

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: P776366

Luminaire Tested: HCDJBL3040CSD-HCD62TRH-4000lm-3000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776366
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B056)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD62TRH-4000lm-3000K
Description: 6 INCH ROUND NARROW HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4127.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 0.82 / 0.91
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

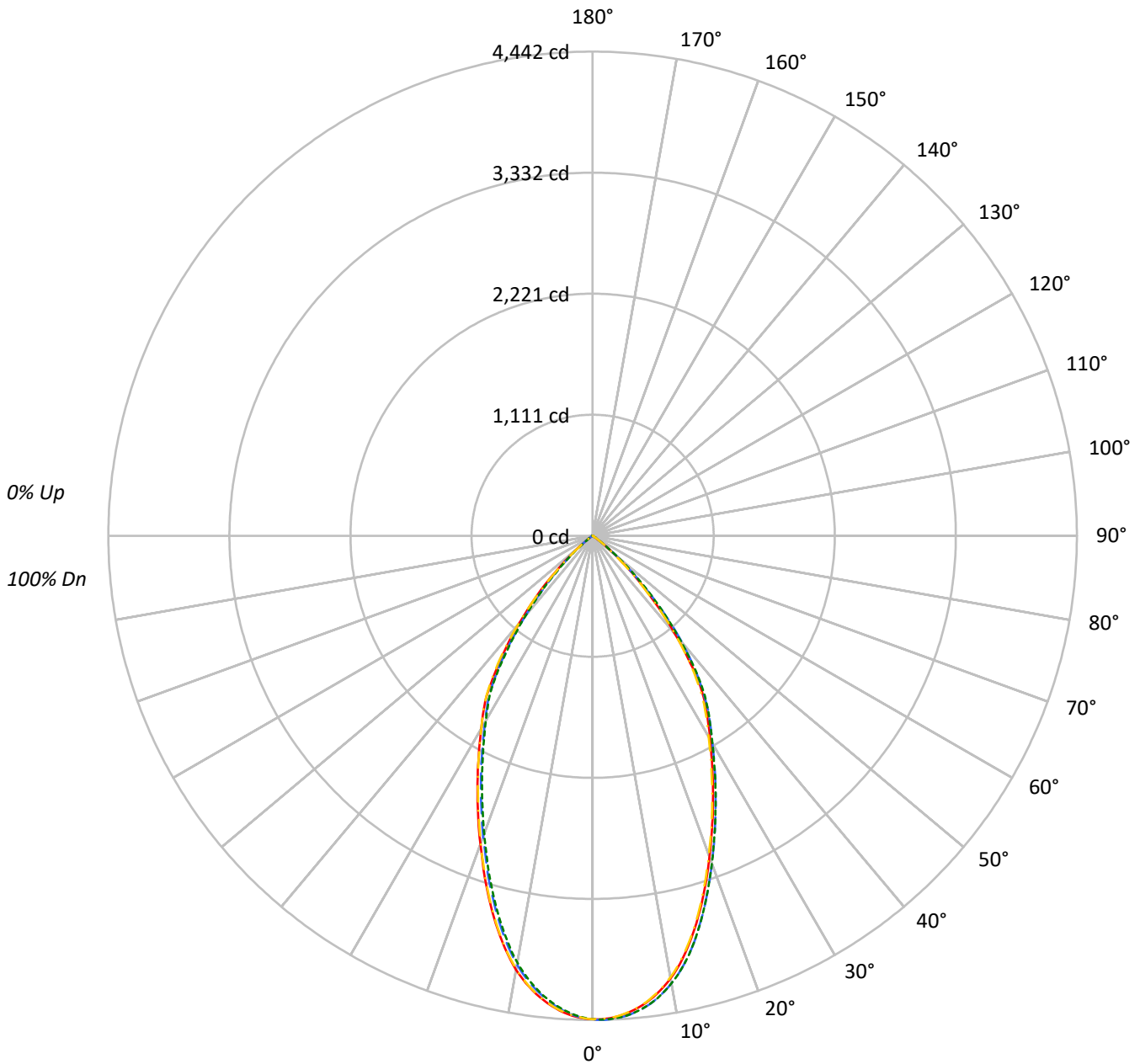
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	113	110	108	106	111	108	106	104	104	102	101	100	99	98	97	96	95	93								
2	107	102	98	95	105	101	97	93	97	94	91	94	92	89	92	89	88	86								
3	102	95	90	85	100	93	89	85	91	87	83	88	85	82	86	83	81	79								
4	96	88	82	78	94	87	82	77	85	80	77	83	79	76	81	78	75	73								
5	91	82	76	71	89	81	75	71	79	74	70	78	73	70	76	72	69	68								
6	86	77	70	66	84	76	70	66	74	69	65	73	68	65	71	67	64	63								
7	81	72	65	61	80	71	65	61	70	64	60	68	64	60	67	63	60	58								
8	77	67	61	57	76	67	61	56	65	60	56	64	59	56	63	59	56	54								
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51								
10	70	59	53	49	69	59	53	49	58	53	49	57	52	49	57	52	49	47								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	243138	243138	243138	243138
5°	240314	241673	238207	236435
10°	229471	232065	225046	221300
15°	208736	212493	202112	196846
20°	182903	186578	175616	169631
25°	158162	161501	151055	144994
30°	136445	139047	129457	124025
35°	117263	120013	106863	101201
40°	84480	89582	74983	68428
45°	50028	55890	42679	37066
50°	20741	24247	14660	12221
55°	3517	4645	3517	2322
60°	1458	1371	1414	1162
65°	869	817	869	713
70°	561	561	561	497
75°	424	339	424	339
80°	253	253	253	253
85°	0	252	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 59471 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.4	9.8
10°-20°	1004.4	24.3
20°-30°	1168.5	28.3
30°-40°	1016.2	24.6
40°-50°	467.5	11.3
50°-60°	55.2	1.3
60°-70°	6.6	0.2
70°-80°	2.0	0.0
80°-90°	0.3	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2579.2	62.5
0°-40°	3595.5	87.1
0°-60°	4118.1	99.8
0°-90°	4127.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4127.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	4435	4435	4435	4435	4435	
5°	4367	4392	4329	4296	4367	409
15°	3678	3744	3561	3468	3678	1023
25°	2615	2670	2497	2397	2615	1201
35°	1752	1793	1597	1512	1752	1065
45°	645	721	550	478	645	507
55°	37	49	37	24	37	61
65°	7	6	7	6	7	7
75°	2	2	2	2	2	2
85°	0	0	0	0	0	0
90°	0	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°	4435.2	4435.2	4435.2	4435.2	4435.2	4435.2	4435.2	4435.2	4435.2	4435.2	4435.2
0.5°	4437.1	4440.2	4440.6	4437.1	4437.9	4435.5	4434.0	4434.8	4434.0	4434.4	4433.6
1°	4436.3	4440.6	4442.2	4440.2	4439.1	4435.5	4433.6	4432.0	4429.7	4429.3	4427.7
1.5°	4432.8	4439.1	4442.2	4441.4	4439.1	4434.4	4430.8	4427.3	4423.4	4421.4	4419.1
2°	4428.9	4436.7	4440.2	4441.0	4437.1	4432.0	4426.9	4420.7	4415.6	4412.1	4408.1
2.5°	4422.6	4432.0	4436.3	4439.1	4434.0	4426.9	4420.3	4412.1	4405.8	4400.7	4395.6
3°	4414.8	4425.8	4430.5	4435.9	4428.5	4421.1	4412.1	4402.7	4393.6	4387.4	4381.1
3.5°	4405.8	4417.5	4423.8	4430.8	4422.2	4413.6	4402.3	4391.3	4380.3	4371.7	4365.5
4°	4394.4	4407.7	4414.8	4423.8	4414.4	4403.8	4391.3	4377.2	4364.7	4354.9	4347.8
4.5°	4381.5	4396.4	4405.0	4414.8	4404.2	4392.1	4378.0	4362.3	4347.4	4336.1	4328.3
5°	4367.0	4383.5	4392.1	4405.0	4391.7	4379.2	4362.7	4345.5	4328.7	4315.3	4305.9
5.5°	4351.4	4369.0	4378.8	4392.5	4378.4	4363.5	4345.9	4327.5	4308.7	4293.4	4283.2
6°	4333.0	4352.1	4363.9	4379.2	4362.7	4346.7	4327.9	4305.5	4285.6	4269.1	4258.2
6.5°	4313.8	4334.9	4346.7	4363.5	4345.1	4328.3	4307.5	4283.2	4262.1	4244.9	4231.9
7°	4291.5	4314.2	4327.1	4346.7	4326.7	4308.3	4285.2	4259.7	4236.6	4218.2	4204.5
7.5°	4267.6	4292.2	4305.9	4327.1	4305.2	4284.4	4260.9	4235.1	4208.4	4188.5	4174.4
8°	4242.1	4267.6	4281.7	4305.9	4282.1	4259.3	4235.1	4206.5	4179.5	4157.9	4142.3
8.5°	4215.1	4242.5	4257.0	4282.8	4256.2	4234.3	4207.3	4176.3	4148.1	4125.4	4109.0
9°	4185.7	4214.7	4229.2	4256.6	4229.2	4206.1	4177.9	4145.0	4115.3	4090.6	4073.4
9.5°	4154.8	4184.6	4201.0	4229.2	4200.2	4175.6	4145.8	4113.3	4080.0	4054.6	4035.8
10°	4122.3	4152.5	4169.3	4199.8	4168.9	4143.4	4112.9	4076.1	4042.8	4016.2	3995.4
10.5°	4086.7	4120.3	4136.8	4168.9	4137.2	4110.6	4076.5	4038.9	4002.5	3972.7	3951.6
11°	4049.9	4084.3	4101.5	4136.4	4101.5	4073.7	4039.3	3998.2	3959.8	3926.1	3905.4
11.5°	4009.9	4045.2	4063.6	4101.2	4064.4	4035.4	3999.0	3955.9	3914.4	3880.7	3858.8
12°	3966.9	4004.8	4022.8	4062.8	4024.4	3993.9	3955.1	3909.7	3868.6	3834.1	3810.2
12.5°	3922.6	3961.0	3980.9	4022.1	3982.9	3950.4	3910.1	3864.3	3819.6	3784.0	3759.7
13°	3876.8	3916.3	3937.5	3979.8	3938.7	3905.8	3864.7	3816.5	3770.7	3733.1	3708.0
13.5°	3829.4	3870.1	3892.1	3935.9	3892.8	3858.4	3816.5	3767.2	3719.8	3681.0	3654.4
14°	3780.1	3822.4	3843.9	3891.3	3844.3	3810.6	3766.8	3715.9	3667.7	3629.7	3602.3
14.5°	3730.0	3772.6	3795.4	3841.2	3794.6	3759.3	3715.1	3663.8	3615.6	3574.1	3547.9
15°	3677.9	3722.1	3743.3	3793.8	3744.1	3707.6	3663.4	3611.3	3561.2	3520.9	3493.1
15.5°	3625.0	3669.7	3690.8	3742.5	3692.8	3655.6	3611.3	3558.1	3507.2	3466.1	3437.5
16°	3572.2	3617.2	3638.7	3690.0	3639.1	3602.3	3558.5	3503.3	3452.7	3411.6	3382.7
16.5°	3519.3	3564.3	3586.7	3637.6	3585.5	3549.1	3504.8	3450.0	3399.1	3355.6	3327.4
17°	3466.1	3510.3	3531.4	3584.3	3531.8	3494.6	3448.8	3394.8	3343.5	3299.6	3270.7
17.5°	3410.5	3455.9	3476.6	3529.1	3476.2	3438.3	3394.0	3340.8	3287.5	3244.4	3213.1
18°	3355.6	3400.3	3421.8	3474.3	3421.0	3383.0	3338.8	3285.2	3231.1	3187.3	3155.2
18.5°	3300.8	3345.8	3366.2	3418.3	3365.0	3328.2	3283.6	3227.6	3175.5	3130.5	3098.4
19°	3245.2	3291.0	3309.4	3361.9	3309.8	3273.0	3226.8	3172.0	3118.4	3073.3	3042.0
19.5°	3190.8	3235.4	3254.6	3305.9	3253.8	3217.4	3170.4	3118.0	3062.4	3020.5	2989.1
20°	3135.2	3179.4	3197.8	3250.3	3198.2	3161.0	3116.0	3061.2	3010.3	2967.6	2935.9
20.5°	3080.0	3125.4	3143.4	3193.5	3141.8	3105.0	3060.4	3009.1	2958.2	2914.7	2882.6
21°	3025.9	3071.0	3089.8	3139.9	3086.6	3050.6	3008.3	2957.0	2906.1	2861.9	2829.4



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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°	2867.4	2910.0	2927.3	2974.3	2928.4	2893.6	2852.5	2800.8	2748.3	2704.1	2671.2
23°	2815.7	2856.8	2874.8	2921.0	2876.0	2841.1	2800.4	2747.9	2697.4	2651.6	2620.7
23.5°	2765.2	2805.1	2822.7	2868.1	2823.9	2788.7	2747.2	2697.0	2646.1	2601.5	2570.2
24°	2713.5	2754.6	2770.6	2814.9	2771.4	2737.0	2695.5	2646.9	2596.0	2551.4	2519.3
24.5°	2664.5	2704.1	2719.0	2762.8	2720.5	2683.7	2645.0	2596.8	2545.9	2502.4	2470.3
25°	2614.8	2654.0	2668.8	2712.7	2670.0	2634.0	2594.1	2546.3	2497.3	2453.5	2421.8
25.5°	2565.9	2604.2	2619.1	2662.6	2619.1	2585.4	2544.7	2498.1	2449.6	2404.9	2374.8
26°	2517.7	2557.3	2570.2	2612.1	2569.8	2537.3	2496.6	2450.4	2401.8	2357.9	2327.8
26.5°	2470.7	2507.1	2522.0	2561.2	2521.2	2487.6	2448.4	2402.2	2354.0	2311.0	2279.2
27°	2422.9	2459.4	2473.1	2513.0	2472.7	2438.2	2400.2	2355.2	2307.4	2264.8	2233.4
27.5°	2376.0	2412.4	2425.3	2465.2	2424.5	2393.2	2353.6	2308.2	2261.2	2219.3	2188.0
28°	2330.1	2367.3	2378.3	2417.9	2376.7	2345.8	2306.7	2263.2	2216.2	2173.5	2143.8
28.5°	2284.3	2321.5	2332.1	2370.9	2330.9	2298.8	2261.2	2217.4	2170.8	2129.3	2099.5
29°	2240.9	2275.3	2286.7	2323.5	2285.1	2253.8	2217.8	2173.5	2128.5	2086.6	2056.5
29.5°	2198.2	2231.9	2241.3	2278.5	2240.9	2209.9	2173.5	2130.8	2085.8	2045.1	2015.3
30°	2155.5	2189.6	2199.0	2235.0	2196.6	2167.3	2130.8	2089.0	2045.1	2003.6	1975.0
30.5°	2114.0	2147.3	2157.1	2191.9	2154.3	2124.6	2089.3	2047.1	2004.0	1963.3	1935.5
31°	2073.7	2106.2	2115.6	2148.9	2113.6	2084.3	2048.2	2007.1	1963.7	1923.7	1895.5
31.5°	2033.0	2065.1	2074.5	2107.7	2072.9	2044.3	2008.3	1968.0	1924.9	1885.3	1857.9
32°	1995.0	2027.1	2035.3	2067.0	2033.7	2004.0	1970.3	1930.0	1886.5	1847.0	1819.2
32.5°	1957.0	1987.9	1996.2	2027.1	1993.8	1965.2	1930.8	1890.0	1848.1	1808.2	1781.6
33°	1919.0	1949.6	1957.8	1988.3	1956.6	1926.8	1892.0	1849.7	1806.6	1765.5	1737.7
33.5°	1879.1	1909.6	1917.1	1949.2	1917.1	1888.5	1850.5	1803.9	1760.0	1716.2	1686.0
34°	1839.5	1868.9	1873.2	1909.6	1878.3	1848.1	1806.6	1755.7	1709.5	1664.9	1635.1
34.5°	1795.3	1824.7	1825.8	1866.9	1837.2	1805.9	1758.9	1705.6	1653.1	1612.0	1579.5
35°	1752.2	1777.7	1778.4	1820.0	1793.3	1762.4	1711.1	1655.9	1596.8	1558.0	1525.5
35.5°	1704.4	1729.1	1731.1	1773.7	1748.3	1717.4	1662.5	1603.4	1537.6	1498.1	1472.6
36°	1653.5	1678.6	1682.9	1725.6	1701.3	1669.2	1614.0	1550.6	1482.4	1438.6	1419.4
36.5°	1597.5	1626.5	1634.7	1678.6	1649.6	1616.7	1562.7	1496.1	1427.6	1380.2	1361.8
37°	1536.9	1573.3	1586.2	1630.4	1596.8	1561.1	1510.2	1441.3	1375.1	1322.7	1306.2
37.5°	1473.8	1518.5	1536.5	1581.1	1540.8	1505.1	1456.6	1384.2	1321.9	1265.9	1247.9
38°	1412.7	1464.4	1484.4	1530.6	1483.2	1448.4	1402.2	1329.7	1269.4	1210.3	1190.7
38.5°	1354.8	1407.6	1431.1	1480.1	1424.1	1387.7	1345.8	1274.9	1214.6	1157.0	1130.0
39°	1296.8	1349.3	1377.5	1428.8	1365.4	1325.8	1289.8	1221.3	1160.6	1105.8	1074.8
39.5°	1238.5	1291.0	1323.5	1374.0	1308.6	1266.7	1231.1	1167.2	1104.6	1050.9	1017.3
40°	1180.5	1232.6	1269.4	1319.2	1251.8	1210.3	1171.9	1114.0	1047.8	996.1	962.8
40.5°	1122.6	1174.7	1215.4	1264.3	1195.4	1153.5	1111.6	1060.7	992.2	943.6	906.5
41°	1067.4	1116.3	1161.7	1209.5	1141.4	1098.3	1051.7	1007.1	940.5	891.2	852.8
41.5°	1010.6	1059.6	1105.0	1154.7	1087.4	1040.8	993.0	952.7	889.2	839.5	798.4
42°	956.6	1006.3	1047.8	1097.1	1034.5	986.7	935.8	897.4	839.5	788.2	745.9
42.5°	901.0	953.8	991.4	1040.4	980.5	933.5	880.2	843.0	791.3	738.9	696.2
43°	847.3	900.6	933.9	985.2	927.2	880.2	826.6	789.8	742.8	693.1	649.2
43.5°	793.3	845.4	875.9	929.6	874.3	825.8	773.3	736.5	693.4	644.5	601.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	645.3	692.3	712.2	767.1	720.9	673.1	624.9	583.8	550.5	509.0	474.6
45.5°	597.5	642.9	659.4	715.4	671.9	624.9	577.2	536.4	505.1	465.6	435.0
46°	552.9	594.8	609.3	663.7	625.7	577.5	532.1	490.6	461.6	424.8	398.2
46.5°	508.2	547.8	559.9	613.6	577.2	531.7	487.9	446.0	419.4	389.6	365.7
47°	465.2	502.8	511.4	563.8	529.8	490.2	445.2	408.0	380.6	354.7	333.6
47.5°	423.3	458.9	466.0	516.9	485.1	448.7	404.9	370.4	342.2	319.5	301.1
48°	384.1	415.8	422.5	469.9	442.8	408.0	368.8	332.8	303.5	284.7	268.6
48.5°	346.5	373.2	381.4	424.8	403.3	371.6	332.8	295.2	264.7	249.4	240.8
49°	310.9	333.6	342.2	384.1	363.4	335.2	297.2	257.6	231.4	220.8	214.6
49.5°	276.8	295.2	304.2	342.6	323.8	298.8	261.2	227.1	200.1	193.0	190.3
50°	243.2	258.8	268.6	304.6	284.3	262.7	230.6	198.9	171.9	168.8	167.6
50.5°	212.2	224.8	235.3	267.8	244.7	230.6	201.3	173.1	147.2	145.7	146.1
51°	182.9	193.8	204.4	234.5	211.8	199.7	175.0	149.2	125.7	125.7	126.5
51.5°	155.4	165.2	175.4	201.7	182.5	171.9	151.5	128.4	108.1	107.7	109.2
52°	130.0	140.2	148.4	172.7	154.7	145.3	129.6	108.9	92.4	91.6	93.2
52.5°	112.0	122.2	129.2	146.1	128.8	121.8	109.6	91.6	78.7	77.1	77.9
53°	94.0	104.2	110.0	127.3	106.5	100.6	91.2	76.7	67.0	64.6	64.6
53.5°	76.0	86.5	90.8	108.5	86.9	81.8	75.6	63.8	56.4	53.6	52.9
54°	58.3	68.5	71.7	89.7	70.1	66.2	61.9	52.5	47.0	47.4	46.6
54.5°	46.2	50.9	52.5	70.9	56.0	52.9	53.6	46.2	41.9	41.1	39.9
55°	36.8	39.9	41.1	52.1	48.6	46.2	45.4	39.9	36.8	34.5	33.3
55.5°	29.4	31.3	31.7	40.7	41.5	39.5	37.6	33.7	31.7	28.2	27.0
56°	24.7	25.5	25.1	31.3	34.1	32.9	29.8	27.8	26.6	21.9	20.4
56.5°	21.9	22.3	21.9	24.7	26.6	26.2	21.9	21.5	21.5	20.0	18.8
57°	20.4	20.4	20.0	21.1	19.6	19.6	20.0	20.0	20.0	18.8	17.6
57.5°	19.2	19.2	18.4	19.2	18.0	18.0	18.4	18.8	18.4	17.6	16.4
58°	17.6	17.6	17.2	17.6	16.8	16.8	17.2	17.6	17.2	16.4	15.3
58.5°	16.4	16.4	15.7	16.4	15.7	15.7	16.1	16.4	16.1	15.3	14.1
59°	15.3	15.3	14.9	15.3	14.5	14.5	14.9	15.3	14.9	14.1	13.3
59.5°	14.5	14.1	13.7	14.1	13.3	13.3	13.7	14.1	14.1	13.3	12.1
60°	13.3	13.3	12.9	13.3	12.5	12.5	12.9	12.9	12.9	12.1	11.4
60.5°	12.5	12.1	11.7	12.1	11.7	11.7	11.7	12.1	12.1	11.4	10.6
61°	11.4	11.4	11.0	11.4	10.6	11.0	11.0	11.4	11.4	10.6	9.8
61.5°	10.6	10.6	10.2	10.6	10.2	10.2	10.2	10.6	10.6	9.8	9.4
62°	9.8	9.8	9.4	9.8	9.4	9.4	9.8	9.8	9.8	9.4	8.6
62.5°	9.4	9.4	8.6	9.0	8.6	8.6	9.0	9.4	9.4	8.6	8.2
63°	8.6	8.6	8.2	8.6	8.2	8.2	8.2	8.6	8.6	8.2	7.4
63.5°	8.2	8.2	7.8	7.8	7.4	7.8	7.8	8.2	8.2	7.8	7.0
64°	7.8	7.4	7.0	7.4	7.0	7.0	7.4	7.8	7.8	7.4	6.7
64.5°	7.0	7.0	6.7	7.0	6.7	6.7	7.0	7.0	7.0	6.7	6.3
65°	6.7	6.7	6.3	6.7	6.3	6.3	6.7	6.7	6.7	6.3	5.9
65.5°	6.3	6.3	5.9	6.3	5.9	5.9	6.3	6.3	6.3	5.9	5.5
66°	5.9	5.9	5.5	5.9	5.5	5.5	5.9	5.9	5.9	5.5	5.1



TEST NUMBER: P776366

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-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	4.7	4.7	4.7	4.7	4.7	4.7	5.1	5.1	4.7	4.3
68°	4.7	4.7	4.3	4.3	4.3	4.3	4.3	4.7	4.7	4.3	4.3
68.5°	4.3	4.3	3.9	4.3	3.9	3.9	4.3	4.3	4.3	4.3	3.9
69°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4.3	4.3	3.9	3.5
69.5°	3.9	3.9	3.5	3.5	3.5	3.5	3.9	3.9	3.9	3.5	3.5
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.1
70.5°	3.5	3.1	3.1	3.1	3.1	3.1	3.1	3.5	3.5	3.1	3.1
71°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.7
71.5°	3.1	2.7	2.7	2.7	2.7	2.7	2.7	3.1	3.1	2.7	2.7
72°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.3
72.5°	2.7	2.7	2.3	2.3	2.3	2.3	2.7	2.7	2.7	2.3	2.3
73°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
73.5°	2.3	2.3	2.3	2.3	2.0	2.3	2.3	2.3	2.3	2.3	2.0
74°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.0	2.0
74.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
75°	2.0	2.0	1.6	2.0	1.6	2.0	2.0	2.0	2.0	2.0	1.6
75.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	2.0	2.0	1.6	1.6
76°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
76.5°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.2
77°	1.6	1.2	1.2	1.6	1.2	1.2	1.6	1.6	1.6	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
78°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
78.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
79°	1.2	0.8	0.8	1.2	1.2	1.2	1.2	1.2	1.2	0.8	0.8
79.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
80.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
81°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
81.5°	0.8	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4
82°	0.4	0.4	0.4	0.8	0.4	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
83°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
83.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
84°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
84.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4
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	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776366

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-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: P776366

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	4435.2	4435.2	4435.2	4435.2	4435.2	4435.2
0.5°	4425.8	4428.9	4428.9	4430.8	4434.0	4437.1
1°	4417.5	4422.2	4423.0	4426.5	4430.8	4436.3
1.5°	4407.0	4412.4	4414.4	4419.5	4426.5	4432.8
2°	4394.0	4401.9	4405.0	4411.7	4420.3	4428.9
2.5°	4379.6	4388.6	4392.5	4401.9	4412.8	4422.6
3°	4363.1	4373.7	4379.2	4389.7	4403.0	4414.8
3.5°	4344.7	4358.0	4363.9	4376.4	4391.3	4405.8
4°	4325.1	4338.4	4347.1	4360.8	4378.0	4394.4
4.5°	4303.2	4318.9	4327.9	4343.5	4363.1	4381.5
5°	4280.1	4296.5	4307.1	4324.3	4346.7	4367.0
5.5°	4254.3	4273.4	4284.4	4303.6	4328.7	4351.4
6°	4228.0	4248.8	4260.9	4281.3	4309.1	4333.0
6.5°	4199.4	4221.0	4235.5	4257.8	4287.1	4313.8
7°	4169.7	4192.4	4208.1	4232.3	4263.3	4291.5
7.5°	4138.4	4161.5	4178.3	4204.1	4237.4	4267.6
8°	4103.5	4129.0	4146.6	4174.8	4209.6	4242.1
8.5°	4067.1	4094.5	4114.1	4142.7	4180.6	4215.1
9°	4029.1	4056.9	4077.7	4109.0	4148.5	4185.7
9.5°	3988.4	4018.5	4040.1	4073.7	4115.6	4154.8
10°	3944.9	3975.5	3998.2	4036.2	4081.6	4122.3
10.5°	3897.9	3932.0	3956.3	3995.8	4044.0	4086.7
11°	3849.4	3886.6	3911.6	3952.0	4004.1	4049.9
11.5°	3801.2	3836.9	3866.6	3907.3	3961.0	4009.9
12°	3750.7	3787.9	3815.7	3861.9	3916.3	3966.9
12.5°	3699.0	3736.2	3765.6	3813.4	3870.5	3922.6
13°	3646.6	3684.5	3716.6	3764.8	3823.9	3876.8
13.5°	3592.9	3631.3	3665.0	3712.7	3773.8	3829.4
14°	3538.9	3578.8	3610.5	3660.3	3723.7	3780.1
14.5°	3482.9	3524.4	3556.5	3609.4	3671.6	3730.0
15°	3429.2	3468.4	3502.1	3554.9	3619.5	3677.9
15.5°	3372.9	3412.8	3448.0	3500.9	3566.3	3625.0
16°	3316.1	3356.8	3392.0	3444.1	3512.3	3572.2
16.5°	3260.1	3301.2	3336.8	3390.9	3458.2	3519.3
17°	3202.9	3245.2	3280.5	3335.7	3404.6	3466.1
17.5°	3146.9	3188.0	3224.1	3279.7	3349.4	3410.5
18°	3087.4	3130.5	3166.1	3222.1	3293.8	3355.6
18.5°	3032.2	3072.5	3109.3	3165.3	3238.2	3300.8
19°	2977.4	3016.9	3052.6	3111.7	3182.2	3245.2
19.5°	2922.6	2962.5	2998.5	3057.7	3128.1	3190.8
20°	2867.8	2907.7	2945.7	3002.5	3073.3	3135.2
20.5°	2813.3	2854.4	2892.0	2948.4	3019.7	3080.0
21°	2765.2	2799.2	2837.2	2894.0	2964.5	3025.9

TEST NUMBER: P776366

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2610.5	2643.8	2682.2	2739.7	2807.5	2867.4
23°	2560.0	2593.3	2630.5	2687.2	2755.8	2815.7
23.5°	2510.3	2543.2	2581.5	2638.3	2705.7	2765.2
24°	2462.5	2494.6	2532.6	2587.4	2655.9	2713.5
24.5°	2412.8	2446.0	2483.2	2539.6	2605.4	2664.5
25°	2366.2	2397.1	2435.1	2489.1	2556.9	2614.8
25.5°	2318.0	2350.5	2388.5	2442.5	2508.7	2565.9
26°	2271.4	2303.9	2341.9	2395.5	2461.3	2517.7
26.5°	2226.0	2258.5	2296.1	2349.3	2413.9	2470.7
27°	2180.2	2212.7	2249.9	2303.5	2367.3	2422.9
27.5°	2135.2	2168.4	2204.5	2257.7	2321.1	2376.0
28°	2092.1	2123.8	2160.2	2211.5	2275.7	2330.1
28.5°	2050.2	2080.7	2117.5	2168.4	2231.1	2284.3
29°	2009.5	2039.6	2076.0	2126.9	2188.0	2240.9
29.5°	1967.6	1998.9	2033.7	2084.6	2144.9	2198.2
30°	1927.6	1959.3	1994.2	2043.9	2104.2	2155.5
30.5°	1889.3	1920.2	1954.6	2003.2	2063.5	2114.0
31°	1851.7	1881.8	1917.1	1965.2	2023.6	2073.7
31.5°	1813.3	1843.8	1879.5	1927.2	1983.6	2033.0
32°	1774.5	1806.2	1840.7	1888.9	1945.6	1995.0
32.5°	1732.2	1768.7	1803.1	1851.7	1908.4	1957.0
33°	1684.9	1724.4	1760.8	1809.8	1870.9	1919.0
33.5°	1633.2	1675.5	1713.8	1764.0	1829.3	1879.1
34°	1577.2	1623.8	1663.3	1715.4	1783.9	1839.5
34.5°	1521.6	1568.2	1608.1	1668.0	1737.7	1795.3
35°	1467.2	1512.2	1552.1	1616.3	1689.2	1752.2
35.5°	1412.3	1453.1	1496.1	1565.8	1639.1	1704.4
36°	1356.3	1388.5	1441.7	1513.0	1587.0	1653.5
36.5°	1298.0	1333.6	1407.3	1458.9	1534.1	1597.5
37°	1240.1	1279.6	1349.7	1405.3	1480.1	1536.9
37.5°	1183.3	1225.6	1291.7	1348.9	1423.3	1473.8
38°	1124.2	1171.1	1233.8	1292.5	1363.8	1412.7
38.5°	1067.0	1118.3	1175.8	1236.1	1304.3	1354.8
39°	1012.2	1064.2	1121.4	1179.8	1244.8	1296.8
39.5°	958.5	1010.2	1064.6	1123.4	1185.2	1238.5
40°	904.5	956.2	1008.3	1067.8	1125.3	1180.5
40.5°	852.8	903.3	952.7	1013.0	1065.4	1122.6
41°	801.1	851.2	897.8	958.1	1005.5	1067.4
41.5°	748.7	799.2	845.4	901.8	945.6	1010.6
42°	697.4	751.4	794.5	848.9	890.0	956.6
42.5°	650.4	701.7	745.9	793.7	834.4	901.0
43°	602.2	657.4	697.4	739.6	783.1	847.3
43.5°	557.2	610.8	648.4	684.4	730.3	793.3



TEST NUMBER: P776366

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	433.8	478.1	507.1	533.3	586.6	645.3
45.5°	397.0	436.6	462.4	487.9	540.7	597.5
46°	364.1	395.5	419.4	444.0	497.7	552.9
46.5°	331.3	355.9	377.5	402.9	455.8	508.2
47°	298.4	319.5	338.3	364.1	415.4	465.2
47.5°	265.5	285.1	301.1	326.9	376.3	423.3
48°	237.7	251.8	266.3	292.1	339.1	384.1
48.5°	211.4	221.2	233.4	259.6	303.5	346.5
49°	186.0	193.4	202.4	229.8	269.4	310.9
49.5°	163.3	167.6	174.2	202.4	238.1	276.8
50°	142.5	143.3	149.2	176.2	208.3	243.2
50.5°	122.9	127.6	132.7	152.7	181.3	212.2
51°	105.3	111.6	116.3	131.2	156.6	182.9
51.5°	88.9	95.9	99.8	114.7	133.5	155.4
52°	74.8	80.3	83.4	98.7	116.3	130.0
52.5°	61.9	64.2	67.0	82.2	99.1	112.0
53°	50.5	53.6	56.4	66.2	82.2	94.0
53.5°	44.2	43.9	46.6	54.4	65.4	76.0
54°	38.4	36.0	38.4	43.9	52.5	58.3
54.5°	32.1	29.4	31.3	35.2	41.9	46.2
55°	25.8	24.3	25.5	28.2	33.3	36.8
55.5°	19.6	20.8	21.5	23.5	26.6	29.4
56°	18.0	18.8	19.6	20.8	23.1	24.7
56.5°	16.8	17.6	18.0	19.2	20.8	21.9
57°	15.7	16.4	16.8	18.0	19.2	20.4
57.5°	14.9	15.3	15.7	16.4	18.0	19.2
58°	13.7	14.5	14.9	15.3	16.8	17.6
58.5°	12.5	13.3	13.7	14.5	15.7	16.4
59°	11.7	12.5	12.9	13.3	14.5	15.3
59.5°	11.0	11.4	11.7	12.5	13.7	14.5
60°	10.2	10.6	11.0	11.4	12.5	13.3
60.5°	9.4	9.8	10.2	10.6	11.7	12.5
61°	9.0	9.4	9.4	9.8	10.6	11.4
61.5°	8.2	8.6	9.0	9.4	10.2	10.6
62°	7.8	8.2	8.2	8.6	9.4	9.8
62.5°	7.4	7.4	7.8	8.2	8.6	9.4
63°	7.0	7.0	7.4	7.4	8.2	8.6
63.5°	6.7	6.7	6.7	7.0	7.8	8.2
64°	6.3	6.3	6.3	6.7	7.4	7.8
64.5°	5.9	5.9	5.9	6.3	6.7	7.0
65°	5.5	5.5	5.5	5.9	6.3	6.7
65.5°	5.1	5.1	5.5	5.5	5.9	6.3
66°	4.7	5.1	5.1	5.1	5.5	5.9



TEST NUMBER: P776366

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-4000lm-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	3.9	3.9	4.3	4.3	4.7	5.1
68°	3.9	3.9	3.9	3.9	4.3	4.7
68.5°	3.5	3.5	3.5	3.9	4.3	4.3
69°	3.1	3.5	3.5	3.5	3.9	3.9
69.5°	3.1	3.1	3.1	3.5	3.5	3.9
70°	2.7	3.1	3.1	3.1	3.5	3.5
70.5°	2.7	2.7	2.7	3.1	3.1	3.5
71°	2.7	2.7	2.7	2.7	3.1	3.1
71.5°	2.3	2.3	2.3	2.7	2.7	3.1
72°	2.3	2.3	2.3	2.3	2.7	2.7
72.5°	2.0	2.3	2.3	2.3	2.3	2.7
73°	2.0	2.0	2.0	2.3	2.3	2.3
73.5°	2.0	2.0	2.0	2.0	2.3	2.3
74°	2.0	2.0	2.0	2.0	2.0	2.0
74.5°	1.6	1.6	1.6	2.0	2.0	2.0
75°	1.6	1.6	1.6	1.6	1.6	2.0
75.5°	1.6	1.6	1.6	1.6	1.6	1.6
76°	1.2	1.6	1.6	1.6	1.6	1.6
76.5°	1.2	1.2	1.2	1.2	1.6	1.6
77°	1.2	1.2	1.2	1.2	1.2	1.6
77.5°	1.2	1.2	1.2	1.2	1.2	1.2
78°	1.2	1.2	1.2	1.2	1.2	1.2
78.5°	0.8	0.8	0.8	0.8	1.2	1.2
79°	0.8	0.8	0.8	0.8	0.8	1.2
79.5°	0.8	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8	0.8
80.5°	0.8	0.8	0.8	0.8	0.8	0.8
81°	0.4	0.8	0.8	0.8	0.8	0.8
81.5°	0.4	0.4	0.4	0.4	0.4	0.8
82°	0.4	0.4	0.4	0.4	0.4	0.4
82.5°	0.4	0.4	0.4	0.4	0.4	0.4
83°	0.4	0.4	0.4	0.4	0.4	0.4
83.5°	0.4	0.4	0.4	0.4	0.4	0.4
84°	0.4	0.4	0.4	0.4	0.4	0.4
84.5°	0.4	0.4	0.4	0.4	0.0	0.4
85°	0.0	0.0	0.4	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: P776366
CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-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°	2973.1	3015.0	3035.3	3085.9	3033.0	2998.1	2956.2	2905.0	2853.7	2809.0	2776.5
22°	2919.0	2961.3	2979.7	3029.9	2980.9	2946.1	2904.6	2852.9	2801.6	2755.4	2723.7



44°	743.2	793.3	821.5	874.3	821.9	771.4	722.0	684.0	644.5	598.3	557.6
44.5°	694.6	742.4	766.3	819.5	770.6	721.6	673.1	632.4	596.7	552.1	514.9



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



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°	2713.9	2747.2	2785.9	2842.7	2912.0	2973.1
22°	2661.4	2694.7	2732.3	2789.4	2859.9	2919.0



44°	513.3	565.4	600.3	632.8	680.1	743.2
44.5°	473.0	520.8	553.3	580.7	632.4	694.6



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