

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: P776753

Luminaire Tested: HCDJBS4050CSD-HCD81TRH-5000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776753
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B043-HCD81TRH)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL54050CSD-HCD81TRH-5000lm-4000K
Description: 8 INCH ROUND SHALLOW-WIDE HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

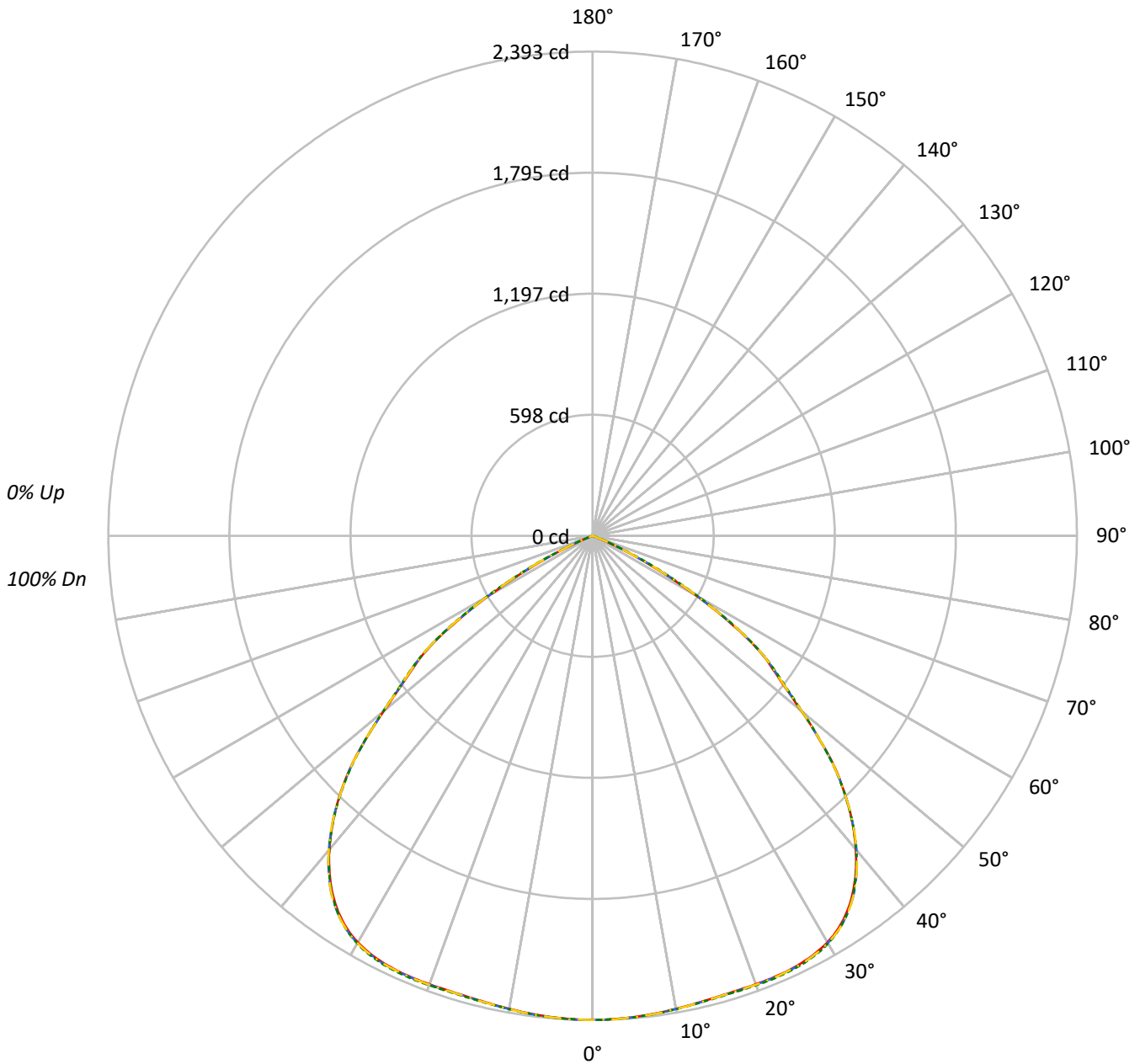
Lumens per Lamp: N/A
Luminaire Lumens: 5812.3 lumens
Efficiency: N/A
Efficacy: 121.1 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.42 / 1.43
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

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



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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	112	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	92	87	84	88	85	82	86	83	80	78								
3	96	87	80	75	93	85	79	74	82	77	73	80	75	71	77	74	70	68								
4	88	78	70	65	86	77	70	64	74	68	63	72	67	63	70	66	62	60								
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53								
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47								
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	40	36	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°	73062	73062	73062	73062
5°	73163	73194	73163	73194
10°	73594	73653	73594	73653
15°	74625	74729	74625	74729
20°	76630	76802	76630	76802
25°	79308	79534	79308	79534
30°	81781	82017	81781	82017
35°	82644	82823	82644	82823
40°	80634	80669	80634	80669
45°	75205	75101	75205	75101
50°	63821	64273	63821	64273
55°	54559	54862	54559	54862
60°	35879	37284	35879	37284
65°	12649	15243	12649	15243
70°	214	1152	214	1152
75°	59	59	59	59
80°	0	88	0	88
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 75205 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.5	3.9
10°-20°	670.1	11.5
20°-30°	1088.5	18.7
30°-40°	1382.1	23.8
40°-50°	1325.5	22.8
50°-60°	892.1	15.3
60°-70°	225.7	3.9
70°-80°	1.0	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°	1986.1	34.2
0°-40°	3368.1	57.9
0°-60°	5585.7	96.1
0°-90°	5812.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5812.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2393	2393	2393	2393	2393	
5°	2387	2388	2387	2388	2387	227
15°	2361	2364	2361	2364	2361	670
25°	2354	2361	2354	2361	2354	1087
35°	2217	2222	2217	2222	2217	1379
45°	1742	1739	1742	1739	1742	1325
55°	1025	1031	1025	1031	1025	886
65°	175	211	175	211	175	210
75°	0	0	0	0	0	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°	2393.1	2393.1	2393.1	2393.1	2393.1	2393.1	2393.1	2393.1	2393.1	2393.1	2393.1
0.5°	2392.6	2392.6	2393.1	2393.5	2393.1	2393.5	2393.1	2392.6	2392.6	2392.6	2393.1
1°	2392.6	2392.6	2393.1	2393.5	2392.6	2393.5	2393.1	2392.6	2392.6	2392.6	2393.1
1.5°	2392.1	2392.1	2392.6	2393.1	2392.6	2393.1	2392.6	2392.1	2392.1	2392.1	2392.6
2°	2391.6	2391.6	2392.6	2392.6	2392.1	2392.6	2392.6	2391.6	2391.6	2391.6	2392.6
2.5°	2391.1	2391.6	2392.1	2392.6	2391.6	2392.6	2392.1	2391.6	2391.1	2391.6	2392.1
3°	2390.7	2390.7	2391.6	2391.6	2391.1	2391.6	2391.6	2390.7	2390.7	2390.7	2391.6
3.5°	2389.7	2390.2	2390.7	2391.1	2390.7	2391.1	2390.7	2390.2	2389.7	2390.2	2390.7
4°	2389.2	2389.2	2389.7	2390.7	2389.7	2390.7	2389.7	2389.2	2389.2	2389.2	2389.7
4.5°	2388.3	2388.8	2389.2	2389.7	2389.2	2389.7	2389.2	2388.8	2388.3	2388.8	2389.2
5°	2387.3	2387.8	2388.3	2388.8	2388.3	2388.8	2388.3	2387.8	2387.3	2387.8	2388.3
5.5°	2386.4	2386.4	2387.3	2387.8	2387.3	2387.8	2387.3	2386.4	2386.4	2386.4	2387.3
6°	2384.9	2385.4	2385.9	2386.8	2386.4	2386.8	2385.9	2385.4	2384.9	2385.4	2385.9
6.5°	2384.0	2384.4	2384.9	2385.9	2384.9	2385.9	2384.9	2384.4	2384.0	2384.4	2384.9
7°	2382.5	2383.0	2384.0	2384.4	2384.0	2384.4	2384.0	2383.0	2382.5	2383.0	2384.0
7.5°	2381.1	2381.6	2382.5	2383.0	2382.5	2383.0	2382.5	2381.6	2381.1	2381.6	2382.5
8°	2380.1	2380.1	2381.1	2382.1	2381.6	2382.1	2381.1	2380.1	2380.1	2380.1	2381.1
8.5°	2378.7	2378.7	2379.7	2380.1	2380.1	2380.1	2379.7	2378.7	2378.7	2378.7	2379.7
9°	2376.8	2377.3	2378.2	2379.2	2378.7	2379.2	2378.2	2377.3	2376.8	2377.3	2378.2
9.5°	2375.4	2375.8	2376.8	2377.7	2377.3	2377.7	2376.8	2375.8	2375.4	2375.8	2376.8
10°	2373.9	2374.4	2375.4	2376.3	2375.8	2376.3	2375.4	2374.4	2373.9	2374.4	2375.4
10.5°	2372.5	2373.0	2373.4	2374.9	2374.4	2374.9	2373.4	2373.0	2372.5	2373.0	2373.4
11°	2371.0	2371.0	2372.0	2373.4	2373.0	2373.4	2372.0	2371.0	2371.0	2371.0	2372.0
11.5°	2369.6	2369.6	2370.6	2372.0	2371.5	2372.0	2370.6	2369.6	2369.6	2369.6	2370.6
12°	2368.2	2368.2	2369.1	2370.6	2370.6	2370.6	2369.1	2368.2	2368.2	2368.2	2369.1
12.5°	2366.7	2366.7	2368.2	2369.1	2369.1	2369.1	2368.2	2366.7	2366.7	2366.7	2368.2
13°	2365.3	2365.8	2366.7	2367.7	2368.2	2367.7	2366.7	2365.8	2365.3	2365.8	2366.7
13.5°	2363.9	2364.3	2365.8	2366.7	2366.7	2366.7	2365.8	2364.3	2363.9	2364.3	2365.8
14°	2362.9	2363.4	2364.3	2365.8	2365.8	2365.8	2364.3	2363.4	2362.9	2363.4	2364.3
14.5°	2362.0	2362.4	2363.4	2364.8	2365.3	2364.8	2363.4	2362.4	2362.0	2362.4	2363.4
15°	2361.0	2361.5	2362.4	2364.3	2364.3	2364.3	2362.4	2361.5	2361.0	2361.5	2362.4
15.5°	2360.0	2360.5	2362.0	2363.4	2363.9	2363.4	2362.0	2360.5	2360.0	2360.5	2362.0
16°	2359.6	2360.0	2361.0	2362.9	2363.4	2362.9	2361.0	2360.0	2359.6	2360.0	2361.0
16.5°	2359.1	2359.6	2360.5	2362.4	2362.9	2362.4	2360.5	2359.6	2359.1	2359.6	2360.5
17°	2358.6	2359.1	2360.5	2362.4	2362.9	2362.4	2360.5	2359.1	2358.6	2359.1	2360.5
17.5°	2358.6	2359.1	2360.0	2362.4	2362.9	2362.4	2360.0	2359.1	2358.6	2359.1	2360.0
18°	2358.1	2358.6	2360.0	2362.4	2362.9	2362.4	2360.0	2358.6	2358.1	2358.6	2360.0
18.5°	2358.1	2358.6	2360.0	2362.4	2362.9	2362.4	2360.0	2358.6	2358.1	2358.6	2360.0
19°	2358.6	2358.6	2360.0	2362.9	2363.4	2362.9	2360.0	2358.6	2358.6	2358.6	2360.0
19.5°	2358.6	2359.1	2360.5	2362.9	2363.9	2362.9	2360.5	2359.1	2358.6	2359.1	2360.5
20°	2358.6	2359.1	2360.5	2363.4	2363.9	2363.4	2360.5	2359.1	2358.6	2359.1	2360.5
20.5°	2359.1	2359.1	2361.0	2363.4	2364.3	2363.4	2361.0	2359.1	2359.1	2359.1	2361.0
21°	2359.1	2359.6	2361.0	2363.9	2364.3	2363.9	2361.0	2359.6	2359.1	2359.6	2361.0



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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°	2358.6	2359.1	2361.0	2363.9	2364.8	2363.9	2361.0	2359.1	2358.6	2359.1	2361.0
23°	2358.1	2358.6	2360.5	2363.4	2364.3	2363.4	2360.5	2358.6	2358.1	2358.6	2360.5
23.5°	2357.6	2358.1	2360.0	2362.9	2363.9	2362.9	2360.0	2358.1	2357.6	2358.1	2360.0
24°	2357.2	2357.2	2359.1	2362.4	2363.4	2362.4	2359.1	2357.2	2357.2	2357.2	2359.1
24.5°	2355.7	2356.2	2358.1	2361.5	2362.4	2361.5	2358.1	2356.2	2355.7	2356.2	2358.1
25°	2354.3	2354.8	2357.2	2360.5	2361.0	2360.5	2357.2	2354.8	2354.3	2354.8	2357.2
25.5°	2352.9	2353.3	2355.7	2359.1	2359.6	2359.1	2355.7	2353.3	2352.9	2353.3	2355.7
26°	2350.9	2351.4	2353.8	2357.2	2358.1	2357.2	2353.8	2351.4	2350.9	2351.4	2353.8
26.5°	2348.6	2349.0	2351.9	2355.3	2355.7	2355.3	2351.9	2349.0	2348.6	2349.0	2351.9
27°	2346.2	2346.6	2349.0	2352.4	2352.9	2352.4	2349.0	2346.6	2346.2	2346.6	2349.0
27.5°	2342.8	2343.8	2346.2	2349.5	2350.0	2349.5	2346.2	2343.8	2342.8	2343.8	2346.2
28°	2339.5	2339.9	2342.8	2346.2	2346.6	2346.2	2342.8	2339.9	2339.5	2339.9	2342.8
28.5°	2335.6	2336.1	2339.0	2342.3	2342.3	2342.3	2339.0	2336.1	2335.6	2336.1	2339.0
29°	2330.8	2331.8	2334.7	2337.5	2338.0	2337.5	2334.7	2331.8	2330.8	2331.8	2334.7
29.5°	2325.6	2326.5	2329.9	2332.8	2332.8	2332.8	2329.9	2326.5	2325.6	2326.5	2329.9
30°	2319.8	2320.8	2324.2	2327.0	2326.5	2327.0	2324.2	2320.8	2319.8	2320.8	2324.2
30.5°	2313.6	2314.6	2317.9	2320.8	2320.3	2320.8	2317.9	2314.6	2313.6	2314.6	2317.9
31°	2306.4	2307.4	2311.2	2313.6	2312.7	2313.6	2311.2	2307.4	2306.4	2307.4	2311.2
31.5°	2298.3	2299.7	2303.6	2305.5	2304.5	2305.5	2303.6	2299.7	2298.3	2299.7	2303.6
32°	2289.2	2291.1	2295.0	2296.9	2295.9	2296.9	2295.0	2291.1	2289.2	2291.1	2295.0
32.5°	2279.6	2281.6	2285.4	2286.8	2285.9	2286.8	2285.4	2281.6	2279.6	2281.6	2285.4
33°	2269.1	2271.0	2275.3	2276.3	2274.9	2276.3	2275.3	2271.0	2269.1	2271.0	2275.3
33.5°	2257.2	2259.6	2263.9	2264.8	2263.4	2264.8	2263.9	2259.6	2257.2	2259.6	2263.9
34°	2245.2	2247.6	2251.9	2252.4	2250.5	2252.4	2251.9	2247.6	2245.2	2247.6	2251.9
34.5°	2231.3	2234.2	2238.5	2238.5	2236.6	2238.5	2238.5	2234.2	2231.3	2234.2	2238.5
35°	2217.4	2219.8	2224.6	2224.1	2222.2	2224.1	2224.6	2219.8	2217.4	2219.8	2224.6
35.5°	2202.1	2204.5	2209.3	2208.8	2206.9	2208.8	2209.3	2204.5	2202.1	2204.5	2209.3
36°	2185.9	2188.7	2193.5	2192.6	2190.2	2192.6	2193.5	2188.7	2185.9	2188.7	2193.5
36.5°	2169.1	2171.5	2176.3	2175.3	2172.5	2175.3	2176.3	2171.5	2169.1	2171.5	2176.3
37°	2150.4	2153.3	2157.6	2157.1	2154.3	2157.1	2157.6	2153.3	2150.4	2153.3	2157.6
37.5°	2131.8	2134.2	2139.0	2137.5	2134.7	2137.5	2139.0	2134.2	2131.8	2134.2	2139.0
38°	2111.7	2114.6	2118.9	2117.4	2114.1	2117.4	2118.9	2114.6	2111.7	2114.6	2118.9
38.5°	2090.6	2093.5	2097.8	2095.9	2093.0	2095.9	2097.8	2093.5	2090.6	2093.5	2097.8
39°	2069.6	2072.0	2075.8	2074.4	2071.0	2074.4	2075.8	2072.0	2069.6	2072.0	2075.8
39.5°	2047.1	2049.0	2052.8	2051.4	2048.0	2051.4	2052.8	2049.0	2047.1	2049.0	2052.8
40°	2023.2	2025.1	2028.9	2027.5	2024.1	2027.5	2028.9	2025.1	2023.2	2025.1	2028.9
40.5°	1999.2	2000.7	2004.0	2002.6	1999.2	2002.6	2004.0	2000.7	1999.2	2000.7	2004.0
41°	1973.9	1975.3	1978.2	1977.2	1973.9	1977.2	1978.2	1975.3	1973.9	1975.3	1978.2
41.5°	1948.0	1949.0	1951.9	1950.0	1947.6	1950.0	1951.9	1949.0	1948.0	1949.0	1951.9
42°	1921.2	1922.2	1924.1	1923.2	1920.8	1923.2	1924.1	1922.2	1921.2	1922.2	1924.1
42.5°	1894.0	1894.0	1895.9	1894.9	1892.5	1894.9	1895.9	1894.0	1894.0	1894.0	1895.9
43°	1865.3	1865.3	1866.7	1865.7	1863.3	1865.7	1866.7	1865.3	1865.3	1865.3	1866.7
43.5°	1835.6	1835.6	1836.1	1835.1	1833.7	1835.1	1836.1	1835.6	1835.6	1835.6	1836.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1741.8	1740.4	1740.4	1739.9	1739.4	1739.9	1740.4	1740.4	1741.8	1740.4	1740.4
45.5°	1708.3	1706.9	1706.4	1705.9	1705.4	1705.9	1706.4	1706.9	1708.3	1706.9	1706.4
46°	1673.8	1671.9	1671.5	1671.5	1671.0	1671.5	1671.5	1671.9	1673.8	1671.9	1671.5
46.5°	1638.0	1636.0	1635.6	1635.1	1634.6	1635.1	1635.6	1636.0	1638.0	1636.0	1635.6
47°	1599.7	1597.8	1596.3	1595.4	1594.4	1595.4	1596.3	1597.8	1599.7	1597.8	1596.3
47.5°	1558.0	1556.1	1554.2	1554.7	1554.2	1554.7	1554.2	1556.1	1558.0	1556.1	1554.2
48°	1514.0	1513.5	1514.5	1515.0	1515.5	1515.0	1514.5	1513.5	1514.0	1513.5	1514.5
48.5°	1471.9	1471.9	1473.8	1474.3	1474.3	1474.3	1473.8	1471.9	1471.9	1471.9	1473.8
49°	1431.2	1430.8	1432.2	1432.7	1433.2	1432.7	1432.2	1430.8	1431.2	1430.8	1432.2
49.5°	1387.2	1387.7	1390.6	1392.5	1393.0	1392.5	1390.6	1387.7	1387.2	1387.7	1390.6
50°	1343.7	1345.6	1349.4	1351.8	1353.2	1351.8	1349.4	1345.6	1343.7	1345.6	1349.4
50.5°	1303.5	1305.9	1309.7	1312.1	1313.0	1312.1	1309.7	1305.9	1303.5	1305.9	1309.7
51°	1266.6	1268.1	1271.9	1273.8	1274.8	1273.8	1271.9	1268.1	1266.6	1268.1	1271.9
51.5°	1231.2	1232.2	1236.5	1239.8	1241.3	1239.8	1236.5	1232.2	1231.2	1232.2	1236.5
52°	1196.3	1198.2	1202.5	1206.8	1208.7	1206.8	1202.5	1198.2	1196.3	1198.2	1202.5
52.5°	1164.7	1166.6	1171.4	1175.7	1178.6	1175.7	1171.4	1166.6	1164.7	1166.6	1171.4
53°	1135.5	1137.4	1142.7	1147.0	1148.9	1147.0	1142.7	1137.4	1135.5	1137.4	1142.7
53.5°	1108.2	1110.2	1114.9	1118.8	1120.7	1118.8	1114.9	1110.2	1108.2	1110.2	1114.9
54°	1082.4	1083.8	1088.1	1090.5	1091.5	1090.5	1088.1	1083.8	1082.4	1083.8	1088.1
54.5°	1055.1	1056.6	1059.9	1062.8	1063.3	1062.8	1059.9	1056.6	1055.1	1056.6	1059.9
55°	1025.0	1026.4	1029.8	1031.7	1030.7	1031.7	1029.8	1026.4	1025.0	1026.4	1029.8
55.5°	990.0	991.5	995.3	997.2	996.7	997.2	995.3	991.5	990.0	991.5	995.3
56°	951.3	953.2	958.0	960.4	959.9	960.4	958.0	953.2	951.3	953.2	958.0
56.5°	910.1	913.0	917.3	921.1	920.7	921.1	917.3	913.0	910.1	913.0	917.3
57°	867.1	869.5	875.7	878.1	878.6	878.1	875.7	869.5	867.1	869.5	875.7
57.5°	822.1	825.0	831.7	834.5	835.0	834.5	831.7	825.0	822.1	825.0	831.7
58°	776.6	779.5	786.2	790.5	791.5	790.5	786.2	779.5	776.6	779.5	786.2
58.5°	730.2	732.6	739.8	745.0	746.5	745.0	739.8	732.6	730.2	732.6	739.8
59°	683.3	685.7	692.4	699.6	701.5	699.6	692.4	685.7	683.3	685.7	692.4
59.5°	635.5	638.3	646.0	654.1	656.0	654.1	646.0	638.3	635.5	638.3	646.0
60°	587.6	591.9	599.6	609.6	610.6	609.6	599.6	591.9	587.6	591.9	599.6
60.5°	540.7	544.6	555.1	564.2	566.1	564.2	555.1	544.6	540.7	544.6	555.1
61°	494.8	499.6	511.1	519.7	522.1	519.7	511.1	499.6	494.8	499.6	511.1
61.5°	450.8	455.1	467.5	475.2	479.5	475.2	467.5	455.1	450.8	455.1	467.5
62°	407.2	411.5	424.4	432.1	436.9	432.1	424.4	411.5	407.2	411.5	424.4
62.5°	363.7	369.4	382.8	390.5	395.7	390.5	382.8	369.4	363.7	369.4	382.8
63°	321.1	328.3	342.1	350.3	356.5	350.3	342.1	328.3	321.1	328.3	342.1
63.5°	281.8	288.1	302.9	311.5	317.7	311.5	302.9	288.1	281.8	288.1	302.9
64°	244.5	251.2	264.6	274.7	280.4	274.7	264.6	251.2	244.5	251.2	264.6
64.5°	209.1	215.3	228.3	239.7	245.5	239.7	228.3	215.3	209.1	215.3	228.3
65°	175.1	183.8	194.8	205.8	211.0	205.8	194.8	183.8	175.1	183.8	194.8
65.5°	145.5	153.6	163.2	174.2	179.0	174.2	163.2	153.6	145.5	153.6	163.2
66°	117.2	125.4	134.9	145.5	147.9	145.5	134.9	125.4	117.2	125.4	134.9



TEST NUMBER: P776753

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	46.9	59.8	64.6	73.7	74.2	73.7	64.6	59.8	46.9	59.8	64.6
68°	28.7	42.1	46.9	56.0	55.0	56.0	46.9	42.1	28.7	42.1	46.9
68.5°	12.4	27.3	33.0	39.7	44.0	39.7	33.0	27.3	12.4	27.3	33.0
69°	6.7	16.7	21.5	25.8	34.0	25.8	21.5	16.7	6.7	16.7	21.5
69.5°	4.3	8.1	12.0	15.3	23.4	15.3	12.0	8.1	4.3	8.1	12.0
70°	2.4	4.8	5.7	6.7	12.9	6.7	5.7	4.8	2.4	4.8	5.7
70.5°	1.0	2.4	3.3	2.9	3.8	2.9	3.3	2.4	1.0	2.4	3.3
71°	1.0	1.4	1.9	1.4	1.4	1.4	1.9	1.4	1.0	1.4	1.9
71.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
72°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
73°	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	1.0	1.0
73.5°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
74°	0.5	0.5	0.5	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5
74.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
80.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
81°	0.0	0.0	0.0	0.0	0.5	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: P776753

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-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: P776753

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2393.1	2393.1	2393.1	2393.1	2393.1	2393.1
0.5°	2393.5	2393.1	2393.5	2393.1	2392.6	2392.6
1°	2393.5	2392.6	2393.5	2393.1	2392.6	2392.6
1.5°	2393.1	2392.6	2393.1	2392.6	2392.1	2392.1
2°	2392.6	2392.1	2392.6	2392.6	2391.6	2391.6
2.5°	2392.6	2391.6	2392.6	2392.1	2391.6	2391.1
3°	2391.6	2391.1	2391.6	2391.6	2390.7	2390.7
3.5°	2391.1	2390.7	2391.1	2390.7	2390.2	2389.7
4°	2390.7	2389.7	2390.7	2389.7	2389.2	2389.2
4.5°	2389.7	2389.2	2389.7	2389.2	2388.8	2388.3
5°	2388.8	2388.3	2388.8	2388.3	2387.8	2387.3
5.5°	2387.8	2387.3	2387.8	2387.3	2386.4	2386.4
6°	2386.8	2386.4	2386.8	2385.9	2385.4	2384.9
6.5°	2385.9	2384.9	2385.9	2384.9	2384.4	2384.0
7°	2384.4	2384.0	2384.4	2384.0	2383.0	2382.5
7.5°	2383.0	2382.5	2383.0	2382.5	2381.6	2381.1
8°	2382.1	2381.6	2382.1	2381.1	2380.1	2380.1
8.5°	2380.1	2380.1	2380.1	2379.7	2378.7	2378.7
9°	2379.2	2378.7	2379.2	2378.2	2377.3	2376.8
9.5°	2377.7	2377.3	2377.7	2376.8	2375.8	2375.4
10°	2376.3	2375.8	2376.3	2375.4	2374.4	2373.9
10.5°	2374.9	2374.4	2374.9	2373.4	2373.0	2372.5
11°	2373.4	2373.0	2373.4	2372.0	2371.0	2371.0
11.5°	2372.0	2371.5	2372.0	2370.6	2369.6	2369.6
12°	2370.6	2370.6	2370.6	2369.1	2368.2	2368.2
12.5°	2369.1	2369.1	2369.1	2368.2	2366.7	2366.7
13°	2367.7	2368.2	2367.7	2366.7	2365.8	2365.3
13.5°	2366.7	2366.7	2366.7	2365.8	2364.3	2363.9
14°	2365.8	2365.8	2365.8	2364.3	2363.4	2362.9
14.5°	2364.8	2365.3	2364.8	2363.4	2362.4	2362.0
15°	2364.3	2364.3	2364.3	2362.4	2361.5	2361.0
15.5°	2363.4	2363.9	2363.4	2362.0	2360.5	2360.0
16°	2362.9	2363.4	2362.9	2361.0	2360.0	2359.6
16.5°	2362.4	2362.9	2362.4	2360.5	2359.6	2359.1
17°	2362.4	2362.9	2362.4	2360.5	2359.1	2358.6
17.5°	2362.4	2362.9	2362.4	2360.0	2359.1	2358.6
18°	2362.4	2362.9	2362.4	2360.0	2358.6	2358.1
18.5°	2362.4	2362.9	2362.4	2360.0	2358.6	2358.1
19°	2362.9	2363.4	2362.9	2360.0	2358.6	2358.6
19.5°	2362.9	2363.9	2362.9	2360.5	2359.1	2358.6
20°	2363.4	2363.9	2363.4	2360.5	2359.1	2358.6
20.5°	2363.4	2364.3	2363.4	2361.0	2359.1	2359.1
21°	2363.9	2364.3	2363.9	2361.0	2359.6	2359.1



TEST NUMBER: P776753

CATALOG NUMBER: HCDJBLS4050CSD-HCD81TRH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2363.9	2364.8	2363.9	2361.0	2359.1	2358.6
23°	2363.4	2364.3	2363.4	2360.5	2358.6	2358.1
23.5°	2362.9	2363.9	2362.9	2360.0	2358.1	2357.6
24°	2362.4	2363.4	2362.4	2359.1	2357.2	2357.2
24.5°	2361.5	2362.4	2361.5	2358.1	2356.2	2355.7
25°	2360.5	2361.0	2360.5	2357.2	2354.8	2354.3
25.5°	2359.1	2359.6	2359.1	2355.7	2353.3	2352.9
26°	2357.2	2358.1	2357.2	2353.8	2351.4	2350.9
26.5°	2355.3	2355.7	2355.3	2351.9	2349.0	2348.6
27°	2352.4	2352.9	2352.4	2349.0	2346.6	2346.2
27.5°	2349.5	2350.0	2349.5	2346.2	2343.8	2342.8
28°	2346.2	2346.6	2346.2	2342.8	2339.9	2339.5
28.5°	2342.3	2342.3	2342.3	2339.0	2336.1	2335.6
29°	2337.5	2338.0	2337.5	2334.7	2331.8	2330.8
29.5°	2332.8	2332.8	2332.8	2329.9	2326.5	2325.6
30°	2327.0	2326.5	2327.0	2324.2	2320.8	2319.8
30.5°	2320.8	2320.3	2320.8	2317.9	2314.6	2313.6
31°	2313.6	2312.7	2313.6	2311.2	2307.4	2306.4
31.5°	2305.5	2304.5	2305.5	2303.6	2299.7	2298.3
32°	2296.9	2295.9	2296.9	2295.0	2291.1	2289.2
32.5°	2286.8	2285.9	2286.8	2285.4	2281.6	2279.6
33°	2276.3	2274.9	2276.3	2275.3	2271.0	2269.1
33.5°	2264.8	2263.4	2264.8	2263.9	2259.6	2257.2
34°	2252.4	2250.5	2252.4	2251.9	2247.6	2245.2
34.5°	2238.5	2236.6	2238.5	2238.5	2234.2	2231.3
35°	2224.1	2222.2	2224.1	2224.6	2219.8	2217.4
35.5°	2208.8	2206.9	2208.8	2209.3	2204.5	2202.1
36°	2192.6	2190.2	2192.6	2193.5	2188.7	2185.9
36.5°	2175.3	2172.5	2175.3	2176.3	2171.5	2169.1
37°	2157.1	2154.3	2157.1	2157.6	2153.3	2150.4
37.5°	2137.5	2134.7	2137.5	2139.0	2134.2	2131.8
38°	2117.4	2114.1	2117.4	2118.9	2114.6	2111.7
38.5°	2095.9	2093.0	2095.9	2097.8	2093.5	2090.6
39°	2074.4	2071.0	2074.4	2075.8	2072.0	2069.6
39.5°	2051.4	2048.0	2051.4	2052.8	2049.0	2047.1
40°	2027.5	2024.1	2027.5	2028.9	2025.1	2023.2
40.5°	2002.6	1999.2	2002.6	2004.0	2000.7	1999.2
41°	1977.2	1973.9	1977.2	1978.2	1975.3	1973.9
41.5°	1950.0	1947.6	1950.0	1951.9	1949.0	1948.0
42°	1923.2	1920.8	1923.2	1924.1	1922.2	1921.2
42.5°	1894.9	1892.5	1894.9	1895.9	1894.0	1894.0
43°	1865.7	1863.3	1865.7	1866.7	1865.3	1865.3
43.5°	1835.1	1833.7	1835.1	1836.1	1835.6	1835.6



TEST NUMBER: P776753

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1739.9	1739.4	1739.9	1740.4	1740.4	1741.8
45.5°	1705.9	1705.4	1705.9	1706.4	1706.9	1708.3
46°	1671.5	1671.0	1671.5	1671.5	1671.9	1673.8
46.5°	1635.1	1634.6	1635.1	1635.6	1636.0	1638.0
47°	1595.4	1594.4	1595.4	1596.3	1597.8	1599.7
47.5°	1554.7	1554.2	1554.7	1554.2	1556.1	1558.0
48°	1515.0	1515.5	1515.0	1514.5	1513.5	1514.0
48.5°	1474.3	1474.3	1474.3	1473.8	1471.9	1471.9
49°	1432.7	1433.2	1432.7	1432.2	1430.8	1431.2
49.5°	1392.5	1393.0	1392.5	1390.6	1387.7	1387.2
50°	1351.8	1353.2	1351.8	1349.4	1345.6	1343.7
50.5°	1312.1	1313.0	1312.1	1309.7	1305.9	1303.5
51°	1273.8	1274.8	1273.8	1271.9	1268.1	1266.6
51.5°	1239.8	1241.3	1239.8	1236.5	1232.2	1231.2
52°	1206.8	1208.7	1206.8	1202.5	1198.2	1196.3
52.5°	1175.7	1178.6	1175.7	1171.4	1166.6	1164.7
53°	1147.0	1148.9	1147.0	1142.7	1137.4	1135.5
53.5°	1118.8	1120.7	1118.8	1114.9	1110.2	1108.2
54°	1090.5	1091.5	1090.5	1088.1	1083.8	1082.4
54.5°	1062.8	1063.3	1062.8	1059.9	1056.6	1055.1
55°	1031.7	1030.7	1031.7	1029.8	1026.4	1025.0
55.5°	997.2	996.7	997.2	995.3	991.5	990.0
56°	960.4	959.9	960.4	958.0	953.2	951.3
56.5°	921.1	920.7	921.1	917.3	913.0	910.1
57°	878.1	878.6	878.1	875.7	869.5	867.1
57.5°	834.5	835.0	834.5	831.7	825.0	822.1
58°	790.5	791.5	790.5	786.2	779.5	776.6
58.5°	745.0	746.5	745.0	739.8	732.6	730.2
59°	699.6	701.5	699.6	692.4	685.7	683.3
59.5°	654.1	656.0	654.1	646.0	638.3	635.5
60°	609.6	610.6	609.6	599.6	591.9	587.6
60.5°	564.2	566.1	564.2	555.1	544.6	540.7
61°	519.7	522.1	519.7	511.1	499.6	494.8
61.5°	475.2	479.5	475.2	467.5	455.1	450.8
62°	432.1	436.9	432.1	424.4	411.5	407.2
62.5°	390.5	395.7	390.5	382.8	369.4	363.7
63°	350.3	356.5	350.3	342.1	328.3	321.1
63.5°	311.5	317.7	311.5	302.9	288.1	281.8
64°	274.7	280.4	274.7	264.6	251.2	244.5
64.5°	239.7	245.5	239.7	228.3	215.3	209.1
65°	205.8	211.0	205.8	194.8	183.8	175.1
65.5°	174.2	179.0	174.2	163.2	153.6	145.5
66°	145.5	147.9	145.5	134.9	125.4	117.2



TEST NUMBER: P776753

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	73.7	74.2	73.7	64.6	59.8	46.9
68°	56.0	55.0	56.0	46.9	42.1	28.7
68.5°	39.7	44.0	39.7	33.0	27.3	12.4
69°	25.8	34.0	25.8	21.5	16.7	6.7
69.5°	15.3	23.4	15.3	12.0	8.1	4.3
70°	6.7	12.9	6.7	5.7	4.8	2.4
70.5°	2.9	3.8	2.9	3.3	2.4	1.0
71°	1.4	1.4	1.4	1.9	1.4	1.0
71.5°	1.0	1.0	1.0	1.0	1.0	1.0
72°	1.0	1.0	1.0	1.0	1.0	1.0
72.5°	1.0	1.0	1.0	1.0	1.0	1.0
73°	1.0	1.0	1.0	1.0	1.0	0.5
73.5°	1.0	1.0	1.0	1.0	0.5	0.5
74°	1.0	1.0	1.0	0.5	0.5	0.5
74.5°	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.5	0.5	0.5	0.5	0.5	0.5
76.5°	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.5	0.5	0.5	0.5	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.0	0.0
80.5°	0.5	0.5	0.5	0.5	0.0	0.0
81°	0.0	0.5	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: P776753

CATALOG NUMBER: HCDJBL54050CSD-HCD81TRH-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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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°	2359.1	2359.6	2361.0	2363.9	2364.8	2363.9	2361.0	2359.6	2359.1	2359.6	2361.0
22°	2359.1	2359.1	2361.0	2363.9	2364.8	2363.9	2361.0	2359.1	2359.1	2359.1	2361.0



44°	1805.4	1804.5	1805.0	1804.0	1803.0	1804.0	1805.0	1804.5	1805.4	1804.5	1805.0
44.5°	1774.3	1772.9	1773.4	1772.9	1771.5	1772.9	1773.4	1772.9	1774.3	1772.9	1773.4



66.5°	93.8	101.4	108.1	118.2	121.1	118.2	108.1	101.4	93.8	101.4	108.1
67°	70.3	78.5	85.7	95.2	96.2	95.2	85.7	78.5	70.3	78.5	85.7



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°	2363.9	2364.8	2363.9	2361.0	2359.6	2359.1
22°	2363.9	2364.8	2363.9	2361.0	2359.1	2359.1



44°	1804.0	1803.0	1804.0	1805.0	1804.5	1805.4
44.5°	1772.9	1771.5	1772.9	1773.4	1772.9	1774.3



66.5°	118.2	121.1	118.2	108.1	101.4	93.8
67°	95.2	96.2	95.2	85.7	78.5	70.3

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Peachtree City, GA 30269

Scaled Data Report



89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)