

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: P776464

Luminaire Tested: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776464  
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: HCDJBL3040CSD-HCD82TRC-4000lm-5000K  
Description: 8 INCH ROUND NARROW SPECULAR CLEAR TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

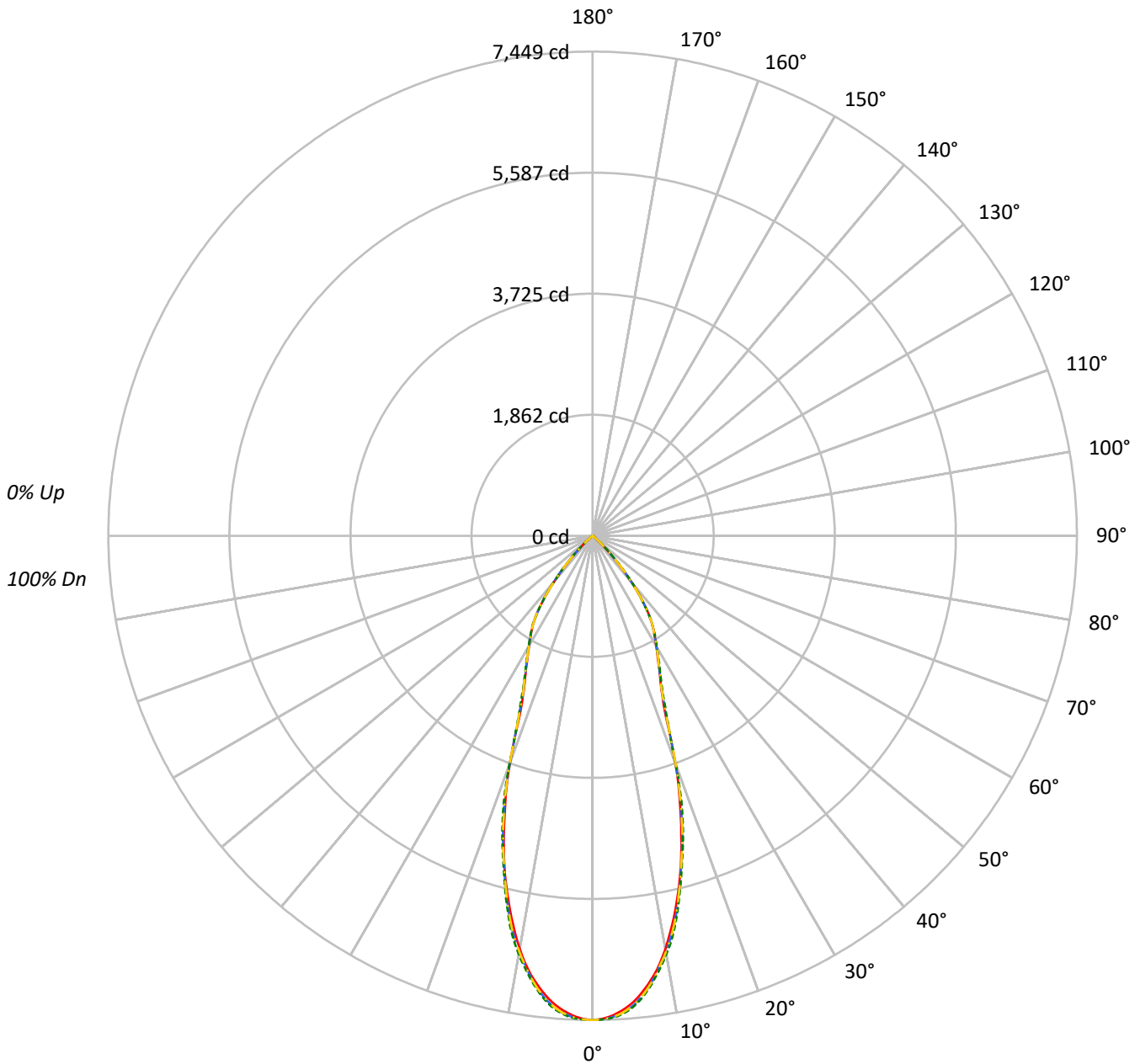
Lumens per Lamp: N/A  
Luminaire Lumens: 4548.5 lumens  
Efficiency: N/A  
Efficacy: 118.1 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 0.66 / 0.66  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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°	227368	227368	227368	227368
5°	220575	222806	220575	222806
10°	199998	202686	199998	202686
15°	165834	167269	165834	167269
20°	120761	121264	120761	121264
25°	83195	84354	83195	84354
30°	68927	69646	68927	69646
35°	57535	57259	57535	57259
40°	36826	37332	36826	37332
45°	14904	16372	14904	16372
50°	2798	3106	2798	3106
55°	852	825	852	825
60°	550	550	550	550
65°	383	383	383	383
70°	259	295	259	295
75°	189	189	189	189
80°	141	141	141	141
85°	0	140	0	140

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 16372 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	667.4	14.7
10°-20°	1439.5	31.6
20°-30°	1180.8	26.0
30°-40°	929.4	20.4
40°-50°	305.7	6.7
50°-60°	17.9	0.4
60°-70°	5.5	0.1
70°-80°	1.9	0.0
80°-90°	0.3	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°	3287.8	72.3
0°-40°	4217.2	92.7
0°-60°	4540.8	99.8
0°-90°	4548.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4548.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	7447	7447	7447	7447	7447	
5°	7197	7270	7197	7270	7197	664
15°	5247	5292	5247	5292	5247	1428
25°	2470	2504	2470	2504	2470	1173
35°	1544	1536	1544	1536	1544	929
45°	345	379	345	379	345	294
55°	16	16	16	16	16	17
65°	5	5	5	5	5	5
75°	2	2	2	2	2	2
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P776464

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	7447.3	7447.3	7447.3	7447.3	7447.3	7447.3	7447.3	7447.3	7447.3	7447.3	7447.3
0.5°	7444.0	7444.8	7448.5	7441.1	7449.3	7441.1	7448.5	7444.8	7444.0	7444.8	7448.5
1°	7436.2	7437.8	7443.6	7436.6	7445.2	7436.6	7443.6	7437.8	7436.2	7437.8	7443.6
1.5°	7422.3	7426.0	7434.6	7429.3	7438.3	7429.3	7434.6	7426.0	7422.3	7426.0	7434.6
2°	7403.9	7408.8	7421.9	7418.2	7430.9	7418.2	7421.9	7408.8	7403.9	7408.8	7421.9
2.5°	7380.2	7387.9	7404.3	7403.5	7417.4	7403.5	7404.3	7387.9	7380.2	7387.9	7404.3
3°	7352.8	7363.0	7383.0	7383.4	7399.4	7383.4	7383.0	7363.0	7352.8	7363.0	7383.0
3.5°	7320.9	7334.4	7356.9	7358.1	7376.1	7358.1	7356.9	7334.4	7320.9	7334.4	7356.9
4°	7285.3	7303.3	7325.8	7327.4	7347.0	7327.4	7325.8	7303.3	7285.3	7303.3	7325.8
4.5°	7244.0	7266.5	7288.5	7292.2	7311.9	7292.2	7288.5	7266.5	7244.0	7266.5	7288.5
5°	7197.3	7225.6	7246.0	7251.3	7270.1	7251.3	7246.0	7225.6	7197.3	7225.6	7246.0
5.5°	7145.4	7178.9	7195.3	7205.5	7221.9	7205.5	7195.3	7178.9	7145.4	7178.9	7195.3
6°	7088.5	7126.2	7139.3	7154.8	7165.0	7154.8	7139.3	7126.2	7088.5	7126.2	7139.3
6.5°	7026.4	7066.9	7075.4	7097.9	7101.6	7097.9	7075.4	7066.9	7026.4	7066.9	7075.4
7°	6960.9	7000.6	7006.3	7037.0	7031.3	7037.0	7006.3	7000.6	6960.9	7000.6	7006.3
7.5°	6891.4	6927.8	6930.2	6970.3	6957.6	6970.3	6930.2	6927.8	6891.4	6927.8	6930.2
8°	6816.9	6849.2	6850.9	6897.9	6878.3	6897.9	6850.9	6849.2	6816.9	6849.2	6850.9
8.5°	6735.5	6762.1	6766.2	6818.6	6797.3	6818.6	6766.2	6762.1	6735.5	6762.1	6766.2
9°	6648.8	6669.3	6678.7	6731.9	6711.4	6731.9	6678.7	6669.3	6648.8	6669.3	6678.7
9.5°	6553.1	6567.8	6589.5	6637.8	6626.7	6637.8	6589.5	6567.8	6553.1	6567.8	6589.5
10°	6451.3	6462.3	6496.3	6534.7	6538.0	6534.7	6496.3	6462.3	6451.3	6462.3	6496.3
10.5°	6343.3	6350.2	6400.1	6425.5	6446.8	6425.5	6400.1	6350.2	6343.3	6350.2	6400.1
11°	6233.2	6236.1	6300.3	6311.4	6347.0	6311.4	6300.3	6236.1	6233.2	6236.1	6300.3
11.5°	6118.3	6120.4	6192.7	6193.6	6237.3	6193.6	6192.7	6120.4	6118.3	6120.4	6192.7
12°	6002.5	6004.2	6074.5	6076.6	6119.5	6076.6	6074.5	6004.2	6002.5	6004.2	6074.5
12.5°	5880.7	5890.5	5946.5	5957.6	5988.2	5957.6	5946.5	5890.5	5880.7	5890.5	5946.5
13°	5760.8	5775.1	5814.4	5836.5	5856.5	5836.5	5814.4	5775.1	5760.8	5775.1	5814.4
13.5°	5636.5	5656.1	5676.6	5708.0	5715.4	5708.0	5676.6	5656.1	5636.5	5656.1	5676.6
14°	5511.3	5530.9	5539.1	5573.9	5573.5	5573.9	5539.1	5530.9	5511.3	5530.9	5539.1
14.5°	5381.2	5396.8	5402.9	5438.1	5433.2	5438.1	5402.9	5396.8	5381.2	5396.8	5402.9
15°	5246.7	5256.5	5266.3	5298.2	5292.1	5298.2	5266.3	5256.5	5246.7	5256.5	5266.3
15.5°	5102.7	5108.4	5130.1	5158.7	5159.9	5158.7	5130.1	5108.4	5102.7	5108.4	5130.1
16°	4956.2	4959.9	4992.6	5018.0	5024.1	5018.0	4992.6	4959.9	4956.2	4959.9	4992.6
16.5°	4802.0	4813.1	4851.9	4878.5	4893.3	4878.5	4851.9	4813.1	4802.0	4813.1	4851.9
17°	4652.7	4665.8	4708.8	4740.3	4759.1	4740.3	4708.8	4665.8	4652.7	4665.8	4708.8
17.5°	4501.8	4519.8	4558.7	4597.1	4615.5	4597.1	4558.7	4519.8	4501.8	4519.8	4558.7
18°	4356.6	4369.7	4405.3	4447.0	4463.0	4447.0	4405.3	4369.7	4356.6	4369.7	4405.3
18.5°	4205.3	4217.5	4244.9	4286.7	4298.9	4286.7	4244.9	4217.5	4205.3	4217.5	4244.9
19°	4050.2	4058.4	4079.7	4110.8	4123.5	4110.8	4079.7	4058.4	4050.2	4058.4	4079.7
19.5°	3888.3	3889.1	3905.0	3928.8	3940.6	3928.8	3905.0	3889.1	3888.3	3889.1	3905.0
20°	3716.9	3716.9	3725.5	3738.6	3732.4	3738.6	3725.5	3716.9	3716.9	3716.9	3725.5
20.5°	3548.4	3542.2	3545.9	3545.5	3527.5	3545.5	3545.9	3542.2	3548.4	3542.2	3545.9
21°	3374.9	3370.8	3355.7	3370.8	3365.1	3370.8	3355.7	3370.8	3374.9	3370.8	3355.7

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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°	2889.8	2909.0	2935.2	2966.7	2952.8	2966.7	2935.2	2909.0	2889.8	2909.0	2935.2
23°	2776.5	2789.6	2816.6	2859.5	2860.0	2859.5	2816.6	2789.6	2776.5	2789.6	2816.6
23.5°	2693.1	2691.0	2708.2	2749.5	2754.8	2749.5	2708.2	2691.0	2693.1	2691.0	2708.2
24°	2603.5	2612.5	2623.1	2656.7	2659.1	2656.7	2623.1	2612.5	2603.5	2612.5	2623.1
24.5°	2534.8	2539.3	2548.7	2570.0	2570.0	2570.0	2548.7	2539.3	2534.8	2539.3	2548.7
25°	2469.7	2475.5	2485.3	2504.9	2504.1	2504.9	2485.3	2475.5	2469.7	2475.5	2485.3
25.5°	2409.2	2412.1	2422.3	2440.7	2441.9	2440.7	2422.3	2412.1	2409.2	2412.1	2422.3
26°	2350.7	2353.2	2360.5	2374.4	2376.5	2374.4	2360.5	2353.2	2350.7	2353.2	2360.5
26.5°	2295.5	2296.3	2304.9	2317.6	2318.8	2317.6	2304.9	2296.3	2295.5	2296.3	2304.9
27°	2239.5	2241.9	2250.9	2266.9	2270.9	2266.9	2250.9	2241.9	2239.5	2241.9	2250.9
27.5°	2186.7	2190.0	2198.5	2214.1	2219.8	2214.1	2198.5	2190.0	2186.7	2190.0	2198.5
28°	2136.8	2140.1	2148.2	2159.7	2165.0	2159.7	2148.2	2140.1	2136.8	2140.1	2148.2
28.5°	2090.6	2092.2	2100.0	2109.0	2113.5	2109.0	2100.0	2092.2	2090.6	2092.2	2100.0
29°	2044.8	2046.0	2053.3	2061.1	2066.0	2061.1	2053.3	2046.0	2044.8	2046.0	2053.3
29.5°	1999.4	2001.8	2007.9	2016.5	2020.6	2016.5	2007.9	2001.8	1999.4	2001.8	2007.9
30°	1955.2	1957.6	1963.4	1971.5	1975.6	1971.5	1963.4	1957.6	1955.2	1957.6	1963.4
30.5°	1912.2	1914.3	1920.0	1927.8	1930.6	1927.8	1920.0	1914.3	1912.2	1914.3	1920.0
31°	1870.1	1872.1	1877.5	1885.6	1889.7	1885.6	1877.5	1872.1	1870.1	1872.1	1877.5
31.5°	1829.6	1831.6	1837.4	1844.7	1847.6	1844.7	1837.4	1831.6	1829.6	1831.6	1837.4
32°	1790.7	1792.4	1797.7	1805.1	1807.9	1805.1	1797.7	1792.4	1790.7	1792.4	1797.7
32.5°	1753.5	1755.2	1758.8	1765.8	1768.2	1765.8	1758.8	1755.2	1753.5	1755.2	1758.8
33°	1717.5	1718.3	1720.4	1723.7	1726.1	1723.7	1720.4	1718.3	1717.5	1718.3	1720.4
33.5°	1680.3	1680.3	1679.5	1677.9	1681.5	1677.9	1679.5	1680.3	1680.3	1680.3	1679.5
34°	1638.2	1636.5	1635.7	1630.4	1638.6	1630.4	1635.7	1636.5	1638.2	1636.5	1635.7
34.5°	1592.8	1589.1	1588.7	1581.7	1587.9	1581.7	1588.7	1589.1	1592.8	1589.1	1588.7
35°	1543.7	1538.8	1538.8	1532.2	1536.3	1532.2	1538.8	1538.8	1543.7	1538.8	1538.8
35.5°	1490.1	1488.1	1485.6	1479.9	1482.3	1479.9	1485.6	1488.1	1490.1	1488.1	1485.6
36°	1434.5	1433.7	1429.2	1425.9	1426.3	1425.9	1429.2	1433.7	1434.5	1433.7	1429.2
36.5°	1375.6	1377.2	1370.7	1368.6	1366.2	1368.6	1370.7	1377.2	1375.6	1377.2	1370.7
37°	1312.2	1317.1	1311.4	1310.1	1306.9	1310.1	1311.4	1317.1	1312.2	1317.1	1311.4
37.5°	1249.2	1252.9	1251.2	1249.2	1248.0	1249.2	1251.2	1252.9	1249.2	1252.9	1251.2
38°	1186.2	1189.1	1187.0	1188.6	1187.4	1188.6	1187.0	1189.1	1186.2	1189.1	1187.0
38.5°	1123.2	1121.6	1122.4	1122.8	1126.1	1122.8	1122.4	1121.6	1123.2	1121.6	1122.4
39°	1059.0	1055.3	1057.3	1057.3	1063.9	1057.3	1057.3	1055.3	1059.0	1055.3	1057.3
39.5°	991.5	989.4	992.3	994.8	999.7	994.8	992.3	989.4	991.5	989.4	992.3
40°	924.0	925.6	929.3	933.0	936.7	933.0	929.3	925.6	924.0	925.6	929.3
40.5°	856.9	861.0	864.7	873.7	873.3	873.7	864.7	861.0	856.9	861.0	864.7
41°	791.9	796.4	801.7	812.3	810.7	812.3	801.7	796.4	791.9	796.4	801.7
41.5°	726.4	732.2	739.1	751.8	748.9	751.8	739.1	732.2	726.4	732.2	739.1
42°	664.3	670.0	679.4	692.1	690.0	692.1	679.4	670.0	664.3	670.0	679.4
42.5°	604.1	609.5	621.7	634.8	633.6	634.8	621.7	609.5	604.1	609.5	621.7
43°	546.1	553.0	565.7	580.4	579.2	580.4	565.7	553.0	546.1	553.0	565.7
43.5°	494.1	497.8	510.5	524.8	526.0	524.8	510.5	497.8	494.1	497.8	510.5



TEST NUMBER: P776464

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	345.2	346.9	360.8	373.9	379.2	373.9	360.8	346.9	345.2	346.9	360.8
45.5°	297.8	301.5	317.0	328.5	335.4	328.5	317.0	301.5	297.8	301.5	317.0
46°	256.1	258.9	275.7	288.8	296.1	288.8	275.7	258.9	256.1	258.9	275.7
46.5°	218.4	223.3	236.4	252.8	261.4	252.8	236.4	223.3	218.4	223.3	236.4
47°	184.1	189.8	200.0	218.4	226.6	218.4	200.0	189.8	184.1	189.8	200.0
47.5°	154.6	160.3	169.7	185.7	191.8	185.7	169.7	160.3	154.6	160.3	169.7
48°	128.0	135.0	141.5	155.8	157.1	155.8	141.5	135.0	128.0	135.0	141.5
48.5°	105.5	111.7	117.0	129.3	127.2	129.3	117.0	111.7	105.5	111.7	117.0
49°	87.5	91.2	94.9	106.3	103.1	106.3	94.9	91.2	87.5	91.2	94.9
49.5°	73.2	74.4	78.5	85.5	81.8	85.5	78.5	74.4	73.2	74.4	78.5
50°	58.9	58.5	63.0	69.5	65.4	69.5	63.0	58.5	58.9	58.5	63.0
50.5°	44.6	46.2	48.7	55.2	51.5	55.2	48.7	46.2	44.6	46.2	48.7
51°	34.4	35.2	39.7	44.2	40.9	44.2	39.7	35.2	34.4	35.2	39.7
51.5°	25.8	29.0	31.5	36.8	36.4	36.8	31.5	29.0	25.8	29.0	31.5
52°	22.5	24.1	26.6	29.0	31.9	29.0	26.6	24.1	22.5	24.1	26.6
52.5°	20.5	20.9	22.9	24.5	27.0	24.5	22.9	20.9	20.5	20.9	22.9
53°	19.2	19.6	19.6	21.3	22.5	21.3	19.6	19.6	19.2	19.6	19.6
53.5°	18.4	18.4	18.8	18.4	18.0	18.4	18.8	18.4	18.4	18.4	18.8
54°	17.6	17.6	17.6	17.6	17.2	17.6	17.6	17.6	17.6	17.6	17.6
54.5°	16.8	16.8	16.8	16.8	16.4	16.8	16.8	16.8	16.8	16.8	16.8
55°	16.0	16.0	16.0	16.0	15.5	16.0	16.0	16.0	16.0	16.0	16.0
55.5°	15.1	15.1	15.1	15.1	14.7	15.1	15.1	15.1	15.1	15.1	15.1
56°	14.3	14.3	14.3	14.3	13.9	14.3	14.3	14.3	14.3	14.3	14.3
56.5°	13.5	13.5	13.9	13.5	13.1	13.5	13.9	13.5	13.5	13.5	13.9
57°	12.7	12.7	13.1	12.7	12.7	12.7	13.1	12.7	12.7	12.7	13.1
57.5°	11.9	12.3	12.3	11.9	11.9	11.9	12.3	12.3	11.9	12.3	12.3
58°	11.5	11.5	11.5	11.5	11.0	11.5	11.5	11.5	11.5	11.5	11.5
58.5°	10.6	11.0	11.0	10.6	10.6	10.6	11.0	11.0	10.6	11.0	11.0
59°	10.2	10.2	10.2	10.2	9.8	10.2	10.2	10.2	10.2	10.2	10.2
59.5°	9.4	9.8	9.8	9.8	9.4	9.8	9.8	9.8	9.4	9.8	9.8
60°	9.0	9.0	9.4	9.0	9.0	9.0	9.4	9.0	9.0	9.0	9.4
60.5°	8.6	8.6	9.0	8.6	8.6	8.6	9.0	8.6	8.6	8.6	9.0
61°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
61.5°	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
62°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
62.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
63°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
63.5°	6.1	6.1	6.5	6.1	6.1	6.1	6.5	6.1	6.1	6.1	6.5
64°	5.7	5.7	6.1	6.1	5.7	6.1	6.1	5.7	5.7	5.7	6.1
64.5°	5.3	5.7	5.7	5.7	5.3	5.7	5.7	5.7	5.3	5.7	5.7
65°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
65.5°	4.9	4.9	5.3	4.9	4.9	4.9	5.3	4.9	4.9	4.9	5.3
66°	4.5	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.5	4.9	4.9





TEST NUMBER: P776464

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
68°	3.7	3.7	4.1	4.1	3.7	4.1	4.1	3.7	3.7	3.7	4.1
68.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
69°	3.3	3.3	3.7	3.7	3.3	3.7	3.7	3.3	3.3	3.3	3.7
69.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
70°	2.9	2.9	3.3	3.3	3.3	3.3	3.3	2.9	2.9	2.9	3.3
70.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
71°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
71.5°	2.5	2.5	2.9	2.9	2.5	2.9	2.9	2.5	2.5	2.5	2.9
72°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
72.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
73°	2.0	2.0	2.0	2.5	2.0	2.5	2.0	2.0	2.0	2.0	2.0
73.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
74°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
74.5°	1.6	1.6	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.6	2.0
75°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
75.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
76°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
76.5°	1.2	1.2	1.2	1.6	1.6	1.6	1.2	1.2	1.2	1.2	1.2
77°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
78°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
78.5°	0.8	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
79°	0.8	0.8	0.8	1.2	0.8	1.2	0.8	0.8	0.8	0.8	0.8
79.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
81°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
81.5°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8
82°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
83°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
83.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
84°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
84.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4
85.5°	0.0	0.0	0.0	0.4	0.4	0.4	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: P776464  
CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

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



TEST NUMBER: P776464

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	7447.3	7447.3	7447.3	7447.3	7447.3	7447.3
0.5°	7441.1	7449.3	7441.1	7448.5	7444.8	7444.0
1°	7436.6	7445.2	7436.6	7443.6	7437.8	7436.2
1.5°	7429.3	7438.3	7429.3	7434.6	7426.0	7422.3
2°	7418.2	7430.9	7418.2	7421.9	7408.8	7403.9
2.5°	7403.5	7417.4	7403.5	7404.3	7387.9	7380.2
3°	7383.4	7399.4	7383.4	7383.0	7363.0	7352.8
3.5°	7358.1	7376.1	7358.1	7356.9	7334.4	7320.9
4°	7327.4	7347.0	7327.4	7325.8	7303.3	7285.3
4.5°	7292.2	7311.9	7292.2	7288.5	7266.5	7244.0
5°	7251.3	7270.1	7251.3	7246.0	7225.6	7197.3
5.5°	7205.5	7221.9	7205.5	7195.3	7178.9	7145.4
6°	7154.8	7165.0	7154.8	7139.3	7126.2	7088.5
6.5°	7097.9	7101.6	7097.9	7075.4	7066.9	7026.4
7°	7037.0	7031.3	7037.0	7006.3	7000.6	6960.9
7.5°	6970.3	6957.6	6970.3	6930.2	6927.8	6891.4
8°	6897.9	6878.3	6897.9	6850.9	6849.2	6816.9
8.5°	6818.6	6797.3	6818.6	6766.2	6762.1	6735.5
9°	6731.9	6711.4	6731.9	6678.7	6669.3	6648.8
9.5°	6637.8	6626.7	6637.8	6589.5	6567.8	6553.1
10°	6534.7	6538.0	6534.7	6496.3	6462.3	6451.3
10.5°	6425.5	6446.8	6425.5	6400.1	6350.2	6343.3
11°	6311.4	6347.0	6311.4	6300.3	6236.1	6233.2
11.5°	6193.6	6237.3	6193.6	6192.7	6120.4	6118.3
12°	6076.6	6119.5	6076.6	6074.5	6004.2	6002.5
12.5°	5957.6	5988.2	5957.6	5946.5	5890.5	5880.7
13°	5836.5	5856.5	5836.5	5814.4	5775.1	5760.8
13.5°	5708.0	5715.4	5708.0	5676.6	5656.1	5636.5
14°	5573.9	5573.5	5573.9	5539.1	5530.9	5511.3
14.5°	5438.1	5433.2	5438.1	5402.9	5396.8	5381.2
15°	5298.2	5292.1	5298.2	5266.3	5256.5	5246.7
15.5°	5158.7	5159.9	5158.7	5130.1	5108.4	5102.7
16°	5018.0	5024.1	5018.0	4992.6	4959.9	4956.2
16.5°	4878.5	4893.3	4878.5	4851.9	4813.1	4802.0
17°	4740.3	4759.1	4740.3	4708.8	4665.8	4652.7
17.5°	4597.1	4615.5	4597.1	4558.7	4519.8	4501.8
18°	4447.0	4463.0	4447.0	4405.3	4369.7	4356.6
18.5°	4286.7	4298.9	4286.7	4244.9	4217.5	4205.3
19°	4110.8	4123.5	4110.8	4079.7	4058.4	4050.2
19.5°	3928.8	3940.6	3928.8	3905.0	3889.1	3888.3
20°	3738.6	3732.4	3738.6	3725.5	3716.9	3716.9
20.5°	3545.5	3527.5	3545.5	3545.9	3542.2	3548.4
21°	3370.8	3365.1	3370.8	3355.7	3370.8	3374.9



TEST NUMBER: P776464

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2966.7	2952.8	2966.7	2935.2	2909.0	2889.8
23°	2859.5	2860.0	2859.5	2816.6	2789.6	2776.5
23.5°	2749.5	2754.8	2749.5	2708.2	2691.0	2693.1
24°	2656.7	2659.1	2656.7	2623.1	2612.5	2603.5
24.5°	2570.0	2570.0	2570.0	2548.7	2539.3	2534.8
25°	2504.9	2504.1	2504.9	2485.3	2475.5	2469.7
25.5°	2440.7	2441.9	2440.7	2422.3	2412.1	2409.2
26°	2374.4	2376.5	2374.4	2360.5	2353.2	2350.7
26.5°	2317.6	2318.8	2317.6	2304.9	2296.3	2295.5
27°	2266.9	2270.9	2266.9	2250.9	2241.9	2239.5
27.5°	2214.1	2219.8	2214.1	2198.5	2190.0	2186.7
28°	2159.7	2165.0	2159.7	2148.2	2140.1	2136.8
28.5°	2109.0	2113.5	2109.0	2100.0	2092.2	2090.6
29°	2061.1	2066.0	2061.1	2053.3	2046.0	2044.8
29.5°	2016.5	2020.6	2016.5	2007.9	2001.8	1999.4
30°	1971.5	1975.6	1971.5	1963.4	1957.6	1955.2
30.5°	1927.8	1930.6	1927.8	1920.0	1914.3	1912.2
31°	1885.6	1889.7	1885.6	1877.5	1872.1	1870.1
31.5°	1844.7	1847.6	1844.7	1837.4	1831.6	1829.6
32°	1805.1	1807.9	1805.1	1797.7	1792.4	1790.7
32.5°	1765.8	1768.2	1765.8	1758.8	1755.2	1753.5
33°	1723.7	1726.1	1723.7	1720.4	1718.3	1717.5
33.5°	1677.9	1681.5	1677.9	1679.5	1680.3	1680.3
34°	1630.4	1638.6	1630.4	1635.7	1636.5	1638.2
34.5°	1581.7	1587.9	1581.7	1588.7	1589.1	1592.8
35°	1532.2	1536.3	1532.2	1538.8	1538.8	1543.7
35.5°	1479.9	1482.3	1479.9	1485.6	1488.1	1490.1
36°	1425.9	1426.3	1425.9	1429.2	1433.7	1434.5
36.5°	1368.6	1366.2	1368.6	1370.7	1377.2	1375.6
37°	1310.1	1306.9	1310.1	1311.4	1317.1	1312.2
37.5°	1249.2	1248.0	1249.2	1251.2	1252.9	1249.2
38°	1188.6	1187.4	1188.6	1187.0	1189.1	1186.2
38.5°	1122.8	1126.1	1122.8	1122.4	1121.6	1123.2
39°	1057.3	1063.9	1057.3	1057.3	1055.3	1059.0
39.5°	994.8	999.7	994.8	992.3	989.4	991.5
40°	933.0	936.7	933.0	929.3	925.6	924.0
40.5°	873.7	873.3	873.7	864.7	861.0	856.9
41°	812.3	810.7	812.3	801.7	796.4	791.9
41.5°	751.8	748.9	751.8	739.1	732.2	726.4
42°	692.1	690.0	692.1	679.4	670.0	664.3
42.5°	634.8	633.6	634.8	621.7	609.5	604.1
43°	580.4	579.2	580.4	565.7	553.0	546.1
43.5°	524.8	526.0	524.8	510.5	497.8	494.1



TEST NUMBER: P776464

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	373.9	379.2	373.9	360.8	346.9	345.2
45.5°	328.5	335.4	328.5	317.0	301.5	297.8
46°	288.8	296.1	288.8	275.7	258.9	256.1
46.5°	252.8	261.4	252.8	236.4	223.3	218.4
47°	218.4	226.6	218.4	200.0	189.8	184.1
47.5°	185.7	191.8	185.7	169.7	160.3	154.6
48°	155.8	157.1	155.8	141.5	135.0	128.0
48.5°	129.3	127.2	129.3	117.0	111.7	105.5
49°	106.3	103.1	106.3	94.9	91.2	87.5
49.5°	85.5	81.8	85.5	78.5	74.4	73.2
50°	69.5	65.4	69.5	63.0	58.5	58.9
50.5°	55.2	51.5	55.2	48.7	46.2	44.6
51°	44.2	40.9	44.2	39.7	35.2	34.4
51.5°	36.8	36.4	36.8	31.5	29.0	25.8
52°	29.0	31.9	29.0	26.6	24.1	22.5
52.5°	24.5	27.0	24.5	22.9	20.9	20.5
53°	21.3	22.5	21.3	19.6	19.6	19.2
53.5°	18.4	18.0	18.4	18.8	18.4	18.4
54°	17.6	17.2	17.6	17.6	17.6	17.6
54.5°	16.8	16.4	16.8	16.8	16.8	16.8
55°	16.0	15.5	16.0	16.0	16.0	16.0
55.5°	15.1	14.7	15.1	15.1	15.1	15.1
56°	14.3	13.9	14.3	14.3	14.3	14.3
56.5°	13.5	13.1	13.5	13.9	13.5	13.5
57°	12.7	12.7	12.7	13.1	12.7	12.7
57.5°	11.9	11.9	11.9	12.3	12.3	11.9
58°	11.5	11.0	11.5	11.5	11.5	11.5
58.5°	10.6	10.6	10.6	11.0	11.0	10.6
59°	10.2	9.8	10.2	10.2	10.2	10.2
59.5°	9.8	9.4	9.8	9.8	9.8	9.4
60°	9.0	9.0	9.0	9.4	9.0	9.0
60.5°	8.6	8.6	8.6	9.0	8.6	8.6
61°	8.2	8.2	8.2	8.2	8.2	8.2
61.5°	7.8	7.8	7.8	7.8	7.8	7.8
62°	7.4	7.4	7.4	7.4	7.4	7.4
62.5°	7.0	7.0	7.0	7.0	7.0	7.0
63°	6.5	6.5	6.5	6.5	6.5	6.5
63.5°	6.1	6.1	6.1	6.5	6.1	6.1
64°	6.1	5.7	6.1	6.1	5.7	5.7
64.5°	5.7	5.3	5.7	5.7	5.7	5.3
65°	5.3	5.3	5.3	5.3	5.3	5.3
65.5°	4.9	4.9	4.9	5.3	4.9	4.9
66°	4.9	4.9	4.9	4.9	4.9	4.5



TEST NUMBER: P776464

CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.1	4.1	4.1	4.1	4.1	4.1
68°	4.1	3.7	4.1	4.1	3.7	3.7
68.5°	3.7	3.7	3.7	3.7	3.7	3.7
69°	3.7	3.3	3.7	3.7	3.3	3.3
69.5°	3.3	3.3	3.3	3.3	3.3	3.3
70°	3.3	3.3	3.3	3.3	2.9	2.9
70.5°	2.9	2.9	2.9	2.9	2.9	2.9
71°	2.9	2.9	2.9	2.9	2.9	2.9
71.5°	2.9	2.5	2.9	2.9	2.5	2.5
72°	2.5	2.5	2.5	2.5	2.5	2.5
72.5°	2.5	2.5	2.5	2.5	2.5	2.5
73°	2.5	2.0	2.5	2.0	2.0	2.0
73.5°	2.0	2.0	2.0	2.0	2.0	2.0
74°	2.0	2.0	2.0	2.0	2.0	2.0
74.5°	2.0	2.0	2.0	2.0	1.6	1.6
75°	1.6	1.6	1.6	1.6	1.6	1.6
75.5°	1.6	1.6	1.6	1.6	1.6	1.6
76°	1.6	1.6	1.6	1.6	1.6	1.6
76.5°	1.6	1.6	1.6	1.2	1.2	1.2
77°	1.2	1.2	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2
78°	1.2	1.2	1.2	1.2	1.2	1.2
78.5°	1.2	1.2	1.2	1.2	0.8	0.8
79°	1.2	0.8	1.2	0.8	0.8	0.8
79.5°	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8
80.5°	0.8	0.8	0.8	0.8	0.8	0.8
81°	0.8	0.8	0.8	0.8	0.8	0.8
81.5°	0.8	0.8	0.8	0.8	0.4	0.4
82°	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4
83°	0.4	0.4	0.4	0.4	0.4	0.4
83.5°	0.4	0.4	0.4	0.4	0.4	0.4
84°	0.4	0.4	0.4	0.4	0.4	0.4
84.5°	0.4	0.4	0.4	0.4	0.4	0.4
85°	0.4	0.4	0.4	0.4	0.0	0.0
85.5°	0.4	0.4	0.4	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: P776464  
CATALOG NUMBER: HCDJBL3040CSD-HCD82TRC-4000lm-5000K

**CANDELA DISTRIBUTION (continued):**

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



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Scaled Data Report





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

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Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report





21.5°	3198.2	3196.2	3201.9	3219.9	3217.4	3219.9	3201.9	3196.2	3198.2	3196.2	3201.9
22°	3018.7	3047.3	3060.8	3084.5	3081.6	3084.5	3060.8	3047.3	3018.7	3047.3	3060.8



44°	443.0	446.3	457.7	472.0	473.7	472.0	457.7	446.3	443.0	446.3	457.7
44.5°	393.5	395.5	406.6	421.3	425.4	421.3	406.6	395.5	393.5	395.5	406.6



66.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
67°	4.1	4.1	4.5	4.5	4.1	4.5	4.5	4.1	4.1	4.1	4.5



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°	3219.9	3217.4	3219.9	3201.9	3196.2	3198.2
22°	3084.5	3081.6	3084.5	3060.8	3047.3	3018.7



44°	472.0	473.7	472.0	457.7	446.3	443.0
44.5°	421.3	425.4	421.3	406.6	395.5	393.5



66.5°	4.5	4.5	4.5	4.5	4.5	4.5
67°	4.5	4.1	4.5	4.5	4.1	4.1

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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)