

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: P776748

Luminaire Tested: HCDJBS4050CSD-HCD81TRC-5000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776748
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-4000K
Description: 8 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5798.0 lumens
Efficiency: N/A
Efficacy: 120.8 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

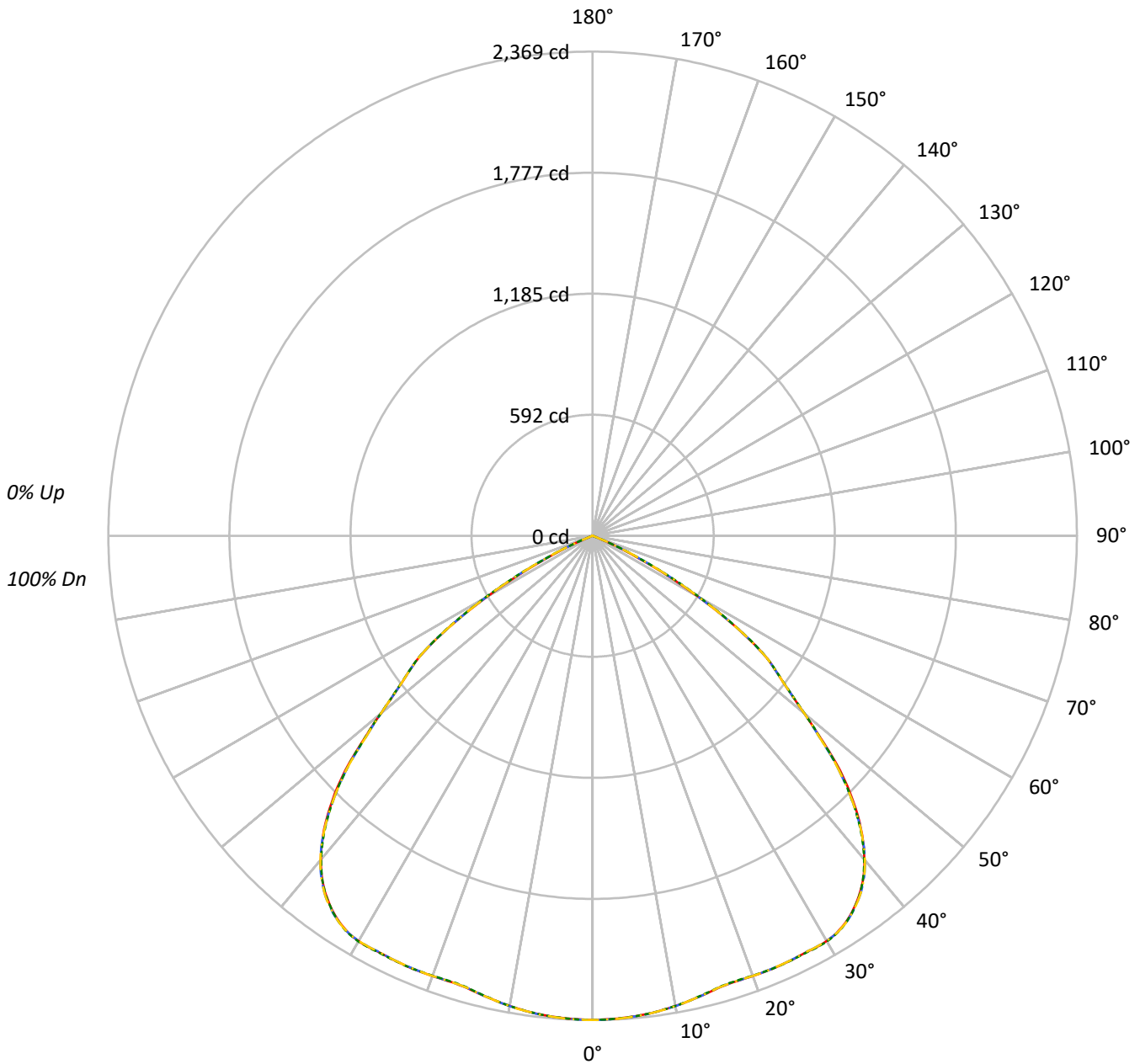
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	72320	72320	72320	72320
5°	72333	72348	72333	72348
10°	72428	72413	72428	72413
15°	72709	72634	72709	72634
20°	74476	74427	74476	74427
25°	77233	77250	77233	77250
30°	80727	80794	80727	80794
35°	82990	83046	82990	83046
40°	82435	82339	82435	82339
45°	77018	76603	77018	76603
50°	64182	64296	64182	64296
55°	55123	55251	55123	55251
60°	36276	37271	36276	37271
65°	12888	14759	12888	14759
70°	384	723	384	723
75°	165	224	165	224
80°	88	176	88	176
85°	0	175	0	175

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 77018 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.6	3.9
10°-20°	652.6	11.3
20°-30°	1060.9	18.3
30°-40°	1387.9	23.9
40°-50°	1348.3	23.3
50°-60°	895.8	15.4
60°-70°	225.6	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°	1938.1	33.4
0°-40°	3326.0	57.4
0°-60°	5570.1	96.1
0°-90°	5798.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5798.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2369	2369	2369	2369	2369	
5°	2360	2361	2360	2361	2360	225
15°	2300	2298	2300	2298	2300	653
25°	2293	2293	2293	2293	2293	1061
35°	2227	2228	2227	2228	2227	1387
45°	1784	1774	1784	1774	1784	1352
55°	1036	1038	1036	1038	1036	894
65°	178	204	178	204	178	213
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°	2368.8	2368.8	2368.8	2368.8	2368.8	2368.8	2368.8	2368.8	2368.8	2368.8	2368.8
0.5°	2368.3	2368.3	2369.3	2369.7	2368.3	2369.7	2369.3	2368.3	2368.3	2368.3	2369.3
1°	2367.8	2368.3	2368.8	2369.3	2368.3	2369.3	2368.8	2368.3	2367.8	2368.3	2368.8
1.5°	2367.4	2367.8	2368.3	2368.8	2367.8	2368.8	2368.3	2367.8	2367.4	2367.8	2368.3
2°	2366.9	2366.9	2367.8	2368.3	2367.4	2368.3	2367.8	2366.9	2366.9	2366.9	2367.8
2.5°	2365.9	2366.4	2366.9	2367.4	2366.4	2367.4	2366.9	2366.4	2365.9	2366.4	2366.9
3°	2365.4	2365.4	2366.4	2366.9	2365.4	2366.9	2366.4	2365.4	2365.4	2365.4	2366.4
3.5°	2364.5	2364.5	2365.4	2365.4	2364.5	2365.4	2365.4	2364.5	2364.5	2364.5	2365.4
4°	2363.1	2363.5	2364.0	2364.5	2363.1	2364.5	2364.0	2363.5	2363.1	2363.5	2364.0
4.5°	2361.6	2362.1	2362.6	2363.1	2362.1	2363.1	2362.6	2362.1	2361.6	2362.1	2362.6
5°	2360.2	2360.7	2361.1	2361.6	2360.7	2361.6	2361.1	2360.7	2360.2	2360.7	2361.1
5.5°	2358.7	2359.2	2359.7	2360.2	2359.2	2360.2	2359.7	2359.2	2358.7	2359.2	2359.7
6°	2356.8	2357.3	2357.8	2358.3	2357.3	2358.3	2357.8	2357.3	2356.8	2357.3	2357.8
6.5°	2354.9	2355.4	2355.9	2356.4	2354.9	2356.4	2355.9	2355.4	2354.9	2355.4	2355.9
7°	2353.0	2353.0	2353.5	2354.0	2352.5	2354.0	2353.5	2353.0	2353.0	2353.0	2353.5
7.5°	2350.6	2350.6	2351.1	2351.1	2350.1	2351.1	2351.1	2350.6	2350.6	2350.6	2351.1
8°	2347.7	2348.2	2348.2	2348.7	2347.7	2348.7	2348.2	2348.2	2347.7	2348.2	2348.2
8.5°	2344.9	2345.4	2345.8	2345.8	2344.9	2345.8	2345.8	2345.4	2344.9	2345.4	2345.8
9°	2342.5	2342.5	2343.0	2343.0	2342.0	2343.0	2343.0	2342.5	2342.5	2342.5	2343.0
9.5°	2339.1	2339.6	2339.6	2340.1	2339.1	2340.1	2339.6	2339.6	2339.1	2339.6	2339.6
10°	2336.3	2336.3	2336.7	2336.7	2335.8	2336.7	2336.7	2336.3	2336.3	2336.3	2336.7
10.5°	2332.9	2332.9	2333.4	2333.4	2332.4	2333.4	2333.4	2332.9	2332.9	2332.9	2333.4
11°	2329.6	2329.6	2330.0	2330.0	2328.6	2330.0	2330.0	2329.6	2329.6	2329.6	2330.0
11.5°	2325.7	2325.7	2326.2	2326.2	2325.3	2326.2	2326.2	2325.7	2325.7	2325.7	2326.2
12°	2322.4	2322.4	2322.4	2322.4	2321.4	2322.4	2322.4	2322.4	2322.4	2322.4	2322.4
12.5°	2318.6	2318.6	2318.6	2318.6	2317.6	2318.6	2318.6	2318.6	2318.6	2318.6	2318.6
13°	2315.2	2314.7	2315.2	2314.7	2313.8	2314.7	2315.2	2314.7	2315.2	2314.7	2315.2
13.5°	2311.4	2310.9	2310.9	2310.9	2309.5	2310.9	2310.9	2310.9	2311.4	2310.9	2310.9
14°	2307.6	2307.6	2307.1	2307.1	2305.6	2307.1	2307.1	2307.6	2307.6	2307.6	2307.1
14.5°	2303.7	2303.7	2303.3	2303.3	2301.8	2303.3	2303.3	2303.7	2303.7	2303.7	2303.3
15°	2300.4	2299.9	2299.4	2299.4	2298.0	2299.4	2299.4	2299.9	2300.4	2299.9	2299.4
15.5°	2297.0	2296.6	2296.1	2295.6	2294.6	2295.6	2296.1	2296.6	2297.0	2296.6	2296.1
16°	2294.6	2294.2	2293.7	2292.7	2291.8	2292.7	2293.7	2294.2	2294.6	2294.2	2293.7
16.5°	2292.7	2292.3	2291.8	2290.3	2289.9	2290.3	2291.8	2292.3	2292.7	2292.3	2291.8
17°	2291.3	2291.3	2290.8	2289.4	2288.4	2289.4	2290.8	2291.3	2291.3	2291.3	2290.8
17.5°	2290.8	2290.8	2289.9	2288.9	2288.4	2288.9	2289.9	2290.8	2290.8	2290.8	2289.9
18°	2290.8	2290.8	2289.9	2289.4	2288.4	2289.4	2289.9	2290.8	2290.8	2290.8	2289.9
18.5°	2290.8	2290.8	2290.3	2289.4	2288.4	2289.4	2290.3	2290.8	2290.8	2290.8	2290.3
19°	2291.3	2291.3	2290.8	2290.3	2289.4	2290.3	2290.8	2291.3	2291.3	2291.3	2290.8
19.5°	2291.8	2291.8	2291.3	2290.8	2289.9	2290.8	2291.3	2291.8	2291.8	2291.8	2291.3
20°	2292.3	2292.3	2291.8	2291.3	2290.8	2291.3	2291.8	2292.3	2292.3	2292.3	2291.8
20.5°	2292.7	2292.3	2292.3	2292.3	2291.3	2292.3	2292.3	2292.3	2292.7	2292.3	2292.3
21°	2292.7	2292.7	2292.7	2292.7	2292.3	2292.7	2292.7	2292.7	2292.7	2292.7	2292.7



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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°	2293.7	2293.2	2293.2	2293.7	2293.7	2293.7	2293.2	2293.2	2293.7	2293.2	2293.2
23°	2293.7	2293.2	2293.2	2294.2	2293.7	2294.2	2293.2	2293.2	2293.7	2293.2	2293.2
23.5°	2293.7	2293.2	2292.7	2293.7	2293.7	2293.7	2292.7	2293.2	2293.7	2293.2	2292.7
24°	2293.2	2292.7	2292.3	2293.7	2293.7	2293.7	2292.3	2292.7	2293.2	2292.7	2292.3
24.5°	2293.2	2292.3	2292.3	2293.7	2293.7	2293.7	2292.3	2292.3	2293.2	2292.3	2292.3
25°	2292.7	2291.8	2291.8	2293.2	2293.2	2293.2	2291.8	2291.8	2292.7	2291.8	2291.8
25.5°	2292.3	2291.3	2291.3	2293.2	2293.2	2293.2	2291.3	2291.3	2292.3	2291.3	2291.3
26°	2291.3	2290.8	2290.3	2292.7	2292.7	2292.7	2290.3	2290.8	2291.3	2290.8	2290.3
26.5°	2290.8	2290.3	2289.9	2292.3	2292.3	2292.3	2289.9	2290.3	2290.8	2290.3	2289.9
27°	2290.8	2289.9	2289.4	2291.8	2292.3	2291.8	2289.4	2289.9	2290.8	2289.9	2289.4
27.5°	2290.8	2290.3	2289.4	2291.8	2292.3	2291.8	2289.4	2290.3	2290.8	2290.3	2289.4
28°	2291.3	2290.3	2289.9	2292.3	2292.7	2292.3	2289.9	2290.3	2291.3	2290.3	2289.9
28.5°	2291.8	2290.8	2289.9	2292.7	2293.2	2292.7	2289.9	2290.8	2291.8	2290.8	2289.9
29°	2291.8	2290.8	2289.9	2293.2	2293.2	2293.2	2289.9	2290.8	2291.8	2290.8	2289.9
29.5°	2291.3	2290.3	2289.9	2292.7	2292.7	2292.7	2289.9	2290.3	2291.3	2290.3	2289.9
30°	2289.9	2289.4	2288.9	2291.8	2291.8	2291.8	2288.9	2289.4	2289.9	2289.4	2288.9
30.5°	2288.0	2287.5	2287.5	2290.3	2289.9	2290.3	2287.5	2287.5	2288.0	2287.5	2287.5
31°	2285.1	2284.6	2284.6	2287.5	2287.0	2287.5	2284.6	2284.6	2285.1	2284.6	2284.6
31.5°	2281.3	2281.3	2281.7	2284.1	2283.2	2284.1	2281.7	2281.3	2281.3	2281.3	2281.7
32°	2276.0	2276.5	2276.9	2279.3	2278.4	2279.3	2276.9	2276.5	2276.0	2276.5	2276.9
32.5°	2270.3	2270.7	2271.7	2273.6	2272.6	2273.6	2271.7	2270.7	2270.3	2270.7	2271.7
33°	2263.6	2264.0	2265.5	2266.9	2265.5	2266.9	2265.5	2264.0	2263.6	2264.0	2265.5
33.5°	2255.9	2256.4	2258.3	2259.2	2257.8	2259.2	2258.3	2256.4	2255.9	2256.4	2258.3
34°	2246.8	2248.2	2250.2	2250.6	2248.7	2250.6	2250.2	2248.2	2246.8	2248.2	2250.2
34.5°	2237.2	2238.7	2241.1	2241.1	2239.2	2241.1	2241.1	2238.7	2237.2	2238.7	2241.1
35°	2226.7	2228.2	2231.0	2230.5	2228.2	2230.5	2231.0	2228.2	2226.7	2228.2	2231.0
35.5°	2215.7	2217.6	2220.0	2219.5	2217.2	2219.5	2220.0	2217.6	2215.7	2217.6	2220.0
36°	2203.8	2205.7	2208.5	2207.6	2204.7	2207.6	2208.5	2205.7	2203.8	2205.7	2208.5
36.5°	2190.8	2193.2	2196.1	2194.7	2191.8	2194.7	2196.1	2193.2	2190.8	2193.2	2196.1
37°	2177.0	2179.4	2182.2	2180.8	2177.5	2180.8	2182.2	2179.4	2177.0	2179.4	2182.2
37.5°	2162.1	2165.0	2166.9	2165.5	2162.1	2165.5	2166.9	2165.0	2162.1	2165.0	2166.9
38°	2145.9	2148.8	2151.1	2149.2	2145.9	2149.2	2151.1	2148.8	2145.9	2148.8	2151.1
38.5°	2128.2	2131.5	2133.9	2131.5	2127.7	2131.5	2133.9	2131.5	2128.2	2131.5	2133.9
39°	2109.5	2113.4	2114.8	2112.4	2108.6	2112.4	2114.8	2113.4	2109.5	2113.4	2114.8
39.5°	2089.9	2093.3	2094.2	2091.3	2087.5	2091.3	2094.2	2093.3	2089.9	2093.3	2094.2
40°	2068.4	2071.3	2072.2	2069.3	2066.0	2069.3	2072.2	2071.3	2068.4	2071.3	2072.2
40.5°	2045.9	2048.3	2048.8	2045.9	2042.1	2045.9	2048.8	2048.3	2045.9	2048.3	2048.8
41°	2022.0	2023.9	2023.4	2020.6	2017.7	2020.6	2023.4	2023.9	2022.0	2023.9	2023.4
41.5°	1996.6	1998.1	1997.1	1994.2	1991.9	1994.2	1997.1	1998.1	1996.6	1998.1	1997.1
42°	1970.3	1970.8	1968.9	1966.5	1965.1	1966.5	1968.9	1970.8	1970.3	1970.8	1968.9
42.5°	1943.1	1942.6	1939.7	1937.8	1936.4	1937.8	1939.7	1942.6	1943.1	1942.6	1939.7
43°	1913.9	1912.4	1909.1	1907.7	1906.7	1907.7	1909.1	1912.4	1913.9	1912.4	1909.1
43.5°	1883.3	1881.4	1876.6	1876.1	1875.6	1876.1	1876.6	1881.4	1883.3	1881.4	1876.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1783.8	1779.5	1772.8	1772.8	1774.2	1772.8	1772.8	1779.5	1783.8	1779.5	1772.8
45.5°	1747.4	1742.6	1735.0	1735.9	1737.4	1735.9	1735.0	1742.6	1747.4	1742.6	1735.0
46°	1709.1	1704.4	1696.7	1697.7	1700.1	1697.7	1696.7	1704.4	1709.1	1704.4	1696.7
46.5°	1669.0	1664.7	1657.0	1658.0	1660.4	1658.0	1657.0	1664.7	1669.0	1664.7	1657.0
47°	1626.9	1622.6	1615.4	1616.3	1618.3	1616.3	1615.4	1622.6	1626.9	1622.6	1615.4
47.5°	1580.0	1575.7	1568.5	1569.9	1571.9	1569.9	1568.5	1575.7	1580.0	1575.7	1568.5
48°	1529.8	1525.9	1520.2	1522.6	1524.5	1522.6	1520.2	1525.9	1529.8	1525.9	1520.2
48.5°	1482.9	1481.0	1475.7	1477.6	1480.0	1477.6	1475.7	1481.0	1482.9	1481.0	1475.7
49°	1438.9	1437.9	1435.1	1436.5	1437.9	1436.5	1435.1	1437.9	1438.9	1437.9	1435.1
49.5°	1395.3	1394.9	1393.4	1394.4	1395.3	1394.4	1393.4	1394.9	1395.3	1394.9	1393.4
50°	1351.3	1350.9	1350.9	1352.3	1353.7	1352.3	1350.9	1350.9	1351.3	1350.9	1350.9
50.5°	1310.2	1310.7	1310.2	1311.2	1312.1	1311.2	1310.2	1310.7	1310.2	1310.7	1310.2
51°	1272.9	1272.9	1272.4	1273.4	1272.4	1273.4	1272.4	1272.9	1272.9	1272.9	1272.4
51.5°	1237.5	1237.0	1236.5	1237.5	1238.0	1237.5	1236.5	1237.0	1237.5	1237.0	1236.5
52°	1203.5	1203.5	1203.5	1205.0	1206.4	1205.0	1203.5	1203.5	1203.5	1203.5	1203.5
52.5°	1172.4	1172.9	1172.4	1174.4	1175.8	1174.4	1172.4	1172.9	1172.4	1172.9	1172.4
53°	1144.7	1144.2	1144.2	1146.6	1147.6	1146.6	1144.2	1144.2	1144.7	1144.2	1144.2
53.5°	1118.4	1118.4	1118.4	1120.3	1121.3	1120.3	1118.4	1118.4	1118.4	1118.4	1118.4
54°	1093.0	1092.6	1092.6	1094.5	1094.5	1094.5	1092.6	1092.6	1093.0	1092.6	1092.6
54.5°	1065.8	1065.8	1065.8	1067.2	1067.7	1067.2	1065.8	1065.8	1065.8	1065.8	1065.8
55°	1035.6	1035.6	1035.6	1038.0	1038.0	1038.0	1035.6	1035.6	1035.6	1035.6	1035.6
55.5°	1000.7	1000.7	1001.2	1004.5	1003.6	1004.5	1001.2	1000.7	1000.7	1000.7	1001.2
56°	961.0	962.0	963.4	966.3	965.8	966.3	963.4	962.0	961.0	962.0	963.4
56.5°	919.9	920.3	922.3	925.1	925.1	925.1	922.3	920.3	919.9	920.3	922.3
57°	876.3	876.8	879.2	882.1	881.1	882.1	879.2	876.8	876.3	876.8	879.2
57.5°	830.9	831.9	833.8	837.6	837.6	837.6	833.8	831.9	830.9	831.9	833.8
58°	785.5	785.5	788.3	792.6	793.6	792.6	788.3	785.5	785.5	785.5	788.3
58.5°	737.6	739.1	741.4	746.7	748.6	746.7	741.4	739.1	737.6	739.1	741.4
59°	689.8	691.7	694.6	699.8	702.2	699.8	694.6	691.7	689.8	691.7	694.6
59.5°	641.5	643.9	647.2	653.9	656.8	653.9	647.2	643.9	641.5	643.9	647.2
60°	594.1	597.0	601.3	607.5	610.4	607.5	601.3	597.0	594.1	597.0	601.3
60.5°	546.8	550.1	555.8	562.5	565.4	562.5	555.8	550.1	546.8	550.1	555.8
61°	500.4	504.7	511.4	517.6	520.0	517.6	511.4	504.7	500.4	504.7	511.4
61.5°	456.3	460.2	468.3	474.0	476.0	474.0	468.3	460.2	456.3	460.2	468.3
62°	412.3	417.1	425.3	430.5	432.9	430.5	425.3	417.1	412.3	417.1	425.3
62.5°	369.3	374.5	383.6	388.4	392.2	388.4	383.6	374.5	369.3	374.5	383.6
63°	326.7	332.9	343.0	347.8	351.6	347.8	343.0	332.9	326.7	332.9	343.0
63.5°	287.0	292.3	303.3	308.5	312.4	308.5	303.3	292.3	287.0	292.3	303.3
64°	249.2	255.0	265.0	270.7	273.6	270.7	265.0	255.0	249.2	255.0	265.0
64.5°	212.9	219.1	228.7	233.9	236.3	233.9	228.7	219.1	212.9	219.1	228.7
65°	178.4	185.1	195.6	201.4	204.3	201.4	195.6	185.1	178.4	185.1	195.6
65.5°	147.8	155.0	163.6	169.8	173.6	169.8	163.6	155.0	147.8	155.0	163.6
66°	118.2	127.7	133.9	140.2	144.0	140.2	133.9	127.7	118.2	127.7	133.9



TEST NUMBER: P776748

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	47.4	61.2	66.5	68.9	69.8	68.9	66.5	61.2	47.4	61.2	66.5
68°	28.7	44.0	48.8	51.7	54.1	51.7	48.8	44.0	28.7	44.0	48.8
68.5°	12.4	29.2	32.0	34.9	39.7	34.9	32.0	29.2	12.4	29.2	32.0
69°	7.7	17.7	21.5	23.0	28.7	23.0	21.5	17.7	7.7	17.7	21.5
69.5°	5.3	10.5	14.4	13.4	18.2	13.4	14.4	10.5	5.3	10.5	14.4
70°	4.3	6.2	7.7	7.2	8.1	7.2	7.7	6.2	4.3	6.2	7.7
70.5°	2.9	3.8	4.8	4.8	3.8	4.8	4.8	3.8	2.9	3.8	4.8
71°	2.4	2.9	3.8	3.8	3.3	3.8	3.8	2.9	2.4	2.9	3.8
71.5°	2.4	2.4	2.9	2.9	2.9	2.9	2.9	2.4	2.4	2.4	2.9
72°	2.4	2.4	2.4	2.9	2.9	2.9	2.4	2.4	2.4	2.4	2.4
72.5°	1.9	2.4	2.4	2.4	2.9	2.4	2.4	2.4	1.9	2.4	2.4
73°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9	2.4
73.5°	1.9	1.9	1.9	2.4	2.4	2.4	1.9	1.9	1.9	1.9	1.9
74°	1.4	1.9	1.9	1.9	2.4	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°	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.4
77°	1.0	1.0	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.4
77.5°	1.0	1.0	1.0	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0
78°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
78.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
79°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
79.5°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
80°	0.5	0.5	0.5	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	1.0	1.0	1.0	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: P776748
CATALOG NUMBER: HCDJBS4050CSD-HCD81TRC-5000lm-4000K

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: P776748

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2368.8	2368.8	2368.8	2368.8	2368.8	2368.8
0.5°	2369.7	2368.3	2369.7	2369.3	2368.3	2368.3
1°	2369.3	2368.3	2369.3	2368.8	2368.3	2367.8
1.5°	2368.8	2367.8	2368.8	2368.3	2367.8	2367.4
2°	2368.3	2367.4	2368.3	2367.8	2366.9	2366.9
2.5°	2367.4	2366.4	2367.4	2366.9	2366.4	2365.9
3°	2366.9	2365.4	2366.9	2366.4	2365.4	2365.4
3.5°	2365.4	2364.5	2365.4	2365.4	2364.5	2364.5
4°	2364.5	2363.1	2364.5	2364.0	2363.5	2363.1
4.5°	2363.1	2362.1	2363.1	2362.6	2362.1	2361.6
5°	2361.6	2360.7	2361.6	2361.1	2360.7	2360.2
5.5°	2360.2	2359.2	2360.2	2359.7	2359.2	2358.7
6°	2358.3	2357.3	2358.3	2357.8	2357.3	2356.8
6.5°	2356.4	2354.9	2356.4	2355.9	2355.4	2354.9
7°	2354.0	2352.5	2354.0	2353.5	2353.0	2353.0
7.5°	2351.1	2350.1	2351.1	2351.1	2350.6	2350.6
8°	2348.7	2347.7	2348.7	2348.2	2348.2	2347.7
8.5°	2345.8	2344.9	2345.8	2345.8	2345.4	2344.9
9°	2343.0	2342.0	2343.0	2343.0	2342.5	2342.5
9.5°	2340.1	2339.1	2340.1	2339.6	2339.6	2339.1
10°	2336.7	2335.8	2336.7	2336.7	2336.3	2336.3
10.5°	2333.4	2332.4	2333.4	2333.4	2332.9	2332.9
11°	2330.0	2328.6	2330.0	2330.0	2329.6	2329.6
11.5°	2326.2	2325.3	2326.2	2326.2	2325.7	2325.7
12°	2322.4	2321.4	2322.4	2322.4	2322.4	2322.4
12.5°	2318.6	2317.6	2318.6	2318.6	2318.6	2318.6
13°	2314.7	2313.8	2314.7	2315.2	2314.7	2315.2
13.5°	2310.9	2309.5	2310.9	2310.9	2310.9	2311.4
14°	2307.1	2305.6	2307.1	2307.1	2307.6	2307.6
14.5°	2303.3	2301.8	2303.3	2303.3	2303.7	2303.7
15°	2299.4	2298.0	2299.4	2299.4	2299.9	2300.4
15.5°	2295.6	2294.6	2295.6	2296.1	2296.6	2297.0
16°	2292.7	2291.8	2292.7	2293.7	2294.2	2294.6
16.5°	2290.3	2289.9	2290.3	2291.8	2292.3	2292.7
17°	2289.4	2288.4	2289.4	2290.8	2291.3	2291.3
17.5°	2288.9	2288.4	2288.9	2289.9	2290.8	2290.8
18°	2289.4	2288.4	2289.4	2289.9	2290.8	2290.8
18.5°	2289.4	2288.4	2289.4	2290.3	2290.8	2290.8
19°	2290.3	2289.4	2290.3	2290.8	2291.3	2291.3
19.5°	2290.8	2289.9	2290.8	2291.3	2291.8	2291.8
20°	2291.3	2290.8	2291.3	2291.8	2292.3	2292.3
20.5°	2292.3	2291.3	2292.3	2292.3	2292.3	2292.7
21°	2292.7	2292.3	2292.7	2292.7	2292.7	2292.7



TEST NUMBER: P776748

CATALOG NUMBER: HCDJBLS4050CSD-HCD81TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2293.7	2293.7	2293.7	2293.2	2293.2	2293.7
23°	2294.2	2293.7	2294.2	2293.2	2293.2	2293.7
23.5°	2293.7	2293.7	2293.7	2292.7	2293.2	2293.7
24°	2293.7	2293.7	2293.7	2292.3	2292.7	2293.2
24.5°	2293.7	2293.7	2293.7	2292.3	2292.3	2293.2
25°	2293.2	2293.2	2293.2	2291.8	2291.8	2292.7
25.5°	2293.2	2293.2	2293.2	2291.3	2291.3	2292.3
26°	2292.7	2292.7	2292.7	2290.3	2290.8	2291.3
26.5°	2292.3	2292.3	2292.3	2289.9	2290.3	2290.8
27°	2291.8	2292.3	2291.8	2289.4	2289.9	2290.8
27.5°	2291.8	2292.3	2291.8	2289.4	2290.3	2290.8
28°	2292.3	2292.7	2292.3	2289.9	2290.3	2291.3
28.5°	2292.7	2293.2	2292.7	2289.9	2290.8	2291.8
29°	2293.2	2293.2	2293.2	2289.9	2290.8	2291.8
29.5°	2292.7	2292.7	2292.7	2289.9	2290.3	2291.3
30°	2291.8	2291.8	2291.8	2288.9	2289.4	2289.9
30.5°	2290.3	2289.9	2290.3	2287.5	2287.5	2288.0
31°	2287.5	2287.0	2287.5	2284.6	2284.6	2285.1
31.5°	2284.1	2283.2	2284.1	2281.7	2281.3	2281.3
32°	2279.3	2278.4	2279.3	2276.9	2276.5	2276.0
32.5°	2273.6	2272.6	2273.6	2271.7	2270.7	2270.3
33°	2266.9	2265.5	2266.9	2265.5	2264.0	2263.6
33.5°	2259.2	2257.8	2259.2	2258.3	2256.4	2255.9
34°	2250.6	2248.7	2250.6	2250.2	2248.2	2246.8
34.5°	2241.1	2239.2	2241.1	2241.1	2238.7	2237.2
35°	2230.5	2228.2	2230.5	2231.0	2228.2	2226.7
35.5°	2219.5	2217.2	2219.5	2220.0	2217.6	2215.7
36°	2207.6	2204.7	2207.6	2208.5	2205.7	2203.8
36.5°	2194.7	2191.8	2194.7	2196.1	2193.2	2190.8
37°	2180.8	2177.5	2180.8	2182.2	2179.4	2177.0
37.5°	2165.5	2162.1	2165.5	2166.9	2165.0	2162.1
38°	2149.2	2145.9	2149.2	2151.1	2148.8	2145.9
38.5°	2131.5	2127.7	2131.5	2133.9	2131.5	2128.2
39°	2112.4	2108.6	2112.4	2114.8	2113.4	2109.5
39.5°	2091.3	2087.5	2091.3	2094.2	2093.3	2089.9
40°	2069.3	2066.0	2069.3	2072.2	2071.3	2068.4
40.5°	2045.9	2042.1	2045.9	2048.8	2048.3	2045.9
41°	2020.6	2017.7	2020.6	2023.4	2023.9	2022.0
41.5°	1994.2	1991.9	1994.2	1997.1	1998.1	1996.6
42°	1966.5	1965.1	1966.5	1968.9	1970.8	1970.3
42.5°	1937.8	1936.4	1937.8	1939.7	1942.6	1943.1
43°	1907.7	1906.7	1907.7	1909.1	1912.4	1913.9
43.5°	1876.1	1875.6	1876.1	1876.6	1881.4	1883.3

TEST NUMBER: P776748

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1772.8	1774.2	1772.8	1772.8	1779.5	1783.8
45.5°	1735.9	1737.4	1735.9	1735.0	1742.6	1747.4
46°	1697.7	1700.1	1697.7	1696.7	1704.4	1709.1
46.5°	1658.0	1660.4	1658.0	1657.0	1664.7	1669.0
47°	1616.3	1618.3	1616.3	1615.4	1622.6	1626.9
47.5°	1569.9	1571.9	1569.9	1568.5	1575.7	1580.0
48°	1522.6	1524.5	1522.6	1520.2	1525.9	1529.8
48.5°	1477.6	1480.0	1477.6	1475.7	1481.0	1482.9
49°	1436.5	1437.9	1436.5	1435.1	1437.9	1438.9
49.5°	1394.4	1395.3	1394.4	1393.4	1394.9	1395.3
50°	1352.3	1353.7	1352.3	1350.9	1350.9	1351.3
50.5°	1311.2	1312.1	1311.2	1310.2	1310.7	1310.2
51°	1273.4	1272.4	1273.4	1272.4	1272.9	1272.9
51.5°	1237.5	1238.0	1237.5	1236.5	1237.0	1237.5
52°	1205.0	1206.4	1205.0	1203.5	1203.5	1203.5
52.5°	1174.4	1175.8	1174.4	1172.4	1172.9	1172.4
53°	1146.6	1147.6	1146.6	1144.2	1144.2	1144.7
53.5°	1120.3	1121.3	1120.3	1118.4	1118.4	1118.4
54°	1094.5	1094.5	1094.5	1092.6	1092.6	1093.0
54.5°	1067.2	1067.7	1067.2	1065.8	1065.8	1065.8
55°	1038.0	1038.0	1038.0	1035.6	1035.6	1035.6
55.5°	1004.5	1003.6	1004.5	1001.2	1000.7	1000.7
56°	966.3	965.8	966.3	963.4	962.0	961.0
56.5°	925.1	925.1	925.1	922.3	920.3	919.9
57°	882.1	881.1	882.1	879.2	876.8	876.3
57.5°	837.6	837.6	837.6	833.8	831.9	830.9
58°	792.6	793.6	792.6	788.3	785.5	785.5
58.5°	746.7	748.6	746.7	741.4	739.1	737.6
59°	699.8	702.2	699.8	694.6	691.7	689.8
59.5°	653.9	656.8	653.9	647.2	643.9	641.5
60°	607.5	610.4	607.5	601.3	597.0	594.1
60.5°	562.5	565.4	562.5	555.8	550.1	546.8
61°	517.6	520.0	517.6	511.4	504.7	500.4
61.5°	474.0	476.0	474.0	468.3	460.2	456.3
62°	430.5	432.9	430.5	425.3	417.1	412.3
62.5°	388.4	392.2	388.4	383.6	374.5	369.3
63°	347.8	351.6	347.8	343.0	332.9	326.7
63.5°	308.5	312.4	308.5	303.3	292.3	287.0
64°	270.7	273.6	270.7	265.0	255.0	249.2
64.5°	233.9	236.3	233.9	228.7	219.1	212.9
65°	201.4	204.3	201.4	195.6	185.1	178.4
65.5°	169.8	173.6	169.8	163.6	155.0	147.8
66°	140.2	144.0	140.2	133.9	127.7	118.2



TEST NUMBER: P776748

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	68.9	69.8	68.9	66.5	61.2	47.4
68°	51.7	54.1	51.7	48.8	44.0	28.7
68.5°	34.9	39.7	34.9	32.0	29.2	12.4
69°	23.0	28.7	23.0	21.5	17.7	7.7
69.5°	13.4	18.2	13.4	14.4	10.5	5.3
70°	7.2	8.1	7.2	7.7	6.2	4.3
70.5°	4.8	3.8	4.8	4.8	3.8	2.9
71°	3.8	3.3	3.8	3.8	2.9	2.4
71.5°	2.9	2.9	2.9	2.9	2.4	2.4
72°	2.9	2.9	2.9	2.4	2.4	2.4
72.5°	2.4	2.9	2.4	2.4	2.4	1.9
73°	2.4	2.4	2.4	2.4	1.9	1.9
73.5°	2.4	2.4	2.4	1.9	1.9	1.9
74°	1.9	2.4	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	1.0	1.0
77°	1.4	1.4	1.4	1.4	1.0	1.0
77.5°	1.4	1.4	1.4	1.0	1.0	1.0
78°	1.0	1.0	1.0	1.0	1.0	1.0
78.5°	1.0	1.0	1.0	1.0	1.0	1.0
79°	1.0	1.0	1.0	1.0	1.0	1.0
79.5°	1.0	1.0	1.0	1.0	0.5	0.5
80°	1.0	1.0	1.0	0.5	0.5	0.5
80.5°	1.0	1.0	1.0	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: P776748

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.0	0.0	0.0

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

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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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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Scaled Data Report





21.5°	2293.2	2293.2	2292.7	2293.2	2292.7	2293.2	2292.7	2293.2	2293.2	2293.2	2292.7
22°	2293.7	2293.2	2293.2	2293.2	2293.2	2293.2	2293.2	2293.2	2293.7	2293.2	2293.2



44°	1851.2	1848.8	1843.1	1842.6	1843.1	1842.6	1843.1	1848.8	1851.2	1848.8	1843.1
44.5°	1818.2	1815.3	1808.6	1808.6	1809.1	1808.6	1808.6	1815.3	1818.2	1815.3	1808.6



66.5°	94.7	102.4	109.1	113.8	115.3	113.8	109.1	102.4	94.7	102.4	109.1
67°	70.8	79.9	85.1	89.9	90.9	89.9	85.1	79.9	70.8	79.9	85.1



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°	2293.2	2292.7	2293.2	2292.7	2293.2	2293.2
22°	2293.2	2293.2	2293.2	2293.2	2293.2	2293.7



44°	1842.6	1843.1	1842.6	1843.1	1848.8	1851.2
44.5°	1808.6	1809.1	1808.6	1808.6	1815.3	1818.2

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66.5°	113.8	115.3	113.8	109.1	102.4	94.7
67°	89.9	90.9	89.9	85.1	79.9	70.8

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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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Scaled Data Report



(END OF REPORT)