.4
0.5°	1914.6	1915.0	1916.1	1916.5	1914.6	1916.5	1916.1	1915.0	1914.6	1915.0	1916.1
1°	1912.0	1912.6	1913.6	1914.3	1912.5	1914.3	1913.6	1912.6	1912.0	1912.6	1913.6
1.5°	1907.7	1908.3	1909.7	1910.5	1908.6	1910.5	1909.7	1908.3	1907.7	1908.3	1909.7
2°	1901.9	1902.4	1904.2	1905.2	1903.4	1905.2	1904.2	1902.4	1901.9	1902.4	1904.2
2.5°	1893.9	1894.9	1897.0	1898.3	1896.6	1898.3	1897.0	1894.9	1893.9	1894.9	1897.0
3°	1884.9	1885.9	1888.4	1890.0	1888.4	1890.0	1888.4	1885.9	1884.9	1885.9	1888.4
3.5°	1874.1	1875.4	1878.2	1880.1	1879.0	1880.1	1878.2	1875.4	1874.1	1875.4	1878.2
4°	1861.6	1863.1	1866.5	1868.8	1867.8	1868.8	1866.5	1863.1	1861.6	1863.1	1866.5
4.5°	1847.8	1849.3	1853.2	1856.1	1855.1	1856.1	1853.2	1849.3	1847.8	1849.3	1853.2
5°	1832.6	1834.1	1838.5	1841.9	1841.0	1841.9	1838.5	1834.1	1832.6	1834.1	1838.5
5.5°	1815.8	1817.5	1822.0	1825.9	1825.5	1825.9	1822.0	1817.5	1815.8	1817.5	1822.0
6°	1797.5	1799.2	1804.2	1808.7	1808.9	1808.7	1804.2	1799.2	1797.5	1799.2	1804.2
6.5°	1778.3	1779.7	1785.2	1790.3	1790.6	1790.3	1785.2	1779.7	1778.3	1779.7	1785.2
7°	1757.4	1759.0	1764.7	1770.4	1771.6	1770.4	1764.7	1759.0	1757.4	1759.0	1764.7
7.5°	1735.4	1736.7	1742.6	1748.7	1750.3	1748.7	1742.6	1736.7	1735.4	1736.7	1742.6
8°	1711.8	1713.3	1719.5	1726.1	1728.1	1726.1	1719.5	1713.3	1711.8	1713.3	1719.5
8.5°	1687.3	1688.7	1694.9	1702.2	1704.6	1702.2	1694.9	1688.7	1687.3	1688.7	1694.9
9°	1661.1	1662.9	1669.4	1677.3	1680.0	1677.3	1669.4	1662.9	1661.1	1662.9	1669.4
9.5°	1634.4	1636.2	1642.5	1650.8	1653.9	1650.8	1642.5	1636.2	1634.4	1636.2	1642.5
10°	1606.4	1608.5	1614.9	1623.9	1626.5	1623.9	1614.9	1608.5	1606.4	1608.5	1614.9
10.5°	1577.5	1579.6	1586.2	1595.7	1598.2	1595.7	1586.2	1579.6	1577.5	1579.6	1586.2
11°	1546.6	1549.9	1556.7	1566.6	1568.8	1566.6	1556.7	1549.9	1546.6	1549.9	1556.7
11.5°	1516.9	1519.6	1526.3	1536.0	1538.5	1536.0	1526.3	1519.6	1516.9	1519.6	1526.3
12°	1485.3	1488.5	1495.4	1505.2	1507.6	1505.2	1495.4	1488.5	1485.3	1488.5	1495.4
12.5°	1453.6	1456.9	1463.9	1473.2	1475.2	1473.2	1463.9	1456.9	1453.6	1456.9	1463.9
13°	1421.1	1424.8	1432.3	1441.6	1443.2	1441.6	1432.3	1424.8	1421.1	1424.8	1432.3
13.5°	1388.5	1392.3	1400.1	1408.2	1410.6	1408.2	1400.1	1392.3	1388.5	1392.3	1400.1
14°	1355.2	1359.2	1367.2	1374.5	1377.1	1374.5	1367.2	1359.2	1355.2	1359.2	1367.2
14.5°	1321.5	1325.6	1333.7	1340.7	1342.8	1340.7	1333.7	1325.6	1321.5	1325.6	1333.7
15°	1287.7	1292.0	1299.9	1307.0	1308.5	1307.0	1299.9	1292.0	1287.7	1292.0	1299.9
15.5°	1253.8	1258.0	1266.0	1272.7	1275.1	1272.7	1266.0	1258.0	1253.8	1258.0	1266.0
16°	1220.2	1223.8	1231.8	1238.5	1241.3	1238.5	1231.8	1223.8	1220.2	1223.8	1231.8
16.5°	1186.9	1190.0	1198.0	1204.5	1207.5	1204.5	1198.0	1190.0	1186.9	1190.0	1198.0
17°	1152.7	1156.1	1163.4	1171.1	1173.3	1171.1	1163.4	1156.1	1152.7	1156.1	1163.4
17.5°	1118.6	1122.1	1129.3	1137.1	1139.8	1137.1	1129.3	1122.1	1118.6	1122.1	1129.3
18°	1085.2	1087.8	1095.5	1103.1	1105.8	1103.1	1095.5	1087.8	1085.2	1087.8	1095.5
18.5°	1051.7	1054.3	1061.2	1068.6	1071.5	1068.6	1061.2	1054.3	1051.7	1054.3	1061.2
19°	1018.1	1020.6	1027.5	1033.7	1037.0	1033.7	1027.5	1020.6	1018.1	1020.6	1027.5
19.5°	984.6	987.3	992.9	998.1	1000.7	998.1	992.9	987.3	984.6	987.3	992.9
20°	950.4	952.7	957.1	962.2	962.3	962.2	957.1	952.7	950.4	952.7	957.1
20.5°	915.8	917.2	922.0	926.8	926.1	926.8	922.0	917.2	915.8	917.2	922.0
21°	880.4	882.8	887.4	892.0	891.9	892.0	887.4	882.8	880.4	882.8	887.4



TEST NUMBER: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	782.2	785.1	789.3	796.8	800.1	796.8	789.3	785.1	782.2	785.1	789.3
23°	753.9	756.1	761.1	767.5	771.2	767.5	761.1	756.1	753.9	756.1	761.1
23.5°	726.0	731.4	735.3	740.6	744.2	740.6	735.3	731.4	726.0	731.4	735.3
24°	704.0	706.1	711.6	717.3	722.0	717.3	711.6	706.1	704.0	706.1	711.6
24.5°	681.3	683.8	689.2	694.9	700.6	694.9	689.2	683.8	681.3	683.8	689.2
25°	660.9	663.5	668.6	673.4	678.8	673.4	668.6	663.5	660.9	663.5	668.6
25.5°	643.4	644.5	648.7	652.8	657.5	652.8	648.7	644.5	643.4	644.5	648.7
26°	626.1	627.1	629.8	633.8	636.6	633.8	629.8	627.1	626.1	627.1	629.8
26.5°	608.2	609.7	612.9	616.4	618.1	616.4	612.9	609.7	608.2	609.7	612.9
27°	590.9	592.7	596.9	600.6	602.4	600.6	596.9	592.7	590.9	592.7	596.9
27.5°	575.0	576.8	580.8	584.8	587.2	584.8	580.8	576.8	575.0	576.8	580.8
28°	560.4	561.9	565.2	568.8	570.9	568.8	565.2	561.9	560.4	561.9	565.2
28.5°	546.5	547.8	550.6	553.6	555.8	553.6	550.6	547.8	546.5	547.8	550.6
29°	533.1	534.1	536.8	539.7	541.1	539.7	536.8	534.1	533.1	534.1	536.8
29.5°	519.6	520.7	523.4	526.1	527.5	526.1	523.4	520.7	519.6	520.7	523.4
30°	506.6	507.7	510.3	512.8	514.4	512.8	510.3	507.7	506.6	507.7	510.3
30.5°	494.1	494.9	497.6	500.2	501.8	500.2	497.6	494.9	494.1	494.9	497.6
31°	481.8	483.1	485.5	488.2	489.5	488.2	485.5	483.1	481.8	483.1	485.5
31.5°	470.5	471.3	473.9	476.4	478.0	476.4	473.9	471.3	470.5	471.3	473.9
32°	459.3	460.3	462.7	465.1	466.5	465.1	462.7	460.3	459.3	460.3	462.7
32.5°	448.9	450.0	452.1	453.8	454.6	453.8	452.1	450.0	448.9	450.0	452.1
33°	439.3	439.8	441.2	442.0	441.9	442.0	441.2	439.8	439.3	439.8	441.2
33.5°	429.3	429.2	429.3	429.3	429.1	429.3	429.3	429.2	429.3	429.2	429.3
34°	418.3	417.5	416.7	417.8	415.6	417.8	416.7	417.5	418.3	417.5	416.7
34.5°	405.5	405.3	405.1	404.3	402.2	404.3	405.1	405.3	405.5	405.3	405.1
35°	392.3	391.3	391.3	390.5	388.9	390.5	391.3	391.3	392.3	391.3	391.3
35.5°	378.6	377.4	377.4	376.0	375.1	376.0	377.4	377.4	378.6	377.4	377.4
36°	363.6	362.9	363.2	360.9	360.7	360.9	363.2	362.9	363.6	362.9	363.2
36.5°	348.0	347.9	347.9	345.6	345.2	345.6	347.9	347.9	348.0	347.9	347.9
37°	332.0	332.0	332.1	330.3	329.6	330.3	332.1	332.0	332.0	332.0	332.1
37.5°	315.9	315.6	316.9	314.8	314.2	314.8	316.9	315.6	315.9	315.6	316.9
38°	299.5	298.8	299.2	298.6	298.7	298.6	299.2	298.8	299.5	298.8	299.2
38.5°	282.4	281.8	281.6	282.5	282.8	282.5	281.6	281.8	282.4	281.8	281.6
39°	265.1	264.8	264.3	266.4	266.5	266.4	264.3	264.8	265.1	264.8	264.3
39.5°	247.5	247.5	247.5	250.1	250.7	250.1	247.5	247.5	247.5	247.5	247.5
40°	230.1	230.6	231.7	233.9	235.0	233.9	231.7	230.6	230.1	230.6	231.7
40.5°	213.0	213.6	215.9	217.7	219.5	217.7	215.9	213.6	213.0	213.6	215.9
41°	196.1	197.1	200.1	201.9	203.9	201.9	200.1	197.1	196.1	197.1	200.1
41.5°	179.2	180.8	184.3	186.4	188.7	186.4	184.3	180.8	179.2	180.8	184.3
42°	163.1	164.8	169.0	171.4	173.5	171.4	169.0	164.8	163.1	164.8	169.0
42.5°	147.4	149.4	154.1	157.2	159.1	157.2	154.1	149.4	147.4	149.4	154.1
43°	132.2	135.0	139.8	143.3	144.9	143.3	139.8	135.0	132.2	135.0	139.8
43.5°	117.9	121.2	125.9	129.7	131.2	129.7	125.9	121.2	117.9	121.2	125.9



TEST NUMBER: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	80.9	82.7	86.9	92.0	93.9	92.0	86.9	82.7	80.9	82.7	86.9
45.5°	69.7	71.5	75.7	80.8	82.9	80.8	75.7	71.5	69.7	71.5	75.7
46°	59.0	61.1	65.5	70.7	74.0	70.7	65.5	61.1	59.0	61.1	65.5
46.5°	49.8	51.5	56.5	61.3	65.1	61.3	56.5	51.5	49.8	51.5	56.5
47°	41.8	43.6	48.0	52.4	56.2	52.4	48.0	43.6	41.8	43.6	48.0
47.5°	34.6	36.2	39.9	43.7	47.2	43.7	39.9	36.2	34.6	36.2	39.9
48°	28.7	29.6	32.7	35.8	38.3	35.8	32.7	29.6	28.7	29.6	32.7
48.5°	23.2	24.3	26.4	29.2	31.4	29.2	26.4	24.3	23.2	24.3	26.4
49°	18.1	19.4	21.6	23.3	25.2	23.3	21.6	19.4	18.1	19.4	21.6
49.5°	14.2	15.1	17.0	18.6	20.0	18.6	17.0	15.1	14.2	15.1	17.0
50°	11.0	11.6	13.0	14.4	15.4	14.4	13.0	11.6	11.0	11.6	13.0
50.5°	8.2	8.3	9.8	11.3	12.0	11.3	9.8	8.3	8.2	8.3	9.8
51°	5.7	6.1	7.4	8.9	10.2	8.9	7.4	6.1	5.7	6.1	7.4
51.5°	3.7	4.6	5.7	6.7	8.4	6.7	5.7	4.6	3.7	4.6	5.7
52°	3.2	3.4	4.2	5.2	6.5	5.2	4.2	3.4	3.2	3.4	4.2
52.5°	2.9	3.0	3.1	3.9	4.8	3.9	3.1	3.0	2.9	3.0	3.1
53°	2.7	2.8	2.8	3.0	3.0	3.0	2.8	2.8	2.7	2.8	2.8
53.5°	2.5	2.6	2.7	2.7	2.6	2.7	2.7	2.6	2.5	2.6	2.7
54°	2.4	2.4	2.5	2.5	2.4	2.5	2.5	2.4	2.4	2.4	2.5
54.5°	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.3
55°	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2
55.5°	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1
56°	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0
56.5°	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.9
57°	1.7	1.7	1.8	1.8	1.7	1.8	1.8	1.7	1.7	1.7	1.8
57.5°	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.7
58°	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.6
58.5°	1.3	1.3	1.5	1.5	1.5	1.5	1.5	1.3	1.3	1.3	1.5
59°	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3	1.3
59.5°	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.2
60°	1.1	1.1	1.2	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.2
60.5°	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.1
61°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
61.5°	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	1.0
62°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
62.5°	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9
63°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
63.5°	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8
64°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
64.5°	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.7
65°	0.6	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.7
65.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
66°	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6





TEST NUMBER: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-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°	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5
68.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4
70.5°	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3
71°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
71.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
72°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3
73°	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3
73.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
74.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
77°	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
82°	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
82.5°	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
83°	0.0	0.0	0.0	0.1	0.1	0.1	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: P775847  
CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-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: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1916.4	1916.4	1916.4	1916.4	1916.4	1916.4
0.5°	1916.5	1914.6	1916.5	1916.1	1915.0	1914.6
1°	1914.3	1912.5	1914.3	1913.6	1912.6	1912.0
1.5°	1910.5	1908.6	1910.5	1909.7	1908.3	1907.7
2°	1905.2	1903.4	1905.2	1904.2	1902.4	1901.9
2.5°	1898.3	1896.6	1898.3	1897.0	1894.9	1893.9
3°	1890.0	1888.4	1890.0	1888.4	1885.9	1884.9
3.5°	1880.1	1879.0	1880.1	1878.2	1875.4	1874.1
4°	1868.8	1867.8	1868.8	1866.5	1863.1	1861.6
4.5°	1856.1	1855.1	1856.1	1853.2	1849.3	1847.8
5°	1841.9	1841.0	1841.9	1838.5	1834.1	1832.6
5.5°	1825.9	1825.5	1825.9	1822.0	1817.5	1815.8
6°	1808.7	1808.9	1808.7	1804.2	1799.2	1797.5
6.5°	1790.3	1790.6	1790.3	1785.2	1779.7	1778.3
7°	1770.4	1771.6	1770.4	1764.7	1759.0	1757.4
7.5°	1748.7	1750.3	1748.7	1742.6	1736.7	1735.4
8°	1726.1	1728.1	1726.1	1719.5	1713.3	1711.8
8.5°	1702.2	1704.6	1702.2	1694.9	1688.7	1687.3
9°	1677.3	1680.0	1677.3	1669.4	1662.9	1661.1
9.5°	1650.8	1653.9	1650.8	1642.5	1636.2	1634.4
10°	1623.9	1626.5	1623.9	1614.9	1608.5	1606.4
10.5°	1595.7	1598.2	1595.7	1586.2	1579.6	1577.5
11°	1566.6	1568.8	1566.6	1556.7	1549.9	1546.6
11.5°	1536.0	1538.5	1536.0	1526.3	1519.6	1516.9
12°	1505.2	1507.6	1505.2	1495.4	1488.5	1485.3
12.5°	1473.2	1475.2	1473.2	1463.9	1456.9	1453.6
13°	1441.6	1443.2	1441.6	1432.3	1424.8	1421.1
13.5°	1408.2	1410.6	1408.2	1400.1	1392.3	1388.5
14°	1374.5	1377.1	1374.5	1367.2	1359.2	1355.2
14.5°	1340.7	1342.8	1340.7	1333.7	1325.6	1321.5
15°	1307.0	1308.5	1307.0	1299.9	1292.0	1287.7
15.5°	1272.7	1275.1	1272.7	1266.0	1258.0	1253.8
16°	1238.5	1241.3	1238.5	1231.8	1223.8	1220.2
16.5°	1204.5	1207.5	1204.5	1198.0	1190.0	1186.9
17°	1171.1	1173.3	1171.1	1163.4	1156.1	1152.7
17.5°	1137.1	1139.8	1137.1	1129.3	1122.1	1118.6
18°	1103.1	1105.8	1103.1	1095.5	1087.8	1085.2
18.5°	1068.6	1071.5	1068.6	1061.2	1054.3	1051.7
19°	1033.7	1037.0	1033.7	1027.5	1020.6	1018.1
19.5°	998.1	1000.7	998.1	992.9	987.3	984.6
20°	962.2	962.3	962.2	957.1	952.7	950.4
20.5°	926.8	926.1	926.8	922.0	917.2	915.8
21°	892.0	891.9	892.0	887.4	882.8	880.4

TEST NUMBER: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	796.8	800.1	796.8	789.3	785.1	782.2
23°	767.5	771.2	767.5	761.1	756.1	753.9
23.5°	740.6	744.2	740.6	735.3	731.4	726.0
24°	717.3	722.0	717.3	711.6	706.1	704.0
24.5°	694.9	700.6	694.9	689.2	683.8	681.3
25°	673.4	678.8	673.4	668.6	663.5	660.9
25.5°	652.8	657.5	652.8	648.7	644.5	643.4
26°	633.8	636.6	633.8	629.8	627.1	626.1
26.5°	616.4	618.1	616.4	612.9	609.7	608.2
27°	600.6	602.4	600.6	596.9	592.7	590.9
27.5°	584.8	587.2	584.8	580.8	576.8	575.0
28°	568.8	570.9	568.8	565.2	561.9	560.4
28.5°	553.6	555.8	553.6	550.6	547.8	546.5
29°	539.7	541.1	539.7	536.8	534.1	533.1
29.5°	526.1	527.5	526.1	523.4	520.7	519.6
30°	512.8	514.4	512.8	510.3	507.7	506.6
30.5°	500.2	501.8	500.2	497.6	494.9	494.1
31°	488.2	489.5	488.2	485.5	483.1	481.8
31.5°	476.4	478.0	476.4	473.9	471.3	470.5
32°	465.1	466.5	465.1	462.7	460.3	459.3
32.5°	453.8	454.6	453.8	452.1	450.0	448.9
33°	442.0	441.9	442.0	441.2	439.8	439.3
33.5°	429.3	429.1	429.3	429.3	429.2	429.3
34°	417.8	415.6	417.8	416.7	417.5	418.3
34.5°	404.3	402.2	404.3	405.1	405.3	405.5
35°	390.5	388.9	390.5	391.3	391.3	392.3
35.5°	376.0	375.1	376.0	377.4	377.4	378.6
36°	360.9	360.7	360.9	363.2	362.9	363.6
36.5°	345.6	345.2	345.6	347.9	347.9	348.0
37°	330.3	329.6	330.3	332.1	332.0	332.0
37.5°	314.8	314.2	314.8	316.9	315.6	315.9
38°	298.6	298.7	298.6	299.2	298.8	299.5
38.5°	282.5	282.8	282.5	281.6	281.8	282.4
39°	266.4	266.5	266.4	264.3	264.8	265.1
39.5°	250.1	250.7	250.1	247.5	247.5	247.5
40°	233.9	235.0	233.9	231.7	230.6	230.1
40.5°	217.7	219.5	217.7	215.9	213.6	213.0
41°	201.9	203.9	201.9	200.1	197.1	196.1
41.5°	186.4	188.7	186.4	184.3	180.8	179.2
42°	171.4	173.5	171.4	169.0	164.8	163.1
42.5°	157.2	159.1	157.2	154.1	149.4	147.4
43°	143.3	144.9	143.3	139.8	135.0	132.2
43.5°	129.7	131.2	129.7	125.9	121.2	117.9



TEST NUMBER: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	92.0	93.9	92.0	86.9	82.7	80.9
45.5°	80.8	82.9	80.8	75.7	71.5	69.7
46°	70.7	74.0	70.7	65.5	61.1	59.0
46.5°	61.3	65.1	61.3	56.5	51.5	49.8
47°	52.4	56.2	52.4	48.0	43.6	41.8
47.5°	43.7	47.2	43.7	39.9	36.2	34.6
48°	35.8	38.3	35.8	32.7	29.6	28.7
48.5°	29.2	31.4	29.2	26.4	24.3	23.2
49°	23.3	25.2	23.3	21.6	19.4	18.1
49.5°	18.6	20.0	18.6	17.0	15.1	14.2
50°	14.4	15.4	14.4	13.0	11.6	11.0
50.5°	11.3	12.0	11.3	9.8	8.3	8.2
51°	8.9	10.2	8.9	7.4	6.1	5.7
51.5°	6.7	8.4	6.7	5.7	4.6	3.7
52°	5.2	6.5	5.2	4.2	3.4	3.2
52.5°	3.9	4.8	3.9	3.1	3.0	2.9
53°	3.0	3.0	3.0	2.8	2.8	2.7
53.5°	2.7	2.6	2.7	2.7	2.6	2.5
54°	2.5	2.4	2.5	2.5	2.4	2.4
54.5°	2.3	2.3	2.3	2.3	2.3	2.2
55°	2.2	2.2	2.2	2.2	2.2	2.1
55.5°	2.1	2.1	2.1	2.1	2.0	2.0
56°	2.0	2.0	2.0	2.0	1.9	1.9
56.5°	1.9	1.8	1.9	1.9	1.8	1.8
57°	1.8	1.7	1.8	1.8	1.7	1.7
57.5°	1.7	1.7	1.7	1.7	1.6	1.6
58°	1.6	1.6	1.6	1.6	1.5	1.5
58.5°	1.5	1.5	1.5	1.5	1.3	1.3
59°	1.3	1.3	1.3	1.3	1.3	1.2
59.5°	1.2	1.2	1.2	1.2	1.2	1.1
60°	1.2	1.1	1.2	1.2	1.1	1.1
60.5°	1.1	1.1	1.1	1.1	1.0	1.0
61°	1.0	1.0	1.0	1.0	1.0	1.0
61.5°	1.0	1.0	1.0	1.0	0.9	0.9
62°	0.9	0.9	0.9	0.9	0.9	0.9
62.5°	0.9	0.9	0.9	0.9	0.8	0.8
63°	0.8	0.8	0.8	0.8	0.8	0.8
63.5°	0.8	0.8	0.8	0.8	0.7	0.7
64°	0.7	0.7	0.7	0.7	0.7	0.7
64.5°	0.7	0.7	0.7	0.7	0.7	0.6
65°	0.7	0.6	0.7	0.7	0.6	0.6
65.5°	0.6	0.6	0.6	0.6	0.6	0.6
66°	0.6	0.6	0.6	0.6	0.6	0.5



TEST NUMBER: P775847

CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-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	0.4	0.4
68.5°	0.4	0.4	0.4	0.4	0.4	0.4
69°	0.4	0.4	0.4	0.4	0.4	0.4
69.5°	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.3	0.3
70.5°	0.4	0.3	0.4	0.3	0.3	0.3
71°	0.3	0.3	0.3	0.3	0.3	0.3
71.5°	0.3	0.3	0.3	0.3	0.3	0.3
72°	0.3	0.3	0.3	0.3	0.3	0.3
72.5°	0.3	0.3	0.3	0.3	0.3	0.2
73°	0.3	0.3	0.3	0.3	0.2	0.2
73.5°	0.2	0.2	0.2	0.2	0.2	0.2
74°	0.2	0.2	0.2	0.2	0.2	0.2
74.5°	0.2	0.2	0.2	0.2	0.2	0.2
75°	0.2	0.2	0.2	0.2	0.2	0.2
75.5°	0.2	0.2	0.2	0.2	0.2	0.2
76°	0.2	0.2	0.2	0.2	0.2	0.2
76.5°	0.2	0.2	0.2	0.2	0.1	0.1
77°	0.2	0.2	0.2	0.1	0.1	0.1
77.5°	0.1	0.1	0.1	0.1	0.1	0.1
78°	0.1	0.1	0.1	0.1	0.1	0.1
78.5°	0.1	0.1	0.1	0.1	0.1	0.1
79°	0.1	0.1	0.1	0.1	0.1	0.1
79.5°	0.1	0.1	0.1	0.1	0.1	0.1
80°	0.1	0.1	0.1	0.1	0.1	0.1
80.5°	0.1	0.1	0.1	0.1	0.1	0.1
81°	0.1	0.1	0.1	0.1	0.1	0.1
81.5°	0.1	0.1	0.1	0.1	0.1	0.1
82°	0.1	0.1	0.1	0.1	0.1	0.0
82.5°	0.1	0.1	0.1	0.1	0.0	0.0
83°	0.1	0.1	0.1	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: P775847  
CATALOG NUMBER: HCDJBL510CSD-HCD82TRH-1000lm-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

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

Scaled Data Report



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°	843.9	848.9	854.0	858.8	860.0	858.8	854.0	848.9	843.9	848.9	854.0
22°	812.1	815.4	821.3	826.2	828.6	826.2	821.3	815.4	812.1	815.4	821.3



44°	105.0	107.9	112.5	116.5	118.0	116.5	112.5	107.9	105.0	107.9	112.5
44.5°	92.7	95.0	99.4	103.6	105.5	103.6	99.4	95.0	92.7	95.0	99.4



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



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

Scaled Data Report



21.5°	858.8	860.0	858.8	854.0	848.9	843.9
22°	826.2	828.6	826.2	821.3	815.4	812.1

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

Scaled Data Report



44°	116.5	118.0	116.5	112.5	107.9	105.0
44.5°	103.6	105.5	103.6	99.4	95.0	92.7

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

Scaled Data Report



66.5°	0.5	0.5	0.5	0.5	0.5	0.5
67°	0.5	0.5	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)