

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: P776432

Luminaire Tested: HCDJBL3040CSD-HCD6TSQMW-4000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776432
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD6TSQMW-4000lm-3500K
Description: 6 INCH SQUARE MEDIUM MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

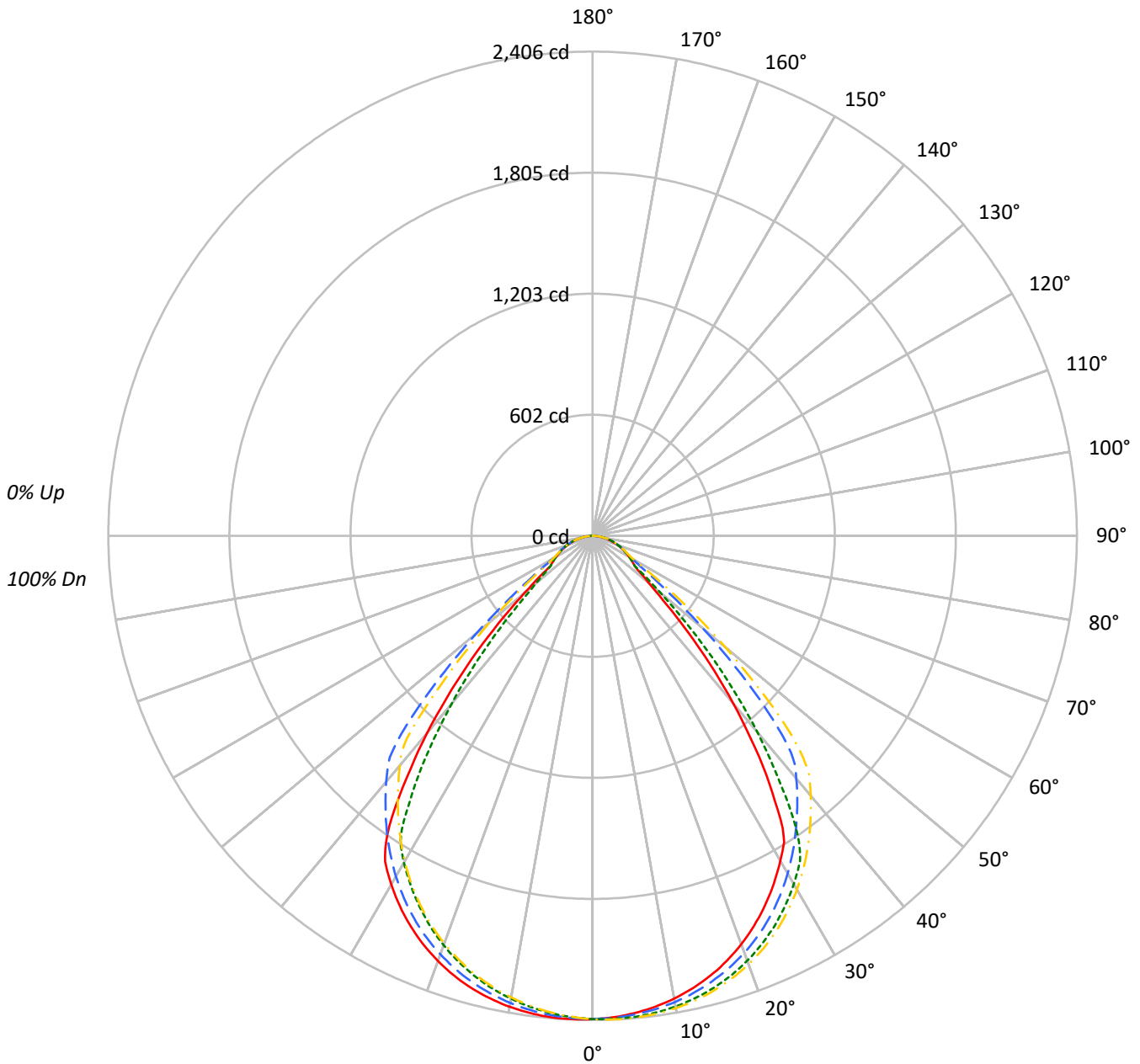
Lumens per Lamp: N/A
Luminaire Lumens: 4213.7 lumens
Efficiency: N/A
Efficacy: 109.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.27
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
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					100			
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79					79			
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70					70			
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63					63			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	57					57			
6	78	67	60	54	77	66	59	54	65	58	54	63	58	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	67	57	49	45	55	49	44	54	48	44	53	48	44	42					42			
9	65	53	46	41	63	52	46	41	51	45	41	50	45	40	49	44	40	39					39			
10	61	49	42	38	60	49	42	38	48	42	37	47	41	37	46	41	37	36					36			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	103402	103402	103402	103402
5°	102903	103711	103780	102920
10°	102095	103830	103900	102130
15°	100850	103649	103703	100957
20°	98969	102955	103010	99189
25°	96272	101593	101669	96610
30°	92731	99408	99483	93203
35°	81764	92208	92503	82059
40°	60926	71465	71892	61123
45°	39658	48968	49284	39871
50°	24435	29171	29492	24589
55°	18849	18909	18909	18849
60°	18101	18032	18032	18101
65°	17248	17411	17248	17493
70°	16353	16856	16453	16957
75°	15138	16319	15537	16253
80°	12992	15670	14083	15075
85°	7262	14129	10621	12153

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°

Vertical Angle: 45°

Luminance: 84631 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.1	5.4
10°-20°	647.1	15.4
20°-30°	960.9	22.8
30°-40°	1062.5	25.2
40°-50°	720.0	17.1
50°-60°	293.5	7.0
60°-70°	173.2	4.1
70°-80°	102.4	2.4
80°-90°	27.0	0.6
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°	1835.1	43.6
0°-40°	2897.6	68.8
0°-60°	3911.1	92.8
0°-90°	4213.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4213.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2402	2402	2402	2402	2402	
5°	2381	2400	2401	2381	2381	226
15°	2262	2325	2326	2265	2262	637
25°	2026	2138	2140	2034	2026	932
35°	1556	1754	1760	1561	1556	952
45°	651	804	809	655	651	514
55°	251	252	252	251	251	236
65°	169	171	169	172	169	168
75°	91	98	93	98	91	96
85°	15	29	22	25	15	21
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°	2401.6	2401.6	2401.6	2401.6	2401.6	2401.6	2401.6	2401.6	2401.6	2401.6	2401.6
0.5°	2401.6	2400.8	2400.8	2401.6	2402.0	2402.4	2403.2	2403.6	2403.6	2402.0	2400.8
1°	2400.0	2400.0	2400.0	2401.6	2402.8	2403.2	2404.4	2404.4	2404.0	2402.0	2400.8
1.5°	2398.4	2398.8	2399.6	2401.2	2403.2	2404.0	2405.1	2405.1	2404.4	2402.4	2400.0
2°	2396.8	2397.6	2398.8	2400.8	2403.2	2404.0	2405.5	2405.5	2404.7	2402.0	2399.6
2.5°	2394.8	2395.6	2397.6	2400.4	2403.2	2404.4	2405.9	2405.9	2404.7	2401.6	2398.4
3°	2392.4	2393.6	2396.0	2399.6	2402.8	2404.4	2405.9	2405.9	2404.4	2401.2	2397.2
3.5°	2390.0	2391.6	2394.4	2398.4	2402.4	2404.0	2405.9	2405.5	2404.0	2400.4	2396.0
4°	2387.3	2389.3	2392.8	2397.2	2401.6	2403.6	2405.5	2405.1	2403.2	2399.2	2394.4
4.5°	2384.1	2386.9	2390.8	2395.6	2400.8	2403.2	2404.7	2404.7	2402.4	2398.0	2392.8
5°	2380.9	2384.1	2388.5	2393.6	2399.6	2402.4	2404.0	2404.0	2401.2	2396.4	2390.8
5.5°	2377.7	2381.3	2386.1	2392.0	2398.0	2401.2	2403.2	2402.8	2400.0	2394.8	2388.5
6°	2373.8	2377.7	2383.3	2389.6	2396.4	2400.0	2402.0	2401.6	2398.4	2392.8	2386.1
6.5°	2370.2	2374.6	2380.1	2387.3	2394.8	2398.4	2400.4	2400.0	2396.4	2390.4	2383.3
7°	2365.8	2370.6	2376.9	2384.5	2392.8	2396.8	2398.8	2398.0	2394.4	2387.7	2380.1
7.5°	2361.4	2367.0	2373.8	2381.7	2390.0	2394.8	2396.8	2396.0	2392.0	2384.9	2376.9
8°	2356.7	2362.6	2370.2	2378.5	2387.7	2392.4	2394.8	2393.6	2389.3	2382.1	2373.8
8.5°	2351.5	2358.3	2366.2	2375.3	2384.9	2389.6	2392.4	2391.2	2386.5	2378.9	2369.8
9°	2346.3	2353.1	2361.8	2371.4	2381.7	2387.3	2389.6	2388.1	2383.3	2375.3	2365.8
9.5°	2341.2	2348.3	2357.5	2367.8	2378.5	2384.1	2386.9	2385.3	2380.1	2371.8	2361.4
10°	2335.2	2343.2	2353.1	2363.4	2374.9	2380.9	2383.7	2381.7	2376.5	2368.2	2357.1
10.5°	2329.3	2337.6	2347.9	2359.1	2371.4	2377.3	2380.1	2378.5	2372.6	2363.8	2352.3
11°	2322.9	2331.6	2343.2	2354.7	2367.0	2373.8	2376.5	2374.6	2368.6	2359.1	2347.5
11.5°	2316.1	2325.7	2337.6	2349.9	2362.6	2369.4	2372.6	2370.6	2364.2	2354.3	2342.4
12°	2309.4	2319.3	2332.0	2344.7	2358.3	2365.4	2368.6	2366.2	2359.8	2349.5	2336.8
12.5°	2302.2	2313.0	2326.1	2339.6	2353.5	2360.6	2363.8	2361.8	2354.7	2344.4	2331.2
13°	2295.1	2306.2	2319.7	2333.6	2348.3	2355.9	2359.1	2356.7	2349.9	2338.8	2325.3
13.5°	2287.5	2299.1	2313.4	2327.7	2342.8	2351.1	2354.3	2351.5	2344.4	2333.2	2318.9
14°	2279.6	2291.5	2307.0	2321.7	2337.2	2345.5	2349.1	2346.3	2338.8	2326.9	2312.6
14.5°	2271.2	2284.0	2299.8	2315.3	2331.2	2340.0	2343.6	2340.8	2332.8	2320.9	2305.4
15°	2262.5	2276.0	2292.7	2308.6	2325.3	2334.4	2338.0	2334.8	2326.5	2314.2	2298.7
15.5°	2253.8	2267.7	2284.7	2301.4	2318.9	2328.1	2332.0	2328.5	2320.1	2307.4	2291.5
16°	2244.6	2258.9	2277.2	2294.3	2312.2	2321.3	2325.7	2322.1	2313.0	2300.2	2283.6
16.5°	2235.1	2250.2	2269.3	2287.1	2305.0	2314.9	2319.3	2315.7	2306.2	2293.1	2276.0
17°	2225.1	2241.0	2261.3	2279.2	2297.5	2307.8	2312.6	2308.6	2298.7	2285.1	2267.7
17.5°	2215.2	2231.5	2252.6	2270.8	2290.3	2300.6	2305.4	2301.0	2291.1	2277.2	2259.3
18°	2204.5	2221.6	2243.4	2262.5	2282.0	2293.1	2298.3	2293.5	2283.2	2268.9	2250.6
18.5°	2194.2	2211.6	2233.9	2253.8	2274.0	2285.5	2290.3	2285.5	2274.8	2260.5	2241.8
19°	2183.0	2201.3	2224.8	2245.0	2265.3	2277.2	2282.4	2277.2	2266.1	2251.4	2231.9
19.5°	2171.5	2190.6	2214.8	2235.5	2256.1	2268.9	2274.4	2268.9	2257.3	2242.6	2222.8
20°	2160.0	2179.8	2204.9	2225.9	2247.0	2259.7	2265.7	2260.1	2248.2	2233.1	2213.2
20.5°	2148.1	2167.9	2194.6	2215.6	2237.9	2250.6	2256.9	2251.0	2238.7	2223.6	2202.9
21°	2135.7	2156.4	2183.8	2205.3	2227.5	2241.0	2247.8	2241.4	2229.1	2213.2	2192.6



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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°	2096.8	2119.5	2149.7	2173.1	2196.5	2211.2	2218.4	2211.6	2198.1	2182.2	2159.6
23°	2083.3	2106.7	2137.7	2161.6	2185.4	2200.5	2208.1	2201.3	2187.0	2170.3	2147.7
23.5°	2069.8	2093.6	2125.4	2149.7	2174.3	2189.8	2197.7	2190.6	2175.9	2158.8	2135.7
24°	2055.9	2080.5	2113.1	2137.7	2162.4	2178.7	2186.6	2179.5	2164.0	2147.3	2123.4
24.5°	2041.2	2066.6	2100.0	2125.4	2150.4	2167.1	2175.1	2167.9	2152.0	2135.3	2111.1
25°	2026.5	2052.7	2086.9	2112.7	2138.5	2155.2	2163.6	2156.0	2140.1	2123.0	2098.0
25.5°	2011.4	2038.0	2073.4	2099.6	2125.8	2143.3	2152.0	2144.1	2127.4	2110.3	2085.3
26°	1996.3	2023.7	2059.5	2086.5	2112.7	2130.6	2139.7	2131.4	2114.7	2097.2	2072.2
26.5°	1980.8	2009.0	2045.1	2073.0	2099.6	2117.9	2127.0	2118.7	2101.2	2084.1	2058.3
27°	1964.9	1993.9	2030.8	2059.5	2086.1	2104.8	2113.9	2105.5	2088.1	2070.6	2044.0
27.5°	1948.6	1977.6	2016.1	2045.5	2072.6	2091.6	2101.2	2092.4	2074.6	2057.1	2030.4
28°	1932.3	1962.1	2001.0	2031.2	2057.9	2077.7	2087.3	2078.5	2060.2	2042.4	2015.3
28.5°	1916.0	1946.2	1985.5	2016.1	2044.0	2063.8	2073.4	2065.0	2045.5	2028.5	2000.6
29°	1899.3	1930.3	1970.8	2001.4	2029.3	2049.5	2059.1	2050.3	2031.2	2013.4	1985.1
29.5°	1882.2	1913.6	1954.6	1986.3	2014.6	2035.2	2045.1	2036.0	2016.5	1999.5	1969.7
30°	1865.2	1897.7	1938.3	1970.8	1999.5	2020.1	2030.0	2021.3	2001.0	1983.2	1954.2
30.5°	1847.7	1880.6	1922.0	1955.3	1983.6	2005.4	2015.0	2006.6	1985.1	1968.1	1938.3
31°	1830.2	1863.6	1905.3	1939.5	1967.3	1990.3	1999.9	1990.7	1969.3	1951.8	1922.0
31.5°	1812.7	1846.1	1888.2	1923.2	1951.4	1974.8	1984.4	1975.2	1953.4	1935.9	1905.3
32°	1795.6	1828.6	1871.1	1906.9	1933.9	1958.5	1968.1	1959.7	1936.3	1920.0	1888.6
32.5°	1765.0	1810.7	1853.6	1890.2	1917.2	1942.6	1952.6	1943.4	1919.2	1903.3	1871.9
33°	1733.2	1792.8	1836.5	1873.1	1893.0	1925.9	1935.9	1926.7	1893.0	1886.2	1854.4
33.5°	1691.1	1775.3	1818.3	1855.6	1864.8	1909.3	1919.2	1910.1	1865.9	1869.9	1836.9
34°	1645.8	1758.3	1800.4	1837.3	1832.6	1891.4	1901.7	1893.0	1834.6	1851.6	1819.1
34.5°	1599.7	1728.9	1782.1	1819.9	1796.0	1873.9	1885.0	1873.9	1798.8	1832.6	1801.6
35°	1555.6	1697.1	1763.8	1794.0	1754.3	1854.0	1867.9	1853.2	1759.9	1808.3	1783.3
35.5°	1511.9	1657.7	1745.2	1766.2	1710.2	1823.8	1850.4	1823.8	1715.7	1780.9	1765.0
36°	1467.8	1613.6	1726.9	1735.6	1660.9	1796.8	1832.6	1797.6	1667.3	1751.9	1746.7
36.5°	1422.1	1570.3	1707.8	1699.9	1611.6	1761.8	1815.1	1764.2	1618.8	1717.3	1728.5
37°	1373.2	1527.0	1689.1	1660.9	1558.8	1722.9	1797.2	1727.3	1568.3	1679.2	1709.0
37.5°	1324.0	1483.7	1670.1	1618.8	1509.1	1680.8	1778.5	1687.5	1517.5	1639.1	1690.3
38°	1274.3	1440.0	1651.0	1572.7	1459.9	1635.9	1760.3	1643.8	1469.0	1594.2	1671.6
38.5°	1225.4	1396.3	1632.3	1525.0	1413.4	1588.6	1741.6	1597.7	1421.3	1547.7	1653.0
39°	1177.3	1351.0	1612.8	1478.1	1366.1	1539.7	1723.7	1549.7	1374.0	1500.0	1633.5
39.5°	1130.5	1304.1	1594.2	1430.8	1319.6	1489.3	1704.6	1501.6	1327.1	1452.3	1614.4
40°	1084.0	1254.8	1574.3	1383.2	1271.5	1441.2	1686.3	1453.5	1279.1	1405.0	1595.4
40.5°	1039.5	1206.7	1554.8	1338.3	1223.0	1394.7	1666.9	1407.0	1230.6	1358.9	1576.3
41°	993.8	1160.3	1535.4	1293.8	1173.0	1349.4	1647.8	1360.5	1180.1	1314.0	1556.4
41.5°	948.9	1113.8	1517.1	1249.3	1123.7	1303.7	1627.5	1315.2	1130.9	1269.9	1536.1
42°	903.2	1068.5	1488.5	1205.6	1075.2	1258.0	1607.3	1269.9	1082.0	1225.4	1515.5
42.5°	858.7	1026.0	1458.3	1160.7	1028.3	1211.9	1587.8	1224.2	1034.3	1179.7	1491.6
43°	813.8	981.4	1416.9	1113.8	982.6	1164.6	1552.4	1176.9	988.2	1133.6	1450.7
43.5°	772.0	937.7	1371.6	1068.9	936.9	1117.3	1517.5	1128.9	942.9	1086.7	1415.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	651.3	806.6	1220.7	935.0	804.2	978.3	1389.9	989.4	809.4	951.6	1264.0
45.5°	613.1	764.5	1169.8	893.2	759.7	934.2	1339.5	943.7	766.5	908.3	1210.7
46°	576.6	723.2	1116.1	851.5	717.2	890.5	1285.0	900.0	723.6	866.2	1156.7
46.5°	542.0	684.2	1062.5	809.8	676.3	846.4	1229.4	856.7	682.2	824.9	1102.6
47°	508.2	644.5	1008.9	768.9	636.6	803.4	1172.6	813.4	642.9	783.6	1049.0
47.5°	477.2	607.5	955.2	728.3	598.4	761.3	1115.0	770.9	604.8	743.0	996.2
48°	449.0	571.4	903.2	688.6	562.6	720.0	1060.1	729.9	568.6	704.1	943.7
48.5°	424.4	536.4	854.3	650.5	528.1	679.5	1005.7	688.2	533.6	664.8	892.8
49°	402.5	502.6	807.4	613.5	495.5	638.9	954.8	648.5	500.7	627.8	843.6
49.5°	383.0	472.0	761.3	578.1	464.5	601.2	905.2	610.3	469.7	590.9	795.9
50°	364.8	442.6	716.4	542.4	435.5	564.2	856.7	573.4	440.3	555.9	750.2
50.5°	349.7	416.4	674.7	509.0	408.5	529.3	809.4	537.2	412.4	521.7	706.5
51°	335.0	392.6	634.2	477.6	383.4	496.3	763.3	503.8	387.4	490.3	663.2
51.5°	321.1	372.7	595.2	448.2	364.0	464.5	717.6	472.0	367.1	459.7	623.4
52°	306.8	354.4	557.5	420.0	344.1	435.1	674.7	441.5	346.5	431.5	584.9
52.5°	293.2	338.5	522.5	393.4	324.6	406.9	631.0	412.8	326.2	403.7	547.9
53°	279.7	323.4	489.1	368.7	304.8	381.9	589.7	385.8	305.6	377.9	513.4
53.5°	269.0	309.5	457.7	345.7	285.3	361.6	550.3	364.8	285.3	356.8	480.0
54°	260.7	296.0	428.7	325.0	269.8	340.9	515.4	343.7	269.8	335.8	449.4
54.5°	255.5	282.9	401.3	306.0	258.3	320.3	479.6	322.6	257.9	314.7	420.8
55°	251.1	269.0	376.3	288.1	251.9	299.6	447.4	301.6	251.9	293.6	394.6
55.5°	246.8	257.9	352.8	271.4	247.2	279.3	416.4	280.5	246.8	276.2	369.9
56°	242.4	248.7	332.2	256.3	242.8	263.0	388.6	263.8	242.4	260.7	350.5
56.5°	238.4	243.6	312.7	245.2	238.4	249.5	366.4	249.9	238.0	248.7	331.0
57°	234.4	239.2	295.2	239.2	234.0	241.2	343.7	240.8	234.0	242.0	311.5
57.5°	230.1	234.8	279.3	234.8	230.1	236.0	321.5	235.6	229.7	237.2	292.1
58°	226.1	230.9	266.2	230.5	225.7	231.7	298.8	231.3	225.7	232.8	276.6
58.5°	222.1	226.5	254.3	226.1	221.7	227.7	276.6	227.3	221.3	228.9	263.4
59°	218.1	222.5	243.6	222.1	217.7	223.3	261.1	223.3	217.3	224.5	251.9
59.5°	214.2	218.5	234.4	217.7	213.8	219.3	247.9	218.9	213.4	220.5	241.6
60°	210.2	214.6	226.5	213.8	209.4	215.4	236.8	215.0	209.4	216.6	232.4
60.5°	205.8	210.6	218.9	209.8	205.4	211.0	227.7	211.0	205.4	212.2	224.5
61°	201.9	206.6	212.2	205.4	201.9	207.0	218.9	207.0	201.1	208.2	217.3
61.5°	197.9	202.6	206.2	201.9	197.9	203.0	211.8	203.0	197.1	204.2	210.6
62°	193.9	198.7	200.7	197.9	193.9	199.5	205.0	199.1	193.1	200.3	204.6
62.5°	189.5	194.7	195.5	193.5	189.9	195.5	199.1	195.1	189.1	196.3	199.5
63°	185.6	190.7	191.1	189.5	186.0	191.5	193.9	190.7	184.8	191.9	194.3
63.5°	181.6	186.4	186.8	185.6	182.4	187.5	188.7	186.8	181.2	187.9	189.9
64°	177.6	182.4	182.4	181.6	178.4	183.6	184.8	182.8	177.2	184.0	186.0
64.5°	173.2	178.4	178.4	177.6	174.8	179.6	180.4	178.8	173.2	180.0	181.6
65°	169.3	174.4	174.4	174.0	170.9	176.0	176.4	174.8	169.3	176.0	177.6
65.5°	165.3	170.1	170.1	170.1	167.3	172.1	172.4	170.9	165.3	172.1	173.6
66°	161.3	166.1	166.1	166.1	163.3	168.1	168.1	166.9	161.3	168.1	169.3



TEST NUMBER: P776432

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	149.4	154.2	154.2	154.6	152.2	156.6	156.2	155.0	149.8	156.2	157.3
68°	145.4	150.2	150.2	150.6	148.6	153.0	152.2	151.0	145.8	151.8	153.4
68.5°	141.5	146.2	146.2	146.6	145.0	149.0	148.6	147.4	141.9	148.2	149.4
69°	137.5	142.3	142.3	144.6	141.5	145.4	144.6	143.4	138.3	144.2	145.4
69.5°	133.9	138.3	138.3	140.7	137.9	141.5	140.3	139.5	134.3	140.3	141.5
70°	129.9	134.3	134.3	136.7	133.9	137.9	136.7	135.5	130.7	136.3	137.5
70.5°	126.0	130.3	130.3	132.3	130.3	134.3	132.7	131.9	126.8	132.3	133.5
71°	122.4	126.8	126.4	128.3	126.8	130.3	128.7	127.9	123.2	128.3	129.5
71.5°	118.4	122.4	122.8	124.8	123.2	126.8	124.8	124.0	119.2	124.4	125.6
72°	114.4	118.8	118.8	120.8	119.6	122.8	120.8	120.4	115.6	120.8	121.6
72.5°	110.5	114.4	114.8	117.2	116.0	119.2	117.2	116.4	111.7	116.8	117.6
73°	106.5	110.9	110.9	113.2	112.4	115.6	113.2	112.4	108.1	112.8	113.6
73.5°	102.5	106.9	106.9	109.7	108.9	112.1	109.3	108.9	104.5	108.9	109.7
74°	98.5	102.9	102.9	105.7	105.3	108.1	105.7	104.9	100.5	105.3	105.7
74.5°	95.0	98.9	98.9	102.1	101.7	104.5	101.7	101.3	97.0	101.3	102.1
75°	91.0	95.0	95.4	98.5	98.1	100.9	98.1	97.4	93.4	97.4	98.1
75.5°	87.0	91.0	91.4	95.0	94.6	97.4	94.2	93.8	89.4	93.8	94.2
76°	83.4	87.0	87.4	91.0	91.0	93.8	90.2	89.8	85.8	89.8	90.2
76.5°	79.5	83.0	83.4	87.4	87.4	90.2	86.6	85.8	82.3	85.8	86.6
77°	75.5	79.1	79.5	83.8	84.2	86.6	83.0	82.3	78.7	82.3	82.6
77.5°	71.5	75.1	75.9	79.9	80.7	83.0	79.1	78.3	75.1	78.3	78.7
78°	67.9	71.1	71.9	76.3	77.1	79.1	75.5	74.7	71.5	74.3	75.1
78.5°	64.0	67.5	67.9	72.7	73.5	75.5	71.5	70.7	67.5	70.7	71.1
79°	60.0	63.6	64.4	68.7	69.9	71.9	67.9	67.2	64.0	66.8	67.2
79.5°	56.0	59.6	60.4	65.2	66.4	68.3	64.4	63.2	60.8	62.8	63.6
80°	52.4	55.6	56.4	61.2	63.2	64.8	60.4	59.6	56.8	59.2	59.6
80.5°	48.5	51.7	52.8	57.6	59.6	61.2	56.8	55.6	53.2	55.2	56.0
81°	44.9	47.7	48.9	54.0	56.0	57.2	53.2	52.1	49.7	51.7	52.1
81.5°	40.9	43.7	45.3	50.5	52.4	53.6	49.7	48.1	46.1	47.7	48.5
82°	37.4	40.1	41.3	46.9	49.3	50.1	46.1	44.5	42.5	43.7	44.5
82.5°	33.4	36.2	37.7	43.3	45.7	46.9	42.5	40.5	38.9	40.1	40.9
83°	29.8	32.2	34.2	39.7	42.5	43.3	39.3	37.0	35.4	36.2	37.4
83.5°	25.8	28.2	31.0	36.2	38.9	39.7	36.2	33.4	31.8	32.6	34.2
84°	22.3	24.2	27.4	32.6	35.4	36.2	33.0	29.4	28.2	28.6	31.0
84.5°	18.3	20.7	24.2	29.4	32.2	33.0	29.4	25.8	24.6	25.0	27.8
85°	14.7	16.7	21.5	25.8	28.6	29.4	26.2	22.3	21.5	21.1	24.6
85.5°	12.3	14.3	18.3	22.3	25.4	26.2	23.0	19.1	17.9	17.9	21.5
86°	9.9	11.9	15.5	19.1	21.9	22.6	20.3	16.3	14.3	14.7	18.3
86.5°	7.9	9.1	12.7	15.5	18.7	19.1	17.1	13.5	11.5	12.3	15.5
87°	5.6	6.8	9.5	12.3	15.1	15.9	14.3	11.1	9.5	9.9	12.3
87.5°	3.6	4.4	6.8	9.1	11.9	12.7	11.5	8.7	7.5	7.9	9.5
88°	1.6	2.4	4.0	6.0	8.7	9.5	8.7	6.8	6.0	6.0	6.8
88.5°	0.4	0.8	1.6	2.8	5.6	6.0	6.0	4.8	4.0	3.6	3.6



TEST NUMBER: P776432
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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.4	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0



TEST NUMBER: P776432

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2401.6	2401.6	2401.6	2401.6	2401.6	2401.6
0.5°	2400.8	2400.0	2400.0	2400.8	2400.8	2401.6
1°	2400.0	2398.8	2398.4	2399.2	2399.2	2400.0
1.5°	2398.8	2397.2	2396.4	2396.8	2397.6	2398.4
2°	2397.6	2395.2	2394.4	2394.8	2395.6	2396.8
2.5°	2396.4	2393.6	2392.4	2392.4	2393.2	2394.8
3°	2394.8	2391.6	2389.6	2389.6	2390.8	2392.4
3.5°	2392.8	2389.6	2387.3	2387.3	2388.1	2390.0
4°	2390.8	2386.9	2384.5	2384.1	2384.9	2387.3
4.5°	2388.5	2384.1	2381.3	2380.9	2381.7	2384.1
5°	2386.1	2381.3	2377.7	2377.3	2378.5	2380.9
5.5°	2383.3	2377.7	2374.6	2373.4	2374.9	2377.7
6°	2380.5	2373.8	2371.0	2369.8	2371.0	2373.8
6.5°	2377.3	2370.2	2366.6	2365.8	2366.6	2370.2
7°	2373.8	2366.2	2362.2	2361.0	2362.2	2365.8
7.5°	2369.8	2361.8	2357.9	2356.3	2357.9	2361.4
8°	2365.8	2357.1	2353.1	2351.5	2352.7	2356.7
8.5°	2361.8	2352.3	2347.9	2346.3	2347.9	2351.5
9°	2357.1	2347.1	2342.4	2340.8	2342.4	2346.3
9.5°	2352.3	2341.6	2336.8	2335.2	2336.4	2341.2
10°	2347.5	2336.0	2330.8	2329.3	2330.8	2335.2
10.5°	2342.0	2330.0	2325.3	2323.3	2324.9	2329.3
11°	2336.4	2324.1	2318.5	2316.9	2318.1	2322.9
11.5°	2330.8	2317.7	2311.8	2310.2	2311.8	2316.1
12°	2324.9	2311.0	2305.4	2303.0	2304.6	2309.4
12.5°	2318.5	2304.2	2298.3	2295.9	2297.5	2302.2
13°	2311.8	2296.7	2290.7	2288.3	2289.5	2295.1
13.5°	2305.0	2289.1	2283.2	2280.8	2282.0	2287.5
14°	2298.3	2281.2	2275.2	2272.8	2274.0	2279.6
14.5°	2290.7	2273.2	2266.9	2264.9	2265.7	2271.2
15°	2282.8	2264.9	2258.5	2256.1	2256.9	2262.5
15.5°	2274.8	2256.1	2249.8	2247.4	2248.2	2253.8
16°	2266.5	2247.0	2240.6	2238.3	2238.7	2244.6
16.5°	2257.7	2237.9	2231.1	2229.1	2229.1	2235.1
17°	2249.0	2228.3	2221.6	2219.2	2219.6	2225.1
17.5°	2239.8	2218.8	2211.6	2209.3	2209.7	2215.2
18°	2230.7	2208.5	2201.3	2198.9	2198.9	2204.5
18.5°	2220.8	2198.1	2191.0	2188.2	2188.2	2194.2
19°	2210.8	2187.0	2179.8	2177.5	2177.1	2183.0
19.5°	2200.5	2175.9	2168.7	2166.3	2165.9	2171.5
20°	2189.8	2164.8	2157.2	2155.6	2154.4	2160.0
20.5°	2179.1	2152.8	2145.3	2143.7	2142.5	2148.1
21°	2167.5	2141.3	2133.4	2131.8	2130.2	2135.7

TEST NUMBER: P776432

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2132.2	2103.6	2095.6	2094.0	2091.6	2096.8
23°	2119.9	2090.0	2082.5	2080.9	2078.1	2083.3
23.5°	2107.1	2076.5	2068.6	2067.4	2064.6	2069.8
24°	2094.0	2062.6	2055.1	2053.5	2050.3	2055.9
24.5°	2080.9	2048.3	2041.2	2039.2	2036.0	2041.2
25°	2067.4	2033.6	2027.3	2025.3	2021.7	2026.5
25.5°	2053.5	2018.9	2011.8	2010.6	2007.0	2011.4
26°	2039.2	2004.2	1997.5	1995.9	1991.9	1996.3
26.5°	2024.9	1989.1	1982.4	1980.8	1976.4	1980.8
27°	2009.8	1973.6	1966.9	1965.7	1960.9	1964.9
27.5°	1994.7	1957.3	1951.4	1949.8	1945.0	1948.6
28°	1979.6	1941.4	1935.1	1933.5	1929.1	1932.3
28.5°	1964.5	1924.8	1918.8	1917.2	1912.4	1916.0
29°	1948.2	1908.5	1902.5	1900.9	1896.1	1899.3
29.5°	1932.3	1891.8	1885.8	1884.2	1879.5	1882.2
30°	1915.6	1874.7	1869.1	1867.1	1862.4	1865.2
30.5°	1898.9	1856.8	1851.6	1849.7	1845.3	1847.7
31°	1881.8	1838.9	1834.6	1832.2	1827.8	1830.2
31.5°	1865.5	1820.3	1816.3	1814.3	1809.9	1812.7
32°	1848.1	1802.8	1798.4	1796.4	1792.4	1795.6
32.5°	1830.6	1773.0	1780.5	1778.1	1774.6	1765.0
33°	1812.7	1741.2	1762.2	1760.3	1756.3	1733.2
33.5°	1794.4	1697.5	1742.4	1741.6	1737.6	1691.1
34°	1775.3	1652.2	1724.9	1722.9	1720.5	1645.8
34.5°	1757.5	1606.5	1692.3	1703.8	1699.9	1599.7
35°	1729.3	1561.2	1661.3	1684.8	1664.9	1555.6
35.5°	1697.9	1517.1	1616.8	1665.7	1632.3	1511.9
36°	1657.3	1473.0	1576.3	1646.6	1590.6	1467.8
36.5°	1612.4	1426.9	1532.2	1627.5	1546.5	1422.1
37°	1569.9	1378.8	1489.7	1607.7	1503.6	1373.2
37.5°	1525.4	1329.5	1446.3	1588.2	1462.2	1324.0
38°	1481.7	1278.3	1404.2	1568.7	1420.5	1274.3
38.5°	1438.4	1228.6	1360.9	1549.3	1377.6	1225.4
39°	1395.9	1180.5	1316.0	1529.8	1335.1	1177.3
39.5°	1348.6	1133.2	1268.7	1509.9	1289.8	1130.5
40°	1301.3	1087.5	1222.2	1490.1	1243.7	1084.0
40.5°	1252.4	1043.0	1175.8	1470.2	1197.2	1039.5
41°	1206.0	997.7	1128.9	1450.7	1150.7	993.8
41.5°	1157.5	951.6	1083.2	1429.7	1106.2	948.9
42°	1111.4	906.0	1041.8	1399.1	1062.9	903.2
42.5°	1066.9	861.8	999.7	1366.1	1021.2	858.7
43°	1024.4	816.9	956.4	1317.6	978.3	813.8
43.5°	979.1	775.2	914.7	1269.9	935.8	772.0

TEST NUMBER: P776432

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	849.9	654.8	786.7	1109.4	808.6	651.3
45.5°	805.4	615.9	747.8	1059.7	768.9	613.1
46°	763.7	579.3	707.7	1011.6	729.1	576.6
46.5°	722.8	544.0	669.9	964.8	690.2	542.0
47°	683.4	510.6	631.8	917.9	652.4	508.2
47.5°	644.9	479.6	596.0	871.0	616.3	477.2
48°	607.5	451.0	560.3	824.5	579.7	449.0
48.5°	571.4	426.0	526.5	780.8	545.6	424.4
49°	536.4	403.7	495.1	738.3	513.0	402.5
49.5°	503.4	384.2	465.7	697.3	482.4	383.0
50°	471.7	367.1	437.1	657.2	452.2	364.8
50.5°	442.2	350.9	412.8	621.1	426.0	349.7
51°	416.0	336.2	390.2	586.1	402.1	335.0
51.5°	393.0	322.2	370.7	552.3	381.1	321.1
52°	372.7	308.7	353.2	520.5	362.0	306.8
52.5°	354.8	294.8	337.7	489.9	345.3	293.2
53°	340.1	281.3	323.4	460.9	329.8	279.7
53.5°	325.4	269.8	309.1	433.9	315.5	269.0
54°	310.7	261.1	295.6	408.1	301.6	260.7
54.5°	296.4	255.5	282.1	384.2	288.5	255.5
55°	282.9	251.1	269.0	362.4	275.0	251.1
55.5°	269.0	246.8	258.3	341.7	262.6	246.8
56°	257.5	242.8	249.9	323.0	252.7	242.4
56.5°	248.3	238.4	245.2	306.4	246.8	238.4
57°	242.8	234.4	240.8	290.5	242.0	234.4
57.5°	238.4	230.1	236.4	276.2	237.6	230.1
58°	234.4	226.1	232.4	263.4	233.6	226.1
58.5°	230.1	222.1	228.1	251.9	229.3	222.1
59°	226.1	218.1	224.1	242.4	225.3	218.1
59.5°	222.1	214.2	220.1	233.6	221.3	214.2
60°	218.1	210.2	216.2	225.7	217.0	210.2
60.5°	214.2	206.2	212.2	218.9	213.0	205.8
61°	210.2	202.3	208.2	212.6	209.0	201.9
61.5°	206.2	198.7	204.2	206.6	205.0	197.9
62°	202.3	194.7	200.3	201.5	200.7	193.9
62.5°	198.3	190.7	196.3	196.7	196.7	189.5
63°	194.3	187.2	192.3	192.7	192.7	185.6
63.5°	190.3	183.2	188.3	188.3	188.3	181.6
64°	186.4	179.2	184.4	184.4	184.4	177.6
64.5°	182.4	175.6	180.4	180.0	180.0	173.2
65°	178.8	171.7	176.4	176.0	176.0	169.3
65.5°	174.8	168.1	172.4	171.7	171.7	165.3
66°	170.9	164.1	168.5	167.7	167.7	161.3



TEST NUMBER: P776432

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	159.3	153.0	157.0	155.8	155.4	149.4
68°	155.4	149.0	153.0	151.8	151.0	145.4
68.5°	151.4	145.4	149.0	147.4	147.0	141.5
69°	147.4	141.9	145.4	142.6	145.0	137.5
69.5°	143.8	138.3	141.5	139.1	140.7	133.9
70°	139.9	134.7	137.9	135.1	136.3	129.9
70.5°	135.9	130.7	133.9	131.5	131.5	126.0
71°	132.3	127.2	129.9	127.9	127.2	122.4
71.5°	128.3	123.6	126.4	123.6	123.2	118.4
72°	124.8	120.0	122.4	119.6	119.2	114.4
72.5°	120.8	116.0	118.8	115.6	115.2	110.5
73°	116.8	112.4	114.8	111.7	110.9	106.5
73.5°	113.2	108.5	110.9	107.7	106.9	102.5
74°	109.3	104.9	106.9	103.7	102.9	98.5
74.5°	105.7	101.3	103.3	99.7	98.9	95.0
75°	101.7	97.7	99.3	95.8	95.0	91.0
75.5°	98.1	93.8	95.4	91.8	91.0	87.0
76°	94.2	90.2	91.8	87.8	86.6	83.4
76.5°	90.6	86.6	87.8	83.8	82.6	79.5
77°	86.6	83.0	84.2	79.9	78.7	75.5
77.5°	83.0	79.1	80.3	75.9	74.7	71.5
78°	79.1	75.5	76.3	71.9	70.7	67.9
78.5°	75.5	71.9	72.7	67.9	66.8	64.0
79°	71.5	67.9	68.7	64.0	62.8	60.0
79.5°	67.5	64.4	64.8	60.0	58.8	56.0
80°	64.0	60.8	60.8	56.4	54.4	52.4
80.5°	60.0	57.2	57.2	52.4	50.5	48.5
81°	56.4	53.6	53.2	48.9	46.5	44.9
81.5°	52.4	50.1	49.7	44.9	42.5	40.9
82°	48.9	46.1	45.7	41.3	38.5	37.4
82.5°	45.3	42.5	42.1	37.7	34.6	33.4
83°	41.7	38.9	38.5	34.2	30.6	29.8
83.5°	38.1	35.4	34.6	30.6	26.6	25.8
84°	34.2	31.8	31.0	27.4	23.0	22.3
84.5°	30.6	28.2	27.4	23.8	19.9	18.3
85°	27.0	24.6	23.8	20.7	16.7	14.7
85.5°	23.4	21.1	19.9	17.5	13.9	12.3
86°	19.9	17.5	16.3	14.3	11.5	9.9
86.5°	16.3	13.9	13.1	11.1	9.1	7.9
87°	13.1	10.7	9.9	7.9	6.4	5.6
87.5°	9.5	7.5	6.8	5.2	4.0	3.6
88°	6.4	4.0	3.6	2.0	1.6	1.6
88.5°	2.8	0.8	0.4	0.4	0.4	0.4



TEST NUMBER: P776432

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQMW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	0.4	0.0	0.0



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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	2122.6	2144.5	2172.7	2194.9	2217.2	2231.5	2237.9	2231.5	2218.8	2202.9	2181.8
22°	2109.9	2132.2	2161.2	2184.2	2206.9	2221.6	2228.3	2222.0	2208.5	2192.6	2170.7



44°	729.9	892.8	1322.8	1023.2	891.6	1069.3	1480.9	1081.2	897.6	1040.7	1366.9
44.5°	690.2	849.9	1273.1	979.1	847.5	1023.2	1436.4	1034.7	853.5	995.8	1316.0



66.5°	157.3	162.1	162.1	162.1	159.7	164.1	164.1	162.9	157.3	164.1	165.3
67°	153.4	158.1	158.1	158.5	156.2	160.5	160.1	158.9	153.4	160.1	161.3



89°	0.0	0.4	0.4	0.8	2.4	3.2	3.2	2.4	2.0	1.6	1.2
89.5°	0.0	0.0	0.4	0.4	0.4	0.8	1.2	0.8	0.4	0.4	0.4

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21.5°	2156.0	2129.0	2121.0	2119.5	2117.5	2122.6
22°	2144.5	2116.3	2108.3	2107.1	2105.1	2109.9



44°	935.4	732.7	871.4	1212.7	893.2	729.9
44.5°	892.0	693.8	829.3	1161.4	851.1	690.2

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66.5°	166.9	160.5	164.5	163.7	163.3	157.3
67°	162.9	156.6	160.9	159.7	159.3	153.4

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89°	0.8	0.0	0.4	0.4	0.4	0.0
89.5°	0.0	0.0	0.0	0.4	0.4	0.0

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)