

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: P776411

Luminaire Tested: HCDJBL3040CSD-HCD6TSQC-4000lm-3000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776411
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-3000K
Description: 6 INCH SQUARE MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

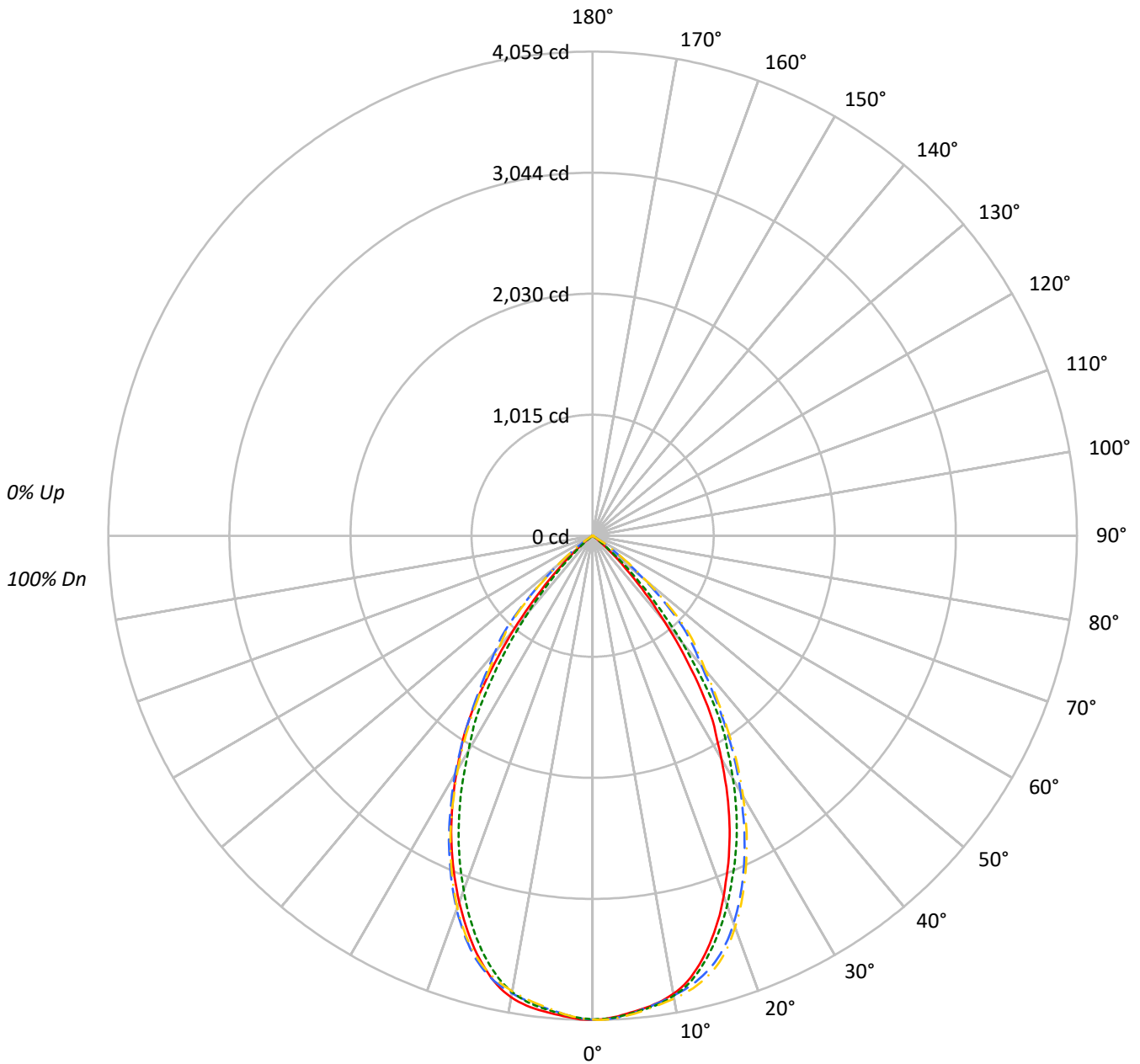
Lumens per Lamp: N/A
Luminaire Lumens: 4424.3 lumens
Efficiency: N/A
Efficacy: 114.9 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 0.99
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (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	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°	174651	174651	174651	174651
5°	173019	173391	173645	172781
10°	170451	171203	171719	169817
15°	162024	163838	163526	160227
20°	147198	151001	149745	144870
25°	129085	135351	133213	126092
30°	107149	116878	113140	103703
35°	83536	96371	89832	78332
40°	52659	65198	57936	47533
45°	25476	34817	29051	21780
50°	7737	12191	9150	6216
55°	1028	938	908	796
60°	706	741	741	603
65°	601	601	642	520
70°	491	541	541	390
75°	449	449	449	383
80°	397	397	397	298
85°	198	395	198	198

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 67509 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	379.3	8.6
10°-20°	1027.9	23.2
20°-30°	1299.4	29.4
30°-40°	1097.9	24.8
40°-50°	530.0	12.0
50°-60°	79.4	1.8
60°-70°	6.7	0.2
70°-80°	3.0	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°	2706.6	61.2
0°-40°	3804.5	86.0
0°-60°	4413.9	99.8
0°-90°	4424.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4424.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4056	4056	4056	4056	4056	
5°	4003	4012	4018	3998	4003	379
15°	3635	3676	3669	3595	3635	1012
25°	2717	2849	2804	2654	2717	1237
35°	1589	1834	1709	1490	1589	972
45°	418	572	477	358	418	341
55°	14	12	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°	4056.4	4056.4	4056.4	4056.4	4056.4	4056.4	4056.4	4056.4	4056.4	4056.4	4056.4
0.5°	4056.8	4057.2	4056.8	4057.2	4052.9	4055.6	4058.4	4060.7	4058.0	4055.2	4054.1
1°	4054.5	4056.4	4056.4	4057.2	4052.5	4056.4	4058.8	4059.9	4057.2	4051.7	4050.1
1.5°	4050.5	4054.1	4054.8	4056.4	4050.9	4054.8	4058.4	4058.0	4054.5	4047.8	4045.5
2°	4046.2	4050.9	4052.5	4054.8	4047.4	4052.9	4056.4	4054.1	4049.8	4042.3	4039.6
2.5°	4040.0	4047.4	4049.0	4051.7	4043.5	4049.4	4052.9	4049.8	4045.5	4036.1	4032.9
3°	4034.1	4041.5	4043.9	4047.8	4038.8	4045.1	4048.2	4043.9	4040.0	4029.0	4024.7
3.5°	4025.9	4035.3	4037.6	4042.3	4032.9	4039.2	4042.3	4038.8	4034.1	4022.0	4016.9
4°	4017.7	4027.8	4030.6	4035.7	4025.9	4033.7	4035.7	4032.1	4027.8	4014.5	4007.5
4.5°	4009.8	4019.2	4022.4	4028.6	4019.2	4026.3	4029.0	4026.3	4023.5	4007.1	3998.5
5°	4003.2	4011.0	4013.0	4020.8	4011.8	4018.8	4021.2	4020.8	4017.7	4000.1	3989.5
5.5°	3995.7	4003.2	4004.0	4012.2	4005.1	4011.4	4013.4	4014.5	4011.8	3992.6	3981.3
6°	3987.9	3995.7	3993.4	4002.8	3998.1	4004.0	4005.5	4007.9	4005.5	3984.8	3973.8
6.5°	3979.7	3988.3	3984.0	3993.8	3990.7	3996.5	3996.9	4000.8	4000.4	3977.0	3964.8
7°	3972.3	3979.7	3974.6	3985.2	3982.8	3988.3	3989.1	3994.2	3993.4	3968.0	3955.8
7.5°	3962.1	3970.7	3964.8	3975.8	3974.6	3979.7	3980.9	3986.4	3985.6	3958.2	3946.4
8°	3953.1	3961.7	3955.8	3966.0	3965.2	3971.1	3973.1	3978.5	3977.0	3948.0	3937.0
8.5°	3941.4	3951.5	3945.7	3955.8	3955.4	3960.9	3964.8	3969.5	3967.6	3937.0	3927.7
9°	3928.0	3941.0	3935.5	3945.3	3943.7	3950.4	3956.6	3959.4	3956.2	3924.9	3917.5
9.5°	3913.6	3928.4	3925.7	3933.5	3930.8	3939.8	3948.0	3949.2	3942.5	3911.2	3906.1
10°	3898.7	3914.7	3914.7	3921.8	3915.9	3927.3	3939.4	3935.5	3927.7	3895.6	3894.0
10.5°	3882.6	3900.6	3903.8	3908.9	3901.0	3913.2	3930.0	3921.4	3912.0	3879.9	3883.0
11°	3863.5	3885.8	3892.4	3894.4	3884.2	3897.9	3919.8	3905.0	3893.2	3863.1	3869.7
11.5°	3841.6	3869.3	3880.7	3879.9	3865.8	3882.6	3908.9	3889.3	3872.9	3843.1	3854.9
12°	3818.5	3851.3	3867.0	3863.5	3844.7	3866.2	3897.1	3870.5	3849.0	3821.6	3838.4
12.5°	3793.0	3830.6	3852.9	3846.6	3820.8	3846.6	3885.8	3850.2	3823.2	3797.7	3821.2
13°	3764.8	3807.9	3837.6	3827.9	3795.4	3826.7	3871.7	3827.5	3795.8	3771.1	3800.9
13.5°	3734.3	3783.6	3821.2	3808.7	3767.6	3803.2	3856.4	3803.2	3766.4	3743.7	3780.1
14°	3703.0	3757.8	3804.0	3786.8	3738.2	3778.9	3839.2	3776.6	3734.7	3714.8	3756.6
14.5°	3670.1	3730.0	3784.8	3762.1	3707.7	3751.9	3821.2	3748.0	3702.2	3684.2	3732.4
15°	3634.9	3699.9	3764.1	3735.5	3675.6	3724.1	3802.4	3719.1	3668.6	3652.1	3704.6
15.5°	3597.7	3669.4	3742.2	3708.5	3642.7	3695.2	3781.3	3688.9	3633.4	3620.8	3675.6
16°	3559.8	3636.5	3718.7	3680.3	3607.9	3665.8	3757.8	3658.0	3597.0	3586.0	3643.9
16.5°	3520.3	3602.8	3692.1	3649.8	3572.7	3634.9	3732.0	3624.7	3559.8	3550.8	3609.9
17°	3480.7	3567.6	3664.7	3618.1	3536.3	3602.0	3703.8	3589.5	3520.6	3514.0	3573.9
17.5°	3438.1	3530.8	3634.9	3585.6	3498.7	3568.8	3673.3	3554.7	3479.2	3477.6	3538.6
18°	3396.6	3494.4	3602.8	3552.7	3458.8	3534.7	3640.4	3518.7	3438.8	3438.1	3498.7
18.5°	3353.5	3456.1	3569.2	3517.9	3419.3	3499.5	3606.3	3481.1	3397.4	3398.1	3458.0
19°	3308.5	3416.5	3532.8	3482.3	3379.4	3463.1	3569.6	3442.4	3355.1	3357.8	3416.9
19.5°	3261.2	3376.2	3496.0	3444.7	3338.7	3425.9	3532.0	3403.6	3311.7	3318.3	3376.6
20°	3212.6	3334.0	3456.9	3408.3	3295.6	3387.6	3493.2	3363.3	3268.2	3274.9	3330.4
20.5°	3164.1	3292.9	3416.5	3370.4	3251.4	3348.8	3452.5	3322.2	3223.6	3231.8	3285.8
21°	3113.6	3249.0	3375.1	3331.6	3206.8	3307.7	3410.3	3280.7	3177.8	3189.6	3239.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2972.0	3108.9	3244.3	3209.1	3072.9	3181.7	3280.3	3153.6	3040.8	3054.1	3098.4
23°	2922.3	3061.6	3198.6	3166.1	3030.7	3136.7	3233.4	3109.7	2993.5	3009.5	3048.7
23.5°	2870.6	3015.0	3151.6	3123.0	2985.3	3092.1	3188.0	3065.9	2946.1	2961.4	2999.0
24°	2820.5	2970.0	3103.8	3078.4	2939.9	3048.3	3140.6	3020.9	2898.8	2913.3	2949.3
24.5°	2769.2	2923.8	3056.1	3033.8	2894.5	3006.4	3092.5	2973.1	2851.4	2864.7	2899.6
25°	2717.2	2875.7	3007.2	2990.0	2849.1	2959.8	3042.0	2925.8	2804.1	2816.6	2849.9
25.5°	2664.0	2825.6	2957.9	2946.5	2803.7	2913.6	2992.7	2878.0	2753.6	2770.8	2800.2
26°	2610.0	2775.5	2906.2	2900.7	2756.3	2867.1	2943.8	2830.3	2703.5	2720.3	2743.8
26.5°	2555.6	2723.8	2854.6	2853.0	2707.0	2820.5	2894.5	2782.9	2651.0	2669.4	2691.0
27°	2500.8	2673.4	2802.9	2806.0	2657.7	2777.8	2845.2	2732.5	2599.4	2618.2	2635.8
27.5°	2444.0	2620.5	2749.3	2759.1	2608.0	2729.7	2795.9	2681.6	2546.9	2566.9	2581.4
28°	2386.9	2569.3	2696.8	2710.5	2557.9	2679.6	2741.5	2631.1	2493.7	2516.4	2524.6
28.5°	2329.0	2514.9	2641.3	2662.4	2507.8	2630.3	2689.0	2579.8	2439.3	2464.8	2471.0
29°	2271.4	2463.2	2586.9	2611.5	2456.2	2580.6	2633.8	2527.0	2386.1	2411.5	2416.2
29.5°	2213.5	2408.4	2532.9	2560.6	2404.5	2532.9	2577.9	2474.5	2330.1	2360.3	2361.8
30°	2155.2	2356.4	2480.8	2512.5	2350.9	2480.8	2521.9	2422.1	2275.7	2307.4	2304.3
30.5°	2101.2	2300.0	2426.8	2461.2	2297.7	2430.7	2469.5	2369.7	2222.5	2254.6	2249.1
31°	2048.0	2245.6	2372.0	2413.1	2246.0	2379.4	2415.5	2316.8	2172.8	2200.6	2191.2
31.5°	1990.4	2189.6	2317.6	2361.8	2197.1	2331.7	2359.9	2262.8	2117.2	2148.5	2134.1
32°	1940.0	2134.8	2264.4	2311.0	2143.5	2278.5	2303.9	2210.8	2069.9	2098.1	2075.8
32.5°	1897.3	2078.9	2209.2	2258.1	2091.4	2228.4	2248.0	2157.5	2017.1	2049.9	2018.2
33°	1848.0	2028.0	2152.5	2209.2	2050.3	2176.3	2190.0	2109.0	1965.0	1997.9	1960.7
33.5°	1786.9	1976.7	2096.5	2158.7	2001.4	2130.9	2134.5	2057.0	1905.9	1951.3	1903.6
34°	1726.7	1923.1	2041.3	2109.0	1948.2	2078.1	2077.3	2006.5	1843.7	1902.0	1848.0
34.5°	1657.8	1875.4	1985.4	2059.3	1893.4	2025.7	2021.0	1962.3	1778.7	1852.3	1792.4
35°	1589.3	1834.3	1930.6	2009.6	1833.5	1983.4	1965.0	1908.6	1709.1	1798.3	1737.2
35.5°	1522.0	1787.7	1873.4	1958.7	1772.1	1942.3	1910.6	1858.9	1637.8	1740.8	1684.0
36°	1456.6	1729.8	1817.9	1919.2	1704.0	1887.9	1856.6	1803.0	1566.2	1678.1	1631.2
36.5°	1384.6	1674.2	1764.2	1869.5	1635.1	1840.2	1804.2	1742.7	1493.4	1615.5	1580.7
37°	1320.0	1608.5	1710.6	1820.2	1562.7	1783.4	1750.9	1680.5	1424.1	1550.2	1531.4
37.5°	1255.9	1545.1	1658.6	1769.7	1494.2	1725.9	1700.4	1615.5	1356.8	1484.0	1484.0
38°	1191.3	1482.5	1606.1	1713.4	1423.8	1663.3	1651.5	1549.0	1289.9	1417.9	1437.1
38.5°	1127.1	1422.2	1556.8	1654.7	1356.8	1601.4	1604.2	1480.1	1226.1	1351.7	1393.2
39°	1061.4	1360.7	1507.5	1591.6	1290.7	1535.3	1558.8	1414.4	1161.9	1288.7	1351.7
39.5°	998.0	1299.3	1460.5	1527.1	1225.7	1469.5	1513.4	1349.0	1096.6	1227.7	1315.3
40°	936.9	1237.9	1417.9	1462.5	1160.0	1403.8	1470.7	1286.4	1030.8	1168.6	1278.2
40.5°	876.2	1176.4	1381.9	1395.2	1095.8	1340.4	1430.4	1225.7	966.7	1110.7	1239.8
41°	819.5	1115.4	1345.9	1333.7	1031.6	1276.6	1395.6	1165.5	903.6	1050.8	1215.2
41.5°	764.3	1054.3	1309.9	1271.9	967.8	1216.3	1360.4	1106.0	842.6	992.5	1181.5
42°	709.5	994.0	1273.9	1210.5	904.8	1156.1	1321.2	1046.9	784.3	933.8	1141.6
42.5°	655.1	933.8	1237.9	1149.0	843.0	1098.1	1291.9	987.4	729.1	876.2	1102.5
43°	603.5	877.4	1202.2	1090.7	785.1	1037.5	1267.2	927.5	674.7	819.9	1051.2
43.5°	553.8	823.4	1164.7	1032.4	728.7	977.2	1228.9	868.0	622.6	765.1	999.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	418.4	665.3	1039.1	858.6	571.8	805.4	1108.7	706.4	477.1	613.3	840.6
45.5°	376.5	615.2	993.3	803.5	523.2	750.6	1060.6	656.7	432.1	564.7	787.4
46°	337.0	566.3	944.3	749.4	476.7	698.2	1009.7	606.6	394.5	517.8	735.8
46.5°	299.4	518.9	895.4	698.2	430.9	648.5	956.5	558.9	356.9	472.8	685.3
47°	263.4	473.1	845.3	648.1	392.9	598.0	899.7	512.7	319.3	431.3	636.7
47.5°	229.3	429.7	794.8	600.3	354.6	550.2	844.2	468.1	281.8	394.1	588.2
48°	198.4	387.4	742.4	553.8	316.6	503.7	790.9	425.0	244.6	356.9	542.8
48.5°	171.0	349.1	690.4	508.0	278.6	459.5	739.3	388.6	214.1	319.7	498.6
49°	146.8	310.7	638.7	463.4	240.7	414.8	689.2	352.2	186.3	283.0	455.9
49.5°	130.7	274.7	591.3	421.1	210.2	376.9	640.3	315.8	160.5	245.8	414.8
50°	115.5	240.7	544.0	381.2	182.0	338.5	594.1	279.4	136.6	215.6	378.8
50.5°	99.8	210.2	500.5	343.2	155.8	300.6	549.5	243.0	115.8	186.7	342.8
51°	84.1	181.2	456.7	305.6	131.9	262.6	506.8	211.3	95.9	160.8	306.8
51.5°	68.9	155.4	416.8	270.8	110.8	230.1	463.4	183.9	78.7	135.8	270.4
52°	57.1	132.3	377.3	238.7	91.2	199.6	421.1	156.9	65.7	113.9	240.3
52.5°	46.2	116.6	341.3	208.6	73.2	171.0	384.7	133.5	52.8	93.5	211.3
53°	35.2	101.0	306.0	180.0	61.1	145.2	348.3	110.4	39.9	76.3	184.7
53.5°	24.7	85.3	272.0	154.2	48.9	121.3	311.5	91.2	26.6	63.4	160.1
54°	16.8	69.7	239.9	129.9	36.4	100.6	275.1	73.2	14.1	50.5	138.1
54.5°	14.9	58.3	211.7	110.8	24.3	81.4	238.7	61.1	12.9	37.6	117.8
55°	13.7	47.0	184.3	91.6	12.5	67.7	210.2	48.5	12.1	25.0	99.4
55.5°	12.1	36.4	160.1	72.4	11.7	54.0	181.6	36.4	11.7	12.9	83.4
56°	11.0	25.8	137.8	53.6	11.3	40.7	155.8	23.9	11.3	11.7	69.3
56.5°	10.6	17.2	121.3	38.7	11.0	27.4	131.9	11.7	11.0	11.3	57.1
57°	10.2	15.7	104.9	25.8	10.6	13.7	110.8	11.0	10.6	11.0	49.7
57.5°	9.8	14.1	88.8	15.3	10.2	11.3	91.2	11.0	10.2	10.6	42.3
58°	9.4	12.5	72.4	13.7	9.8	11.0	74.4	10.6	10.2	10.2	34.8
58.5°	9.0	11.3	56.0	12.1	9.4	10.6	59.9	10.2	9.8	9.8	27.8
59°	9.0	9.8	45.4	11.0	9.0	10.2	51.7	9.8	9.4	9.4	20.4
59.5°	8.6	9.4	36.8	9.4	9.0	9.8	43.4	9.4	9.0	9.4	16.4
60°	8.2	9.0	29.7	9.0	8.6	9.4	35.2	9.0	8.6	9.0	13.7
60.5°	7.8	9.0	24.3	9.0	8.2	9.0	27.4	9.0	8.6	8.6	11.3
61°	7.8	8.6	19.6	8.6	7.8	9.0	19.2	8.6	8.2	8.2	9.8
61.5°	7.4	8.2	16.0	8.2	7.8	8.6	15.7	8.2	7.8	8.2	8.6
62°	7.4	8.2	14.5	8.2	7.4	8.2	12.9	8.2	7.4	7.8	8.2
62.5°	7.0	7.8	12.9	7.8	7.0	8.2	11.0	7.8	7.4	7.4	7.8
63°	6.7	7.4	11.0	7.4	7.0	7.8	9.4	7.4	7.0	7.4	7.4
63.5°	6.7	7.4	9.4	7.4	6.7	7.4	8.6	7.4	7.0	7.0	7.0
64°	6.3	7.0	7.8	7.0	6.7	7.4	7.8	7.0	6.7	6.7	7.0
64.5°	6.3	6.7	7.4	7.0	6.3	7.0	7.8	7.0	6.3	6.7	6.7
65°	5.9	6.7	7.4	6.7	5.9	6.7	7.4	6.7	6.3	6.3	6.7
65.5°	5.9	6.3	7.0	6.3	5.9	6.7	7.0	6.3	5.9	6.3	6.3
66°	5.5	6.3	6.7	6.3	5.5	6.3	7.0	6.3	5.9	5.9	6.3



TEST NUMBER: P776411

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	5.1	5.5	6.3	5.5	5.1	5.9	6.3	5.5	5.1	5.5	5.5
68°	4.7	5.5	5.9	5.5	4.7	5.5	5.9	5.5	5.1	5.1	5.1
68.5°	4.7	5.1	5.9	5.1	4.7	5.1	5.9	5.1	4.7	4.7	5.1
69°	4.3	5.1	5.5	5.1	4.3	5.1	5.5	5.1	4.7	4.7	4.7
69.5°	4.3	4.7	5.5	5.1	4.3	4.7	5.5	4.7	4.3	4.3	4.7
70°	3.9	4.7	5.1	4.7	4.3	4.7	5.1	4.7	4.3	4.3	4.3
70.5°	3.9	4.3	5.1	4.7	3.9	4.7	5.1	4.3	3.9	4.3	4.3
71°	3.9	4.3	4.7	4.3	3.9	4.3	4.7	4.3	3.9	3.9	3.9
71.5°	3.5	3.9	4.7	4.3	3.5	4.3	4.7	3.9	3.5	3.9	3.9
72°	3.5	3.9	4.3	3.9	3.5	3.9	4.3	3.9	3.5	3.5	3.5
72.5°	3.1	3.5	4.3	3.9	3.5	3.9	4.3	3.9	3.5	3.5	3.5
73°	3.1	3.5	3.9	3.9	3.1	3.5	3.9	3.5	3.1	3.1	3.5
73.5°	3.1	3.5	3.9	3.5	3.1	3.5	3.9	3.5	3.1	3.1	3.1
74°	2.7	3.1	3.5	3.5	3.1	3.5	3.5	3.1	3.1	3.1	3.1
74.5°	2.7	3.1	3.5	3.1	2.7	3.1	3.5	3.1	2.7	2.7	2.7
75°	2.7	2.7	3.1	3.1	2.7	3.1	3.5	3.1	2.7	2.7	2.7
75.5°	2.3	2.7	3.1	3.1	2.7	3.1	3.1	2.7	2.7	2.7	2.3
76°	2.3	2.7	3.1	2.7	2.7	2.7	3.1	2.7	2.3	2.3	2.3
76.5°	2.3	2.3	2.7	2.7	2.3	2.7	2.7	2.7	2.3	2.3	2.3
77°	2.3	2.3	2.7	2.7	2.3	2.7	2.7	2.3	2.3	2.3	2.0
77.5°	2.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.0	2.0	2.0
78°	2.0	2.0	2.3	2.3	2.0	2.3	2.3	2.0	2.0	2.0	1.6
78.5°	2.0	2.0	2.0	2.3	2.0	2.3	2.3	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: P776411

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-3000K

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: P776411

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4056.4	4056.4	4056.4	4056.4	4056.4	4056.4
0.5°	4052.5	4050.5	4052.5	4054.5	4058.4	4056.8
1°	4047.8	4047.8	4049.0	4050.1	4055.2	4054.5
1.5°	4043.1	4043.5	4044.3	4045.5	4052.1	4050.5
2°	4037.2	4038.4	4038.0	4039.6	4047.8	4046.2
2.5°	4030.6	4032.1	4031.8	4032.1	4040.8	4040.0
3°	4023.1	4025.5	4024.3	4024.3	4034.5	4034.1
3.5°	4016.1	4017.7	4015.7	4015.7	4025.9	4025.9
4°	4008.7	4011.4	4007.5	4006.3	4016.9	4017.7
4.5°	4001.6	4004.8	3999.3	3995.4	4007.9	4009.8
5°	3993.8	3997.7	3991.4	3984.4	3998.9	4003.2
5.5°	3985.2	3991.1	3982.8	3974.2	3990.3	3995.7
6°	3975.8	3983.6	3973.8	3964.4	3981.7	3987.9
6.5°	3966.8	3975.4	3964.4	3955.0	3972.3	3979.7
7°	3956.2	3966.4	3954.7	3945.7	3962.5	3972.3
7.5°	3945.3	3956.6	3943.3	3935.5	3951.9	3962.1
8°	3933.1	3945.7	3931.2	3924.5	3941.4	3953.1
8.5°	3919.4	3932.7	3918.3	3913.6	3929.6	3941.4
9°	3903.8	3917.1	3904.2	3901.8	3917.1	3928.0
9.5°	3887.7	3901.0	3888.9	3890.5	3903.0	3913.6
10°	3869.7	3884.2	3872.1	3877.6	3888.9	3898.7
10.5°	3849.8	3863.5	3853.3	3864.3	3873.6	3882.6
11°	3828.6	3841.9	3833.7	3850.2	3857.2	3863.5
11.5°	3805.9	3817.3	3812.6	3834.5	3839.6	3841.6
12°	3781.3	3790.7	3788.7	3817.7	3820.0	3818.5
12.5°	3754.7	3762.1	3763.3	3798.9	3797.7	3793.0
13°	3726.5	3732.8	3735.5	3779.7	3774.2	3764.8
13.5°	3696.8	3700.7	3706.9	3759.0	3749.2	3734.3
14°	3665.8	3666.6	3676.8	3736.7	3721.8	3703.0
14.5°	3634.1	3631.4	3645.1	3712.4	3693.6	3670.1
15°	3600.5	3594.6	3611.4	3685.4	3662.3	3634.9
15.5°	3566.0	3556.6	3576.2	3656.8	3630.2	3597.7
16°	3529.6	3517.5	3540.2	3625.9	3596.6	3559.8
16.5°	3492.5	3476.0	3503.0	3593.4	3561.7	3520.3
17°	3454.5	3434.5	3465.9	3559.4	3526.1	3480.7
17.5°	3415.8	3391.9	3426.3	3522.2	3487.8	3438.1
18°	3375.1	3349.2	3385.2	3484.6	3449.4	3396.6
18.5°	3336.3	3303.8	3343.7	3445.1	3409.9	3353.5
19°	3293.7	3257.3	3302.3	3404.0	3369.6	3308.5
19.5°	3251.4	3209.9	3259.2	3361.4	3328.1	3261.2
20°	3206.0	3161.8	3215.8	3317.5	3285.4	3212.6
20.5°	3162.2	3111.7	3168.4	3269.4	3242.4	3164.1
21°	3116.0	3063.1	3123.0	3224.8	3196.6	3113.6

TEST NUMBER: P776411

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2976.7	2915.6	2979.0	3077.6	3053.0	2972.0
23°	2930.1	2865.1	2932.0	3030.3	3003.7	2922.3
23.5°	2883.1	2814.2	2885.1	2978.2	2956.3	2870.6
24°	2836.2	2761.4	2833.8	2926.2	2910.5	2820.5
24.5°	2789.2	2708.2	2782.5	2871.4	2863.2	2769.2
25°	2737.1	2654.2	2731.3	2820.5	2811.1	2717.2
25.5°	2683.9	2600.2	2678.4	2765.7	2760.2	2664.0
26°	2631.1	2544.2	2625.6	2709.8	2707.8	2610.0
26.5°	2578.3	2489.4	2572.8	2650.3	2656.9	2555.6
27°	2523.9	2431.9	2519.9	2596.7	2602.1	2500.8
27.5°	2468.7	2374.0	2464.0	2539.5	2548.9	2444.0
28°	2413.9	2315.7	2408.8	2481.2	2493.7	2386.9
28.5°	2357.9	2257.0	2354.0	2424.8	2439.3	2329.0
29°	2301.2	2197.9	2297.7	2369.3	2383.8	2271.4
29.5°	2244.0	2140.7	2241.3	2315.3	2330.1	2213.5
30°	2187.3	2085.9	2184.2	2260.1	2273.4	2155.2
30.5°	2131.3	2032.7	2127.8	2204.1	2217.4	2101.2
31°	2075.0	1975.2	2071.8	2146.6	2160.7	2048.0
31.5°	2022.5	1925.5	2016.3	2088.3	2105.5	1990.4
32°	1970.1	1880.5	1964.6	2030.0	2049.1	1940.0
32.5°	1915.3	1821.4	1913.0	1972.0	1993.6	1897.3
33°	1867.6	1765.0	1857.0	1914.9	1943.1	1848.0
33.5°	1823.3	1696.1	1812.4	1856.2	1890.3	1786.9
34°	1766.6	1625.7	1767.0	1798.3	1836.6	1726.7
34.5°	1714.1	1557.6	1708.7	1740.8	1793.2	1657.8
35°	1649.6	1490.3	1653.5	1684.4	1749.8	1589.3
35.5°	1584.6	1426.5	1587.7	1629.2	1695.4	1522.0
36°	1520.4	1360.0	1523.2	1576.4	1642.5	1456.6
36.5°	1457.8	1293.0	1460.9	1523.2	1581.1	1384.6
37°	1395.6	1226.1	1397.1	1473.1	1517.3	1320.0
37.5°	1334.5	1159.6	1336.9	1424.5	1452.7	1255.9
38°	1273.5	1092.7	1276.2	1382.7	1384.2	1191.3
38.5°	1210.9	1027.3	1215.9	1340.8	1327.5	1127.1
39°	1147.5	963.5	1155.7	1298.9	1270.3	1061.4
39.5°	1084.4	903.6	1094.6	1257.0	1213.6	998.0
40°	1022.2	845.7	1032.0	1215.2	1156.5	936.9
40.5°	963.1	790.1	972.5	1180.3	1095.4	876.2
41°	905.6	733.8	913.4	1150.2	1035.1	819.5
41.5°	850.0	679.8	859.0	1116.9	974.9	764.3
42°	795.6	625.4	805.0	1086.4	917.3	709.5
42.5°	742.4	577.3	754.1	1054.3	862.5	655.1
43°	690.4	529.1	702.9	1005.4	809.7	603.5
43.5°	640.3	483.3	652.4	959.2	757.7	553.8



TEST NUMBER: P776411

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	497.4	357.7	510.3	804.6	609.7	418.4
45.5°	452.8	319.3	466.1	757.7	562.0	376.5
46°	410.5	283.0	424.6	710.7	516.6	337.0
46.5°	373.0	247.7	385.1	664.1	472.4	299.4
47°	335.4	215.6	347.1	617.6	430.5	263.4
47.5°	298.2	185.9	309.6	574.9	390.6	229.3
48°	260.6	160.1	275.1	531.1	351.8	198.4
48.5°	228.2	137.4	243.0	489.2	314.3	171.0
49°	197.6	122.5	212.5	449.3	280.2	146.8
49.5°	169.8	107.6	184.7	410.9	246.9	130.7
50°	146.0	92.8	158.9	374.1	215.6	115.5
50.5°	124.8	77.9	135.8	339.7	186.3	99.8
51°	106.4	63.4	120.5	307.6	161.2	84.1
51.5°	90.4	52.1	105.3	277.1	138.5	68.9
52°	76.7	41.1	90.0	248.1	122.9	57.1
52.5°	64.6	30.5	74.4	221.5	107.2	46.2
53°	54.4	20.4	59.5	195.7	92.0	35.2
53.5°	44.2	13.3	48.1	171.8	76.3	24.7
54°	34.0	12.1	37.2	149.9	61.1	16.8
54.5°	23.9	11.3	27.0	129.9	49.7	14.9
55°	14.1	10.6	17.6	111.5	38.7	13.7
55.5°	10.6	9.8	15.7	98.2	28.2	12.1
56°	10.2	9.4	14.1	84.9	18.8	11.0
56.5°	9.8	9.0	12.1	72.0	12.1	10.6
57°	9.4	8.6	10.2	58.7	11.3	10.2
57.5°	9.0	8.2	8.2	45.4	11.0	9.8
58°	8.6	8.2	8.2	36.4	10.2	9.4
58.5°	8.6	7.8	7.8	29.0	9.4	9.0
59°	8.2	7.4	7.8	23.1	9.0	9.0
59.5°	7.8	7.4	7.4	18.8	9.0	8.6
60°	7.8	7.0	7.0	14.9	8.6	8.2
60.5°	7.4	6.7	7.0	13.3	8.2	7.8
61°	7.0	6.7	6.7	11.3	8.2	7.8
61.5°	7.0	6.3	6.7	9.4	7.8	7.4
62°	6.7	6.3	6.3	7.4	7.4	7.4
62.5°	6.7	5.9	6.3	7.0	7.4	7.0
63°	6.3	5.9	5.9	7.0	7.0	6.7
63.5°	5.9	5.5	5.9	6.7	7.0	6.7
64°	5.9	5.5	5.5	6.7	6.7	6.3
64.5°	5.5	5.1	5.5	6.3	6.3	6.3
65°	5.5	5.1	5.1	6.3	6.3	5.9
65.5°	5.1	4.7	5.1	5.9	5.9	5.9
66°	5.1	4.7	4.7	5.9	5.9	5.5



TEST NUMBER: P776411

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	4.7	3.9	4.3	5.1	5.1	5.1
68°	4.3	3.9	4.3	5.1	5.1	4.7
68.5°	4.3	3.9	3.9	4.7	4.7	4.7
69°	3.9	3.5	3.9	4.7	4.7	4.3
69.5°	3.9	3.5	3.9	4.3	4.7	4.3
70°	3.5	3.1	3.5	4.3	4.3	3.9
70.5°	3.5	3.1	3.5	4.3	4.3	3.9
71°	3.5	3.1	3.1	3.9	3.9	3.9
71.5°	3.1	2.7	3.1	3.9	3.9	3.5
72°	3.1	2.7	3.1	3.5	3.5	3.5
72.5°	2.7	2.7	2.7	3.5	3.5	3.1
73°	2.7	2.7	2.7	3.1	3.5	3.1
73.5°	2.7	2.3	2.7	3.1	3.1	3.1
74°	2.3	2.3	2.7	3.1	3.1	2.7
74.5°	2.3	2.3	2.3	2.7	3.1	2.7
75°	2.3	2.3	2.3	2.7	2.7	2.7
75.5°	2.3	2.0	2.3	2.3	2.7	2.3
76°	2.0	2.0	2.0	2.3	2.3	2.3
76.5°	2.0	2.0	2.0	2.3	2.3	2.3
77°	2.0	2.0	2.0	2.0	2.3	2.3
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: P776411

CATALOG NUMBER: HCDJBL3040CSD-HCD6TSQC-4000lm-3000K

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°	3065.9	3203.3	3332.0	3292.1	3161.8	3265.9	3368.4	3239.3	3133.2	3146.5	3195.0
22°	3018.9	3156.7	3288.2	3251.0	3116.8	3224.0	3325.0	3197.4	3089.4	3099.2	3146.5



44°	506.0	770.6	1133.4	974.5	673.5	918.5	1194.4	812.1	572.6	712.7	947.1
44.5°	461.0	717.0	1086.4	915.8	622.6	862.5	1154.1	758.8	523.6	662.2	893.9



66.5°	5.5	5.9	6.7	5.9	5.5	6.3	6.7	5.9	5.5	5.9	5.9
67°	5.1	5.9	6.3	5.9	5.1	5.9	6.7	5.9	5.5	5.5	5.5



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°	3069.4	3015.8	3074.9	3177.4	3149.6	3065.9
22°	3023.6	2967.3	3027.9	3129.3	3100.3	3018.9



44°	590.9	438.3	602.3	908.3	708.4	506.0
44.5°	542.0	397.6	555.7	856.7	658.3	461.0



66.5°	5.1	4.3	4.7	5.5	5.5	5.5
67°	4.7	4.3	4.7	5.5	5.5	5.1

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Scaled Data Report



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

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Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)