

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: P776435

Luminaire Tested: HCDJBL3040CSD-HCD81TRC-4000lm-2700K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776435
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B042-HCD81TRC)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD81TRC-4000lm-2700K
Description: 8 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 2700K CCT
Ballast/Driver: -

Summary

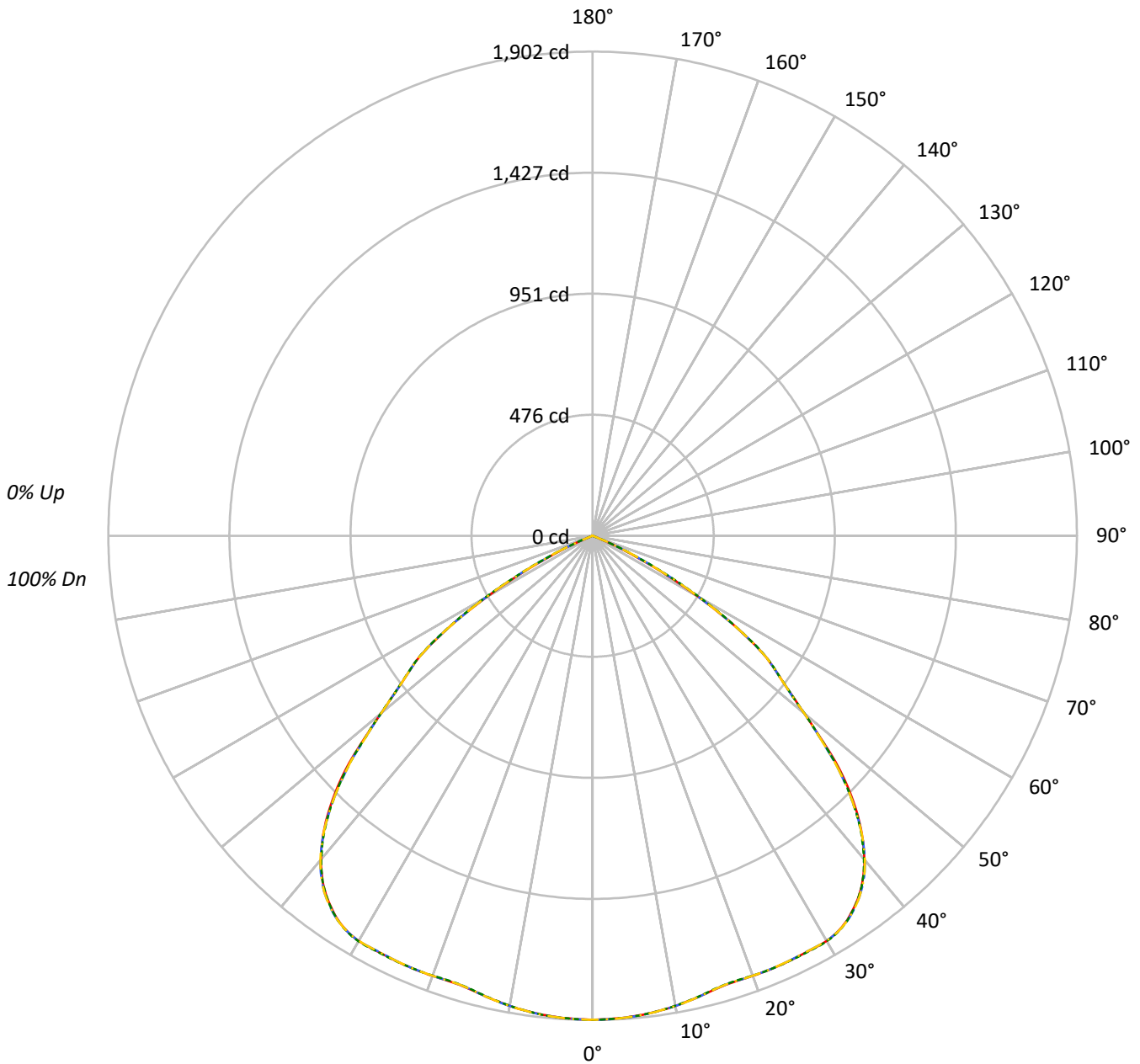
Lumens per Lamp: N/A
Luminaire Lumens: 4653.4 lumens
Efficiency: N/A
Efficacy: 120.9 lumens/watt
Spacing Criteria (0/90/45): 1.44 / 1.44 / 1.44
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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	100	100	100	100	100		
	1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89	89	89	89	89	89		
	2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78	78	78	78	78	78		
	3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68	68	68	68	68	68		
	4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60	60	60	60	60	60		
	5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52	52	52	52	52	52		
	6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46	46	46	46	46	46		
	7	70	58	50	44	68	57	49	44	55	49	44	54	48	43	53	47	43	41	41	41	41	41	41		
	8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37		
	9	61	48	41	35	60	48	40	35	47	40	35	46	39	35	45	39	35	33	33	33	33	33	33		
	10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	58044	58044	58044	58044
5°	58054	58064	58054	58064
10°	58130	58118	58130	58118
15°	58357	58296	58357	58296
20°	59771	59735	59771	59735
25°	61986	62000	61986	62000
30°	64789	64845	64789	64845
35°	66606	66651	66606	66651
40°	66162	66083	66162	66083
45°	61811	61483	61811	61483
50°	51515	51605	51515	51605
55°	44243	44344	44243	44344
60°	29114	29914	29114	29914
65°	10345	11840	10345	11840
70°	312	580	312	580
75°	142	177	142	177
80°	70	141	70	141
85°	0	140	0	140

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 61811 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.3	3.9
10°-20°	523.8	11.3
20°-30°	851.5	18.3
30°-40°	1113.9	23.9
40°-50°	1082.2	23.3
50°-60°	718.9	15.4
60°-70°	181.0	3.9
70°-80°	1.6	0.0
80°-90°	0.2	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°	1555.5	33.4
0°-40°	2669.4	57.4
0°-60°	4470.5	96.1
0°-90°	4653.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4653.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1901	1901	1901	1901	1901	
5°	1894	1895	1894	1895	1894	180
15°	1846	1844	1846	1844	1846	524
25°	1840	1840	1840	1840	1840	852
35°	1787	1788	1787	1788	1787	1113
45°	1432	1424	1432	1424	1432	1085
55°	831	833	831	833	831	717
65°	143	164	143	164	143	171
75°	1	2	1	2	1	1
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°	1901.2	1901.2	1901.2	1901.2	1901.2	1901.2	1901.2	1901.2	1901.2	1901.2	1901.2
0.5°	1900.8	1900.8	1901.6	1901.9	1900.8	1901.9	1901.6	1900.8	1900.8	1900.8	1901.6
1°	1900.4	1900.8	1901.2	1901.6	1900.8	1901.6	1901.2	1900.8	1900.4	1900.8	1901.2
1.5°	1900.0	1900.4	1900.8	1901.2	1900.4	1901.2	1900.8	1900.4	1900.0	1900.4	1900.8
2°	1899.6	1899.6	1900.4	1900.8	1900.0	1900.8	1900.4	1899.6	1899.6	1899.6	1900.4
2.5°	1898.9	1899.3	1899.6	1900.0	1899.3	1900.0	1899.6	1899.3	1898.9	1899.3	1899.6
3°	1898.5	1898.5	1899.3	1899.6	1898.5	1899.6	1899.3	1898.5	1898.5	1898.5	1899.3
3.5°	1897.7	1897.7	1898.5	1898.5	1897.7	1898.5	1898.5	1897.7	1897.7	1897.7	1898.5
4°	1896.6	1896.9	1897.3	1897.7	1896.6	1897.7	1897.3	1896.9	1896.6	1896.9	1897.3
4.5°	1895.4	1895.8	1896.2	1896.6	1895.8	1896.6	1896.2	1895.8	1895.4	1895.8	1896.2
5°	1894.3	1894.6	1895.0	1895.4	1894.6	1895.4	1895.0	1894.6	1894.3	1894.6	1895.0
5.5°	1893.1	1893.5	1893.9	1894.3	1893.5	1894.3	1893.9	1893.5	1893.1	1893.5	1893.9
6°	1891.6	1892.0	1892.3	1892.7	1892.0	1892.7	1892.3	1892.0	1891.6	1892.0	1892.3
6.5°	1890.0	1890.4	1890.8	1891.2	1890.0	1891.2	1890.8	1890.4	1890.0	1890.4	1890.8
7°	1888.5	1888.5	1888.9	1889.3	1888.1	1889.3	1888.9	1888.5	1888.5	1888.5	1888.9
7.5°	1886.6	1886.6	1887.0	1887.0	1886.2	1887.0	1887.0	1886.6	1886.6	1886.6	1887.0
8°	1884.3	1884.7	1884.7	1885.0	1884.3	1885.0	1884.7	1884.7	1884.3	1884.7	1884.7
8.5°	1882.0	1882.4	1882.7	1882.7	1882.0	1882.7	1882.7	1882.4	1882.0	1882.4	1882.7
9°	1880.1	1880.1	1880.4	1880.4	1879.7	1880.4	1880.4	1880.1	1880.1	1880.1	1880.4
9.5°	1877.4	1877.8	1877.8	1878.1	1877.4	1878.1	1877.8	1877.8	1877.4	1877.8	1877.8
10°	1875.1	1875.1	1875.4	1875.4	1874.7	1875.4	1875.4	1875.1	1875.1	1875.1	1875.4
10.5°	1872.4	1872.4	1872.8	1872.8	1872.0	1872.8	1872.8	1872.4	1872.4	1872.4	1872.8
11°	1869.7	1869.7	1870.1	1870.1	1868.9	1870.1	1870.1	1869.7	1869.7	1869.7	1870.1
11.5°	1866.6	1866.6	1867.0	1867.0	1866.2	1867.0	1867.0	1866.6	1866.6	1866.6	1867.0
12°	1863.9	1863.9	1863.9	1863.9	1863.2	1863.9	1863.9	1863.9	1863.9	1863.9	1863.9
12.5°	1860.9	1860.9	1860.9	1860.9	1860.1	1860.9	1860.9	1860.9	1860.9	1860.9	1860.9
13°	1858.2	1857.8	1858.2	1857.8	1857.0	1857.8	1858.2	1857.8	1858.2	1857.8	1858.2
13.5°	1855.1	1854.7	1854.7	1854.7	1853.6	1854.7	1854.7	1854.7	1855.1	1854.7	1854.7
14°	1852.0	1852.0	1851.6	1851.6	1850.5	1851.6	1851.6	1852.0	1852.0	1852.0	1851.6
14.5°	1849.0	1849.0	1848.6	1848.6	1847.4	1848.6	1848.6	1849.0	1849.0	1849.0	1848.6
15°	1846.3	1845.9	1845.5	1845.5	1844.4	1845.5	1845.5	1845.9	1846.3	1845.9	1845.5
15.5°	1843.6	1843.2	1842.8	1842.4	1841.7	1842.4	1842.8	1843.2	1843.6	1843.2	1842.8
16°	1841.7	1841.3	1840.9	1840.1	1839.4	1840.1	1840.9	1841.3	1841.7	1841.3	1840.9
16.5°	1840.1	1839.7	1839.4	1838.2	1837.8	1838.2	1839.4	1839.7	1840.1	1839.7	1839.4
17°	1839.0	1839.0	1838.6	1837.4	1836.7	1837.4	1838.6	1839.0	1839.0	1839.0	1838.6
17.5°	1838.6	1838.6	1837.8	1837.1	1836.7	1837.1	1837.8	1838.6	1838.6	1838.6	1837.8
18°	1838.6	1838.6	1837.8	1837.4	1836.7	1837.4	1837.8	1838.6	1838.6	1838.6	1837.8
18.5°	1838.6	1838.6	1838.2	1837.4	1836.7	1837.4	1838.2	1838.6	1838.6	1838.6	1838.2
19°	1839.0	1839.0	1838.6	1838.2	1837.4	1838.2	1838.6	1839.0	1839.0	1839.0	1838.6
19.5°	1839.4	1839.4	1839.0	1838.6	1837.8	1838.6	1839.0	1839.4	1839.4	1839.4	1839.0
20°	1839.7	1839.7	1839.4	1839.0	1838.6	1839.0	1839.4	1839.7	1839.7	1839.7	1839.4
20.5°	1840.1	1839.7	1839.7	1839.7	1839.0	1839.7	1839.7	1839.7	1840.1	1839.7	1839.7
21°	1840.1	1840.1	1840.1	1840.1	1839.7	1840.1	1840.1	1840.1	1840.1	1840.1	1840.1



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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°	1840.9	1840.5	1840.5	1840.9	1840.9	1840.9	1840.5	1840.5	1840.9	1840.5	1840.5
23°	1840.9	1840.5	1840.5	1841.3	1840.9	1841.3	1840.5	1840.5	1840.9	1840.5	1840.5
23.5°	1840.9	1840.5	1840.1	1840.9	1840.9	1840.9	1840.1	1840.5	1840.9	1840.5	1840.1
24°	1840.5	1840.1	1839.7	1840.9	1840.9	1840.9	1839.7	1840.1	1840.5	1840.1	1839.7
24.5°	1840.5	1839.7	1839.7	1840.9	1840.9	1840.9	1839.7	1839.7	1840.5	1839.7	1839.7
25°	1840.1	1839.4	1839.4	1840.5	1840.5	1840.5	1839.4	1839.4	1840.1	1839.4	1839.4
25.5°	1839.7	1839.0	1839.0	1840.5	1840.5	1840.5	1839.0	1839.0	1839.7	1839.0	1839.0
26°	1839.0	1838.6	1838.2	1840.1	1840.1	1840.1	1838.2	1838.6	1839.0	1838.6	1838.2
26.5°	1838.6	1838.2	1837.8	1839.7	1839.7	1839.7	1837.8	1838.2	1838.6	1838.2	1837.8
27°	1838.6	1837.8	1837.4	1839.4	1839.7	1839.4	1837.4	1837.8	1838.6	1837.8	1837.4
27.5°	1838.6	1838.2	1837.4	1839.4	1839.7	1839.4	1837.4	1838.2	1838.6	1838.2	1837.4
28°	1839.0	1838.2	1837.8	1839.7	1840.1	1839.7	1837.8	1838.2	1839.0	1838.2	1837.8
28.5°	1839.4	1838.6	1837.8	1840.1	1840.5	1840.1	1837.8	1838.6	1839.4	1838.6	1837.8
29°	1839.4	1838.6	1837.8	1840.5	1840.5	1840.5	1837.8	1838.6	1839.4	1838.6	1837.8
29.5°	1839.0	1838.2	1837.8	1840.1	1840.1	1840.1	1837.8	1838.2	1839.0	1838.2	1837.8
30°	1837.8	1837.4	1837.1	1839.4	1839.4	1839.4	1837.1	1837.4	1837.8	1837.4	1837.1
30.5°	1836.3	1835.9	1835.9	1838.2	1837.8	1838.2	1835.9	1835.9	1836.3	1835.9	1835.9
31°	1834.0	1833.6	1833.6	1835.9	1835.5	1835.9	1833.6	1833.6	1834.0	1833.6	1833.6
31.5°	1830.9	1830.9	1831.3	1833.2	1832.4	1833.2	1831.3	1830.9	1830.9	1830.9	1831.3
32°	1826.7	1827.1	1827.5	1829.4	1828.6	1829.4	1827.5	1827.1	1826.7	1827.1	1827.5
32.5°	1822.1	1822.5	1823.2	1824.8	1824.0	1824.8	1823.2	1822.5	1822.1	1822.5	1823.2
33°	1816.7	1817.1	1818.2	1819.4	1818.2	1819.4	1818.2	1817.1	1816.7	1817.1	1818.2
33.5°	1810.6	1810.9	1812.5	1813.3	1812.1	1813.3	1812.5	1810.9	1810.6	1810.9	1812.5
34°	1803.3	1804.4	1806.0	1806.3	1804.8	1806.3	1806.0	1804.4	1803.3	1804.4	1806.0
34.5°	1795.6	1796.7	1798.7	1798.7	1797.1	1798.7	1798.7	1796.7	1795.6	1796.7	1798.7
35°	1787.1	1788.3	1790.6	1790.2	1788.3	1790.2	1790.6	1788.3	1787.1	1788.3	1790.6
35.5°	1778.3	1779.9	1781.8	1781.4	1779.5	1781.4	1781.8	1779.9	1778.3	1779.9	1781.8
36°	1768.7	1770.3	1772.6	1771.8	1769.5	1771.8	1772.6	1770.3	1768.7	1770.3	1772.6
36.5°	1758.4	1760.3	1762.6	1761.4	1759.1	1761.4	1762.6	1760.3	1758.4	1760.3	1762.6
37°	1747.2	1749.1	1751.4	1750.3	1747.6	1750.3	1751.4	1749.1	1747.2	1749.1	1751.4
37.5°	1735.3	1737.6	1739.2	1738.0	1735.3	1738.0	1739.2	1737.6	1735.3	1737.6	1739.2
38°	1722.3	1724.6	1726.5	1725.0	1722.3	1725.0	1726.5	1724.6	1722.3	1724.6	1726.5
38.5°	1708.1	1710.7	1712.7	1710.7	1707.7	1710.7	1712.7	1710.7	1708.1	1710.7	1712.7
39°	1693.1	1696.2	1697.3	1695.4	1692.3	1695.4	1697.3	1696.2	1693.1	1696.2	1697.3
39.5°	1677.3	1680.0	1680.8	1678.5	1675.4	1678.5	1680.8	1680.0	1677.3	1680.0	1680.8
40°	1660.1	1662.4	1663.1	1660.8	1658.1	1660.8	1663.1	1662.4	1660.1	1662.4	1663.1
40.5°	1642.0	1643.9	1644.3	1642.0	1639.0	1642.0	1644.3	1643.9	1642.0	1643.9	1644.3
41°	1622.8	1624.4	1624.0	1621.7	1619.4	1621.7	1624.0	1624.4	1622.8	1624.4	1624.0
41.5°	1602.5	1603.6	1602.9	1600.6	1598.6	1600.6	1602.9	1603.6	1602.5	1603.6	1602.9
42°	1581.4	1581.7	1580.2	1578.3	1577.1	1578.3	1580.2	1581.7	1581.4	1581.7	1580.2
42.5°	1559.5	1559.1	1556.8	1555.3	1554.1	1555.3	1556.8	1559.1	1559.5	1559.1	1556.8
43°	1536.1	1534.9	1532.2	1531.1	1530.3	1531.1	1532.2	1534.9	1536.1	1534.9	1532.2
43.5°	1511.5	1510.0	1506.1	1505.7	1505.3	1505.7	1506.1	1510.0	1511.5	1510.0	1506.1



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CATALOG NUMBER: HCDJBL3040CSD-HCD81TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1431.6	1428.2	1422.8	1422.8	1424.0	1422.8	1422.8	1428.2	1431.6	1428.2	1422.8
45.5°	1402.5	1398.6	1392.5	1393.2	1394.4	1393.2	1392.5	1398.6	1402.5	1398.6	1392.5
46°	1371.7	1367.9	1361.8	1362.5	1364.5	1362.5	1361.8	1367.9	1371.7	1367.9	1361.8
46.5°	1339.5	1336.0	1329.9	1330.7	1332.6	1330.7	1329.9	1336.0	1339.5	1336.0	1329.9
47°	1305.7	1302.3	1296.5	1297.3	1298.8	1297.3	1296.5	1302.3	1305.7	1302.3	1296.5
47.5°	1268.1	1264.6	1258.9	1260.0	1261.6	1260.0	1258.9	1264.6	1268.1	1264.6	1258.9
48°	1227.8	1224.7	1220.1	1222.0	1223.6	1222.0	1220.1	1224.7	1227.8	1224.7	1220.1
48.5°	1190.2	1188.6	1184.4	1185.9	1187.8	1185.9	1184.4	1188.6	1190.2	1188.6	1184.4
49°	1154.8	1154.1	1151.8	1152.9	1154.1	1152.9	1151.8	1154.1	1154.8	1154.1	1151.8
49.5°	1119.9	1119.5	1118.4	1119.1	1119.9	1119.1	1118.4	1119.5	1119.9	1119.5	1118.4
50°	1084.6	1084.2	1084.2	1085.3	1086.5	1085.3	1084.2	1084.2	1084.6	1084.2	1084.2
50.5°	1051.6	1051.9	1051.6	1052.3	1053.1	1052.3	1051.6	1051.9	1051.6	1051.9	1051.6
51°	1021.6	1021.6	1021.2	1022.0	1021.2	1022.0	1021.2	1021.6	1021.6	1021.6	1021.2
51.5°	993.2	992.8	992.4	993.2	993.6	993.2	992.4	992.8	993.2	992.8	992.4
52°	965.9	965.9	965.9	967.1	968.2	967.1	965.9	965.9	965.9	965.9	965.9
52.5°	941.0	941.4	941.0	942.5	943.7	942.5	941.0	941.4	941.0	941.4	941.0
53°	918.7	918.3	918.3	920.3	921.0	920.3	918.3	918.3	918.7	918.3	918.3
53.5°	897.6	897.6	897.6	899.1	899.9	899.1	897.6	897.6	897.6	897.6	897.6
54°	877.3	876.9	876.9	878.4	878.4	878.4	876.9	876.9	877.3	876.9	876.9
54.5°	855.4	855.4	855.4	856.5	856.9	856.5	855.4	855.4	855.4	855.4	855.4
55°	831.2	831.2	831.2	833.1	833.1	833.1	831.2	831.2	831.2	831.2	831.2
55.5°	803.2	803.2	803.5	806.2	805.5	806.2	803.5	803.2	803.2	803.2	803.5
56°	771.3	772.1	773.2	775.5	775.1	775.5	773.2	772.1	771.3	772.1	773.2
56.5°	738.3	738.7	740.2	742.5	742.5	742.5	740.2	738.7	738.3	738.7	740.2
57°	703.3	703.7	705.6	707.9	707.2	707.9	705.6	703.7	703.3	703.7	705.6
57.5°	666.9	667.6	669.2	672.2	672.2	672.2	669.2	667.6	666.9	667.6	669.2
58°	630.4	630.4	632.7	636.2	636.9	636.2	632.7	630.4	630.4	630.4	632.7
58.5°	592.0	593.2	595.1	599.3	600.8	599.3	595.1	593.2	592.0	593.2	595.1
59°	553.6	555.1	557.5	561.7	563.6	561.7	557.5	555.1	553.6	555.1	557.5
59.5°	514.8	516.8	519.4	524.8	527.1	524.8	519.4	516.8	514.8	516.8	519.4
60°	476.8	479.1	482.6	487.6	489.9	487.6	482.6	479.1	476.8	479.1	482.6
60.5°	438.8	441.5	446.1	451.5	453.8	451.5	446.1	441.5	438.8	441.5	446.1
61°	401.6	405.0	410.4	415.4	417.3	415.4	410.4	405.0	401.6	405.0	410.4
61.5°	366.3	369.3	375.9	380.5	382.0	380.5	375.9	369.3	366.3	369.3	375.9
62°	330.9	334.8	341.3	345.5	347.4	345.5	341.3	334.8	330.9	334.8	341.3
62.5°	296.4	300.6	307.9	311.7	314.8	311.7	307.9	300.6	296.4	300.6	307.9
63°	262.2	267.2	275.3	279.1	282.2	279.1	275.3	267.2	262.2	267.2	275.3
63.5°	230.4	234.6	243.4	247.6	250.7	247.6	243.4	234.6	230.4	234.6	243.4
64°	200.0	204.6	212.7	217.3	219.6	217.3	212.7	204.6	200.0	204.6	212.7
64.5°	170.8	175.8	183.5	187.7	189.7	187.7	183.5	175.8	170.8	175.8	183.5
65°	143.2	148.6	157.0	161.6	163.9	161.6	157.0	148.6	143.2	148.6	157.0
65.5°	118.6	124.4	131.3	136.3	139.4	136.3	131.3	124.4	118.6	124.4	131.3
66°	94.8	102.5	107.5	112.5	115.6	112.5	107.5	102.5	94.8	102.5	107.5



TEST NUMBER: P776435

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	38.0	49.1	53.4	55.3	56.1	55.3	53.4	49.1	38.0	49.1	53.4
68°	23.0	35.3	39.2	41.5	43.4	41.5	39.2	35.3	23.0	35.3	39.2
68.5°	10.0	23.4	25.7	28.0	31.9	28.0	25.7	23.4	10.0	23.4	25.7
69°	6.1	14.2	17.3	18.4	23.0	18.4	17.3	14.2	6.1	14.2	17.3
69.5°	4.2	8.4	11.5	10.7	14.6	10.7	11.5	8.4	4.2	8.4	11.5
70°	3.5	5.0	6.1	5.8	6.5	5.8	6.1	5.0	3.5	5.0	6.1
70.5°	2.3	3.1	3.8	3.8	3.1	3.8	3.8	3.1	2.3	3.1	3.8
71°	1.9	2.3	3.1	3.1	2.7	3.1	3.1	2.3	1.9	2.3	3.1
71.5°	1.9	1.9	2.3	2.3	2.3	2.3	2.3	1.9	1.9	1.9	2.3
72°	1.9	1.9	1.9	2.3	2.3	2.3	1.9	1.9	1.9	1.9	1.9
72.5°	1.5	1.9	1.9	1.9	2.3	1.9	1.9	1.9	1.5	1.9	1.9
73°	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.5	1.5	1.5	1.9
73.5°	1.5	1.5	1.5	1.9	1.9	1.9	1.5	1.5	1.5	1.5	1.5
74°	1.2	1.5	1.5	1.5	1.9	1.5	1.5	1.5	1.2	1.5	1.5
74.5°	1.2	1.2	1.5	1.5	1.5	1.5	1.5	1.2	1.2	1.2	1.5
75°	1.2	1.2	1.2	1.5	1.5	1.5	1.2	1.2	1.2	1.2	1.2
75.5°	1.2	1.2	1.2	1.5	1.5	1.5	1.2	1.2	1.2	1.2	1.2
76°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
76.5°	0.8	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
77°	0.8	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
77.5°	0.8	0.8	0.8	1.2	1.2	1.2	0.8	0.8	0.8	0.8	0.8
78°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
78.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
79°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
79.5°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8
80°	0.4	0.4	0.4	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4
80.5°	0.4	0.4	0.4	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4
81°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
81.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
83°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
83.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
84°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4
84.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.4	0.4	0.4	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: P776435
CATALOG NUMBER: HCDJBL3040CSD-HCD81TRC-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: P776435

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1901.2	1901.2	1901.2	1901.2	1901.2	1901.2
0.5°	1901.9	1900.8	1901.9	1901.6	1900.8	1900.8
1°	1901.6	1900.8	1901.6	1901.2	1900.8	1900.4
1.5°	1901.2	1900.4	1901.2	1900.8	1900.4	1900.0
2°	1900.8	1900.0	1900.8	1900.4	1899.6	1899.6
2.5°	1900.0	1899.3	1900.0	1899.6	1899.3	1898.9
3°	1899.6	1898.5	1899.6	1899.3	1898.5	1898.5
3.5°	1898.5	1897.7	1898.5	1898.5	1897.7	1897.7
4°	1897.7	1896.6	1897.7	1897.3	1896.9	1896.6
4.5°	1896.6	1895.8	1896.6	1896.2	1895.8	1895.4
5°	1895.4	1894.6	1895.4	1895.0	1894.6	1894.3
5.5°	1894.3	1893.5	1894.3	1893.9	1893.5	1893.1
6°	1892.7	1892.0	1892.7	1892.3	1892.0	1891.6
6.5°	1891.2	1890.0	1891.2	1890.8	1890.4	1890.0
7°	1889.3	1888.1	1889.3	1888.9	1888.5	1888.5
7.5°	1887.0	1886.2	1887.0	1887.0	1886.6	1886.6
8°	1885.0	1884.3	1885.0	1884.7	1884.7	1884.3
8.5°	1882.7	1882.0	1882.7	1882.7	1882.4	1882.0
9°	1880.4	1879.7	1880.4	1880.4	1880.1	1880.1
9.5°	1878.1	1877.4	1878.1	1877.8	1877.8	1877.4
10°	1875.4	1874.7	1875.4	1875.4	1875.1	1875.1
10.5°	1872.8	1872.0	1872.8	1872.8	1872.4	1872.4
11°	1870.1	1868.9	1870.1	1870.1	1869.7	1869.7
11.5°	1867.0	1866.2	1867.0	1867.0	1866.6	1866.6
12°	1863.9	1863.2	1863.9	1863.9	1863.9	1863.9
12.5°	1860.9	1860.1	1860.9	1860.9	1860.9	1860.9
13°	1857.8	1857.0	1857.8	1858.2	1857.8	1858.2
13.5°	1854.7	1853.6	1854.7	1854.7	1854.7	1855.1
14°	1851.6	1850.5	1851.6	1851.6	1852.0	1852.0
14.5°	1848.6	1847.4	1848.6	1848.6	1849.0	1849.0
15°	1845.5	1844.4	1845.5	1845.5	1845.9	1846.3
15.5°	1842.4	1841.7	1842.4	1842.8	1843.2	1843.6
16°	1840.1	1839.4	1840.1	1840.9	1841.3	1841.7
16.5°	1838.2	1837.8	1838.2	1839.4	1839.7	1840.1
17°	1837.4	1836.7	1837.4	1838.6	1839.0	1839.0
17.5°	1837.1	1836.7	1837.1	1837.8	1838.6	1838.6
18°	1837.4	1836.7	1837.4	1837.8	1838.6	1838.6
18.5°	1837.4	1836.7	1837.4	1838.2	1838.6	1838.6
19°	1838.2	1837.4	1838.2	1838.6	1839.0	1839.0
19.5°	1838.6	1837.8	1838.6	1839.0	1839.4	1839.4
20°	1839.0	1838.6	1839.0	1839.4	1839.7	1839.7
20.5°	1839.7	1839.0	1839.7	1839.7	1839.7	1840.1
21°	1840.1	1839.7	1840.1	1840.1	1840.1	1840.1



TEST NUMBER: P776435

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1840.9	1840.9	1840.9	1840.5	1840.5	1840.9
23°	1841.3	1840.9	1841.3	1840.5	1840.5	1840.9
23.5°	1840.9	1840.9	1840.9	1840.1	1840.5	1840.9
24°	1840.9	1840.9	1840.9	1839.7	1840.1	1840.5
24.5°	1840.9	1840.9	1840.9	1839.7	1839.7	1840.5
25°	1840.5	1840.5	1840.5	1839.4	1839.4	1840.1
25.5°	1840.5	1840.5	1840.5	1839.0	1839.0	1839.7
26°	1840.1	1840.1	1840.1	1838.2	1838.6	1839.0
26.5°	1839.7	1839.7	1839.7	1837.8	1838.2	1838.6
27°	1839.4	1839.7	1839.4	1837.4	1837.8	1838.6
27.5°	1839.4	1839.7	1839.4	1837.4	1838.2	1838.6
28°	1839.7	1840.1	1839.7	1837.8	1838.2	1839.0
28.5°	1840.1	1840.5	1840.1	1837.8	1838.6	1839.4
29°	1840.5	1840.5	1840.5	1837.8	1838.6	1839.4
29.5°	1840.1	1840.1	1840.1	1837.8	1838.2	1839.0
30°	1839.4	1839.4	1839.4	1837.1	1837.4	1837.8
30.5°	1838.2	1837.8	1838.2	1835.9	1835.9	1836.3
31°	1835.9	1835.5	1835.9	1833.6	1833.6	1834.0
31.5°	1833.2	1832.4	1833.2	1831.3	1830.9	1830.9
32°	1829.4	1828.6	1829.4	1827.5	1827.1	1826.7
32.5°	1824.8	1824.0	1824.8	1823.2	1822.5	1822.1
33°	1819.4	1818.2	1819.4	1818.2	1817.1	1816.7
33.5°	1813.3	1812.1	1813.3	1812.5	1810.9	1810.6
34°	1806.3	1804.8	1806.3	1806.0	1804.4	1803.3
34.5°	1798.7	1797.1	1798.7	1798.7	1796.7	1795.6
35°	1790.2	1788.3	1790.2	1790.6	1788.3	1787.1
35.5°	1781.4	1779.5	1781.4	1781.8	1779.9	1778.3
36°	1771.8	1769.5	1771.8	1772.6	1770.3	1768.7
36.5°	1761.4	1759.1	1761.4	1762.6	1760.3	1758.4
37°	1750.3	1747.6	1750.3	1751.4	1749.1	1747.2
37.5°	1738.0	1735.3	1738.0	1739.2	1737.6	1735.3
38°	1725.0	1722.3	1725.0	1726.5	1724.6	1722.3
38.5°	1710.7	1707.7	1710.7	1712.7	1710.7	1708.1
39°	1695.4	1692.3	1695.4	1697.3	1696.2	1693.1
39.5°	1678.5	1675.4	1678.5	1680.8	1680.0	1677.3
40°	1660.8	1658.1	1660.8	1663.1	1662.4	1660.1
40.5°	1642.0	1639.0	1642.0	1644.3	1643.9	1642.0
41°	1621.7	1619.4	1621.7	1624.0	1624.4	1622.8
41.5°	1600.6	1598.6	1600.6	1602.9	1603.6	1602.5
42°	1578.3	1577.1	1578.3	1580.2	1581.7	1581.4
42.5°	1555.3	1554.1	1555.3	1556.8	1559.1	1559.5
43°	1531.1	1530.3	1531.1	1532.2	1534.9	1536.1
43.5°	1505.7	1505.3	1505.7	1506.1	1510.0	1511.5

TEST NUMBER: P776435

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1422.8	1424.0	1422.8	1422.8	1428.2	1431.6
45.5°	1393.2	1394.4	1393.2	1392.5	1398.6	1402.5
46°	1362.5	1364.5	1362.5	1361.8	1367.9	1371.7
46.5°	1330.7	1332.6	1330.7	1329.9	1336.0	1339.5
47°	1297.3	1298.8	1297.3	1296.5	1302.3	1305.7
47.5°	1260.0	1261.6	1260.0	1258.9	1264.6	1268.1
48°	1222.0	1223.6	1222.0	1220.1	1224.7	1227.8
48.5°	1185.9	1187.8	1185.9	1184.4	1188.6	1190.2
49°	1152.9	1154.1	1152.9	1151.8	1154.1	1154.8
49.5°	1119.1	1119.9	1119.1	1118.4	1119.5	1119.9
50°	1085.3	1086.5	1085.3	1084.2	1084.2	1084.6
50.5°	1052.3	1053.1	1052.3	1051.6	1051.9	1051.6
51°	1022.0	1021.2	1022.0	1021.2	1021.6	1021.6
51.5°	993.2	993.6	993.2	992.4	992.8	993.2
52°	967.1	968.2	967.1	965.9	965.9	965.9
52.5°	942.5	943.7	942.5	941.0	941.4	941.0
53°	920.3	921.0	920.3	918.3	918.3	918.7
53.5°	899.1	899.9	899.1	897.6	897.6	897.6
54°	878.4	878.4	878.4	876.9	876.9	877.3
54.5°	856.5	856.9	856.5	855.4	855.4	855.4
55°	833.1	833.1	833.1	831.2	831.2	831.2
55.5°	806.2	805.5	806.2	803.5	803.2	803.2
56°	775.5	775.1	775.5	773.2	772.1	771.3
56.5°	742.5	742.5	742.5	740.2	738.7	738.3
57°	707.9	707.2	707.9	705.6	703.7	703.3
57.5°	672.2	672.2	672.2	669.2	667.6	666.9
58°	636.2	636.9	636.2	632.7	630.4	630.4
58.5°	599.3	600.8	599.3	595.1	593.2	592.0
59°	561.7	563.6	561.7	557.5	555.1	553.6
59.5°	524.8	527.1	524.8	519.4	516.8	514.8
60°	487.6	489.9	487.6	482.6	479.1	476.8
60.5°	451.5	453.8	451.5	446.1	441.5	438.8
61°	415.4	417.3	415.4	410.4	405.0	401.6
61.5°	380.5	382.0	380.5	375.9	369.3	366.3
62°	345.5	347.4	345.5	341.3	334.8	330.9
62.5°	311.7	314.8	311.7	307.9	300.6	296.4
63°	279.1	282.2	279.1	275.3	267.2	262.2
63.5°	247.6	250.7	247.6	243.4	234.6	230.4
64°	217.3	219.6	217.3	212.7	204.6	200.0
64.5°	187.7	189.7	187.7	183.5	175.8	170.8
65°	161.6	163.9	161.6	157.0	148.6	143.2
65.5°	136.3	139.4	136.3	131.3	124.4	118.6
66°	112.5	115.6	112.5	107.5	102.5	94.8



TEST NUMBER: P776435

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRC-4000lm-2700K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	55.3	56.1	55.3	53.4	49.1	38.0
68°	41.5	43.4	41.5	39.2	35.3	23.0
68.5°	28.0	31.9	28.0	25.7	23.4	10.0
69°	18.4	23.0	18.4	17.3	14.2	6.1
69.5°	10.7	14.6	10.7	11.5	8.4	4.2
70°	5.8	6.5	5.8	6.1	5.0	3.5
70.5°	3.8	3.1	3.8	3.8	3.1	2.3
71°	3.1	2.7	3.1	3.1	2.3	1.9
71.5°	2.3	2.3	2.3	2.3	1.9	1.9
72°	2.3	2.3	2.3	1.9	1.9	1.9
72.5°	1.9	2.3	1.9	1.9	1.9	1.5
73°	1.9	1.9	1.9	1.9	1.5	1.5
73.5°	1.9	1.9	1.9	1.5	1.5	1.5
74°	1.5	1.9	1.5	1.5	1.5	1.2
74.5°	1.5	1.5	1.5	1.5	1.2	1.2
75°	1.5	1.5	1.5	1.2	1.2	1.2
75.5°	1.5	1.5	1.5	1.2	1.2	1.2
76°	1.2	1.2	1.2	1.2	1.2	1.2
76.5°	1.2	1.2	1.2	1.2	0.8	0.8
77°	1.2	1.2	1.2	1.2	0.8	0.8
77.5°	1.2	1.2	1.2	0.8	0.8	0.8
78°	0.8	0.8	0.8	0.8	0.8	0.8
78.5°	0.8	0.8	0.8	0.8	0.8	0.8
79°	0.8	0.8	0.8	0.8	0.8	0.8
79.5°	0.8	0.8	0.8	0.8	0.4	0.4
80°	0.8	0.8	0.8	0.4	0.4	0.4
80.5°	0.8	0.8	0.8	0.4	0.4	0.4
81°	0.4	0.4	0.4	0.4	0.4	0.4
81.5°	0.4	0.4	0.4	0.4	0.4	0.4
82°	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4
83°	0.4	0.4	0.4	0.4	0.4	0.4
83.5°	0.4	0.4	0.4	0.4	0.4	0.4
84°	0.4	0.4	0.4	0.4	0.0	0.0
84.5°	0.4	0.4	0.4	0.0	0.0	0.0
85°	0.4	0.4	0.4	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: P776435

CATALOG NUMBER: HCDJBL3040CSD-HCD81TRC-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



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1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

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Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	1840.5	1840.5	1840.1	1840.5	1840.1	1840.5	1840.1	1840.5	1840.5	1840.5	1840.1
22°	1840.9	1840.5	1840.5	1840.5	1840.5	1840.5	1840.5	1840.5	1840.9	1840.5	1840.5



44°	1485.8	1483.9	1479.2	1478.9	1479.2	1478.9	1479.2	1483.9	1485.8	1483.9	1479.2
44.5°	1459.3	1457.0	1451.6	1451.6	1452.0	1451.6	1451.6	1457.0	1459.3	1457.0	1451.6



66.5°	76.0	82.2	87.5	91.4	92.5	91.4	87.5	82.2	76.0	82.2	87.5
67°	56.8	64.1	68.3	72.2	72.9	72.2	68.3	64.1	56.8	64.1	68.3



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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21.5°	1840.5	1840.1	1840.5	1840.1	1840.5	1840.5
22°	1840.5	1840.5	1840.5	1840.5	1840.5	1840.9



44°	1478.9	1479.2	1478.9	1479.2	1483.9	1485.8
44.5°	1451.6	1452.0	1451.6	1451.6	1457.0	1459.3



66.5°	91.4	92.5	91.4	87.5	82.2	76.0
67°	72.2	72.9	72.2	68.3	64.1	56.8

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Peachtree City, GA 30269

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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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Scaled Data Report



(END OF REPORT)