

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: P776325

Luminaire Tested: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776325
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B006-HCD4TSQMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K
Description: 4 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

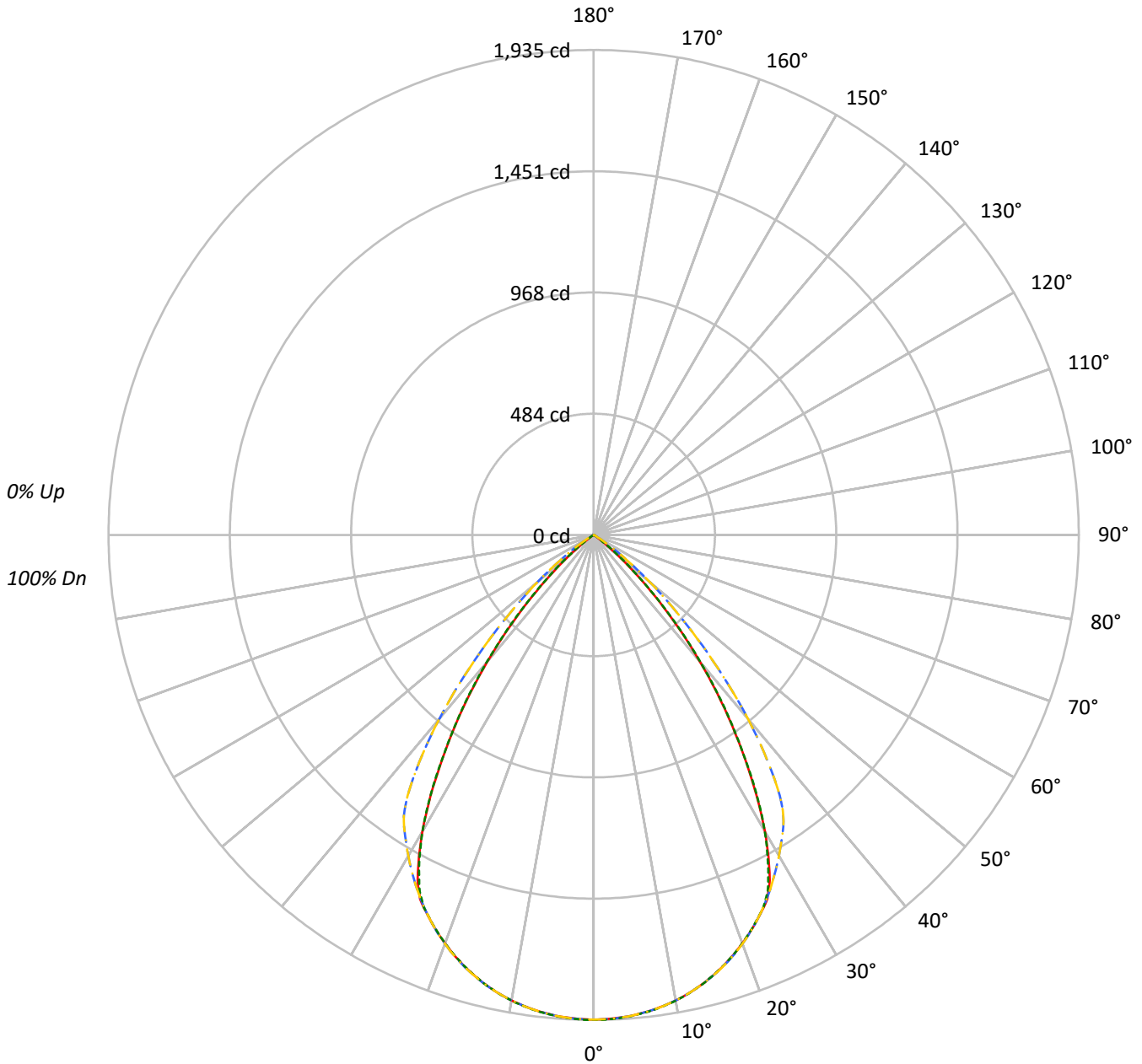
Lumens per Lamp: N/A
Luminaire Lumens: 2558.8 lumens
Efficiency: N/A
Efficacy: 66.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.14
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')CIE Type: Direct

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



TEST NUMBER: P776325
CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

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	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92					92			
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	90	88	86	85					85			
3	100	93	88	84	98	92	87	83	89	85	81	87	83	80	84	81	79	77					77			
4	95	86	80	75	93	85	79	75	83	78	74	81	77	73	79	75	72	71					71			
5	89	80	73	68	87	79	73	68	77	72	67	75	71	67	74	70	66	65					65			
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	69	64	61	59					59			
7	79	69	62	57	77	68	62	57	67	61	57	65	60	56	64	60	56	55					55			
8	74	64	57	53	73	63	57	53	62	56	52	61	56	52	60	55	52	50					50			
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47					47			
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	191161	191161	191161	191161
5°	190710	190819	190710	190819
10°	189292	189372	189292	189372
15°	186597	186628	186597	186628
20°	182402	182318	182402	182318
25°	176939	176231	176939	176231
30°	155837	155792	155837	155792
35°	121702	122124	121702	122124
40°	84940	85792	84940	85792
45°	48211	49498	48211	49498
50°	19175	20590	19175	20590
55°	2843	3636	2843	3636
60°	613	613	613	613
65°	444	444	444	444
70°	347	347	347	347
75°	306	306	306	306
80°	228	228	228	228
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 81508 cd/sqm



TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.3	7.1
10°-20°	513.4	20.1
20°-30°	739.5	28.9
30°-40°	698.0	27.3
40°-50°	359.8	14.1
50°-60°	62.8	2.5
60°-70°	2.3	0.1
70°-80°	0.7	0.0
80°-90°	0.1	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°	1435.3	56.1
0°-40°	2133.2	83.4
0°-60°	2555.8	99.9
0°-90°	2558.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2558.8	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1934	1934	1934	1934	1934	
5°	1922	1923	1922	1923	1922	182
15°	1824	1824	1824	1824	1824	513
25°	1622	1616	1622	1616	1622	733
35°	1009	1012	1009	1012	1009	626
45°	345	354	345	354	345	273
55°	16	21	16	21	16	29
65°	2	2	2	2	2	2
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0
0.5°	1933.6	1933.6	1933.6	1934.0	1935.1	1934.0	1933.6	1933.6	1933.6	1933.6	1933.6
1°	1933.2	1933.2	1933.2	1933.6	1934.7	1933.6	1933.2	1933.2	1933.2	1933.2	1933.2
1.5°	1932.4	1932.8	1932.8	1932.8	1934.0	1932.8	1932.8	1932.8	1932.4	1932.8	1932.8
2°	1931.7	1931.7	1932.0	1932.0	1933.2	1932.0	1932.0	1931.7	1931.7	1931.7	1932.0
2.5°	1930.5	1930.5	1930.9	1931.3	1932.0	1931.3	1930.9	1930.5	1930.5	1930.5	1930.9
3°	1929.3	1929.3	1929.7	1929.7	1930.9	1929.7	1929.7	1929.3	1929.3	1929.3	1929.7
3.5°	1927.8	1927.8	1928.2	1928.2	1929.3	1928.2	1928.2	1927.8	1927.8	1927.8	1928.2
4°	1926.3	1926.3	1926.3	1926.7	1927.4	1926.7	1926.3	1926.3	1926.3	1926.3	1926.3
4.5°	1924.4	1924.4	1924.4	1924.4	1925.5	1924.4	1924.4	1924.4	1924.4	1924.4	1924.4
5°	1922.1	1922.1	1922.1	1922.1	1923.2	1922.1	1922.1	1922.1	1922.1	1922.1	1922.1
5.5°	1919.4	1919.4	1919.8	1919.8	1920.5	1919.8	1919.8	1919.4	1919.4	1919.4	1919.8
6°	1916.7	1916.7	1916.7	1917.1	1917.8	1917.1	1916.7	1916.7	1916.7	1916.7	1916.7
6.5°	1913.6	1913.6	1914.0	1914.0	1914.8	1914.0	1914.0	1913.6	1913.6	1913.6	1914.0
7°	1910.5	1910.5	1910.5	1910.9	1911.7	1910.9	1910.5	1910.5	1910.5	1910.5	1910.5
7.5°	1907.1	1907.1	1907.1	1907.1	1908.2	1907.1	1907.1	1907.1	1907.1	1907.1	1907.1
8°	1903.3	1903.3	1903.6	1903.6	1904.4	1903.6	1903.6	1903.3	1903.3	1903.3	1903.6
8.5°	1899.4	1899.4	1899.4	1899.4	1900.2	1899.4	1899.4	1899.4	1899.4	1899.4	1899.4
9°	1895.2	1895.2	1895.2	1895.2	1896.0	1895.2	1895.2	1895.2	1895.2	1895.2	1895.2
9.5°	1890.6	1890.6	1890.6	1890.6	1891.4	1890.6	1890.6	1890.6	1890.6	1890.6	1890.6
10°	1886.0	1886.0	1886.0	1886.0	1886.8	1886.0	1886.0	1886.0	1886.0	1886.0	1886.0
10.5°	1881.0	1881.0	1881.0	1880.6	1881.8	1880.6	1881.0	1881.0	1881.0	1881.0	1881.0
11°	1875.6	1875.6	1876.0	1875.6	1876.4	1875.6	1876.0	1875.6	1875.6	1875.6	1876.0
11.5°	1870.3	1870.3	1870.3	1869.9	1870.7	1869.9	1870.3	1870.3	1870.3	1870.3	1870.3
12°	1864.5	1864.5	1864.5	1864.1	1864.9	1864.1	1864.5	1864.5	1864.5	1864.5	1864.5
12.5°	1858.0	1858.4	1858.4	1858.0	1858.4	1858.0	1858.4	1858.4	1858.0	1858.4	1858.4
13°	1851.9	1852.2	1852.2	1851.5	1852.2	1851.5	1852.2	1852.2	1851.9	1852.2	1852.2
13.5°	1845.3	1845.3	1845.7	1844.9	1845.7	1844.9	1845.7	1845.3	1845.3	1845.3	1845.7
14°	1838.4	1838.8	1838.8	1838.0	1838.4	1838.0	1838.8	1838.8	1838.4	1838.8	1838.8
14.5°	1831.1	1831.5	1831.9	1831.1	1831.1	1831.1	1831.9	1831.5	1831.1	1831.5	1831.9
15°	1823.5	1824.2	1824.2	1823.5	1823.8	1823.5	1824.2	1824.2	1823.5	1824.2	1824.2
15.5°	1815.8	1816.6	1816.6	1815.8	1815.8	1815.8	1816.6	1816.6	1815.8	1816.6	1816.6
16°	1807.7	1808.5	1808.9	1807.7	1807.7	1807.7	1808.9	1808.5	1807.7	1808.5	1808.9
16.5°	1799.7	1800.1	1800.8	1799.7	1799.3	1799.7	1800.8	1800.1	1799.7	1800.1	1800.8
17°	1791.2	1791.6	1792.4	1790.9	1790.9	1790.9	1792.4	1791.6	1791.2	1791.6	1792.4
17.5°	1782.0	1782.8	1783.6	1782.0	1782.0	1782.0	1783.6	1782.8	1782.0	1782.8	1783.6
18°	1773.2	1773.6	1774.4	1773.2	1772.8	1773.2	1774.4	1773.6	1773.2	1773.6	1774.4
18.5°	1764.0	1764.4	1765.1	1763.6	1763.2	1763.6	1765.1	1764.4	1764.0	1764.4	1765.1
19°	1754.0	1754.8	1755.6	1754.0	1753.3	1754.0	1755.6	1754.8	1754.0	1754.8	1755.6
19.5°	1744.4	1744.8	1745.6	1744.0	1743.7	1744.0	1745.6	1744.8	1744.4	1744.8	1745.6
20°	1734.1	1734.8	1735.6	1733.7	1733.3	1733.7	1735.6	1734.8	1734.1	1734.8	1735.6
20.5°	1724.1	1724.5	1725.2	1723.3	1722.9	1723.3	1725.2	1724.5	1724.1	1724.5	1725.2
21°	1713.4	1713.7	1714.5	1712.6	1712.2	1712.6	1714.5	1713.7	1713.4	1713.7	1714.5



TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1680.4	1680.4	1680.7	1679.2	1679.2	1679.2	1680.7	1680.4	1680.4	1680.4	1680.7
23°	1668.9	1668.9	1668.9	1667.7	1667.3	1667.7	1668.9	1668.9	1668.9	1668.9	1668.9
23.5°	1657.3	1657.3	1656.6	1655.8	1655.8	1655.8	1656.6	1657.3	1657.3	1657.3	1656.6
24°	1645.5	1645.5	1644.3	1643.9	1644.7	1643.9	1644.3	1645.5	1645.5	1645.5	1644.3
24.5°	1633.6	1633.2	1631.6	1631.6	1632.8	1631.6	1631.6	1633.2	1633.6	1633.2	1631.6
25°	1622.4	1620.5	1618.6	1619.0	1615.9	1619.0	1618.6	1620.5	1622.4	1620.5	1618.6
25.5°	1609.4	1608.2	1605.6	1606.7	1599.8	1606.7	1605.6	1608.2	1609.4	1608.2	1605.6
26°	1587.5	1595.6	1592.1	1594.4	1583.7	1594.4	1592.1	1595.6	1587.5	1595.6	1592.1
26.5°	1569.1	1582.9	1578.7	1581.4	1560.3	1581.4	1578.7	1582.9	1569.1	1582.9	1578.7
27°	1546.9	1571.0	1564.9	1563.4	1533.0	1563.4	1564.9	1571.0	1546.9	1571.0	1564.9
27.5°	1519.2	1554.5	1550.7	1546.9	1508.5	1546.9	1550.7	1554.5	1519.2	1554.5	1550.7
28°	1490.1	1532.7	1536.5	1529.2	1481.3	1529.2	1536.5	1532.7	1490.1	1532.7	1536.5
28.5°	1460.5	1513.9	1522.3	1504.3	1452.9	1504.3	1522.3	1513.9	1460.5	1513.9	1522.3
29°	1429.5	1490.5	1507.7	1478.2	1425.2	1478.2	1507.7	1490.5	1429.5	1490.5	1507.7
29.5°	1398.0	1462.8	1493.1	1452.9	1395.3	1452.9	1493.1	1462.8	1398.0	1462.8	1493.1
30°	1365.4	1434.4	1478.2	1426.0	1365.0	1426.0	1478.2	1434.4	1365.4	1434.4	1478.2
30.5°	1332.0	1404.5	1463.6	1398.0	1333.5	1398.0	1463.6	1404.5	1332.0	1404.5	1463.6
31°	1297.5	1374.6	1448.6	1369.2	1301.3	1369.2	1448.6	1374.6	1297.5	1374.6	1448.6
31.5°	1262.6	1343.5	1433.7	1340.5	1266.4	1340.5	1433.7	1343.5	1262.6	1343.5	1433.7
32°	1226.9	1312.1	1418.7	1310.9	1230.7	1310.9	1418.7	1312.1	1226.9	1312.1	1418.7
32.5°	1190.4	1279.5	1404.1	1280.6	1194.7	1280.6	1404.1	1279.5	1190.4	1279.5	1404.1
33°	1154.0	1246.8	1389.2	1248.8	1159.0	1248.8	1389.2	1246.8	1154.0	1246.8	1389.2
33.5°	1117.2	1212.7	1371.9	1216.2	1120.2	1216.2	1371.9	1212.7	1117.2	1212.7	1371.9
34°	1081.1	1178.2	1353.5	1182.0	1083.4	1182.0	1353.5	1178.2	1081.1	1178.2	1353.5
34.5°	1044.7	1143.3	1332.0	1146.7	1047.0	1146.7	1332.0	1143.3	1044.7	1143.3	1332.0
35°	1008.6	1108.3	1305.9	1111.0	1012.1	1111.0	1305.9	1108.3	1008.6	1108.3	1305.9
35.5°	973.3	1073.8	1277.9	1076.1	976.0	1076.1	1277.9	1073.8	973.3	1073.8	1277.9
36°	938.4	1038.5	1246.8	1040.4	942.2	1040.4	1246.8	1038.5	938.4	1038.5	1246.8
36.5°	903.1	1004.0	1213.5	1005.5	907.7	1005.5	1213.5	1004.0	903.1	1004.0	1213.5
37°	868.2	969.5	1178.2	971.0	873.6	971.0	1178.2	969.5	868.2	969.5	1178.2
37.5°	832.9	935.3	1142.5	937.6	839.0	937.6	1142.5	935.3	832.9	935.3	1142.5
38°	797.6	901.2	1105.7	903.9	804.5	903.9	1105.7	901.2	797.6	901.2	1105.7
38.5°	761.9	868.2	1069.2	871.3	769.2	871.3	1069.2	868.2	761.9	868.2	1069.2
39°	727.4	834.8	1032.4	838.6	734.7	838.6	1032.4	834.8	727.4	834.8	1032.4
39.5°	693.2	801.4	995.2	806.4	699.0	806.4	995.2	801.4	693.2	801.4	995.2
40°	658.3	767.7	957.2	773.4	664.9	773.4	957.2	767.7	658.3	767.7	957.2
40.5°	624.2	734.3	918.8	740.1	630.3	740.1	918.8	734.3	624.2	734.3	918.8
41°	591.2	701.3	880.5	707.1	597.0	707.1	880.5	701.3	591.2	701.3	880.5
41.5°	558.2	668.3	841.7	674.1	564.3	674.1	841.7	668.3	558.2	668.3	841.7
42°	526.4	636.1	803.0	641.1	532.9	641.1	803.0	636.1	526.4	636.1	803.0
42.5°	494.9	603.9	765.0	609.2	501.8	609.2	765.0	603.9	494.9	603.9	765.0
43°	463.8	572.4	727.0	577.0	471.1	577.0	727.0	572.4	463.8	572.4	727.0
43.5°	432.8	541.3	689.8	546.7	441.2	546.7	689.8	541.3	432.8	541.3	689.8



TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	344.9	451.5	583.1	457.3	354.1	457.3	583.1	451.5	344.9	451.5	583.1
45.5°	318.0	422.8	549.8	429.3	326.9	429.3	549.8	422.8	318.0	422.8	549.8
46°	292.3	394.8	517.9	401.7	300.8	401.7	517.9	394.8	292.3	394.8	517.9
46.5°	266.2	366.4	486.5	374.1	275.8	374.1	486.5	366.4	266.2	366.4	486.5
47°	241.7	339.5	455.8	346.8	252.4	346.8	455.8	339.5	241.7	339.5	455.8
47.5°	217.1	313.4	426.2	320.0	229.4	320.0	426.2	313.4	217.1	313.4	426.2
48°	195.7	288.5	397.8	295.0	207.2	295.0	397.8	288.5	195.7	288.5	397.8
48.5°	174.9	263.9	370.6	271.2	187.2	271.2	370.6	263.9	174.9	263.9	370.6
49°	157.7	239.8	343.4	247.8	168.8	247.8	343.4	239.8	157.7	239.8	343.4
49.5°	141.2	217.1	317.3	225.6	151.2	225.6	317.3	217.1	141.2	217.1	317.3
50°	124.7	195.7	291.6	204.1	133.9	204.1	291.6	195.7	124.7	195.7	291.6
50.5°	109.0	175.3	267.8	184.1	117.0	184.1	267.8	175.3	109.0	175.3	267.8
51°	94.0	157.7	244.8	166.1	102.8	166.1	244.8	157.7	94.0	157.7	244.8
51.5°	81.7	140.8	222.9	148.5	89.4	148.5	222.9	140.8	81.7	140.8	222.9
52°	69.8	124.3	201.8	131.6	76.7	131.6	201.8	124.3	69.8	124.3	201.8
52.5°	58.7	108.2	181.8	115.5	64.8	115.5	181.8	108.2	58.7	108.2	181.8
53°	48.3	93.6	164.2	101.3	53.7	101.3	164.2	93.6	48.3	93.6	164.2
53.5°	39.9	80.6	146.9	88.2	43.0	88.2	146.9	80.6	39.9	80.6	146.9
54°	31.1	68.7	130.8	75.6	34.1	75.6	130.8	68.7	31.1	68.7	130.8
54.5°	22.6	57.5	115.9	63.7	27.6	63.7	115.9	57.5	22.6	57.5	115.9
55°	16.5	48.0	101.3	52.6	21.1	52.6	101.3	48.0	16.5	48.0	101.3
55.5°	10.4	39.1	88.2	42.2	14.6	42.2	88.2	39.1	10.4	39.1	88.2
56°	6.9	30.7	75.6	33.0	8.1	33.0	75.6	30.7	6.9	30.7	75.6
56.5°	5.4	22.3	64.8	25.3	5.0	25.3	64.8	22.3	5.4	22.3	64.8
57°	3.8	14.6	55.2	18.4	4.2	18.4	55.2	14.6	3.8	14.6	55.2
57.5°	3.8	9.2	46.4	12.3	3.8	12.3	46.4	9.2	3.8	9.2	46.4
58°	3.5	5.8	38.7	8.1	3.8	8.1	38.7	5.8	3.5	5.8	38.7
58.5°	3.5	3.8	32.2	5.8	3.5	5.8	32.2	3.8	3.5	3.8	32.2
59°	3.1	3.1	26.1	4.2	3.5	4.2	26.1	3.1	3.1	3.1	26.1
59.5°	3.1	3.1	21.1	3.1	3.5	3.1	21.1	3.1	3.1	3.1	21.1
60°	3.1	3.1	16.9	3.1	3.1	3.1	16.9	3.1	3.1	3.1	16.9
60.5°	2.7	2.7	13.0	3.1	3.1	3.1	13.0	2.7	2.7	2.7	13.0
61°	2.7	2.7	10.4	2.7	3.1	2.7	10.4	2.7	2.7	2.7	10.4
61.5°	2.7	2.7	7.7	2.7	2.7	2.7	7.7	2.7	2.7	2.7	7.7
62°	2.3	2.3	5.8	2.7	2.7	2.7	5.8	2.3	2.3	2.3	5.8
62.5°	2.3	2.3	4.2	2.3	2.7	2.3	4.2	2.3	2.3	2.3	4.2
63°	2.3	2.3	3.1	2.3	2.3	2.3	3.1	2.3	2.3	2.3	3.1
63.5°	2.3	1.9	2.3	2.3	2.3	2.3	2.3	1.9	2.3	1.9	2.3
64°	1.9	1.9	1.9	1.9	2.3	1.9	1.9	1.9	1.9	1.9	1.9
64.5°	1.9	1.9	1.5	1.9	2.3	1.9	1.5	1.9	1.9	1.9	1.5
65°	1.9	1.9	1.5	1.9	1.9	1.9	1.5	1.9	1.9	1.9	1.5
65.5°	1.9	1.5	1.5	1.9	1.9	1.9	1.5	1.5	1.9	1.5	1.5
66°	1.9	1.5	1.2	1.5	1.9	1.5	1.2	1.5	1.9	1.5	1.2



TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.5	1.5	1.2	1.5	1.5	1.5	1.2	1.5	1.5	1.5	1.2
68°	1.5	1.2	1.2	1.5	1.5	1.5	1.2	1.2	1.5	1.2	1.2
68.5°	1.5	1.2	0.8	1.2	1.5	1.2	0.8	1.2	1.5	1.2	0.8
69°	1.2	1.2	0.8	1.2	1.5	1.2	0.8	1.2	1.2	1.2	0.8
69.5°	1.2	1.2	0.8	1.2	1.5	1.2	0.8	1.2	1.2	1.2	0.8
70°	1.2	1.2	0.8	1.2	1.2	1.2	0.8	1.2	1.2	1.2	0.8
70.5°	1.2	1.2	0.8	1.2	1.2	1.2	0.8	1.2	1.2	1.2	0.8
71°	1.2	0.8	0.8	1.2	1.2	1.2	0.8	0.8	1.2	0.8	0.8
71.5°	1.2	0.8	0.8	0.8	1.2	0.8	0.8	0.8	1.2	0.8	0.8
72°	1.2	0.8	0.8	0.8	1.2	0.8	0.8	0.8	1.2	0.8	0.8
72.5°	0.8	0.8	0.4	0.8	1.2	0.8	0.4	0.8	0.8	0.8	0.4
73°	0.8	0.8	0.4	0.8	1.2	0.8	0.4	0.8	0.8	0.8	0.4
73.5°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
74°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
74.5°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
75°	0.8	0.8	0.4	0.8	0.8	0.8	0.4	0.8	0.8	0.8	0.4
75.5°	0.8	0.4	0.4	0.8	0.8	0.8	0.4	0.4	0.8	0.4	0.4
76°	0.8	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.8	0.4	0.4
76.5°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4
77°	0.4	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
78°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
78.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
79°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
79.5°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
80°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
80.5°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
81°	0.4	0.4	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.0
81.5°	0.4	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.4	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.4	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: P776325
CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

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: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1934.0	1934.0	1934.0	1934.0	1934.0	1934.0
0.5°	1934.0	1935.1	1934.0	1933.6	1933.6	1933.6
1°	1933.6	1934.7	1933.6	1933.2	1933.2	1933.2
1.5°	1932.8	1934.0	1932.8	1932.8	1932.8	1932.4
2°	1932.0	1933.2	1932.0	1932.0	1931.7	1931.7
2.5°	1931.3	1932.0	1931.3	1930.9	1930.5	1930.5
3°	1929.7	1930.9	1929.7	1929.7	1929.3	1929.3
3.5°	1928.2	1929.3	1928.2	1928.2	1927.8	1927.8
4°	1926.7	1927.4	1926.7	1926.3	1926.3	1926.3
4.5°	1924.4	1925.5	1924.4	1924.4	1924.4	1924.4
5°	1922.1	1923.2	1922.1	1922.1	1922.1	1922.1
5.5°	1919.8	1920.5	1919.8	1919.8	1919.4	1919.4
6°	1917.1	1917.8	1917.1	1916.7	1916.7	1916.7
6.5°	1914.0	1914.8	1914.0	1914.0	1913.6	1913.6
7°	1910.9	1911.7	1910.9	1910.5	1910.5	1910.5
7.5°	1907.1	1908.2	1907.1	1907.1	1907.1	1907.1
8°	1903.6	1904.4	1903.6	1903.6	1903.3	1903.3
8.5°	1899.4	1900.2	1899.4	1899.4	1899.4	1899.4
9°	1895.2	1896.0	1895.2	1895.2	1895.2	1895.2
9.5°	1890.6	1891.4	1890.6	1890.6	1890.6	1890.6
10°	1886.0	1886.8	1886.0	1886.0	1886.0	1886.0
10.5°	1880.6	1881.8	1880.6	1881.0	1881.0	1881.0
11°	1875.6	1876.4	1875.6	1876.0	1875.6	1875.6
11.5°	1869.9	1870.7	1869.9	1870.3	1870.3	1870.3
12°	1864.1	1864.9	1864.1	1864.5	1864.5	1864.5
12.5°	1858.0	1858.4	1858.0	1858.4	1858.4	1858.0
13°	1851.5	1852.2	1851.5	1852.2	1852.2	1851.9
13.5°	1844.9	1845.7	1844.9	1845.7	1845.3	1845.3
14°	1838.0	1838.4	1838.0	1838.8	1838.8	1838.4
14.5°	1831.1	1831.1	1831.1	1831.9	1831.5	1831.1
15°	1823.5	1823.8	1823.5	1824.2	1824.2	1823.5
15.5°	1815.8	1815.8	1815.8	1816.6	1816.6	1815.8
16°	1807.7	1807.7	1807.7	1808.9	1808.5	1807.7
16.5°	1799.7	1799.3	1799.7	1800.8	1800.1	1799.7
17°	1790.9	1790.9	1790.9	1792.4	1791.6	1791.2
17.5°	1782.0	1782.0	1782.0	1783.6	1782.8	1782.0
18°	1773.2	1772.8	1773.2	1774.4	1773.6	1773.2
18.5°	1763.6	1763.2	1763.6	1765.1	1764.4	1764.0
19°	1754.0	1753.3	1754.0	1755.6	1754.8	1754.0
19.5°	1744.0	1743.7	1744.0	1745.6	1744.8	1744.4
20°	1733.7	1733.3	1733.7	1735.6	1734.8	1734.1
20.5°	1723.3	1722.9	1723.3	1725.2	1724.5	1724.1
21°	1712.6	1712.2	1712.6	1714.5	1713.7	1713.4

TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1679.2	1679.2	1679.2	1680.7	1680.4	1680.4
23°	1667.7	1667.3	1667.7	1668.9	1668.9	1668.9
23.5°	1655.8	1655.8	1655.8	1656.6	1657.3	1657.3
24°	1643.9	1644.7	1643.9	1644.3	1645.5	1645.5
24.5°	1631.6	1632.8	1631.6	1631.6	1633.2	1633.6
25°	1619.0	1615.9	1619.0	1618.6	1620.5	1622.4
25.5°	1606.7	1599.8	1606.7	1605.6	1608.2	1609.4
26°	1594.4	1583.7	1594.4	1592.1	1595.6	1587.5
26.5°	1581.4	1560.3	1581.4	1578.7	1582.9	1569.1
27°	1563.4	1533.0	1563.4	1564.9	1571.0	1546.9
27.5°	1546.9	1508.5	1546.9	1550.7	1554.5	1519.2
28°	1529.2	1481.3	1529.2	1536.5	1532.7	1490.1
28.5°	1504.3	1452.9	1504.3	1522.3	1513.9	1460.5
29°	1478.2	1425.2	1478.2	1507.7	1490.5	1429.5
29.5°	1452.9	1395.3	1452.9	1493.1	1462.8	1398.0
30°	1426.0	1365.0	1426.0	1478.2	1434.4	1365.4
30.5°	1398.0	1333.5	1398.0	1463.6	1404.5	1332.0
31°	1369.2	1301.3	1369.2	1448.6	1374.6	1297.5
31.5°	1340.5	1266.4	1340.5	1433.7	1343.5	1262.6
32°	1310.9	1230.7	1310.9	1418.7	1312.1	1226.9
32.5°	1280.6	1194.7	1280.6	1404.1	1279.5	1190.4
33°	1248.8	1159.0	1248.8	1389.2	1246.8	1154.0
33.5°	1216.2	1120.2	1216.2	1371.9	1212.7	1117.2
34°	1182.0	1083.4	1182.0	1353.5	1178.2	1081.1
34.5°	1146.7	1047.0	1146.7	1332.0	1143.3	1044.7
35°	1111.0	1012.1	1111.0	1305.9	1108.3	1008.6
35.5°	1076.1	976.0	1076.1	1277.9	1073.8	973.3
36°	1040.4	942.2	1040.4	1246.8	1038.5	938.4
36.5°	1005.5	907.7	1005.5	1213.5	1004.0	903.1
37°	971.0	873.6	971.0	1178.2	969.5	868.2
37.5°	937.6	839.0	937.6	1142.5	935.3	832.9
38°	903.9	804.5	903.9	1105.7	901.2	797.6
38.5°	871.3	769.2	871.3	1069.2	868.2	761.9
39°	838.6	734.7	838.6	1032.4	834.8	727.4
39.5°	806.4	699.0	806.4	995.2	801.4	693.2
40°	773.4	664.9	773.4	957.2	767.7	658.3
40.5°	740.1	630.3	740.1	918.8	734.3	624.2
41°	707.1	597.0	707.1	880.5	701.3	591.2
41.5°	674.1	564.3	674.1	841.7	668.3	558.2
42°	641.1	532.9	641.1	803.0	636.1	526.4
42.5°	609.2	501.8	609.2	765.0	603.9	494.9
43°	577.0	471.1	577.0	727.0	572.4	463.8
43.5°	546.7	441.2	546.7	689.8	541.3	432.8



TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	457.3	354.1	457.3	583.1	451.5	344.9
45.5°	429.3	326.9	429.3	549.8	422.8	318.0
46°	401.7	300.8	401.7	517.9	394.8	292.3
46.5°	374.1	275.8	374.1	486.5	366.4	266.2
47°	346.8	252.4	346.8	455.8	339.5	241.7
47.5°	320.0	229.4	320.0	426.2	313.4	217.1
48°	295.0	207.2	295.0	397.8	288.5	195.7
48.5°	271.2	187.2	271.2	370.6	263.9	174.9
49°	247.8	168.8	247.8	343.4	239.8	157.7
49.5°	225.6	151.2	225.6	317.3	217.1	141.2
50°	204.1	133.9	204.1	291.6	195.7	124.7
50.5°	184.1	117.0	184.1	267.8	175.3	109.0
51°	166.1	102.8	166.1	244.8	157.7	94.0
51.5°	148.5	89.4	148.5	222.9	140.8	81.7
52°	131.6	76.7	131.6	201.8	124.3	69.8
52.5°	115.5	64.8	115.5	181.8	108.2	58.7
53°	101.3	53.7	101.3	164.2	93.6	48.3
53.5°	88.2	43.0	88.2	146.9	80.6	39.9
54°	75.6	34.1	75.6	130.8	68.7	31.1
54.5°	63.7	27.6	63.7	115.9	57.5	22.6
55°	52.6	21.1	52.6	101.3	48.0	16.5
55.5°	42.2	14.6	42.2	88.2	39.1	10.4
56°	33.0	8.1	33.0	75.6	30.7	6.9
56.5°	25.3	5.0	25.3	64.8	22.3	5.4
57°	18.4	4.2	18.4	55.2	14.6	3.8
57.5°	12.3	3.8	12.3	46.4	9.2	3.8
58°	8.1	3.8	8.1	38.7	5.8	3.5
58.5°	5.8	3.5	5.8	32.2	3.8	3.5
59°	4.2	3.5	4.2	26.1	3.1	3.1
59.5°	3.1	3.5	3.1	21.1	3.1	3.1
60°	3.1	3.1	3.1	16.9	3.1	3.1
60.5°	3.1	3.1	3.1	13.0	2.7	2.7
61°	2.7	3.1	2.7	10.4	2.7	2.7
61.5°	2.7	2.7	2.7	7.7	2.7	2.7
62°	2.7	2.7	2.7	5.8	2.3	2.3
62.5°	2.3	2.7	2.3	4.2	2.3	2.3
63°	2.3	2.3	2.3	3.1	2.3	2.3
63.5°	2.3	2.3	2.3	2.3	1.9	2.3
64°	1.9	2.3	1.9	1.9	1.9	1.9
64.5°	1.9	2.3	1.9	1.5	1.9	1.9
65°	1.9	1.9	1.9	1.5	1.9	1.9
65.5°	1.9	1.9	1.9	1.5	1.5	1.9
66°	1.5	1.9	1.5	1.2	1.5	1.9



TEST NUMBER: P776325

CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.5	1.5	1.5	1.2	1.5	1.5
68°	1.5	1.5	1.5	1.2	1.2	1.5
68.5°	1.2	1.5	1.2	0.8	1.2	1.5
69°	1.2	1.5	1.2	0.8	1.2	1.2
69.5°	1.2	1.5	1.2	0.8	1.2	1.2
70°	1.2	1.2	1.2	0.8	1.2	1.2
70.5°	1.2	1.2	1.2	0.8	1.2	1.2
71°	1.2	1.2	1.2	0.8	0.8	1.2
71.5°	0.8	1.2	0.8	0.8	0.8	1.2
72°	0.8	1.2	0.8	0.8	0.8	1.2
72.5°	0.8	1.2	0.8	0.4	0.8	0.8
73°	0.8	1.2	0.8	0.4	0.8	0.8
73.5°	0.8	0.8	0.8	0.4	0.8	0.8
74°	0.8	0.8	0.8	0.4	0.8	0.8
74.5°	0.8	0.8	0.8	0.4	0.8	0.8
75°	0.8	0.8	0.8	0.4	0.8	0.8
75.5°	0.8	0.8	0.8	0.4	0.4	0.8
76°	0.4	0.8	0.4	0.4	0.4	0.8
76.5°	0.4	0.8	0.4	0.4	0.4	0.4
77°	0.4	0.8	0.4	0.4	0.4	0.4
77.5°	0.4	0.4	0.4	0.4	0.4	0.4
78°	0.4	0.4	0.4	0.4	0.4	0.4
78.5°	0.4	0.4	0.4	0.4	0.4	0.4
79°	0.4	0.4	0.4	0.0	0.4	0.4
79.5°	0.4	0.4	0.4	0.0	0.4	0.4
80°	0.4	0.4	0.4	0.0	0.4	0.4
80.5°	0.4	0.4	0.4	0.0	0.4	0.4
81°	0.4	0.4	0.4	0.0	0.4	0.4
81.5°	0.4	0.4	0.4	0.0	0.0	0.4
82°	0.0	0.4	0.0	0.0	0.0	0.0
82.5°	0.0	0.4	0.0	0.0	0.0	0.0
83°	0.0	0.4	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: P776325
CATALOG NUMBER: HCDJBL3040CSD-HCD4TSQMB-4000lm-2700K

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°	1702.6	1703.0	1703.4	1701.8	1701.5	1701.8	1703.4	1703.0	1702.6	1703.0	1703.4
22°	1691.5	1691.9	1692.3	1690.3	1690.3	1690.3	1692.3	1691.9	1691.5	1691.9	1692.3



44°	402.8	510.6	653.0	516.0	411.3	516.0	653.0	510.6	402.8	510.6	653.0
44.5°	373.7	481.1	617.7	486.5	382.1	486.5	617.7	481.1	373.7	481.1	617.7



66.5°	1.5	1.5	1.2	1.5	1.9	1.5	1.2	1.5	1.5	1.5	1.2
67°	1.5	1.5	1.2	1.5	1.5	1.5	1.2	1.5	1.5	1.5	1.2



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°	1701.8	1701.5	1701.8	1703.4	1703.0	1702.6
22°	1690.3	1690.3	1690.3	1692.3	1691.9	1691.5



44°	516.0	411.3	516.0	653.0	510.6	402.8
44.5°	486.5	382.1	486.5	617.7	481.1	373.7



66.5°	1.5	1.9	1.5	1.2	1.5	1.5
67°	1.5	1.5	1.5	1.2	1.5	1.5

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)