

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: P776413

Luminaire Tested: HCDJBL3040CSD-HCD6TSQC-4000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776413
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD6TSQC-4000lm-4000K
Description: 6 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

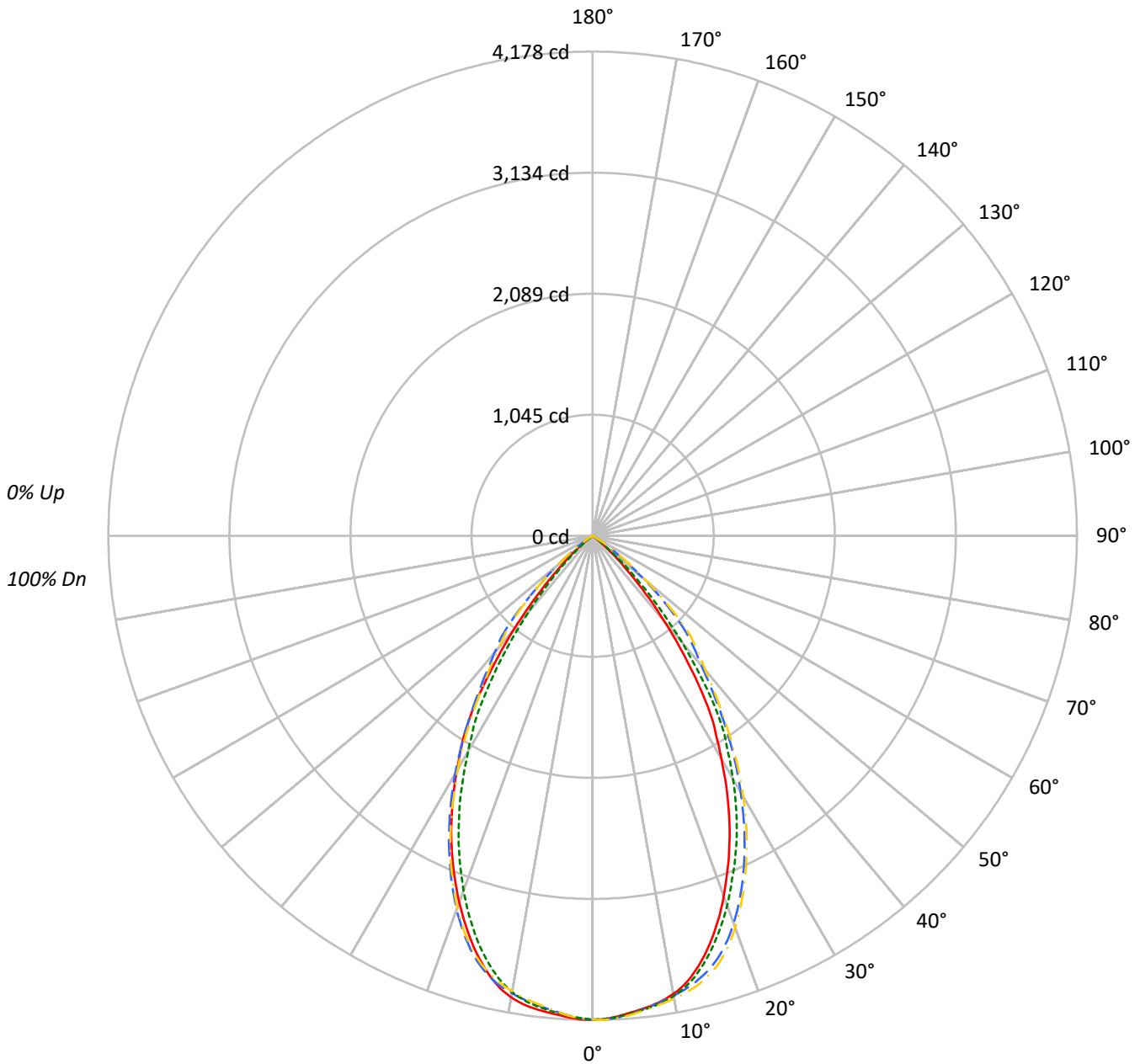
Lumens per Lamp: N/A
Luminaire Lumens: 4554.6 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 0.99
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')

CIE Type: Direct
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): 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					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	113	110	108	105	111	108	106	104	104	102	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	85					85			
3	101	94	89	85	99	93	88	84	90	86	83	88	84	81	86	83	80	79					79			
4	96	87	82	77	94	86	81	77	84	79	76	82	78	75	80	77	74	72					72			
5	90	81	75	70	89	80	74	70	78	73	69	77	72	69	75	71	68	67					67			
6	85	76	69	65	84	75	69	64	73	68	64	72	67	64	71	66	63	62					62			
7	81	71	64	60	79	70	64	60	69	63	59	67	63	59	66	62	59	57					57			
8	76	66	60	55	75	65	59	55	64	59	55	63	58	55	62	58	54	53					53			
9	72	62	56	51	71	61	55	51	60	55	51	60	55	51	59	54	51	49					49			
10	69	58	52	48	68	58	52	48	57	51	48	56	51	48	55	51	47	46					46			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	179800	179800	179800	179800
5°	178119	178499	178763	177872
10°	175474	176248	176777	174823
15°	166798	168665	168345	164948
20°	151537	155450	154158	149140
25°	132890	139337	137137	129807
30°	110306	120324	116476	106761
35°	85995	99209	92476	80639
40°	54210	67120	59645	48932
45°	26225	35840	29903	22420
50°	7964	12546	9418	6397
55°	1058	968	938	818
60°	732	766	766	629
65°	611	611	652	530
70°	504	554	554	403
75°	466	466	466	399
80°	397	397	397	298
85°	198	395	198	198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 69500 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.5	8.6
10°-20°	1058.2	23.2
20°-30°	1337.7	29.4
30°-40°	1130.3	24.8
40°-50°	545.6	12.0
50°-60°	81.8	1.8
60°-70°	6.9	0.2
70°-80°	3.1	0.1
80°-90°	0.7	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°	2786.4	61.2
0°-40°	3916.7	86.0
0°-60°	4544.0	99.8
0°-90°	4554.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4554.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4176	4176	4176	4176	4176	
5°	4121	4130	4136	4116	4121	390
15°	3742	3784	3777	3700	3742	1042
25°	2797	2933	2887	2732	2797	1273
35°	1636	1888	1759	1534	1636	1000
45°	431	589	491	368	431	351
55°	14	13	12	11	14	27
65°	6	6	6	5	6	6
75°	3	3	3	2	3	3
85°	0	1	0	0	0	1
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°	4176.0	4176.0	4176.0	4176.0	4176.0	4176.0	4176.0	4176.0	4176.0	4176.0	4176.0
0.5°	4176.4	4176.8	4176.4	4176.8	4172.3	4175.2	4178.0	4180.4	4177.6	4174.7	4173.5
1°	4173.9	4176.0	4176.0	4176.8	4171.9	4176.0	4178.4	4179.6	4176.8	4171.1	4169.5
1.5°	4169.9	4173.5	4174.3	4176.0	4170.3	4174.3	4178.0	4177.6	4173.9	4167.1	4164.7
2°	4165.5	4170.3	4171.9	4174.3	4166.7	4172.3	4176.0	4173.5	4169.1	4161.5	4158.6
2.5°	4159.0	4166.7	4168.3	4171.1	4162.7	4168.7	4172.3	4169.1	4164.7	4155.0	4151.8
3°	4153.0	4160.6	4163.1	4167.1	4157.8	4164.3	4167.5	4163.1	4159.0	4147.8	4143.3
3.5°	4144.5	4154.2	4156.6	4161.5	4151.8	4158.2	4161.5	4157.8	4153.0	4140.5	4135.3
4°	4136.1	4146.5	4149.4	4154.6	4144.5	4152.6	4154.6	4151.0	4146.5	4132.8	4125.6
4.5°	4128.0	4137.7	4140.9	4147.4	4137.7	4144.9	4147.8	4144.9	4142.1	4125.2	4116.3
5°	4121.2	4129.2	4131.2	4139.3	4130.0	4137.3	4139.7	4139.3	4136.1	4117.9	4107.1
5.5°	4113.5	4121.2	4122.0	4130.4	4123.2	4129.6	4131.6	4132.8	4130.0	4110.3	4098.6
6°	4105.5	4113.5	4111.1	4120.8	4115.9	4122.0	4123.6	4126.0	4123.6	4102.2	4090.9
6.5°	4097.0	4105.9	4101.4	4111.5	4108.3	4114.3	4114.7	4118.7	4118.3	4094.2	4081.7
7°	4089.3	4097.0	4091.8	4102.6	4100.2	4105.9	4106.7	4111.9	4111.1	4084.9	4072.4
7.5°	4078.9	4087.7	4081.7	4093.0	4091.8	4097.0	4098.2	4103.8	4103.0	4074.8	4062.7
8°	4069.6	4078.5	4072.4	4082.9	4082.1	4088.1	4090.1	4095.8	4094.2	4064.4	4053.1
8.5°	4057.5	4068.0	4061.9	4072.4	4072.0	4077.7	4081.7	4086.5	4084.5	4053.1	4043.4
9°	4043.8	4057.1	4051.5	4061.5	4059.9	4066.8	4073.2	4076.0	4072.8	4040.6	4032.9
9.5°	4028.9	4044.2	4041.4	4049.5	4046.6	4055.9	4064.4	4065.6	4058.7	4026.5	4021.2
10°	4013.6	4030.1	4030.1	4037.4	4031.3	4043.0	4055.5	4051.5	4043.4	4010.4	4008.8
10.5°	3997.1	4015.6	4018.8	4024.1	4016.0	4028.5	4045.8	4037.0	4027.3	3994.3	3997.5
11°	3977.3	4000.3	4007.1	4009.2	3998.7	4012.8	4035.3	4020.0	4008.0	3976.9	3983.8
11.5°	3954.8	3983.4	3995.1	3994.3	3979.8	3997.1	4024.1	4003.9	3987.0	3956.4	3968.5
12°	3931.0	3964.8	3981.0	3977.3	3958.0	3980.2	4012.0	3984.6	3962.4	3934.2	3951.5
12.5°	3904.8	3943.5	3966.5	3960.0	3933.4	3960.0	4000.3	3963.6	3935.8	3909.6	3933.8
13°	3875.8	3920.1	3950.7	3940.7	3907.2	3939.5	3985.8	3940.3	3907.6	3882.3	3912.9
13.5°	3844.4	3895.1	3933.8	3920.9	3878.6	3915.3	3970.1	3915.3	3877.4	3854.0	3891.5
14°	3812.1	3868.6	3916.1	3898.4	3848.4	3890.3	3952.4	3887.9	3844.8	3824.2	3867.3
14.5°	3778.3	3839.9	3896.4	3873.0	3817.0	3862.5	3933.8	3858.5	3811.3	3792.8	3842.4
15°	3742.0	3808.9	3875.0	3845.6	3783.9	3833.9	3914.5	3828.7	3776.7	3759.8	3813.8
15.5°	3703.8	3777.5	3852.4	3817.8	3750.1	3804.1	3892.7	3797.6	3740.4	3727.5	3783.9
16°	3664.7	3743.7	3828.3	3788.8	3714.2	3773.9	3868.6	3765.8	3703.0	3691.7	3751.3
16.5°	3624.0	3709.0	3800.9	3757.4	3678.0	3742.0	3842.0	3731.6	3664.7	3655.4	3716.3
17°	3583.3	3672.7	3772.7	3724.7	3640.5	3708.2	3813.0	3695.3	3624.4	3617.6	3679.2
17.5°	3539.4	3634.9	3742.0	3691.3	3601.8	3674.0	3781.5	3659.5	3581.7	3580.1	3642.9
18°	3496.7	3597.4	3709.0	3657.4	3560.7	3638.9	3747.7	3622.4	3540.2	3539.4	3601.8
18.5°	3452.4	3557.9	3674.4	3621.6	3520.1	3602.6	3712.6	3583.7	3497.5	3498.3	3559.9
19°	3406.0	3517.2	3636.9	3584.9	3479.0	3565.2	3674.8	3543.8	3454.0	3456.8	3517.6
19.5°	3357.3	3475.7	3599.0	3546.2	3437.1	3526.9	3636.1	3503.9	3409.3	3416.1	3476.1
20°	3307.3	3432.2	3558.7	3508.8	3392.7	3487.4	3596.2	3462.4	3364.5	3371.4	3428.6
20.5°	3257.4	3389.9	3517.2	3469.7	3347.2	3447.5	3554.3	3420.1	3318.6	3327.1	3382.7
21°	3205.4	3344.8	3474.5	3429.8	3301.3	3405.2	3510.8	3377.4	3271.5	3283.6	3335.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	3059.5	3200.6	3340.0	3303.7	3163.5	3275.5	3377.0	3246.5	3130.5	3144.2	3189.7
23°	3008.4	3151.8	3292.8	3259.4	3120.0	3229.2	3328.7	3201.4	3081.7	3098.2	3138.5
23.5°	2955.2	3103.9	3244.5	3215.1	3073.2	3183.2	3281.9	3156.2	3033.0	3048.7	3087.3
24°	2903.6	3057.5	3195.3	3169.1	3026.5	3138.1	3233.2	3109.9	2984.2	2999.1	3036.2
24.5°	2850.9	3010.0	3146.2	3123.2	2979.8	3095.0	3183.6	3060.8	2935.5	2949.2	2985.0
25°	2797.3	2960.4	3095.8	3078.1	2933.0	3047.1	3131.7	3012.0	2886.7	2899.6	2933.8
25.5°	2742.5	2908.9	3045.0	3033.4	2886.3	2999.5	3080.9	2962.9	2834.7	2852.5	2882.7
26°	2686.9	2857.3	2991.9	2986.2	2837.6	2951.6	3030.5	2913.7	2783.2	2800.5	2824.7
26.5°	2630.9	2804.1	2938.7	2937.1	2786.8	2903.6	2979.8	2865.0	2729.2	2748.1	2770.3
27°	2574.5	2752.1	2885.5	2888.7	2736.0	2859.7	2929.0	2813.0	2676.0	2695.3	2713.5
27.5°	2516.1	2697.8	2830.3	2840.4	2684.9	2810.2	2878.2	2760.6	2622.0	2642.6	2657.5
28°	2457.2	2645.0	2776.3	2790.4	2633.3	2758.6	2822.2	2708.6	2567.2	2590.6	2599.0
28.5°	2397.6	2589.0	2719.1	2740.9	2581.7	2707.8	2768.3	2655.9	2511.2	2537.4	2543.8
29°	2338.4	2535.8	2663.1	2688.5	2528.5	2656.7	2711.5	2601.5	2456.4	2482.6	2487.4
29.5°	2278.7	2479.4	2607.5	2636.1	2475.4	2607.5	2653.8	2547.5	2398.8	2429.8	2431.4
30°	2218.7	2425.8	2553.9	2586.6	2420.2	2553.9	2596.2	2493.5	2342.8	2375.4	2372.2
30.5°	2163.1	2367.8	2498.3	2533.8	2365.4	2502.4	2542.2	2439.5	2288.0	2321.1	2315.4
31°	2108.3	2311.8	2441.9	2484.2	2312.2	2449.6	2486.6	2385.1	2236.8	2265.5	2255.8
31.5°	2049.1	2254.2	2385.9	2431.4	2261.8	2400.4	2429.4	2329.5	2179.6	2211.9	2197.0
32°	1997.1	2197.8	2331.1	2379.1	2206.6	2345.6	2371.8	2275.9	2130.9	2159.9	2136.9
32.5°	1953.2	2140.2	2274.3	2324.7	2153.0	2294.1	2314.2	2221.1	2076.5	2110.3	2077.7
33°	1902.4	2087.8	2215.9	2274.3	2110.7	2240.5	2254.6	2171.2	2022.9	2056.8	2018.5
33.5°	1839.6	2035.0	2158.3	2222.3	2060.4	2193.7	2197.4	2117.6	1962.1	2008.8	1959.7
34°	1777.6	1979.8	2101.5	2171.2	2005.6	2139.3	2138.5	2065.6	1898.0	1958.0	1902.4
34.5°	1706.6	1930.7	2043.9	2120.0	1949.2	2085.4	2080.5	2020.1	1831.1	1906.9	1845.2
35°	1636.1	1888.3	1987.5	2068.8	1887.5	2041.8	2022.9	1964.9	1759.4	1851.3	1788.4
35.5°	1566.8	1840.4	1928.6	2016.5	1824.3	1999.5	1966.9	1913.7	1686.1	1792.1	1733.6
36°	1499.6	1780.8	1871.4	1975.8	1754.2	1943.5	1911.3	1856.1	1612.4	1727.6	1679.2
36.5°	1425.4	1723.6	1816.2	1924.6	1683.3	1894.4	1857.3	1794.1	1537.4	1663.1	1627.3
37°	1358.9	1655.9	1761.0	1873.8	1608.7	1836.0	1802.5	1730.0	1466.1	1595.8	1576.5
37.5°	1292.9	1590.6	1707.4	1821.9	1538.2	1776.7	1750.6	1663.1	1396.8	1527.8	1527.8
38°	1226.4	1526.1	1653.5	1763.9	1465.7	1712.3	1700.2	1594.6	1327.9	1459.7	1479.4
38.5°	1160.3	1464.1	1602.7	1703.4	1396.8	1648.6	1651.4	1523.7	1262.3	1391.6	1434.3
39°	1092.6	1400.8	1551.9	1638.6	1328.7	1580.5	1604.7	1456.0	1196.2	1326.7	1391.6
39.5°	1027.4	1337.6	1503.6	1572.1	1261.9	1512.9	1558.0	1388.8	1128.9	1263.9	1354.1
40°	964.5	1274.3	1459.7	1505.6	1194.2	1445.2	1514.1	1324.3	1061.2	1203.0	1315.8
40.5°	902.1	1211.1	1422.6	1436.3	1128.1	1379.9	1472.6	1261.9	995.1	1143.4	1276.4
41°	843.7	1148.2	1385.5	1373.1	1062.0	1314.2	1436.7	1199.8	930.3	1081.8	1251.0
41.5°	786.8	1085.4	1348.5	1309.4	996.3	1252.2	1400.4	1138.6	867.4	1021.7	1216.3
42°	730.4	1023.3	1311.4	1246.1	931.5	1190.1	1360.2	1077.7	807.4	961.3	1175.2
42.5°	674.4	961.3	1274.3	1182.9	867.8	1130.5	1329.9	1016.5	750.6	902.1	1134.9
43°	621.3	903.3	1237.7	1122.9	808.2	1068.1	1304.6	954.9	694.6	844.1	1082.2
43.5°	570.1	847.7	1199.0	1062.8	750.2	1006.0	1265.1	893.6	641.0	787.7	1028.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	430.7	684.9	1069.7	883.9	588.6	829.1	1141.4	727.2	491.1	631.3	865.4
45.5°	387.6	633.3	1022.5	827.1	538.7	772.7	1091.8	676.0	444.8	581.4	810.6
46°	346.9	583.0	972.2	771.5	490.7	718.8	1039.5	624.5	406.1	533.0	757.4
46.5°	308.2	534.2	921.8	718.8	443.6	667.6	984.7	575.3	367.4	486.7	705.5
47°	271.1	487.1	870.2	667.2	404.5	615.6	926.2	527.8	328.8	444.0	655.5
47.5°	236.1	442.4	818.3	618.0	365.0	566.5	869.0	481.9	290.1	405.7	605.5
48°	204.3	398.9	764.3	570.1	325.9	518.5	814.2	437.5	251.8	367.4	558.8
48.5°	176.1	359.4	710.7	523.0	286.9	473.0	761.1	400.1	220.4	329.2	513.3
49°	151.1	319.9	657.5	477.0	247.8	427.1	709.5	362.6	191.8	291.3	469.4
49.5°	134.6	282.8	608.8	433.5	216.4	388.0	659.1	325.1	165.2	253.0	427.1
50°	118.9	247.8	560.0	392.4	187.3	348.5	611.6	287.7	140.6	222.0	390.0
50.5°	102.7	216.4	515.3	353.3	160.4	309.4	565.7	250.2	119.3	192.2	352.9
51°	86.6	186.5	470.2	314.7	135.8	270.3	521.7	217.6	98.7	165.6	315.9
51.5°	70.9	159.9	429.1	278.8	114.0	236.9	477.0	189.4	81.0	139.8	278.4
52°	58.8	136.2	388.4	245.8	93.9	205.5	433.5	161.6	67.7	117.2	247.4
52.5°	47.5	120.1	351.3	214.7	75.3	176.1	396.0	137.4	54.4	96.3	217.6
53°	36.3	103.9	315.1	185.3	62.9	149.5	358.6	113.6	41.1	78.6	190.2
53.5°	25.4	87.8	280.0	158.7	50.4	124.9	320.7	93.9	27.4	65.3	164.8
54°	17.3	71.7	247.0	133.8	37.5	103.5	283.2	75.3	14.5	52.0	142.2
54.5°	15.3	60.0	218.0	114.0	25.0	83.8	245.8	62.9	13.3	38.7	121.3
55°	14.1	48.3	189.8	94.3	12.9	69.7	216.4	50.0	12.5	25.8	102.3
55.5°	12.5	37.5	164.8	74.5	12.1	55.6	186.9	37.5	12.1	13.3	85.8
56°	11.3	26.6	141.8	55.2	11.7	41.9	160.4	24.6	11.7	12.1	71.3
56.5°	10.9	17.7	124.9	39.9	11.3	28.2	135.8	12.1	11.3	11.7	58.8
57°	10.5	16.1	108.0	26.6	10.9	14.1	114.0	11.3	10.9	11.3	51.2
57.5°	10.1	14.5	91.5	15.7	10.5	11.7	93.9	11.3	10.5	10.9	43.5
58°	9.7	12.9	74.5	14.1	10.1	11.3	76.5	10.9	10.5	10.5	35.9
58.5°	9.3	11.7	57.6	12.5	9.7	10.9	61.6	10.5	10.1	10.1	28.6
59°	9.3	10.1	46.7	11.3	9.3	10.5	53.2	10.1	9.7	9.7	21.0
59.5°	8.9	9.7	37.9	9.7	9.3	10.1	44.7	9.7	9.3	9.7	16.9
60°	8.5	9.3	30.6	9.3	8.9	9.7	36.3	9.3	8.9	9.3	14.1
60.5°	8.1	9.3	25.0	9.3	8.5	9.3	28.2	9.3	8.9	8.9	11.7
61°	8.1	8.9	20.1	8.9	8.1	9.3	19.7	8.9	8.5	8.5	10.1
61.5°	7.7	8.5	16.5	8.5	8.1	8.9	16.1	8.5	8.1	8.5	8.9
62°	7.7	8.5	14.9	8.5	7.7	8.5	13.3	8.5	7.7	8.1	8.5
62.5°	7.3	8.1	13.3	8.1	7.3	8.5	11.3	8.1	7.7	7.7	8.1
63°	6.8	7.7	11.3	7.7	7.3	8.1	9.7	7.7	7.3	7.7	7.7
63.5°	6.8	7.7	9.7	7.7	6.8	7.7	8.9	7.7	7.3	7.3	7.3
64°	6.4	7.3	8.1	7.3	6.8	7.7	8.1	7.3	6.8	6.8	7.3
64.5°	6.4	6.8	7.7	7.3	6.4	7.3	8.1	7.3	6.4	6.8	6.8
65°	6.0	6.8	7.7	6.8	6.0	6.8	7.7	6.8	6.4	6.4	6.8
65.5°	6.0	6.4	7.3	6.4	6.0	6.8	7.3	6.4	6.0	6.4	6.4
66°	5.6	6.4	6.8	6.4	5.6	6.4	7.3	6.4	6.0	6.0	6.4



TEST NUMBER: P776413

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	5.2	5.6	6.4	5.6	5.2	6.0	6.4	5.6	5.2	5.6	5.6
68°	4.8	5.6	6.0	5.6	4.8	5.6	6.0	5.6	5.2	5.2	5.2
68.5°	4.8	5.2	6.0	5.2	4.8	5.2	6.0	5.2	4.8	4.8	5.2
69°	4.4	5.2	5.6	5.2	4.4	5.2	5.6	5.2	4.8	4.8	4.8
69.5°	4.4	4.8	5.6	5.2	4.4	4.8	5.6	4.8	4.4	4.4	4.8
70°	4.0	4.8	5.2	4.8	4.4	4.8	5.2	4.8	4.4	4.4	4.4
70.5°	4.0	4.4	5.2	4.8	4.0	4.8	5.2	4.4	4.0	4.4	4.4
71°	4.0	4.4	4.8	4.4	4.0	4.4	4.8	4.4	4.0	4.0	4.0
71.5°	3.6	4.0	4.8	4.4	3.6	4.4	4.8	4.0	3.6	4.0	4.0
72°	3.6	4.0	4.4	4.0	3.6	4.0	4.4	4.0	3.6	3.6	3.6
72.5°	3.2	3.6	4.4	4.0	3.6	4.0	4.4	4.0	3.6	3.6	3.6
73°	3.2	3.6	4.0	4.0	3.2	3.6	4.0	3.6	3.2	3.2	3.6
73.5°	3.2	3.6	4.0	3.6	3.2	3.6	4.0	3.6	3.2	3.2	3.2
74°	2.8	3.2	3.6	3.6	3.2	3.6	3.6	3.2	3.2	3.2	3.2
74.5°	2.8	3.2	3.6	3.2	2.8	3.2	3.6	3.2	2.8	2.8	2.8
75°	2.8	2.8	3.2	3.2	2.8	3.2	3.6	3.2	2.8	2.8	2.8
75.5°	2.4	2.8	3.2	3.2	2.8	3.2	3.2	2.8	2.8	2.8	2.4
76°	2.4	2.8	3.2	2.8	2.8	2.8	3.2	2.8	2.4	2.4	2.4
76.5°	2.4	2.4	2.8	2.8	2.4	2.8	2.8	2.8	2.4	2.4	2.4
77°	2.4	2.4	2.8	2.8	2.4	2.8	2.8	2.4	2.4	2.4	2.0
77.5°	2.0	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.0	2.0	2.0
78°	2.0	2.0	2.4	2.4	2.0	2.4	2.4	2.0	2.0	2.0	1.6
78.5°	2.0	2.0	2.0	2.4	2.0	2.4	2.4	2.0	2.0	2.0	1.6
79°	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.6	1.6
79.5°	1.6	2.0	2.0	2.0	2.0	2.0	2.0	1.6	1.6	1.6	1.2
80°	1.6	1.6	1.6	2.0	1.6	2.0	2.0	1.6	1.6	1.6	1.2
80.5°	1.6	1.6	1.6	1.6	1.6	2.0	1.6	1.6	1.6	1.2	1.2
81°	1.2	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2	1.2	1.2
81.5°	1.2	1.2	1.2	1.6	1.6	1.6	1.6	1.2	1.2	1.2	0.8
82°	1.2	1.2	1.2	1.6	1.2	1.6	1.2	1.2	1.2	0.8	0.8
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8
83°	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	0.8
83.5°	0.8	0.8	0.8	1.2	1.2	1.2	0.8	0.8	0.8	0.4	0.8
84°	0.8	0.8	0.8	1.2	0.8	1.2	0.8	0.8	0.8	0.4	0.4
84.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8	0.4	0.4
85°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
85.5°	0.4	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4
86°	0.4	0.4	0.4	0.8	0.8	0.8	0.4	0.4	0.4	0.0	0.4
86.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0
87°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776413
CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-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: P776413

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4176.0	4176.0	4176.0	4176.0	4176.0	4176.0
0.5°	4171.9	4169.9	4171.9	4173.9	4178.0	4176.4
1°	4167.1	4167.1	4168.3	4169.5	4174.7	4173.9
1.5°	4162.3	4162.7	4163.5	4164.7	4171.5	4169.9
2°	4156.2	4157.4	4157.0	4158.6	4167.1	4165.5
2.5°	4149.4	4151.0	4150.6	4151.0	4159.8	4159.0
3°	4141.7	4144.1	4142.9	4142.9	4153.4	4153.0
3.5°	4134.5	4136.1	4134.1	4134.1	4144.5	4144.5
4°	4126.8	4129.6	4125.6	4124.4	4135.3	4136.1
4.5°	4119.6	4122.8	4117.1	4113.1	4126.0	4128.0
5°	4111.5	4115.5	4109.1	4101.8	4116.7	4121.2
5.5°	4102.6	4108.7	4100.2	4091.4	4107.9	4113.5
6°	4093.0	4101.0	4090.9	4081.3	4099.0	4105.5
6.5°	4083.7	4092.6	4081.3	4071.6	4089.3	4097.0
7°	4072.8	4083.3	4071.2	4061.9	4079.3	4089.3
7.5°	4061.5	4073.2	4059.5	4051.5	4068.4	4078.9
8°	4049.0	4061.9	4047.0	4040.2	4057.5	4069.6
8.5°	4034.9	4048.6	4033.7	4028.9	4045.4	4057.5
9°	4018.8	4032.5	4019.2	4016.8	4032.5	4043.8
9.5°	4002.3	4016.0	4003.5	4005.1	4018.0	4028.9
10°	3983.8	3998.7	3986.2	3991.8	4003.5	4013.6
10.5°	3963.2	3977.3	3966.9	3978.1	3987.8	3997.1
11°	3941.5	3955.2	3946.7	3963.6	3970.9	3977.3
11.5°	3918.1	3929.8	3925.0	3947.5	3952.8	3954.8
12°	3892.7	3902.4	3900.4	3930.2	3932.6	3931.0
12.5°	3865.3	3873.0	3874.2	3910.9	3909.6	3904.8
13°	3836.3	3842.8	3845.6	3891.1	3885.5	3875.8
13.5°	3805.7	3809.7	3816.2	3869.8	3859.7	3844.4
14°	3773.9	3774.7	3785.2	3846.8	3831.5	3812.1
14.5°	3741.2	3738.4	3752.5	3821.8	3802.5	3778.3
15°	3706.6	3700.5	3717.9	3794.0	3770.2	3742.0
15.5°	3671.1	3661.5	3681.6	3764.6	3737.2	3703.8
16°	3633.7	3621.2	3644.5	3732.8	3702.6	3664.7
16.5°	3595.4	3578.5	3606.3	3699.3	3666.7	3624.0
17°	3556.3	3535.8	3568.0	3664.3	3630.0	3583.3
17.5°	3516.4	3491.9	3527.3	3626.0	3590.6	3539.4
18°	3474.5	3447.9	3485.0	3587.3	3551.1	3496.7
18.5°	3434.6	3401.2	3442.3	3546.6	3510.4	3452.4
19°	3390.7	3353.3	3399.6	3504.3	3468.9	3406.0
19.5°	3347.2	3304.5	3355.3	3460.4	3426.2	3357.3
20°	3300.5	3255.0	3310.5	3415.3	3382.3	3307.3
20.5°	3255.4	3203.4	3261.8	3365.7	3337.9	3257.4
21°	3207.8	3153.4	3215.1	3319.8	3290.8	3205.4

TEST NUMBER: P776413

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	3064.4	3001.5	3066.8	3168.3	3142.9	3059.5
23°	3016.4	2949.6	3018.5	3119.6	3092.2	3008.4
23.5°	2968.1	2897.2	2970.1	3066.0	3043.4	2955.2
24°	2919.7	2842.8	2917.3	3012.4	2996.3	2903.6
24.5°	2871.4	2788.0	2864.6	2956.0	2947.5	2850.9
25°	2817.8	2732.4	2811.8	2903.6	2894.0	2797.3
25.5°	2763.0	2676.8	2757.4	2847.2	2841.6	2742.5
26°	2708.6	2619.2	2703.0	2789.6	2787.6	2686.9
26.5°	2654.2	2562.8	2648.6	2728.4	2735.2	2630.9
27°	2598.2	2503.6	2594.2	2673.2	2678.8	2574.5
27.5°	2541.4	2443.9	2536.6	2614.4	2624.0	2516.1
28°	2485.0	2383.9	2479.8	2554.3	2567.2	2457.2
28.5°	2427.4	2323.5	2423.4	2496.3	2511.2	2397.6
29°	2369.0	2262.6	2365.4	2439.1	2454.0	2338.4
29.5°	2310.2	2203.8	2307.4	2383.5	2398.8	2278.7
30°	2251.8	2147.4	2248.5	2326.7	2340.4	2218.7
30.5°	2194.1	2092.6	2190.5	2269.1	2282.8	2163.1
31°	2136.1	2033.4	2132.9	2209.9	2224.4	2108.3
31.5°	2082.1	1982.2	2075.7	2149.8	2167.6	2049.1
32°	2028.1	1935.9	2022.5	2089.8	2109.5	1997.1
32.5°	1971.7	1875.1	1969.3	2030.2	2052.3	1953.2
33°	1922.6	1817.0	1911.7	1971.3	2000.4	1902.4
33.5°	1877.1	1746.1	1865.8	1910.9	1946.0	1839.6
34°	1818.6	1673.6	1819.0	1851.3	1890.8	1777.6
34.5°	1764.7	1603.5	1759.0	1792.1	1846.0	1706.6
35°	1698.2	1534.2	1702.2	1734.0	1801.3	1636.1
35.5°	1631.3	1468.5	1634.5	1677.2	1745.3	1566.8
36°	1565.2	1400.0	1568.0	1622.8	1690.9	1499.6
36.5°	1500.8	1331.1	1504.0	1568.0	1627.7	1425.4
37°	1436.7	1262.3	1438.3	1516.5	1562.0	1358.9
37.5°	1373.9	1193.8	1376.3	1466.5	1495.5	1292.9
38°	1311.0	1124.9	1313.8	1423.4	1425.0	1226.4
38.5°	1246.5	1057.6	1251.8	1380.3	1366.6	1160.3
39°	1181.3	991.9	1189.7	1337.2	1307.8	1092.6
39.5°	1116.4	930.3	1126.9	1294.1	1249.4	1027.4
40°	1052.3	870.6	1062.4	1251.0	1190.5	964.5
40.5°	991.5	813.4	1001.2	1215.1	1127.7	902.1
41°	932.3	755.4	940.3	1184.1	1065.6	843.7
41.5°	875.1	699.8	884.3	1149.8	1003.6	786.8
42°	819.1	643.8	828.7	1118.4	944.4	730.4
42.5°	764.3	594.3	776.4	1085.4	888.0	674.4
43°	710.7	544.7	723.6	1035.0	833.6	621.3
43.5°	659.1	497.6	671.6	987.5	780.0	570.1



TEST NUMBER: P776413

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	512.1	368.2	525.4	828.3	627.7	430.7
45.5°	466.1	328.8	479.8	780.0	578.6	387.6
46°	422.6	291.3	437.1	731.6	531.8	346.9
46.5°	384.0	255.0	396.4	683.7	486.3	308.2
47°	345.3	222.0	357.4	635.8	443.2	271.1
47.5°	307.0	191.4	318.7	591.8	402.1	236.1
48°	268.3	164.8	283.2	546.7	362.2	204.3
48.5°	234.9	141.4	250.2	503.6	323.5	176.1
49°	203.5	126.1	218.8	462.5	288.5	151.1
49.5°	174.9	110.8	190.2	423.0	254.2	134.6
50°	150.3	95.5	163.6	385.2	222.0	118.9
50.5°	128.5	80.2	139.8	349.7	191.8	102.7
51°	109.6	65.3	124.1	316.7	166.0	86.6
51.5°	93.1	53.6	108.4	285.2	142.6	70.9
52°	79.0	42.3	92.7	255.4	126.5	58.8
52.5°	66.5	31.4	76.5	228.0	110.4	47.5
53°	56.0	21.0	61.2	201.4	94.7	36.3
53.5°	45.5	13.7	49.6	176.9	78.6	25.4
54°	35.1	12.5	38.3	154.3	62.9	17.3
54.5°	24.6	11.7	27.8	133.8	51.2	15.3
55°	14.5	10.9	18.1	114.8	39.9	14.1
55.5°	10.9	10.1	16.1	101.1	29.0	12.5
56°	10.5	9.7	14.5	87.4	19.3	11.3
56.5°	10.1	9.3	12.5	74.1	12.5	10.9
57°	9.7	8.9	10.5	60.4	11.7	10.5
57.5°	9.3	8.5	8.5	46.7	11.3	10.1
58°	8.9	8.5	8.5	37.5	10.5	9.7
58.5°	8.9	8.1	8.1	29.8	9.7	9.3
59°	8.5	7.7	8.1	23.8	9.3	9.3
59.5°	8.1	7.7	7.7	19.3	9.3	8.9
60°	8.1	7.3	7.3	15.3	8.9	8.5
60.5°	7.7	6.8	7.3	13.7	8.5	8.1
61°	7.3	6.8	6.8	11.7	8.5	8.1
61.5°	7.3	6.4	6.8	9.7	8.1	7.7
62°	6.8	6.4	6.4	7.7	7.7	7.7
62.5°	6.8	6.0	6.4	7.3	7.7	7.3
63°	6.4	6.0	6.0	7.3	7.3	6.8
63.5°	6.0	5.6	6.0	6.8	7.3	6.8
64°	6.0	5.6	5.6	6.8	6.8	6.4
64.5°	5.6	5.2	5.6	6.4	6.4	6.4
65°	5.6	5.2	5.2	6.4	6.4	6.0
65.5°	5.2	4.8	5.2	6.0	6.0	6.0
66°	5.2	4.8	4.8	6.0	6.0	5.6



TEST NUMBER: P776413

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.8	4.0	4.4	5.2	5.2	5.2
68°	4.4	4.0	4.4	5.2	5.2	4.8
68.5°	4.4	4.0	4.0	4.8	4.8	4.8
69°	4.0	3.6	4.0	4.8	4.8	4.4
69.5°	4.0	3.6	4.0	4.4	4.8	4.4
70°	3.6	3.2	3.6	4.4	4.4	4.0
70.5°	3.6	3.2	3.6	4.4	4.4	4.0
71°	3.6	3.2	3.2	4.0	4.0	4.0
71.5°	3.2	2.8	3.2	4.0	4.0	3.6
72°	3.2	2.8	3.2	3.6	3.6	3.6
72.5°	2.8	2.8	2.8	3.6	3.6	3.2
73°	2.8	2.8	2.8	3.2	3.6	3.2
73.5°	2.8	2.4	2.8	3.2	3.2	3.2
74°	2.4	2.4	2.8	3.2	3.2	2.8
74.5°	2.4	2.4	2.4	2.8	3.2	2.8
75°	2.4	2.4	2.4	2.8	2.8	2.8
75.5°	2.4	2.0	2.4	2.4	2.8	2.4
76°	2.0	2.0	2.0	2.4	2.4	2.4
76.5°	2.0	2.0	2.0	2.4	2.4	2.4
77°	2.0	2.0	2.0	2.0	2.4	2.4
77.5°	1.6	1.6	2.0	2.0	2.0	2.0
78°	1.6	1.6	1.6	2.0	2.0	2.0
78.5°	1.6	1.6	1.6	1.6	2.0	2.0
79°	1.6	1.6	1.6	1.6	2.0	1.6
79.5°	1.2	1.2	1.6	1.6	1.6	1.6
80°	1.2	1.2	1.2	1.2	1.6	1.6
80.5°	1.2	1.2	1.2	1.2	1.6	1.6
81°	1.2	1.2	1.2	1.2	1.2	1.2
81.5°	0.8	1.2	1.2	1.2	1.2	1.2
82°	0.8	0.8	0.8	0.8	1.2	1.2
82.5°	0.8	0.8	0.8	0.8	0.8	1.2
83°	0.8	0.8	0.8	0.8	0.8	0.8
83.5°	0.8	0.8	0.8	0.8	0.8	0.8
84°	0.4	0.8	0.8	0.4	0.8	0.8
84.5°	0.4	0.4	0.4	0.4	0.4	0.8
85°	0.4	0.4	0.4	0.4	0.4	0.4
85.5°	0.4	0.4	0.4	0.4	0.4	0.4
86°	0.4	0.4	0.4	0.4	0.4	0.4
86.5°	0.0	0.4	0.4	0.4	0.4	0.4
87°	0.0	0.0	0.0	0.0	0.0	0.4
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: P776413

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-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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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





21.5°	3156.2	3297.7	3430.2	3389.1	3255.0	3362.1	3467.7	3334.7	3225.5	3239.2	3289.2
22°	3107.9	3249.7	3385.1	3346.8	3208.6	3319.0	3423.0	3291.6	3180.4	3190.5	3239.2



44°	520.9	793.3	1166.8	1003.2	693.4	945.6	1229.6	836.0	589.4	733.7	975.0
44.5°	474.6	738.1	1118.4	942.8	641.0	888.0	1188.1	781.2	539.1	681.7	920.2



66.5°	5.6	6.0	6.8	6.0	5.6	6.4	6.8	6.0	5.6	6.0	6.0
67°	5.2	6.0	6.4	6.0	5.2	6.0	6.8	6.0	5.6	5.6	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	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	0.0

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21.5°	3159.9	3104.7	3165.5	3271.1	3242.5	3156.2
22°	3112.7	3054.7	3117.2	3221.5	3191.7	3107.9



44°	608.4	451.2	620.0	935.1	729.2	520.9
44.5°	558.0	409.3	572.1	881.9	677.7	474.6



66.5°	5.2	4.4	4.8	5.6	5.6	5.6
67°	4.8	4.4	4.8	5.6	5.6	5.2

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Peachtree City, GA 30269

Scaled Data Report



89°	0.0	0.0	0.0	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)