

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: P776802

Luminaire Tested: HCDJBL54050CSD-HCD8TRH-5000lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776802
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: HCDJBS4050CSD-HCD8TRH-5000lm-3500K
Description: 8 INCH ROUND MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

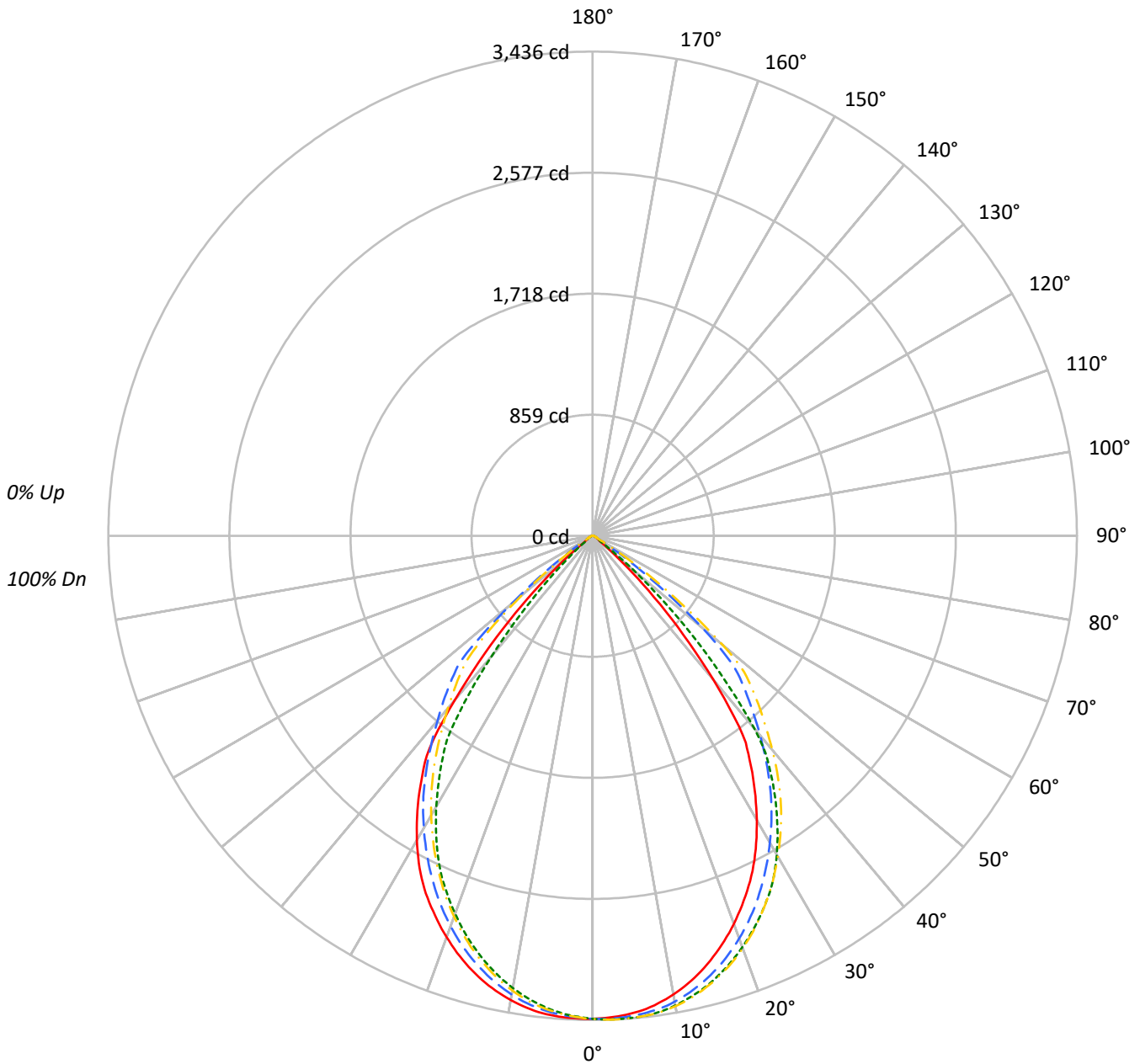
Lumens per Lamp: N/A
Luminaire Lumens: 4751.5 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.15
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 48
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	100	100	100	100		
	1	113	110	107	104	110	107	105	103	103	101	99	100	98	97	96	95	94	92	92	92	92	92	92		
	2	106	101	96	92	104	99	95	91	96	92	89	92	90	87	90	87	85	84	84	84	84	84	84		
	3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76	76	76	76	76	76		
	4	94	85	79	74	92	84	78	73	82	76	72	79	75	72	78	74	71	69	69	69	69	69	69		
	5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	65	63	63	63	63	63	63		
	6	83	72	66	61	81	72	65	60	70	64	60	68	63	60	67	63	59	57	57	57	57	57	57		
	7	78	67	60	55	76	66	60	55	65	59	55	64	58	55	62	58	54	53	53	53	53	53	53		
	8	73	62	55	51	72	62	55	51	60	55	50	59	54	50	58	54	50	48	48	48	48	48	48		
	9	69	58	51	47	68	57	51	47	56	51	46	56	50	46	55	50	46	45	45	45	45	45	45		
	10	65	54	48	43	64	54	47	43	53	47	43	52	47	43	51	46	43	41	41	41	41	41	41		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	104664	104664	104664	104664
5°	104138	105177	104659	103458
10°	102447	104902	103718	101030
15°	99471	103466	101677	97461
20°	95217	100932	98463	92690
25°	89764	97404	94325	86699
30°	82119	92128	87890	78181
35°	72409	84060	78980	68015
40°	53034	71021	60515	44314
45°	26713	43245	33410	19546
50°	8150	17939	10976	5600
55°	3013	3391	3013	2608
60°	2302	2534	2302	1984
65°	1806	1943	1770	1532
70°	1428	1553	1393	1223
75°	1168	1274	1109	944
80°	914	1072	914	738
85°	666	981	666	490

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 135°
 Vertical Angle: 45°
 Luminance: 71077 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.7	6.8
10°-20°	895.7	18.9
20°-30°	1256.9	26.5
30°-40°	1290.7	27.2
40°-50°	789.2	16.6
50°-60°	153.3	3.2
60°-70°	27.9	0.6
70°-80°	12.4	0.3
80°-90°	2.7	0.1
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°	2475.3	52.1
0°-40°	3766.0	79.3
0°-60°	4708.5	99.1
0°-90°	4751.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4751.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3428	3428	3428	3428	3428	
5°	3398	3432	3415	3376	3398	321
15°	3147	3274	3217	3084	3147	883
25°	2665	2892	2800	2574	2665	1219
35°	1943	2255	2119	1825	1943	1187
45°	619	1002	774	453	619	498
55°	57	64	57	49	57	62
65°	25	27	24	21	25	25
75°	10	11	9	8	10	11
85°	2	3	2	1	2	2
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°	3428.2	3428.2	3428.2	3428.2	3428.2	3428.2	3428.2	3428.2	3428.2	3428.2	3428.2
0.5°	3427.2	3426.7	3429.1	3431.0	3429.6	3431.0	3431.9	3431.9	3428.6	3426.3	3426.3
1°	3425.3	3426.3	3429.1	3432.4	3431.5	3432.9	3433.8	3432.9	3428.6	3424.9	3424.4
1.5°	3423.4	3425.3	3429.1	3433.3	3432.9	3434.8	3435.2	3433.3	3428.2	3423.4	3422.0
2°	3421.1	3423.9	3429.1	3433.8	3434.3	3435.7	3436.2	3433.3	3427.2	3421.6	3419.2
2.5°	3418.3	3422.0	3428.2	3433.8	3434.8	3436.6	3436.2	3433.3	3426.3	3419.2	3416.4
3°	3415.0	3419.7	3426.7	3432.9	3434.8	3436.6	3436.2	3432.9	3424.4	3416.8	3412.6
3.5°	3411.2	3416.8	3424.9	3431.5	3434.8	3436.6	3435.7	3431.5	3422.5	3413.5	3408.8
4°	3407.4	3414.0	3422.5	3430.0	3433.8	3435.7	3434.8	3430.5	3420.6	3410.7	3404.6
4.5°	3403.2	3410.7	3419.7	3428.2	3432.9	3434.8	3433.3	3429.1	3418.3	3407.4	3399.4
5°	3398.0	3406.9	3416.8	3426.3	3431.9	3433.3	3431.9	3426.7	3415.0	3403.2	3394.7
5.5°	3392.3	3402.2	3413.1	3423.9	3430.0	3431.9	3430.0	3423.9	3411.7	3398.9	3389.0
6°	3385.7	3397.0	3409.8	3421.1	3428.2	3430.0	3427.7	3421.1	3406.9	3393.7	3382.4
6.5°	3378.2	3390.4	3405.5	3417.8	3425.3	3427.7	3425.3	3416.8	3401.3	3387.6	3375.3
7°	3369.7	3383.8	3400.8	3413.5	3421.6	3424.4	3422.5	3412.1	3395.1	3381.0	3367.8
7.5°	3360.7	3375.8	3395.6	3408.3	3416.8	3420.6	3418.7	3406.0	3388.5	3373.0	3359.3
8°	3350.3	3367.3	3390.0	3402.7	3411.7	3415.9	3414.5	3400.3	3381.5	3365.4	3349.9
8.5°	3339.5	3357.4	3382.9	3396.6	3405.5	3410.2	3409.3	3393.7	3373.0	3356.5	3340.0
9°	3328.7	3348.0	3375.3	3389.5	3398.9	3404.6	3403.6	3386.2	3364.5	3346.6	3329.1
9.5°	3316.4	3337.1	3366.9	3381.9	3391.8	3397.5	3397.0	3378.2	3355.1	3336.7	3317.8
10°	3304.6	3326.8	3357.4	3373.9	3383.8	3390.4	3389.5	3369.7	3345.6	3326.3	3305.6
10.5°	3291.9	3315.0	3347.5	3365.0	3374.9	3382.9	3381.9	3361.2	3335.7	3315.0	3292.8
11°	3278.2	3303.2	3336.7	3355.5	3365.9	3373.9	3373.5	3351.8	3324.9	3303.7	3280.1
11.5°	3264.1	3290.5	3325.4	3345.2	3356.5	3364.5	3364.0	3341.9	3313.6	3290.9	3265.9
12°	3249.0	3277.7	3313.1	3334.8	3346.6	3355.1	3353.7	3331.5	3301.8	3278.2	3251.8
12.5°	3233.9	3264.1	3300.8	3323.5	3335.7	3345.2	3342.8	3320.6	3289.0	3264.5	3236.7
13°	3217.8	3249.9	3287.6	3312.2	3324.9	3334.8	3332.0	3308.9	3276.3	3250.4	3221.6
13.5°	3200.9	3235.3	3273.5	3299.9	3312.6	3323.5	3320.2	3297.1	3262.2	3235.8	3206.1
14°	3183.4	3219.7	3259.3	3287.2	3300.4	3311.7	3307.4	3284.3	3248.0	3220.7	3189.1
14.5°	3165.0	3202.8	3244.3	3273.5	3287.2	3299.0	3294.7	3270.7	3232.5	3204.2	3172.6
15°	3147.1	3186.3	3228.7	3258.9	3273.5	3285.7	3281.0	3257.0	3216.9	3187.7	3155.1
15.5°	3127.3	3168.8	3212.7	3243.8	3259.3	3271.6	3266.9	3242.4	3200.9	3170.7	3137.2
16°	3107.5	3150.4	3196.2	3228.7	3244.7	3257.5	3252.3	3226.8	3183.9	3152.8	3118.3
16.5°	3087.7	3132.0	3178.7	3213.1	3229.2	3242.8	3237.6	3210.3	3166.4	3134.4	3099.0
17°	3066.9	3113.2	3160.8	3196.6	3213.1	3227.3	3221.6	3194.7	3149.0	3115.0	3078.7
17.5°	3045.3	3093.4	3141.9	3178.7	3196.6	3210.8	3205.1	3177.3	3130.1	3095.7	3058.5
18°	3023.6	3072.6	3123.1	3160.8	3179.6	3194.3	3188.6	3159.4	3111.3	3075.9	3037.7
18.5°	3000.9	3051.4	3103.3	3142.4	3161.7	3176.8	3170.7	3141.5	3091.5	3055.2	3015.6
19°	2977.8	3030.2	3083.0	3123.5	3143.8	3158.4	3152.3	3122.6	3071.7	3034.4	2993.9
19.5°	2954.7	3008.0	3062.2	3103.7	3125.4	3140.0	3133.9	3103.3	3051.4	3012.7	2971.2
20°	2930.7	2985.4	3041.0	3084.4	3106.6	3120.7	3114.6	3083.5	3030.6	2991.0	2948.1
20.5°	2905.7	2961.3	3019.3	3063.6	3087.2	3101.8	3094.8	3062.7	3008.9	2967.9	2924.5
21°	2880.2	2937.3	2997.2	3042.9	3066.9	3081.6	3074.5	3042.0	2987.7	2945.3	2900.5



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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°	2801.9	2862.3	2926.9	2977.4	3005.2	3019.3	3010.4	2977.4	2918.9	2874.1	2825.0
23°	2775.1	2835.4	2902.9	2954.7	2983.0	2997.2	2988.2	2954.7	2895.8	2849.6	2799.1
23.5°	2748.2	2809.5	2878.3	2931.6	2960.4	2975.5	2965.1	2931.1	2872.7	2824.1	2772.7
24°	2720.8	2782.1	2852.4	2908.0	2938.2	2952.4	2941.5	2907.6	2849.1	2798.6	2746.3
24.5°	2693.0	2755.3	2826.5	2884.0	2915.1	2928.8	2917.5	2884.0	2825.0	2772.7	2718.9
25°	2664.7	2727.4	2800.1	2859.0	2891.5	2904.7	2893.9	2859.5	2800.1	2746.3	2690.7
25.5°	2634.5	2699.6	2773.6	2834.5	2868.4	2881.2	2868.9	2834.9	2774.1	2719.9	2662.8
26°	2603.4	2671.8	2746.8	2809.0	2844.8	2856.6	2843.9	2810.4	2746.8	2693.5	2634.5
26.5°	2571.8	2643.5	2718.9	2784.0	2819.9	2831.2	2818.0	2785.4	2718.0	2665.7	2605.8
27°	2539.3	2613.8	2691.1	2758.1	2793.5	2805.7	2792.5	2759.5	2688.3	2637.4	2576.5
27.5°	2505.8	2582.7	2662.4	2731.2	2766.1	2780.7	2766.1	2732.6	2657.6	2608.1	2546.4
28°	2471.9	2550.6	2633.6	2703.9	2737.3	2754.8	2739.2	2703.9	2626.5	2576.5	2516.7
28.5°	2437.4	2518.5	2604.8	2676.5	2707.6	2727.4	2711.9	2674.6	2594.5	2545.4	2486.9
29°	2401.1	2485.1	2574.7	2647.7	2677.5	2699.1	2685.0	2644.9	2561.9	2513.8	2456.8
29.5°	2365.8	2452.5	2545.4	2618.0	2645.9	2669.9	2656.7	2614.3	2527.5	2481.3	2426.1
30°	2329.4	2418.1	2515.2	2586.4	2613.3	2640.2	2628.4	2581.7	2493.1	2447.8	2394.5
30.5°	2292.2	2383.7	2485.5	2554.8	2579.8	2608.6	2599.6	2549.2	2458.2	2413.9	2363.9
31°	2254.9	2347.8	2454.4	2522.3	2545.9	2578.0	2571.4	2516.2	2422.8	2379.4	2332.7
31.5°	2217.2	2313.4	2424.2	2489.3	2511.0	2544.9	2541.6	2482.7	2387.0	2344.5	2301.2
32°	2180.0	2276.6	2392.6	2455.4	2476.1	2511.9	2512.4	2448.7	2350.2	2309.6	2269.1
32.5°	2141.8	2241.7	2361.5	2420.0	2440.7	2478.0	2482.7	2413.9	2313.9	2275.2	2237.0
33°	2102.6	2205.4	2329.9	2385.6	2404.4	2444.5	2453.0	2378.0	2276.2	2238.9	2204.0
33.5°	2063.5	2168.6	2298.3	2348.8	2367.2	2409.1	2422.8	2342.2	2238.0	2203.5	2170.1
34°	2024.4	2131.4	2263.9	2314.4	2330.9	2374.2	2392.2	2306.3	2199.3	2168.2	2136.1
34.5°	1983.8	2095.1	2231.8	2277.6	2293.1	2339.4	2361.0	2270.0	2158.7	2131.9	2100.3
35°	1942.8	2056.9	2197.9	2241.3	2255.4	2304.0	2329.4	2233.3	2119.1	2094.6	2065.4
35.5°	1904.1	2019.2	2164.9	2204.0	2215.8	2267.7	2296.9	2196.0	2079.5	2057.8	2029.5
36°	1862.6	1981.4	2130.0	2169.1	2176.7	2232.3	2263.4	2158.3	2040.4	2020.6	1994.2
36.5°	1826.3	1942.8	2095.6	2131.9	2137.1	2196.0	2229.5	2120.1	1998.9	1982.9	1958.8
37°	1766.9	1904.1	2060.2	2094.6	2096.5	2157.8	2195.1	2081.9	1953.6	1944.7	1922.0
37.5°	1707.0	1865.4	2025.8	2056.4	2056.4	2121.0	2160.2	2042.3	1897.0	1906.9	1886.2
38°	1628.7	1826.8	1989.9	2018.7	2013.5	2082.8	2125.3	2003.6	1832.9	1868.7	1850.8
38.5°	1556.6	1788.6	1955.0	1979.6	1970.1	2044.6	2089.9	1965.4	1760.3	1830.1	1816.4
39°	1483.5	1749.4	1918.7	1942.8	1913.1	2006.9	2054.1	1925.8	1682.0	1786.7	1780.6
39.5°	1409.5	1688.1	1883.8	1903.6	1853.2	1967.8	2018.2	1887.6	1599.0	1733.9	1745.7
40°	1330.7	1619.3	1848.5	1865.4	1782.0	1929.6	1982.4	1832.0	1518.4	1673.5	1711.7
40.5°	1253.4	1547.1	1813.6	1827.2	1702.8	1890.9	1947.0	1774.4	1441.1	1604.7	1679.2
41°	1174.6	1476.4	1778.7	1775.4	1622.1	1837.2	1910.7	1708.4	1363.2	1532.5	1646.6
41.5°	1097.8	1406.2	1744.7	1725.9	1541.0	1786.7	1876.8	1636.3	1288.7	1458.0	1615.1
42°	1024.7	1334.5	1711.2	1663.6	1460.9	1721.6	1841.9	1562.2	1210.5	1383.1	1582.5
42.5°	956.3	1259.5	1678.2	1597.1	1382.6	1652.3	1808.4	1483.5	1135.5	1311.4	1551.4
43°	887.9	1184.1	1645.7	1525.9	1307.1	1577.8	1775.9	1410.9	1057.2	1240.6	1518.9
43.5°	818.1	1109.6	1612.2	1451.4	1230.7	1500.9	1742.8	1337.8	983.2	1170.9	1487.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	618.7	901.6	1516.0	1234.0	1001.6	1277.9	1646.2	1121.8	773.8	959.6	1392.0
45.5°	558.3	834.2	1484.0	1165.7	928.9	1205.7	1613.6	1048.7	706.9	891.2	1359.9
46°	500.8	768.2	1451.4	1096.8	859.2	1134.1	1580.2	977.5	642.2	824.3	1329.3
46.5°	443.3	703.1	1419.8	1027.0	790.3	1061.0	1548.6	907.7	579.1	761.6	1278.4
47°	390.0	638.0	1381.6	956.8	722.9	987.0	1515.6	839.4	518.2	697.4	1218.0
47.5°	340.9	578.1	1333.1	888.4	656.4	917.2	1481.6	773.8	466.4	636.6	1147.3
48°	296.1	520.1	1276.0	822.4	593.7	849.3	1447.7	710.2	415.0	576.2	1069.0
48.5°	257.5	464.5	1213.8	758.7	532.8	782.8	1401.0	647.0	363.6	519.6	991.2
49°	224.0	411.2	1154.3	697.4	481.0	717.2	1341.1	584.7	312.2	468.2	911.5
49.5°	195.7	360.7	1084.6	636.1	429.6	653.6	1278.8	525.8	269.3	416.8	834.2
50°	171.6	313.1	1016.7	575.8	377.7	590.4	1205.3	475.3	231.1	365.0	758.2
50.5°	152.8	269.7	941.2	517.3	326.3	531.9	1126.5	424.9	196.2	314.1	687.5
51°	133.4	232.9	862.5	461.6	275.4	480.0	1045.0	374.9	165.5	272.1	617.7
51.5°	114.6	201.4	786.1	408.8	236.2	428.2	962.9	324.4	138.6	233.4	553.6
52°	95.7	174.9	712.0	360.3	199.0	376.3	883.2	274.4	113.2	197.6	499.8
52.5°	76.9	155.1	639.9	313.6	165.5	324.4	806.8	234.4	90.5	165.0	446.6
53°	67.0	135.8	574.8	270.2	136.7	273.0	734.2	198.1	72.6	136.7	393.3
53.5°	63.7	116.0	511.2	229.6	111.3	232.0	663.0	166.5	64.6	111.8	339.5
54°	61.3	96.7	451.7	193.8	87.2	194.3	596.0	138.2	61.8	89.1	286.2
54.5°	58.9	77.3	395.2	159.9	69.8	162.2	531.0	113.2	59.4	68.8	244.7
55°	56.6	63.2	345.2	135.3	63.7	132.5	474.4	90.1	56.6	55.2	208.9
55.5°	54.2	57.1	297.1	111.3	61.3	106.1	418.7	69.3	54.2	52.8	176.8
56°	51.9	54.7	254.2	86.8	58.5	82.5	362.6	56.1	52.3	50.9	149.0
56.5°	50.0	52.3	216.0	62.7	55.6	63.2	306.5	53.8	50.0	49.0	124.5
57°	48.1	50.5	182.0	53.8	53.3	54.2	262.2	51.4	48.1	47.2	104.2
57.5°	46.2	48.6	154.7	51.9	51.4	51.9	221.6	49.5	46.2	45.3	87.7
58°	44.3	46.7	134.9	50.0	49.0	50.0	184.8	47.6	44.3	43.9	74.5
58.5°	42.4	45.3	115.1	48.1	47.2	48.1	152.8	46.2	42.4	42.0	64.1
59°	40.6	43.4	95.3	46.2	45.3	46.2	124.5	44.3	40.6	40.6	55.6
59.5°	39.1	42.0	75.4	44.8	43.4	44.3	100.9	42.9	39.1	39.1	49.5
60°	37.7	40.6	65.5	42.9	41.5	42.9	83.0	41.5	37.7	37.7	44.8
60.5°	36.3	39.1	57.1	41.5	39.6	41.5	69.3	39.6	35.8	36.8	40.6
61°	34.9	37.7	50.5	40.1	38.2	39.6	58.9	38.7	34.4	35.4	38.2
61.5°	33.5	36.3	44.8	38.7	36.8	38.2	51.4	37.3	33.0	34.0	36.8
62°	32.1	34.9	41.0	37.3	35.4	37.3	45.7	35.8	31.6	33.0	35.4
62.5°	30.7	34.0	38.2	35.8	34.0	35.8	41.5	34.4	30.2	31.6	34.0
63°	29.2	32.5	36.8	34.9	32.1	34.4	38.2	33.5	28.8	30.7	32.5
63.5°	28.3	31.6	35.8	33.5	30.7	33.0	36.8	32.1	27.8	29.2	31.6
64°	26.9	30.2	34.4	32.1	29.7	32.1	35.4	31.1	26.4	28.3	30.2
64.5°	25.9	29.2	33.5	31.1	28.3	30.7	34.0	29.7	25.5	27.3	29.2
65°	25.0	28.3	32.1	30.2	26.9	29.7	32.5	28.8	24.5	26.4	28.3
65.5°	24.0	27.3	31.1	28.8	25.9	28.8	31.1	27.8	23.1	25.5	27.3
66°	22.6	25.9	29.7	27.8	25.0	27.3	30.2	26.4	22.2	24.5	26.4



TEST NUMBER: P776802

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	20.3	23.1	26.9	25.0	21.7	24.5	27.3	23.6	19.3	21.7	23.6
68°	19.3	22.2	25.9	24.0	20.7	23.6	25.9	22.6	18.9	20.7	22.6
68.5°	18.4	21.7	25.0	23.1	19.8	22.6	25.0	21.7	17.9	19.8	21.7
69°	17.4	20.7	24.0	22.2	18.9	21.7	24.0	21.2	17.0	19.3	20.7
69.5°	17.0	19.8	23.1	21.2	18.4	21.2	23.1	20.3	16.5	18.4	19.8
70°	16.0	18.9	22.2	20.3	17.4	20.3	22.2	19.3	15.6	17.4	18.9
70.5°	15.6	18.4	21.2	19.8	16.5	19.3	21.7	18.4	15.1	17.0	18.4
71°	14.6	17.4	20.3	18.9	16.0	18.9	20.7	17.9	14.1	16.0	17.4
71.5°	14.1	17.0	19.3	17.9	15.1	17.9	19.8	17.0	13.7	15.6	16.5
72°	13.2	16.0	18.9	17.4	14.6	17.0	18.9	16.5	12.7	14.6	16.0
72.5°	12.7	15.6	17.9	16.5	13.7	16.5	17.9	15.6	12.3	14.1	15.1
73°	12.3	14.6	17.0	16.0	13.2	15.6	17.4	15.1	11.8	13.7	14.6
73.5°	11.3	14.1	16.5	15.1	12.7	15.1	16.5	14.1	11.3	12.7	13.7
74°	10.8	13.2	15.6	14.6	12.3	14.6	16.0	13.7	10.4	12.3	13.2
74.5°	10.4	12.7	14.6	13.7	11.3	13.7	15.1	13.2	9.9	11.8	12.3
75°	9.9	12.3	14.1	13.2	10.8	13.2	14.6	12.3	9.4	10.8	11.8
75.5°	9.4	11.3	13.2	12.7	10.4	12.7	13.7	11.8	9.0	10.4	11.3
76°	9.0	10.8	12.7	12.3	9.9	12.3	13.2	11.3	8.5	9.9	10.4
76.5°	8.5	10.4	12.3	11.3	9.4	11.3	12.3	10.4	8.0	9.4	9.9
77°	8.0	9.9	11.3	10.8	9.0	10.8	11.8	9.9	7.5	9.0	9.4
77.5°	7.5	9.4	10.8	10.4	8.5	10.4	11.3	9.4	7.1	8.5	9.0
78°	7.1	9.0	10.4	9.9	8.0	9.9	10.4	9.0	6.6	8.0	8.0
78.5°	6.6	8.0	9.4	9.4	7.5	9.4	9.9	8.5	6.1	7.1	7.5
79°	6.1	7.5	9.0	8.5	7.1	9.0	9.4	8.0	6.1	6.6	7.1
79.5°	5.7	7.1	8.5	8.0	6.6	8.5	9.0	7.5	5.7	6.1	6.6
80°	5.2	6.6	8.0	7.5	6.1	7.5	8.0	7.1	5.2	5.7	6.1
80.5°	4.7	6.1	7.5	7.1	6.1	7.1	7.5	6.1	4.7	5.2	5.7
81°	4.2	5.7	7.1	6.6	5.7	6.6	7.1	5.7	4.2	4.7	5.2
81.5°	4.2	5.2	6.1	6.1	5.2	6.6	6.6	5.7	4.2	4.7	4.7
82°	3.8	4.7	5.7	5.7	4.7	6.1	6.1	5.2	3.8	4.2	4.2
82.5°	3.3	4.2	5.2	5.2	4.2	5.7	5.7	4.7	3.3	3.8	3.8
83°	2.8	3.8	4.7	4.7	4.2	5.2	5.2	4.2	2.8	3.3	3.3
83.5°	2.8	3.3	4.2	4.2	3.8	4.7	4.7	3.8	2.8	2.8	2.8
84°	2.4	3.3	3.8	4.2	3.3	4.2	4.2	3.3	2.4	2.4	2.4
84.5°	1.9	2.8	3.3	3.8	3.3	3.8	3.8	2.8	1.9	1.9	2.4
85°	1.9	2.4	2.8	3.3	2.8	3.3	3.3	2.4	1.9	1.9	1.9
85.5°	1.4	1.9	2.8	2.8	2.8	3.3	2.8	1.9	1.4	1.4	1.4
86°	0.9	1.4	2.4	2.4	2.4	2.8	2.4	1.9	1.4	0.9	0.9
86.5°	0.9	0.9	1.9	2.4	1.9	2.4	2.4	1.4	0.9	0.9	0.9
87°	0.5	0.9	1.4	1.9	1.9	1.9	1.9	0.9	0.9	0.5	0.5
87.5°	0.5	0.5	1.4	1.4	1.4	1.9	1.4	0.9	0.5	0.5	0.5
88°	0.5	0.5	0.9	1.4	1.4	1.4	1.4	0.5	0.5	0.0	0.0
88.5°	0.0	0.5	0.5	0.9	0.9	0.9	0.9	0.5	0.5	0.0	0.0



TEST NUMBER: P776802
CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-5000lm-3500K

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	0.5	0.0	0.5	0.0	0.0	0.0	0.0



TEST NUMBER: P776802

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TRH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3428.2	3428.2	3428.2	3428.2	3428.2	3428.2
0.5°	3427.2	3423.9	3425.3	3427.2	3428.2	3427.2
1°	3424.4	3420.6	3422.0	3423.9	3425.8	3425.3
1.5°	3421.1	3416.8	3418.3	3420.6	3422.5	3423.4
2°	3417.8	3413.1	3414.0	3416.8	3419.2	3421.1
2.5°	3414.0	3408.8	3409.8	3412.6	3415.4	3418.3
3°	3410.2	3403.6	3405.0	3407.4	3411.7	3415.0
3.5°	3405.0	3398.0	3398.9	3402.7	3406.9	3411.2
4°	3399.9	3391.4	3392.8	3397.0	3402.7	3407.4
4.5°	3393.7	3383.8	3385.2	3390.4	3397.5	3403.2
5°	3386.7	3375.8	3377.2	3383.8	3391.4	3398.0
5.5°	3379.1	3366.4	3368.3	3376.8	3385.2	3392.3
6°	3370.6	3357.4	3359.3	3368.7	3378.2	3385.7
6.5°	3361.7	3346.6	3348.9	3359.8	3370.6	3378.2
7°	3352.2	3335.7	3338.1	3350.3	3361.7	3369.7
7.5°	3341.4	3323.9	3326.3	3340.0	3352.2	3360.7
8°	3330.5	3312.2	3314.5	3329.1	3341.9	3350.3
8.5°	3319.2	3299.4	3302.3	3317.3	3330.1	3339.5
9°	3307.4	3286.2	3289.5	3304.6	3318.3	3328.7
9.5°	3295.2	3272.5	3275.8	3291.4	3305.6	3316.4
10°	3282.9	3258.9	3262.2	3277.3	3292.8	3304.6
10.5°	3269.2	3243.8	3247.6	3262.6	3279.1	3291.9
11°	3255.6	3228.2	3232.5	3247.1	3265.0	3278.2
11.5°	3241.4	3212.7	3216.9	3231.5	3249.9	3264.1
12°	3226.3	3195.7	3200.4	3215.0	3234.3	3249.0
12.5°	3210.3	3178.2	3183.4	3197.6	3217.8	3233.9
13°	3194.3	3160.3	3166.0	3180.1	3201.3	3217.8
13.5°	3176.8	3141.5	3147.6	3162.7	3183.9	3200.9
14°	3159.4	3122.6	3128.3	3143.8	3166.0	3183.4
14.5°	3141.5	3103.7	3108.9	3124.5	3146.6	3165.0
15°	3122.6	3083.5	3088.6	3105.1	3127.8	3147.1
15.5°	3103.7	3062.2	3068.4	3084.4	3107.5	3127.3
16°	3083.9	3041.5	3047.1	3063.6	3086.8	3107.5
16.5°	3063.6	3020.3	3025.9	3042.4	3066.0	3087.7
17°	3042.4	2998.1	3003.3	3019.8	3044.8	3066.9
17.5°	3021.2	2975.5	2980.7	2997.2	3022.2	3045.3
18°	2999.0	2951.4	2957.1	2973.6	3000.0	3023.6
18.5°	2976.4	2927.8	2933.5	2950.0	2976.4	3000.9
19°	2953.8	2903.3	2909.0	2926.0	2952.8	2977.8
19.5°	2929.7	2878.3	2883.5	2901.4	2928.8	2954.7
20°	2906.2	2852.9	2858.5	2876.0	2904.3	2930.7
20.5°	2881.2	2827.4	2832.1	2850.5	2879.3	2905.7
21°	2855.7	2801.5	2805.7	2824.6	2852.9	2880.2



TEST NUMBER: P776802

CATALOG NUMBER: HCDJBLS4050CSD-HCD8TRH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2777.9	2721.8	2724.1	2743.5	2773.2	2801.9
23°	2751.5	2694.0	2695.8	2716.1	2744.9	2775.1
23.5°	2724.6	2666.1	2669.0	2688.3	2717.1	2748.2
24°	2697.7	2636.4	2639.7	2659.5	2689.2	2720.8
24.5°	2669.4	2606.2	2611.4	2630.3	2660.5	2693.0
25°	2641.6	2573.7	2581.7	2600.6	2631.7	2664.7
25.5°	2612.8	2541.2	2551.5	2571.4	2602.0	2634.5
26°	2583.6	2507.7	2519.5	2541.6	2572.8	2603.4
26.5°	2551.5	2473.7	2487.9	2511.5	2543.1	2571.8
27°	2519.5	2438.4	2454.4	2479.9	2512.4	2539.3
27.5°	2486.9	2403.0	2420.5	2448.7	2480.8	2505.8
28°	2453.0	2366.2	2385.1	2417.6	2447.8	2471.9
28.5°	2418.6	2329.4	2350.7	2385.1	2414.3	2437.4
29°	2383.7	2291.7	2315.3	2354.4	2380.8	2401.1
29.5°	2349.3	2255.4	2279.5	2322.8	2346.9	2365.8
30°	2312.9	2217.7	2242.7	2290.3	2310.6	2329.4
30.5°	2276.6	2179.0	2206.4	2257.3	2275.7	2292.2
31°	2239.9	2139.9	2169.1	2225.7	2239.9	2254.9
31.5°	2202.6	2102.2	2131.9	2192.2	2204.0	2217.2
32°	2165.8	2063.0	2094.1	2158.7	2166.8	2180.0
32.5°	2129.5	2023.4	2057.4	2123.9	2131.4	2141.8
33°	2091.8	1983.8	2019.6	2090.8	2095.1	2102.6
33.5°	2053.6	1942.8	1981.9	2056.4	2057.8	2063.5
34°	2015.4	1903.6	1943.2	2021.5	2021.1	2024.4
34.5°	1977.2	1863.1	1904.1	1985.7	1984.3	1983.8
35°	1939.0	1824.9	1865.9	1949.9	1947.0	1942.8
35.5°	1901.3	1779.2	1827.2	1914.5	1910.7	1904.1
36°	1862.1	1718.3	1788.1	1878.6	1872.5	1862.6
36.5°	1823.9	1645.7	1749.9	1842.8	1834.8	1826.3
37°	1785.8	1570.7	1713.1	1806.5	1797.1	1766.9
37.5°	1747.6	1497.6	1672.6	1770.7	1759.3	1707.0
38°	1712.7	1420.8	1614.1	1735.3	1721.6	1628.7
38.5°	1653.7	1344.9	1545.7	1700.4	1682.5	1556.6
39°	1589.1	1266.1	1475.9	1666.5	1649.0	1483.5
39.5°	1518.9	1187.4	1407.1	1631.6	1590.1	1409.5
40°	1448.6	1111.9	1337.8	1597.6	1529.7	1330.7
40.5°	1378.8	1037.4	1267.0	1564.6	1459.9	1253.4
41°	1306.2	966.7	1193.0	1532.1	1391.5	1174.6
41.5°	1233.1	897.8	1119.5	1499.5	1326.0	1097.8
42°	1157.7	829.0	1048.3	1467.0	1260.0	1024.7
42.5°	1085.5	759.7	980.8	1435.9	1191.1	956.3
43°	1014.8	693.2	914.8	1404.3	1119.9	887.9
43.5°	947.3	629.5	849.3	1373.1	1048.7	818.1



TEST NUMBER: P776802

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	749.8	452.7	658.3	1278.8	852.1	618.7
45.5°	685.6	399.4	597.5	1231.7	788.4	558.3
46°	622.0	348.0	541.3	1181.2	725.7	500.8
46.5°	563.0	303.2	484.8	1122.3	663.9	443.3
47°	506.9	262.7	431.0	1068.5	603.6	390.0
47.5°	455.5	227.8	378.7	1003.0	546.1	340.9
48°	404.6	198.5	331.0	936.5	490.4	296.1
48.5°	353.2	174.5	287.6	859.6	437.1	257.5
49°	302.3	155.6	248.5	788.4	386.2	224.0
49.5°	260.3	136.7	214.1	717.7	337.6	195.7
50°	224.5	117.9	186.3	652.6	292.8	171.6
50.5°	192.9	99.0	161.3	589.4	251.8	152.8
51°	167.4	80.2	142.9	531.9	216.9	133.4
51.5°	145.7	67.4	124.5	474.8	187.7	114.6
52°	126.8	63.2	106.1	423.5	161.7	95.7
52.5°	108.9	60.4	87.7	373.0	142.9	76.9
53°	91.0	58.0	71.2	327.3	123.5	67.0
53.5°	74.0	55.6	58.5	284.3	104.7	63.7
54°	60.8	53.3	54.2	247.1	85.4	61.3
54.5°	54.2	50.9	52.3	212.2	68.8	58.9
55°	52.3	49.0	50.5	182.0	57.1	56.6
55.5°	50.5	47.2	48.6	160.8	53.8	54.2
56°	48.6	45.3	46.7	140.0	51.9	51.9
56.5°	46.7	43.4	44.8	119.3	50.0	50.0
57°	45.3	41.5	43.4	98.1	48.1	48.1
57.5°	43.4	39.6	41.5	77.8	46.2	46.2
58°	42.0	38.2	40.1	67.0	44.8	44.3
58.5°	40.6	36.8	38.7	58.0	43.4	42.4
59°	39.1	35.4	37.3	50.9	42.0	40.6
59.5°	37.7	34.0	35.8	45.3	40.6	39.1
60°	36.3	32.5	34.9	41.0	39.1	37.7
60.5°	35.4	31.1	33.5	38.7	37.7	36.3
61°	34.0	29.7	32.5	37.3	36.3	34.9
61.5°	32.5	28.8	31.1	35.8	34.9	33.5
62°	31.6	27.3	30.2	34.4	34.0	32.1
62.5°	30.2	26.4	28.8	33.5	32.5	30.7
63°	29.2	25.0	27.8	32.1	31.6	29.2
63.5°	28.3	24.0	26.9	31.1	30.2	28.3
64°	26.9	23.1	25.9	30.2	29.2	26.9
64.5°	25.9	22.2	25.0	28.8	28.3	25.9
65°	25.0	21.2	24.0	27.8	27.3	25.0
65.5°	24.0	20.3	23.1	26.9	25.9	24.0
66°	23.1	19.3	22.2	25.9	25.0	22.6



TEST NUMBER: P776802

CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	20.7	17.0	19.8	23.1	22.2	20.3
68°	19.8	16.0	18.9	22.2	21.2	19.3
68.5°	18.9	15.6	18.4	21.2	20.7	18.4
69°	18.4	14.6	17.4	20.3	19.8	17.4
69.5°	17.4	14.1	17.0	19.8	18.9	17.0
70°	17.0	13.7	16.0	18.9	17.9	16.0
70.5°	16.0	12.7	15.6	17.9	17.4	15.6
71°	15.6	12.3	14.6	17.4	16.5	14.6
71.5°	14.6	11.8	14.1	16.5	16.0	14.1
72°	14.1	11.3	13.7	15.6	15.1	13.2
72.5°	13.7	10.4	12.7	15.1	14.6	12.7
73°	12.7	9.9	12.3	14.1	13.7	12.3
73.5°	12.3	9.4	11.8	13.7	13.2	11.3
74°	11.8	9.0	11.3	12.7	12.3	10.8
74.5°	10.8	8.5	10.4	12.3	11.8	10.4
75°	10.4	8.0	9.9	11.8	11.3	9.9
75.5°	9.9	7.5	9.4	10.8	10.8	9.4
76°	9.4	7.1	9.0	10.4	9.9	9.0
76.5°	9.0	7.1	8.5	9.9	9.4	8.5
77°	8.5	6.6	8.0	9.0	9.0	8.0
77.5°	8.0	6.1	7.5	8.5	8.5	7.5
78°	7.5	5.7	7.1	8.0	8.0	7.1
78.5°	7.1	5.2	6.6	7.5	7.1	6.6
79°	6.6	4.7	6.1	7.1	6.6	6.1
79.5°	6.1	4.7	5.7	6.6	6.1	5.7
80°	5.7	4.2	5.2	5.7	5.7	5.2
80.5°	5.2	3.8	4.7	5.2	5.2	4.7
81°	4.7	3.8	4.2	4.7	4.7	4.2
81.5°	4.2	3.3	3.8	4.2	4.2	4.2
82°	3.8	2.8	3.8	3.8	3.8	3.8
82.5°	3.3	2.8	3.3	3.8	3.3	3.3
83°	2.8	2.4	2.8	3.3	2.8	2.8
83.5°	2.8	1.9	2.4	2.8	2.4	2.8
84°	2.4	1.9	1.9	2.4	1.9	2.4
84.5°	1.9	1.4	1.9	1.9	1.9	1.9
85°	1.4	1.4	1.4	1.9	1.4	1.9
85.5°	1.4	0.9	0.9	1.4	0.9	1.4
86°	0.9	0.5	0.9	0.9	0.9	0.9
86.5°	0.5	0.5	0.5	0.9	0.5	0.9
87°	0.5	0.0	0.5	0.5	0.5	0.5
87.5°	0.0	0.0	0.0	0.0	0.5	0.5
88°	0.0	0.0	0.0	0.0	0.0	0.5
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776802
CATALOG NUMBER: HCDJBL54050CSD-HCD8TRH-5000lm-3500K

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
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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°	2854.3	2912.8	2974.1	3021.7	3046.7	3061.3	3053.3	3020.7	2965.1	2921.7	2876.0
22°	2828.3	2887.8	2950.5	3000.0	3025.9	3040.5	3032.5	2999.0	2942.5	2898.6	2851.0



44°	747.9	1037.4	1579.7	1377.9	1154.8	1425.0	1710.3	1266.1	910.1	1100.1	1454.3
44.5°	682.3	968.6	1547.6	1305.2	1078.0	1349.6	1678.2	1192.1	842.2	1029.9	1423.6



66.5°	21.7	25.0	28.8	26.9	23.6	26.4	29.2	25.5	21.2	23.6	25.0
67°	20.7	24.0	27.8	25.9	22.6	25.5	28.3	24.5	20.3	22.6	24.0



89°	0.0	0.0	0.5	0.5	0.9	0.9	0.5	0.5	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0

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21.5°	2829.8	2775.1	2778.8	2798.2	2826.5	2854.3
22°	2804.3	2748.2	2751.5	2771.3	2799.6	2828.3



44°	879.4	567.3	784.7	1342.0	979.4	747.9
44.5°	814.4	510.7	721.0	1310.4	915.7	682.3

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66.5°	22.2	18.4	21.2	25.0	24.0	21.7
67°	21.7	17.9	20.7	24.0	23.1	20.7

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Peachtree City, GA 30269

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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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Scaled Data Report



(END OF REPORT)