

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: P776787

Luminaire Tested: HCDJBS4050CSD-HCD82TRMB-5000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776787  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B065-HCD82TRMB)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD82TRMB-5000lm-3500K  
Description: 8 INCH ROUND NARROW MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

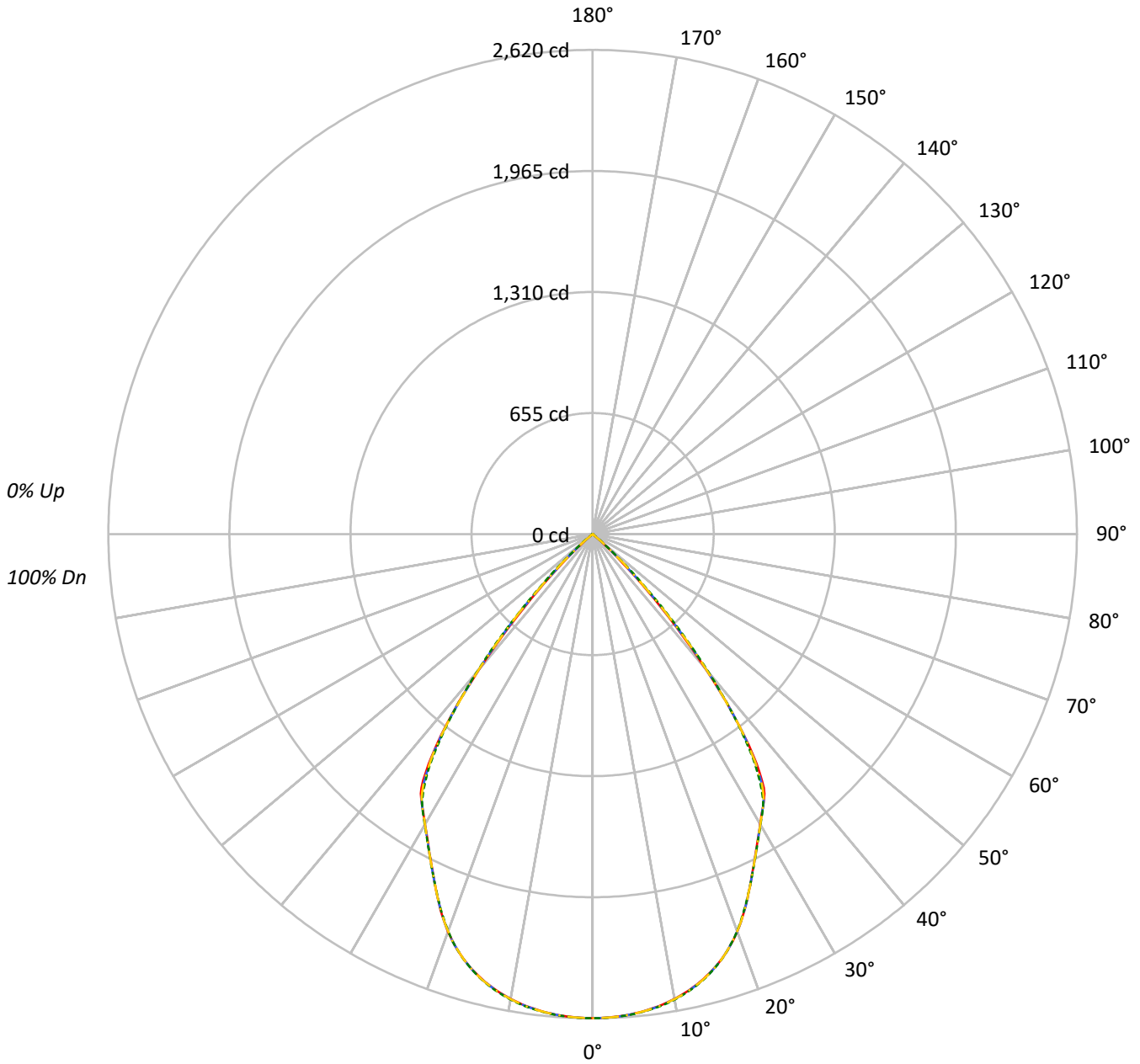
Lumens per Lamp: N/A  
Luminaire Lumens: 3115.8 lumens  
Efficiency: N/A  
Efficacy: 64.9 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.06 / 1.08  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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



TEST NUMBER: P776787  
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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	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93					93			
2	107	102	98	94	105	100	97	93	97	94	91	94	92	89	91	89	87	86					86			
3	101	95	89	85	99	93	88	85	91	86	83	88	85	82	86	83	81	79					79			
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	81	77	74	73					73			
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	75	72	69	67					67			
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62					62			
7	81	71	64	60	79	70	64	60	69	63	59	68	63	59	66	62	59	57					57			
8	76	66	60	55	75	66	60	55	64	59	55	63	58	55	62	58	55	53					53			
9	72	62	56	51	71	61	55	51	60	55	51	60	55	51	59	54	51	49					49			
10	68	58	52	48	67	58	52	48	57	51	48	56	51	47	55	51	47	46					46			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	79983	79983	79983	79983
5°	79795	79869	79795	79869
10°	79168	79286	79168	79286
15°	77640	77716	77640	77716
20°	74349	74271	74349	74271
25°	68677	68741	68677	68741
30°	63932	64034	63932	64034
35°	58690	57494	58690	57494
40°	37870	38922	37870	38922
45°	13898	16714	13898	16714
50°	1591	2555	1591	2555
55°	250	250	250	250
60°	147	147	147	147
65°	101	101	101	101
70°	80	80	80	80
75°	59	59	59	59
80°	0	0	0	0
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 16714 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.1	7.9
10°-20°	689.1	22.1
20°-30°	939.3	30.1
30°-40°	927.5	29.8
40°-50°	303.7	9.7
50°-60°	7.1	0.2
60°-70°	1.5	0.0
70°-80°	0.4	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°	1875.5	60.2
0°-40°	2803.1	90.0
0°-60°	3113.9	99.9
0°-90°	3115.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3115.8	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2620	2620	2620	2620	2620	
5°	2604	2606	2604	2606	2604	247
15°	2456	2459	2456	2459	2456	689
25°	2039	2041	2039	2041	2039	939
35°	1575	1543	1575	1543	1575	931
45°	322	387	322	387	322	285
55°	5	5	5	5	5	6
65°	1	1	1	1	1	1
75°	0	0	0	0	0	0
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°	2619.8	2619.8	2619.8	2619.8	2619.8	2619.8	2619.8	2619.8	2619.8	2619.8	2619.8
0.5°	2619.3	2619.3	2619.8	2619.3	2619.8	2619.3	2619.8	2619.3	2619.3	2619.3	2619.8
1°	2618.8	2618.8	2619.3	2618.8	2619.8	2618.8	2619.3	2618.8	2618.8	2618.8	2619.3
1.5°	2617.9	2618.3	2618.3	2618.3	2618.8	2618.3	2618.3	2618.3	2617.9	2618.3	2618.3
2°	2616.9	2616.9	2617.4	2617.4	2617.9	2617.4	2617.4	2616.9	2616.9	2616.9	2617.4
2.5°	2615.5	2616.0	2616.0	2616.0	2616.5	2616.0	2616.0	2616.0	2615.5	2616.0	2616.0
3°	2614.1	2614.1	2614.6	2614.6	2615.0	2614.6	2614.6	2614.1	2614.1	2614.1	2614.6
3.5°	2612.2	2612.2	2612.7	2612.7	2613.2	2612.7	2612.7	2612.2	2612.2	2612.2	2612.7
4°	2609.8	2609.8	2610.3	2610.3	2611.3	2610.3	2610.3	2609.8	2609.8	2609.8	2610.3
4.5°	2607.0	2607.0	2607.5	2608.0	2608.4	2608.0	2607.5	2607.0	2607.0	2607.0	2607.5
5°	2603.7	2604.2	2604.7	2605.1	2606.1	2605.1	2604.7	2604.2	2603.7	2604.2	2604.7
5.5°	2600.9	2600.9	2601.4	2601.8	2602.8	2601.8	2601.4	2600.9	2600.9	2600.9	2601.4
6°	2597.1	2597.1	2598.0	2598.5	2599.5	2598.5	2598.0	2597.1	2597.1	2597.1	2598.0
6.5°	2592.9	2593.3	2594.3	2594.7	2595.7	2594.7	2594.3	2593.3	2592.9	2593.3	2594.3
7°	2588.6	2588.6	2590.0	2590.5	2591.4	2590.5	2590.0	2588.6	2588.6	2588.6	2590.0
7.5°	2583.9	2583.9	2585.3	2585.8	2586.7	2585.8	2585.3	2583.9	2583.9	2583.9	2585.3
8°	2578.7	2579.2	2580.1	2581.1	2582.0	2581.1	2580.1	2579.2	2578.7	2579.2	2580.1
8.5°	2573.0	2573.5	2574.4	2575.4	2576.3	2575.4	2574.4	2573.5	2573.0	2573.5	2574.4
9°	2566.9	2567.4	2568.8	2569.7	2570.7	2569.7	2568.8	2567.4	2566.9	2567.4	2568.8
9.5°	2560.3	2560.8	2562.2	2563.6	2564.5	2563.6	2562.2	2560.8	2560.3	2560.8	2562.2
10°	2553.7	2554.1	2555.1	2556.5	2557.5	2556.5	2555.1	2554.1	2553.7	2554.1	2555.1
10.5°	2546.1	2546.6	2548.0	2549.4	2550.4	2549.4	2548.0	2546.6	2546.1	2546.6	2548.0
11°	2538.6	2539.0	2540.5	2541.4	2542.3	2541.4	2540.5	2539.0	2538.6	2539.0	2540.5
11.5°	2530.1	2530.5	2532.0	2532.9	2534.3	2532.9	2532.0	2530.5	2530.1	2530.5	2532.0
12°	2521.6	2521.6	2523.0	2524.4	2525.4	2524.4	2523.0	2521.6	2521.6	2521.6	2523.0
12.5°	2512.1	2512.1	2513.6	2515.0	2515.9	2515.0	2513.6	2512.1	2512.1	2512.1	2513.6
13°	2502.2	2502.7	2503.6	2505.1	2505.5	2505.1	2503.6	2502.7	2502.2	2502.7	2503.6
13.5°	2491.4	2491.8	2493.3	2494.2	2495.1	2494.2	2493.3	2491.8	2491.4	2491.8	2493.3
14°	2480.5	2481.0	2481.9	2482.9	2483.8	2482.9	2481.9	2481.0	2480.5	2481.0	2481.9
14.5°	2468.7	2469.2	2470.1	2471.1	2472.0	2471.1	2470.1	2469.2	2468.7	2469.2	2470.1
15°	2456.4	2456.4	2457.4	2458.3	2458.8	2458.3	2457.4	2456.4	2456.4	2456.4	2457.4
15.5°	2443.2	2443.2	2444.2	2445.1	2445.6	2445.1	2444.2	2443.2	2443.2	2443.2	2444.2
16°	2429.1	2429.5	2430.0	2430.5	2431.4	2430.5	2430.0	2429.5	2429.1	2429.5	2430.0
16.5°	2414.9	2414.9	2415.4	2415.8	2416.3	2415.8	2415.4	2414.9	2414.9	2414.9	2415.4
17°	2399.3	2399.3	2399.8	2400.3	2400.7	2400.3	2399.8	2399.3	2399.3	2399.3	2399.8
17.5°	2382.8	2382.8	2383.3	2383.3	2383.7	2383.3	2383.3	2382.8	2382.8	2382.8	2383.3
18°	2366.3	2365.8	2365.8	2365.8	2366.3	2365.8	2365.8	2365.8	2366.3	2365.8	2365.8
18.5°	2347.9	2347.9	2347.4	2347.4	2347.4	2347.4	2347.4	2347.9	2347.9	2347.9	2347.4
19°	2329.0	2329.0	2328.5	2328.0	2328.0	2328.0	2328.5	2329.0	2329.0	2329.0	2328.5
19.5°	2309.2	2308.7	2308.2	2307.7	2307.7	2307.7	2308.2	2308.7	2309.2	2308.7	2308.2
20°	2288.4	2287.9	2287.5	2286.5	2286.0	2286.5	2287.5	2287.9	2288.4	2287.9	2287.5
20.5°	2266.2	2265.7	2264.8	2263.9	2263.4	2263.9	2264.8	2265.7	2266.2	2265.7	2264.8
21°	2243.1	2243.1	2242.1	2240.2	2239.3	2240.2	2242.1	2243.1	2243.1	2243.1	2242.1



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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°	2169.0	2169.0	2168.0	2166.6	2166.6	2166.6	2168.0	2169.0	2169.0	2169.0	2168.0
23°	2143.0	2143.0	2142.5	2141.1	2141.1	2141.1	2142.5	2143.0	2143.0	2143.0	2142.5
23.5°	2116.6	2117.0	2116.6	2115.6	2115.6	2115.6	2116.6	2117.0	2116.6	2117.0	2116.6
24°	2090.1	2090.6	2090.6	2090.1	2090.6	2090.1	2090.6	2090.6	2090.1	2090.6	2090.6
24.5°	2064.7	2064.7	2065.1	2064.7	2065.6	2064.7	2065.1	2064.7	2064.7	2064.7	2065.1
25°	2038.7	2039.2	2039.6	2039.6	2040.6	2039.6	2039.6	2039.2	2038.7	2039.2	2039.6
25.5°	2014.1	2014.1	2014.6	2015.1	2016.0	2015.1	2014.6	2014.1	2014.1	2014.1	2014.6
26°	1989.6	1990.1	1990.5	1991.0	1992.0	1991.0	1990.5	1990.1	1989.6	1990.1	1990.5
26.5°	1965.5	1966.0	1966.5	1966.9	1968.4	1966.9	1966.5	1966.0	1965.5	1966.0	1966.5
27°	1942.4	1942.4	1943.3	1943.3	1944.8	1943.3	1943.3	1942.4	1942.4	1942.4	1943.3
27.5°	1919.3	1919.7	1920.2	1921.2	1922.1	1921.2	1920.2	1919.7	1919.3	1919.7	1920.2
28°	1896.6	1897.1	1898.0	1898.5	1899.9	1898.5	1898.0	1897.1	1896.6	1897.1	1898.0
28.5°	1874.9	1875.8	1876.3	1876.8	1878.2	1876.8	1876.3	1875.8	1874.9	1875.8	1876.3
29°	1854.1	1854.6	1855.1	1855.5	1857.0	1855.5	1855.1	1854.6	1854.1	1854.6	1855.1
29.5°	1833.4	1833.8	1834.8	1835.2	1836.2	1835.2	1834.8	1833.8	1833.4	1833.8	1834.8
30°	1813.5	1813.5	1814.5	1815.0	1816.4	1815.0	1814.5	1813.5	1813.5	1813.5	1814.5
30.5°	1793.7	1794.2	1794.7	1795.6	1796.5	1795.6	1794.7	1794.2	1793.7	1794.2	1794.7
31°	1774.8	1775.3	1776.2	1776.7	1778.1	1776.7	1776.2	1775.3	1774.8	1775.3	1776.2
31.5°	1756.9	1757.4	1757.4	1757.8	1758.8	1757.8	1757.4	1757.4	1756.9	1757.4	1757.4
32°	1739.4	1739.4	1739.4	1739.0	1739.9	1739.0	1739.4	1739.4	1739.4	1739.4	1739.4
32.5°	1722.4	1722.0	1721.0	1719.1	1717.2	1719.1	1721.0	1722.0	1722.4	1722.0	1721.0
33°	1704.0	1703.1	1698.4	1693.6	1688.4	1693.6	1698.4	1703.1	1704.0	1703.1	1698.4
33.5°	1684.2	1679.5	1670.5	1662.5	1655.9	1662.5	1670.5	1679.5	1684.2	1679.5	1670.5
34°	1655.9	1649.7	1637.5	1627.1	1620.0	1627.1	1637.5	1649.7	1655.9	1649.7	1637.5
34.5°	1618.6	1613.4	1599.7	1589.8	1582.7	1589.8	1599.7	1613.4	1618.6	1613.4	1599.7
35°	1574.7	1569.5	1557.2	1549.2	1542.6	1549.2	1557.2	1569.5	1574.7	1569.5	1557.2
35.5°	1526.5	1523.7	1512.4	1503.9	1497.3	1503.9	1512.4	1523.7	1526.5	1523.7	1512.4
36°	1475.1	1472.7	1463.3	1454.8	1447.7	1454.8	1463.3	1472.7	1475.1	1472.7	1463.3
36.5°	1420.3	1418.4	1410.4	1401.5	1393.9	1401.5	1410.4	1418.4	1420.3	1418.4	1410.4
37°	1359.0	1357.6	1352.8	1346.2	1338.7	1346.2	1352.8	1357.6	1359.0	1357.6	1352.8
37.5°	1295.7	1293.8	1291.9	1287.7	1281.6	1287.7	1291.9	1293.8	1295.7	1293.8	1291.9
38°	1228.7	1225.9	1226.8	1226.3	1223.5	1226.3	1226.8	1225.9	1228.7	1225.9	1226.8
38.5°	1163.6	1159.3	1160.2	1162.6	1165.0	1162.6	1160.2	1159.3	1163.6	1159.3	1160.2
39°	1093.2	1091.8	1092.7	1098.4	1104.5	1098.4	1092.7	1091.8	1093.2	1091.8	1092.7
39.5°	1023.4	1024.3	1026.2	1033.3	1041.8	1033.3	1026.2	1024.3	1023.4	1024.3	1026.2
40°	950.2	954.9	959.2	968.6	976.6	968.6	959.2	954.9	950.2	954.9	959.2
40.5°	879.9	886.5	894.5	904.9	912.0	904.9	894.5	886.5	879.9	886.5	894.5
41°	807.6	816.6	829.8	841.6	848.7	841.6	829.8	816.6	807.6	816.6	829.8
41.5°	739.2	748.6	764.7	778.8	785.5	778.8	764.7	748.6	739.2	748.6	764.7
42°	672.2	680.7	699.5	716.5	722.7	716.5	699.5	680.7	672.2	680.7	699.5
42.5°	607.0	617.4	638.7	655.6	661.3	655.6	638.7	617.4	607.0	617.4	638.7
43°	544.2	556.0	577.3	595.2	601.4	595.2	577.3	556.0	544.2	556.0	577.3
43.5°	485.7	497.0	517.8	536.2	544.7	536.2	517.8	497.0	485.7	497.0	517.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	321.9	331.8	353.5	375.3	387.1	375.3	353.5	331.8	321.9	331.8	353.5
45.5°	272.4	284.2	306.3	329.0	339.9	329.0	306.3	284.2	272.4	284.2	306.3
46°	228.9	238.8	263.9	286.0	299.3	286.0	263.9	238.8	228.9	238.8	263.9
46.5°	189.8	200.1	223.7	245.0	259.1	245.0	223.7	200.1	189.8	200.1	223.7
47°	159.1	165.2	185.0	206.3	218.5	206.3	185.0	165.2	159.1	165.2	185.0
47.5°	129.8	133.6	151.5	169.9	178.0	169.9	151.5	133.6	129.8	133.6	151.5
48°	103.4	107.2	120.8	137.4	145.9	137.4	120.8	107.2	103.4	107.2	120.8
48.5°	83.1	85.0	96.8	109.0	116.6	109.0	96.8	85.0	83.1	85.0	96.8
49°	62.3	64.7	74.6	86.4	90.6	86.4	74.6	64.7	62.3	64.7	74.6
49.5°	47.2	48.1	54.8	65.1	70.8	65.1	54.8	48.1	47.2	48.1	54.8
50°	33.5	32.6	41.5	51.0	53.8	51.0	41.5	32.6	33.5	32.6	41.5
50.5°	20.8	22.7	29.3	38.2	43.4	38.2	29.3	22.7	20.8	22.7	29.3
51°	11.3	15.1	20.3	25.5	33.0	25.5	20.3	15.1	11.3	15.1	20.3
51.5°	9.0	9.4	13.2	16.5	24.5	16.5	13.2	9.4	9.0	9.4	13.2
52°	7.6	8.0	8.5	10.4	16.0	10.4	8.5	8.0	7.6	8.0	8.5
52.5°	6.1	7.1	7.1	8.0	7.6	8.0	7.1	7.1	6.1	7.1	7.1
53°	6.1	6.1	6.6	6.6	6.1	6.6	6.6	6.1	6.1	6.1	6.6
53.5°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
54°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
54.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
55°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
55.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
56°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
56.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
57°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
57.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
58°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
58.5°	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.8	3.3	3.3
59°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
59.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
60°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
60.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
61°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
61.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
62°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
62.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
63°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
63.5°	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.4	1.9	1.9
64°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
64.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
65°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
65.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
66°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4





TEST NUMBER: P776787

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
68°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
68.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
69°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
69.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
70.5°	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.9	0.9
71°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	0.5	0.5	0.5	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°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5
78°	0.0	0.0	0.0	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
81°	0.0	0.0	0.0	0.0	0.0	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: P776787

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-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: P776787

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2619.8	2619.8	2619.8	2619.8	2619.8	2619.8
0.5°	2619.3	2619.8	2619.3	2619.8	2619.3	2619.3
1°	2618.8	2619.8	2618.8	2619.3	2618.8	2618.8
1.5°	2618.3	2618.8	2618.3	2618.3	2618.3	2617.9
2°	2617.4	2617.9	2617.4	2617.4	2616.9	2616.9
2.5°	2616.0	2616.5	2616.0	2616.0	2616.0	2615.5
3°	2614.6	2615.0	2614.6	2614.6	2614.1	2614.1
3.5°	2612.7	2613.2	2612.7	2612.7	2612.2	2612.2
4°	2610.3	2611.3	2610.3	2610.3	2609.8	2609.8
4.5°	2608.0	2608.4	2608.0	2607.5	2607.0	2607.0
5°	2605.1	2606.1	2605.1	2604.7	2604.2	2603.7
5.5°	2601.8	2602.8	2601.8	2601.4	2600.9	2600.9
6°	2598.5	2599.5	2598.5	2598.0	2597.1	2597.1
6.5°	2594.7	2595.7	2594.7	2594.3	2593.3	2592.9
7°	2590.5	2591.4	2590.5	2590.0	2588.6	2588.6
7.5°	2585.8	2586.7	2585.8	2585.3	2583.9	2583.9
8°	2581.1	2582.0	2581.1	2580.1	2579.2	2578.7
8.5°	2575.4	2576.3	2575.4	2574.4	2573.5	2573.0
9°	2569.7	2570.7	2569.7	2568.8	2567.4	2566.9
9.5°	2563.6	2564.5	2563.6	2562.2	2560.8	2560.3
10°	2556.5	2557.5	2556.5	2555.1	2554.1	2553.7
10.5°	2549.4	2550.4	2549.4	2548.0	2546.6	2546.1
11°	2541.4	2542.3	2541.4	2540.5	2539.0	2538.6
11.5°	2532.9	2534.3	2532.9	2532.0	2530.5	2530.1
12°	2524.4	2525.4	2524.4	2523.0	2521.6	2521.6
12.5°	2515.0	2515.9	2515.0	2513.6	2512.1	2512.1
13°	2505.1	2505.5	2505.1	2503.6	2502.7	2502.2
13.5°	2494.2	2495.1	2494.2	2493.3	2491.8	2491.4
14°	2482.9	2483.8	2482.9	2481.9	2481.0	2480.5
14.5°	2471.1	2472.0	2471.1	2470.1	2469.2	2468.7
15°	2458.3	2458.8	2458.3	2457.4	2456.4	2456.4
15.5°	2445.1	2445.6	2445.1	2444.2	2443.2	2443.2
16°	2430.5	2431.4	2430.5	2430.0	2429.5	2429.1
16.5°	2415.8	2416.3	2415.8	2415.4	2414.9	2414.9
17°	2400.3	2400.7	2400.3	2399.8	2399.3	2399.3
17.5°	2383.3	2383.7	2383.3	2383.3	2382.8	2382.8
18°	2365.8	2366.3	2365.8	2365.8	2365.8	2366.3
18.5°	2347.4	2347.4	2347.4	2347.4	2347.9	2347.9
19°	2328.0	2328.0	2328.0	2328.5	2329.0	2329.0
19.5°	2307.7	2307.7	2307.7	2308.2	2308.7	2309.2
20°	2286.5	2286.0	2286.5	2287.5	2287.9	2288.4
20.5°	2263.9	2263.4	2263.9	2264.8	2265.7	2266.2
21°	2240.2	2239.3	2240.2	2242.1	2243.1	2243.1

TEST NUMBER: P776787

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2166.6	2166.6	2166.6	2168.0	2169.0	2169.0
23°	2141.1	2141.1	2141.1	2142.5	2143.0	2143.0
23.5°	2115.6	2115.6	2115.6	2116.6	2117.0	2116.6
24°	2090.1	2090.6	2090.1	2090.6	2090.6	2090.1
24.5°	2064.7	2065.6	2064.7	2065.1	2064.7	2064.7
25°	2039.6	2040.6	2039.6	2039.6	2039.2	2038.7
25.5°	2015.1	2016.0	2015.1	2014.6	2014.1	2014.1
26°	1991.0	1992.0	1991.0	1990.5	1990.1	1989.6
26.5°	1966.9	1968.4	1966.9	1966.5	1966.0	1965.5
27°	1943.3	1944.8	1943.3	1943.3	1942.4	1942.4
27.5°	1921.2	1922.1	1921.2	1920.2	1919.7	1919.3
28°	1898.5	1899.9	1898.5	1898.0	1897.1	1896.6
28.5°	1876.8	1878.2	1876.8	1876.3	1875.8	1874.9
29°	1855.5	1857.0	1855.5	1855.1	1854.6	1854.1
29.5°	1835.2	1836.2	1835.2	1834.8	1833.8	1833.4
30°	1815.0	1816.4	1815.0	1814.5	1813.5	1813.5
30.5°	1795.6	1796.5	1795.6	1794.7	1794.2	1793.7
31°	1776.7	1778.1	1776.7	1776.2	1775.3	1774.8
31.5°	1757.8	1758.8	1757.8	1757.4	1757.4	1756.9
32°	1739.0	1739.9	1739.0	1739.4	1739.4	1739.4
32.5°	1719.1	1717.2	1719.1	1721.0	1722.0	1722.4
33°	1693.6	1688.4	1693.6	1698.4	1703.1	1704.0
33.5°	1662.5	1655.9	1662.5	1670.5	1679.5	1684.2
34°	1627.1	1620.0	1627.1	1637.5	1649.7	1655.9
34.5°	1589.8	1582.7	1589.8	1599.7	1613.4	1618.6
35°	1549.2	1542.6	1549.2	1557.2	1569.5	1574.7
35.5°	1503.9	1497.3	1503.9	1512.4	1523.7	1526.5
36°	1454.8	1447.7	1454.8	1463.3	1472.7	1475.1
36.5°	1401.5	1393.9	1401.5	1410.4	1418.4	1420.3
37°	1346.2	1338.7	1346.2	1352.8	1357.6	1359.0
37.5°	1287.7	1281.6	1287.7	1291.9	1293.8	1295.7
38°	1226.3	1223.5	1226.3	1226.8	1225.9	1228.7
38.5°	1162.6	1165.0	1162.6	1160.2	1159.3	1163.6
39°	1098.4	1104.5	1098.4	1092.7	1091.8	1093.2
39.5°	1033.3	1041.8	1033.3	1026.2	1024.3	1023.4
40°	968.6	976.6	968.6	959.2	954.9	950.2
40.5°	904.9	912.0	904.9	894.5	886.5	879.9
41°	841.6	848.7	841.6	829.8	816.6	807.6
41.5°	778.8	785.5	778.8	764.7	748.6	739.2
42°	716.5	722.7	716.5	699.5	680.7	672.2
42.5°	655.6	661.3	655.6	638.7	617.4	607.0
43°	595.2	601.4	595.2	577.3	556.0	544.2
43.5°	536.2	544.7	536.2	517.8	497.0	485.7



TEST NUMBER: P776787

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	375.3	387.1	375.3	353.5	331.8	321.9
45.5°	329.0	339.9	329.0	306.3	284.2	272.4
46°	286.0	299.3	286.0	263.9	238.8	228.9
46.5°	245.0	259.1	245.0	223.7	200.1	189.8
47°	206.3	218.5	206.3	185.0	165.2	159.1
47.5°	169.9	178.0	169.9	151.5	133.6	129.8
48°	137.4	145.9	137.4	120.8	107.2	103.4
48.5°	109.0	116.6	109.0	96.8	85.0	83.1
49°	86.4	90.6	86.4	74.6	64.7	62.3
49.5°	65.1	70.8	65.1	54.8	48.1	47.2
50°	51.0	53.8	51.0	41.5	32.6	33.5
50.5°	38.2	43.4	38.2	29.3	22.7	20.8
51°	25.5	33.0	25.5	20.3	15.1	11.3
51.5°	16.5	24.5	16.5	13.2	9.4	9.0
52°	10.4	16.0	10.4	8.5	8.0	7.6
52.5°	8.0	7.6	8.0	7.1	7.1	6.1
53°	6.6	6.1	6.6	6.6	6.1	6.1
53.5°	5.7	5.7	5.7	5.7	5.7	5.7
54°	5.2	5.2	5.2	5.2	5.2	5.2
54.5°	5.2	5.2	5.2	5.2	5.2	5.2
55°	4.7	4.7	4.7	4.7	4.7	4.7
55.5°	4.7	4.7	4.7	4.7	4.7	4.7
56°	4.2	4.2	4.2	4.2	4.2	4.2
56.5°	3.8	3.8	3.8	3.8	3.8	3.8
57°	3.8	3.8	3.8	3.8	3.8	3.8
57.5°	3.3	3.3	3.3	3.3	3.3	3.3
58°	3.3	3.3	3.3	3.3	3.3	3.3
58.5°	3.3	3.3	3.3	3.3	3.3	2.8
59°	2.8	2.8	2.8	2.8	2.8	2.8
59.5°	2.8	2.8	2.8	2.8	2.8	2.8
60°	2.4	2.4	2.4	2.4	2.4	2.4
60.5°	2.4	2.4	2.4	2.4	2.4	2.4
61°	2.4	2.4	2.4	2.4	2.4	2.4
61.5°	1.9	1.9	1.9	1.9	1.9	1.9
62°	1.9	1.9	1.9	1.9	1.9	1.9
62.5°	1.9	1.9	1.9	1.9	1.9	1.9
63°	1.9	1.9	1.9	1.9	1.9	1.9
63.5°	1.9	1.9	1.9	1.9	1.9	1.4
64°	1.4	1.4	1.4	1.4	1.4	1.4
64.5°	1.4	1.4	1.4	1.4	1.4	1.4
65°	1.4	1.4	1.4	1.4	1.4	1.4
65.5°	1.4	1.4	1.4	1.4	1.4	1.4
66°	1.4	1.4	1.4	1.4	1.4	1.4



TEST NUMBER: P776787

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	0.9	0.9	0.9	0.9	0.9	0.9
68°	0.9	0.9	0.9	0.9	0.9	0.9
68.5°	0.9	0.9	0.9	0.9	0.9	0.9
69°	0.9	0.9	0.9	0.9	0.9	0.9
69.5°	0.9	0.9	0.9	0.9	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9	0.9
70.5°	0.9	0.9	0.9	0.9	0.9	0.5
71°	0.5	0.5	0.5	0.5	0.5	0.5
71.5°	0.5	0.5	0.5	0.5	0.5	0.5
72°	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5
73°	0.5	0.5	0.5	0.5	0.5	0.5
73.5°	0.5	0.5	0.5	0.5	0.5	0.5
74°	0.5	0.5	0.5	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	0.0
78°	0.5	0.5	0.5	0.0	0.0	0.0
78.5°	0.0	0.0	0.0	0.0	0.0	0.0
79°	0.0	0.0	0.0	0.0	0.0	0.0
79.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0
80.5°	0.0	0.0	0.0	0.0	0.0	0.0
81°	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
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: P776787

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRMB-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



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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°	2219.0	2218.5	2217.6	2216.2	2215.7	2216.2	2217.6	2218.5	2219.0	2218.5	2217.6
22°	2194.5	2194.0	2193.0	2191.6	2191.2	2191.6	2193.0	2194.0	2194.5	2194.0	2193.0



44°	429.1	438.0	459.8	479.1	490.4	479.1	459.8	438.0	429.1	438.0	459.8
44.5°	374.8	383.3	405.0	426.2	437.6	426.2	405.0	383.3	374.8	383.3	405.0



66.5°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	1.4
67°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9



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°	2216.2	2215.7	2216.2	2217.6	2218.5	2219.0
22°	2191.6	2191.2	2191.6	2193.0	2194.0	2194.5



44°	479.1	490.4	479.1	459.8	438.0	429.1
44.5°	426.2	437.6	426.2	405.0	383.3	374.8

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66.5°	1.4	1.4	1.4	1.4	0.9	0.9
67°	0.9	0.9	0.9	0.9	0.9	0.9

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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)