

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P776268

Luminaire Tested: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776268  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B050)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBL3040CSD-HCD42TRH-4000lm-4000K  
Description: 4 INCH ROUND NARROW HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

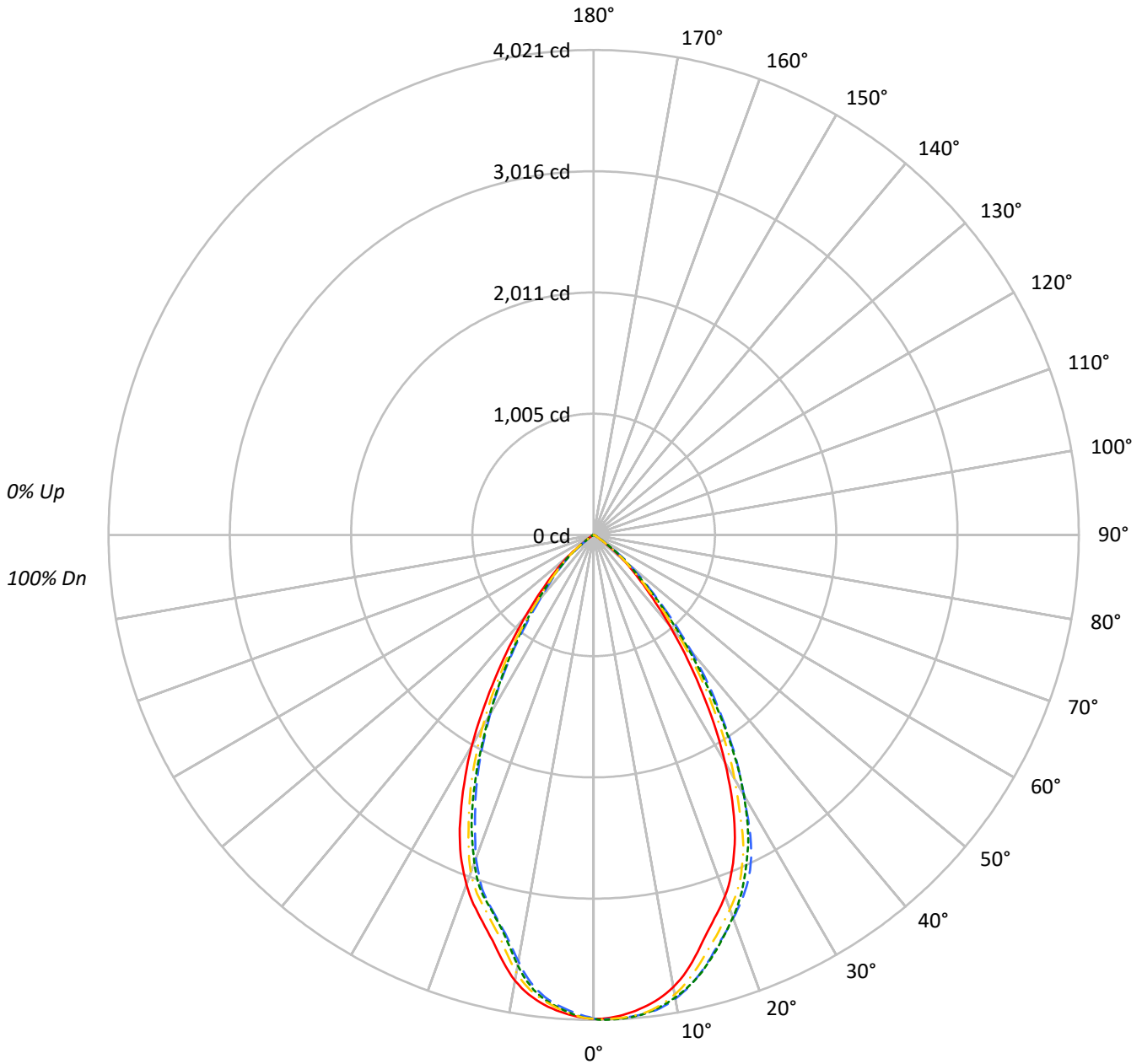
Lumens per Lamp: N/A  
Luminaire Lumens: 4047.2 lumens  
Efficiency: N/A  
Efficacy: 105.1 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 0.93 / 0.92  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.5  
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	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	100	100	99	97	97	96	95	93						93													
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86						86													
3	101	95	89	85	99	93	88	84	90	86	83	88	85	82	86	83	80	79						79													
4	96	88	82	77	94	87	81	77	84	80	76	82	78	75	80	77	74	73						73													
5	90	82	75	71	89	81	75	70	79	74	70	77	73	69	76	72	69	67						67													
6	86	76	70	65	84	75	69	65	74	68	64	72	68	64	71	67	64	62						62													
7	81	71	65	60	80	70	64	60	69	64	60	68	63	59	67	62	59	58						58													
8	77	67	60	56	75	66	60	56	65	59	56	64	59	55	63	58	55	54						54													
9	73	63	56	52	72	62	56	52	61	56	52	60	55	52	59	55	51	50						50													
10	69	59	53	49	68	58	53	49	58	52	48	57	52	48	56	51	48	47						47													

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

	0°	90°	180°	270°
0°	504771	504771	504771	504771
5°	500395	505941	497995	493725
10°	486412	497632	479511	463192
15°	454762	478279	443166	421955
20°	426677	452082	413070	387289
25°	384600	416482	363730	326418
30°	316490	361684	293370	251155
35°	235322	280751	213045	181104
40°	160770	195779	143618	123165
45°	103245	122325	91570	78364
50°	62163	70836	53313	43152
55°	23697	28019	16785	13077
60°	8004	9439	6695	5386
65°	3841	4080	3127	2531
70°	1766	2061	1472	1325
75°	972	1167	778	778
80°	580	580	290	290
85°	0	578	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 136082 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	371.6	9.2
10°-20°	968.6	23.9
20°-30°	1215.3	30.0
30°-40°	928.0	22.9
40°-50°	442.2	10.9
50°-60°	105.8	2.6
60°-70°	13.1	0.3
70°-80°	2.3	0.1
80°-90°	0.2	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°	2555.5	63.1
0°-40°	3483.5	86.1
0°-60°	4031.5	99.6
0°-90°	4047.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4047.2	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	4011	4011	4011	4011	4011	
5°	3961	4005	3942	3908	3961	373
15°	3490	3671	3401	3239	3490	981
25°	2770	2999	2619	2351	2770	1252
35°	1532	1827	1387	1179	1532	957
45°	580	687	514	440	580	459
55°	108	128	76	60	108	116
65°	13	14	10	8	13	14
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°	4010.9	4010.9	4010.9	4010.9	4010.9	4010.9	4010.9	4010.9	4010.9	4010.9	4010.9
0.5°	4012.1	4011.3	4010.9	4010.1	4018.6	4017.8	4016.2	4013.3	4008.9	4002.1	3998.8
1°	4011.7	4013.7	4015.0	4014.2	4020.6	4020.2	4017.0	4012.5	4005.3	3995.6	3991.6
1.5°	4009.3	4013.7	4016.2	4017.0	4021.4	4020.6	4016.6	4010.9	4001.7	3987.2	3981.1
2°	4005.3	4013.3	4017.0	4018.6	4021.0	4020.6	4015.8	4008.5	3995.2	3978.3	3970.2
2.5°	4000.5	4010.9	4016.2	4018.6	4019.8	4019.4	4014.2	4005.3	3988.8	3968.2	3959.4
3°	3994.0	4007.3	4014.2	4018.2	4018.6	4018.2	4011.7	4001.3	3981.1	3957.8	3947.3
3.5°	3986.8	4004.5	4011.7	4016.6	4016.2	4016.2	4009.3	3996.8	3973.1	3946.1	3934.4
4°	3978.7	3999.6	4008.5	4015.0	4013.3	4014.2	4006.9	3991.6	3963.4	3934.4	3920.7
4.5°	3969.8	3994.0	4005.7	4011.7	4010.1	4010.9	4003.3	3985.5	3953.7	3921.1	3906.6
5°	3961.0	3988.0	4002.5	4008.9	4004.9	4006.9	3998.8	3977.9	3942.0	3907.0	3890.1
5.5°	3950.5	3981.9	3998.0	4005.7	4000.1	4002.1	3993.2	3969.0	3930.4	3892.1	3872.3
6°	3938.8	3974.7	3993.6	4001.7	3992.4	3995.6	3986.0	3959.8	3917.1	3875.6	3853.4
6.5°	3926.3	3966.6	3988.0	3995.6	3984.7	3987.2	3977.1	3948.5	3902.6	3857.0	3830.8
7°	3913.4	3957.8	3981.1	3989.2	3975.5	3977.9	3967.0	3936.0	3886.4	3836.5	3806.3
7.5°	3899.7	3946.9	3973.1	3981.5	3964.2	3966.2	3953.7	3921.1	3869.1	3812.7	3778.9
8°	3883.6	3934.4	3963.0	3972.3	3952.1	3953.3	3940.0	3905.4	3850.2	3787.3	3747.1
8.5°	3866.7	3920.3	3950.5	3961.0	3938.4	3939.2	3923.9	3888.5	3828.4	3758.7	3713.6
9°	3847.8	3905.0	3936.8	3948.1	3925.1	3922.7	3907.0	3869.9	3805.5	3727.3	3675.3
9.5°	3828.0	3888.5	3921.5	3934.4	3909.4	3907.0	3888.1	3850.2	3779.7	3692.3	3635.5
10°	3806.3	3869.9	3904.6	3919.1	3894.1	3888.5	3868.3	3827.6	3752.3	3654.4	3590.7
10.5°	3782.1	3849.8	3886.4	3903.4	3877.2	3869.9	3847.0	3803.9	3722.1	3613.7	3548.4
11°	3756.7	3829.2	3866.3	3886.0	3859.5	3849.8	3824.0	3777.3	3687.8	3573.0	3504.5
11.5°	3728.9	3806.7	3846.6	3867.9	3841.3	3828.4	3798.6	3749.9	3652.4	3531.5	3461.0
12°	3699.1	3782.5	3824.4	3849.8	3820.8	3806.3	3772.8	3720.9	3615.3	3490.0	3421.9
12.5°	3667.3	3755.9	3800.6	3828.8	3799.4	3781.3	3745.8	3689.4	3577.8	3452.6	3385.7
13°	3632.6	3728.1	3775.7	3807.9	3777.7	3756.7	3716.4	3656.4	3539.6	3416.7	3351.8
13.5°	3596.8	3698.7	3749.1	3784.9	3753.9	3729.3	3686.6	3623.0	3502.9	3381.7	3320.8
14°	3561.7	3668.9	3722.1	3761.6	3728.5	3701.5	3656.0	3588.3	3466.7	3348.6	3289.8
14.5°	3526.7	3637.5	3694.3	3737.0	3699.9	3672.1	3624.6	3553.3	3433.6	3318.0	3259.2
15°	3490.4	3604.0	3665.7	3709.6	3670.9	3642.7	3592.8	3520.2	3401.4	3286.6	3229.0
15.5°	3456.6	3572.2	3636.3	3683.4	3643.1	3612.9	3561.3	3488.0	3370.4	3257.2	3200.8
16°	3423.6	3540.0	3604.0	3654.0	3613.7	3583.9	3532.7	3456.6	3338.9	3227.4	3171.8
16.5°	3393.7	3508.6	3574.2	3625.8	3585.9	3554.1	3504.1	3426.0	3309.1	3198.3	3141.9
17°	3362.7	3477.1	3546.4	3596.8	3556.1	3525.9	3475.9	3394.9	3279.3	3168.9	3110.5
17.5°	3332.5	3448.1	3518.6	3568.6	3526.3	3496.9	3446.5	3365.1	3249.9	3137.1	3077.1
18°	3302.7	3419.5	3490.8	3540.4	3496.5	3467.1	3417.1	3336.1	3220.9	3103.3	3032.8
18.5°	3274.1	3390.5	3464.2	3511.8	3465.0	3438.5	3388.5	3307.1	3189.5	3060.6	2988.5
19°	3245.9	3363.1	3437.7	3483.6	3435.2	3409.0	3360.3	3278.9	3156.0	3018.3	2944.1
19.5°	3216.5	3334.5	3409.5	3453.8	3404.6	3381.3	3332.1	3249.9	3120.6	2975.6	2899.8
20°	3185.9	3307.1	3382.1	3425.2	3375.6	3351.8	3303.5	3219.7	3084.3	2932.9	2852.3
20.5°	3153.2	3279.7	3355.1	3397.0	3345.0	3321.6	3273.7	3187.9	3043.2	2890.2	2797.9
21°	3117.4	3251.9	3327.7	3367.6	3311.2	3291.4	3243.9	3153.6	3002.2	2837.0	2737.9



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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°	2998.9	3157.7	3240.2	3276.1	3205.6	3187.1	3144.0	3038.4	2878.9	2670.2	2571.5
23°	2956.2	3123.4	3208.4	3241.1	3166.5	3151.6	3108.9	2995.7	2831.7	2618.6	2515.1
23.5°	2911.1	3087.2	3176.6	3206.4	3125.4	3110.5	3064.2	2953.0	2781.4	2567.9	2461.9
24°	2865.2	3047.3	3141.9	3169.7	3084.7	3067.0	3019.1	2910.3	2729.4	2515.9	2408.7
24.5°	2818.9	3005.4	3105.3	3129.1	3042.0	3023.1	2974.4	2870.0	2676.2	2466.3	2355.2
25°	2769.7	2961.1	3066.2	3089.2	2999.3	2979.6	2929.6	2820.5	2619.4	2414.8	2300.0
25.5°	2717.7	2914.7	3022.3	3044.9	2956.2	2935.7	2884.5	2769.7	2561.0	2360.0	2243.2
26°	2662.9	2866.0	2977.2	2999.7	2913.5	2892.2	2825.3	2716.1	2501.4	2303.6	2185.1
26.5°	2605.7	2814.4	2925.2	2954.2	2870.4	2840.6	2764.5	2658.5	2442.6	2244.4	2126.3
27°	2547.7	2761.2	2871.2	2907.9	2822.5	2787.4	2699.2	2596.9	2385.0	2181.5	2065.1
27.5°	2488.5	2704.8	2811.2	2861.6	2771.7	2733.0	2635.9	2536.0	2324.1	2119.1	2005.5
28°	2426.9	2645.6	2746.7	2809.2	2718.9	2676.6	2573.1	2471.6	2265.3	2056.2	1945.8
28.5°	2365.2	2581.6	2682.7	2756.8	2661.3	2617.4	2512.7	2403.9	2205.3	1994.2	1887.8
29°	2301.6	2515.5	2616.2	2702.4	2607.3	2554.2	2453.5	2337.4	2145.3	1931.7	1828.2
29.5°	2241.1	2448.2	2551.8	2645.6	2546.9	2492.1	2394.6	2273.0	2082.8	1872.5	1770.2
30°	2177.9	2381.3	2489.3	2585.2	2488.9	2426.5	2335.4	2206.1	2018.8	1814.5	1713.8
30.5°	2113.0	2314.5	2429.7	2522.3	2428.5	2360.0	2276.2	2141.2	1955.5	1755.7	1657.0
31°	2049.0	2250.0	2371.3	2459.5	2369.7	2297.1	2215.8	2075.2	1891.5	1698.5	1598.6
31.5°	1983.7	2185.1	2312.4	2391.4	2305.2	2233.1	2152.5	2011.5	1826.2	1639.7	1540.2
32°	1918.4	2121.9	2252.8	2327.0	2242.3	2172.3	2088.9	1947.0	1759.7	1579.2	1481.3
32.5°	1853.6	2057.8	2191.2	2260.5	2173.5	2109.4	2024.0	1883.4	1692.8	1518.4	1423.3
33°	1788.3	1994.6	2129.1	2195.6	2105.8	2046.6	1957.9	1820.5	1629.6	1457.6	1365.3
33.5°	1725.1	1930.1	2062.7	2131.6	2035.3	1984.9	1892.7	1758.1	1565.1	1396.3	1306.9
34°	1659.0	1865.3	1997.4	2067.9	1966.8	1922.1	1828.6	1695.7	1503.5	1334.3	1250.9
34.5°	1595.3	1799.6	1931.3	2003.9	1897.1	1857.6	1765.4	1634.0	1443.9	1276.3	1196.1
35°	1531.7	1735.5	1864.5	1940.2	1827.4	1792.8	1704.1	1575.2	1386.7	1218.3	1143.3
35.5°	1468.8	1672.3	1800.4	1876.1	1759.7	1727.5	1644.1	1516.4	1327.8	1163.1	1089.8
36°	1411.6	1610.7	1739.2	1811.7	1692.8	1663.4	1584.1	1458.0	1272.2	1107.9	1037.4
36.5°	1354.0	1551.0	1679.1	1745.2	1623.5	1599.0	1522.8	1401.6	1216.7	1055.9	987.0
37°	1296.4	1491.8	1617.5	1683.6	1557.9	1534.5	1462.4	1345.2	1163.5	1006.0	936.3
37.5°	1239.2	1426.9	1558.3	1617.5	1493.4	1472.5	1399.6	1290.8	1110.7	956.8	889.1
38°	1181.6	1373.8	1497.9	1554.3	1432.6	1412.0	1338.7	1234.4	1062.0	908.9	842.0
38.5°	1127.2	1320.2	1435.0	1488.6	1367.3	1350.8	1279.5	1179.2	1010.4	861.7	797.7
39°	1076.1	1267.0	1375.8	1429.8	1308.9	1290.8	1221.5	1124.8	963.7	817.4	756.6
39.5°	1026.5	1213.8	1316.6	1368.5	1250.5	1229.5	1165.1	1072.8	917.7	775.5	719.5
40°	978.6	1159.0	1256.9	1307.7	1191.7	1169.5	1109.1	1019.7	874.2	736.4	683.7
40.5°	930.2	1106.3	1197.7	1246.9	1132.9	1111.1	1056.3	968.5	829.9	699.4	649.4
41°	884.7	1051.9	1140.1	1186.0	1078.5	1054.3	1006.0	920.1	788.8	665.5	618.8
41.5°	841.2	1000.7	1086.9	1128.8	1022.9	997.5	955.6	874.2	749.7	632.5	591.0
42°	798.9	949.2	1034.2	1072.4	972.1	942.3	904.8	828.3	712.3	603.5	562.8
42.5°	758.6	900.4	982.6	1017.6	920.1	890.3	856.1	785.6	675.2	573.7	535.8
43°	720.7	854.1	933.0	962.8	870.6	840.0	808.1	743.7	640.2	545.9	510.0
43.5°	682.5	809.0	883.1	910.5	822.2	792.8	761.4	703.8	607.1	518.9	484.2



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CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	580.1	683.7	739.7	764.6	687.3	662.3	632.1	593.4	514.5	443.2	412.9
45.5°	548.7	645.4	694.9	721.1	646.2	623.6	595.0	559.6	486.3	419.4	390.4
46°	517.7	608.3	652.2	678.4	605.5	587.0	559.2	527.8	458.9	396.0	370.2
46.5°	488.7	574.9	615.2	639.3	568.4	551.9	526.1	497.1	432.7	373.9	350.1
47°	460.9	541.9	579.3	601.1	532.2	518.1	494.7	467.3	406.5	352.9	329.5
47.5°	434.3	510.4	544.7	565.2	499.6	486.7	465.7	439.1	383.1	332.4	309.4
48°	408.5	480.2	512.4	531.4	468.1	456.8	437.5	412.5	361.0	311.4	289.3
48.5°	383.1	451.6	482.6	498.3	437.9	428.2	410.9	387.2	339.2	290.9	266.7
49°	359.8	423.8	453.6	468.9	410.5	401.3	385.5	364.6	317.1	267.1	241.7
49.5°	339.2	397.6	426.2	438.7	383.9	378.7	363.4	342.0	294.9	241.3	216.3
50°	317.5	373.1	399.6	412.1	361.8	356.1	341.2	319.9	272.3	215.9	191.0
50.5°	296.9	350.1	374.7	384.3	339.6	333.2	318.7	297.3	245.7	190.6	168.4
51°	275.2	327.5	351.3	360.6	317.1	310.6	296.5	274.8	219.2	166.8	146.6
51.5°	251.0	306.2	329.1	337.6	294.9	288.0	273.9	249.0	193.4	145.4	127.3
52°	225.2	284.0	306.6	315.4	272.3	265.1	247.8	222.4	169.2	127.3	111.6
52.5°	200.2	259.8	284.0	294.5	247.8	239.7	220.8	195.8	147.4	111.2	97.9
53°	175.2	233.3	259.4	271.1	221.2	212.7	194.2	171.2	128.5	97.9	86.2
53.5°	152.7	207.1	232.5	246.6	195.8	186.5	170.0	148.7	112.4	86.2	76.1
54°	137.8	181.3	204.7	219.2	170.4	162.8	147.0	129.7	98.7	76.5	67.7
54.5°	122.9	158.3	178.9	193.4	147.4	141.0	127.3	113.2	87.0	67.7	60.4
55°	108.0	137.0	155.9	167.2	127.7	122.1	110.8	99.1	76.5	60.4	54.0
55.5°	93.1	123.3	136.6	145.8	110.4	106.0	97.1	86.6	68.1	54.0	48.3
56°	78.6	109.2	122.1	131.3	95.9	91.9	85.0	76.5	60.4	48.3	43.5
56.5°	69.3	95.1	108.0	116.8	83.8	81.0	74.9	67.7	54.0	43.5	39.1
57°	61.2	81.4	93.9	102.3	73.7	71.3	66.1	60.0	48.3	39.5	35.9
57.5°	54.8	72.1	79.8	88.2	64.9	62.8	58.8	53.6	43.5	36.3	33.0
58°	48.7	64.1	70.5	73.7	57.6	56.0	52.4	47.9	39.1	33.0	29.8
58.5°	43.9	56.8	62.4	64.9	51.2	50.0	46.7	42.7	35.9	29.8	27.0
59°	39.5	50.8	55.6	57.6	45.5	44.3	41.9	38.7	33.0	27.0	23.8
59.5°	35.5	45.5	49.6	51.2	40.7	39.9	38.7	35.5	29.8	23.8	21.8
60°	31.8	40.7	44.3	45.5	37.5	36.7	35.5	32.6	26.6	21.8	19.7
60.5°	29.0	36.7	39.9	40.7	34.2	33.4	32.2	29.4	23.8	19.7	17.7
61°	26.2	33.0	35.9	36.7	31.0	30.2	29.0	26.2	21.4	17.7	16.5
61.5°	23.8	29.8	32.2	33.0	27.8	27.0	25.8	23.4	19.3	16.5	14.9
62°	21.4	27.0	29.0	29.8	24.2	23.8	22.6	20.9	17.7	14.9	13.7
62.5°	19.7	24.6	26.6	27.0	22.2	21.8	20.5	19.3	16.1	13.7	12.5
63°	17.7	22.2	24.2	24.6	20.1	19.7	18.5	17.3	14.9	12.5	11.3
63.5°	16.1	20.1	21.8	22.2	18.1	17.7	16.9	15.7	13.3	11.3	10.5
64°	14.9	18.5	19.7	20.1	16.5	16.1	15.3	14.5	12.5	10.5	9.7
64.5°	13.7	16.9	18.1	18.1	14.9	14.9	14.1	13.3	11.3	9.7	8.9
65°	12.9	15.3	16.5	16.5	13.7	13.7	12.9	12.1	10.5	8.9	8.1
65.5°	11.7	14.1	14.9	15.3	12.5	12.5	11.7	10.9	9.7	8.1	7.3
66°	10.5	12.9	13.7	14.1	11.7	11.3	10.9	10.1	8.5	7.3	6.8





TEST NUMBER: P776268

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	8.1	9.7	10.5	10.5	8.9	8.9	8.1	7.7	6.4	5.6	5.2
68°	7.3	8.9	9.7	9.7	8.1	8.1	7.7	7.3	6.0	5.2	4.8
68.5°	6.4	8.1	8.9	8.9	7.3	7.3	6.8	6.4	5.6	4.8	4.4
69°	6.0	7.7	8.1	8.1	6.8	6.8	6.4	6.0	5.2	4.4	4.0
69.5°	5.6	6.8	7.3	7.7	6.4	6.0	5.6	5.6	4.4	4.0	3.6
70°	4.8	6.4	6.8	6.8	5.6	5.6	5.2	4.8	4.0	3.6	3.2
70.5°	4.4	5.6	6.0	6.4	5.2	5.2	4.8	4.4	4.0	3.2	3.2
71°	4.0	5.2	5.6	5.6	4.8	4.8	4.4	4.0	3.6	3.2	2.8
71.5°	3.6	4.8	5.2	5.2	4.4	4.4	4.0	4.0	3.2	2.8	2.8
72°	3.6	4.4	4.8	4.8	4.0	4.0	3.6	3.6	2.8	2.4	2.4
72.5°	3.2	4.0	4.4	4.4	3.6	3.6	3.6	3.2	2.8	2.4	2.0
73°	2.8	3.6	4.0	4.0	3.6	3.2	3.2	2.8	2.4	2.0	2.0
73.5°	2.8	3.2	3.6	3.6	3.2	3.2	2.8	2.8	2.0	2.0	2.0
74°	2.4	3.2	3.2	3.6	2.8	2.8	2.8	2.4	2.0	1.6	1.6
74.5°	2.0	2.8	3.2	3.2	2.8	2.4	2.4	2.4	2.0	1.6	1.6
75°	2.0	2.4	2.8	2.8	2.4	2.4	2.4	2.0	1.6	1.2	1.2
75.5°	1.6	2.4	2.4	2.8	2.4	2.0	2.0	2.0	1.6	1.2	1.2
76°	1.6	2.0	2.4	2.4	2.0	2.0	2.0	1.6	1.2	1.2	1.2
76.5°	1.6	2.0	2.0	2.4	2.0	2.0	1.6	1.6	1.2	0.8	0.8
77°	1.2	1.6	2.0	2.0	1.6	1.6	1.6	1.2	1.2	0.8	0.8
77.5°	1.2	1.6	1.6	2.0	1.6	1.6	1.2	1.2	0.8	0.8	0.8
78°	1.2	1.2	1.6	1.6	1.6	1.2	1.2	1.2	0.8	0.8	0.8
78.5°	0.8	1.2	1.6	1.6	1.2	1.2	1.2	0.8	0.8	0.8	0.8
79°	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.4	0.4
79.5°	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.4	0.4
80°	0.8	0.8	1.2	1.2	0.8	0.8	0.8	0.8	0.4	0.4	0.4
80.5°	0.4	0.8	0.8	1.2	0.8	0.8	0.8	0.8	0.4	0.4	0.4
81°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
81.5°	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4
82°	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.0	0.4
82.5°	0.4	0.4	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.0	0.0
83°	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.0	0.0	0.0
83.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0
84°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
84.5°	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.4	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: P776268

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

**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: P776268

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4010.9	4010.9	4010.9	4010.9	4010.9	4010.9
0.5°	3996.4	4010.5	4010.9	4010.5	4010.1	4012.1
1°	3987.2	4004.5	4005.3	4005.7	4006.1	4011.7
1.5°	3976.7	3996.8	3997.2	3998.8	4001.3	4009.3
2°	3965.4	3987.2	3988.8	3990.4	3994.0	4005.3
2.5°	3952.9	3976.7	3977.9	3980.7	3985.1	4000.5
3°	3939.2	3964.6	3966.6	3969.8	3975.9	3994.0
3.5°	3925.5	3952.1	3954.1	3958.2	3965.8	3986.8
4°	3910.2	3938.4	3940.4	3945.7	3954.5	3978.7
4.5°	3894.9	3923.9	3925.5	3932.0	3942.4	3969.8
5°	3876.4	3908.2	3911.0	3917.9	3930.4	3961.0
5.5°	3856.6	3891.3	3894.5	3903.0	3917.1	3950.5
6°	3835.3	3873.1	3877.2	3886.8	3902.6	3938.8
6.5°	3808.7	3852.6	3856.6	3869.1	3886.8	3926.3
7°	3781.7	3829.2	3835.3	3850.2	3870.3	3913.4
7.5°	3748.3	3804.3	3810.7	3829.6	3853.0	3899.7
8°	3715.2	3774.0	3784.5	3806.3	3832.9	3883.6
8.5°	3675.7	3741.8	3754.3	3780.1	3810.7	3866.7
9°	3635.1	3706.0	3720.9	3751.5	3787.3	3847.8
9.5°	3590.3	3666.9	3683.4	3719.7	3761.6	3828.0
10°	3545.6	3624.6	3643.9	3684.2	3733.4	3806.3
10.5°	3500.9	3579.5	3601.6	3645.9	3700.7	3782.1
11°	3457.4	3533.9	3558.1	3605.6	3666.5	3756.7
11.5°	3413.9	3488.0	3511.4	3562.9	3630.2	3728.9
12°	3379.2	3444.5	3469.1	3519.8	3590.7	3699.1
12.5°	3345.0	3404.2	3426.4	3476.7	3549.6	3667.3
13°	3312.8	3366.7	3389.7	3438.5	3510.6	3632.6
13.5°	3282.1	3332.1	3355.5	3400.6	3472.3	3596.8
14°	3250.7	3299.5	3322.8	3367.2	3435.2	3561.7
14.5°	3224.1	3269.7	3293.0	3335.7	3400.6	3526.7
15°	3193.9	3238.6	3262.8	3304.3	3367.6	3490.4
15.5°	3167.3	3210.0	3233.8	3273.7	3336.1	3456.6
16°	3140.3	3183.0	3204.4	3243.5	3304.3	3423.6
16.5°	3109.7	3155.2	3177.0	3214.9	3273.3	3393.7
17°	3077.1	3129.1	3148.8	3185.5	3245.5	3362.7
17.5°	3034.4	3099.6	3120.6	3156.5	3215.7	3332.5
18°	2992.1	3065.4	3087.6	3127.4	3186.7	3302.7
18.5°	2949.8	3027.1	3051.7	3094.0	3156.0	3274.1
19°	2907.5	2985.6	3014.2	3059.4	3124.2	3245.9
19.5°	2864.8	2940.1	2971.9	3018.7	3089.2	3216.5
20°	2813.2	2891.8	2926.0	2976.4	3052.1	3185.9
20.5°	2757.6	2841.8	2878.9	2930.0	3011.4	3153.2
21°	2702.8	2792.3	2827.3	2879.7	2967.5	3117.4

TEST NUMBER: P776268

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2534.0	2642.4	2662.9	2713.3	2818.0	2998.9
23°	2474.8	2589.2	2604.5	2655.7	2765.3	2956.2
23.5°	2420.0	2534.0	2546.5	2600.5	2710.5	2911.1
24°	2358.0	2474.4	2489.7	2544.5	2656.9	2865.2
24.5°	2301.6	2415.6	2429.7	2488.1	2601.7	2818.9
25°	2241.9	2350.7	2371.7	2434.1	2549.7	2769.7
25.5°	2183.5	2289.9	2313.7	2377.7	2496.2	2717.7
26°	2124.3	2228.2	2254.0	2322.1	2443.4	2662.9
26.5°	2066.7	2166.6	2196.8	2263.7	2389.0	2605.7
27°	2006.7	2101.3	2135.6	2204.9	2331.8	2547.7
27.5°	1948.7	2038.9	2075.6	2145.3	2274.2	2488.5
28°	1888.6	1975.7	2015.1	2080.4	2214.6	2426.9
28.5°	1829.0	1911.6	1955.9	2022.4	2153.3	2365.2
29°	1766.2	1850.0	1894.7	1960.7	2091.7	2301.6
29.5°	1703.7	1787.9	1835.5	1901.1	2026.4	2241.1
30°	1644.1	1728.3	1775.4	1843.1	1964.4	2177.9
30.5°	1582.1	1669.5	1713.4	1783.5	1899.9	2113.0
31°	1524.4	1612.7	1652.6	1725.1	1836.3	2049.0
31.5°	1466.8	1555.9	1591.3	1666.7	1773.0	1983.7
32°	1411.2	1500.7	1532.5	1608.2	1712.2	1918.4
32.5°	1357.3	1443.1	1474.1	1549.8	1652.2	1853.6
33°	1302.1	1389.9	1419.7	1489.8	1591.3	1788.3
33.5°	1250.1	1336.7	1364.9	1425.7	1530.9	1725.1
34°	1196.9	1283.5	1310.1	1370.5	1470.5	1659.0
34.5°	1146.6	1230.4	1255.3	1315.4	1410.8	1595.3
35°	1097.0	1178.8	1200.9	1260.2	1351.2	1531.7
35.5°	1047.9	1131.2	1149.0	1205.0	1291.6	1468.8
36°	1000.7	1083.7	1099.0	1150.6	1232.0	1411.6
36.5°	956.0	1039.8	1049.5	1097.0	1172.7	1354.0
37°	912.1	993.5	1002.3	1043.4	1116.3	1296.4
37.5°	870.6	949.6	955.6	990.6	1062.8	1239.2
38°	829.5	906.4	911.3	939.5	1010.4	1181.6
38.5°	789.6	864.5	868.2	889.5	962.0	1127.2
39°	752.6	826.3	826.3	840.4	914.9	1076.1
39.5°	714.3	786.0	787.2	795.3	868.6	1026.5
40°	679.6	749.7	747.7	751.7	823.5	978.6
40.5°	645.0	712.7	710.7	712.3	779.9	930.2
41°	612.4	678.4	674.4	674.8	739.7	884.7
41.5°	582.1	643.8	639.8	641.4	701.0	841.2
42°	552.3	612.0	607.5	609.5	665.5	798.9
42.5°	524.5	580.5	576.5	580.1	630.5	758.6
43°	495.9	550.3	546.7	551.9	598.3	720.7
43.5°	470.1	521.3	518.5	525.7	567.6	682.5



TEST NUMBER: P776268

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	396.4	440.3	439.9	450.4	485.5	580.1
45.5°	374.7	415.0	415.4	427.4	460.1	548.7
46°	354.5	390.8	392.0	404.1	435.5	517.7
46.5°	334.4	368.2	369.8	381.9	411.7	488.7
47°	314.2	347.3	349.3	361.0	388.8	460.9
47.5°	293.7	327.5	329.1	340.8	366.2	434.3
48°	274.4	307.4	309.8	321.5	345.3	408.5
48.5°	250.6	288.5	291.3	302.6	325.5	383.1
49°	225.6	267.5	271.1	283.6	305.8	359.8
49.5°	200.2	244.9	249.4	263.5	286.0	339.2
50°	176.1	220.4	225.6	240.9	265.5	317.5
50.5°	153.9	195.0	201.4	216.7	241.7	296.9
51°	132.9	170.4	176.9	193.0	217.1	275.2
51.5°	116.0	148.7	154.3	169.2	193.0	251.0
52°	101.1	133.8	139.4	147.4	168.8	225.2
52.5°	89.0	119.2	124.1	132.9	147.0	200.2
53°	78.2	105.1	108.8	118.4	132.9	175.2
53.5°	69.3	90.6	93.9	104.3	118.4	152.7
54°	61.6	76.1	78.6	89.8	103.9	137.8
54.5°	55.2	66.9	69.3	75.3	89.4	122.9
55°	49.1	59.6	61.6	66.9	75.3	108.0
55.5°	44.3	53.2	54.8	59.2	66.5	93.1
56°	39.9	47.5	49.1	52.8	59.2	78.6
56.5°	36.7	42.7	43.9	47.1	52.8	69.3
57°	33.4	38.7	39.5	42.3	47.1	61.2
57.5°	30.2	34.6	35.5	37.9	42.3	54.8
58°	27.0	31.4	32.2	34.2	37.9	48.7
58.5°	24.2	28.2	29.0	31.0	34.2	43.9
59°	21.8	25.8	26.2	28.2	31.0	39.5
59.5°	19.7	23.4	23.8	25.4	27.8	35.5
60°	18.1	21.4	21.8	23.0	25.4	31.8
60.5°	16.5	19.3	19.7	20.9	23.0	29.0
61°	14.9	17.3	17.7	18.9	20.9	26.2
61.5°	13.7	16.1	16.5	17.3	18.9	23.8
62°	12.5	14.9	15.3	15.7	17.3	21.4
62.5°	11.3	13.7	14.1	14.5	15.7	19.7
63°	10.5	12.5	12.9	13.3	14.5	17.7
63.5°	9.7	11.3	11.7	12.1	13.3	16.1
64°	8.9	10.1	10.5	10.9	12.1	14.9
64.5°	8.1	9.3	9.7	10.1	10.9	13.7
65°	7.3	8.5	8.9	9.3	10.1	12.9
65.5°	6.8	8.1	8.1	8.5	9.3	11.7
66°	6.0	7.3	7.3	7.7	8.5	10.5



TEST NUMBER: P776268

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.8	5.6	5.6	6.0	6.4	8.1
68°	4.4	5.2	5.2	5.6	6.0	7.3
68.5°	4.0	4.8	4.8	5.2	5.6	6.4
69°	3.6	4.4	4.4	4.4	4.8	6.0
69.5°	3.2	4.0	4.0	4.4	4.4	5.6
70°	3.2	3.6	3.6	4.0	4.0	4.8
70.5°	2.8	3.2	3.2	3.6	3.6	4.4
71°	2.8	3.2	3.2	3.2	3.6	4.0
71.5°	2.4	2.8	2.8	2.8	3.2	3.6
72°	2.0	2.4	2.4	2.8	2.8	3.6
72.5°	2.0	2.4	2.4	2.4	2.8	3.2
73°	2.0	2.0	2.0	2.4	2.4	2.8
73.5°	1.6	2.0	2.0	2.0	2.0	2.8
74°	1.6	1.6	1.6	2.0	2.0	2.4
74.5°	1.2	1.6	1.6	1.6	1.6	2.0
75°	1.2	1.6	1.6	1.6	1.6	2.0
75.5°	1.2	1.2	1.2	1.6	1.6	1.6
76°	1.2	1.2	1.2	1.2	1.2	1.6
76.5°	0.8	1.2	1.2	1.2	1.2	1.6
77°	0.8	0.8	1.2	1.2	1.2	1.2
77.5°	0.8	0.8	0.8	0.8	0.8	1.2
78°	0.8	0.8	0.8	0.8	0.8	1.2
78.5°	0.8	0.8	0.8	0.8	0.8	0.8
79°	0.4	0.8	0.8	0.8	0.8	0.8
79.5°	0.4	0.4	0.4	0.4	0.4	0.8
80°	0.4	0.4	0.4	0.4	0.4	0.8
80.5°	0.4	0.4	0.4	0.4	0.4	0.4
81°	0.4	0.4	0.4	0.4	0.4	0.4
81.5°	0.4	0.4	0.4	0.4	0.4	0.4
82°	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.0	0.4	0.4	0.4	0.4	0.4
83°	0.0	0.4	0.4	0.4	0.0	0.4
83.5°	0.0	0.0	0.0	0.0	0.0	0.4
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: P776268

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-4000lm-4000K

**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°	3079.5	3222.1	3299.9	3338.1	3278.1	3257.6	3212.0	3117.0	2961.1	2781.0	2681.1
22°	3040.4	3190.7	3270.1	3307.9	3241.9	3224.1	3179.0	3081.1	2920.0	2724.2	2626.3



44°	646.6	764.6	833.1	860.5	776.7	747.3	715.5	664.7	575.3	493.5	460.1
44.5°	612.8	723.1	786.0	811.8	731.6	703.4	673.2	628.9	544.3	467.7	436.3



66.5°	9.3	11.7	12.9	12.9	10.5	10.5	9.7	9.3	8.1	6.8	6.0
67°	8.5	10.5	11.7	11.7	9.7	9.3	8.9	8.5	7.3	6.0	5.6



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°	2647.2	2742.7	2774.1	2825.3	2920.4	3079.5
22°	2592.4	2692.4	2718.9	2768.5	2870.0	3040.4



44°	445.2	493.1	491.1	499.2	538.6	646.6
44.5°	420.6	466.1	464.9	475.0	512.0	612.8



66.5°	5.6	6.4	6.8	7.3	7.7	9.3
67°	5.2	6.0	6.0	6.4	7.3	8.5

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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)