

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: P776637

Luminaire Tested: HCDJBS4050CSD-HCD4TSQMB-5000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776637
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B006-HCD4TSQMB)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD4TSQMB-5000lm-3500K
Description: 4 INCH SQUARE MEDIUM MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3144.1 lumens
Efficiency: N/A
Efficacy: 65.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.14
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

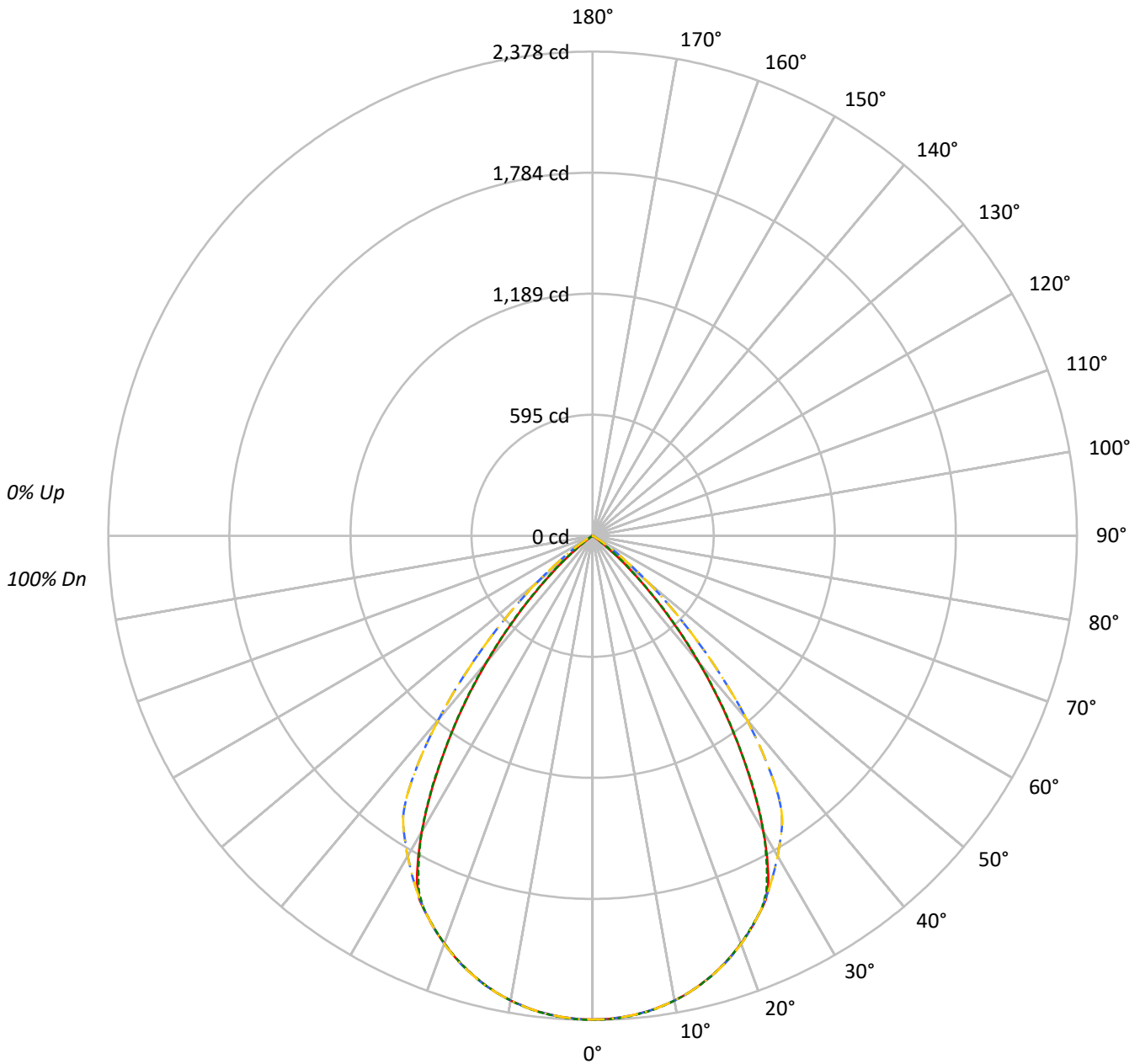
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	100	100	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	97	95	94	92	92	92	92
2	107	101	97	93	104	100	96	92	96	93	90	93	91	88	90	88	86	85	85	85	85
3	100	93	88	84	98	92	87	83	89	85	81	87	83	80	84	82	79	77	77	77	77
4	95	86	80	75	93	85	79	75	83	78	74	81	77	73	79	75	72	71	71	71	71
5	89	80	73	68	87	79	73	68	77	72	67	75	71	67	74	70	66	65	65	65	65
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	69	64	61	59	59	59	59
7	79	69	62	57	77	68	62	57	67	61	57	65	60	56	64	60	56	55	55	55	55
8	74	64	57	53	73	63	57	53	62	56	52	61	56	52	60	55	52	50	50	50	50
9	70	60	53	49	69	59	53	49	58	52	48	57	52	48	56	52	48	47	47	47	47
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43	43	43	43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	234879	234879	234879	234879
5°	234327	234466	234327	234466
10°	232590	232691	232590	232691
15°	229278	229319	229278	229319
20°	224119	224024	224119	224024
25°	217423	216539	217423	216539
30°	191481	191424	191481	191424
35°	149539	150058	149539	150058
40°	104372	105404	104372	105404
45°	59240	60820	59240	60820
50°	23558	25295	23558	25295
55°	3498	4463	3498	4463
60°	751	751	751	751
65°	561	561	561	561
70°	405	405	405	405
75°	344	344	344	344
80°	285	285	285	285
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 100155 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.0	7.1
10°-20°	630.8	20.1
20°-30°	908.7	28.9
30°-40°	857.6	27.3
40°-50°	442.1	14.1
50°-60°	77.2	2.5
60°-70°	2.8	0.1
70°-80°	0.8	0.0
80°-90°	0.1	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°	1763.6	56.1
0°-40°	2621.2	83.4
0°-60°	3140.4	99.9
0°-90°	3144.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3144.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2376	2376	2376	2376	2376	
5°	2362	2363	2362	2363	2362	224
15°	2241	2241	2241	2241	2241	631
25°	1994	1986	1994	1986	1994	901
35°	1239	1244	1239	1244	1239	769
45°	424	435	424	435	424	335
55°	20	26	20	26	20	36
65°	2	2	2	2	2	2
75°	1	1	1	1	1	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°	2376.3	2376.3	2376.3	2376.3	2376.3	2376.3	2376.3	2376.3	2376.3	2376.3	2376.3
0.5°	2375.9	2375.9	2375.9	2376.3	2377.7	2376.3	2375.9	2375.9	2375.9	2375.9	2375.9
1°	2375.4	2375.4	2375.4	2375.9	2377.3	2375.9	2375.4	2375.4	2375.4	2375.4	2375.4
1.5°	2374.4	2374.9	2374.9	2374.9	2376.3	2374.9	2374.9	2374.9	2374.4	2374.9	2374.9
2°	2373.5	2373.5	2374.0	2374.0	2375.4	2374.0	2374.0	2373.5	2373.5	2373.5	2374.0
2.5°	2372.1	2372.1	2372.6	2373.0	2374.0	2373.0	2372.6	2372.1	2372.1	2372.1	2372.6
3°	2370.7	2370.7	2371.1	2371.1	2372.6	2371.1	2371.1	2370.7	2370.7	2370.7	2371.1
3.5°	2368.8	2368.8	2369.3	2369.3	2370.7	2369.3	2369.3	2368.8	2368.8	2368.8	2369.3
4°	2366.9	2366.9	2366.9	2367.4	2368.3	2367.4	2366.9	2366.9	2366.9	2366.9	2366.9
4.5°	2364.5	2364.5	2364.5	2364.5	2366.0	2364.5	2364.5	2364.5	2364.5	2364.5	2364.5
5°	2361.7	2361.7	2361.7	2361.7	2363.1	2361.7	2361.7	2361.7	2361.7	2361.7	2361.7
5.5°	2358.4	2358.4	2358.9	2358.9	2359.8	2358.9	2358.9	2358.4	2358.4	2358.4	2358.9
6°	2355.1	2355.1	2355.1	2355.6	2356.5	2355.6	2355.1	2355.1	2355.1	2355.1	2355.1
6.5°	2351.4	2351.4	2351.8	2351.8	2352.8	2351.8	2351.8	2351.4	2351.4	2351.4	2351.8
7°	2347.6	2347.6	2347.6	2348.1	2349.0	2348.1	2347.6	2347.6	2347.6	2347.6	2347.6
7.5°	2343.3	2343.3	2343.3	2343.3	2344.8	2343.3	2343.3	2343.3	2343.3	2343.3	2343.3
8°	2338.6	2338.6	2339.1	2339.1	2340.0	2339.1	2339.1	2338.6	2338.6	2338.6	2339.1
8.5°	2333.9	2333.9	2333.9	2333.9	2334.9	2333.9	2333.9	2333.9	2333.9	2333.9	2333.9
9°	2328.7	2328.7	2328.7	2328.7	2329.7	2328.7	2328.7	2328.7	2328.7	2328.7	2328.7
9.5°	2323.1	2323.1	2323.1	2323.1	2324.0	2323.1	2323.1	2323.1	2323.1	2323.1	2323.1
10°	2317.4	2317.4	2317.4	2317.4	2318.4	2317.4	2317.4	2317.4	2317.4	2317.4	2317.4
10.5°	2311.3	2311.3	2311.3	2310.8	2312.2	2310.8	2311.3	2311.3	2311.3	2311.3	2311.3
11°	2304.7	2304.7	2305.2	2304.7	2305.6	2304.7	2305.2	2304.7	2304.7	2304.7	2305.2
11.5°	2298.1	2298.1	2298.1	2297.6	2298.6	2297.6	2298.1	2298.1	2298.1	2298.1	2298.1
12°	2291.0	2291.0	2291.0	2290.5	2291.5	2290.5	2291.0	2291.0	2291.0	2291.0	2291.0
12.5°	2283.0	2283.5	2283.5	2283.0	2283.5	2283.0	2283.5	2283.5	2283.0	2283.5	2283.5
13°	2275.5	2275.9	2275.9	2275.0	2275.9	2275.0	2275.9	2275.9	2275.5	2275.9	2275.9
13.5°	2267.4	2267.4	2267.9	2267.0	2267.9	2267.0	2267.9	2267.4	2267.4	2267.4	2267.9
14°	2259.0	2259.4	2259.4	2258.5	2259.0	2258.5	2259.4	2259.4	2259.0	2259.4	2259.4
14.5°	2250.0	2250.5	2250.9	2250.0	2250.0	2250.0	2250.9	2250.5	2250.0	2250.5	2250.9
15°	2240.6	2241.5	2241.5	2240.6	2241.0	2240.6	2241.5	2241.5	2240.6	2241.5	2241.5
15.5°	2231.1	2232.1	2232.1	2231.1	2231.1	2231.1	2232.1	2232.1	2231.1	2232.1	2232.1
16°	2221.2	2222.2	2222.7	2221.2	2221.2	2221.2	2222.7	2222.2	2221.2	2222.2	2222.7
16.5°	2211.3	2211.8	2212.8	2211.3	2210.9	2211.3	2212.8	2211.8	2211.3	2211.8	2212.8
17°	2201.0	2201.4	2202.4	2200.5	2200.5	2200.5	2202.4	2201.4	2201.0	2201.4	2202.4
17.5°	2189.7	2190.6	2191.5	2189.7	2189.7	2189.7	2191.5	2190.6	2189.7	2190.6	2191.5
18°	2178.8	2179.3	2180.2	2178.8	2178.3	2178.8	2180.2	2179.3	2178.8	2179.3	2180.2
18.5°	2167.5	2168.0	2168.9	2167.0	2166.6	2167.0	2168.9	2168.0	2167.5	2168.0	2168.9
19°	2155.2	2156.2	2157.1	2155.2	2154.3	2155.2	2157.1	2156.2	2155.2	2156.2	2157.1
19.5°	2143.5	2143.9	2144.9	2143.0	2142.5	2143.0	2144.9	2143.9	2143.5	2143.9	2144.9
20°	2130.7	2131.7	2132.6	2130.3	2129.8	2130.3	2132.6	2131.7	2130.7	2131.7	2132.6
20.5°	2118.5	2118.9	2119.9	2117.5	2117.1	2117.5	2119.9	2118.9	2118.5	2118.9	2119.9
21°	2105.3	2105.8	2106.7	2104.3	2103.9	2104.3	2106.7	2105.8	2105.3	2105.8	2106.7



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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°	2064.7	2064.7	2065.2	2063.3	2063.3	2063.3	2065.2	2064.7	2064.7	2064.7	2065.2
23°	2050.6	2050.6	2050.6	2049.2	2048.7	2049.2	2050.6	2050.6	2050.6	2050.6	2050.6
23.5°	2036.5	2036.5	2035.5	2034.6	2034.6	2034.6	2035.5	2036.5	2036.5	2036.5	2035.5
24°	2021.8	2021.8	2020.4	2020.0	2020.9	2020.0	2020.4	2021.8	2021.8	2021.8	2020.4
24.5°	2007.2	2006.8	2004.9	2004.9	2006.3	2004.9	2004.9	2006.8	2007.2	2006.8	2004.9
25°	1993.6	1991.2	1988.8	1989.3	1985.5	1989.3	1988.8	1991.2	1993.6	1991.2	1988.8
25.5°	1977.5	1976.1	1972.8	1974.2	1965.7	1974.2	1972.8	1976.1	1977.5	1976.1	1972.8
26°	1950.7	1960.6	1956.3	1959.1	1945.9	1959.1	1956.3	1960.6	1950.7	1960.6	1956.3
26.5°	1928.0	1945.0	1939.8	1943.1	1917.2	1943.1	1939.8	1945.0	1928.0	1945.0	1939.8
27°	1900.7	1930.4	1922.8	1921.0	1883.7	1921.0	1922.8	1930.4	1900.7	1930.4	1922.8
27.5°	1866.7	1910.1	1905.4	1900.7	1853.6	1900.7	1905.4	1910.1	1866.7	1910.1	1905.4
28°	1830.9	1883.2	1888.0	1879.0	1820.1	1879.0	1888.0	1883.2	1830.9	1883.2	1888.0
28.5°	1794.6	1860.1	1870.5	1848.4	1785.2	1848.4	1870.5	1860.1	1794.6	1860.1	1870.5
29°	1756.4	1831.4	1852.6	1816.3	1751.3	1816.3	1852.6	1831.4	1756.4	1831.4	1852.6
29.5°	1717.8	1797.5	1834.7	1785.2	1714.5	1785.2	1834.7	1797.5	1717.8	1797.5	1834.7
30°	1677.7	1762.6	1816.3	1752.2	1677.2	1752.2	1816.3	1762.6	1677.7	1762.6	1816.3
30.5°	1636.7	1725.8	1798.4	1717.8	1638.6	1717.8	1798.4	1725.8	1636.7	1725.8	1798.4
31°	1594.3	1689.0	1780.0	1682.4	1599.0	1682.4	1780.0	1689.0	1594.3	1689.0	1780.0
31.5°	1551.4	1650.8	1761.6	1647.1	1556.1	1647.1	1761.6	1650.8	1551.4	1650.8	1761.6
32°	1507.5	1612.2	1743.2	1610.8	1512.3	1610.8	1743.2	1612.2	1507.5	1612.2	1743.2
32.5°	1462.8	1572.1	1725.3	1573.5	1467.9	1573.5	1725.3	1572.1	1462.8	1572.1	1725.3
33°	1418.0	1532.1	1706.9	1534.4	1424.1	1534.4	1706.9	1532.1	1418.0	1532.1	1706.9
33.5°	1372.7	1490.1	1685.7	1494.3	1376.5	1494.3	1685.7	1490.1	1372.7	1490.1	1685.7
34°	1328.4	1447.7	1663.1	1452.4	1331.2	1452.4	1663.1	1447.7	1328.4	1447.7	1663.1
34.5°	1283.6	1404.8	1636.7	1409.0	1286.5	1409.0	1636.7	1404.8	1283.6	1404.8	1636.7
35°	1239.3	1361.9	1604.7	1365.2	1243.6	1365.2	1604.7	1361.9	1239.3	1361.9	1604.7
35.5°	1195.9	1319.5	1570.2	1322.3	1199.2	1322.3	1570.2	1319.5	1195.9	1319.5	1570.2
36°	1153.0	1276.1	1532.1	1278.4	1157.8	1278.4	1532.1	1276.1	1153.0	1276.1	1532.1
36.5°	1109.7	1233.7	1491.0	1235.5	1115.3	1235.5	1491.0	1233.7	1109.7	1233.7	1491.0
37°	1066.8	1191.2	1447.7	1193.1	1073.4	1193.1	1447.7	1191.2	1066.8	1191.2	1447.7
37.5°	1023.4	1149.3	1403.8	1152.1	1031.0	1152.1	1403.8	1149.3	1023.4	1149.3	1403.8
38°	980.0	1107.3	1358.6	1110.6	988.5	1110.6	1358.6	1107.3	980.0	1107.3	1358.6
38.5°	936.2	1066.8	1313.8	1070.6	945.2	1070.6	1313.8	1066.8	936.2	1066.8	1313.8
39°	893.8	1025.8	1268.5	1030.5	902.7	1030.5	1268.5	1025.8	893.8	1025.8	1268.5
39.5°	851.8	984.8	1222.8	990.9	858.9	990.9	1222.8	984.8	851.8	984.8	1222.8
40°	808.9	943.3	1176.1	950.3	816.9	950.3	1176.1	943.3	808.9	943.3	1176.1
40.5°	767.0	902.3	1129.0	909.3	774.5	909.3	1129.0	902.3	767.0	902.3	1129.0
41°	726.4	861.7	1081.9	868.8	733.5	868.8	1081.9	861.7	726.4	861.7	1081.9
41.5°	685.9	821.2	1034.3	828.3	693.4	828.3	1034.3	821.2	685.9	821.2	1034.3
42°	646.8	781.6	986.6	787.7	654.8	787.7	986.6	781.6	646.8	781.6	986.6
42.5°	608.1	742.0	940.0	748.6	616.6	748.6	940.0	742.0	608.1	742.0	940.0
43°	569.9	703.3	893.3	709.0	578.9	709.0	893.3	703.3	569.9	703.3	893.3
43.5°	531.7	665.1	847.6	671.7	542.1	671.7	847.6	665.1	531.7	665.1	847.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	423.8	554.8	716.5	561.9	435.1	561.9	716.5	554.8	423.8	554.8	716.5
45.5°	390.8	519.5	675.5	527.5	401.6	527.5	675.5	519.5	390.8	519.5	675.5
46°	359.2	485.1	636.4	493.6	369.6	493.6	636.4	485.1	359.2	485.1	636.4
46.5°	327.2	450.2	597.7	459.6	338.9	459.6	597.7	450.2	327.2	450.2	597.7
47°	297.0	417.2	560.0	426.1	310.2	426.1	560.0	417.2	297.0	417.2	560.0
47.5°	266.8	385.1	523.7	393.1	281.9	393.1	523.7	385.1	266.8	385.1	523.7
48°	240.4	354.5	488.8	362.5	254.6	362.5	488.8	354.5	240.4	354.5	488.8
48.5°	215.0	324.3	455.4	333.3	230.0	333.3	455.4	324.3	215.0	324.3	455.4
49°	193.7	294.6	421.9	304.5	207.4	304.5	421.9	294.6	193.7	294.6	421.9
49.5°	173.5	266.8	389.8	277.2	185.7	277.2	389.8	266.8	173.5	266.8	389.8
50°	153.2	240.4	358.3	250.8	164.5	250.8	358.3	240.4	153.2	240.4	358.3
50.5°	133.9	215.4	329.0	226.3	143.8	226.3	329.0	215.4	133.9	215.4	329.0
51°	115.5	193.7	300.8	204.1	126.3	204.1	300.8	193.7	115.5	193.7	300.8
51.5°	100.4	173.0	273.9	182.4	109.8	182.4	273.9	173.0	100.4	173.0	273.9
52°	85.8	152.7	248.0	161.7	94.3	161.7	248.0	152.7	85.8	152.7	248.0
52.5°	72.1	132.9	223.4	141.9	79.7	141.9	223.4	132.9	72.1	132.9	223.4
53°	59.4	115.0	201.8	124.4	66.0	124.4	201.8	115.0	59.4	115.0	201.8
53.5°	49.0	99.0	180.5	108.4	52.8	108.4	180.5	99.0	49.0	99.0	180.5
54°	38.2	84.4	160.7	92.9	42.0	92.9	160.7	84.4	38.2	84.4	160.7
54.5°	27.8	70.7	142.4	78.3	33.9	78.3	142.4	70.7	27.8	70.7	142.4
55°	20.3	58.9	124.4	64.6	25.9	64.6	124.4	58.9	20.3	58.9	124.4
55.5°	12.7	48.1	108.4	51.9	17.9	51.9	108.4	48.1	12.7	48.1	108.4
56°	8.5	37.7	92.9	40.5	9.9	40.5	92.9	37.7	8.5	37.7	92.9
56.5°	6.6	27.3	79.7	31.1	6.1	31.1	79.7	27.3	6.6	27.3	79.7
57°	4.7	17.9	67.9	22.6	5.2	22.6	67.9	17.9	4.7	17.9	67.9
57.5°	4.7	11.3	57.0	15.1	4.7	15.1	57.0	11.3	4.7	11.3	57.0
58°	4.2	7.1	47.6	9.9	4.7	9.9	47.6	7.1	4.2	7.1	47.6
58.5°	4.2	4.7	39.6	7.1	4.2	7.1	39.6	4.7	4.2	4.7	39.6
59°	3.8	3.8	32.1	5.2	4.2	5.2	32.1	3.8	3.8	3.8	32.1
59.5°	3.8	3.8	25.9	3.8	4.2	3.8	25.9	3.8	3.8	3.8	25.9
60°	3.8	3.8	20.7	3.8	3.8	3.8	20.7	3.8	3.8	3.8	20.7
60.5°	3.3	3.3	16.0	3.8	3.8	3.8	16.0	3.3	3.3	3.3	16.0
61°	3.3	3.3	12.7	3.3	3.8	3.3	12.7	3.3	3.3	3.3	12.7
61.5°	3.3	3.3	9.4	3.3	3.3	3.3	9.4	3.3	3.3	3.3	9.4
62°	2.8	2.8	7.1	3.3	3.3	3.3	7.1	2.8	2.8	2.8	7.1
62.5°	2.8	2.8	5.2	2.8	3.3	2.8	5.2	2.8	2.8	2.8	5.2
63°	2.8	2.8	3.8	2.8	2.8	2.8	3.8	2.8	2.8	2.8	3.8
63.5°	2.8	2.4	2.8	2.8	2.8	2.8	2.8	2.4	2.8	2.4	2.8
64°	2.4	2.4	2.4	2.4	2.8	2.4	2.4	2.4	2.4	2.4	2.4
64.5°	2.4	2.4	1.9	2.4	2.8	2.4	1.9	2.4	2.4	2.4	1.9
65°	2.4	2.4	1.9	2.4	2.4	2.4	1.9	2.4	2.4	2.4	1.9
65.5°	2.4	1.9	1.9	2.4	2.4	2.4	1.9	1.9	2.4	1.9	1.9
66°	2.4	1.9	1.4	1.9	2.4	1.9	1.4	1.9	2.4	1.9	1.4



TEST NUMBER: P776637

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.9	1.9	1.4	1.9	1.9	1.9	1.4	1.9	1.9	1.9	1.4
68°	1.9	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.9	1.4	1.4
68.5°	1.9	1.4	0.9	1.4	1.9	1.4	0.9	1.4	1.9	1.4	0.9
69°	1.4	1.4	0.9	1.4	1.9	1.4	0.9	1.4	1.4	1.4	0.9
69.5°	1.4	1.4	0.9	1.4	1.9	1.4	0.9	1.4	1.4	1.4	0.9
70°	1.4	1.4	0.9	1.4	1.4	1.4	0.9	1.4	1.4	1.4	0.9
70.5°	1.4	1.4	0.9	1.4	1.4	1.4	0.9	1.4	1.4	1.4	0.9
71°	1.4	0.9	0.9	1.4	1.4	1.4	0.9	0.9	1.4	0.9	0.9
71.5°	1.4	0.9	0.9	0.9	1.4	0.9	0.9	0.9	1.4	0.9	0.9
72°	1.4	0.9	0.9	0.9	1.4	0.9	0.9	0.9	1.4	0.9	0.9
72.5°	0.9	0.9	0.5	0.9	1.4	0.9	0.5	0.9	0.9	0.9	0.5
73°	0.9	0.9	0.5	0.9	1.4	0.9	0.5	0.9	0.9	0.9	0.5
73.5°	0.9	0.9	0.5	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.5
74°	0.9	0.9	0.5	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.5
74.5°	0.9	0.9	0.5	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.5
75°	0.9	0.9	0.5	0.9	0.9	0.9	0.5	0.9	0.9	0.9	0.5
75.5°	0.9	0.5	0.5	0.9	0.9	0.9	0.5	0.5	0.9	0.5	0.5
76°	0.9	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.9	0.5	0.5
76.5°	0.5	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5
77°	0.5	0.5	0.5	0.5	0.9	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	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
79.5°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
80°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
80.5°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
81°	0.5	0.5	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.0
81.5°	0.5	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.5	0.0	0.0
82°	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.5	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: P776637

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3500K

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: P776637

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2376.3	2376.3	2376.3	2376.3	2376.3	2376.3
0.5°	2376.3	2377.7	2376.3	2375.9	2375.9	2375.9
1°	2375.9	2377.3	2375.9	2375.4	2375.4	2375.4
1.5°	2374.9	2376.3	2374.9	2374.9	2374.9	2374.4
2°	2374.0	2375.4	2374.0	2374.0	2373.5	2373.5
2.5°	2373.0	2374.0	2373.0	2372.6	2372.1	2372.1
3°	2371.1	2372.6	2371.1	2371.1	2370.7	2370.7
3.5°	2369.3	2370.7	2369.3	2369.3	2368.8	2368.8
4°	2367.4	2368.3	2367.4	2366.9	2366.9	2366.9
4.5°	2364.5	2366.0	2364.5	2364.5	2364.5	2364.5
5°	2361.7	2363.1	2361.7	2361.7	2361.7	2361.7
5.5°	2358.9	2359.8	2358.9	2358.9	2358.4	2358.4
6°	2355.6	2356.5	2355.6	2355.1	2355.1	2355.1
6.5°	2351.8	2352.8	2351.8	2351.8	2351.4	2351.4
7°	2348.1	2349.0	2348.1	2347.6	2347.6	2347.6
7.5°	2343.3	2344.8	2343.3	2343.3	2343.3	2343.3
8°	2339.1	2340.0	2339.1	2339.1	2338.6	2338.6
8.5°	2333.9	2334.9	2333.9	2333.9	2333.9	2333.9
9°	2328.7	2329.7	2328.7	2328.7	2328.7	2328.7
9.5°	2323.1	2324.0	2323.1	2323.1	2323.1	2323.1
10°	2317.4	2318.4	2317.4	2317.4	2317.4	2317.4
10.5°	2310.8	2312.2	2310.8	2311.3	2311.3	2311.3
11°	2304.7	2305.6	2304.7	2305.2	2304.7	2304.7
11.5°	2297.6	2298.6	2297.6	2298.1	2298.1	2298.1
12°	2290.5	2291.5	2290.5	2291.0	2291.0	2291.0
12.5°	2283.0	2283.5	2283.0	2283.5	2283.5	2283.0
13°	2275.0	2275.9	2275.0	2275.9	2275.9	2275.5
13.5°	2267.0	2267.9	2267.0	2267.9	2267.4	2267.4
14°	2258.5	2259.0	2258.5	2259.4	2259.4	2259.0
14.5°	2250.0	2250.0	2250.0	2250.9	2250.5	2250.0
15°	2240.6	2241.0	2240.6	2241.5	2241.5	2240.6
15.5°	2231.1	2231.1	2231.1	2232.1	2232.1	2231.1
16°	2221.2	2221.2	2221.2	2222.7	2222.2	2221.2
16.5°	2211.3	2210.9	2211.3	2212.8	2211.8	2211.3
17°	2200.5	2200.5	2200.5	2202.4	2201.4	2201.0
17.5°	2189.7	2189.7	2189.7	2191.5	2190.6	2189.7
18°	2178.8	2178.3	2178.8	2180.2	2179.3	2178.8
18.5°	2167.0	2166.6	2167.0	2168.9	2168.0	2167.5
19°	2155.2	2154.3	2155.2	2157.1	2156.2	2155.2
19.5°	2143.0	2142.5	2143.0	2144.9	2143.9	2143.5
20°	2130.3	2129.8	2130.3	2132.6	2131.7	2130.7
20.5°	2117.5	2117.1	2117.5	2119.9	2118.9	2118.5
21°	2104.3	2103.9	2104.3	2106.7	2105.8	2105.3

TEST NUMBER: P776637

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2063.3	2063.3	2063.3	2065.2	2064.7	2064.7
23°	2049.2	2048.7	2049.2	2050.6	2050.6	2050.6
23.5°	2034.6	2034.6	2034.6	2035.5	2036.5	2036.5
24°	2020.0	2020.9	2020.0	2020.4	2021.8	2021.8
24.5°	2004.9	2006.3	2004.9	2004.9	2006.8	2007.2
25°	1989.3	1985.5	1989.3	1988.8	1991.2	1993.6
25.5°	1974.2	1965.7	1974.2	1972.8	1976.1	1977.5
26°	1959.1	1945.9	1959.1	1956.3	1960.6	1950.7
26.5°	1943.1	1917.2	1943.1	1939.8	1945.0	1928.0
27°	1921.0	1883.7	1921.0	1922.8	1930.4	1900.7
27.5°	1900.7	1853.6	1900.7	1905.4	1910.1	1866.7
28°	1879.0	1820.1	1879.0	1888.0	1883.2	1830.9
28.5°	1848.4	1785.2	1848.4	1870.5	1860.1	1794.6
29°	1816.3	1751.3	1816.3	1852.6	1831.4	1756.4
29.5°	1785.2	1714.5	1785.2	1834.7	1797.5	1717.8
30°	1752.2	1677.2	1752.2	1816.3	1762.6	1677.7
30.5°	1717.8	1638.6	1717.8	1798.4	1725.8	1636.7
31°	1682.4	1599.0	1682.4	1780.0	1689.0	1594.3
31.5°	1647.1	1556.1	1647.1	1761.6	1650.8	1551.4
32°	1610.8	1512.3	1610.8	1743.2	1612.2	1507.5
32.5°	1573.5	1467.9	1573.5	1725.3	1572.1	1462.8
33°	1534.4	1424.1	1534.4	1706.9	1532.1	1418.0
33.5°	1494.3	1376.5	1494.3	1685.7	1490.1	1372.7
34°	1452.4	1331.2	1452.4	1663.1	1447.7	1328.4
34.5°	1409.0	1286.5	1409.0	1636.7	1404.8	1283.6
35°	1365.2	1243.6	1365.2	1604.7	1361.9	1239.3
35.5°	1322.3	1199.2	1322.3	1570.2	1319.5	1195.9
36°	1278.4	1157.8	1278.4	1532.1	1276.1	1153.0
36.5°	1235.5	1115.3	1235.5	1491.0	1233.7	1109.7
37°	1193.1	1073.4	1193.1	1447.7	1191.2	1066.8
37.5°	1152.1	1031.0	1152.1	1403.8	1149.3	1023.4
38°	1110.6	988.5	1110.6	1358.6	1107.3	980.0
38.5°	1070.6	945.2	1070.6	1313.8	1066.8	936.2
39°	1030.5	902.7	1030.5	1268.5	1025.8	893.8
39.5°	990.9	858.9	990.9	1222.8	984.8	851.8
40°	950.3	816.9	950.3	1176.1	943.3	808.9
40.5°	909.3	774.5	909.3	1129.0	902.3	767.0
41°	868.8	733.5	868.8	1081.9	861.7	726.4
41.5°	828.3	693.4	828.3	1034.3	821.2	685.9
42°	787.7	654.8	787.7	986.6	781.6	646.8
42.5°	748.6	616.6	748.6	940.0	742.0	608.1
43°	709.0	578.9	709.0	893.3	703.3	569.9
43.5°	671.7	542.1	671.7	847.6	665.1	531.7



TEST NUMBER: P776637

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	561.9	435.1	561.9	716.5	554.8	423.8
45.5°	527.5	401.6	527.5	675.5	519.5	390.8
46°	493.6	369.6	493.6	636.4	485.1	359.2
46.5°	459.6	338.9	459.6	597.7	450.2	327.2
47°	426.1	310.2	426.1	560.0	417.2	297.0
47.5°	393.1	281.9	393.1	523.7	385.1	266.8
48°	362.5	254.6	362.5	488.8	354.5	240.4
48.5°	333.3	230.0	333.3	455.4	324.3	215.0
49°	304.5	207.4	304.5	421.9	294.6	193.7
49.5°	277.2	185.7	277.2	389.8	266.8	173.5
50°	250.8	164.5	250.8	358.3	240.4	153.2
50.5°	226.3	143.8	226.3	329.0	215.4	133.9
51°	204.1	126.3	204.1	300.8	193.7	115.5
51.5°	182.4	109.8	182.4	273.9	173.0	100.4
52°	161.7	94.3	161.7	248.0	152.7	85.8
52.5°	141.9	79.7	141.9	223.4	132.9	72.1
53°	124.4	66.0	124.4	201.8	115.0	59.4
53.5°	108.4	52.8	108.4	180.5	99.0	49.0
54°	92.9	42.0	92.9	160.7	84.4	38.2
54.5°	78.3	33.9	78.3	142.4	70.7	27.8
55°	64.6	25.9	64.6	124.4	58.9	20.3
55.5°	51.9	17.9	51.9	108.4	48.1	12.7
56°	40.5	9.9	40.5	92.9	37.7	8.5
56.5°	31.1	6.1	31.1	79.7	27.3	6.6
57°	22.6	5.2	22.6	67.9	17.9	4.7
57.5°	15.1	4.7	15.1	57.0	11.3	4.7
58°	9.9	4.7	9.9	47.6	7.1	4.2
58.5°	7.1	4.2	7.1	39.6	4.7	4.2
59°	5.2	4.2	5.2	32.1	3.8	3.8
59.5°	3.8	4.2	3.8	25.9	3.8	3.8
60°	3.8	3.8	3.8	20.7	3.8	3.8
60.5°	3.8	3.8	3.8	16.0	3.3	3.3
61°	3.3	3.8	3.3	12.7	3.3	3.3
61.5°	3.3	3.3	3.3	9.4	3.3	3.3
62°	3.3	3.3	3.3	7.1	2.8	2.8
62.5°	2.8	3.3	2.8	5.2	2.8	2.8
63°	2.8	2.8	2.8	3.8	2.8	2.8
63.5°	2.8	2.8	2.8	2.8	2.4	2.8
64°	2.4	2.8	2.4	2.4	2.4	2.4
64.5°	2.4	2.8	2.4	1.9	2.4	2.4
65°	2.4	2.4	2.4	1.9	2.4	2.4
65.5°	2.4	2.4	2.4	1.9	1.9	2.4
66°	1.9	2.4	1.9	1.4	1.9	2.4



TEST NUMBER: P776637

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.9	1.9	1.9	1.4	1.9	1.9
68°	1.9	1.9	1.9	1.4	1.4	1.9
68.5°	1.4	1.9	1.4	0.9	1.4	1.9
69°	1.4	1.9	1.4	0.9	1.4	1.4
69.5°	1.4	1.9	1.4	0.9	1.4	1.4
70°	1.4	1.4	1.4	0.9	1.4	1.4
70.5°	1.4	1.4	1.4	0.9	1.4	1.4
71°	1.4	1.4	1.4	0.9	0.9	1.4
71.5°	0.9	1.4	0.9	0.9	0.9	1.4
72°	0.9	1.4	0.9	0.9	0.9	1.4
72.5°	0.9	1.4	0.9	0.5	0.9	0.9
73°	0.9	1.4	0.9	0.5	0.9	0.9
73.5°	0.9	0.9	0.9	0.5	0.9	0.9
74°	0.9	0.9	0.9	0.5	0.9	0.9
74.5°	0.9	0.9	0.9	0.5	0.9	0.9
75°	0.9	0.9	0.9	0.5	0.9	0.9
75.5°	0.9	0.9	0.9	0.5	0.5	0.9
76°	0.5	0.9	0.5	0.5	0.5	0.9
76.5°	0.5	0.9	0.5	0.5	0.5	0.5
77°	0.5	0.9	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	0.0	0.5	0.5
79.5°	0.5	0.5	0.5	0.0	0.5	0.5
80°	0.5	0.5	0.5	0.0	0.5	0.5
80.5°	0.5	0.5	0.5	0.0	0.5	0.5
81°	0.5	0.5	0.5	0.0	0.5	0.5
81.5°	0.5	0.5	0.5	0.0	0.0	0.5
82°	0.0	0.5	0.0	0.0	0.0	0.0
82.5°	0.0	0.5	0.0	0.0	0.0	0.0
83°	0.0	0.5	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: P776637

CATALOG NUMBER: HCDJBL54050CSD-HCD4TSQMB-5000lm-3500K

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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Scaled Data Report





21.5°	2092.1	2092.6	2093.0	2091.1	2090.7	2091.1	2093.0	2092.6	2092.1	2092.6	2093.0
22°	2078.4	2078.9	2079.4	2077.0	2077.0	2077.0	2079.4	2078.9	2078.4	2078.9	2079.4



44°	495.0	627.4	802.3	634.0	505.3	634.0	802.3	627.4	495.0	627.4	802.3
44.5°	459.1	591.1	759.0	597.7	469.5	597.7	759.0	591.1	459.1	591.1	759.0



66.5°	1.9	1.9	1.4	1.9	2.4	1.9	1.4	1.9	1.9	1.9	1.4
67°	1.9	1.9	1.4	1.9	1.9	1.9	1.4	1.9	1.9	1.9	1.4



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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Scaled Data Report





21.5°	2091.1	2090.7	2091.1	2093.0	2092.6	2092.1
22°	2077.0	2077.0	2077.0	2079.4	2078.9	2078.4



44°	634.0	505.3	634.0	802.3	627.4	495.0
44.5°	597.7	469.5	597.7	759.0	591.1	459.1

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66.5°	1.9	2.4	1.9	1.4	1.9	1.9
67°	1.9	1.9	1.9	1.4	1.9	1.9

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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)