

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: P776548

Luminaire Tested: HCDJBS4050CSD-HCD41TRC-5000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776548
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B028)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS4050CSD-HCD41TRC-5000lm-4000K
Description: 4 INCH ROUND SHALLOW-WIDE SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

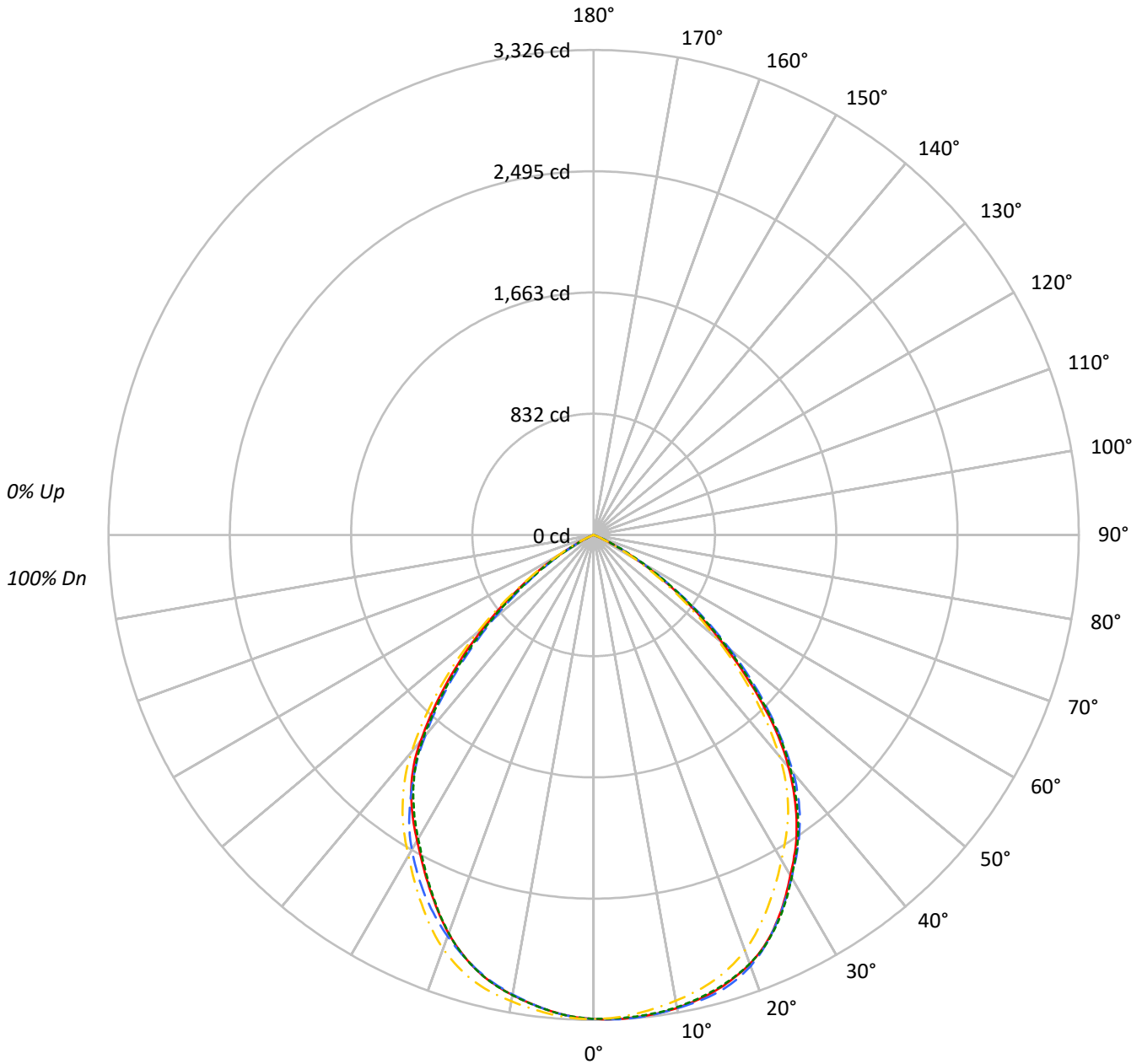
Lumens per Lamp: N/A
Luminaire Lumens: 5788.4 lumens
Efficiency: N/A
Efficacy: 120.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.16 / 1.22
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 48
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	109	106	103	110	107	104	101	102	100	98	99	97	95	95	94	93	91																			
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81																			
3	98	90	83	78	95	88	82	78	85	80	76	83	79	75	80	77	74	72																			
4	91	81	75	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	74	67	62	83	73	66	61	71	65	61	70	64	60	68	63	60	58																			
6	79	68	61	55	77	67	60	55	65	59	55	64	58	54	62	58	54	52																			
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47																			
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43																			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	41	39																			
10	61	49	42	38	60	49	42	38	48	42	38	47	42	37	46	41	37	36																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	417784	417784	417784	417784
5°	419556	418836	414478	414541
10°	420983	420254	409430	409609
15°	421486	420548	402776	402959
20°	419270	419150	389539	389150
25°	409609	411067	370270	369062
30°	392070	394512	351875	349579
35°	372609	375620	335030	331205
40°	341516	345130	303221	298753
45°	290941	295960	250825	244186
50°	225802	231793	191049	182787
55°	158438	164845	127895	119075
60°	91291	97559	65996	58294
65°	31774	36062	17956	14264
70°	1067	2281	1067	883
75°	924	1167	924	924
80°	725	1015	725	725
85°	0	722	0	722

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 299965 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.3	5.4
10°-20°	890.9	15.4
20°-30°	1292.8	22.3
30°-40°	1433.7	24.8
40°-50°	1164.1	20.1
50°-60°	584.5	10.1
60°-70°	106.3	1.8
70°-80°	2.2	0.0
80°-90°	0.5	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°	2497.1	43.1
0°-40°	3930.8	67.9
0°-60°	5679.4	98.1
0°-90°	5788.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5788.4	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3320	3320	3320	3320	3320	
5°	3321	3315	3281	3281	3321	316
15°	3235	3228	3091	3093	3235	912
25°	2950	2960	2666	2658	2950	1354
35°	2425	2445	2181	2156	2425	1507
45°	1635	1663	1409	1372	1635	1251
55°	722	751	583	543	722	651
65°	107	121	60	48	107	127
75°	2	2	2	2	2	2
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3319.7	3319.7	3319.7	3319.7	3319.7	3319.7	3319.7	3319.7	3319.7	3319.7	3319.7
0.5°	3321.1	3321.1	3321.6	3322.5	3318.7	3319.7	3320.1	3320.1	3317.8	3317.3	3318.2
1°	3322.5	3322.5	3323.0	3323.5	3319.7	3319.2	3319.2	3319.2	3315.8	3314.9	3316.3
1.5°	3323.5	3323.5	3324.5	3324.5	3320.1	3318.7	3317.8	3316.3	3313.4	3312.5	3313.9
2°	3324.0	3324.5	3324.9	3324.9	3319.7	3317.8	3315.8	3313.0	3310.6	3309.1	3310.6
2.5°	3324.0	3325.4	3325.9	3324.9	3319.2	3316.8	3313.9	3310.1	3307.2	3305.8	3307.2
3°	3324.0	3325.4	3325.9	3324.9	3318.7	3315.4	3311.5	3306.3	3302.9	3301.5	3303.4
3.5°	3324.0	3325.4	3325.9	3324.5	3318.7	3313.4	3308.2	3302.0	3297.7	3296.2	3298.6
4°	3323.0	3324.9	3325.4	3324.5	3317.3	3312.0	3304.8	3297.7	3292.4	3291.4	3293.3
4.5°	3322.1	3324.5	3324.9	3323.5	3316.3	3309.6	3301.5	3292.9	3286.6	3285.2	3287.1
5°	3321.1	3323.0	3323.5	3322.5	3315.4	3307.7	3297.2	3287.1	3280.9	3279.0	3280.9
5.5°	3319.2	3322.1	3322.1	3320.6	3313.9	3304.8	3292.9	3281.4	3273.7	3272.3	3274.2
6°	3317.3	3320.1	3320.1	3319.2	3312.5	3302.0	3288.1	3275.2	3267.0	3265.6	3267.0
6.5°	3315.8	3318.2	3317.8	3316.8	3310.6	3299.1	3283.3	3268.9	3260.3	3258.4	3259.9
7°	3313.4	3315.8	3315.8	3314.4	3308.7	3295.3	3278.0	3262.2	3252.7	3250.8	3252.2
7.5°	3311.5	3313.0	3313.0	3312.0	3305.8	3291.9	3272.8	3255.5	3245.0	3243.1	3243.6
8°	3308.7	3309.6	3310.1	3309.1	3303.4	3288.1	3267.5	3248.8	3237.4	3235.0	3235.9
8.5°	3305.3	3306.3	3306.7	3305.8	3300.5	3283.8	3262.2	3242.1	3229.2	3226.8	3226.8
9°	3302.0	3302.9	3303.4	3302.0	3296.7	3279.5	3256.5	3234.5	3221.6	3218.7	3218.2
9.5°	3298.1	3298.6	3300.0	3297.7	3292.9	3275.2	3250.3	3227.3	3213.0	3210.1	3209.6
10°	3294.3	3294.3	3296.7	3293.3	3288.6	3269.9	3244.5	3219.7	3203.9	3201.9	3200.5
10.5°	3289.5	3290.0	3293.3	3289.5	3284.3	3264.2	3237.8	3212.0	3195.2	3193.8	3191.4
11°	3284.7	3285.2	3290.0	3284.7	3279.0	3257.9	3231.1	3203.9	3185.7	3184.7	3181.4
11.5°	3279.5	3279.9	3285.7	3279.5	3273.2	3251.2	3224.4	3195.7	3176.1	3175.6	3171.3
12°	3274.7	3275.2	3282.3	3274.2	3267.5	3245.0	3217.3	3187.6	3165.6	3166.1	3161.3
12.5°	3268.9	3269.9	3278.0	3268.0	3261.8	3237.8	3210.1	3179.0	3155.0	3156.5	3150.7
13°	3263.2	3264.6	3274.2	3261.8	3255.5	3230.7	3202.9	3170.4	3144.0	3146.0	3139.3
13.5°	3256.5	3258.4	3269.4	3255.1	3248.8	3222.5	3194.8	3161.3	3132.1	3135.4	3127.3
14°	3249.8	3251.7	3264.6	3248.4	3242.1	3214.9	3186.2	3151.2	3119.6	3124.4	3114.4
14.5°	3243.1	3244.5	3258.9	3241.2	3235.0	3206.3	3177.1	3140.2	3106.2	3112.0	3101.5
15°	3235.0	3237.4	3253.2	3233.1	3227.8	3197.2	3167.5	3129.2	3091.4	3099.5	3088.1
15.5°	3226.8	3228.7	3246.0	3224.4	3220.1	3188.1	3157.4	3116.8	3076.1	3086.1	3073.7
16°	3218.2	3219.2	3238.8	3214.9	3211.5	3178.0	3146.4	3104.3	3060.3	3071.3	3058.4
16.5°	3208.6	3209.1	3229.7	3204.8	3202.9	3167.0	3134.5	3090.4	3043.5	3056.5	3044.0
17°	3198.6	3198.6	3220.1	3193.8	3193.8	3156.0	3121.6	3076.6	3025.8	3041.2	3029.2
17.5°	3188.1	3187.6	3209.6	3182.8	3184.2	3143.6	3108.2	3061.3	3008.1	3024.4	3013.4
18°	3178.0	3176.1	3198.6	3170.8	3174.2	3131.6	3095.2	3044.5	2990.0	3007.2	2997.6
18.5°	3167.0	3164.1	3186.6	3158.4	3163.7	3118.2	3080.4	3028.2	2970.8	2988.0	2980.9
19°	3156.0	3151.7	3173.7	3146.0	3153.1	3105.3	3065.1	3010.5	2950.7	2969.4	2964.1
19.5°	3144.0	3138.8	3160.3	3133.0	3141.6	3091.4	3048.8	2991.9	2930.1	2949.8	2946.9
20°	3130.6	3124.9	3146.4	3119.2	3129.7	3076.6	3032.1	2972.7	2908.6	2929.2	2929.7
20.5°	3117.2	3110.5	3130.6	3104.3	3116.3	3061.3	3014.4	2951.7	2887.1	2906.7	2911.0
21°	3102.4	3095.2	3114.4	3089.5	3102.9	3045.0	2995.7	2930.1	2863.1	2884.2	2892.3



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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°	3053.1	3045.0	3059.8	3039.2	3056.9	2990.9	2934.9	2859.8	2790.9	2811.9	2833.9
23°	3034.9	3026.8	3039.2	3021.5	3039.2	2971.8	2912.9	2835.9	2766.0	2786.6	2813.8
23.5°	3014.8	3008.1	3018.7	3003.3	3020.6	2951.7	2890.9	2810.5	2741.1	2761.2	2794.2
24°	2994.3	2989.0	2997.1	2984.7	3001.4	2931.1	2867.4	2785.1	2715.7	2735.8	2774.1
24.5°	2972.7	2969.9	2975.6	2966.0	2981.3	2909.6	2844.5	2759.3	2691.3	2709.5	2753.5
25°	2949.8	2950.2	2953.6	2947.4	2960.3	2889.0	2821.0	2733.5	2666.5	2683.7	2732.0
25.5°	2927.3	2930.1	2931.1	2927.7	2938.3	2867.0	2797.6	2706.7	2641.6	2657.4	2710.0
26°	2903.8	2910.0	2907.6	2908.1	2916.3	2845.0	2773.6	2681.8	2617.2	2631.5	2687.5
26.5°	2879.9	2889.9	2884.7	2888.5	2893.3	2822.5	2749.2	2655.9	2592.3	2604.7	2664.5
27°	2855.0	2869.4	2861.2	2867.9	2868.9	2799.0	2725.3	2630.1	2567.4	2577.9	2641.1
27.5°	2829.2	2848.3	2837.3	2846.4	2844.5	2775.1	2700.9	2604.2	2542.0	2552.1	2616.7
28°	2803.3	2826.3	2812.9	2824.9	2819.1	2751.2	2676.0	2578.4	2517.1	2526.2	2592.8
28.5°	2777.0	2804.3	2788.0	2802.4	2792.8	2726.8	2651.1	2552.6	2493.2	2500.9	2567.9
29°	2750.7	2781.3	2762.6	2779.4	2766.9	2701.9	2625.3	2527.2	2468.8	2476.0	2543.0
29.5°	2724.8	2758.8	2738.7	2756.4	2741.1	2677.5	2600.4	2502.3	2444.9	2450.6	2518.1
30°	2698.0	2736.3	2714.3	2732.5	2714.8	2652.6	2575.5	2477.4	2421.4	2425.7	2492.7
30.5°	2672.2	2712.9	2689.4	2708.6	2687.5	2628.2	2550.6	2452.5	2398.5	2401.3	2467.9
31°	2646.4	2688.9	2664.1	2684.6	2661.7	2604.2	2526.2	2429.1	2375.5	2377.4	2441.5
31.5°	2621.5	2665.5	2640.6	2659.8	2636.3	2579.4	2501.8	2406.1	2352.0	2353.0	2413.8
32°	2594.7	2641.6	2616.2	2635.8	2610.9	2555.0	2477.9	2382.7	2329.1	2329.6	2384.6
32.5°	2570.3	2617.6	2592.8	2610.9	2585.1	2531.0	2454.0	2358.7	2306.6	2304.7	2354.4
33°	2543.9	2591.8	2567.4	2586.1	2560.2	2506.6	2429.6	2334.8	2282.2	2279.3	2321.9
33.5°	2516.2	2565.0	2543.0	2559.3	2532.9	2481.7	2403.7	2309.9	2257.3	2252.5	2288.4
34°	2486.0	2535.3	2516.7	2530.5	2505.2	2454.5	2377.9	2285.1	2232.4	2226.2	2254.9
34.5°	2455.9	2505.2	2488.9	2499.9	2475.5	2427.2	2351.1	2259.2	2206.6	2198.4	2220.0
35°	2425.3	2473.1	2460.7	2468.3	2444.9	2397.5	2323.8	2232.9	2180.7	2170.7	2185.0
35.5°	2393.7	2441.1	2432.9	2436.8	2413.8	2368.3	2295.6	2206.1	2153.9	2141.5	2150.1
36°	2362.1	2408.0	2404.2	2402.8	2383.2	2338.2	2265.4	2178.8	2126.2	2112.3	2114.2
36.5°	2330.0	2374.5	2374.1	2369.3	2348.7	2305.6	2234.8	2150.1	2097.5	2080.7	2077.8
37°	2295.6	2339.6	2342.0	2334.3	2315.7	2272.1	2202.7	2120.0	2067.3	2049.1	2041.5
37.5°	2261.6	2303.7	2310.9	2298.9	2280.7	2237.7	2170.2	2089.8	2036.2	2016.1	2004.6
38°	2225.2	2266.4	2276.9	2262.6	2245.3	2202.7	2136.7	2056.3	2003.2	1979.3	1966.8
38.5°	2189.3	2229.1	2241.5	2225.2	2209.9	2167.3	2099.9	2020.4	1967.8	1940.0	1926.1
39°	2154.4	2192.2	2206.1	2188.4	2175.0	2130.5	2061.6	1983.6	1929.0	1899.8	1882.1
39.5°	2116.6	2153.0	2167.8	2149.6	2138.1	2093.2	2022.8	1944.3	1888.3	1859.1	1839.0
40°	2078.8	2112.3	2126.2	2109.4	2100.8	2053.4	1982.6	1904.1	1845.7	1816.6	1795.5
40.5°	2038.6	2070.2	2084.1	2067.3	2061.6	2012.8	1941.0	1863.5	1803.2	1771.6	1751.0
41°	2000.3	2027.6	2041.5	2024.7	2022.8	1971.1	1898.4	1821.3	1760.1	1727.1	1707.0
41.5°	1958.7	1984.0	1997.4	1981.7	1982.1	1928.5	1856.3	1779.2	1716.1	1683.0	1661.5
42°	1916.6	1940.5	1953.9	1939.1	1941.0	1884.5	1813.7	1736.2	1673.0	1636.6	1616.0
42.5°	1871.1	1896.0	1910.4	1896.0	1897.0	1841.0	1770.1	1692.6	1629.0	1589.7	1569.6
43°	1827.6	1852.0	1866.3	1851.5	1852.9	1797.4	1726.6	1648.6	1585.4	1543.8	1524.2
43.5°	1780.7	1807.0	1821.3	1807.5	1805.6	1751.5	1681.6	1605.5	1541.4	1497.8	1477.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1634.7	1670.1	1685.4	1672.0	1662.9	1612.7	1545.2	1472.5	1409.3	1360.0	1339.4
45.5°	1585.4	1624.2	1639.5	1628.5	1613.2	1564.8	1499.8	1429.9	1365.3	1315.0	1294.5
46°	1536.1	1578.2	1593.6	1582.5	1563.9	1516.0	1453.3	1385.4	1320.8	1269.6	1248.0
46.5°	1485.9	1531.3	1547.6	1535.2	1515.1	1468.2	1407.9	1341.8	1277.7	1225.6	1202.6
47°	1437.1	1484.4	1500.7	1487.3	1466.3	1420.3	1361.0	1297.3	1233.2	1181.5	1156.6
47.5°	1388.7	1436.1	1453.8	1441.4	1417.5	1372.0	1315.0	1253.8	1189.7	1136.5	1112.1
48°	1340.4	1388.7	1407.9	1394.5	1370.6	1323.7	1268.6	1209.3	1146.6	1093.5	1067.2
48.5°	1292.1	1341.4	1360.5	1347.1	1323.7	1275.3	1224.1	1166.2	1103.5	1051.4	1023.1
49°	1246.6	1294.5	1314.6	1299.7	1276.8	1228.9	1178.2	1121.7	1060.0	1007.8	979.6
49.5°	1199.2	1247.6	1268.1	1252.8	1229.9	1182.5	1133.2	1078.2	1017.9	965.7	937.0
50°	1153.3	1200.2	1221.2	1205.5	1183.9	1136.1	1088.2	1034.1	975.8	924.1	893.9
50.5°	1106.9	1152.3	1174.8	1159.0	1139.4	1089.2	1043.7	991.1	934.6	883.4	852.8
51°	1062.4	1106.4	1127.0	1111.7	1094.0	1044.2	999.2	948.5	892.5	841.8	812.1
51.5°	1017.4	1061.4	1081.5	1066.7	1049.4	1000.6	955.7	906.4	852.3	802.0	772.9
52°	974.3	1016.0	1035.6	1021.7	1005.4	956.1	912.6	864.7	812.6	762.8	733.6
52.5°	929.8	970.5	990.1	977.2	960.9	914.0	870.0	822.1	772.4	724.5	695.3
53°	887.7	926.0	944.6	932.7	917.8	870.5	826.9	781.5	733.1	685.3	658.0
53.5°	844.2	882.4	898.2	888.2	875.3	828.4	785.8	741.7	694.4	648.0	622.6
54°	803.5	839.4	853.2	844.2	833.1	786.7	745.1	702.0	656.1	611.1	586.7
54.5°	762.8	795.8	809.2	802.0	791.5	747.0	704.9	663.3	618.8	575.2	551.3
55°	722.1	755.1	766.6	759.9	751.3	707.3	666.1	624.5	582.9	539.8	517.8
55.5°	681.9	713.5	723.1	719.3	712.1	667.6	626.9	586.7	546.5	505.8	484.8
56°	643.6	672.8	681.4	678.6	671.4	629.3	588.6	550.3	511.6	472.3	454.1
56.5°	605.8	632.6	640.8	637.9	632.6	591.5	552.2	514.9	477.1	441.7	424.0
57°	567.6	594.4	600.6	599.6	594.4	555.1	515.9	479.0	445.5	411.1	393.8
57.5°	531.2	556.5	560.9	561.3	558.0	519.7	480.5	446.5	413.9	380.4	363.2
58°	495.8	518.7	522.6	524.5	521.1	484.8	448.4	414.4	382.4	349.8	333.1
58.5°	461.3	482.9	486.2	488.1	485.7	452.7	416.3	381.9	350.8	318.7	305.8
59°	427.8	447.9	450.3	452.2	453.2	421.1	384.3	349.3	319.2	291.4	279.5
59.5°	394.3	413.9	415.9	418.2	420.2	389.1	352.2	317.3	290.0	264.6	253.2
60°	362.7	380.4	382.8	385.2	387.6	357.0	320.6	288.1	262.2	238.8	229.2
60.5°	331.6	347.9	350.3	353.2	354.6	325.4	292.4	260.3	235.9	214.9	205.8
61°	301.5	317.3	319.2	321.1	322.1	296.7	263.7	234.0	210.1	191.4	184.2
61.5°	273.7	287.6	290.5	291.9	292.4	268.5	237.8	208.6	186.2	169.9	163.7
62°	245.5	259.4	262.7	263.2	264.2	242.1	213.0	184.2	163.2	149.3	144.0
62.5°	219.2	231.6	235.9	235.9	236.4	216.3	189.0	161.7	141.6	129.7	125.9
63°	194.8	205.8	210.1	209.6	210.6	191.4	166.1	141.2	120.6	112.0	109.1
63.5°	170.8	181.4	186.6	184.7	186.2	168.4	145.5	121.1	102.4	95.2	93.3
64°	149.3	160.8	163.7	162.7	163.2	146.4	125.9	103.4	85.7	80.4	79.9
64.5°	127.8	140.7	144.5	143.1	141.2	126.3	107.7	86.1	70.3	67.5	67.0
65°	106.7	120.1	125.4	123.5	121.1	107.7	90.9	71.3	60.3	57.9	57.9
65.5°	85.2	99.5	106.2	103.8	102.4	90.0	75.1	61.3	50.7	48.8	48.8
66°	63.6	79.4	87.1	84.2	85.2	74.2	64.1	50.7	40.7	39.7	40.2



TEST NUMBER: P776548

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	21.5	38.3	45.0	43.1	48.3	41.2	32.1	19.6	14.4	15.3	15.8
68°	17.7	28.2	33.5	32.5	37.3	30.1	21.1	14.4	9.1	10.5	10.5
68.5°	13.9	20.1	23.9	23.4	26.8	19.1	14.4	9.6	5.3	6.7	6.7
69°	10.0	16.7	16.3	16.3	15.8	12.9	9.6	6.2	3.3	4.3	4.3
69.5°	6.2	13.4	12.9	12.9	10.0	8.1	5.3	3.8	2.9	2.9	2.9
70°	2.9	10.0	9.6	9.6	6.2	4.3	3.3	2.9	2.9	2.9	2.9
70.5°	2.4	6.2	6.2	6.2	3.8	2.9	2.9	2.4	2.4	2.9	2.9
71°	2.4	2.9	3.3	3.3	2.9	2.9	2.4	2.4	2.4	2.4	2.9
71.5°	2.4	2.9	2.9	2.9	2.9	2.4	2.4	2.4	2.4	2.4	2.4
72°	2.4	2.4	2.9	2.9	2.9	2.4	2.4	2.4	2.4	2.4	2.4
72.5°	2.4	2.4	2.9	2.9	2.4	2.4	2.4	2.4	2.4	2.4	2.4
73°	2.4	2.4	2.9	2.9	2.4	2.4	2.4	1.9	2.4	2.4	2.4
73.5°	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9	2.4	2.4
74°	1.9	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9	1.9	2.4
74.5°	1.9	2.4	2.4	2.4	2.4	1.9	1.9	1.9	1.9	1.9	1.9
75°	1.9	1.9	2.4	2.4	2.4	1.9	1.9	1.9	1.9	1.9	1.9
75.5°	1.9	1.9	2.4	2.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9
76°	1.9	1.9	1.9	2.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9
76.5°	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.9	1.9
77°	1.4	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.9
77.5°	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.4	1.4
78°	1.4	1.4	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.4	1.4
78.5°	1.4	1.4	1.9	1.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4
79°	1.4	1.4	1.4	1.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4
79.5°	1.0	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.4
80°	1.0	1.4	1.4	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.4
80.5°	1.0	1.0	1.4	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0
81°	1.0	1.0	1.4	1.4	1.4	1.0	1.0	1.0	1.0	1.0	1.0
81.5°	1.0	1.0	1.0	1.4	1.4	1.0	1.0	1.0	1.0	1.0	1.0
82°	1.0	1.0	1.0	1.4	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	0.5	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	1.0
83°	0.5	0.5	1.0	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	1.0	1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	1.0	1.0	0.5	0.5	0.5	0.0	0.5	0.5
85°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5
85.5°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
86°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.5
86.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.5	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: P776548
CATALOG NUMBER: HCDJBL54050CSD-HCD41TRC-5000lm-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	0.5	0.5



TEST NUMBER: P776548

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3319.7	3319.7	3319.7	3319.7	3319.7	3319.7
0.5°	3319.2	3316.8	3318.7	3320.1	3321.6	3321.1
1°	3317.3	3314.9	3317.8	3320.1	3322.5	3322.5
1.5°	3314.9	3312.5	3316.3	3320.1	3322.5	3323.5
2°	3312.5	3309.6	3313.9	3318.7	3322.1	3324.0
2.5°	3309.1	3306.3	3311.5	3316.8	3321.6	3324.0
3°	3305.3	3302.4	3307.7	3314.4	3320.6	3324.0
3.5°	3301.0	3298.1	3303.9	3311.5	3319.2	3324.0
4°	3295.7	3292.9	3299.6	3308.7	3317.3	3323.0
4.5°	3290.0	3287.6	3294.3	3304.8	3315.4	3322.1
5°	3283.8	3281.4	3289.0	3300.5	3313.4	3321.1
5.5°	3277.1	3274.7	3283.3	3296.2	3311.1	3319.2
6°	3269.9	3268.0	3277.1	3291.4	3308.2	3317.3
6.5°	3262.7	3260.8	3270.9	3286.6	3304.8	3315.8
7°	3255.1	3253.6	3264.6	3281.9	3302.0	3313.4
7.5°	3247.4	3246.0	3257.5	3276.6	3298.1	3311.5
8°	3239.8	3238.3	3250.8	3271.3	3294.8	3308.7
8.5°	3231.6	3230.7	3243.6	3266.1	3290.5	3305.3
9°	3223.5	3222.5	3236.4	3260.3	3285.7	3302.0
9.5°	3215.3	3213.9	3228.7	3254.1	3280.4	3298.1
10°	3207.2	3205.3	3220.6	3247.9	3275.2	3294.3
10.5°	3198.6	3196.7	3213.0	3241.7	3269.4	3289.5
11°	3190.0	3187.6	3204.8	3235.4	3263.2	3284.7
11.5°	3180.9	3177.5	3195.7	3228.7	3257.0	3279.5
12°	3171.8	3168.0	3187.1	3222.0	3250.8	3274.7
12.5°	3162.2	3157.0	3177.5	3214.4	3243.6	3268.9
13°	3152.2	3146.0	3167.5	3207.2	3235.9	3263.2
13.5°	3142.1	3133.5	3157.4	3198.6	3228.3	3256.5
14°	3130.6	3120.6	3146.0	3189.5	3219.7	3249.8
14.5°	3118.7	3107.2	3133.5	3179.9	3210.6	3243.1
15°	3106.2	3092.8	3120.6	3168.9	3201.0	3235.0
15.5°	3092.4	3077.5	3106.7	3157.4	3190.0	3226.8
16°	3078.0	3061.3	3091.9	3145.5	3179.0	3218.2
16.5°	3062.7	3044.5	3076.1	3132.6	3166.5	3208.6
17°	3046.9	3026.8	3059.8	3118.7	3154.6	3198.6
17.5°	3030.6	3008.6	3042.6	3103.8	3141.6	3188.1
18°	3012.9	2989.5	3024.9	3089.0	3128.3	3178.0
18.5°	2994.7	2969.9	3007.2	3072.7	3114.4	3167.0
19°	2975.6	2949.8	2987.6	3056.0	3100.5	3156.0
19.5°	2955.5	2928.2	2967.5	3038.3	3085.7	3144.0
20°	2934.4	2905.7	2946.4	3019.6	3070.3	3130.6
20.5°	2912.4	2883.2	2924.9	3000.5	3053.6	3117.2
21°	2889.9	2859.3	2902.4	2979.9	3035.9	3102.4

TEST NUMBER: P776548

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2817.2	2786.1	2831.1	2914.3	2980.4	3053.1
23°	2791.8	2760.2	2805.7	2890.4	2960.3	3034.9
23.5°	2766.0	2734.9	2781.3	2866.5	2940.2	3014.8
24°	2740.2	2709.5	2755.9	2842.6	2918.6	2994.3
24.5°	2713.4	2683.7	2730.6	2817.7	2896.6	2972.7
25°	2687.0	2657.8	2705.2	2792.3	2874.1	2949.8
25.5°	2660.7	2632.0	2680.3	2767.9	2852.6	2927.3
26°	2633.4	2606.6	2654.0	2743.0	2829.6	2903.8
26.5°	2606.2	2580.3	2628.6	2718.1	2806.2	2879.9
27°	2579.4	2554.5	2602.8	2692.3	2782.7	2855.0
27.5°	2553.0	2528.6	2577.4	2666.9	2758.8	2829.2
28°	2526.7	2503.7	2551.1	2641.1	2733.9	2803.3
28.5°	2500.9	2478.9	2526.7	2615.7	2709.5	2777.0
29°	2474.6	2453.0	2501.8	2590.4	2684.2	2750.7
29.5°	2449.2	2429.1	2477.0	2566.0	2659.3	2724.8
30°	2424.8	2405.6	2452.1	2541.1	2634.4	2698.0
30.5°	2400.9	2381.7	2428.6	2516.7	2610.5	2672.2
31°	2376.5	2358.3	2405.2	2492.3	2586.5	2646.4
31.5°	2351.6	2333.9	2380.8	2468.8	2561.7	2621.5
32°	2327.6	2310.4	2356.8	2443.5	2536.8	2594.7
32.5°	2303.2	2286.5	2332.9	2419.5	2512.4	2570.3
33°	2276.9	2261.1	2308.0	2394.6	2487.5	2543.9
33.5°	2250.1	2235.8	2282.2	2367.8	2460.7	2516.2
34°	2223.3	2209.0	2256.3	2340.6	2432.0	2486.0
34.5°	2196.0	2182.6	2229.1	2312.8	2401.8	2455.9
35°	2167.3	2155.8	2201.8	2284.1	2371.7	2425.3
35.5°	2139.1	2128.6	2174.5	2255.4	2340.6	2393.7
36°	2108.5	2099.4	2146.8	2225.2	2309.0	2362.1
36.5°	2077.4	2069.7	2117.6	2195.6	2276.0	2330.0
37°	2043.9	2039.1	2086.5	2163.5	2242.0	2295.6
37.5°	2011.3	2008.0	2055.4	2129.5	2206.6	2261.6
38°	1975.9	1974.5	2022.8	2095.5	2170.7	2225.2
38.5°	1937.2	1938.6	1987.9	2060.6	2134.8	2189.3
39°	1897.0	1900.8	1950.6	2022.8	2097.5	2154.4
39.5°	1856.3	1860.6	1910.8	1982.6	2059.7	2116.6
40°	1811.8	1818.5	1869.7	1941.0	2019.9	2078.8
40.5°	1767.3	1774.9	1828.0	1899.3	1979.3	2038.6
41°	1721.8	1730.4	1785.5	1856.8	1936.2	2000.3
41.5°	1676.8	1685.0	1741.4	1814.2	1892.2	1958.7
42°	1630.4	1641.9	1698.8	1770.6	1850.1	1916.6
42.5°	1584.0	1596.4	1654.8	1726.1	1806.0	1871.1
43°	1537.6	1552.4	1611.3	1681.6	1761.5	1827.6
43.5°	1492.6	1505.5	1566.8	1636.6	1714.6	1780.7



TEST NUMBER: P776548

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1350.9	1372.0	1433.7	1499.8	1575.4	1634.7
45.5°	1306.4	1326.5	1389.7	1454.3	1528.0	1585.4
46°	1259.5	1282.5	1346.1	1408.8	1480.1	1536.1
46.5°	1214.1	1238.0	1301.2	1361.5	1431.3	1485.9
47°	1169.1	1194.0	1257.1	1316.0	1383.5	1437.1
47.5°	1125.5	1148.5	1212.2	1270.1	1335.6	1388.7
48°	1081.0	1105.4	1167.7	1224.6	1287.8	1340.4
48.5°	1038.0	1061.4	1122.7	1178.2	1239.4	1292.1
49°	994.4	1018.8	1078.6	1134.6	1193.0	1246.6
49.5°	954.2	976.2	1034.6	1088.7	1146.1	1199.2
50°	910.7	933.6	991.1	1043.7	1099.7	1153.3
50.5°	869.5	891.1	946.6	999.2	1052.8	1106.9
51°	828.4	849.9	904.5	955.7	1007.8	1062.4
51.5°	788.2	809.2	861.9	911.6	963.3	1017.4
52°	749.4	769.5	820.2	869.5	920.2	974.3
52.5°	710.2	730.3	778.1	826.4	876.2	929.8
53°	671.9	690.5	737.9	784.3	834.1	887.7
53.5°	634.6	652.3	697.7	741.7	792.5	844.2
54°	598.2	614.9	658.0	701.5	751.3	803.5
54.5°	561.8	578.6	619.7	662.3	711.6	762.8
55°	527.4	542.7	581.9	622.1	671.9	722.1
55.5°	493.4	506.8	544.1	582.9	633.6	681.9
56°	460.4	472.8	507.7	546.5	595.8	643.6
56.5°	429.3	439.3	472.3	510.1	559.4	605.8
57°	398.6	406.8	437.9	474.2	523.5	567.6
57.5°	368.0	374.2	403.4	439.3	487.6	531.2
58°	337.4	344.6	372.3	405.8	454.1	495.8
58.5°	309.1	314.4	340.2	373.7	422.1	461.3
59°	281.9	285.7	310.1	342.6	390.0	427.8
59.5°	255.5	258.4	280.9	313.0	359.4	394.3
60°	230.7	231.6	253.2	283.3	329.7	362.7
60.5°	207.2	206.7	226.8	257.0	300.0	331.6
61°	184.2	182.3	201.5	230.7	271.8	301.5
61.5°	163.2	162.2	177.5	206.3	245.5	273.7
62°	143.1	143.1	158.9	182.3	219.7	245.5
62.5°	124.4	123.9	139.7	162.7	194.8	219.2
63°	107.7	104.8	121.1	144.0	171.8	194.8
63.5°	91.9	85.2	101.9	125.4	152.7	170.8
64°	78.0	70.8	83.3	106.7	134.0	149.3
64.5°	65.6	58.9	68.9	88.1	115.3	127.8
65°	56.9	47.9	56.5	73.7	96.2	106.7
65.5°	47.9	38.8	45.5	60.3	77.5	85.2
66°	38.8	30.6	35.9	48.3	62.7	63.6



TEST NUMBER: P776548

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	15.3	14.4	15.8	21.5	28.2	21.5
68°	10.5	11.0	12.4	15.3	20.1	17.7
68.5°	6.7	7.7	9.1	12.0	16.3	13.9
69°	4.3	3.8	6.2	8.6	12.9	10.0
69.5°	2.9	2.9	2.9	5.7	9.6	6.2
70°	2.9	2.4	2.4	2.4	5.7	2.9
70.5°	2.9	2.4	2.4	2.4	2.4	2.4
71°	2.4	2.4	2.4	2.4	2.4	2.4
71.5°	2.4	2.4	2.4	2.4	2.4	2.4
72°	2.4	2.4	1.9	1.9	2.4	2.4
72.5°	2.4	2.4	1.9	1.9	1.9	2.4
73°	2.4	1.9	1.9	1.9	1.9	2.4
73.5°	2.4	1.9	1.9	1.9	1.9	1.9
74°	1.9	1.9	1.9	1.9	1.9	1.9
74.5°	1.9	1.9	1.9	1.9	1.9	1.9
75°	1.9	1.9	1.9	1.9	1.9	1.9
75.5°	1.9	1.9	1.4	1.4	1.4	1.9
76°	1.9	1.9	1.4	1.4	1.4	1.9
76.5°	1.9	1.4	1.4	1.4	1.4	1.4
77°	1.9	1.4	1.4	1.4	1.4	1.4
77.5°	1.4	1.4	1.4	1.4	1.4	1.4
78°	1.4	1.4	1.4	1.4	1.4	1.4
78.5°	1.4	1.4	1.4	1.4	1.4	1.4
79°	1.4	1.4	1.4	1.0	1.0	1.4
79.5°	1.4	1.4	1.0	1.0	1.0	1.0
80°	1.4	1.0	1.0	1.0	1.0	1.0
80.5°	1.0	1.0	1.0	1.0	1.0	1.0
81°	1.0	1.0	1.0	1.0	1.0	1.0
81.5°	1.0	1.0	1.0	1.0	1.0	1.0
82°	1.0	1.0	1.0	1.0	0.5	1.0
82.5°	1.0	1.0	1.0	0.5	0.5	0.5
83°	1.0	1.0	0.5	0.5	0.5	0.5
83.5°	0.5	0.5	0.5	0.5	0.5	0.5
84°	0.5	0.5	0.5	0.5	0.5	0.5
84.5°	0.5	0.5	0.5	0.5	0.5	0.5
85°	0.5	0.5	0.5	0.5	0.5	0.0
85.5°	0.5	0.5	0.5	0.5	0.0	0.0
86°	0.5	0.5	0.5	0.5	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: P776548

CATALOG NUMBER: HCDJBL54050CSD-HCD41TRC-5000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.5	0.5	0.0	0.0	0.0	0.0

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

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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Scaled Data Report





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

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Scaled Data Report





21.5°	3086.6	3079.0	3096.7	3073.2	3088.5	3027.8	2976.1	2907.6	2839.2	2860.3	2873.2
22°	3070.8	3062.2	3078.5	3056.9	3073.2	3010.0	2956.5	2884.2	2815.3	2836.3	2854.0



44°	1732.8	1762.0	1776.4	1763.0	1760.1	1704.6	1635.7	1560.5	1496.4	1451.4	1431.8
44.5°	1681.6	1716.5	1730.9	1718.5	1709.8	1658.2	1590.7	1517.0	1452.9	1405.0	1385.9



66.5°	47.4	63.6	71.3	68.9	69.9	63.2	53.6	40.2	30.6	30.1	31.1
67°	32.5	50.2	57.4	55.0	58.9	52.2	42.6	30.1	21.1	21.1	22.0



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

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21.5°	2866.5	2835.9	2879.4	2958.4	3018.2	3086.6
22°	2841.6	2810.5	2855.5	2936.8	2999.5	3070.8



44°	1443.3	1461.0	1521.8	1591.6	1668.7	1732.8
44.5°	1396.9	1416.0	1477.7	1545.7	1622.7	1681.6

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66.5°	29.7	23.9	27.8	38.3	49.3	47.4
67°	21.1	18.2	21.1	29.2	37.8	32.5

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Scaled Data Report



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

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Scaled Data Report



(END OF REPORT)