

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: P776772

Luminaire Tested: HCDJBS4050CSD-HCD82TRC-5000lm-3500K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776772  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B062-HCD82TRC)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD82TRC-5000lm-3500K  
Description: 8 INCH ROUND NARROW SPECULAR CLEAR TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

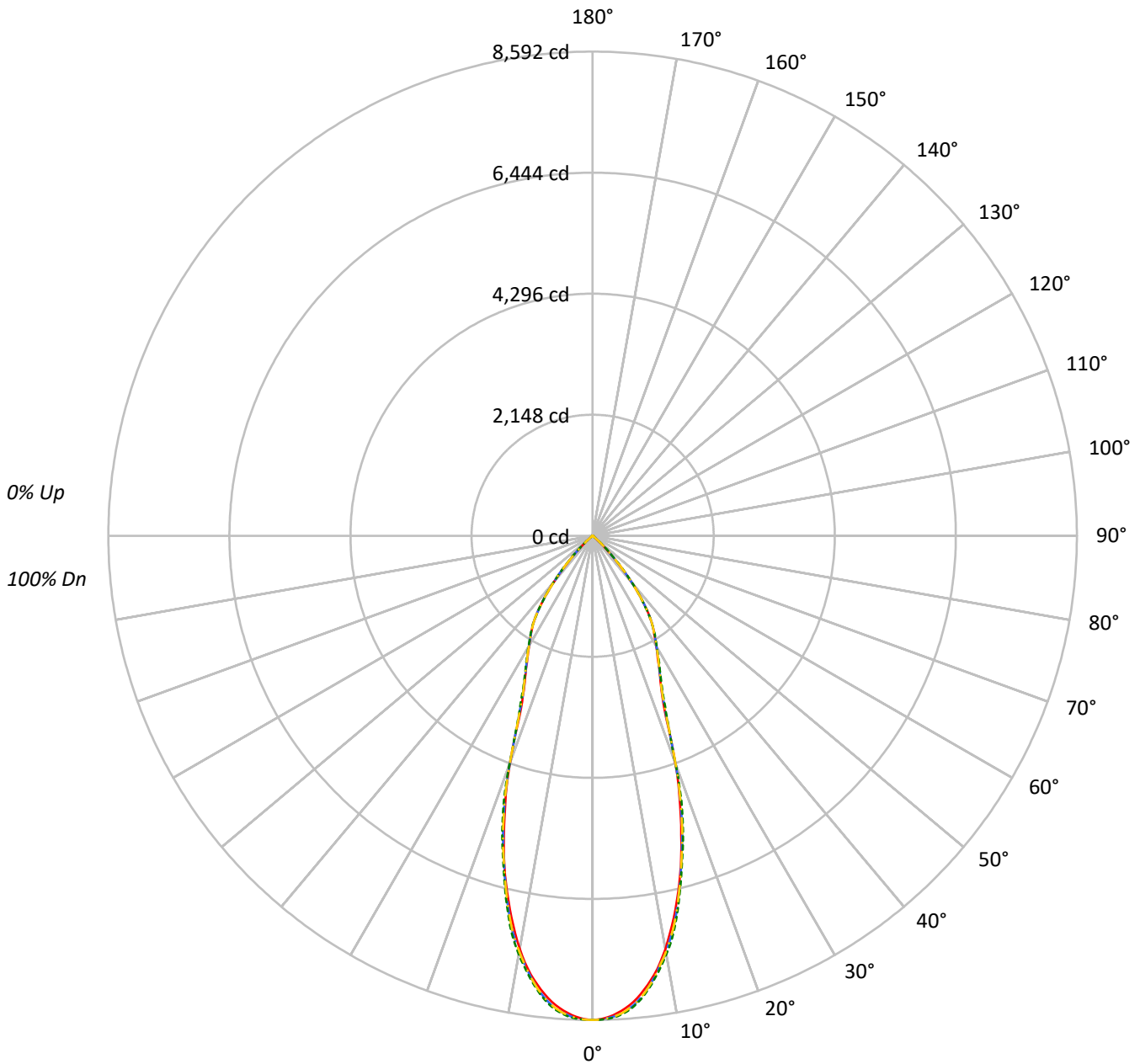
Lumens per Lamp: N/A  
Luminaire Lumens: 5246.5 lumens  
Efficiency: N/A  
Efficacy: 109.3 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 0.66 / 0.66  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

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



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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									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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94																			
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88																			
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82																			
4	98	91	86	82	97	90	85	81	88	84	80	86	82	80	84	81	79	77																			
5	94	86	80	76	92	85	80	76	83	79	75	81	78	74	80	77	74	72																			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68																			
7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64																			
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61																			
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57																			
10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	54																			

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

	0°	90°	180°	270°
0°	262255	262255	262255	262255
5°	254421	256996	254421	256996
10°	230687	233787	230687	233787
15°	191278	192934	191278	192934
20°	139290	139871	139290	139871
25°	95963	97297	95963	97297
30°	79503	80335	79503	80335
35°	66364	66047	66364	66047
40°	42477	43059	42477	43059
45°	17193	18885	17193	18885
50°	3225	3586	3225	3586
55°	979	953	979	953
60°	635	635	635	635
65°	441	441	441	441
70°	295	339	295	339
75°	224	224	224	224
80°	158	158	158	158
85°	0	175	0	175

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 18885 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	769.9	14.7
10°-20°	1660.4	31.6
20°-30°	1362.0	26.0
30°-40°	1072.0	20.4
40°-50°	352.7	6.7
50°-60°	20.6	0.4
60°-70°	6.3	0.1
70°-80°	2.2	0.0
80°-90°	0.4	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°	3792.3	72.3
0°-40°	4864.3	92.7
0°-60°	5237.6	99.8
0°-90°	5246.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5246.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	8590	8590	8590	8590	8590	
5°	8302	8386	8302	8386	8302	765
15°	6052	6104	6052	6104	6052	1647
25°	2849	2888	2849	2888	2849	1353
35°	1781	1772	1781	1772	1781	1071
45°	398	437	398	437	398	340
55°	18	18	18	18	18	19
65°	6	6	6	6	6	6
75°	2	2	2	2	2	2
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°	8590.0	8590.0	8590.0	8590.0	8590.0	8590.0	8590.0	8590.0	8590.0	8590.0	8590.0
0.5°	8586.2	8587.1	8591.4	8582.9	8592.3	8582.9	8591.4	8587.1	8586.2	8587.1	8591.4
1°	8577.2	8579.1	8585.7	8577.7	8587.6	8577.7	8585.7	8579.1	8577.2	8579.1	8585.7
1.5°	8561.2	8565.4	8575.4	8569.2	8579.6	8569.2	8575.4	8565.4	8561.2	8565.4	8575.4
2°	8540.0	8545.6	8560.7	8556.5	8571.1	8556.5	8560.7	8545.6	8540.0	8545.6	8560.7
2.5°	8512.6	8521.6	8540.4	8539.5	8555.5	8539.5	8540.4	8521.6	8512.6	8521.6	8540.4
3°	8481.0	8492.8	8515.9	8516.4	8534.8	8516.4	8515.9	8492.8	8481.0	8492.8	8515.9
3.5°	8444.2	8459.8	8485.7	8487.1	8507.9	8487.1	8485.7	8459.8	8444.2	8459.8	8485.7
4°	8403.1	8423.9	8449.9	8451.7	8474.4	8451.7	8449.9	8423.9	8403.1	8423.9	8449.9
4.5°	8355.5	8381.4	8406.9	8411.2	8433.8	8411.2	8406.9	8381.4	8355.5	8381.4	8406.9
5°	8301.7	8334.3	8357.9	8364.0	8385.7	8364.0	8357.9	8334.3	8301.7	8334.3	8357.9
5.5°	8241.8	8280.5	8299.4	8311.1	8330.0	8311.1	8299.4	8280.5	8241.8	8280.5	8299.4
6°	8176.2	8219.6	8234.7	8252.6	8264.4	8252.6	8234.7	8219.6	8176.2	8219.6	8234.7
6.5°	8104.5	8151.2	8161.1	8187.1	8191.3	8187.1	8161.1	8151.2	8104.5	8151.2	8161.1
7°	8029.0	8074.8	8081.4	8116.8	8110.2	8116.8	8081.4	8074.8	8029.0	8074.8	8081.4
7.5°	7948.8	7990.8	7993.6	8039.9	8025.2	8039.9	7993.6	7990.8	7948.8	7990.8	7993.6
8°	7862.9	7900.2	7902.1	7956.4	7933.7	7956.4	7902.1	7900.2	7862.9	7900.2	7902.1
8.5°	7769.1	7799.7	7804.4	7864.8	7840.3	7864.8	7804.4	7799.7	7769.1	7799.7	7804.4
9°	7669.0	7692.6	7703.5	7764.8	7741.2	7764.8	7703.5	7692.6	7669.0	7692.6	7703.5
9.5°	7558.6	7575.6	7600.6	7656.3	7643.6	7656.3	7600.6	7575.6	7558.6	7575.6	7600.6
10°	7441.2	7453.9	7493.1	7537.4	7541.2	7537.4	7493.1	7453.9	7441.2	7453.9	7493.1
10.5°	7316.6	7324.6	7382.2	7411.4	7436.0	7411.4	7382.2	7324.6	7316.6	7324.6	7382.2
11°	7189.7	7193.0	7267.1	7279.8	7320.8	7279.8	7267.1	7193.0	7189.7	7193.0	7267.1
11.5°	7057.1	7059.5	7143.0	7143.9	7194.4	7143.9	7143.0	7059.5	7057.1	7059.5	7143.0
12°	6923.6	6925.5	7006.6	7009.0	7058.5	7009.0	7006.6	6925.5	6923.6	6925.5	7006.6
12.5°	6783.0	6794.3	6859.0	6871.7	6907.1	6871.7	6859.0	6794.3	6783.0	6794.3	6859.0
13°	6644.8	6661.3	6706.6	6732.0	6755.2	6732.0	6706.6	6661.3	6644.8	6661.3	6706.6
13.5°	6501.3	6524.0	6547.6	6583.9	6592.4	6583.9	6547.6	6524.0	6501.3	6524.0	6547.6
14°	6357.0	6379.6	6389.1	6429.2	6428.7	6429.2	6389.1	6379.6	6357.0	6379.6	6389.1
14.5°	6206.9	6224.9	6231.9	6272.5	6266.9	6272.5	6231.9	6224.9	6206.9	6224.9	6231.9
15°	6051.7	6063.0	6074.4	6111.2	6104.1	6111.2	6074.4	6063.0	6051.7	6063.0	6074.4
15.5°	5885.6	5892.3	5917.3	5950.3	5951.7	5950.3	5917.3	5892.3	5885.6	5892.3	5917.3
16°	5716.7	5721.0	5758.7	5788.0	5795.1	5788.0	5758.7	5721.0	5716.7	5721.0	5758.7
16.5°	5538.9	5551.6	5596.4	5627.1	5644.1	5627.1	5596.4	5551.6	5538.9	5551.6	5596.4
17°	5366.7	5381.8	5431.3	5467.6	5489.3	5467.6	5431.3	5381.8	5366.7	5381.8	5431.3
17.5°	5192.6	5213.3	5258.2	5302.5	5323.7	5302.5	5258.2	5213.3	5192.6	5213.3	5258.2
18°	5025.1	5040.2	5081.2	5129.4	5147.8	5129.4	5081.2	5040.2	5025.1	5040.2	5081.2
18.5°	4850.5	4864.7	4896.3	4944.4	4958.6	4944.4	4896.3	4864.7	4850.5	4864.7	4896.3
19°	4671.7	4681.2	4705.7	4741.5	4756.2	4741.5	4705.7	4681.2	4671.7	4681.2	4705.7
19.5°	4484.9	4485.8	4504.2	4531.6	4545.3	4531.6	4504.2	4485.8	4484.9	4485.8	4504.2
20°	4287.2	4287.2	4297.1	4312.2	4305.1	4312.2	4297.1	4287.2	4287.2	4287.2	4297.1
20.5°	4092.8	4085.7	4090.0	4089.5	4068.8	4089.5	4090.0	4085.7	4092.8	4085.7	4090.0
21°	3892.8	3888.1	3870.6	3888.1	3881.5	3888.1	3870.6	3888.1	3892.8	3888.1	3870.6



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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°	3333.2	3355.4	3385.6	3421.9	3405.9	3421.9	3385.6	3355.4	3333.2	3355.4	3385.6
23°	3202.5	3217.6	3248.8	3298.3	3298.8	3298.3	3248.8	3217.6	3202.5	3217.6	3248.8
23.5°	3106.3	3103.9	3123.8	3171.4	3177.5	3171.4	3123.8	3103.9	3106.3	3103.9	3123.8
24°	3003.0	3013.4	3025.6	3064.3	3067.1	3064.3	3025.6	3013.4	3003.0	3013.4	3025.6
24.5°	2923.7	2928.9	2939.8	2964.3	2964.3	2964.3	2939.8	2928.9	2923.7	2928.9	2939.8
25°	2848.7	2855.3	2866.6	2889.3	2888.3	2889.3	2866.6	2855.3	2848.7	2855.3	2866.6
25.5°	2778.9	2782.2	2794.0	2815.2	2816.6	2815.2	2794.0	2782.2	2778.9	2782.2	2794.0
26°	2711.4	2714.2	2722.7	2738.8	2741.1	2738.8	2722.7	2714.2	2711.4	2714.2	2722.7
26.5°	2647.7	2648.7	2658.6	2673.2	2674.6	2673.2	2658.6	2648.7	2647.7	2648.7	2658.6
27°	2583.1	2585.9	2596.3	2614.7	2619.4	2614.7	2596.3	2585.9	2583.1	2585.9	2596.3
27.5°	2522.2	2526.0	2535.9	2553.8	2560.4	2553.8	2535.9	2526.0	2522.2	2526.0	2535.9
28°	2464.7	2468.4	2477.9	2491.1	2497.2	2491.1	2477.9	2468.4	2464.7	2468.4	2477.9
28.5°	2411.3	2413.2	2422.2	2432.6	2437.8	2432.6	2422.2	2413.2	2411.3	2413.2	2422.2
29°	2358.5	2359.9	2368.4	2377.4	2383.0	2377.4	2368.4	2359.9	2358.5	2359.9	2368.4
29.5°	2306.1	2309.0	2316.0	2326.0	2330.7	2326.0	2316.0	2309.0	2306.1	2309.0	2316.0
30°	2255.2	2258.0	2264.6	2274.1	2278.8	2274.1	2264.6	2258.0	2255.2	2258.0	2264.6
30.5°	2205.6	2208.0	2214.6	2223.6	2226.9	2223.6	2214.6	2208.0	2205.6	2208.0	2214.6
31°	2157.0	2159.4	2165.5	2175.0	2179.7	2175.0	2165.5	2159.4	2157.0	2159.4	2165.5
31.5°	2110.3	2112.7	2119.3	2127.8	2131.1	2127.8	2119.3	2112.7	2110.3	2112.7	2119.3
32°	2065.5	2067.4	2073.5	2082.0	2085.3	2082.0	2073.5	2067.4	2065.5	2067.4	2073.5
32.5°	2022.6	2024.5	2028.7	2036.7	2039.6	2036.7	2028.7	2024.5	2022.6	2024.5	2028.7
33°	1981.1	1982.0	1984.4	1988.1	1991.0	1988.1	1984.4	1982.0	1981.1	1982.0	1984.4
33.5°	1938.1	1938.1	1937.2	1935.3	1939.6	1935.3	1937.2	1938.1	1938.1	1938.1	1937.2
34°	1889.5	1887.7	1886.7	1880.6	1890.0	1880.6	1886.7	1887.7	1889.5	1887.7	1886.7
34.5°	1837.2	1832.9	1832.5	1824.4	1831.5	1824.4	1832.5	1832.9	1837.2	1832.9	1832.5
35°	1780.6	1774.9	1774.9	1767.3	1772.1	1767.3	1774.9	1774.9	1780.6	1774.9	1774.9
35.5°	1718.8	1716.4	1713.6	1707.0	1709.8	1707.0	1713.6	1716.4	1718.8	1716.4	1713.6
36°	1654.6	1653.6	1648.5	1644.7	1645.2	1644.7	1648.5	1653.6	1654.6	1653.6	1648.5
36.5°	1586.6	1588.5	1581.0	1578.6	1575.8	1578.6	1581.0	1588.5	1586.6	1588.5	1581.0
37°	1513.5	1519.2	1512.6	1511.2	1507.4	1511.2	1512.6	1519.2	1513.5	1519.2	1512.6
37.5°	1440.9	1445.1	1443.2	1440.9	1439.4	1440.9	1443.2	1445.1	1440.9	1445.1	1443.2
38°	1368.2	1371.5	1369.2	1371.0	1369.6	1371.0	1369.2	1371.5	1368.2	1371.5	1369.2
38.5°	1295.6	1293.7	1294.6	1295.1	1298.9	1295.1	1294.6	1293.7	1295.6	1293.7	1294.6
39°	1221.5	1217.2	1219.6	1219.6	1227.1	1219.6	1219.6	1217.2	1221.5	1217.2	1219.6
39.5°	1143.6	1141.3	1144.6	1147.4	1153.1	1147.4	1144.6	1141.3	1143.6	1141.3	1144.6
40°	1065.8	1067.7	1071.9	1076.2	1080.4	1076.2	1071.9	1067.7	1065.8	1067.7	1071.9
40.5°	988.4	993.1	997.4	1007.8	1007.3	1007.8	997.4	993.1	988.4	993.1	997.4
41°	913.4	918.6	924.7	937.0	935.1	937.0	924.7	918.6	913.4	918.6	924.7
41.5°	837.9	844.5	852.5	867.2	863.9	867.2	852.5	844.5	837.9	844.5	852.5
42°	766.2	772.8	783.7	798.3	795.9	798.3	783.7	772.8	766.2	772.8	783.7
42.5°	696.8	703.0	717.1	732.2	730.8	732.2	717.1	703.0	696.8	703.0	717.1
43°	629.8	637.9	652.5	669.5	668.1	669.5	652.5	637.9	629.8	637.9	652.5
43.5°	569.9	574.2	588.8	605.3	606.7	605.3	588.8	574.2	569.9	574.2	588.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	398.2	400.1	416.1	431.2	437.4	431.2	416.1	400.1	398.2	400.1	416.1
45.5°	343.5	347.7	365.6	378.9	386.9	378.9	365.6	347.7	343.5	347.7	365.6
46°	295.3	298.6	318.0	333.1	341.6	333.1	318.0	298.6	295.3	298.6	318.0
46.5°	251.9	257.6	272.7	291.6	301.5	291.6	272.7	257.6	251.9	257.6	272.7
47°	212.3	218.9	230.7	251.9	261.4	251.9	230.7	218.9	212.3	218.9	230.7
47.5°	178.3	184.9	195.8	214.2	221.3	214.2	195.8	184.9	178.3	184.9	195.8
48°	147.7	155.7	163.2	179.8	181.2	179.8	163.2	155.7	147.7	155.7	163.2
48.5°	121.7	128.8	134.9	149.1	146.7	149.1	134.9	128.8	121.7	128.8	134.9
49°	101.0	105.2	109.5	122.7	118.9	122.7	109.5	105.2	101.0	105.2	109.5
49.5°	84.5	85.9	90.6	98.6	94.4	98.6	90.6	85.9	84.5	85.9	90.6
50°	67.9	67.5	72.7	80.2	75.5	80.2	72.7	67.5	67.9	67.5	72.7
50.5°	51.4	53.3	56.1	63.7	59.4	63.7	56.1	53.3	51.4	53.3	56.1
51°	39.6	40.6	45.8	51.0	47.2	51.0	45.8	40.6	39.6	40.6	45.8
51.5°	29.7	33.5	36.3	42.5	42.0	42.5	36.3	33.5	29.7	33.5	36.3
52°	25.9	27.8	30.7	33.5	36.8	33.5	30.7	27.8	25.9	27.8	30.7
52.5°	23.6	24.1	26.4	28.3	31.1	28.3	26.4	24.1	23.6	24.1	26.4
53°	22.2	22.6	22.6	24.5	25.9	24.5	22.6	22.6	22.2	22.6	22.6
53.5°	21.2	21.2	21.7	21.2	20.8	21.2	21.7	21.2	21.2	21.2	21.7
54°	20.3	20.3	20.3	20.3	19.8	20.3	20.3	20.3	20.3	20.3	20.3
54.5°	19.3	19.3	19.3	19.3	18.9	19.3	19.3	19.3	19.3	19.3	19.3
55°	18.4	18.4	18.4	18.4	17.9	18.4	18.4	18.4	18.4	18.4	18.4
55.5°	17.5	17.5	17.5	17.5	17.0	17.5	17.5	17.5	17.5	17.5	17.5
56°	16.5	16.5	16.5	16.5	16.0	16.5	16.5	16.5	16.5	16.5	16.5
56.5°	15.6	15.6	16.0	15.6	15.1	15.6	16.0	15.6	15.6	15.6	16.0
57°	14.6	14.6	15.1	14.6	14.6	14.6	15.1	14.6	14.6	14.6	15.1
57.5°	13.7	14.2	14.2	13.7	13.7	13.7	14.2	14.2	13.7	14.2	14.2
58°	13.2	13.2	13.2	13.2	12.7	13.2	13.2	13.2	13.2	13.2	13.2
58.5°	12.3	12.7	12.7	12.3	12.3	12.3	12.7	12.7	12.3	12.7	12.7
59°	11.8	11.8	11.8	11.8	11.3	11.8	11.8	11.8	11.8	11.8	11.8
59.5°	10.9	11.3	11.3	11.3	10.9	11.3	11.3	11.3	10.9	11.3	11.3
60°	10.4	10.4	10.9	10.4	10.4	10.4	10.9	10.4	10.4	10.4	10.9
60.5°	9.9	9.9	10.4	9.9	9.9	9.9	10.4	9.9	9.9	9.9	10.4
61°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
61.5°	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
62°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
62.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
63°	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
63.5°	7.1	7.1	7.5	7.1	7.1	7.1	7.5	7.1	7.1	7.1	7.5
64°	6.6	6.6	7.1	7.1	6.6	7.1	7.1	6.6	6.6	6.6	7.1
64.5°	6.1	6.6	6.6	6.6	6.1	6.6	6.6	6.6	6.1	6.6	6.6
65°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
65.5°	5.7	5.7	6.1	5.7	5.7	5.7	6.1	5.7	5.7	5.7	6.1
66°	5.2	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.2	5.7	5.7





TEST NUMBER: P776772

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
68°	4.2	4.2	4.7	4.7	4.2	4.7	4.7	4.2	4.2	4.2	4.7
68.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
69°	3.8	3.8	4.2	4.2	3.8	4.2	4.2	3.8	3.8	3.8	4.2
69.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
70°	3.3	3.3	3.8	3.8	3.8	3.8	3.8	3.3	3.3	3.3	3.8
70.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
71°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
71.5°	2.8	2.8	3.3	3.3	2.8	3.3	3.3	2.8	2.8	2.8	3.3
72°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
73°	2.4	2.4	2.4	2.8	2.4	2.8	2.4	2.4	2.4	2.4	2.4
73.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
74°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
74.5°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9	2.4
75°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
75.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
76°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
76.5°	1.4	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.4
77°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
78°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
78.5°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	1.4
79°	0.9	0.9	0.9	1.4	0.9	1.4	0.9	0.9	0.9	0.9	0.9
79.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
80.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
81°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
81.5°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.9
82°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
85.5°	0.0	0.0	0.0	0.5	0.5	0.5	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: P776772

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-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: P776772

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	8590.0	8590.0	8590.0	8590.0	8590.0	8590.0
0.5°	8582.9	8592.3	8582.9	8591.4	8587.1	8586.2
1°	8577.7	8587.6	8577.7	8585.7	8579.1	8577.2
1.5°	8569.2	8579.6	8569.2	8575.4	8565.4	8561.2
2°	8556.5	8571.1	8556.5	8560.7	8545.6	8540.0
2.5°	8539.5	8555.5	8539.5	8540.4	8521.6	8512.6
3°	8516.4	8534.8	8516.4	8515.9	8492.8	8481.0
3.5°	8487.1	8507.9	8487.1	8485.7	8459.8	8444.2
4°	8451.7	8474.4	8451.7	8449.9	8423.9	8403.1
4.5°	8411.2	8433.8	8411.2	8406.9	8381.4	8355.5
5°	8364.0	8385.7	8364.0	8357.9	8334.3	8301.7
5.5°	8311.1	8330.0	8311.1	8299.4	8280.5	8241.8
6°	8252.6	8264.4	8252.6	8234.7	8219.6	8176.2
6.5°	8187.1	8191.3	8187.1	8161.1	8151.2	8104.5
7°	8116.8	8110.2	8116.8	8081.4	8074.8	8029.0
7.5°	8039.9	8025.2	8039.9	7993.6	7990.8	7948.8
8°	7956.4	7933.7	7956.4	7902.1	7900.2	7862.9
8.5°	7864.8	7840.3	7864.8	7804.4	7799.7	7769.1
9°	7764.8	7741.2	7764.8	7703.5	7692.6	7669.0
9.5°	7656.3	7643.6	7656.3	7600.6	7575.6	7558.6
10°	7537.4	7541.2	7537.4	7493.1	7453.9	7441.2
10.5°	7411.4	7436.0	7411.4	7382.2	7324.6	7316.6
11°	7279.8	7320.8	7279.8	7267.1	7193.0	7189.7
11.5°	7143.9	7194.4	7143.9	7143.0	7059.5	7057.1
12°	7009.0	7058.5	7009.0	7006.6	6925.5	6923.6
12.5°	6871.7	6907.1	6871.7	6859.0	6794.3	6783.0
13°	6732.0	6755.2	6732.0	6706.6	6661.3	6644.8
13.5°	6583.9	6592.4	6583.9	6547.6	6524.0	6501.3
14°	6429.2	6428.7	6429.2	6389.1	6379.6	6357.0
14.5°	6272.5	6266.9	6272.5	6231.9	6224.9	6206.9
15°	6111.2	6104.1	6111.2	6074.4	6063.0	6051.7
15.5°	5950.3	5951.7	5950.3	5917.3	5892.3	5885.6
16°	5788.0	5795.1	5788.0	5758.7	5721.0	5716.7
16.5°	5627.1	5644.1	5627.1	5596.4	5551.6	5538.9
17°	5467.6	5489.3	5467.6	5431.3	5381.8	5366.7
17.5°	5302.5	5323.7	5302.5	5258.2	5213.3	5192.6
18°	5129.4	5147.8	5129.4	5081.2	5040.2	5025.1
18.5°	4944.4	4958.6	4944.4	4896.3	4864.7	4850.5
19°	4741.5	4756.2	4741.5	4705.7	4681.2	4671.7
19.5°	4531.6	4545.3	4531.6	4504.2	4485.8	4484.9
20°	4312.2	4305.1	4312.2	4297.1	4287.2	4287.2
20.5°	4089.5	4068.8	4089.5	4090.0	4085.7	4092.8
21°	3888.1	3881.5	3888.1	3870.6	3888.1	3892.8

TEST NUMBER: P776772

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3421.9	3405.9	3421.9	3385.6	3355.4	3333.2
23°	3298.3	3298.8	3298.3	3248.8	3217.6	3202.5
23.5°	3171.4	3177.5	3171.4	3123.8	3103.9	3106.3
24°	3064.3	3067.1	3064.3	3025.6	3013.4	3003.0
24.5°	2964.3	2964.3	2964.3	2939.8	2928.9	2923.7
25°	2889.3	2888.3	2889.3	2866.6	2855.3	2848.7
25.5°	2815.2	2816.6	2815.2	2794.0	2782.2	2778.9
26°	2738.8	2741.1	2738.8	2722.7	2714.2	2711.4
26.5°	2673.2	2674.6	2673.2	2658.6	2648.7	2647.7
27°	2614.7	2619.4	2614.7	2596.3	2585.9	2583.1
27.5°	2553.8	2560.4	2553.8	2535.9	2526.0	2522.2
28°	2491.1	2497.2	2491.1	2477.9	2468.4	2464.7
28.5°	2432.6	2437.8	2432.6	2422.2	2413.2	2411.3
29°	2377.4	2383.0	2377.4	2368.4	2359.9	2358.5
29.5°	2326.0	2330.7	2326.0	2316.0	2309.0	2306.1
30°	2274.1	2278.8	2274.1	2264.6	2258.0	2255.2
30.5°	2223.6	2226.9	2223.6	2214.6	2208.0	2205.6
31°	2175.0	2179.7	2175.0	2165.5	2159.4	2157.0
31.5°	2127.8	2131.1	2127.8	2119.3	2112.7	2110.3
32°	2082.0	2085.3	2082.0	2073.5	2067.4	2065.5
32.5°	2036.7	2039.6	2036.7	2028.7	2024.5	2022.6
33°	1988.1	1991.0	1988.1	1984.4	1982.0	1981.1
33.5°	1935.3	1939.6	1935.3	1937.2	1938.1	1938.1
34°	1880.6	1890.0	1880.6	1886.7	1887.7	1889.5
34.5°	1824.4	1831.5	1824.4	1832.5	1832.9	1837.2
35°	1767.3	1772.1	1767.3	1774.9	1774.9	1780.6
35.5°	1707.0	1709.8	1707.0	1713.6	1716.4	1718.8
36°	1644.7	1645.2	1644.7	1648.5	1653.6	1654.6
36.5°	1578.6	1575.8	1578.6	1581.0	1588.5	1586.6
37°	1511.2	1507.4	1511.2	1512.6	1519.2	1513.5
37.5°	1440.9	1439.4	1440.9	1443.2	1445.1	1440.9
38°	1371.0	1369.6	1371.0	1369.2	1371.5	1368.2
38.5°	1295.1	1298.9	1295.1	1294.6	1293.7	1295.6
39°	1219.6	1227.1	1219.6	1219.6	1217.2	1221.5
39.5°	1147.4	1153.1	1147.4	1144.6	1141.3	1143.6
40°	1076.2	1080.4	1076.2	1071.9	1067.7	1065.8
40.5°	1007.8	1007.3	1007.8	997.4	993.1	988.4
41°	937.0	935.1	937.0	924.7	918.6	913.4
41.5°	867.2	863.9	867.2	852.5	844.5	837.9
42°	798.3	795.9	798.3	783.7	772.8	766.2
42.5°	732.2	730.8	732.2	717.1	703.0	696.8
43°	669.5	668.1	669.5	652.5	637.9	629.8
43.5°	605.3	606.7	605.3	588.8	574.2	569.9



TEST NUMBER: P776772

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	431.2	437.4	431.2	416.1	400.1	398.2
45.5°	378.9	386.9	378.9	365.6	347.7	343.5
46°	333.1	341.6	333.1	318.0	298.6	295.3
46.5°	291.6	301.5	291.6	272.7	257.6	251.9
47°	251.9	261.4	251.9	230.7	218.9	212.3
47.5°	214.2	221.3	214.2	195.8	184.9	178.3
48°	179.8	181.2	179.8	163.2	155.7	147.7
48.5°	149.1	146.7	149.1	134.9	128.8	121.7
49°	122.7	118.9	122.7	109.5	105.2	101.0
49.5°	98.6	94.4	98.6	90.6	85.9	84.5
50°	80.2	75.5	80.2	72.7	67.5	67.9
50.5°	63.7	59.4	63.7	56.1	53.3	51.4
51°	51.0	47.2	51.0	45.8	40.6	39.6
51.5°	42.5	42.0	42.5	36.3	33.5	29.7
52°	33.5	36.8	33.5	30.7	27.8	25.9
52.5°	28.3	31.1	28.3	26.4	24.1	23.6
53°	24.5	25.9	24.5	22.6	22.6	22.2
53.5°	21.2	20.8	21.2	21.7	21.2	21.2
54°	20.3	19.8	20.3	20.3	20.3	20.3
54.5°	19.3	18.9	19.3	19.3	19.3	19.3
55°	18.4	17.9	18.4	18.4	18.4	18.4
55.5°	17.5	17.0	17.5	17.5	17.5	17.5
56°	16.5	16.0	16.5	16.5	16.5	16.5
56.5°	15.6	15.1	15.6	16.0	15.6	15.6
57°	14.6	14.6	14.6	15.1	14.6	14.6
57.5°	13.7	13.7	13.7	14.2	14.2	13.7
58°	13.2	12.7	13.2	13.2	13.2	13.2
58.5°	12.3	12.3	12.3	12.7	12.7	12.3
59°	11.8	11.3	11.8	11.8	11.8	11.8
59.5°	11.3	10.9	11.3	11.3	11.3	10.9
60°	10.4	10.4	10.4	10.9	10.4	10.4
60.5°	9.9	9.9	9.9	10.4	9.9	9.9
61°	9.4	9.4	9.4	9.4	9.4	9.4
61.5°	9.0	9.0	9.0	9.0	9.0	9.0
62°	8.5	8.5	8.5	8.5	8.5	8.5
62.5°	8.0	8.0	8.0	8.0	8.0	8.0
63°	7.5	7.5	7.5	7.5	7.5	7.5
63.5°	7.1	7.1	7.1	7.5	7.1	7.1
64°	7.1	6.6	7.1	7.1	6.6	6.6
64.5°	6.6	6.1	6.6	6.6	6.6	6.1
65°	6.1	6.1	6.1	6.1	6.1	6.1
65.5°	5.7	5.7	5.7	6.1	5.7	5.7
66°	5.7	5.7	5.7	5.7	5.7	5.2



TEST NUMBER: P776772

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-5000lm-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.7	4.7	4.7	4.7	4.7	4.7
68°	4.7	4.2	4.7	4.7	4.2	4.2
68.5°	4.2	4.2	4.2	4.2	4.2	4.2
69°	4.2	3.8	4.2	4.2	3.8	3.8
69.5°	3.8	3.8	3.8	3.8	3.8	3.8
70°	3.8	3.8	3.8	3.8	3.3	3.3
70.5°	3.3	3.3	3.3	3.3	3.3	3.3
71°	3.3	3.3	3.3	3.3	3.3	3.3
71.5°	3.3	2.8	3.3	3.3	2.8	2.8
72°	2.8	2.8	2.8	2.8	2.8	2.8
72.5°	2.8	2.8	2.8	2.8	2.8	2.8
73°	2.8	2.4	2.8	2.4	2.4	2.4
73.5°	2.4	2.4	2.4	2.4	2.4	2.4
74°	2.4	2.4	2.4	2.4	2.4	2.4
74.5°	2.4	2.4	2.4	2.4	1.9	1.9
75°	1.9	1.9	1.9	1.9	1.9	1.9
75.5°	1.9	1.9	1.9	1.9	1.9	1.9
76°	1.9	1.9	1.9	1.9	1.9	1.9
76.5°	1.9	1.9	1.9	1.4	1.4	1.4
77°	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4
78°	1.4	1.4	1.4	1.4	1.4	1.4
78.5°	1.4	1.4	1.4	1.4	0.9	0.9
79°	1.4	0.9	1.4	0.9	0.9	0.9
79.5°	0.9	0.9	0.9	0.9	0.9	0.9
80°	0.9	0.9	0.9	0.9	0.9	0.9
80.5°	0.9	0.9	0.9	0.9	0.9	0.9
81°	0.9	0.9	0.9	0.9	0.9	0.9
81.5°	0.9	0.9	0.9	0.9	0.5	0.5
82°	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	0.5	0.5
83°	0.5	0.5	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.0	0.0
85.5°	0.5	0.5	0.5	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: P776772

CATALOG NUMBER: HCDJBL54050CSD-HCD82TRC-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



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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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Peachtree City, GA 30269

Scaled Data Report





21.5°	3689.0	3686.6	3693.2	3714.0	3711.1	3714.0	3693.2	3686.6	3689.0	3686.6	3693.2
22°	3481.8	3514.9	3530.4	3557.8	3554.5	3557.8	3530.4	3514.9	3481.8	3514.9	3530.4



44°	511.0	514.7	527.9	544.5	546.3	544.5	527.9	514.7	511.0	514.7	527.9
44.5°	453.9	456.2	469.0	485.9	490.7	485.9	469.0	456.2	453.9	456.2	469.0



66.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
67°	4.7	4.7	5.2	5.2	4.7	5.2	5.2	4.7	4.7	4.7	5.2



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°	3714.0	3711.1	3714.0	3693.2	3686.6	3689.0
22°	3557.8	3554.5	3557.8	3530.4	3514.9	3481.8



44°	544.5	546.3	544.5	527.9	514.7	511.0
44.5°	485.9	490.7	485.9	469.0	456.2	453.9



66.5°	5.2	5.2	5.2	5.2	5.2	5.2
67°	5.2	4.7	5.2	5.2	4.7	4.7

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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)