

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: P776384

Luminaire Tested: HCDJBL3040CSD-HCD62TRMW-4000lm-5000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776384
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B057-HCD62TRMW)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD62TRMW-4000lm-5000K
Description: 6 INCH ROUND NARROW MATTE WHITE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 5000K CCT
Ballast/Driver: -

Summary

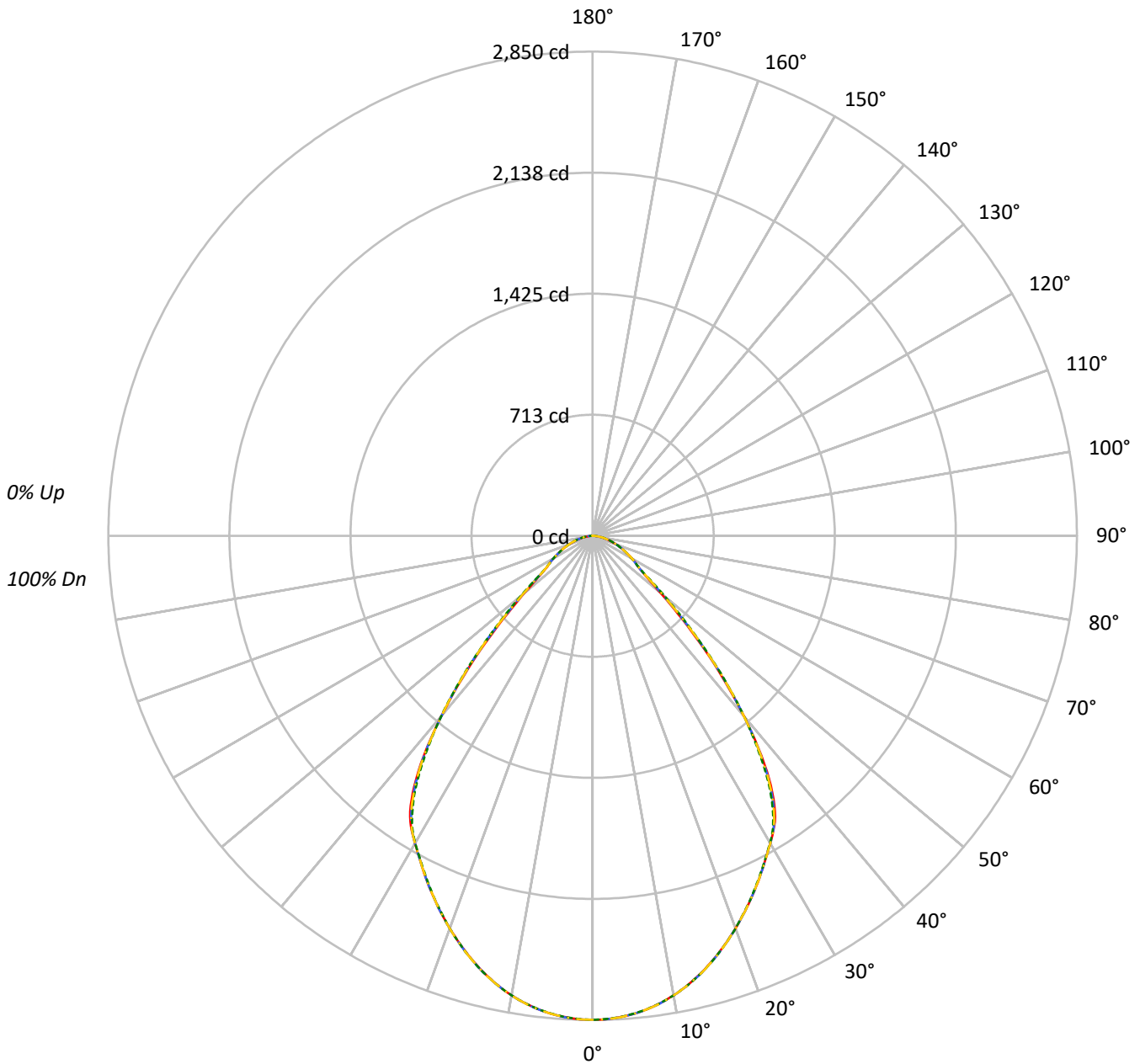
Lumens per Lamp: N/A
Luminaire Lumens: 4536.3 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.11 / 1.14
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

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					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								
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	97	89	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71								
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63								
5	84	74	66	61	82	73	66	61	71	65	60	69	64	59	67	63	59	57								
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52								
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47								
8	69	58	51	45	68	57	50	45	56	50	45	55	49	45	54	49	45	43								
9	65	54	47	42	64	53	46	42	52	46	41	51	45	41	50	45	41	40								
10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	156210	156210	156210	156210
5°	155387	155321	155387	155321
10°	152909	152909	152909	152909
15°	148730	148798	148730	148798
20°	143460	143413	143460	143413
25°	137766	137542	137766	137542
30°	132343	132141	132343	132141
35°	123420	121613	123420	121613
40°	99064	99179	99064	99179
45°	69317	71411	69317	71411
50°	44314	47205	44314	47205
55°	32238	32744	32238	32744
60°	29274	29131	29274	29131
65°	26306	26203	26306	26203
70°	23321	23658	23321	23658
75°	20355	21393	20355	21393
80°	16763	18973	16763	18973
85°	10315	15662	10315	15662

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 71411 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.1	5.9
10°-20°	737.0	16.2
20°-30°	1048.0	23.1
30°-40°	1120.3	24.7
40°-50°	707.9	15.6
50°-60°	322.1	7.1
60°-70°	201.8	4.4
70°-80°	106.0	2.3
80°-90°	26.1	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2052.1	45.2
0°-40°	3172.4	69.9
0°-60°	4202.4	92.6
0°-90°	4536.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4536.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2850	2850	2850	2850	2850	
5°	2824	2822	2824	2822	2824	267
15°	2621	2622	2621	2622	2621	737
25°	2278	2274	2278	2274	2278	1048
35°	1844	1817	1844	1817	1844	1125
45°	894	921	894	921	894	697
55°	337	343	337	343	337	318
65°	203	202	203	202	203	202
75°	96	101	96	101	96	102
85°	16	25	16	25	16	22
90°	0	1	0	1	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°	2849.5	2849.5	2849.5	2849.5	2849.5	2849.5	2849.5	2849.5	2849.5	2849.5	2849.5
0.5°	2849.1	2849.5	2849.1	2849.1	2847.9	2849.1	2849.1	2849.5	2849.1	2849.5	2849.1
1°	2848.3	2848.7	2848.7	2848.3	2847.1	2848.3	2848.7	2848.7	2848.3	2848.7	2848.7
1.5°	2847.1	2847.5	2847.1	2847.1	2845.8	2847.1	2847.1	2847.5	2847.1	2847.5	2847.1
2°	2845.4	2845.4	2845.4	2845.4	2843.8	2845.4	2845.4	2845.4	2845.4	2845.4	2845.4
2.5°	2843.0	2843.0	2843.4	2843.0	2841.7	2843.0	2843.4	2843.0	2843.0	2843.0	2843.4
3°	2840.1	2840.5	2840.5	2840.5	2838.9	2840.5	2840.5	2840.5	2840.1	2840.5	2840.5
3.5°	2836.8	2836.8	2837.2	2837.2	2835.6	2837.2	2837.2	2836.8	2836.8	2836.8	2837.2
4°	2833.2	2833.2	2833.2	2833.2	2831.9	2833.2	2833.2	2833.2	2833.2	2833.2	2833.2
4.5°	2828.7	2829.1	2829.1	2829.1	2827.4	2829.1	2829.1	2829.1	2828.7	2829.1	2829.1
5°	2823.7	2824.2	2824.2	2824.2	2822.5	2824.2	2824.2	2824.2	2823.7	2824.2	2824.2
5.5°	2818.4	2818.8	2818.8	2818.8	2817.2	2818.8	2818.8	2818.8	2818.4	2818.8	2818.8
6°	2812.7	2812.7	2812.7	2812.7	2811.5	2812.7	2812.7	2812.7	2812.7	2812.7	2812.7
6.5°	2806.2	2806.2	2806.6	2806.6	2805.4	2806.6	2806.6	2806.2	2806.2	2806.2	2806.6
7°	2799.2	2799.6	2799.6	2799.6	2798.4	2799.6	2799.6	2799.6	2799.2	2799.6	2799.6
7.5°	2791.9	2791.9	2792.3	2792.3	2791.0	2792.3	2792.3	2791.9	2791.9	2791.9	2792.3
8°	2783.7	2784.1	2784.5	2784.5	2783.3	2784.5	2784.5	2784.1	2783.7	2784.1	2784.5
8.5°	2775.1	2775.5	2775.9	2775.9	2774.7	2775.9	2775.9	2775.5	2775.1	2775.5	2775.9
9°	2766.1	2766.5	2766.9	2767.3	2766.1	2767.3	2766.9	2766.5	2766.1	2766.5	2766.9
9.5°	2756.7	2757.1	2757.5	2757.9	2756.7	2757.9	2757.5	2757.1	2756.7	2757.1	2757.5
10°	2746.9	2746.9	2747.3	2748.1	2746.9	2748.1	2747.3	2746.9	2746.9	2746.9	2747.3
10.5°	2736.3	2736.3	2737.1	2737.5	2736.3	2737.5	2737.1	2736.3	2736.3	2736.3	2737.1
11°	2725.2	2725.2	2726.0	2726.9	2725.2	2726.9	2726.0	2725.2	2725.2	2725.2	2726.0
11.5°	2713.4	2713.8	2714.6	2715.4	2714.2	2715.4	2714.6	2713.8	2713.4	2713.8	2714.6
12°	2701.5	2701.9	2702.7	2703.6	2702.3	2703.6	2702.7	2701.9	2701.5	2701.9	2702.7
12.5°	2689.2	2689.7	2690.1	2690.9	2690.1	2690.9	2690.1	2689.7	2689.2	2689.7	2690.1
13°	2676.2	2676.6	2677.4	2678.2	2677.4	2678.2	2677.4	2676.6	2676.2	2676.6	2677.4
13.5°	2663.1	2663.5	2664.3	2665.1	2663.9	2665.1	2664.3	2663.5	2663.1	2663.5	2664.3
14°	2649.2	2650.0	2650.8	2651.2	2650.4	2651.2	2650.8	2650.0	2649.2	2650.0	2650.8
14.5°	2635.3	2635.7	2636.5	2637.3	2636.5	2637.3	2636.5	2635.7	2635.3	2635.7	2636.5
15°	2620.6	2621.4	2622.2	2623.0	2621.8	2623.0	2622.2	2621.4	2620.6	2621.4	2622.2
15.5°	2605.8	2606.3	2607.1	2607.9	2606.7	2607.9	2607.1	2606.3	2605.8	2606.3	2607.1
16°	2590.3	2591.1	2591.9	2592.8	2591.5	2592.8	2591.9	2591.1	2590.3	2591.1	2591.9
16.5°	2575.2	2575.6	2576.4	2577.2	2576.0	2577.2	2576.4	2575.6	2575.2	2575.6	2576.4
17°	2559.2	2559.6	2560.5	2561.3	2560.1	2561.3	2560.5	2559.6	2559.2	2559.6	2560.5
17.5°	2543.3	2543.3	2544.1	2544.9	2543.7	2544.9	2544.1	2543.3	2543.3	2543.3	2544.1
18°	2526.5	2527.4	2527.8	2528.2	2526.9	2528.2	2527.8	2527.4	2526.5	2527.4	2527.8
18.5°	2509.8	2510.6	2511.0	2511.4	2510.2	2511.4	2511.0	2510.6	2509.8	2510.6	2511.0
19°	2493.0	2493.8	2494.2	2494.2	2493.4	2494.2	2494.2	2493.8	2493.0	2493.8	2494.2
19.5°	2476.2	2476.7	2477.1	2477.5	2476.2	2477.5	2477.1	2476.7	2476.2	2476.7	2477.1
20°	2459.1	2459.5	2459.9	2459.9	2458.3	2459.9	2459.9	2459.5	2459.1	2459.5	2459.9
20.5°	2441.9	2441.9	2441.9	2441.9	2440.7	2441.9	2441.9	2441.9	2441.9	2441.9	2441.9
21°	2423.5	2423.9	2424.3	2423.9	2422.7	2423.9	2424.3	2423.9	2423.5	2423.9	2424.3



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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°	2370.4	2370.4	2370.0	2369.5	2367.9	2369.5	2370.0	2370.4	2370.4	2370.4	2370.0
23°	2352.0	2352.0	2351.6	2351.1	2349.5	2351.1	2351.6	2352.0	2352.0	2352.0	2351.6
23.5°	2333.6	2333.6	2333.2	2332.3	2331.1	2332.3	2333.2	2333.6	2333.6	2333.6	2333.2
24°	2315.2	2315.2	2314.8	2313.5	2311.9	2313.5	2314.8	2315.2	2315.2	2315.2	2314.8
24.5°	2296.8	2296.4	2296.0	2294.7	2293.1	2294.7	2296.0	2296.4	2296.8	2296.4	2296.0
25°	2277.6	2277.6	2277.2	2275.9	2273.9	2275.9	2277.2	2277.6	2277.6	2277.6	2277.2
25.5°	2258.8	2258.8	2258.3	2256.7	2255.1	2256.7	2258.3	2258.8	2258.8	2258.8	2258.3
26°	2239.9	2239.9	2239.5	2238.3	2236.3	2238.3	2239.5	2239.9	2239.9	2239.9	2239.5
26.5°	2220.7	2220.7	2220.3	2218.7	2217.1	2218.7	2220.3	2220.7	2220.7	2220.7	2220.3
27°	2201.5	2201.9	2201.5	2199.9	2197.8	2199.9	2201.5	2201.9	2201.5	2201.9	2201.5
27.5°	2182.7	2182.7	2182.3	2181.1	2179.0	2181.1	2182.3	2182.7	2182.7	2182.7	2182.3
28°	2163.1	2163.9	2163.5	2162.3	2160.6	2162.3	2163.5	2163.9	2163.1	2163.9	2163.5
28.5°	2144.7	2145.5	2145.1	2143.9	2142.2	2143.9	2145.1	2145.5	2144.7	2145.5	2145.1
29°	2126.3	2127.1	2126.7	2125.9	2123.8	2125.9	2126.7	2127.1	2126.3	2127.1	2126.7
29.5°	2108.3	2108.7	2108.7	2107.5	2105.9	2107.5	2108.7	2108.7	2108.3	2108.7	2108.7
30°	2090.7	2090.7	2090.7	2089.1	2087.5	2089.1	2090.7	2090.7	2090.7	2090.7	2090.7
30.5°	2072.7	2073.1	2072.3	2071.1	2069.1	2071.1	2072.3	2073.1	2072.7	2073.1	2072.3
31°	2055.2	2055.2	2054.3	2052.3	2049.8	2052.3	2054.3	2055.2	2055.2	2055.2	2054.3
31.5°	2036.4	2036.4	2034.7	2032.7	2029.4	2032.7	2034.7	2036.4	2036.4	2036.4	2034.7
32°	2017.1	2015.9	2013.1	2009.4	2004.9	2009.4	2013.1	2015.9	2017.1	2015.9	2013.1
32.5°	1996.3	1993.4	1988.9	1982.8	1977.5	1982.8	1988.9	1993.4	1996.3	1993.4	1988.9
33°	1972.6	1969.3	1961.5	1954.6	1948.9	1954.6	1961.5	1969.3	1972.6	1969.3	1961.5
33.5°	1945.2	1942.3	1931.7	1924.3	1918.6	1924.3	1931.7	1942.3	1945.2	1942.3	1931.7
34°	1914.1	1912.9	1900.2	1892.0	1887.1	1892.0	1900.2	1912.9	1914.1	1912.9	1900.2
34.5°	1880.2	1878.1	1866.7	1857.7	1853.2	1857.7	1866.7	1878.1	1880.2	1878.1	1866.7
35°	1844.2	1840.9	1831.1	1821.3	1817.2	1821.3	1831.1	1840.9	1844.2	1840.9	1831.1
35.5°	1806.2	1801.7	1793.9	1783.7	1778.4	1783.7	1793.9	1801.7	1806.2	1801.7	1793.9
36°	1765.7	1760.0	1755.1	1744.9	1738.3	1744.9	1755.1	1760.0	1765.7	1760.0	1755.1
36.5°	1723.2	1717.1	1713.8	1704.0	1695.8	1704.0	1713.8	1717.1	1723.2	1717.1	1713.8
37°	1678.6	1672.9	1670.5	1661.5	1653.3	1661.5	1670.5	1672.9	1678.6	1672.9	1670.5
37.5°	1632.0	1627.9	1625.5	1618.1	1610.0	1618.1	1625.5	1627.9	1632.0	1627.9	1625.5
38°	1583.8	1581.3	1578.9	1574.0	1567.0	1574.0	1578.9	1581.3	1583.8	1581.3	1578.9
38.5°	1534.3	1534.3	1530.2	1528.6	1522.5	1528.6	1530.2	1534.3	1534.3	1534.3	1530.2
39°	1485.3	1486.1	1482.0	1481.6	1479.1	1481.6	1482.0	1486.1	1485.3	1486.1	1482.0
39.5°	1435.0	1436.2	1432.1	1433.3	1432.9	1433.3	1432.1	1436.2	1435.0	1436.2	1432.1
40°	1384.3	1386.7	1383.1	1385.1	1385.9	1385.1	1383.1	1386.7	1384.3	1386.7	1383.1
40.5°	1332.8	1336.4	1334.0	1337.3	1338.1	1337.3	1334.0	1336.4	1332.8	1336.4	1334.0
41°	1282.5	1286.6	1285.8	1288.6	1291.5	1288.6	1285.8	1286.6	1282.5	1286.6	1285.8
41.5°	1232.6	1235.5	1237.9	1241.6	1242.8	1241.6	1237.9	1235.5	1232.6	1235.5	1237.9
42°	1182.7	1185.2	1190.1	1193.4	1196.6	1193.4	1190.1	1185.2	1182.7	1185.2	1190.1
42.5°	1133.3	1135.7	1142.7	1146.8	1149.6	1146.8	1142.7	1135.7	1133.3	1135.7	1142.7
43°	1083.8	1087.1	1096.1	1099.7	1102.6	1099.7	1096.1	1087.1	1083.8	1087.1	1096.1
43.5°	1035.1	1038.0	1049.0	1052.7	1055.2	1052.7	1049.0	1038.0	1035.1	1038.0	1049.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	894.1	899.0	911.3	918.2	921.1	918.2	911.3	899.0	894.1	899.0	911.3
45.5°	848.7	854.9	867.5	875.3	878.2	875.3	867.5	854.9	848.7	854.9	867.5
46°	805.4	812.3	824.6	833.6	837.3	833.6	824.6	812.3	805.4	812.3	824.6
46.5°	763.3	771.0	782.9	793.1	797.2	793.1	782.9	771.0	763.3	771.0	782.9
47°	722.4	731.0	742.4	753.5	758.0	753.5	742.4	731.0	722.4	731.0	742.4
47.5°	683.6	691.7	704.0	715.4	719.5	715.4	704.0	691.7	683.6	691.7	704.0
48°	646.8	654.9	667.2	679.1	683.6	679.1	667.2	654.9	646.8	654.9	667.2
48.5°	612.4	619.4	631.6	643.9	648.8	643.9	631.6	619.4	612.4	619.4	631.6
49°	579.3	585.8	597.7	610.8	615.3	610.8	597.7	585.8	579.3	585.8	597.7
49.5°	548.2	554.0	566.2	578.5	583.8	578.5	566.2	554.0	548.2	554.0	566.2
50°	519.6	523.7	536.4	548.6	553.5	548.6	536.4	523.7	519.6	523.7	536.4
50.5°	493.0	495.9	508.6	520.0	524.9	520.0	508.6	495.9	493.0	495.9	508.6
51°	468.5	471.0	482.4	492.6	498.4	492.6	482.4	471.0	468.5	471.0	482.4
51.5°	445.6	447.7	458.3	467.7	473.0	467.7	458.3	447.7	445.6	447.7	458.3
52°	424.8	426.8	436.6	444.4	448.9	444.4	436.6	426.8	424.8	426.8	436.6
52.5°	405.6	407.2	415.8	422.3	426.4	422.3	415.8	407.2	405.6	407.2	415.8
53°	388.0	390.8	397.0	402.3	405.6	402.3	397.0	390.8	388.0	390.8	397.0
53.5°	374.1	375.7	379.8	384.3	386.7	384.3	379.8	375.7	374.1	375.7	379.8
54°	361.0	361.4	364.3	367.5	369.6	367.5	364.3	361.4	361.0	361.4	364.3
54.5°	349.1	349.1	350.4	352.8	355.3	352.8	350.4	349.1	349.1	349.1	350.4
55°	337.3	337.7	339.3	341.0	342.6	341.0	339.3	337.7	337.3	337.7	339.3
55.5°	326.2	327.9	329.5	330.7	333.6	330.7	329.5	327.9	326.2	327.9	329.5
56°	318.5	319.3	320.5	321.3	324.6	321.3	320.5	319.3	318.5	319.3	320.5
56.5°	311.9	311.9	311.9	312.8	315.6	312.8	311.9	311.9	311.9	311.9	311.9
57°	305.8	305.8	305.0	304.6	306.6	304.6	305.0	305.8	305.8	305.8	305.0
57.5°	300.1	299.7	298.9	298.0	297.6	298.0	298.9	299.7	300.1	299.7	298.9
58°	293.9	293.5	292.7	291.9	291.1	291.9	292.7	293.5	293.9	293.5	292.7
58.5°	287.4	287.0	286.2	285.4	285.0	285.4	286.2	287.0	287.4	287.0	286.2
59°	280.9	280.5	280.0	279.2	278.4	279.2	280.0	280.5	280.9	280.5	280.0
59.5°	273.9	273.9	273.1	272.7	272.3	272.7	273.1	273.9	273.9	273.9	273.1
60°	267.0	267.0	266.6	266.1	265.7	266.1	266.6	267.0	267.0	267.0	266.6
60.5°	260.0	260.0	259.6	259.2	258.8	259.2	259.6	260.0	260.0	260.0	259.6
61°	253.5	253.5	253.1	252.7	252.2	252.7	253.1	253.5	253.5	253.5	253.1
61.5°	246.9	246.9	246.5	246.1	245.7	246.1	246.5	246.9	246.9	246.9	246.5
62°	240.4	240.4	240.0	239.6	239.2	239.6	240.0	240.4	240.4	240.4	240.0
62.5°	233.8	233.8	233.4	233.0	232.6	233.0	233.4	233.8	233.8	233.8	233.4
63°	227.7	227.3	227.3	226.5	226.5	226.5	227.3	227.3	227.7	227.3	227.3
63.5°	221.2	221.2	220.8	220.4	220.4	220.4	220.8	221.2	221.2	221.2	220.8
64°	215.0	215.0	214.6	214.2	213.8	214.2	214.6	215.0	215.0	215.0	214.6
64.5°	208.9	208.9	208.5	208.1	208.1	208.1	208.5	208.9	208.9	208.9	208.5
65°	202.8	203.2	202.8	202.4	202.0	202.4	202.8	203.2	202.8	203.2	202.8
65.5°	196.6	197.1	197.1	196.6	196.2	196.6	197.1	197.1	196.6	197.1	197.1
66°	190.9	191.3	190.9	190.5	190.5	190.5	190.9	191.3	190.9	191.3	190.9



TEST NUMBER: P776384

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	173.3	174.2	174.2	173.8	173.8	173.8	174.2	174.2	173.3	174.2	174.2
68°	167.6	168.4	168.8	168.4	168.4	168.4	168.8	168.4	167.6	168.4	168.8
68.5°	162.3	163.1	163.5	163.1	163.1	163.1	163.5	163.1	162.3	163.1	163.5
69°	156.6	157.8	158.2	158.2	157.8	158.2	158.2	157.8	156.6	157.8	158.2
69.5°	150.9	152.5	153.3	152.9	152.9	152.9	153.3	152.5	150.9	152.5	153.3
70°	145.5	146.8	148.0	148.0	147.6	148.0	148.0	146.8	145.5	146.8	148.0
70.5°	140.2	141.9	143.1	142.7	142.7	142.7	143.1	141.9	140.2	141.9	143.1
71°	135.3	137.0	138.2	138.2	137.8	138.2	138.2	137.0	135.3	137.0	138.2
71.5°	130.0	131.6	133.3	133.3	132.9	133.3	133.3	131.6	130.0	131.6	133.3
72°	125.1	126.7	128.4	128.4	128.0	128.4	128.4	126.7	125.1	126.7	128.4
72.5°	120.2	121.8	123.9	123.5	123.5	123.5	123.9	121.8	120.2	121.8	123.9
73°	114.9	116.9	119.0	119.0	118.6	119.0	119.0	116.9	114.9	116.9	119.0
73.5°	110.0	112.0	114.5	114.5	114.1	114.5	114.5	112.0	110.0	112.0	114.5
74°	105.5	107.1	109.6	110.0	109.6	110.0	109.6	107.1	105.5	107.1	109.6
74.5°	100.6	102.6	105.1	105.5	105.1	105.5	105.1	102.6	100.6	102.6	105.1
75°	96.1	97.7	100.6	101.0	101.0	101.0	100.6	97.7	96.1	97.7	100.6
75.5°	91.6	93.2	96.5	96.5	96.5	96.5	96.5	93.2	91.6	93.2	96.5
76°	87.1	88.7	92.0	92.4	92.4	92.4	92.0	88.7	87.1	88.7	92.0
76.5°	82.6	84.2	87.5	88.3	87.9	88.3	87.5	84.2	82.6	84.2	87.5
77°	78.1	80.1	83.4	84.2	83.8	84.2	83.4	80.1	78.1	80.1	83.4
77.5°	73.6	75.6	79.3	80.1	79.7	80.1	79.3	75.6	73.6	75.6	79.3
78°	69.5	71.5	74.8	76.0	75.6	76.0	74.8	71.5	69.5	71.5	74.8
78.5°	65.4	67.0	70.7	72.0	72.0	72.0	70.7	67.0	65.4	67.0	70.7
79°	61.3	63.0	66.6	67.9	67.9	67.9	66.6	63.0	61.3	63.0	66.6
79.5°	57.2	58.9	63.0	64.2	64.2	64.2	63.0	58.9	57.2	58.9	63.0
80°	53.1	54.8	58.9	60.1	60.1	60.1	58.9	54.8	53.1	54.8	58.9
80.5°	49.5	51.1	55.2	56.4	56.4	56.4	55.2	51.1	49.5	51.1	55.2
81°	45.4	47.0	51.1	52.7	52.7	52.7	51.1	47.0	45.4	47.0	51.1
81.5°	41.7	42.9	47.4	49.1	49.1	49.1	47.4	42.9	41.7	42.9	47.4
82°	38.0	39.2	43.7	45.4	45.4	45.4	43.7	39.2	38.0	39.2	43.7
82.5°	33.9	35.6	40.1	42.1	42.1	42.1	40.1	35.6	33.9	35.6	40.1
83°	30.3	31.9	36.4	38.4	38.4	38.4	36.4	31.9	30.3	31.9	36.4
83.5°	26.6	28.2	33.1	35.2	34.8	35.2	33.1	28.2	26.6	28.2	33.1
84°	23.3	24.5	29.8	31.5	31.5	31.5	29.8	24.5	23.3	24.5	29.8
84.5°	19.6	20.9	26.6	28.2	28.2	28.2	26.6	20.9	19.6	20.9	26.6
85°	16.4	17.6	23.3	24.9	24.9	24.9	23.3	17.6	16.4	17.6	23.3
85.5°	13.1	14.7	20.0	21.7	21.7	21.7	20.0	14.7	13.1	14.7	20.0
86°	10.6	11.9	17.2	18.4	18.4	18.4	17.2	11.9	10.6	11.9	17.2
86.5°	8.6	9.8	13.9	15.1	15.5	15.1	13.9	9.8	8.6	9.8	13.9
87°	6.5	7.8	11.4	12.3	12.3	12.3	11.4	7.8	6.5	7.8	11.4
87.5°	4.9	5.7	8.6	9.4	9.4	9.4	8.6	5.7	4.9	5.7	8.6
88°	3.3	4.1	6.1	6.5	7.0	6.5	6.1	4.1	3.3	4.1	6.1
88.5°	1.6	2.5	4.1	4.9	5.3	4.9	4.1	2.5	1.6	2.5	4.1



TEST NUMBER: P776384

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.4	0.4	0.8	1.2	0.8	0.4	0.4	0.0	0.4	0.4



TEST NUMBER: P776384

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2849.5	2849.5	2849.5	2849.5	2849.5	2849.5
0.5°	2849.1	2847.9	2849.1	2849.1	2849.5	2849.1
1°	2848.3	2847.1	2848.3	2848.7	2848.7	2848.3
1.5°	2847.1	2845.8	2847.1	2847.1	2847.5	2847.1
2°	2845.4	2843.8	2845.4	2845.4	2845.4	2845.4
2.5°	2843.0	2841.7	2843.0	2843.4	2843.0	2843.0
3°	2840.5	2838.9	2840.5	2840.5	2840.5	2840.1
3.5°	2837.2	2835.6	2837.2	2837.2	2836.8	2836.8
4°	2833.2	2831.9	2833.2	2833.2	2833.2	2833.2
4.5°	2829.1	2827.4	2829.1	2829.1	2829.1	2828.7
5°	2824.2	2822.5	2824.2	2824.2	2824.2	2823.7
5.5°	2818.8	2817.2	2818.8	2818.8	2818.8	2818.4
6°	2812.7	2811.5	2812.7	2812.7	2812.7	2812.7
6.5°	2806.6	2805.4	2806.6	2806.6	2806.2	2806.2
7°	2799.6	2798.4	2799.6	2799.6	2799.6	2799.2
7.5°	2792.3	2791.0	2792.3	2792.3	2791.9	2791.9
8°	2784.5	2783.3	2784.5	2784.5	2784.1	2783.7
8.5°	2775.9	2774.7	2775.9	2775.9	2775.5	2775.1
9°	2767.3	2766.1	2767.3	2766.9	2766.5	2766.1
9.5°	2757.9	2756.7	2757.9	2757.5	2757.1	2756.7
10°	2748.1	2746.9	2748.1	2747.3	2746.9	2746.9
10.5°	2737.5	2736.3	2737.5	2737.1	2736.3	2736.3
11°	2726.9	2725.2	2726.9	2726.0	2725.2	2725.2
11.5°	2715.4	2714.2	2715.4	2714.6	2713.8	2713.4
12°	2703.6	2702.3	2703.6	2702.7	2701.9	2701.5
12.5°	2690.9	2690.1	2690.9	2690.1	2689.7	2689.2
13°	2678.2	2677.4	2678.2	2677.4	2676.6	2676.2
13.5°	2665.1	2663.9	2665.1	2664.3	2663.5	2663.1
14°	2651.2	2650.4	2651.2	2650.8	2650.0	2649.2
14.5°	2637.3	2636.5	2637.3	2636.5	2635.7	2635.3
15°	2623.0	2621.8	2623.0	2622.2	2621.4	2620.6
15.5°	2607.9	2606.7	2607.9	2607.1	2606.3	2605.8
16°	2592.8	2591.5	2592.8	2591.9	2591.1	2590.3
16.5°	2577.2	2576.0	2577.2	2576.4	2575.6	2575.2
17°	2561.3	2560.1	2561.3	2560.5	2559.6	2559.2
17.5°	2544.9	2543.7	2544.9	2544.1	2543.3	2543.3
18°	2528.2	2526.9	2528.2	2527.8	2527.4	2526.5
18.5°	2511.4	2510.2	2511.4	2511.0	2510.6	2509.8
19°	2494.2	2493.4	2494.2	2494.2	2493.8	2493.0
19.5°	2477.5	2476.2	2477.5	2477.1	2476.7	2476.2
20°	2459.9	2458.3	2459.9	2459.9	2459.5	2459.1
20.5°	2441.9	2440.7	2441.9	2441.9	2441.9	2441.9
21°	2423.9	2422.7	2423.9	2424.3	2423.9	2423.5



TEST NUMBER: P776384

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2369.5	2367.9	2369.5	2370.0	2370.4	2370.4
23°	2351.1	2349.5	2351.1	2351.6	2352.0	2352.0
23.5°	2332.3	2331.1	2332.3	2333.2	2333.6	2333.6
24°	2313.5	2311.9	2313.5	2314.8	2315.2	2315.2
24.5°	2294.7	2293.1	2294.7	2296.0	2296.4	2296.8
25°	2275.9	2273.9	2275.9	2277.2	2277.6	2277.6
25.5°	2256.7	2255.1	2256.7	2258.3	2258.8	2258.8
26°	2238.3	2236.3	2238.3	2239.5	2239.9	2239.9
26.5°	2218.7	2217.1	2218.7	2220.3	2220.7	2220.7
27°	2199.9	2197.8	2199.9	2201.5	2201.9	2201.5
27.5°	2181.1	2179.0	2181.1	2182.3	2182.7	2182.7
28°	2162.3	2160.6	2162.3	2163.5	2163.9	2163.1
28.5°	2143.9	2142.2	2143.9	2145.1	2145.5	2144.7
29°	2125.9	2123.8	2125.9	2126.7	2127.1	2126.3
29.5°	2107.5	2105.9	2107.5	2108.7	2108.7	2108.3
30°	2089.1	2087.5	2089.1	2090.7	2090.7	2090.7
30.5°	2071.1	2069.1	2071.1	2072.3	2073.1	2072.7
31°	2052.3	2049.8	2052.3	2054.3	2055.2	2055.2
31.5°	2032.7	2029.4	2032.7	2034.7	2036.4	2036.4
32°	2009.4	2004.9	2009.4	2013.1	2015.9	2017.1
32.5°	1982.8	1977.5	1982.8	1988.9	1993.4	1996.3
33°	1954.6	1948.9	1954.6	1961.5	1969.3	1972.6
33.5°	1924.3	1918.6	1924.3	1931.7	1942.3	1945.2
34°	1892.0	1887.1	1892.0	1900.2	1912.9	1914.1
34.5°	1857.7	1853.2	1857.7	1866.7	1878.1	1880.2
35°	1821.3	1817.2	1821.3	1831.1	1840.9	1844.2
35.5°	1783.7	1778.4	1783.7	1793.9	1801.7	1806.2
36°	1744.9	1738.3	1744.9	1755.1	1760.0	1765.7
36.5°	1704.0	1695.8	1704.0	1713.8	1717.1	1723.2
37°	1661.5	1653.3	1661.5	1670.5	1672.9	1678.6
37.5°	1618.1	1610.0	1618.1	1625.5	1627.9	1632.0
38°	1574.0	1567.0	1574.0	1578.9	1581.3	1583.8
38.5°	1528.6	1522.5	1528.6	1530.2	1534.3	1534.3
39°	1481.6	1479.1	1481.6	1482.0	1486.1	1485.3
39.5°	1433.3	1432.9	1433.3	1432.1	1436.2	1435.0
40°	1385.1	1385.9	1385.1	1383.1	1386.7	1384.3
40.5°	1337.3	1338.1	1337.3	1334.0	1336.4	1332.8
41°	1288.6	1291.5	1288.6	1285.8	1286.6	1282.5
41.5°	1241.6	1242.8	1241.6	1237.9	1235.5	1232.6
42°	1193.4	1196.6	1193.4	1190.1	1185.2	1182.7
42.5°	1146.8	1149.6	1146.8	1142.7	1135.7	1133.3
43°	1099.7	1102.6	1099.7	1096.1	1087.1	1083.8
43.5°	1052.7	1055.2	1052.7	1049.0	1038.0	1035.1



TEST NUMBER: P776384

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	918.2	921.1	918.2	911.3	899.0	894.1
45.5°	875.3	878.2	875.3	867.5	854.9	848.7
46°	833.6	837.3	833.6	824.6	812.3	805.4
46.5°	793.1	797.2	793.1	782.9	771.0	763.3
47°	753.5	758.0	753.5	742.4	731.0	722.4
47.5°	715.4	719.5	715.4	704.0	691.7	683.6
48°	679.1	683.6	679.1	667.2	654.9	646.8
48.5°	643.9	648.8	643.9	631.6	619.4	612.4
49°	610.8	615.3	610.8	597.7	585.8	579.3
49.5°	578.5	583.8	578.5	566.2	554.0	548.2
50°	548.6	553.5	548.6	536.4	523.7	519.6
50.5°	520.0	524.9	520.0	508.6	495.9	493.0
51°	492.6	498.4	492.6	482.4	471.0	468.5
51.5°	467.7	473.0	467.7	458.3	447.7	445.6
52°	444.4	448.9	444.4	436.6	426.8	424.8
52.5°	422.3	426.4	422.3	415.8	407.2	405.6
53°	402.3	405.6	402.3	397.0	390.8	388.0
53.5°	384.3	386.7	384.3	379.8	375.7	374.1
54°	367.5	369.6	367.5	364.3	361.4	361.0
54.5°	352.8	355.3	352.8	350.4	349.1	349.1
55°	341.0	342.6	341.0	339.3	337.7	337.3
55.5°	330.7	333.6	330.7	329.5	327.9	326.2
56°	321.3	324.6	321.3	320.5	319.3	318.5
56.5°	312.8	315.6	312.8	311.9	311.9	311.9
57°	304.6	306.6	304.6	305.0	305.8	305.8
57.5°	298.0	297.6	298.0	298.9	299.7	300.1
58°	291.9	291.1	291.9	292.7	293.5	293.9
58.5°	285.4	285.0	285.4	286.2	287.0	287.4
59°	279.2	278.4	279.2	280.0	280.5	280.9
59.5°	272.7	272.3	272.7	273.1	273.9	273.9
60°	266.1	265.7	266.1	266.6	267.0	267.0
60.5°	259.2	258.8	259.2	259.6	260.0	260.0
61°	252.7	252.2	252.7	253.1	253.5	253.5
61.5°	246.1	245.7	246.1	246.5	246.9	246.9
62°	239.6	239.2	239.6	240.0	240.4	240.4
62.5°	233.0	232.6	233.0	233.4	233.8	233.8
63°	226.5	226.5	226.5	227.3	227.3	227.7
63.5°	220.4	220.4	220.4	220.8	221.2	221.2
64°	214.2	213.8	214.2	214.6	215.0	215.0
64.5°	208.1	208.1	208.1	208.5	208.9	208.9
65°	202.4	202.0	202.4	202.8	203.2	202.8
65.5°	196.6	196.2	196.6	197.1	197.1	196.6
66°	190.5	190.5	190.5	190.9	191.3	190.9



TEST NUMBER: P776384

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	173.8	173.8	173.8	174.2	174.2	173.3
68°	168.4	168.4	168.4	168.8	168.4	167.6
68.5°	163.1	163.1	163.1	163.5	163.1	162.3
69°	158.2	157.8	158.2	158.2	157.8	156.6
69.5°	152.9	152.9	152.9	153.3	152.5	150.9
70°	148.0	147.6	148.0	148.0	146.8	145.5
70.5°	142.7	142.7	142.7	143.1	141.9	140.2
71°	138.2	137.8	138.2	138.2	137.0	135.3
71.5°	133.3	132.9	133.3	133.3	131.6	130.0
72°	128.4	128.0	128.4	128.4	126.7	125.1
72.5°	123.5	123.5	123.5	123.9	121.8	120.2
73°	119.0	118.6	119.0	119.0	116.9	114.9
73.5°	114.5	114.1	114.5	114.5	112.0	110.0
74°	110.0	109.6	110.0	109.6	107.1	105.5
74.5°	105.5	105.1	105.5	105.1	102.6	100.6
75°	101.0	101.0	101.0	100.6	97.7	96.1
75.5°	96.5	96.5	96.5	96.5	93.2	91.6
76°	92.4	92.4	92.4	92.0	88.7	87.1
76.5°	88.3	87.9	88.3	87.5	84.2	82.6
77°	84.2	83.8	84.2	83.4	80.1	78.1
77.5°	80.1	79.7	80.1	79.3	75.6	73.6
78°	76.0	75.6	76.0	74.8	71.5	69.5
78.5°	72.0	72.0	72.0	70.7	67.0	65.4
79°	67.9	67.9	67.9	66.6	63.0	61.3
79.5°	64.2	64.2	64.2	63.0	58.9	57.2
80°	60.1	60.1	60.1	58.9	54.8	53.1
80.5°	56.4	56.4	56.4	55.2	51.1	49.5
81°	52.7	52.7	52.7	51.1	47.0	45.4
81.5°	49.1	49.1	49.1	47.4	42.9	41.7
82°	45.4	45.4	45.4	43.7	39.2	38.0
82.5°	42.1	42.1	42.1	40.1	35.6	33.9
83°	38.4	38.4	38.4	36.4	31.9	30.3
83.5°	35.2	34.8	35.2	33.1	28.2	26.6
84°	31.5	31.5	31.5	29.8	24.5	23.3
84.5°	28.2	28.2	28.2	26.6	20.9	19.6
85°	24.9	24.9	24.9	23.3	17.6	16.4
85.5°	21.7	21.7	21.7	20.0	14.7	13.1
86°	18.4	18.4	18.4	17.2	11.9	10.6
86.5°	15.1	15.5	15.1	13.9	9.8	8.6
87°	12.3	12.3	12.3	11.4	7.8	6.5
87.5°	9.4	9.4	9.4	8.6	5.7	4.9
88°	6.5	7.0	6.5	6.1	4.1	3.3
88.5°	4.9	5.3	4.9	4.1	2.5	1.6



TEST NUMBER: P776384

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRMW-4000lm-5000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.8	1.2	0.8	0.4	0.4	0.0



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Peachtree City, GA 30269

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

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Scaled Data Report





21.5°	2405.9	2406.3	2405.9	2405.9	2404.7	2405.9	2405.9	2406.3	2405.9	2406.3	2405.9
22°	2388.4	2388.4	2388.4	2387.5	2386.3	2387.5	2388.4	2388.4	2388.4	2388.4	2388.4



44°	986.9	989.8	1002.0	1007.3	1009.8	1007.3	1002.0	989.8	986.9	989.8	1002.0
44.5°	939.5	944.0	955.8	962.4	964.8	962.4	955.8	944.0	939.5	944.0	955.8



66.5°	184.8	185.6	185.6	185.2	184.8	185.2	185.6	185.6	184.8	185.6	185.6
67°	179.1	179.9	179.9	179.5	179.1	179.5	179.9	179.9	179.1	179.9	179.9



89°	0.8	1.2	2.5	3.3	3.7	3.3	2.5	1.2	0.8	1.2	2.5
89.5°	0.4	0.4	1.2	2.0	2.5	2.0	1.2	0.4	0.4	0.4	1.2

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21.5°	2405.9	2404.7	2405.9	2405.9	2406.3	2405.9
22°	2387.5	2386.3	2387.5	2388.4	2388.4	2388.4



44°	1007.3	1009.8	1007.3	1002.0	989.8	986.9
44.5°	962.4	964.8	962.4	955.8	944.0	939.5



66.5°	185.2	184.8	185.2	185.6	185.6	184.8
67°	179.5	179.1	179.5	179.9	179.9	179.1

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89°	3.3	3.7	3.3	2.5	1.2	0.8
89.5°	2.0	2.5	2.0	1.2	0.4	0.4

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Peachtree City, GA 30269

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(END OF REPORT)