

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



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: P776493

Luminaire Tested: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

Issue Date: 2/7/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776493  
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-HCD8TRH-4000lm-4000K  
Description: 8 INCH ROUND MEDIUM HAZE TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

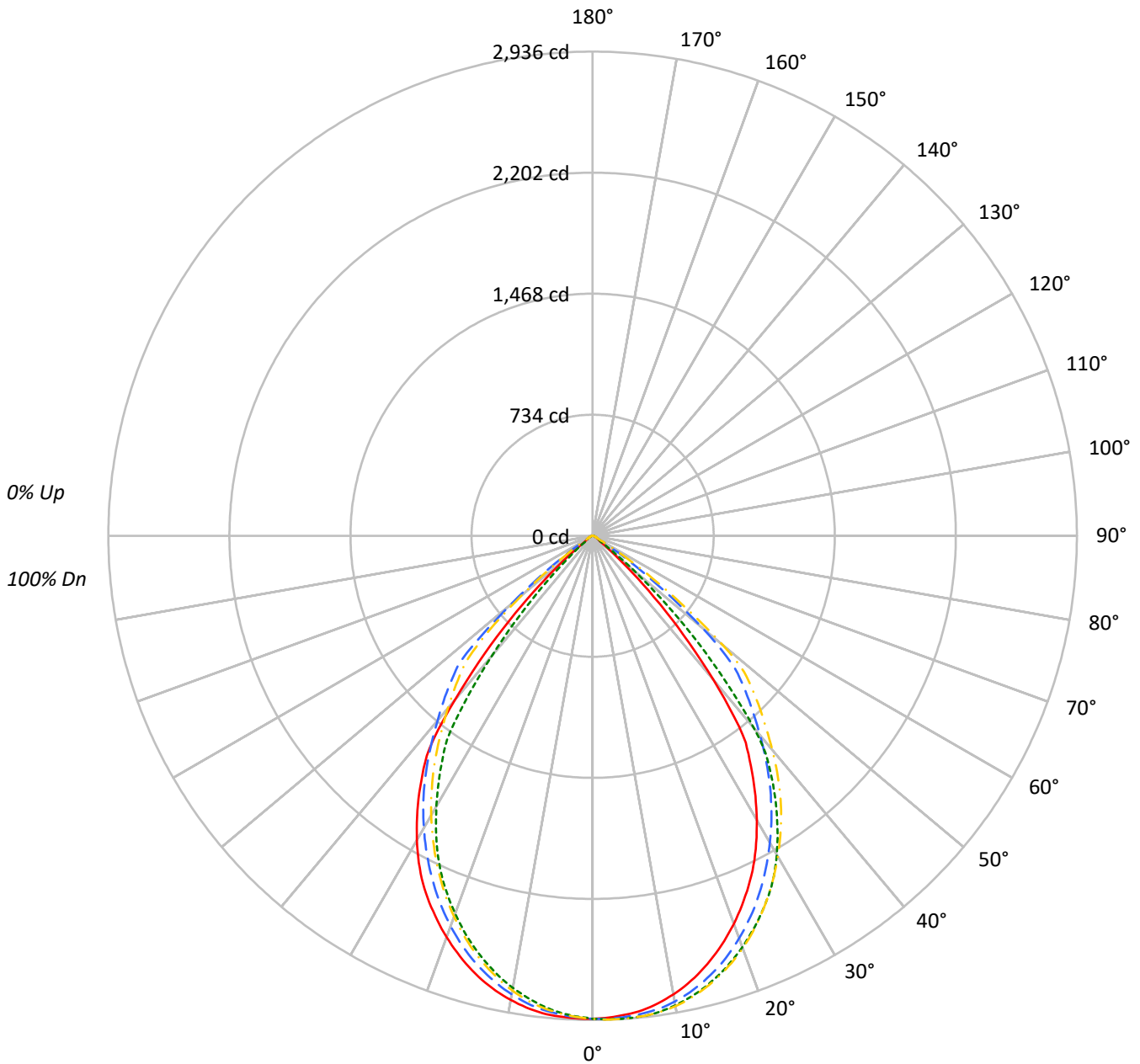
Lumens per Lamp: N/A  
Luminaire Lumens: 4059.3 lumens  
Efficiency: N/A  
Efficacy: 105.4 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.15  
Luminous Opening: Circular (Dia: 0.67' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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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CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	89414	89414	89414	89414
5°	88968	89857	89412	88386
10°	87523	89622	88608	86311
15°	84979	88393	86866	83263
20°	81344	86228	84119	79187
25°	76687	83216	80581	74070
30°	70158	78707	75086	66791
35°	61862	71813	67475	58105
40°	45311	60674	51699	37858
45°	22819	36946	28544	16696
50°	6963	15327	9376	4783
55°	2571	2896	2571	2230
60°	1966	2168	1966	1697
65°	1546	1662	1510	1308
70°	1223	1330	1187	1044
75°	1003	1097	955	802
80°	774	914	774	633
85°	560	841	560	420

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 135°

Vertical Angle: 45°

Luminance: 60723 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	275.7	6.8
10°-20°	765.2	18.9
20°-30°	1073.8	26.5
30°-40°	1102.7	27.2
40°-50°	674.2	16.6
50°-60°	130.9	3.2
60°-70°	23.8	0.6
70°-80°	10.6	0.3
80°-90°	2.3	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°	2114.7	52.1
0°-40°	3217.4	79.3
0°-60°	4022.6	99.1
0°-90°	4059.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4059.3	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2929	2929	2929	2929	2929	
5°	2903	2932	2918	2884	2903	275
15°	2689	2797	2748	2634	2689	755
25°	2276	2470	2392	2199	2276	1041
35°	1660	1927	1810	1559	1660	1014
45°	528	856	661	387	528	426
55°	48	54	48	42	48	53
65°	21	23	21	18	21	22
75°	8	9	8	7	8	9
85°	2	2	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°	2928.7	2928.7	2928.7	2928.7	2928.7	2928.7	2928.7	2928.7	2928.7	2928.7	2928.7
0.5°	2927.9	2927.5	2929.5	2931.2	2929.9	2931.2	2932.0	2932.0	2929.1	2927.1	2927.1
1°	2926.3	2927.1	2929.5	2932.4	2931.6	2932.8	2933.6	2932.8	2929.1	2925.9	2925.5
1.5°	2924.7	2926.3	2929.5	2933.2	2932.8	2934.4	2934.8	2933.2	2928.7	2924.7	2923.5
2°	2922.7	2925.1	2929.5	2933.6	2934.0	2935.2	2935.6	2933.2	2927.9	2923.1	2921.1
2.5°	2920.3	2923.5	2928.7	2933.6	2934.4	2936.0	2935.6	2933.2	2927.1	2921.1	2918.7
3°	2917.5	2921.5	2927.5	2932.8	2934.4	2936.0	2935.6	2932.8	2925.5	2919.1	2915.4
3.5°	2914.2	2919.1	2925.9	2931.6	2934.4	2936.0	2935.2	2931.6	2923.9	2916.3	2912.2
4°	2911.0	2916.7	2923.9	2930.4	2933.6	2935.2	2934.4	2930.8	2922.3	2913.8	2908.6
4.5°	2907.4	2913.8	2921.5	2928.7	2932.8	2934.4	2933.2	2929.5	2920.3	2911.0	2904.2
5°	2903.0	2910.6	2919.1	2927.1	2932.0	2933.2	2932.0	2927.5	2917.5	2907.4	2900.1
5.5°	2898.1	2906.6	2915.8	2925.1	2930.4	2932.0	2930.4	2925.1	2914.6	2903.8	2895.3
6°	2892.5	2902.2	2913.0	2922.7	2928.7	2930.4	2928.3	2922.7	2910.6	2899.3	2889.7
6.5°	2886.0	2896.5	2909.4	2919.9	2926.3	2928.3	2926.3	2919.1	2905.8	2894.1	2883.6
7°	2878.8	2890.9	2905.4	2916.3	2923.1	2925.5	2923.9	2915.0	2900.5	2888.5	2877.2
7.5°	2871.1	2884.0	2900.9	2911.8	2919.1	2922.3	2920.7	2909.8	2894.9	2881.6	2869.9
8°	2862.3	2876.8	2896.1	2907.0	2914.6	2918.3	2917.1	2905.0	2888.9	2875.2	2861.9
8.5°	2853.0	2868.3	2890.1	2901.7	2909.4	2913.4	2912.6	2899.3	2881.6	2867.5	2853.4
9°	2843.7	2860.3	2883.6	2895.7	2903.8	2908.6	2907.8	2892.9	2874.4	2859.0	2844.1
9.5°	2833.3	2851.0	2876.4	2889.3	2897.7	2902.6	2902.2	2886.0	2866.3	2850.6	2834.5
10°	2823.2	2842.1	2868.3	2882.4	2890.9	2896.5	2895.7	2878.8	2858.2	2841.7	2824.0
10.5°	2812.3	2832.1	2859.9	2874.8	2883.2	2890.1	2889.3	2871.5	2849.8	2832.1	2813.1
11°	2800.6	2822.0	2850.6	2866.7	2875.6	2882.4	2882.0	2863.5	2840.5	2822.4	2802.2
11.5°	2788.5	2811.1	2840.9	2857.8	2867.5	2874.4	2874.0	2855.0	2830.8	2811.5	2790.2
12°	2775.7	2800.2	2830.4	2849.0	2859.0	2866.3	2865.1	2846.2	2820.8	2800.6	2778.1
12.5°	2762.8	2788.5	2820.0	2839.3	2849.8	2857.8	2855.8	2836.9	2809.9	2788.9	2765.2
13°	2749.1	2776.5	2808.7	2829.6	2840.5	2849.0	2846.6	2826.8	2799.0	2776.9	2752.3
13.5°	2734.6	2764.0	2796.6	2819.2	2830.0	2839.3	2836.5	2816.7	2786.9	2764.4	2739.0
14°	2719.7	2750.7	2784.5	2808.3	2819.6	2829.2	2825.6	2805.9	2774.8	2751.5	2724.5
14.5°	2703.9	2736.2	2771.6	2796.6	2808.3	2818.4	2814.7	2794.2	2761.6	2737.4	2710.4
15°	2688.6	2722.1	2758.3	2784.1	2796.6	2807.1	2803.0	2782.5	2748.3	2723.3	2695.5
15.5°	2671.7	2707.2	2744.6	2771.2	2784.5	2795.0	2791.0	2770.0	2734.6	2708.8	2680.2
16°	2654.8	2691.5	2730.5	2758.3	2772.0	2782.9	2778.5	2756.7	2720.1	2693.5	2664.1
16.5°	2637.9	2675.7	2715.6	2745.0	2758.7	2770.4	2766.0	2742.6	2705.2	2677.8	2647.5
17°	2620.2	2659.6	2700.3	2730.9	2745.0	2757.1	2752.3	2729.3	2690.3	2661.2	2630.2
17.5°	2601.6	2642.7	2684.2	2715.6	2730.9	2743.0	2738.2	2714.4	2674.1	2644.7	2612.9
18°	2583.1	2625.0	2668.1	2700.3	2716.4	2728.9	2724.1	2699.1	2658.0	2627.8	2595.2
18.5°	2563.8	2606.9	2651.2	2684.6	2701.1	2714.0	2708.8	2683.8	2641.1	2610.1	2576.2
19°	2544.0	2588.7	2633.9	2668.5	2685.8	2698.3	2693.1	2667.7	2624.2	2592.4	2557.7
19.5°	2524.3	2569.8	2616.1	2651.6	2670.1	2682.6	2677.4	2651.2	2606.9	2573.8	2538.4
20°	2503.7	2550.5	2598.0	2635.1	2654.0	2666.1	2660.8	2634.3	2589.1	2555.3	2518.6
20.5°	2482.4	2529.9	2579.5	2617.3	2637.5	2650.0	2643.9	2616.5	2570.6	2535.6	2498.5
21°	2460.6	2509.4	2560.5	2599.6	2620.2	2632.6	2626.6	2598.8	2552.5	2516.2	2477.9



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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°	2393.8	2445.3	2500.5	2543.6	2567.4	2579.5	2571.8	2543.6	2493.7	2455.4	2413.5
23°	2370.8	2422.4	2480.0	2524.3	2548.4	2560.5	2552.9	2524.3	2473.9	2434.4	2391.3
23.5°	2347.8	2400.2	2459.0	2504.5	2529.1	2542.0	2533.1	2504.1	2454.2	2412.7	2368.8
24°	2324.5	2376.8	2436.9	2484.4	2510.2	2522.3	2513.0	2484.0	2434.0	2390.9	2346.2
24.5°	2300.7	2353.9	2414.7	2463.8	2490.4	2502.1	2492.4	2463.8	2413.5	2368.8	2322.8
25°	2276.5	2330.1	2392.1	2442.5	2470.3	2481.6	2472.3	2442.9	2392.1	2346.2	2298.7
25.5°	2250.7	2306.3	2369.6	2421.5	2450.6	2461.4	2451.0	2422.0	2370.0	2323.7	2274.9
26°	2224.2	2282.6	2346.6	2399.8	2430.4	2440.5	2429.6	2401.0	2346.6	2301.1	2250.7
26.5°	2197.2	2258.4	2322.8	2378.4	2409.1	2418.7	2407.4	2379.7	2322.0	2277.3	2226.2
27°	2169.4	2233.0	2299.1	2356.3	2386.5	2397.0	2385.7	2357.5	2296.7	2253.2	2201.2
27.5°	2140.8	2206.4	2274.5	2333.3	2363.1	2375.6	2363.1	2334.5	2270.5	2228.2	2175.4
28°	2111.8	2179.0	2249.9	2310.0	2338.6	2353.5	2340.2	2310.0	2243.9	2201.2	2150.0
28.5°	2082.3	2151.6	2225.4	2286.6	2313.2	2330.1	2316.8	2285.0	2216.5	2174.6	2124.6
29°	2051.3	2123.0	2199.6	2262.0	2287.4	2305.9	2293.8	2259.6	2188.7	2147.6	2098.9
29.5°	2021.1	2095.2	2174.6	2236.6	2260.4	2281.0	2269.7	2233.4	2159.3	2119.8	2072.7
30°	1990.1	2065.8	2148.8	2209.6	2232.6	2255.6	2245.5	2205.6	2129.9	2091.2	2045.7
30.5°	1958.3	2036.4	2123.4	2182.7	2204.0	2228.6	2220.9	2177.8	2100.1	2062.2	2019.5
31°	1926.4	2005.8	2096.8	2154.9	2175.0	2202.4	2196.8	2149.6	2069.9	2032.8	1992.9
31.5°	1894.2	1976.4	2071.1	2126.7	2145.2	2174.2	2171.4	2121.0	2039.2	2003.0	1965.9
32°	1862.4	1945.0	2044.1	2097.7	2115.4	2146.0	2146.4	2092.0	2007.8	1973.2	1938.5
32.5°	1829.8	1915.2	2017.5	2067.4	2085.2	2117.0	2121.0	2062.2	1976.8	1943.8	1911.1
33°	1796.3	1884.1	1990.5	2038.0	2054.1	2088.4	2095.6	2031.6	1944.6	1912.7	1882.9
33.5°	1762.9	1852.7	1963.5	2006.6	2022.3	2058.2	2069.9	2001.0	1911.9	1882.5	1853.9
34°	1729.4	1820.9	1934.1	1977.2	1991.3	2028.4	2043.7	1970.4	1878.9	1852.3	1824.9
34.5°	1694.8	1789.9	1906.7	1945.8	1959.1	1998.6	2017.1	1939.3	1844.3	1821.3	1794.3
35°	1659.8	1757.2	1877.7	1914.8	1926.8	1968.3	1990.1	1907.9	1810.4	1789.5	1764.5
35.5°	1626.7	1725.0	1849.5	1882.9	1893.0	1937.3	1962.3	1876.1	1776.6	1758.0	1733.9
36°	1591.3	1692.8	1819.7	1853.1	1859.6	1907.1	1933.7	1843.9	1743.1	1726.2	1703.7
36.5°	1560.2	1659.8	1790.3	1821.3	1825.7	1876.1	1904.7	1811.2	1707.7	1694.0	1673.5
37°	1509.5	1626.7	1760.1	1789.5	1791.1	1843.5	1875.3	1778.6	1669.0	1661.4	1642.0
37.5°	1458.3	1593.7	1730.7	1756.8	1756.8	1812.0	1845.5	1744.8	1620.7	1629.1	1611.4
38°	1391.5	1560.7	1700.0	1724.6	1720.2	1779.4	1815.7	1711.7	1565.9	1596.5	1581.2
38.5°	1329.8	1528.0	1670.2	1691.2	1683.1	1746.8	1785.4	1679.1	1503.8	1563.5	1551.8
39°	1267.4	1494.6	1639.2	1659.8	1634.4	1714.5	1754.8	1645.3	1437.0	1526.4	1521.2
39.5°	1204.1	1442.2	1609.4	1626.3	1583.2	1681.1	1724.2	1612.6	1366.1	1481.3	1491.4
40°	1136.9	1383.4	1579.2	1593.7	1522.4	1648.5	1693.6	1565.1	1297.2	1429.7	1462.4
40.5°	1070.8	1321.8	1549.4	1561.1	1454.7	1615.4	1663.4	1515.9	1231.1	1370.9	1434.6
41°	1003.5	1261.3	1519.6	1516.7	1385.8	1569.5	1632.4	1459.5	1164.6	1309.3	1406.8
41.5°	937.8	1201.3	1490.6	1474.4	1316.5	1526.4	1603.4	1397.9	1101.0	1245.6	1379.8
42°	875.4	1140.1	1462.0	1421.3	1248.0	1470.8	1573.5	1334.7	1034.1	1181.6	1352.0
42.5°	817.0	1076.0	1433.8	1364.5	1181.2	1411.6	1544.9	1267.4	970.1	1120.3	1325.4
43°	758.6	1011.6	1406.0	1303.6	1116.7	1347.9	1517.1	1205.3	903.2	1059.9	1297.6
43.5°	698.9	947.9	1377.4	1240.0	1051.4	1282.3	1488.9	1142.9	839.9	1000.3	1270.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	528.5	770.3	1295.2	1054.3	855.7	1091.7	1406.4	958.4	661.1	819.8	1189.2
45.5°	477.0	712.6	1267.8	995.9	793.6	1030.1	1378.6	895.9	603.9	761.4	1161.8
46°	427.8	656.2	1240.0	937.0	734.0	968.9	1350.0	835.1	548.7	704.2	1135.6
46.5°	378.7	600.7	1213.0	877.4	675.2	906.4	1323.0	775.5	494.7	650.6	1092.1
47°	333.2	545.1	1180.4	817.4	617.6	843.2	1294.8	717.1	442.7	595.8	1040.6
47.5°	291.3	493.9	1138.9	759.0	560.8	783.5	1265.8	661.1	398.4	543.9	980.1
48°	253.0	444.3	1090.1	702.6	507.2	725.5	1236.8	606.7	354.5	492.3	913.3
48.5°	220.0	396.8	1036.9	648.2	455.2	668.7	1196.9	552.7	310.6	443.9	846.8
49°	191.4	351.3	986.2	595.8	410.9	612.7	1145.7	499.5	266.7	400.0	778.7
49.5°	167.2	308.2	926.6	543.4	367.0	558.4	1092.5	449.2	230.0	356.1	712.6
50°	146.6	267.5	868.6	491.9	322.7	504.4	1029.7	406.1	197.4	311.8	647.8
50.5°	130.5	230.4	804.1	441.9	278.8	454.4	962.4	363.0	167.6	268.3	587.4
51°	114.0	199.0	736.8	394.4	235.3	410.1	892.7	320.3	141.4	232.4	527.7
51.5°	97.9	172.0	671.6	349.3	201.8	365.8	822.6	277.2	118.4	199.4	472.9
52°	81.8	149.5	608.3	307.8	170.0	321.5	754.5	234.5	96.7	168.8	427.0
52.5°	65.7	132.5	546.7	267.9	141.4	277.2	689.3	200.2	77.3	141.0	381.5
53°	57.2	116.0	491.1	230.8	116.8	233.3	627.2	169.2	62.0	116.8	336.0
53.5°	54.4	99.1	436.7	196.2	95.1	198.2	566.4	142.2	55.2	95.5	290.1
54°	52.4	82.6	385.9	165.6	74.5	166.0	509.2	118.0	52.8	76.1	244.5
54.5°	50.4	66.1	337.6	136.6	59.6	138.6	453.6	96.7	50.8	58.8	209.1
55°	48.3	54.0	294.9	115.6	54.4	113.2	405.3	76.9	48.3	47.1	178.5
55.5°	46.3	48.7	253.8	95.1	52.4	90.6	357.7	59.2	46.3	45.1	151.1
56°	44.3	46.7	217.1	74.1	50.0	70.5	309.8	47.9	44.7	43.5	127.3
56.5°	42.7	44.7	184.5	53.6	47.5	54.0	261.9	45.9	42.7	41.9	106.4
57°	41.1	43.1	155.5	45.9	45.5	46.3	224.0	43.9	41.1	40.3	89.0
57.5°	39.5	41.5	132.1	44.3	43.9	44.3	189.3	42.3	39.5	38.7	74.9
58°	37.9	39.9	115.2	42.7	41.9	42.7	157.9	40.7	37.9	37.5	63.7
58.5°	36.3	38.7	98.3	41.1	40.3	41.1	130.5	39.5	36.3	35.9	54.8
59°	34.6	37.1	81.4	39.5	38.7	39.5	106.4	37.9	34.6	34.6	47.5
59.5°	33.4	35.9	64.5	38.3	37.1	37.9	86.2	36.7	33.4	33.4	42.3
60°	32.2	34.6	56.0	36.7	35.5	36.7	70.9	35.5	32.2	32.2	38.3
60.5°	31.0	33.4	48.7	35.5	33.8	35.5	59.2	33.8	30.6	31.4	34.6
61°	29.8	32.2	43.1	34.2	32.6	33.8	50.4	33.0	29.4	30.2	32.6
61.5°	28.6	31.0	38.3	33.0	31.4	32.6	43.9	31.8	28.2	29.0	31.4
62°	27.4	29.8	35.0	31.8	30.2	31.8	39.1	30.6	27.0	28.2	30.2
62.5°	26.2	29.0	32.6	30.6	29.0	30.6	35.5	29.4	25.8	27.0	29.0
63°	25.0	27.8	31.4	29.8	27.4	29.4	32.6	28.6	24.6	26.2	27.8
63.5°	24.2	27.0	30.6	28.6	26.2	28.2	31.4	27.4	23.8	25.0	27.0
64°	23.0	25.8	29.4	27.4	25.4	27.4	30.2	26.6	22.6	24.2	25.8
64.5°	22.2	25.0	28.6	26.6	24.2	26.2	29.0	25.4	21.8	23.4	25.0
65°	21.4	24.2	27.4	25.8	23.0	25.4	27.8	24.6	20.9	22.6	24.2
65.5°	20.5	23.4	26.6	24.6	22.2	24.6	26.6	23.8	19.7	21.8	23.4
66°	19.3	22.2	25.4	23.8	21.4	23.4	25.8	22.6	18.9	20.9	22.6





TEST NUMBER: P776493

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	17.3	19.7	23.0	21.4	18.5	20.9	23.4	20.1	16.5	18.5	20.1
68°	16.5	18.9	22.2	20.5	17.7	20.1	22.2	19.3	16.1	17.7	19.3
68.5°	15.7	18.5	21.4	19.7	16.9	19.3	21.4	18.5	15.3	16.9	18.5
69°	14.9	17.7	20.5	18.9	16.1	18.5	20.5	18.1	14.5	16.5	17.7
69.5°	14.5	16.9	19.7	18.1	15.7	18.1	19.7	17.3	14.1	15.7	16.9
70°	13.7	16.1	18.9	17.3	14.9	17.3	18.9	16.5	13.3	14.9	16.1
70.5°	13.3	15.7	18.1	16.9	14.1	16.5	18.5	15.7	12.9	14.5	15.7
71°	12.5	14.9	17.3	16.1	13.7	16.1	17.7	15.3	12.1	13.7	14.9
71.5°	12.1	14.5	16.5	15.3	12.9	15.3	16.9	14.5	11.7	13.3	14.1
72°	11.3	13.7	16.1	14.9	12.5	14.5	16.1	14.1	10.9	12.5	13.7
72.5°	10.9	13.3	15.3	14.1	11.7	14.1	15.3	13.3	10.5	12.1	12.9
73°	10.5	12.5	14.5	13.7	11.3	13.3	14.9	12.9	10.1	11.7	12.5
73.5°	9.7	12.1	14.1	12.9	10.9	12.9	14.1	12.1	9.7	10.9	11.7
74°	9.3	11.3	13.3	12.5	10.5	12.5	13.7	11.7	8.9	10.5	11.3
74.5°	8.9	10.9	12.5	11.7	9.7	11.7	12.9	11.3	8.5	10.1	10.5
75°	8.5	10.5	12.1	11.3	9.3	11.3	12.5	10.5	8.1	9.3	10.1
75.5°	8.1	9.7	11.3	10.9	8.9	10.9	11.7	10.1	7.7	8.9	9.7
76°	7.7	9.3	10.9	10.5	8.5	10.5	11.3	9.7	7.3	8.5	8.9
76.5°	7.3	8.9	10.5	9.7	8.1	9.7	10.5	8.9	6.8	8.1	8.5
77°	6.8	8.5	9.7	9.3	7.7	9.3	10.1	8.5	6.4	7.7	8.1
77.5°	6.4	8.1	9.3	8.9	7.3	8.9	9.7	8.1	6.0	7.3	7.7
78°	6.0	7.7	8.9	8.5	6.8	8.5	8.9	7.7	5.6	6.8	6.8
78.5°	5.6	6.8	8.1	8.1	6.4	8.1	8.5	7.3	5.2	6.0	6.4
79°	5.2	6.4	7.7	7.3	6.0	7.7	8.1	6.8	5.2	5.6	6.0
79.5°	4.8	6.0	7.3	6.8	5.6	7.3	7.7	6.4	4.8	5.2	5.6
80°	4.4	5.6	6.8	6.4	5.2	6.4	6.8	6.0	4.4	4.8	5.2
80.5°	4.0	5.2	6.4	6.0	5.2	6.0	6.4	5.2	4.0	4.4	4.8
81°	3.6	4.8	6.0	5.6	4.8	5.6	6.0	4.8	3.6	4.0	4.4
81.5°	3.6	4.4	5.2	5.2	4.4	5.6	5.6	4.8	3.6	4.0	4.0
82°	3.2	4.0	4.8	4.8	4.0	5.2	5.2	4.4	3.2	3.6	3.6
82.5°	2.8	3.6	4.4	4.4	3.6	4.8	4.8	4.0	2.8	3.2	3.2
83°	2.4	3.2	4.0	4.0	3.6	4.4	4.4	3.6	2.4	2.8	2.8
83.5°	2.4	2.8	3.6	3.6	3.2	4.0	4.0	3.2	2.4	2.4	2.4
84°	2.0	2.8	3.2	3.6	2.8	3.6	3.6	2.8	2.0	2.0	2.0
84.5°	1.6	2.4	2.8	3.2	2.8	3.2	3.2	2.4	1.6	1.6	2.0
85°	1.6	2.0	2.4	2.8	2.4	2.8	2.8	2.0	1.6	1.6	1.6
85.5°	1.2	1.6	2.4	2.4	2.4	2.8	2.4	1.6	1.2	1.2	1.2
86°	0.8	1.2	2.0	2.0	2.0	2.4	2.0	1.6	1.2	0.8	0.8
86.5°	0.8	0.8	1.6	2.0	1.6	2.0	2.0	1.2	0.8	0.8	0.8
87°	0.4	0.8	1.2	1.6	1.6	1.6	1.6	0.8	0.8	0.4	0.4
87.5°	0.4	0.4	1.2	1.2	1.2	1.6	1.2	0.8	0.4	0.4	0.4
88°	0.4	0.4	0.8	1.2	1.2	1.2	1.2	0.4	0.4	0.0	0.0
88.5°	0.0	0.4	0.4	0.8	0.8	0.8	0.8	0.4	0.4	0.0	0.0



TEST NUMBER: P776493  
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0



TEST NUMBER: P776493

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2928.7	2928.7	2928.7	2928.7	2928.7	2928.7
0.5°	2927.9	2925.1	2926.3	2927.9	2928.7	2927.9
1°	2925.5	2922.3	2923.5	2925.1	2926.7	2926.3
1.5°	2922.7	2919.1	2920.3	2922.3	2923.9	2924.7
2°	2919.9	2915.8	2916.7	2919.1	2921.1	2922.7
2.5°	2916.7	2912.2	2913.0	2915.4	2917.9	2920.3
3°	2913.4	2907.8	2909.0	2911.0	2914.6	2917.5
3.5°	2909.0	2903.0	2903.8	2907.0	2910.6	2914.2
4°	2904.6	2897.3	2898.5	2902.2	2907.0	2911.0
4.5°	2899.3	2890.9	2892.1	2896.5	2902.6	2907.4
5°	2893.3	2884.0	2885.2	2890.9	2897.3	2903.0
5.5°	2886.8	2876.0	2877.6	2884.8	2892.1	2898.1
6°	2879.6	2868.3	2869.9	2878.0	2886.0	2892.5
6.5°	2871.9	2859.0	2861.1	2870.3	2879.6	2886.0
7°	2863.9	2849.8	2851.8	2862.3	2871.9	2878.8
7.5°	2854.6	2839.7	2841.7	2853.4	2863.9	2871.1
8°	2845.3	2829.6	2831.7	2844.1	2855.0	2862.3
8.5°	2835.7	2818.8	2821.2	2834.1	2844.9	2853.0
9°	2825.6	2807.5	2810.3	2823.2	2834.9	2843.7
9.5°	2815.1	2795.8	2798.6	2811.9	2824.0	2833.3
10°	2804.7	2784.1	2786.9	2799.8	2813.1	2823.2
10.5°	2793.0	2771.2	2774.4	2787.3	2801.4	2812.3
11°	2781.3	2757.9	2761.6	2774.0	2789.4	2800.6
11.5°	2769.2	2744.6	2748.3	2760.7	2776.5	2788.5
12°	2756.3	2730.1	2734.2	2746.7	2763.2	2775.7
12.5°	2742.6	2715.2	2719.7	2731.7	2749.1	2762.8
13°	2728.9	2699.9	2704.8	2716.8	2735.0	2749.1
13.5°	2714.0	2683.8	2689.0	2701.9	2720.1	2734.6
14°	2699.1	2667.7	2672.5	2685.8	2704.8	2719.7
14.5°	2683.8	2651.6	2656.0	2669.3	2688.2	2703.9
15°	2667.7	2634.3	2638.7	2652.8	2672.1	2688.6
15.5°	2651.6	2616.1	2621.4	2635.1	2654.8	2671.7
16°	2634.7	2598.4	2603.2	2617.3	2637.1	2654.8
16.5°	2617.3	2580.3	2585.1	2599.2	2619.3	2637.9
17°	2599.2	2561.3	2565.8	2579.9	2601.2	2620.2
17.5°	2581.1	2542.0	2546.4	2560.5	2581.9	2601.6
18°	2562.1	2521.5	2526.3	2540.4	2562.9	2583.1
18.5°	2542.8	2501.3	2506.1	2520.2	2542.8	2563.8
19°	2523.5	2480.4	2485.2	2499.7	2522.7	2544.0
19.5°	2502.9	2459.0	2463.4	2478.8	2502.1	2524.3
20°	2482.8	2437.3	2442.1	2457.0	2481.2	2503.7
20.5°	2461.4	2415.5	2419.5	2435.2	2459.8	2482.4
21°	2439.7	2393.3	2397.0	2413.1	2437.3	2460.6

TEST NUMBER: P776493

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2373.2	2325.3	2327.3	2343.8	2369.2	2393.8
23°	2350.6	2301.5	2303.1	2320.4	2345.0	2370.8
23.5°	2327.7	2277.7	2280.1	2296.7	2321.2	2347.8
24°	2304.7	2252.3	2255.2	2272.1	2297.5	2324.5
24.5°	2280.5	2226.6	2231.0	2247.1	2272.9	2300.7
25°	2256.8	2198.8	2205.6	2221.7	2248.3	2276.5
25.5°	2232.2	2171.0	2179.8	2196.8	2222.9	2250.7
26°	2207.2	2142.4	2152.4	2171.4	2198.0	2224.2
26.5°	2179.8	2113.4	2125.5	2145.6	2172.6	2197.2
27°	2152.4	2083.2	2096.8	2118.6	2146.4	2169.4
27.5°	2124.6	2052.9	2067.8	2092.0	2119.4	2140.8
28°	2095.6	2021.5	2037.6	2065.4	2091.2	2111.8
28.5°	2066.2	1990.1	2008.2	2037.6	2062.6	2082.3
29°	2036.4	1957.9	1978.0	2011.4	2034.0	2051.3
29.5°	2007.0	1926.8	1947.4	1984.5	2005.0	2021.1
30°	1976.0	1894.6	1916.0	1956.7	1974.0	1990.1
30.5°	1945.0	1861.6	1884.9	1928.5	1944.2	1958.3
31°	1913.6	1828.1	1853.1	1901.5	1913.6	1926.4
31.5°	1881.7	1795.9	1821.3	1872.9	1882.9	1894.2
32°	1850.3	1762.5	1789.1	1844.3	1851.1	1862.4
32.5°	1819.3	1728.6	1757.6	1814.4	1820.9	1829.8
33°	1787.1	1694.8	1725.4	1786.2	1789.9	1796.3
33.5°	1754.4	1659.8	1693.2	1756.8	1758.0	1762.9
34°	1721.8	1626.3	1660.2	1727.0	1726.6	1729.4
34.5°	1689.2	1591.7	1626.7	1696.4	1695.2	1694.8
35°	1656.5	1559.0	1594.1	1665.8	1663.4	1659.8
35.5°	1624.3	1520.0	1561.1	1635.6	1632.4	1626.7
36°	1590.9	1468.0	1527.6	1605.0	1599.7	1591.3
36.5°	1558.2	1406.0	1495.0	1574.3	1567.5	1560.2
37°	1525.6	1341.9	1463.6	1543.3	1535.3	1509.5
37.5°	1493.0	1279.5	1428.9	1512.7	1503.0	1458.3
38°	1463.2	1213.8	1379.0	1482.5	1470.8	1391.5
38.5°	1412.8	1148.9	1320.6	1452.7	1437.4	1329.8
39°	1357.6	1081.7	1260.9	1423.7	1408.8	1267.4
39.5°	1297.6	1014.4	1202.1	1393.9	1358.4	1204.1
40°	1237.6	949.9	1142.9	1364.9	1306.9	1136.9
40.5°	1177.9	886.3	1082.5	1336.7	1247.2	1070.8
41°	1115.9	825.8	1019.2	1308.9	1188.8	1003.5
41.5°	1053.5	767.0	956.4	1281.1	1132.8	937.8
42°	989.0	708.2	895.5	1253.3	1076.4	875.4
42.5°	927.4	649.0	837.9	1226.7	1017.6	817.0
43°	866.9	592.2	781.5	1199.7	956.8	758.6
43.5°	809.3	537.8	725.5	1173.1	895.9	698.9



TEST NUMBER: P776493

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	640.5	386.7	562.4	1092.5	728.0	528.5
45.5°	585.7	341.2	510.4	1052.3	673.6	477.0
46°	531.4	297.3	462.5	1009.1	620.0	427.8
46.5°	481.0	259.0	414.1	958.8	567.2	378.7
47°	433.1	224.4	368.2	912.9	515.7	333.2
47.5°	389.2	194.6	323.5	856.9	466.5	291.3
48°	345.6	169.6	282.8	800.1	419.0	253.0
48.5°	301.7	149.1	245.7	734.4	373.4	220.0
49°	258.2	132.9	212.3	673.6	329.9	191.4
49.5°	222.4	116.8	182.9	613.1	288.4	167.2
50°	191.8	100.7	159.1	557.5	250.2	146.6
50.5°	164.8	84.6	137.8	503.6	215.1	130.5
51°	143.0	68.5	122.1	454.4	185.3	114.0
51.5°	124.5	57.6	106.4	405.7	160.3	97.9
52°	108.4	54.0	90.6	361.8	138.2	81.8
52.5°	93.1	51.6	74.9	318.7	122.1	65.7
53°	77.8	49.6	60.8	279.6	105.5	57.2
53.5°	63.2	47.5	50.0	242.9	89.4	54.4
54°	52.0	45.5	46.3	211.1	72.9	52.4
54.5°	46.3	43.5	44.7	181.3	58.8	50.4
55°	44.7	41.9	43.1	155.5	48.7	48.3
55.5°	43.1	40.3	41.5	137.4	45.9	46.3
56°	41.5	38.7	39.9	119.6	44.3	44.3
56.5°	39.9	37.1	38.3	101.9	42.7	42.7
57°	38.7	35.5	37.1	83.8	41.1	41.1
57.5°	37.1	33.8	35.5	66.5	39.5	39.5
58°	35.9	32.6	34.2	57.2	38.3	37.9
58.5°	34.6	31.4	33.0	49.6	37.1	36.3
59°	33.4	30.2	31.8	43.5	35.9	34.6
59.5°	32.2	29.0	30.6	38.7	34.6	33.4
60°	31.0	27.8	29.8	35.0	33.4	32.2
60.5°	30.2	26.6	28.6	33.0	32.2	31.0
61°	29.0	25.4	27.8	31.8	31.0	29.8
61.5°	27.8	24.6	26.6	30.6	29.8	28.6
62°	27.0	23.4	25.8	29.4	29.0	27.4
62.5°	25.8	22.6	24.6	28.6	27.8	26.2
63°	25.0	21.4	23.8	27.4	27.0	25.0
63.5°	24.2	20.5	23.0	26.6	25.8	24.2
64°	23.0	19.7	22.2	25.8	25.0	23.0
64.5°	22.2	18.9	21.4	24.6	24.2	22.2
65°	21.4	18.1	20.5	23.8	23.4	21.4
65.5°	20.5	17.3	19.7	23.0	22.2	20.5
66°	19.7	16.5	18.9	22.2	21.4	19.3



TEST NUMBER: P776493

CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	17.7	14.5	16.9	19.7	18.9	17.3
68°	16.9	13.7	16.1	18.9	18.1	16.5
68.5°	16.1	13.3	15.7	18.1	17.7	15.7
69°	15.7	12.5	14.9	17.3	16.9	14.9
69.5°	14.9	12.1	14.5	16.9	16.1	14.5
70°	14.5	11.7	13.7	16.1	15.3	13.7
70.5°	13.7	10.9	13.3	15.3	14.9	13.3
71°	13.3	10.5	12.5	14.9	14.1	12.5
71.5°	12.5	10.1	12.1	14.1	13.7	12.1
72°	12.1	9.7	11.7	13.3	12.9	11.3
72.5°	11.7	8.9	10.9	12.9	12.5	10.9
73°	10.9	8.5	10.5	12.1	11.7	10.5
73.5°	10.5	8.1	10.1	11.7	11.3	9.7
74°	10.1	7.7	9.7	10.9	10.5	9.3
74.5°	9.3	7.3	8.9	10.5	10.1	8.9
75°	8.9	6.8	8.5	10.1	9.7	8.5
75.5°	8.5	6.4	8.1	9.3	9.3	8.1
76°	8.1	6.0	7.7	8.9	8.5	7.7
76.5°	7.7	6.0	7.3	8.5	8.1	7.3
77°	7.3	5.6	6.8	7.7	7.7	6.8
77.5°	6.8	5.2	6.4	7.3	7.3	6.4
78°	6.4	4.8	6.0	6.8	6.8	6.0
78.5°	6.0	4.4	5.6	6.4	6.0	5.6
79°	5.6	4.0	5.2	6.0	5.6	5.2
79.5°	5.2	4.0	4.8	5.6	5.2	4.8
80°	4.8	3.6	4.4	4.8	4.8	4.4
80.5°	4.4	3.2	4.0	4.4	4.4	4.0
81°	4.0	3.2	3.6	4.0	4.0	3.6
81.5°	3.6	2.8	3.2	3.6	3.6	3.6
82°	3.2	2.4	3.2	3.2	3.2	3.2
82.5°	2.8	2.4	2.8	3.2	2.8	2.8
83°	2.4	2.0	2.4	2.8	2.4	2.4
83.5°	2.4	1.6	2.0	2.4	2.0	2.4
84°	2.0	1.6	1.6	2.0	1.6	2.0
84.5°	1.6	1.2	1.6	1.6	1.6	1.6
85°	1.2	1.2	1.2	1.6	1.2	1.6
85.5°	1.2	0.8	0.8	1.2	0.8	1.2
86°	0.8	0.4	0.8	0.8	0.8	0.8
86.5°	0.4	0.4	0.4	0.8	0.4	0.8
87°	0.4	0.0	0.4	0.4	0.4	0.4
87.5°	0.0	0.0	0.0	0.0	0.4	0.4
88°	0.0	0.0	0.0	0.0	0.0	0.4
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776493  
CATALOG NUMBER: HCDJBL3040CSD-HCD8TRH-4000lm-4000K

**CANDELA DISTRIBUTION (continued):**

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



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Cooper Lighting Solutions Photometric Lab  
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Peachtree City, GA 30269

Scaled Data Report





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

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Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





21.5°	2438.5	2488.4	2540.8	2581.5	2602.8	2615.3	2608.5	2580.7	2533.1	2496.1	2457.0
22°	2416.3	2467.1	2520.6	2562.9	2585.1	2597.6	2590.7	2562.1	2513.8	2476.3	2435.6



44°	638.9	886.3	1349.6	1177.1	986.6	1217.4	1461.1	1081.7	777.5	939.9	1242.4
44.5°	582.9	827.5	1322.2	1115.1	920.9	1153.0	1433.8	1018.4	719.5	879.8	1216.2



66.5°	18.5	21.4	24.6	23.0	20.1	22.6	25.0	21.8	18.1	20.1	21.4
67°	17.7	20.5	23.8	22.2	19.3	21.8	24.2	20.9	17.3	19.3	20.5



89°	0.0	0.0	0.4	0.4	0.8	0.8	0.4	0.4	0.0	0.0	0.0
89.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.0



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21.5°	2417.5	2370.8	2374.0	2390.5	2414.7	2438.5
22°	2395.8	2347.8	2350.6	2367.6	2391.7	2416.3



44°	751.3	484.6	670.3	1146.5	836.7	638.9
44.5°	695.7	436.3	616.0	1119.5	782.3	582.9

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66.5°	18.9	15.7	18.1	21.4	20.5	18.5
67°	18.5	15.3	17.7	20.5	19.7	17.7

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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)