

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: P776746

Luminaire Tested: HCDJBS4050CSD-HCD81TRC-5000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776746
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: HCDJBS4050CSD-HCD81TRC-5000lm-3000K
Description: 8 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

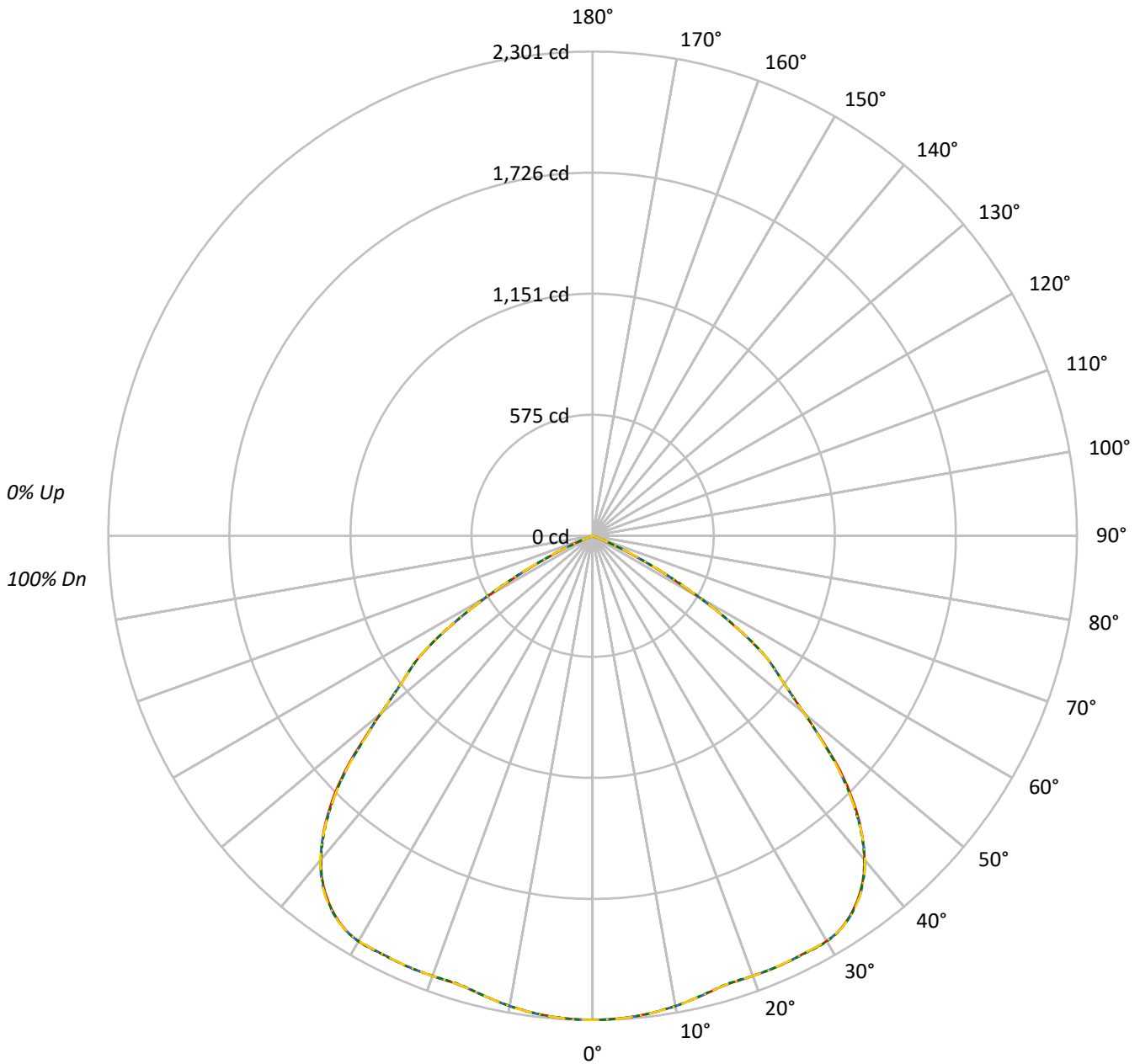
Lumens per Lamp: N/A
Luminaire Lumens: 5632.0 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.44 / 1.44 / 1.44
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 48
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	102	99	97	98	96	94	94	93	91	89								
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78								
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68								
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60								
5	81	70	62	56	80	69	62	56	67	60	55	65	59	55	63	58	54	52								
6	75	63	55	50	74	63	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	35	60	48	40	35	47	40	35	46	39	35	45	39	35	33								
10	57	45	37	32	56	44	37	32	43	37	32	42	36	32	41	36	32	30								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	70250	70250	70250	70250
5°	70261	70276	70261	70276
10°	70354	70339	70354	70339
15°	70626	70554	70626	70554
20°	72341	72296	72341	72296
25°	75023	75040	75023	75040
30°	78414	78481	78414	78481
35°	80616	80668	80616	80668
40°	80076	79984	80076	79984
45°	74812	74410	74812	74410
50°	62349	62458	62349	62458
55°	53547	53670	53547	53670
60°	35238	36203	35238	36203
65°	12519	14333	12519	14333
70°	375	705	375	705
75°	165	224	165	224
80°	88	158	88	158
85°	0	175	0	175

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 74812 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.2	3.9
10°-20°	634.0	11.3
20°-30°	1030.5	18.3
30°-40°	1348.1	23.9
40°-50°	1309.7	23.3
50°-60°	870.1	15.4
60°-70°	219.1	3.9
70°-80°	2.0	0.0
80°-90°	0.3	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°	1882.6	33.4
0°-40°	3230.8	57.4
0°-60°	5410.6	96.1
0°-90°	5632.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5632.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2301	2301	2301	2301	2301	
5°	2293	2293	2293	2293	2293	218
15°	2234	2232	2234	2232	2234	634
25°	2227	2228	2227	2228	2227	1031
35°	2163	2164	2163	2164	2163	1347
45°	1733	1723	1733	1723	1733	1313
55°	1006	1008	1006	1008	1006	868
65°	173	198	173	198	173	207
75°	1	2	1	2	1	2
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°	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0
0.5°	2300.5	2300.5	2301.4	2301.9	2300.5	2301.9	2301.4	2300.5	2300.5	2300.5	2301.4
1°	2300.0	2300.5	2301.0	2301.4	2300.5	2301.4	2301.0	2300.5	2300.0	2300.5	2301.0
1.5°	2299.6	2300.0	2300.5	2301.0	2300.0	2301.0	2300.5	2300.0	2299.6	2300.0	2300.5
2°	2299.1	2299.1	2300.0	2300.5	2299.6	2300.5	2300.0	2299.1	2299.1	2299.1	2300.0
2.5°	2298.2	2298.7	2299.1	2299.6	2298.7	2299.6	2299.1	2298.7	2298.2	2298.7	2299.1
3°	2297.7	2297.7	2298.7	2299.1	2297.7	2299.1	2298.7	2297.7	2297.7	2297.7	2298.7
3.5°	2296.8	2296.8	2297.7	2297.7	2296.8	2297.7	2297.7	2296.8	2296.8	2296.8	2297.7
4°	2295.4	2295.9	2296.3	2296.8	2295.4	2296.8	2296.3	2295.9	2295.4	2295.9	2296.3
4.5°	2294.0	2294.5	2294.9	2295.4	2294.5	2295.4	2294.9	2294.5	2294.0	2294.5	2294.9
5°	2292.6	2293.1	2293.5	2294.0	2293.1	2294.0	2293.5	2293.1	2292.6	2293.1	2293.5
5.5°	2291.2	2291.7	2292.2	2292.6	2291.7	2292.6	2292.2	2291.7	2291.2	2291.7	2292.2
6°	2289.4	2289.8	2290.3	2290.8	2289.8	2290.8	2290.3	2289.8	2289.4	2289.8	2290.3
6.5°	2287.5	2288.0	2288.4	2288.9	2287.5	2288.9	2288.4	2288.0	2287.5	2288.0	2288.4
7°	2285.6	2285.6	2286.1	2286.6	2285.2	2286.6	2286.1	2285.6	2285.6	2285.6	2286.1
7.5°	2283.3	2283.3	2283.8	2283.8	2282.9	2283.8	2283.8	2283.3	2283.3	2283.3	2283.8
8°	2280.5	2281.0	2281.0	2281.5	2280.5	2281.5	2281.0	2281.0	2280.5	2281.0	2281.0
8.5°	2277.7	2278.2	2278.7	2278.7	2277.7	2278.7	2278.7	2278.2	2277.7	2278.2	2278.7
9°	2275.4	2275.4	2275.9	2275.9	2275.0	2275.9	2275.9	2275.4	2275.4	2275.4	2275.9
9.5°	2272.2	2272.6	2272.6	2273.1	2272.2	2273.1	2272.6	2272.6	2272.2	2272.6	2272.6
10°	2269.4	2269.4	2269.8	2269.8	2268.9	2269.8	2269.8	2269.4	2269.4	2269.4	2269.8
10.5°	2266.1	2266.1	2266.6	2266.6	2265.7	2266.6	2266.6	2266.1	2266.1	2266.1	2266.6
11°	2262.9	2262.9	2263.3	2263.3	2261.9	2263.3	2263.3	2262.9	2262.9	2262.9	2263.3
11.5°	2259.2	2259.2	2259.6	2259.6	2258.7	2259.6	2259.6	2259.2	2259.2	2259.2	2259.6
12°	2255.9	2255.9	2255.9	2255.9	2255.0	2255.9	2255.9	2255.9	2255.9	2255.9	2255.9
12.5°	2252.2	2252.2	2252.2	2252.2	2251.3	2252.2	2252.2	2252.2	2252.2	2252.2	2252.2
13°	2248.9	2248.5	2248.9	2248.5	2247.5	2248.5	2248.9	2248.5	2248.9	2248.5	2248.9
13.5°	2245.2	2244.8	2244.8	2244.8	2243.4	2244.8	2244.8	2244.8	2245.2	2244.8	2244.8
14°	2241.5	2241.5	2241.0	2241.0	2239.6	2241.0	2241.0	2241.5	2241.5	2241.5	2241.0
14.5°	2237.8	2237.8	2237.3	2237.3	2235.9	2237.3	2237.3	2237.8	2237.8	2237.8	2237.3
15°	2234.5	2234.1	2233.6	2233.6	2232.2	2233.6	2233.6	2234.1	2234.5	2234.1	2233.6
15.5°	2231.3	2230.8	2230.4	2229.9	2229.0	2229.9	2230.4	2230.8	2231.3	2230.8	2230.4
16°	2229.0	2228.5	2228.0	2227.1	2226.2	2227.1	2228.0	2228.5	2229.0	2228.5	2228.0
16.5°	2227.1	2226.6	2226.2	2224.8	2224.3	2224.8	2226.2	2226.6	2227.1	2226.6	2226.2
17°	2225.7	2225.7	2225.2	2223.8	2222.9	2223.8	2225.2	2225.7	2225.7	2225.7	2225.2
17.5°	2225.2	2225.2	2224.3	2223.4	2222.9	2223.4	2224.3	2225.2	2225.2	2225.2	2224.3
18°	2225.2	2225.2	2224.3	2223.8	2222.9	2223.8	2224.3	2225.2	2225.2	2225.2	2224.3
18.5°	2225.2	2225.2	2224.8	2223.8	2222.9	2223.8	2224.8	2225.2	2225.2	2225.2	2224.8
19°	2225.7	2225.7	2225.2	2224.8	2223.8	2224.8	2225.2	2225.7	2225.7	2225.7	2225.2
19.5°	2226.2	2226.2	2225.7	2225.2	2224.3	2225.2	2225.7	2226.2	2226.2	2226.2	2225.7
20°	2226.6	2226.6	2226.2	2225.7	2225.2	2225.7	2226.2	2226.6	2226.6	2226.6	2226.2
20.5°	2227.1	2226.6	2226.6	2226.6	2225.7	2226.6	2226.6	2226.6	2227.1	2226.6	2226.6
21°	2227.1	2227.1	2227.1	2227.1	2226.6	2227.1	2227.1	2227.1	2227.1	2227.1	2227.1



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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°	2228.0	2227.6	2227.6	2228.0	2228.0	2228.0	2227.6	2227.6	2228.0	2227.6	2227.6
23°	2228.0	2227.6	2227.6	2228.5	2228.0	2228.5	2227.6	2227.6	2228.0	2227.6	2227.6
23.5°	2228.0	2227.6	2227.1	2228.0	2228.0	2228.0	2227.1	2227.6	2228.0	2227.6	2227.1
24°	2227.6	2227.1	2226.6	2228.0	2228.0	2228.0	2226.6	2227.1	2227.6	2227.1	2226.6
24.5°	2227.6	2226.6	2226.6	2228.0	2228.0	2228.0	2226.6	2226.6	2227.6	2226.6	2226.6
25°	2227.1	2226.2	2226.2	2227.6	2227.6	2227.6	2226.2	2226.2	2227.1	2226.2	2226.2
25.5°	2226.6	2225.7	2225.7	2227.6	2227.6	2227.6	2225.7	2225.7	2226.6	2225.7	2225.7
26°	2225.7	2225.2	2224.8	2227.1	2227.1	2227.1	2224.8	2225.2	2225.7	2225.2	2224.8
26.5°	2225.2	2224.8	2224.3	2226.6	2226.6	2226.6	2224.3	2224.8	2225.2	2224.8	2224.3
27°	2225.2	2224.3	2223.8	2226.2	2226.6	2226.2	2223.8	2224.3	2225.2	2224.3	2223.8
27.5°	2225.2	2224.8	2223.8	2226.2	2226.6	2226.2	2223.8	2224.8	2225.2	2224.8	2223.8
28°	2225.7	2224.8	2224.3	2226.6	2227.1	2226.6	2224.3	2224.8	2225.7	2224.8	2224.3
28.5°	2226.2	2225.2	2224.3	2227.1	2227.6	2227.1	2224.3	2225.2	2226.2	2225.2	2224.3
29°	2226.2	2225.2	2224.3	2227.6	2227.6	2227.6	2224.3	2225.2	2226.2	2225.2	2224.3
29.5°	2225.7	2224.8	2224.3	2227.1	2227.1	2227.1	2224.3	2224.8	2225.7	2224.8	2224.3
30°	2224.3	2223.8	2223.4	2226.2	2226.2	2226.2	2223.4	2223.8	2224.3	2223.8	2223.4
30.5°	2222.5	2222.0	2222.0	2224.8	2224.3	2224.8	2222.0	2222.0	2222.5	2222.0	2222.0
31°	2219.7	2219.2	2219.2	2222.0	2221.5	2222.0	2219.2	2219.2	2219.7	2219.2	2219.2
31.5°	2215.9	2215.9	2216.4	2218.7	2217.8	2218.7	2216.4	2215.9	2215.9	2215.9	2216.4
32°	2210.8	2211.3	2211.8	2214.1	2213.2	2214.1	2211.8	2211.3	2210.8	2211.3	2211.8
32.5°	2205.3	2205.7	2206.7	2208.5	2207.6	2208.5	2206.7	2205.7	2205.3	2205.7	2206.7
33°	2198.8	2199.2	2200.6	2202.0	2200.6	2202.0	2200.6	2199.2	2198.8	2199.2	2200.6
33.5°	2191.3	2191.8	2193.6	2194.6	2193.2	2194.6	2193.6	2191.8	2191.3	2191.8	2193.6
34°	2182.5	2183.9	2185.7	2186.2	2184.3	2186.2	2185.7	2183.9	2182.5	2183.9	2185.7
34.5°	2173.2	2174.6	2176.9	2176.9	2175.1	2176.9	2176.9	2174.6	2173.2	2174.6	2176.9
35°	2163.0	2164.4	2167.2	2166.7	2164.4	2166.7	2167.2	2164.4	2163.0	2164.4	2167.2
35.5°	2152.3	2154.1	2156.5	2156.0	2153.7	2156.0	2156.5	2154.1	2152.3	2154.1	2156.5
36°	2140.7	2142.5	2145.3	2144.4	2141.6	2144.4	2145.3	2142.5	2140.7	2142.5	2145.3
36.5°	2128.1	2130.4	2133.2	2131.8	2129.1	2131.8	2133.2	2130.4	2128.1	2130.4	2133.2
37°	2114.7	2117.0	2119.8	2118.4	2115.1	2118.4	2119.8	2117.0	2114.7	2117.0	2119.8
37.5°	2100.2	2103.0	2104.9	2103.5	2100.2	2103.5	2104.9	2103.0	2100.2	2103.0	2104.9
38°	2084.4	2087.2	2089.6	2087.7	2084.4	2087.7	2089.6	2087.2	2084.4	2087.2	2089.6
38.5°	2067.3	2070.5	2072.8	2070.5	2066.8	2070.5	2072.8	2070.5	2067.3	2070.5	2072.8
39°	2049.1	2052.9	2054.2	2051.9	2048.2	2051.9	2054.2	2052.9	2049.1	2052.9	2054.2
39.5°	2030.1	2033.3	2034.3	2031.5	2027.8	2031.5	2034.3	2033.3	2030.1	2033.3	2034.3
40°	2009.2	2012.0	2012.9	2010.1	2006.9	2010.1	2012.9	2012.0	2009.2	2012.0	2012.9
40.5°	1987.3	1989.7	1990.1	1987.3	1983.6	1987.3	1990.1	1989.7	1987.3	1989.7	1990.1
41°	1964.1	1966.0	1965.5	1962.7	1959.9	1962.7	1965.5	1966.0	1964.1	1966.0	1965.5
41.5°	1939.5	1940.9	1939.9	1937.2	1934.8	1937.2	1939.9	1940.9	1939.5	1940.9	1939.9
42°	1913.9	1914.4	1912.5	1910.2	1908.8	1910.2	1912.5	1914.4	1913.9	1914.4	1912.5
42.5°	1887.4	1887.0	1884.2	1882.3	1880.9	1882.3	1884.2	1887.0	1887.4	1887.0	1884.2
43°	1859.1	1857.7	1854.4	1853.0	1852.1	1853.0	1854.4	1857.7	1859.1	1857.7	1854.4
43.5°	1829.4	1827.5	1822.8	1822.4	1821.9	1822.4	1822.8	1827.5	1829.4	1827.5	1822.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1732.7	1728.5	1722.0	1722.0	1723.4	1722.0	1722.0	1728.5	1732.7	1728.5	1722.0
45.5°	1697.4	1692.7	1685.3	1686.2	1687.6	1686.2	1685.3	1692.7	1697.4	1692.7	1685.3
46°	1660.2	1655.6	1648.1	1649.1	1651.4	1649.1	1648.1	1655.6	1660.2	1655.6	1648.1
46.5°	1621.2	1617.0	1609.6	1610.5	1612.8	1610.5	1609.6	1617.0	1621.2	1617.0	1609.6
47°	1580.3	1576.1	1569.1	1570.1	1571.9	1570.1	1569.1	1576.1	1580.3	1576.1	1569.1
47.5°	1534.8	1530.6	1523.6	1525.0	1526.9	1525.0	1523.6	1530.6	1534.8	1530.6	1523.6
48°	1486.0	1482.3	1476.7	1479.0	1480.9	1479.0	1476.7	1482.3	1486.0	1482.3	1476.7
48.5°	1440.4	1438.6	1433.5	1435.3	1437.6	1435.3	1433.5	1438.6	1440.4	1438.6	1433.5
49°	1397.7	1396.8	1394.0	1395.4	1396.8	1395.4	1394.0	1396.8	1397.7	1396.8	1394.0
49.5°	1355.4	1354.9	1353.5	1354.5	1355.4	1354.5	1353.5	1354.9	1355.4	1354.9	1353.5
50°	1312.7	1312.2	1312.2	1313.6	1315.0	1313.6	1312.2	1312.2	1312.7	1312.2	1312.2
50.5°	1272.7	1273.2	1272.7	1273.6	1274.6	1273.6	1272.7	1273.2	1272.7	1273.2	1272.7
51°	1236.5	1236.5	1236.0	1236.9	1236.0	1236.9	1236.0	1236.5	1236.5	1236.5	1236.0
51.5°	1202.1	1201.6	1201.1	1202.1	1202.5	1202.1	1201.1	1201.6	1202.1	1201.6	1201.1
52°	1169.1	1169.1	1169.1	1170.5	1171.9	1170.5	1169.1	1169.1	1169.1	1169.1	1169.1
52.5°	1138.9	1139.3	1138.9	1140.7	1142.1	1140.7	1138.9	1139.3	1138.9	1139.3	1138.9
53°	1111.9	1111.5	1111.5	1113.8	1114.7	1113.8	1111.5	1111.5	1111.9	1111.5	1111.5
53.5°	1086.4	1086.4	1086.4	1088.2	1089.2	1088.2	1086.4	1086.4	1086.4	1086.4	1086.4
54°	1061.7	1061.3	1061.3	1063.1	1063.1	1063.1	1061.3	1061.3	1061.7	1061.3	1061.3
54.5°	1035.3	1035.3	1035.3	1036.6	1037.1	1036.6	1035.3	1035.3	1035.3	1035.3	1035.3
55°	1006.0	1006.0	1006.0	1008.3	1008.3	1008.3	1006.0	1006.0	1006.0	1006.0	1006.0
55.5°	972.1	972.1	972.5	975.8	974.8	975.8	972.5	972.1	972.1	972.1	972.5
56°	933.5	934.4	935.8	938.6	938.1	938.6	935.8	934.4	933.5	934.4	935.8
56.5°	893.5	894.0	895.9	898.6	898.6	898.6	895.9	894.0	893.5	894.0	895.9
57°	851.3	851.7	854.0	856.8	855.9	856.8	854.0	851.7	851.3	851.7	854.0
57.5°	807.1	808.0	809.9	813.6	813.6	813.6	809.9	808.0	807.1	808.0	809.9
58°	763.0	763.0	765.8	769.9	770.9	769.9	765.8	763.0	763.0	763.0	765.8
58.5°	716.5	717.9	720.2	725.3	727.2	725.3	720.2	717.9	716.5	717.9	720.2
59°	670.0	671.9	674.7	679.8	682.1	679.8	674.7	671.9	670.0	671.9	674.7
59.5°	623.1	625.4	628.7	635.2	638.0	635.2	628.7	625.4	623.1	625.4	628.7
60°	577.1	579.9	584.1	590.1	592.9	590.1	584.1	579.9	577.1	579.9	584.1
60.5°	531.1	534.4	539.9	546.4	549.2	546.4	539.9	534.4	531.1	534.4	539.9
61°	486.0	490.2	496.7	502.8	505.1	502.8	496.7	490.2	486.0	490.2	496.7
61.5°	443.3	447.0	454.9	460.5	462.3	460.5	454.9	447.0	443.3	447.0	454.9
62°	400.5	405.2	413.1	418.2	420.5	418.2	413.1	405.2	400.5	405.2	413.1
62.5°	358.7	363.8	372.7	377.3	381.0	377.3	372.7	363.8	358.7	363.8	372.7
63°	317.4	323.4	333.2	337.8	341.5	337.8	333.2	323.4	317.4	323.4	333.2
63.5°	278.8	283.9	294.6	299.7	303.4	299.7	294.6	283.9	278.8	283.9	294.6
64°	242.1	247.7	257.4	263.0	265.8	263.0	257.4	247.7	242.1	247.7	257.4
64.5°	206.8	212.8	222.1	227.2	229.5	227.2	222.1	212.8	206.8	212.8	222.1
65°	173.3	179.8	190.0	195.6	198.4	195.6	190.0	179.8	173.3	179.8	190.0
65.5°	143.6	150.5	158.9	165.0	168.7	165.0	158.9	150.5	143.6	150.5	158.9
66°	114.8	124.1	130.1	136.1	139.9	136.1	130.1	124.1	114.8	124.1	130.1



TEST NUMBER: P776746

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	46.0	59.5	64.6	66.9	67.8	66.9	64.6	59.5	46.0	59.5	64.6
68°	27.9	42.7	47.4	50.2	52.5	50.2	47.4	42.7	27.9	42.7	47.4
68.5°	12.1	28.3	31.1	33.9	38.6	33.9	31.1	28.3	12.1	28.3	31.1
69°	7.4	17.2	20.9	22.3	27.9	22.3	20.9	17.2	7.4	17.2	20.9
69.5°	5.1	10.2	13.9	13.0	17.7	13.0	13.9	10.2	5.1	10.2	13.9
70°	4.2	6.0	7.4	7.0	7.9	7.0	7.4	6.0	4.2	6.0	7.4
70.5°	2.8	3.7	4.6	4.6	3.7	4.6	4.6	3.7	2.8	3.7	4.6
71°	2.3	2.8	3.7	3.7	3.3	3.7	3.7	2.8	2.3	2.8	3.7
71.5°	2.3	2.3	2.8	2.8	2.8	2.8	2.8	2.3	2.3	2.3	2.8
72°	2.3	2.3	2.3	2.8	2.8	2.8	2.3	2.3	2.3	2.3	2.3
72.5°	1.9	2.3	2.3	2.3	2.8	2.3	2.3	2.3	1.9	2.3	2.3
73°	1.9	1.9	2.3	2.3	2.3	2.3	2.3	1.9	1.9	1.9	2.3
73.5°	1.9	1.9	1.9	2.3	2.3	2.3	1.9	1.9	1.9	1.9	1.9
74°	1.4	1.9	1.9	1.9	2.3	1.9	1.9	1.9	1.4	1.9	1.9
74.5°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.4	1.9
75°	1.4	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.4
75.5°	1.4	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.4
76°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
76.5°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	1.4
77°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	1.4
77.5°	0.9	0.9	0.9	1.4	1.4	1.4	0.9	0.9	0.9	0.9	0.9
78°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
78.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
79°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
79.5°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.9
80°	0.5	0.5	0.5	0.9	0.9	0.9	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	0.9	0.9	0.9	0.5	0.5	0.5	0.5	0.5
81°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
84.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.5	0.5	0.5	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: P776746
CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-3000K

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: P776746

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0
0.5°	2301.9	2300.5	2301.9	2301.4	2300.5	2300.5
1°	2301.4	2300.5	2301.4	2301.0	2300.5	2300.0
1.5°	2301.0	2300.0	2301.0	2300.5	2300.0	2299.6
2°	2300.5	2299.6	2300.5	2300.0	2299.1	2299.1
2.5°	2299.6	2298.7	2299.6	2299.1	2298.7	2298.2
3°	2299.1	2297.7	2299.1	2298.7	2297.7	2297.7
3.5°	2297.7	2296.8	2297.7	2297.7	2296.8	2296.8
4°	2296.8	2295.4	2296.8	2296.3	2295.9	2295.4
4.5°	2295.4	2294.5	2295.4	2294.9	2294.5	2294.0
5°	2294.0	2293.1	2294.0	2293.5	2293.1	2292.6
5.5°	2292.6	2291.7	2292.6	2292.2	2291.7	2291.2
6°	2290.8	2289.8	2290.8	2290.3	2289.8	2289.4
6.5°	2288.9	2287.5	2288.9	2288.4	2288.0	2287.5
7°	2286.6	2285.2	2286.6	2286.1	2285.6	2285.6
7.5°	2283.8	2282.9	2283.8	2283.8	2283.3	2283.3
8°	2281.5	2280.5	2281.5	2281.0	2281.0	2280.5
8.5°	2278.7	2277.7	2278.7	2278.7	2278.2	2277.7
9°	2275.9	2275.0	2275.9	2275.9	2275.4	2275.4
9.5°	2273.1	2272.2	2273.1	2272.6	2272.6	2272.2
10°	2269.8	2268.9	2269.8	2269.8	2269.4	2269.4
10.5°	2266.6	2265.7	2266.6	2266.6	2266.1	2266.1
11°	2263.3	2261.9	2263.3	2263.3	2262.9	2262.9
11.5°	2259.6	2258.7	2259.6	2259.6	2259.2	2259.2
12°	2255.9	2255.0	2255.9	2255.9	2255.9	2255.9
12.5°	2252.2	2251.3	2252.2	2252.2	2252.2	2252.2
13°	2248.5	2247.5	2248.5	2248.9	2248.5	2248.9
13.5°	2244.8	2243.4	2244.8	2244.8	2244.8	2245.2
14°	2241.0	2239.6	2241.0	2241.0	2241.5	2241.5
14.5°	2237.3	2235.9	2237.3	2237.3	2237.8	2237.8
15°	2233.6	2232.2	2233.6	2233.6	2234.1	2234.5
15.5°	2229.9	2229.0	2229.9	2230.4	2230.8	2231.3
16°	2227.1	2226.2	2227.1	2228.0	2228.5	2229.0
16.5°	2224.8	2224.3	2224.8	2226.2	2226.6	2227.1
17°	2223.8	2222.9	2223.8	2225.2	2225.7	2225.7
17.5°	2223.4	2222.9	2223.4	2224.3	2225.2	2225.2
18°	2223.8	2222.9	2223.8	2224.3	2225.2	2225.2
18.5°	2223.8	2222.9	2223.8	2224.8	2225.2	2225.2
19°	2224.8	2223.8	2224.8	2225.2	2225.7	2225.7
19.5°	2225.2	2224.3	2225.2	2225.7	2226.2	2226.2
20°	2225.7	2225.2	2225.7	2226.2	2226.6	2226.6
20.5°	2226.6	2225.7	2226.6	2226.6	2226.6	2227.1
21°	2227.1	2226.6	2227.1	2227.1	2227.1	2227.1



TEST NUMBER: P776746

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2228.0	2228.0	2228.0	2227.6	2227.6	2228.0
23°	2228.5	2228.0	2228.5	2227.6	2227.6	2228.0
23.5°	2228.0	2228.0	2228.0	2227.1	2227.6	2228.0
24°	2228.0	2228.0	2228.0	2226.6	2227.1	2227.6
24.5°	2228.0	2228.0	2228.0	2226.6	2226.6	2227.6
25°	2227.6	2227.6	2227.6	2226.2	2226.2	2227.1
25.5°	2227.6	2227.6	2227.6	2225.7	2225.7	2226.6
26°	2227.1	2227.1	2227.1	2224.8	2225.2	2225.7
26.5°	2226.6	2226.6	2226.6	2224.3	2224.8	2225.2
27°	2226.2	2226.6	2226.2	2223.8	2224.3	2225.2
27.5°	2226.2	2226.6	2226.2	2223.8	2224.8	2225.2
28°	2226.6	2227.1	2226.6	2224.3	2224.8	2225.7
28.5°	2227.1	2227.6	2227.1	2224.3	2225.2	2226.2
29°	2227.6	2227.6	2227.6	2224.3	2225.2	2226.2
29.5°	2227.1	2227.1	2227.1	2224.3	2224.8	2225.7
30°	2226.2	2226.2	2226.2	2223.4	2223.8	2224.3
30.5°	2224.8	2224.3	2224.8	2222.0	2222.0	2222.5
31°	2222.0	2221.5	2222.0	2219.2	2219.2	2219.7
31.5°	2218.7	2217.8	2218.7	2216.4	2215.9	2215.9
32°	2214.1	2213.2	2214.1	2211.8	2211.3	2210.8
32.5°	2208.5	2207.6	2208.5	2206.7	2205.7	2205.3
33°	2202.0	2200.6	2202.0	2200.6	2199.2	2198.8
33.5°	2194.6	2193.2	2194.6	2193.6	2191.8	2191.3
34°	2186.2	2184.3	2186.2	2185.7	2183.9	2182.5
34.5°	2176.9	2175.1	2176.9	2176.9	2174.6	2173.2
35°	2166.7	2164.4	2166.7	2167.2	2164.4	2163.0
35.5°	2156.0	2153.7	2156.0	2156.5	2154.1	2152.3
36°	2144.4	2141.6	2144.4	2145.3	2142.5	2140.7
36.5°	2131.8	2129.1	2131.8	2133.2	2130.4	2128.1
37°	2118.4	2115.1	2118.4	2119.8	2117.0	2114.7
37.5°	2103.5	2100.2	2103.5	2104.9	2103.0	2100.2
38°	2087.7	2084.4	2087.7	2089.6	2087.2	2084.4
38.5°	2070.5	2066.8	2070.5	2072.8	2070.5	2067.3
39°	2051.9	2048.2	2051.9	2054.2	2052.9	2049.1
39.5°	2031.5	2027.8	2031.5	2034.3	2033.3	2030.1
40°	2010.1	2006.9	2010.1	2012.9	2012.0	2009.2
40.5°	1987.3	1983.6	1987.3	1990.1	1989.7	1987.3
41°	1962.7	1959.9	1962.7	1965.5	1966.0	1964.1
41.5°	1937.2	1934.8	1937.2	1939.9	1940.9	1939.5
42°	1910.2	1908.8	1910.2	1912.5	1914.4	1913.9
42.5°	1882.3	1880.9	1882.3	1884.2	1887.0	1887.4
43°	1853.0	1852.1	1853.0	1854.4	1857.7	1859.1
43.5°	1822.4	1821.9	1822.4	1822.8	1827.5	1829.4



TEST NUMBER: P776746

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1722.0	1723.4	1722.0	1722.0	1728.5	1732.7
45.5°	1686.2	1687.6	1686.2	1685.3	1692.7	1697.4
46°	1649.1	1651.4	1649.1	1648.1	1655.6	1660.2
46.5°	1610.5	1612.8	1610.5	1609.6	1617.0	1621.2
47°	1570.1	1571.9	1570.1	1569.1	1576.1	1580.3
47.5°	1525.0	1526.9	1525.0	1523.6	1530.6	1534.8
48°	1479.0	1480.9	1479.0	1476.7	1482.3	1486.0
48.5°	1435.3	1437.6	1435.3	1433.5	1438.6	1440.4
49°	1395.4	1396.8	1395.4	1394.0	1396.8	1397.7
49.5°	1354.5	1355.4	1354.5	1353.5	1354.9	1355.4
50°	1313.6	1315.0	1313.6	1312.2	1312.2	1312.7
50.5°	1273.6	1274.6	1273.6	1272.7	1273.2	1272.7
51°	1236.9	1236.0	1236.9	1236.0	1236.5	1236.5
51.5°	1202.1	1202.5	1202.1	1201.1	1201.6	1202.1
52°	1170.5	1171.9	1170.5	1169.1	1169.1	1169.1
52.5°	1140.7	1142.1	1140.7	1138.9	1139.3	1138.9
53°	1113.8	1114.7	1113.8	1111.5	1111.5	1111.9
53.5°	1088.2	1089.2	1088.2	1086.4	1086.4	1086.4
54°	1063.1	1063.1	1063.1	1061.3	1061.3	1061.7
54.5°	1036.6	1037.1	1036.6	1035.3	1035.3	1035.3
55°	1008.3	1008.3	1008.3	1006.0	1006.0	1006.0
55.5°	975.8	974.8	975.8	972.5	972.1	972.1
56°	938.6	938.1	938.6	935.8	934.4	933.5
56.5°	898.6	898.6	898.6	895.9	894.0	893.5
57°	856.8	855.9	856.8	854.0	851.7	851.3
57.5°	813.6	813.6	813.6	809.9	808.0	807.1
58°	769.9	770.9	769.9	765.8	763.0	763.0
58.5°	725.3	727.2	725.3	720.2	717.9	716.5
59°	679.8	682.1	679.8	674.7	671.9	670.0
59.5°	635.2	638.0	635.2	628.7	625.4	623.1
60°	590.1	592.9	590.1	584.1	579.9	577.1
60.5°	546.4	549.2	546.4	539.9	534.4	531.1
61°	502.8	505.1	502.8	496.7	490.2	486.0
61.5°	460.5	462.3	460.5	454.9	447.0	443.3
62°	418.2	420.5	418.2	413.1	405.2	400.5
62.5°	377.3	381.0	377.3	372.7	363.8	358.7
63°	337.8	341.5	337.8	333.2	323.4	317.4
63.5°	299.7	303.4	299.7	294.6	283.9	278.8
64°	263.0	265.8	263.0	257.4	247.7	242.1
64.5°	227.2	229.5	227.2	222.1	212.8	206.8
65°	195.6	198.4	195.6	190.0	179.8	173.3
65.5°	165.0	168.7	165.0	158.9	150.5	143.6
66°	136.1	139.9	136.1	130.1	124.1	114.8



TEST NUMBER: P776746

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	66.9	67.8	66.9	64.6	59.5	46.0
68°	50.2	52.5	50.2	47.4	42.7	27.9
68.5°	33.9	38.6	33.9	31.1	28.3	12.1
69°	22.3	27.9	22.3	20.9	17.2	7.4
69.5°	13.0	17.7	13.0	13.9	10.2	5.1
70°	7.0	7.9	7.0	7.4	6.0	4.2
70.5°	4.6	3.7	4.6	4.6	3.7	2.8
71°	3.7	3.3	3.7	3.7	2.8	2.3
71.5°	2.8	2.8	2.8	2.8	2.3	2.3
72°	2.8	2.8	2.8	2.3	2.3	2.3
72.5°	2.3	2.8	2.3	2.3	2.3	1.9
73°	2.3	2.3	2.3	2.3	1.9	1.9
73.5°	2.3	2.3	2.3	1.9	1.9	1.9
74°	1.9	2.3	1.9	1.9	1.9	1.4
74.5°	1.9	1.9	1.9	1.9	1.4	1.4
75°	1.9	1.9	1.9	1.4	1.4	1.4
75.5°	1.9	1.9	1.9	1.4	1.4	1.4
76°	1.4	1.4	1.4	1.4	1.4	1.4
76.5°	1.4	1.4	1.4	1.4	0.9	0.9
77°	1.4	1.4	1.4	1.4	0.9	0.9
77.5°	1.4	1.4	1.4	0.9	0.9	0.9
78°	0.9	0.9	0.9	0.9	0.9	0.9
78.5°	0.9	0.9	0.9	0.9	0.9	0.9
79°	0.9	0.9	0.9	0.9	0.9	0.9
79.5°	0.9	0.9	0.9	0.9	0.5	0.5
80°	0.9	0.9	0.9	0.5	0.5	0.5
80.5°	0.9	0.9	0.9	0.5	0.5	0.5
81°	0.5	0.5	0.5	0.5	0.5	0.5
81.5°	0.5	0.5	0.5	0.5	0.5	0.5
82°	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.0	0.0
84.5°	0.5	0.5	0.5	0.0	0.0	0.0
85°	0.5	0.5	0.5	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: P776746

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-3000K

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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Scaled Data Report





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

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Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	2227.6	2227.6	2227.1	2227.6	2227.1	2227.6	2227.1	2227.6	2227.6	2227.6	2227.1
22°	2228.0	2227.6	2227.6	2227.6	2227.6	2227.6	2227.6	2227.6	2228.0	2227.6	2227.6



44°	1798.2	1795.9	1790.3	1789.9	1790.3	1789.9	1790.3	1795.9	1798.2	1795.9	1790.3
44.5°	1766.2	1763.4	1756.9	1756.9	1757.3	1756.9	1756.9	1763.4	1766.2	1763.4	1756.9



66.5°	92.0	99.4	105.9	110.6	112.0	110.6	105.9	99.4	92.0	99.4	105.9
67°	68.8	77.6	82.7	87.4	88.3	87.4	82.7	77.6	68.8	77.6	82.7



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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21.5°	2227.6	2227.1	2227.6	2227.1	2227.6	2227.6
22°	2227.6	2227.6	2227.6	2227.6	2227.6	2228.0



44°	1789.9	1790.3	1789.9	1790.3	1795.9	1798.2
44.5°	1756.9	1757.3	1756.9	1756.9	1763.4	1766.2

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66.5°	110.6	112.0	110.6	105.9	99.4	92.0
67°	87.4	88.3	87.4	82.7	77.6	68.8

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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)