

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: P776564

Luminaire Tested: HCDJBS4050CSD-HCD41TRMB-5000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776564
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B031)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD41TRMB-5000lm-5000K
Description: 4 INCH ROUND SHALLOW-WIDE MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

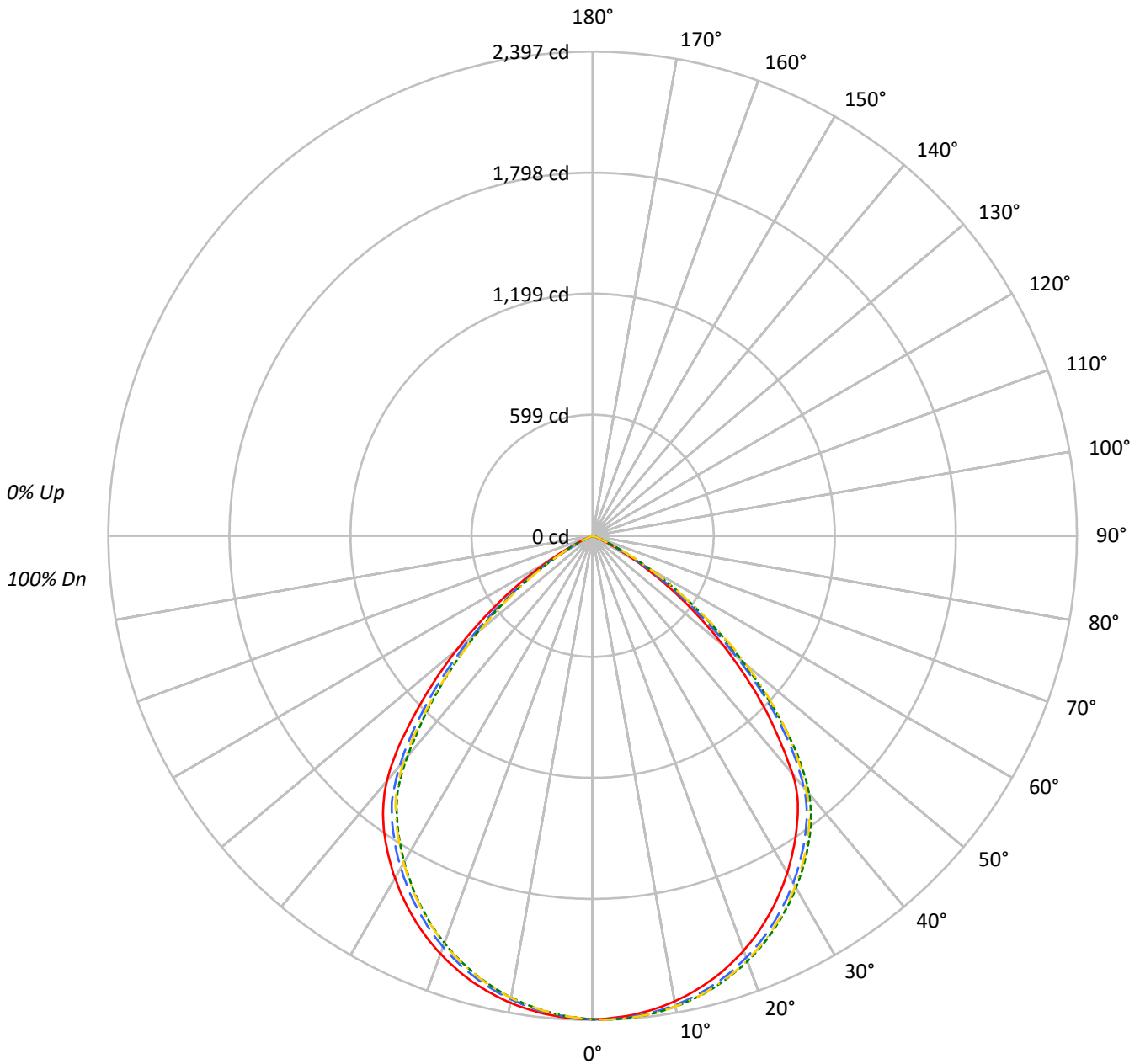
Lumens per Lamp: N/A
Luminaire Lumens: 4433.5 lumens
Efficiency: N/A
Efficacy: 92.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.21 / 1.26
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	112	109	106	103	109	106	104	101	102	100	98	99	97	95	95	94	92	90								
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81								
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72								
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64								
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	57								
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51								
7	73	62	54	49	72	61	54	49	59	53	48	58	52	48	57	52	48	46								
8	69	57	49	44	67	56	49	44	55	48	44	54	48	44	53	47	43	42								
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	40	38								
10	60	49	42	37	59	48	41	37	47	41	37	46	41	36	45	40	36	35								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	301247	301247	301247	301247
5°	300566	302284	300932	299328
10°	299006	302418	299939	296591
15°	296499	301815	298024	292643
20°	292683	300170	294893	287286
25°	287148	297063	290453	280205
30°	279971	292541	284345	270947
35°	270627	286144	276234	259596
40°	252950	273765	260359	234123
45°	213361	239719	220711	192270
50°	165127	190501	171960	144981
55°	113348	136475	119009	95774
60°	61339	80418	66348	48402
65°	18790	29064	20666	13013
70°	1803	1950	1803	1803
75°	1896	1896	1896	1896
80°	1739	1739	1377	1739
85°	722	1444	722	1444

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 112.5°
 Vertical Angle: 45°
 Luminance: 241624 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.1	5.1
10°-20°	643.2	14.5
20°-30°	956.7	21.6
30°-40°	1105.8	24.9
40°-50°	933.1	21.0
50°-60°	474.7	10.7
60°-70°	88.8	2.0
70°-80°	3.9	0.1
80°-90°	1.1	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°	1826.0	41.2
0°-40°	2931.9	66.1
0°-60°	4339.7	97.9
0°-90°	4433.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4433.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2394	2394	2394	2394	2394	
5°	2379	2393	2382	2369	2379	226
15°	2276	2316	2287	2246	2276	641
25°	2068	2139	2092	2018	2068	952
35°	1762	1862	1798	1690	1762	1097
45°	1199	1347	1240	1080	1199	918
55°	517	622	542	436	517	466
65°	63	98	69	44	63	84
75°	4	4	4	4	4	4
85°	0	1	0	1	0	1
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°	2393.7	2393.7	2393.7	2393.7	2393.7	2393.7	2393.7	2393.7	2393.7	2393.7	2393.7
0.5°	2393.2	2393.2	2394.2	2394.7	2395.2	2395.2	2395.2	2393.2	2392.8	2393.2	2392.8
1°	2392.8	2393.7	2394.7	2395.2	2395.7	2396.2	2395.7	2393.7	2392.8	2392.8	2391.8
1.5°	2391.8	2393.2	2394.7	2395.7	2395.7	2396.6	2396.2	2394.2	2392.3	2391.3	2390.3
2°	2390.8	2392.8	2394.2	2396.2	2396.2	2397.1	2396.6	2394.2	2391.8	2390.3	2388.4
2.5°	2388.9	2391.3	2393.7	2396.2	2396.2	2396.6	2395.7	2393.7	2390.8	2388.9	2386.9
3°	2387.4	2390.3	2392.8	2395.2	2396.2	2396.6	2395.7	2392.3	2389.8	2387.4	2384.5
3.5°	2385.5	2388.9	2392.3	2394.7	2395.2	2396.2	2395.7	2391.8	2387.9	2385.0	2382.6
4°	2384.0	2387.4	2390.8	2393.7	2394.7	2395.7	2394.7	2391.3	2386.4	2383.0	2380.1
4.5°	2381.6	2385.5	2389.8	2392.3	2393.7	2394.7	2393.2	2390.3	2384.5	2380.1	2376.7
5°	2379.2	2383.5	2387.9	2391.3	2392.8	2393.2	2391.8	2388.4	2382.1	2377.7	2373.8
5.5°	2376.2	2381.1	2386.0	2389.8	2390.8	2392.3	2390.8	2386.4	2380.1	2375.3	2370.4
6°	2372.8	2378.7	2384.5	2387.9	2389.4	2390.3	2388.9	2384.5	2377.2	2371.9	2367.0
6.5°	2369.4	2375.8	2381.6	2386.0	2387.4	2388.4	2386.4	2382.6	2374.3	2369.0	2363.6
7°	2366.5	2372.8	2379.2	2384.0	2385.0	2386.0	2384.0	2380.1	2370.9	2364.6	2359.7
7.5°	2362.7	2369.4	2376.2	2381.1	2382.1	2384.0	2381.6	2377.2	2367.5	2361.2	2355.4
8°	2358.8	2366.1	2373.3	2378.7	2379.6	2381.1	2378.7	2373.8	2363.6	2356.8	2351.0
8.5°	2354.4	2362.2	2369.9	2375.3	2376.7	2378.2	2375.8	2370.4	2359.7	2352.5	2346.1
9°	2349.5	2358.3	2366.5	2371.9	2373.3	2375.3	2372.8	2367.0	2355.9	2348.1	2340.8
9.5°	2344.7	2353.9	2362.7	2368.5	2369.9	2371.9	2369.0	2363.6	2352.0	2343.2	2335.5
10°	2339.8	2349.5	2358.3	2365.1	2366.5	2368.5	2365.6	2359.7	2347.1	2338.4	2330.1
10.5°	2334.5	2344.7	2353.9	2360.7	2362.7	2364.6	2361.2	2355.4	2342.3	2333.0	2324.3
11°	2329.1	2339.3	2349.5	2356.3	2358.3	2360.2	2357.3	2351.0	2337.4	2327.2	2318.5
11.5°	2323.8	2334.0	2344.7	2352.0	2353.9	2355.9	2352.5	2346.1	2332.1	2321.4	2312.2
12°	2317.0	2328.7	2339.3	2347.1	2349.5	2351.0	2348.1	2340.8	2326.2	2315.6	2305.4
12.5°	2311.2	2322.8	2334.0	2342.3	2344.7	2346.1	2342.7	2335.5	2319.9	2309.2	2298.6
13°	2304.4	2317.0	2328.2	2337.4	2339.3	2341.3	2337.9	2330.6	2314.1	2302.4	2291.3
13.5°	2298.1	2310.7	2322.4	2331.6	2334.0	2335.5	2332.1	2324.8	2307.8	2295.6	2284.0
14°	2290.8	2303.9	2316.5	2325.8	2328.2	2330.6	2326.7	2318.5	2301.0	2288.8	2276.7
14.5°	2283.5	2297.1	2309.7	2319.9	2322.4	2324.3	2320.4	2312.2	2294.7	2281.6	2268.5
15°	2275.7	2289.8	2302.9	2313.6	2316.5	2318.5	2314.1	2305.8	2287.4	2273.8	2260.2
15.5°	2268.0	2281.6	2296.6	2306.8	2310.2	2311.7	2307.3	2298.6	2280.1	2266.0	2252.4
16°	2259.7	2274.8	2289.3	2300.0	2303.4	2305.4	2300.5	2291.8	2272.3	2257.8	2244.2
16.5°	2251.5	2267.0	2281.6	2293.2	2296.1	2298.1	2293.7	2284.5	2264.6	2249.5	2235.0
17°	2243.2	2258.7	2274.3	2285.9	2289.3	2290.8	2286.4	2277.2	2256.3	2241.3	2225.7
17.5°	2234.0	2250.0	2266.5	2278.2	2281.6	2283.0	2278.7	2269.4	2247.6	2232.0	2216.0
18°	2224.3	2241.3	2257.8	2270.4	2273.8	2275.3	2270.9	2260.7	2238.8	2222.8	2206.3
18.5°	2215.0	2232.5	2249.0	2262.6	2265.5	2268.0	2262.6	2252.4	2230.6	2213.6	2196.6
19°	2205.3	2222.8	2240.8	2253.9	2257.8	2259.7	2253.9	2244.2	2221.4	2203.9	2186.9
19.5°	2195.6	2213.6	2231.6	2245.6	2249.5	2251.0	2245.1	2235.4	2212.1	2194.2	2176.2
20°	2185.4	2203.9	2222.3	2236.9	2241.3	2242.2	2236.4	2226.2	2201.9	2184.0	2165.5
20.5°	2174.7	2194.2	2213.1	2227.7	2232.0	2233.5	2227.2	2217.0	2192.7	2173.8	2154.4
21°	2164.1	2183.5	2203.4	2218.4	2223.3	2224.8	2218.0	2207.3	2182.0	2162.6	2143.2



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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°	2130.1	2151.4	2172.3	2188.8	2193.2	2194.7	2187.9	2177.2	2150.0	2129.1	2108.2
23°	2118.4	2140.3	2161.6	2178.6	2183.0	2184.5	2177.7	2166.5	2138.8	2117.9	2096.1
23.5°	2106.3	2128.1	2151.0	2168.4	2172.8	2173.3	2167.0	2155.3	2127.6	2105.8	2083.0
24°	2093.7	2116.5	2139.8	2157.3	2161.6	2163.1	2155.8	2144.6	2116.0	2093.7	2070.8
24.5°	2081.0	2104.8	2128.1	2146.1	2151.0	2151.4	2144.6	2133.0	2104.3	2081.5	2057.7
25°	2067.9	2092.7	2116.0	2134.4	2139.3	2140.3	2133.0	2121.3	2091.7	2068.4	2044.6
25.5°	2054.8	2080.1	2104.3	2123.3	2128.1	2128.6	2121.3	2109.7	2079.1	2055.8	2030.5
26°	2041.7	2067.0	2091.7	2111.1	2116.5	2117.0	2109.7	2097.5	2066.5	2042.2	2016.9
26.5°	2028.6	2053.8	2079.6	2099.0	2104.3	2104.3	2097.1	2084.9	2053.4	2028.6	2002.9
27°	2014.5	2040.7	2066.5	2086.9	2091.7	2092.2	2084.4	2072.3	2040.3	2015.5	1988.8
27.5°	2000.4	2027.1	2053.8	2074.7	2079.1	2079.6	2071.8	2059.2	2027.1	2001.4	1974.2
28°	1985.9	2013.5	2040.7	2061.6	2067.0	2067.4	2059.2	2046.1	2014.0	1987.3	1959.2
28.5°	1971.3	1999.0	2026.7	2048.5	2053.8	2053.8	2046.1	2032.5	2000.0	1973.2	1944.6
29°	1956.7	1984.9	2012.6	2034.9	2040.7	2040.3	2032.0	2019.4	1985.4	1958.2	1930.0
29.5°	1941.7	1970.3	1999.0	2021.8	2027.1	2026.7	2018.4	2005.8	1971.3	1943.6	1914.0
30°	1926.6	1956.3	1984.9	2008.2	2013.1	2013.1	2004.3	1991.2	1956.7	1928.6	1898.0
30.5°	1911.1	1941.2	1970.3	1994.1	1999.5	1998.0	1990.2	1977.1	1942.2	1913.5	1882.9
31°	1895.6	1926.1	1955.8	1979.1	1984.9	1983.9	1975.2	1962.6	1926.6	1898.0	1866.9
31.5°	1879.1	1910.6	1940.7	1965.0	1970.3	1969.4	1960.6	1948.0	1911.1	1882.0	1850.4
32°	1863.0	1895.1	1925.7	1950.4	1955.8	1954.8	1946.1	1932.9	1895.6	1866.4	1834.4
32.5°	1846.5	1878.6	1910.1	1935.4	1940.2	1939.3	1931.0	1917.9	1880.0	1849.9	1816.9
33°	1830.0	1862.5	1894.6	1919.8	1925.7	1923.7	1916.0	1902.4	1864.5	1833.9	1800.4
33.5°	1813.5	1846.0	1878.6	1904.8	1910.1	1908.2	1900.4	1886.3	1848.0	1817.4	1782.9
34°	1796.5	1830.0	1863.0	1888.8	1894.6	1893.1	1883.9	1870.8	1831.5	1799.9	1766.4
34.5°	1779.0	1813.0	1846.5	1873.2	1878.6	1876.6	1867.4	1854.3	1815.0	1782.9	1748.0
35°	1761.5	1796.0	1829.5	1856.2	1862.5	1860.6	1850.9	1837.3	1798.0	1765.4	1730.0
35.5°	1743.1	1778.5	1812.5	1840.2	1845.5	1844.1	1834.4	1820.8	1780.5	1747.5	1710.6
36°	1725.6	1761.1	1795.5	1822.7	1829.0	1827.1	1816.9	1803.8	1762.0	1728.5	1691.6
36.5°	1706.7	1743.1	1778.1	1805.7	1812.0	1809.6	1799.4	1785.8	1743.1	1709.1	1671.7
37°	1687.7	1724.6	1760.1	1787.8	1793.6	1791.2	1781.0	1767.4	1724.2	1689.7	1650.8
37.5°	1667.4	1704.7	1740.7	1768.8	1774.7	1772.2	1762.5	1748.4	1703.8	1668.3	1625.6
38°	1647.0	1684.8	1720.8	1749.9	1755.2	1752.8	1743.1	1728.5	1681.9	1645.0	1599.4
38.5°	1623.7	1662.5	1700.4	1729.5	1734.8	1731.9	1720.8	1707.7	1659.6	1619.8	1571.7
39°	1598.4	1637.7	1678.0	1709.1	1713.0	1709.1	1696.5	1684.8	1635.8	1593.1	1543.5
39.5°	1570.7	1610.5	1652.8	1686.8	1690.7	1683.9	1670.8	1660.1	1610.5	1565.9	1513.9
40°	1539.7	1581.9	1625.6	1663.0	1666.4	1657.2	1644.5	1633.4	1584.8	1536.7	1483.8
40.5°	1505.2	1552.8	1597.9	1637.7	1640.2	1630.5	1616.9	1606.2	1556.2	1507.1	1452.3
41°	1471.7	1522.7	1569.3	1610.5	1613.0	1602.3	1589.2	1578.0	1526.1	1477.0	1420.7
41.5°	1437.7	1491.6	1539.2	1581.9	1583.8	1574.1	1561.5	1548.4	1493.0	1445.5	1388.2
42°	1403.2	1458.6	1509.6	1550.8	1552.8	1545.0	1533.3	1518.3	1460.5	1413.4	1354.7
42.5°	1369.2	1425.6	1478.0	1518.8	1521.7	1515.9	1504.2	1488.2	1425.1	1380.4	1319.7
43°	1335.7	1392.1	1445.9	1486.2	1489.2	1485.8	1474.1	1455.2	1388.7	1345.9	1284.7
43.5°	1301.3	1357.6	1412.9	1451.8	1455.2	1454.7	1443.0	1423.1	1351.8	1310.5	1249.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1198.8	1252.2	1307.6	1341.1	1346.9	1357.6	1347.4	1320.2	1240.1	1201.7	1143.0
45.5°	1164.3	1216.3	1270.2	1301.3	1309.0	1324.1	1313.4	1285.7	1203.2	1164.3	1107.5
46°	1129.4	1181.3	1233.8	1262.9	1271.2	1289.1	1279.9	1248.8	1166.3	1125.5	1072.1
46.5°	1093.9	1145.4	1195.9	1224.5	1233.3	1254.6	1246.4	1213.9	1128.9	1087.1	1036.1
47°	1057.5	1110.0	1158.5	1185.2	1194.4	1218.2	1210.9	1176.0	1093.4	1048.8	1001.2
47.5°	1021.1	1074.5	1120.6	1145.4	1157.0	1182.3	1176.5	1139.1	1057.5	1010.9	965.3
48°	985.2	1038.6	1080.8	1107.0	1120.1	1145.9	1140.1	1102.2	1021.6	973.0	930.3
48.5°	948.8	1002.2	1042.0	1068.7	1083.2	1109.5	1105.1	1068.2	985.7	934.2	895.3
49°	913.3	967.2	1002.6	1030.8	1045.9	1072.6	1068.2	1029.8	949.7	896.8	859.9
49.5°	877.9	931.3	964.3	992.9	1009.0	1035.2	1032.7	993.4	913.8	859.4	824.5
50°	843.4	894.9	925.4	956.5	973.0	997.3	995.4	957.0	878.3	823.5	789.0
50.5°	808.4	858.4	887.1	918.2	936.6	959.9	958.5	921.6	842.9	786.6	753.1
51°	774.9	821.5	848.2	881.7	900.2	922.5	920.1	886.6	808.9	751.6	718.6
51.5°	740.5	786.1	811.3	844.8	864.3	885.6	884.7	851.6	773.5	716.7	684.1
52°	707.4	749.7	774.9	809.4	828.8	848.2	847.3	816.7	739.0	682.7	649.7
52.5°	674.9	714.7	739.5	772.0	792.9	811.8	810.4	781.2	705.5	649.2	615.7
53°	642.4	679.8	703.1	738.5	757.9	775.4	774.0	747.3	672.0	616.6	582.2
53.5°	609.8	645.3	668.1	703.6	723.5	739.5	738.0	713.3	638.5	584.1	549.6
54°	577.8	610.3	634.1	669.1	689.0	704.0	701.6	679.8	606.0	553.5	518.1
54.5°	546.7	576.3	600.6	633.6	654.5	668.6	666.2	646.3	574.4	524.4	487.5
55°	516.6	543.8	568.1	602.1	622.0	634.1	631.7	613.7	542.4	493.3	456.9
55.5°	486.5	510.8	535.6	570.0	589.4	600.1	596.2	580.7	511.3	463.2	429.2
56°	456.9	479.7	504.5	537.5	556.4	566.6	562.3	549.6	480.7	436.0	401.1
56.5°	427.8	449.1	473.9	505.0	524.4	533.1	529.2	517.1	452.0	408.8	373.4
57°	399.6	418.5	444.3	476.3	493.3	501.6	497.2	486.5	423.9	382.1	345.2
57.5°	371.9	389.4	415.1	446.2	463.2	470.0	465.6	456.9	395.7	354.9	319.5
58°	344.2	361.2	386.0	417.1	434.1	439.9	436.0	427.8	367.1	327.7	294.2
58.5°	318.5	334.1	358.3	388.9	404.9	409.8	405.9	398.1	338.9	303.5	270.4
59°	292.3	308.3	332.1	361.7	375.8	379.7	376.3	368.5	312.7	278.2	247.6
59.5°	268.0	283.1	306.4	335.5	347.2	349.6	346.7	339.4	288.4	255.4	225.8
60°	243.7	258.3	281.1	309.8	319.5	322.4	319.0	312.7	263.6	232.6	204.9
60.5°	221.4	235.5	256.9	285.5	293.8	295.7	292.8	286.5	239.9	211.2	184.0
61°	199.1	212.7	234.5	260.7	268.0	270.0	266.6	260.3	217.0	189.8	165.1
61.5°	178.2	191.8	212.2	237.4	243.3	244.7	241.8	236.0	196.2	170.4	147.6
62°	160.2	171.4	191.3	215.6	219.5	220.9	218.5	212.2	174.3	151.0	129.6
62.5°	142.7	154.9	171.4	193.7	196.2	198.1	195.7	188.4	154.4	133.0	113.6
63°	124.8	138.4	154.9	173.3	174.3	176.3	173.8	166.1	135.0	116.0	98.6
63.5°	107.3	121.9	138.4	155.4	153.4	155.4	152.9	145.7	117.0	100.5	85.0
64°	89.8	105.4	121.9	137.4	133.5	135.5	134.0	126.2	100.0	85.5	71.9
64.5°	75.7	89.3	105.4	119.9	114.6	117.0	115.6	107.8	84.5	71.9	60.2
65°	63.1	75.7	88.9	102.0	97.6	100.0	98.6	90.8	69.4	62.1	51.5
65.5°	52.4	63.6	75.3	84.5	81.6	83.5	82.5	75.7	58.3	52.0	43.2
66°	42.7	52.0	62.6	69.9	67.0	68.9	68.0	64.6	47.6	41.8	35.0



TEST NUMBER: P776564

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRMB-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	20.9	25.7	32.5	34.5	36.4	37.9	36.9	32.0	14.6	16.0	13.1
68°	17.5	19.4	24.8	25.7	26.2	27.2	26.2	21.4	8.7	11.2	9.2
68.5°	14.6	15.5	18.0	18.9	16.5	17.0	16.0	14.6	5.8	7.3	6.8
69°	11.2	12.1	14.6	15.5	11.2	11.7	10.7	9.7	5.3	5.8	5.3
69.5°	8.3	8.7	11.7	12.1	7.8	7.8	7.3	6.8	5.3	5.3	5.3
70°	4.9	5.3	8.3	8.3	5.3	5.3	5.3	5.3	4.9	4.9	4.9
70.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
71°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
71.5°	4.4	4.4	4.4	4.9	4.4	4.4	4.9	4.9	4.9	4.9	4.9
72°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
73°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
73.5°	3.9	3.9	3.9	3.9	3.9	3.9	4.4	4.4	3.9	3.9	4.4
74°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
74.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
75.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.9	3.4	3.4	3.4
76°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
76.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
77°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.9	2.9	3.4
77.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
78°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
78.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.4	2.4	2.9
79°	2.4	2.4	2.9	2.9	2.9	2.9	2.9	2.9	2.4	2.4	2.4
79.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
80°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.9	1.9	2.4
80.5°	1.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.9	1.9	2.4
81°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9	1.9
81.5°	1.9	1.9	1.9	2.4	1.9	1.9	1.9	1.9	1.5	1.5	1.9
82°	1.5	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.5	1.5	1.9
82.5°	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.5	1.0	1.5	1.5
83°	1.5	1.5	1.9	1.9	1.9	1.9	1.9	1.5	1.0	1.0	1.5
83.5°	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.0	1.5
84°	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.0	0.5	0.5	1.0
84.5°	0.5	1.0	1.5	1.5	1.5	1.5	1.5	1.0	0.5	0.5	1.0
85°	0.5	1.0	1.0	1.5	1.0	1.5	1.0	1.0	0.5	0.5	1.0
85.5°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.0	0.5	1.0
86°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.0	0.5	0.5
86.5°	0.0	0.5	1.0	1.0	0.5	1.0	1.0	0.5	0.0	0.5	0.5
87°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.5
87.5°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0
88°	0.0	0.0	0.5	0.5	0.0	0.5	0.5	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: P776564
CATALOG NUMBER: HCDJBL4050CSD-HCD41TRMB-5000lm-5000K

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: P776564

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRMB-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2393.7	2393.7	2393.7	2393.7	2393.7	2393.7
0.5°	2392.3	2392.3	2393.2	2392.8	2391.8	2393.2
1°	2390.8	2390.8	2391.8	2391.3	2390.8	2392.8
1.5°	2388.9	2388.9	2389.8	2389.8	2389.4	2391.8
2°	2387.4	2386.9	2387.4	2387.9	2386.9	2390.8
2.5°	2385.5	2384.5	2385.5	2385.0	2385.0	2388.9
3°	2383.0	2382.1	2382.6	2382.6	2383.0	2387.4
3.5°	2380.1	2379.6	2379.6	2380.1	2380.6	2385.5
4°	2377.2	2376.7	2376.7	2377.2	2378.2	2384.0
4.5°	2373.8	2373.3	2373.3	2373.8	2375.3	2381.6
5°	2370.4	2369.4	2369.4	2370.4	2371.9	2379.2
5.5°	2367.0	2366.1	2365.6	2366.5	2369.0	2376.2
6°	2363.1	2361.7	2361.2	2363.1	2365.1	2372.8
6.5°	2359.3	2357.8	2356.8	2358.8	2361.2	2369.4
7°	2354.9	2353.4	2352.9	2354.4	2357.3	2366.5
7.5°	2350.0	2348.6	2348.1	2349.5	2353.4	2362.7
8°	2345.2	2343.2	2343.2	2344.2	2348.6	2358.8
8.5°	2339.8	2338.4	2337.9	2339.3	2343.2	2354.4
9°	2334.5	2332.5	2332.1	2334.0	2337.9	2349.5
9.5°	2329.1	2326.7	2326.2	2328.2	2332.5	2344.7
10°	2323.3	2320.9	2319.9	2322.4	2326.7	2339.8
10.5°	2317.0	2315.1	2314.1	2316.5	2321.4	2334.5
11°	2310.7	2308.8	2307.8	2310.2	2314.6	2329.1
11.5°	2303.9	2301.5	2301.0	2302.9	2308.3	2323.8
12°	2297.1	2294.7	2293.7	2296.1	2302.0	2317.0
12.5°	2290.3	2287.4	2286.4	2288.8	2294.7	2311.2
13°	2282.5	2279.6	2278.2	2281.6	2287.4	2304.4
13.5°	2274.8	2271.9	2270.4	2273.8	2280.1	2298.1
14°	2267.0	2263.6	2262.6	2266.0	2272.3	2290.8
14.5°	2258.7	2255.3	2253.9	2257.8	2264.6	2283.5
15°	2250.0	2246.1	2245.1	2248.5	2255.8	2275.7
15.5°	2241.3	2237.4	2236.4	2239.8	2247.1	2268.0
16°	2232.0	2228.2	2227.7	2231.1	2238.4	2259.7
16.5°	2223.3	2218.9	2218.0	2221.8	2229.1	2251.5
17°	2213.6	2208.7	2207.8	2212.1	2219.9	2243.2
17.5°	2203.9	2199.0	2198.1	2202.4	2210.2	2234.0
18°	2193.7	2188.8	2187.9	2191.7	2201.0	2224.3
18.5°	2183.0	2178.1	2177.2	2181.5	2190.8	2215.0
19°	2172.8	2167.5	2166.0	2170.9	2179.6	2205.3
19.5°	2161.6	2156.3	2155.3	2159.7	2169.4	2195.6
20°	2150.5	2145.1	2144.2	2148.5	2159.2	2185.4
20.5°	2139.3	2133.5	2132.0	2136.9	2147.6	2174.7
21°	2127.6	2121.3	2120.4	2125.2	2135.9	2164.1



TEST NUMBER: P776564

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRMB-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2090.7	2084.9	2083.0	2087.8	2100.5	2130.1
23°	2078.1	2072.3	2070.4	2075.7	2087.3	2118.4
23.5°	2065.0	2058.7	2057.2	2062.6	2074.2	2106.3
24°	2051.9	2045.1	2043.2	2049.5	2061.6	2093.7
24.5°	2038.3	2031.5	2029.6	2035.4	2048.5	2081.0
25°	2024.7	2017.9	2016.0	2021.8	2035.4	2067.9
25.5°	2010.6	2003.3	2001.4	2007.2	2021.3	2054.8
26°	1996.6	1988.8	1986.8	1993.2	2007.2	2041.7
26.5°	1981.5	1974.2	1972.3	1979.1	1992.7	2028.6
27°	1967.4	1959.2	1957.7	1964.0	1978.1	2014.5
27.5°	1951.9	1944.1	1942.2	1949.0	1963.5	2000.4
28°	1936.8	1928.1	1926.6	1933.4	1948.5	1985.9
28.5°	1921.3	1913.0	1911.1	1918.4	1932.9	1971.3
29°	1905.8	1897.5	1895.1	1902.4	1917.9	1956.7
29.5°	1889.2	1881.5	1879.1	1886.8	1902.4	1941.7
30°	1873.7	1864.5	1863.0	1870.3	1886.8	1926.6
30.5°	1856.7	1848.5	1846.0	1854.3	1870.3	1911.1
31°	1840.2	1831.5	1829.0	1836.8	1853.8	1895.6
31.5°	1823.7	1815.0	1812.0	1820.8	1837.8	1879.1
32°	1806.7	1797.5	1794.6	1804.3	1821.3	1863.0
32.5°	1789.2	1780.5	1778.1	1786.8	1804.8	1846.5
33°	1771.3	1763.0	1760.6	1768.8	1787.3	1830.0
33.5°	1753.8	1745.0	1742.6	1751.8	1769.3	1813.5
34°	1735.8	1726.6	1724.6	1734.4	1751.8	1796.5
34.5°	1717.9	1708.6	1706.2	1715.9	1734.4	1779.0
35°	1698.9	1689.7	1687.7	1697.0	1715.4	1761.5
35.5°	1679.0	1670.8	1668.8	1678.5	1697.9	1743.1
36°	1659.6	1650.4	1648.9	1659.6	1679.0	1725.6
36.5°	1638.7	1629.5	1628.5	1639.7	1658.6	1706.7
37°	1615.9	1607.6	1607.1	1617.8	1638.2	1687.7
37.5°	1589.2	1582.4	1583.4	1596.5	1617.8	1667.4
38°	1560.5	1554.2	1555.7	1570.2	1592.1	1647.0
38.5°	1530.9	1523.1	1526.5	1541.6	1564.9	1623.7
39°	1498.9	1492.1	1496.0	1512.0	1536.7	1598.4
39.5°	1465.9	1459.1	1463.9	1480.4	1506.6	1570.7
40°	1432.4	1425.1	1430.4	1447.9	1475.1	1539.7
40.5°	1398.4	1390.1	1395.9	1414.9	1441.1	1505.2
41°	1365.3	1355.6	1361.9	1381.9	1406.6	1471.7
41.5°	1331.8	1319.7	1326.5	1346.9	1370.2	1437.7
42°	1298.3	1286.7	1291.5	1312.4	1334.8	1403.2
42.5°	1265.8	1251.7	1256.1	1277.5	1298.8	1369.2
43°	1232.8	1218.2	1219.7	1241.5	1261.4	1335.7
43.5°	1200.3	1182.3	1183.3	1205.1	1225.0	1301.3



TEST NUMBER: P776564

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRMB-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1099.3	1080.3	1073.5	1093.0	1117.7	1198.8
45.5°	1064.8	1045.4	1037.1	1055.6	1081.3	1164.3
46°	1029.8	1011.9	1002.6	1018.2	1046.3	1129.4
46.5°	993.9	975.9	966.7	980.8	1010.9	1093.9
47°	958.9	942.9	931.3	943.4	975.9	1057.5
47.5°	924.0	907.0	895.3	906.5	940.0	1021.1
48°	888.5	874.5	861.8	870.1	905.1	985.2
48.5°	854.1	839.5	826.4	833.2	870.1	948.8
49°	820.1	806.5	792.9	798.2	835.6	913.3
49.5°	785.6	773.5	758.4	763.3	801.1	877.9
50°	751.6	740.5	724.9	728.3	766.7	843.4
50.5°	719.6	707.9	691.4	694.3	733.2	808.4
51°	687.0	675.4	659.4	661.8	700.2	774.9
51.5°	654.5	644.3	626.8	629.3	666.7	740.5
52°	622.0	613.2	595.8	597.7	635.1	707.4
52.5°	591.4	582.7	564.2	566.1	603.0	674.9
53°	559.8	551.6	534.6	536.5	572.0	642.4
53.5°	528.8	522.0	504.0	507.4	540.9	609.8
54°	498.2	492.3	475.3	478.3	510.8	577.8
54.5°	469.5	464.2	447.7	450.6	481.2	546.7
55°	441.4	436.5	420.5	423.9	453.0	516.6
55.5°	413.7	408.3	394.3	397.7	424.4	486.5
56°	386.0	381.2	368.0	372.4	396.7	456.9
56.5°	358.3	354.9	342.8	347.6	369.5	427.8
57°	330.7	329.2	319.0	323.4	344.2	399.6
57.5°	305.4	304.4	295.7	300.1	318.5	371.9
58°	280.2	279.7	273.4	278.2	294.7	344.2
58.5°	255.9	256.4	252.0	256.9	270.4	318.5
59°	232.6	234.0	231.1	236.0	248.6	292.3
59.5°	210.2	212.7	211.7	216.1	227.2	268.0
60°	189.4	192.3	192.8	197.6	206.8	243.7
60.5°	169.5	171.4	174.3	178.7	186.4	221.4
61°	150.5	154.9	158.8	163.6	167.5	199.1
61.5°	132.1	138.9	143.2	148.1	151.5	178.2
62°	115.1	122.4	127.7	132.6	135.0	160.2
62.5°	100.0	105.8	112.2	117.0	118.5	142.7
63°	85.5	89.8	96.6	101.5	102.4	124.8
63.5°	72.3	76.2	83.5	88.4	88.4	107.3
64°	60.2	64.1	71.4	76.2	75.7	89.8
64.5°	52.0	53.4	60.2	64.6	63.1	75.7
65°	44.2	43.7	50.5	53.9	52.9	63.1
65.5°	35.9	35.4	41.3	44.2	43.2	52.4
66°	28.2	28.2	32.5	35.9	34.5	42.7



TEST NUMBER: P776564

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRMB-5000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	11.2	14.1	15.5	15.5	15.5	20.9
68°	8.3	11.2	12.1	13.1	11.2	17.5
68.5°	6.3	8.3	8.7	10.2	10.2	14.6
69°	5.3	5.3	5.3	7.8	8.7	11.2
69.5°	5.3	5.3	4.9	5.3	7.3	8.3
70°	4.9	4.9	4.9	4.9	5.8	4.9
70.5°	4.9	4.9	4.9	4.9	4.9	4.9
71°	4.9	4.9	4.9	4.9	4.4	4.9
71.5°	4.4	4.4	4.4	4.4	4.4	4.4
72°	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	4.4	4.4	4.4	4.4	4.4	4.4
73°	4.4	4.4	4.4	4.4	3.9	4.4
73.5°	3.9	3.9	3.9	3.9	3.9	3.9
74°	3.9	3.9	3.9	3.9	3.9	3.9
74.5°	3.9	3.9	3.9	3.9	3.9	3.9
75°	3.9	3.9	3.9	3.9	3.4	3.9
75.5°	3.4	3.4	3.4	3.4	3.4	3.4
76°	3.4	3.4	3.4	3.4	3.4	3.4
76.5°	3.4	3.4	3.4	3.4	3.4	3.4
77°	3.4	3.4	3.4	3.4	2.9	3.4
77.5°	2.9	2.9	2.9	2.9	2.9	2.9
78°	2.9	2.9	2.9	2.9	2.9	2.9
78.5°	2.9	2.9	2.9	2.9	2.4	2.9
79°	2.9	2.9	2.9	2.4	2.4	2.4
79.5°	2.4	2.4	2.4	2.4	2.4	2.4
80°	2.4	2.4	2.4	2.4	1.9	2.4
80.5°	2.4	2.4	2.4	2.4	1.9	1.9
81°	1.9	2.4	2.4	1.9	1.9	1.9
81.5°	1.9	1.9	1.9	1.9	1.5	1.9
82°	1.9	1.9	1.9	1.9	1.5	1.5
82.5°	1.9	1.9	1.9	1.5	1.5	1.5
83°	1.5	1.5	1.5	1.5	1.0	1.5
83.5°	1.5	1.5	1.5	1.5	1.0	1.0
84°	1.5	1.5	1.5	1.5	1.0	1.0
84.5°	1.0	1.0	1.0	1.0	0.5	0.5
85°	1.0	1.0	1.0	1.0	0.5	0.5
85.5°	1.0	1.0	1.0	1.0	0.5	0.5
86°	0.5	0.5	0.5	0.5	0.5	0.5
86.5°	0.5	0.5	0.5	0.5	0.5	0.0
87°	0.5	0.5	0.5	0.5	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: P776564

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRMB-5000lm-5000K

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°	2152.9	2173.3	2193.7	2208.7	2213.1	2214.6	2207.8	2197.6	2171.8	2151.9	2132.0
22°	2141.7	2162.6	2183.0	2199.0	2203.4	2204.4	2198.5	2187.9	2160.7	2141.2	2120.4



44°	1267.8	1323.1	1378.5	1415.4	1420.7	1423.1	1412.0	1389.6	1314.8	1274.5	1214.3
44.5°	1233.3	1287.2	1342.5	1378.5	1383.3	1391.1	1380.9	1357.1	1277.0	1238.6	1178.9



66.5°	34.0	42.2	51.5	56.8	56.8	58.8	57.3	53.9	36.4	32.0	26.2
67°	27.2	33.5	41.3	44.7	46.6	48.1	47.1	42.7	25.7	21.8	18.0



89°	0.0	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	0.0

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Scaled Data Report





21.5°	2115.5	2109.7	2107.7	2113.1	2123.8	2152.9
22°	2103.4	2097.5	2095.6	2100.5	2112.1	2141.7



44°	1166.3	1148.8	1146.4	1167.7	1189.1	1267.8
44.5°	1133.3	1113.8	1110.0	1130.3	1153.6	1233.3

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66.5°	20.4	22.3	25.2	28.2	26.7	34.0
67°	15.5	17.0	18.9	21.4	20.9	27.2

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Scaled Data Report



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

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)