

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: P776452

Luminaire Tested: HCDJBL3040CSD-HCD81TRMB-4000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776452  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B045-HCD81TRMB)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL3040CSD-HCD81TRMB-4000lm-3500K  
Description: 8 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

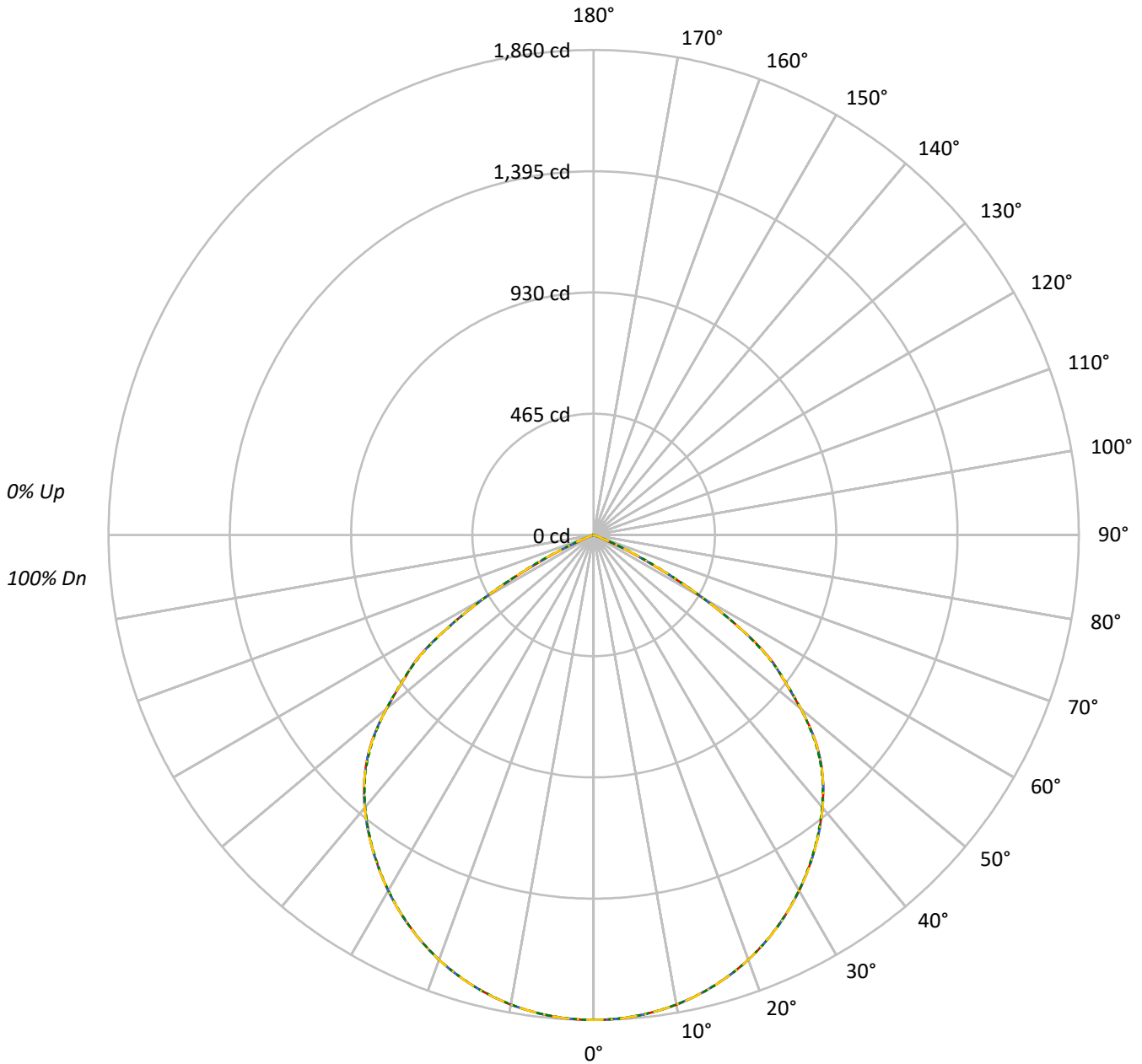
Lumens per Lamp: N/A  
Luminaire Lumens: 4201.8 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.26 / 1.37  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

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



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89								
2	103	97	91	86	101	95	90	85	91	87	84	88	85	82	85	82	80	78								
3	95	86	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68								
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59								
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52								
6	75	63	55	50	74	62	55	49	61	54	49	59	53	49	58	52	48	46								
7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41								
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37								
9	61	48	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35	33								
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	42	36	32	30								

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

	0°	90°	180°	270°
0°	56792	56792	56792	56792
5°	56776	56752	56776	56752
10°	56708	56695	56708	56695
15°	56561	56549	56561	56549
20°	56331	56318	56331	56318
25°	55983	55957	55983	55957
30°	55535	55492	55535	55492
35°	55011	54937	55011	54937
40°	54389	54282	54389	54282
45°	53163	52973	53163	52973
50°	49235	49235	49235	49235
55°	43817	43333	43817	43333
60°	29260	29669	29260	29669
65°	10359	12397	10359	12397
70°	107	1169	107	1169
75°	0	0	0	0
80°	0	0	0	0
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 53163 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.1	4.2
10°-20°	505.1	12.0
20°-30°	765.8	18.2
30°-40°	923.2	22.0
40°-50°	941.1	22.4
50°-60°	707.2	16.8
60°-70°	182.7	4.3
70°-80°	0.5	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°	1447.0	34.4
0°-40°	2370.2	56.4
0°-60°	4018.6	95.6
0°-90°	4201.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4201.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1860	1860	1860	1860	1860	
5°	1853	1852	1853	1852	1853	176
15°	1790	1789	1790	1789	1790	505
25°	1662	1661	1662	1661	1662	766
35°	1476	1474	1476	1474	1476	923
45°	1231	1227	1231	1227	1231	942
55°	823	814	823	814	823	707
65°	143	172	143	172	143	171
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1860.2	1860.2	1860.2	1860.2	1860.2	1860.2	1860.2	1860.2	1860.2	1860.2	1860.2
0.5°	1860.2	1860.2	1860.2	1860.2	1859.8	1860.2	1860.2	1860.2	1860.2	1860.2	1860.2
1°	1860.2	1860.2	1860.2	1859.8	1859.4	1859.8	1860.2	1860.2	1860.2	1860.2	1860.2
1.5°	1859.8	1859.8	1859.8	1859.8	1859.4	1859.8	1859.8	1859.8	1859.8	1859.8	1859.8
2°	1859.4	1859.4	1859.4	1859.0	1858.6	1859.0	1859.4	1859.4	1859.4	1859.4	1859.4
2.5°	1858.2	1858.6	1858.6	1858.6	1857.8	1858.6	1858.6	1858.6	1858.2	1858.6	1858.6
3°	1857.4	1857.8	1857.8	1857.8	1857.0	1857.8	1857.8	1857.8	1857.4	1857.8	1857.8
3.5°	1856.6	1856.6	1856.6	1856.6	1856.2	1856.6	1856.6	1856.6	1856.6	1856.6	1856.6
4°	1855.4	1855.4	1855.4	1855.4	1854.6	1855.4	1855.4	1855.4	1855.4	1855.4	1855.4
4.5°	1854.2	1854.2	1854.2	1854.2	1853.4	1854.2	1854.2	1854.2	1854.2	1854.2	1854.2
5°	1852.6	1852.6	1852.6	1852.6	1851.8	1852.6	1852.6	1852.6	1852.6	1852.6	1852.6
5.5°	1851.1	1851.1	1851.1	1851.1	1850.3	1851.1	1851.1	1851.1	1851.1	1851.1	1851.1
6°	1849.1	1849.5	1849.1	1849.1	1848.7	1849.1	1849.1	1849.5	1849.1	1849.5	1849.1
6.5°	1847.1	1847.5	1847.5	1847.1	1846.7	1847.1	1847.5	1847.5	1847.1	1847.5	1847.5
7°	1845.1	1845.1	1845.1	1845.1	1844.7	1845.1	1845.1	1845.1	1845.1	1845.1	1845.1
7.5°	1842.7	1842.7	1842.7	1843.1	1842.3	1843.1	1842.7	1842.7	1842.7	1842.7	1842.7
8°	1840.3	1840.3	1840.3	1840.3	1839.9	1840.3	1840.3	1840.3	1840.3	1840.3	1840.3
8.5°	1837.9	1837.9	1837.9	1837.9	1837.1	1837.9	1837.9	1837.9	1837.9	1837.9	1837.9
9°	1835.2	1835.2	1835.2	1835.2	1834.8	1835.2	1835.2	1835.2	1835.2	1835.2	1835.2
9.5°	1832.0	1832.4	1832.4	1832.4	1831.6	1832.4	1832.4	1832.4	1832.0	1832.4	1832.4
10°	1829.2	1829.2	1829.2	1829.2	1828.8	1829.2	1829.2	1829.2	1829.2	1829.2	1829.2
10.5°	1826.0	1826.0	1826.0	1826.0	1825.6	1826.0	1826.0	1826.0	1826.0	1826.0	1826.0
11°	1822.4	1822.4	1822.4	1822.8	1822.0	1822.8	1822.4	1822.4	1822.4	1822.4	1822.4
11.5°	1818.9	1818.9	1818.9	1819.3	1818.5	1819.3	1818.9	1818.9	1818.9	1818.9	1818.9
12°	1815.3	1815.3	1815.3	1815.3	1814.9	1815.3	1815.3	1815.3	1815.3	1815.3	1815.3
12.5°	1811.3	1811.3	1811.3	1811.7	1810.9	1811.7	1811.3	1811.3	1811.3	1811.3	1811.3
13°	1807.3	1807.3	1807.3	1807.3	1806.9	1807.3	1807.3	1807.3	1807.3	1807.3	1807.3
13.5°	1803.0	1803.4	1803.4	1803.4	1802.6	1803.4	1803.4	1803.4	1803.0	1803.4	1803.4
14°	1798.6	1799.0	1799.0	1799.0	1798.2	1799.0	1799.0	1799.0	1798.6	1799.0	1799.0
14.5°	1794.2	1794.2	1794.2	1794.2	1793.8	1794.2	1794.2	1794.2	1794.2	1794.2	1794.2
15°	1789.5	1789.5	1789.5	1789.9	1789.1	1789.9	1789.5	1789.5	1789.5	1789.5	1789.5
15.5°	1784.7	1784.7	1784.7	1784.7	1784.3	1784.7	1784.7	1784.7	1784.7	1784.7	1784.7
16°	1779.5	1779.9	1779.9	1779.9	1779.1	1779.9	1779.9	1779.9	1779.5	1779.9	1779.9
16.5°	1774.4	1774.4	1774.8	1774.8	1774.4	1774.8	1774.8	1774.4	1774.4	1774.4	1774.8
17°	1769.2	1769.2	1769.6	1769.2	1768.8	1769.2	1769.6	1769.2	1769.2	1769.2	1769.6
17.5°	1763.6	1763.6	1764.0	1764.0	1763.6	1764.0	1764.0	1763.6	1763.6	1763.6	1764.0
18°	1758.1	1758.1	1758.1	1758.1	1757.7	1758.1	1758.1	1758.1	1758.1	1758.1	1758.1
18.5°	1752.1	1752.1	1752.5	1752.5	1751.7	1752.5	1752.5	1752.1	1752.1	1752.1	1752.5
19°	1746.2	1746.2	1746.6	1746.6	1745.8	1746.6	1746.6	1746.2	1746.2	1746.2	1746.6
19.5°	1740.2	1740.2	1740.2	1740.2	1739.8	1740.2	1740.2	1740.2	1740.2	1740.2	1740.2
20°	1733.8	1733.8	1733.8	1733.8	1733.4	1733.8	1733.8	1733.8	1733.8	1733.8	1733.8
20.5°	1727.1	1727.5	1727.5	1727.5	1726.7	1727.5	1727.5	1727.5	1727.1	1727.5	1727.5
21°	1720.7	1720.7	1720.7	1720.7	1720.3	1720.7	1720.7	1720.7	1720.7	1720.7	1720.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	1699.7	1700.1	1700.1	1700.1	1699.3	1700.1	1700.1	1700.1	1699.7	1700.1	1700.1
23°	1692.5	1692.5	1692.5	1692.5	1692.1	1692.5	1692.5	1692.5	1692.5	1692.5	1692.5
23.5°	1685.0	1685.4	1685.4	1685.4	1684.6	1685.4	1685.4	1685.4	1685.0	1685.4	1685.4
24°	1677.4	1677.4	1677.8	1677.4	1677.0	1677.4	1677.8	1677.4	1677.4	1677.4	1677.8
24.5°	1669.5	1669.9	1670.3	1669.9	1669.1	1669.9	1670.3	1669.9	1669.5	1669.9	1670.3
25°	1661.9	1661.9	1662.3	1661.9	1661.1	1661.9	1662.3	1661.9	1661.9	1661.9	1662.3
25.5°	1653.6	1654.0	1654.4	1654.0	1653.2	1654.0	1654.4	1654.0	1653.6	1654.0	1654.4
26°	1645.6	1645.6	1646.0	1645.6	1644.8	1645.6	1646.0	1645.6	1645.6	1645.6	1646.0
26.5°	1637.3	1637.7	1637.7	1637.3	1636.5	1637.3	1637.7	1637.7	1637.3	1637.7	1637.7
27°	1629.0	1629.0	1629.4	1629.0	1628.2	1629.0	1629.4	1629.0	1629.0	1629.0	1629.4
27.5°	1620.2	1620.6	1620.6	1620.2	1619.4	1620.2	1620.6	1620.6	1620.2	1620.6	1620.6
28°	1611.5	1611.9	1611.9	1611.5	1610.7	1611.5	1611.9	1611.9	1611.5	1611.9	1611.9
28.5°	1602.7	1602.7	1603.1	1602.7	1601.9	1602.7	1603.1	1602.7	1602.7	1602.7	1603.1
29°	1593.6	1594.0	1594.0	1593.6	1592.4	1593.6	1594.0	1594.0	1593.6	1594.0	1594.0
29.5°	1584.5	1584.9	1584.9	1584.5	1583.3	1584.5	1584.9	1584.9	1584.5	1584.9	1584.9
30°	1575.3	1575.7	1575.7	1574.9	1574.1	1574.9	1575.7	1575.7	1575.3	1575.7	1575.7
30.5°	1566.2	1566.2	1566.2	1565.8	1564.6	1565.8	1566.2	1566.2	1566.2	1566.2	1566.2
31°	1556.2	1556.6	1557.0	1555.9	1555.1	1555.9	1557.0	1556.6	1556.2	1556.6	1557.0
31.5°	1546.7	1547.1	1547.1	1546.3	1545.1	1546.3	1547.1	1547.1	1546.7	1547.1	1547.1
32°	1537.2	1537.6	1537.6	1536.8	1535.2	1536.8	1537.6	1537.6	1537.2	1537.6	1537.6
32.5°	1527.2	1527.6	1527.6	1526.5	1525.3	1526.5	1527.6	1527.6	1527.2	1527.6	1527.6
33°	1516.9	1517.7	1517.7	1516.9	1515.3	1516.9	1517.7	1517.7	1516.9	1517.7	1517.7
33.5°	1507.0	1507.4	1507.8	1506.6	1505.0	1506.6	1507.8	1507.4	1507.0	1507.4	1507.8
34°	1496.7	1497.1	1497.4	1496.3	1495.1	1496.3	1497.4	1497.1	1496.7	1497.1	1497.4
34.5°	1486.3	1486.7	1487.1	1485.9	1484.7	1485.9	1487.1	1486.7	1486.3	1486.7	1487.1
35°	1476.0	1476.4	1476.8	1475.6	1474.0	1475.6	1476.8	1476.4	1476.0	1476.4	1476.8
35.5°	1465.3	1466.1	1466.1	1464.9	1463.3	1464.9	1466.1	1466.1	1465.3	1466.1	1466.1
36°	1454.9	1455.3	1455.7	1454.1	1452.6	1454.1	1455.7	1455.3	1454.9	1455.3	1455.7
36.5°	1444.2	1444.6	1445.0	1443.4	1441.8	1443.4	1445.0	1444.6	1444.2	1444.6	1445.0
37°	1433.1	1433.5	1433.9	1432.3	1431.1	1432.3	1433.9	1433.5	1433.1	1433.5	1433.9
37.5°	1422.0	1422.8	1423.2	1421.2	1419.6	1421.2	1423.2	1422.8	1422.0	1422.8	1423.2
38°	1410.8	1411.2	1412.0	1410.0	1408.8	1410.0	1412.0	1411.2	1410.8	1411.2	1412.0
38.5°	1399.3	1400.1	1400.5	1398.9	1397.3	1398.9	1400.5	1400.1	1399.3	1400.1	1400.5
39°	1388.2	1389.0	1389.4	1387.4	1385.8	1387.4	1389.4	1389.0	1388.2	1389.0	1389.4
39.5°	1376.7	1377.1	1377.5	1375.9	1373.9	1375.9	1377.5	1377.1	1376.7	1377.1	1377.5
40°	1364.7	1365.5	1365.5	1364.0	1362.0	1364.0	1365.5	1365.5	1364.7	1365.5	1365.5
40.5°	1352.8	1353.2	1353.6	1351.6	1350.0	1351.6	1353.6	1353.2	1352.8	1353.2	1353.6
41°	1340.5	1341.3	1341.7	1339.7	1337.7	1339.7	1341.7	1341.3	1340.5	1341.3	1341.7
41.5°	1328.2	1328.6	1329.0	1327.0	1325.4	1327.0	1329.0	1328.6	1328.2	1328.6	1329.0
42°	1315.5	1315.9	1316.3	1314.3	1312.3	1314.3	1316.3	1315.9	1315.5	1315.9	1316.3
42.5°	1302.4	1303.2	1303.2	1301.2	1299.2	1301.2	1303.2	1303.2	1302.4	1303.2	1303.2
43°	1289.3	1289.7	1289.7	1287.7	1285.7	1287.7	1289.7	1289.7	1289.3	1289.7	1289.7
43.5°	1275.4	1275.8	1275.8	1273.8	1271.8	1273.8	1275.8	1275.8	1275.4	1275.8	1275.8



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CATALOG NUMBER: HCDJBL3040CSD-HCD81TRMB-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1231.3	1231.3	1230.9	1228.9	1226.9	1228.9	1230.9	1231.3	1231.3	1231.3	1230.9
45.5°	1215.4	1215.4	1215.0	1212.6	1210.6	1212.6	1215.0	1215.4	1215.4	1215.4	1215.0
46°	1199.1	1199.1	1198.3	1195.9	1193.5	1195.9	1198.3	1199.1	1199.1	1199.1	1198.3
46.5°	1181.6	1181.6	1180.8	1178.0	1176.4	1178.0	1180.8	1181.6	1181.6	1181.6	1180.8
47°	1163.3	1163.3	1162.1	1159.7	1157.8	1159.7	1162.1	1163.3	1163.3	1163.3	1162.1
47.5°	1144.2	1144.2	1143.1	1140.7	1138.7	1140.7	1143.1	1144.2	1144.2	1144.2	1143.1
48°	1124.4	1124.4	1123.6	1121.2	1119.6	1121.2	1123.6	1124.4	1124.4	1124.4	1123.6
48.5°	1103.7	1103.7	1102.9	1101.3	1099.7	1101.3	1102.9	1103.7	1103.7	1103.7	1102.9
49°	1081.9	1081.9	1081.5	1080.3	1079.5	1080.3	1081.5	1081.9	1081.9	1081.9	1081.5
49.5°	1060.0	1059.6	1060.0	1058.8	1058.4	1058.8	1060.0	1059.6	1060.0	1059.6	1060.0
50°	1036.6	1037.0	1037.8	1037.0	1036.6	1037.0	1037.8	1037.0	1036.6	1037.0	1037.8
50.5°	1012.3	1013.9	1015.1	1014.7	1014.7	1014.7	1015.1	1013.9	1012.3	1013.9	1015.1
51°	989.3	990.1	991.3	992.5	993.3	992.5	991.3	990.1	989.3	990.1	991.3
51.5°	966.6	967.0	968.6	969.8	971.0	969.8	968.6	967.0	966.6	967.0	968.6
52°	944.0	944.8	946.4	948.0	950.0	948.0	946.4	944.8	944.0	944.8	946.4
52.5°	922.5	923.3	925.3	927.3	928.9	927.3	925.3	923.3	922.5	923.3	925.3
53°	902.3	903.1	905.1	906.7	908.2	906.7	905.1	903.1	902.3	903.1	905.1
53.5°	883.2	884.0	884.8	885.6	886.8	885.6	884.8	884.0	883.2	884.0	884.8
54°	865.3	864.5	864.5	864.1	864.1	864.1	864.5	864.5	865.3	864.5	864.5
54.5°	845.5	844.7	843.1	841.1	839.5	841.1	843.1	844.7	845.5	844.7	843.1
55°	823.2	821.6	819.2	816.5	814.1	816.5	819.2	821.6	823.2	821.6	819.2
55.5°	797.0	795.0	792.6	790.2	787.9	790.2	792.6	795.0	797.0	795.0	792.6
56°	767.6	766.4	764.0	761.6	758.9	761.6	764.0	766.4	767.6	766.4	764.0
56.5°	735.4	734.2	733.4	731.0	729.1	731.0	733.4	734.2	735.4	734.2	733.4
57°	701.6	700.8	700.5	698.5	696.1	698.5	700.5	700.8	701.6	700.8	700.5
57.5°	665.9	665.9	665.9	663.9	662.3	663.9	665.9	665.9	665.9	665.9	665.9
58°	629.7	630.1	630.5	629.3	627.7	629.3	630.5	630.1	629.7	630.1	630.5
58.5°	592.8	592.8	594.0	593.6	592.0	593.6	594.0	592.8	592.8	592.8	594.0
59°	555.0	555.8	557.0	557.4	557.0	557.4	557.0	555.8	555.0	555.8	557.0
59.5°	517.3	518.1	520.1	521.7	521.7	521.7	520.1	518.1	517.3	518.1	520.1
60°	479.2	480.7	483.1	486.3	485.9	486.3	483.1	480.7	479.2	480.7	483.1
60.5°	441.4	443.4	446.6	450.1	450.5	450.1	446.6	443.4	441.4	443.4	446.6
61°	404.9	407.2	410.4	414.4	415.6	414.4	410.4	407.2	404.9	407.2	410.4
61.5°	369.1	371.1	375.5	379.0	381.4	379.0	375.5	371.1	369.1	371.1	375.5
62°	333.3	336.1	340.9	345.3	348.4	345.3	340.9	336.1	333.3	336.1	340.9
62.5°	298.0	301.2	307.5	312.3	315.5	312.3	307.5	301.2	298.0	301.2	307.5
63°	264.2	267.8	274.9	280.1	283.7	280.1	274.9	267.8	264.2	267.8	274.9
63.5°	232.0	235.6	243.2	249.5	255.5	249.5	243.2	235.6	232.0	235.6	243.2
64°	201.0	205.0	212.6	220.9	227.7	220.9	212.6	205.0	201.0	205.0	212.6
64.5°	171.2	176.4	184.4	193.1	199.4	193.1	184.4	176.4	171.2	176.4	184.4
65°	143.4	150.2	157.7	166.1	171.6	166.1	157.7	150.2	143.4	150.2	157.7
65.5°	118.0	125.5	132.3	140.2	145.4	140.2	132.3	125.5	118.0	125.5	132.3
66°	94.6	103.7	108.9	116.8	121.6	116.8	108.9	103.7	94.6	103.7	108.9





TEST NUMBER: P776452

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRMB-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	36.2	48.9	54.4	61.2	64.8	61.2	54.4	48.9	36.2	48.9	54.4
68°	21.1	33.8	41.3	46.1	50.5	46.1	41.3	33.8	21.1	33.8	41.3
68.5°	7.9	22.6	29.8	35.0	40.1	35.0	29.8	22.6	7.9	22.6	29.8
69°	4.0	13.5	19.1	24.2	29.8	24.2	19.1	13.5	4.0	13.5	19.1
69.5°	2.4	6.0	10.7	15.9	21.5	15.9	10.7	6.0	2.4	6.0	10.7
70°	1.2	2.8	6.0	9.1	13.1	9.1	6.0	2.8	1.2	2.8	6.0
70.5°	0.4	1.6	3.6	4.4	5.2	4.4	3.6	1.6	0.4	1.6	3.6
71°	0.4	0.8	2.0	2.4	2.0	2.4	2.0	0.8	0.4	0.8	2.0
71.5°	0.4	0.4	1.2	1.2	0.4	1.2	1.2	0.4	0.4	0.4	1.2
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°	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0
73.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78°	0.0	0.0	0.0	0.0	0.0	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: P776452

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRMB-4000lm-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: P776452

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRMB-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1860.2	1860.2	1860.2	1860.2	1860.2	1860.2
0.5°	1860.2	1859.8	1860.2	1860.2	1860.2	1860.2
1°	1859.8	1859.4	1859.8	1860.2	1860.2	1860.2
1.5°	1859.8	1859.4	1859.8	1859.8	1859.8	1859.8
2°	1859.0	1858.6	1859.0	1859.4	1859.4	1859.4
2.5°	1858.6	1857.8	1858.6	1858.6	1858.6	1858.2
3°	1857.8	1857.0	1857.8	1857.8	1857.8	1857.4
3.5°	1856.6	1856.2	1856.6	1856.6	1856.6	1856.6
4°	1855.4	1854.6	1855.4	1855.4	1855.4	1855.4
4.5°	1854.2	1853.4	1854.2	1854.2	1854.2	1854.2
5°	1852.6	1851.8	1852.6	1852.6	1852.6	1852.6
5.5°	1851.1	1850.3	1851.1	1851.1	1851.1	1851.1
6°	1849.1	1848.7	1849.1	1849.1	1849.5	1849.1
6.5°	1847.1	1846.7	1847.1	1847.5	1847.5	1847.1
7°	1845.1	1844.7	1845.1	1845.1	1845.1	1845.1
7.5°	1843.1	1842.3	1843.1	1842.7	1842.7	1842.7
8°	1840.3	1839.9	1840.3	1840.3	1840.3	1840.3
8.5°	1837.9	1837.1	1837.9	1837.9	1837.9	1837.9
9°	1835.2	1834.8	1835.2	1835.2	1835.2	1835.2
9.5°	1832.4	1831.6	1832.4	1832.4	1832.4	1832.0
10°	1829.2	1828.8	1829.2	1829.2	1829.2	1829.2
10.5°	1826.0	1825.6	1826.0	1826.0	1826.0	1826.0
11°	1822.8	1822.0	1822.8	1822.4	1822.4	1822.4
11.5°	1819.3	1818.5	1819.3	1818.9	1818.9	1818.9
12°	1815.3	1814.9	1815.3	1815.3	1815.3	1815.3
12.5°	1811.7	1810.9	1811.7	1811.3	1811.3	1811.3
13°	1807.3	1806.9	1807.3	1807.3	1807.3	1807.3
13.5°	1803.4	1802.6	1803.4	1803.4	1803.4	1803.0
14°	1799.0	1798.2	1799.0	1799.0	1799.0	1798.6
14.5°	1794.2	1793.8	1794.2	1794.2	1794.2	1794.2
15°	1789.9	1789.1	1789.9	1789.5	1789.5	1789.5
15.5°	1784.7	1784.3	1784.7	1784.7	1784.7	1784.7
16°	1779.9	1779.1	1779.9	1779.9	1779.9	1779.5
16.5°	1774.8	1774.4	1774.8	1774.8	1774.4	1774.4
17°	1769.2	1768.8	1769.2	1769.6	1769.2	1769.2
17.5°	1764.0	1763.6	1764.0	1764.0	1763.6	1763.6
18°	1758.1	1757.7	1758.1	1758.1	1758.1	1758.1
18.5°	1752.5	1751.7	1752.5	1752.5	1752.1	1752.1
19°	1746.6	1745.8	1746.6	1746.6	1746.2	1746.2
19.5°	1740.2	1739.8	1740.2	1740.2	1740.2	1740.2
20°	1733.8	1733.4	1733.8	1733.8	1733.8	1733.8
20.5°	1727.5	1726.7	1727.5	1727.5	1727.5	1727.1
21°	1720.7	1720.3	1720.7	1720.7	1720.7	1720.7



TEST NUMBER: P776452

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRMB-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1700.1	1699.3	1700.1	1700.1	1700.1	1699.7
23°	1692.5	1692.1	1692.5	1692.5	1692.5	1692.5
23.5°	1685.4	1684.6	1685.4	1685.4	1685.4	1685.0
24°	1677.4	1677.0	1677.4	1677.8	1677.4	1677.4
24.5°	1669.9	1669.1	1669.9	1670.3	1669.9	1669.5
25°	1661.9	1661.1	1661.9	1662.3	1661.9	1661.9
25.5°	1654.0	1653.2	1654.0	1654.4	1654.0	1653.6
26°	1645.6	1644.8	1645.6	1646.0	1645.6	1645.6
26.5°	1637.3	1636.5	1637.3	1637.7	1637.7	1637.3
27°	1629.0	1628.2	1629.0	1629.4	1629.0	1629.0
27.5°	1620.2	1619.4	1620.2	1620.6	1620.6	1620.2
28°	1611.5	1610.7	1611.5	1611.9	1611.9	1611.5
28.5°	1602.7	1601.9	1602.7	1603.1	1602.7	1602.7
29°	1593.6	1592.4	1593.6	1594.0	1594.0	1593.6
29.5°	1584.5	1583.3	1584.5	1584.9	1584.9	1584.5
30°	1574.9	1574.1	1574.9	1575.7	1575.7	1575.3
30.5°	1565.8	1564.6	1565.8	1566.2	1566.2	1566.2
31°	1555.9	1555.1	1555.9	1557.0	1556.6	1556.2
31.5°	1546.3	1545.1	1546.3	1547.1	1547.1	1546.7
32°	1536.8	1535.2	1536.8	1537.6	1537.6	1537.2
32.5°	1526.5	1525.3	1526.5	1527.6	1527.6	1527.2
33°	1516.9	1515.3	1516.9	1517.7	1517.7	1516.9
33.5°	1506.6	1505.0	1506.6	1507.8	1507.4	1507.0
34°	1496.3	1495.1	1496.3	1497.4	1497.1	1496.7
34.5°	1485.9	1484.7	1485.9	1487.1	1486.7	1486.3
35°	1475.6	1474.0	1475.6	1476.8	1476.4	1476.0
35.5°	1464.9	1463.3	1464.9	1466.1	1466.1	1465.3
36°	1454.1	1452.6	1454.1	1455.7	1455.3	1454.9
36.5°	1443.4	1441.8	1443.4	1445.0	1444.6	1444.2
37°	1432.3	1431.1	1432.3	1433.9	1433.5	1433.1
37.5°	1421.2	1419.6	1421.2	1423.2	1422.8	1422.0
38°	1410.0	1408.8	1410.0	1412.0	1411.2	1410.8
38.5°	1398.9	1397.3	1398.9	1400.5	1400.1	1399.3
39°	1387.4	1385.8	1387.4	1389.4	1389.0	1388.2
39.5°	1375.9	1373.9	1375.9	1377.5	1377.1	1376.7
40°	1364.0	1362.0	1364.0	1365.5	1365.5	1364.7
40.5°	1351.6	1350.0	1351.6	1353.6	1353.2	1352.8
41°	1339.7	1337.7	1339.7	1341.7	1341.3	1340.5
41.5°	1327.0	1325.4	1327.0	1329.0	1328.6	1328.2
42°	1314.3	1312.3	1314.3	1316.3	1315.9	1315.5
42.5°	1301.2	1299.2	1301.2	1303.2	1303.2	1302.4
43°	1287.7	1285.7	1287.7	1289.7	1289.7	1289.3
43.5°	1273.8	1271.8	1273.8	1275.8	1275.8	1275.4



TEST NUMBER: P776452

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRMB-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1228.9	1226.9	1228.9	1230.9	1231.3	1231.3
45.5°	1212.6	1210.6	1212.6	1215.0	1215.4	1215.4
46°	1195.9	1193.5	1195.9	1198.3	1199.1	1199.1
46.5°	1178.0	1176.4	1178.0	1180.8	1181.6	1181.6
47°	1159.7	1157.8	1159.7	1162.1	1163.3	1163.3
47.5°	1140.7	1138.7	1140.7	1143.1	1144.2	1144.2
48°	1121.2	1119.6	1121.2	1123.6	1124.4	1124.4
48.5°	1101.3	1099.7	1101.3	1102.9	1103.7	1103.7
49°	1080.3	1079.5	1080.3	1081.5	1081.9	1081.9
49.5°	1058.8	1058.4	1058.8	1060.0	1059.6	1060.0
50°	1037.0	1036.6	1037.0	1037.8	1037.0	1036.6
50.5°	1014.7	1014.7	1014.7	1015.1	1013.9	1012.3
51°	992.5	993.3	992.5	991.3	990.1	989.3
51.5°	969.8	971.0	969.8	968.6	967.0	966.6
52°	948.0	950.0	948.0	946.4	944.8	944.0
52.5°	927.3	928.9	927.3	925.3	923.3	922.5
53°	906.7	908.2	906.7	905.1	903.1	902.3
53.5°	885.6	886.8	885.6	884.8	884.0	883.2
54°	864.1	864.1	864.1	864.5	864.5	865.3
54.5°	841.1	839.5	841.1	843.1	844.7	845.5
55°	816.5	814.1	816.5	819.2	821.6	823.2
55.5°	790.2	787.9	790.2	792.6	795.0	797.0
56°	761.6	758.9	761.6	764.0	766.4	767.6
56.5°	731.0	729.1	731.0	733.4	734.2	735.4
57°	698.5	696.1	698.5	700.5	700.8	701.6
57.5°	663.9	662.3	663.9	665.9	665.9	665.9
58°	629.3	627.7	629.3	630.5	630.1	629.7
58.5°	593.6	592.0	593.6	594.0	592.8	592.8
59°	557.4	557.0	557.4	557.0	555.8	555.0
59.5°	521.7	521.7	521.7	520.1	518.1	517.3
60°	486.3	485.9	486.3	483.1	480.7	479.2
60.5°	450.1	450.5	450.1	446.6	443.4	441.4
61°	414.4	415.6	414.4	410.4	407.2	404.9
61.5°	379.0	381.4	379.0	375.5	371.1	369.1
62°	345.3	348.4	345.3	340.9	336.1	333.3
62.5°	312.3	315.5	312.3	307.5	301.2	298.0
63°	280.1	283.7	280.1	274.9	267.8	264.2
63.5°	249.5	255.5	249.5	243.2	235.6	232.0
64°	220.9	227.7	220.9	212.6	205.0	201.0
64.5°	193.1	199.4	193.1	184.4	176.4	171.2
65°	166.1	171.6	166.1	157.7	150.2	143.4
65.5°	140.2	145.4	140.2	132.3	125.5	118.0
66°	116.8	121.6	116.8	108.9	103.7	94.6



TEST NUMBER: P776452

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRMB-4000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	61.2	64.8	61.2	54.4	48.9	36.2
68°	46.1	50.5	46.1	41.3	33.8	21.1
68.5°	35.0	40.1	35.0	29.8	22.6	7.9
69°	24.2	29.8	24.2	19.1	13.5	4.0
69.5°	15.9	21.5	15.9	10.7	6.0	2.4
70°	9.1	13.1	9.1	6.0	2.8	1.2
70.5°	4.4	5.2	4.4	3.6	1.6	0.4
71°	2.4	2.0	2.4	2.0	0.8	0.4
71.5°	1.2	0.4	1.2	1.2	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	0.0	0.0	0.0
73.5°	0.0	0.0	0.0	0.0	0.0	0.0
74°	0.0	0.0	0.0	0.0	0.0	0.0
74.5°	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0
75.5°	0.0	0.0	0.0	0.0	0.0	0.0
76°	0.0	0.0	0.0	0.0	0.0	0.0
76.5°	0.0	0.0	0.0	0.0	0.0	0.0
77°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
78°	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
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: P776452  
CATALOG NUMBER: HCDJBL3040CSD-HCD81TRMB-4000lm-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



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Peachtree City, GA 30269

Scaled Data Report





— 0°-180°    - - 45°-225°    - - - - 90°-270°    - · - · 135°-315°

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1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



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1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





21.5°	1714.0	1714.0	1714.0	1714.0	1713.2	1714.0	1714.0	1714.0	1714.0	1714.0	1714.0	1714.0
22°	1706.8	1706.8	1707.2	1707.2	1706.4	1707.2	1707.2	1706.8	1706.8	1706.8	1706.8	1707.2



44°	1261.1	1261.4	1261.1	1259.1	1257.5	1259.1	1261.1	1261.4	1261.1	1261.4	1261.1
44.5°	1246.4	1246.7	1246.7	1244.4	1242.0	1244.4	1246.7	1246.7	1246.4	1246.7	1246.7



66.5°	74.7	83.8	88.2	95.8	100.1	95.8	88.2	83.8	74.7	83.8	88.2
67°	55.2	64.4	70.7	77.1	80.7	77.1	70.7	64.4	55.2	64.4	70.7



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



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Scaled Data Report





21.5°	1714.0	1713.2	1714.0	1714.0	1714.0	1714.0
22°	1707.2	1706.4	1707.2	1707.2	1706.8	1706.8



44°	1259.1	1257.5	1259.1	1261.1	1261.4	1261.1
44.5°	1244.4	1242.0	1244.4	1246.7	1246.7	1246.4



66.5°	95.8	100.1	95.8	88.2	83.8	74.7
67°	77.1	80.7	77.1	70.7	64.4	55.2

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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

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)