

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: P776518

Luminaire Tested: HCDJBL3040CSD-HCD8TSQH-4000lm-4000K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P776518
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B005-HCD4TSQC)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL3040CSD-HCD8TSQH-4000lm-4000K
Description: 8 INCH SQUARE MEDIUM HAZE TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

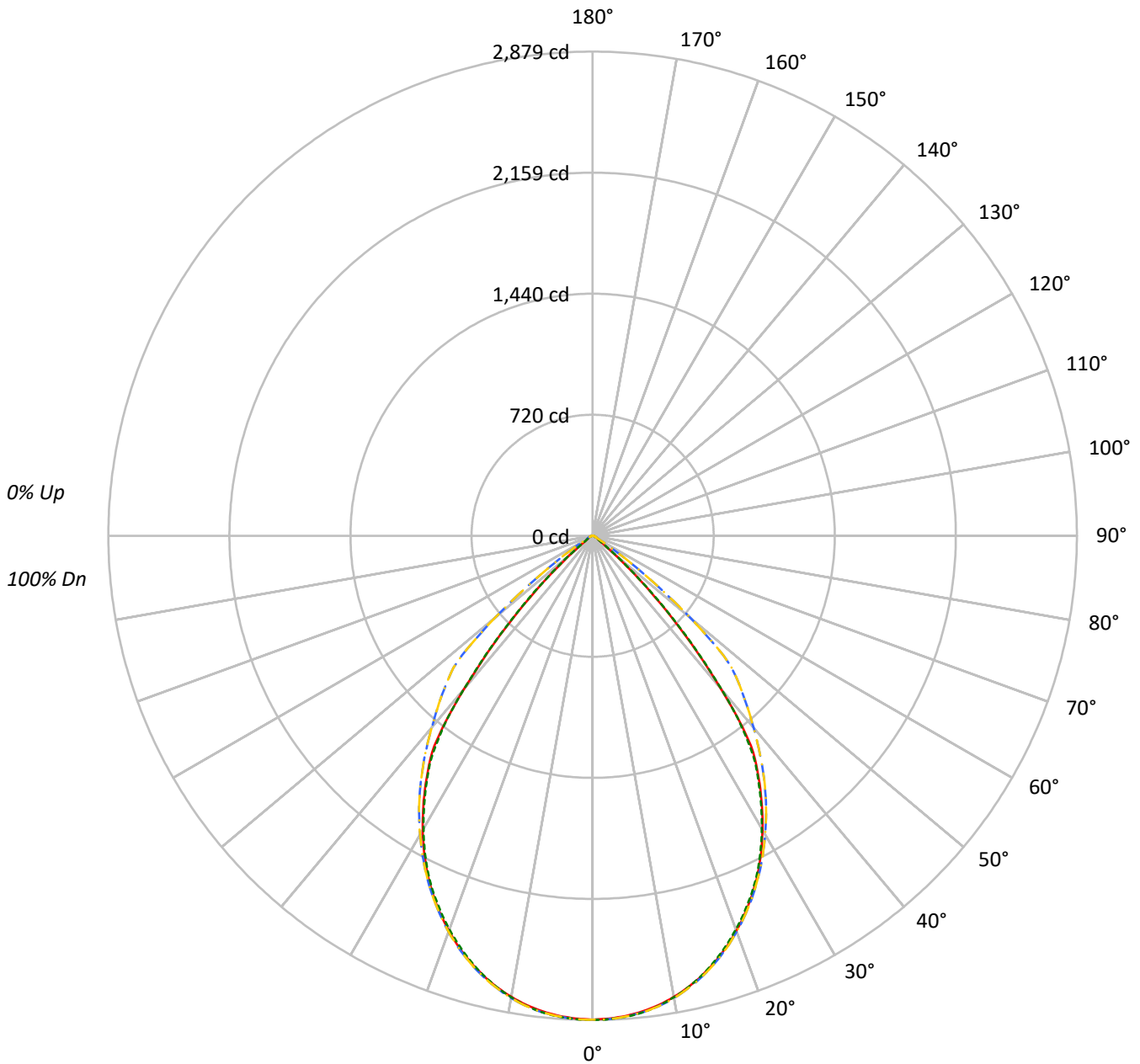
Lumens per Lamp: N/A
Luminaire Lumens: 3962.6 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 1.08 / 1.15
Luminous Opening: Rectangular (W 0.67' x L: 0.67' x H: 0')
CIE Type: Direct

Input Watts (W): 38.5
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					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	93	90	87	90	87	85	84	84	84	84	84	84		
	3	100	92	87	82	98	91	86	82	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	77	73	80	75	72	78	74	71	69	69	69	69	69	69		
	5	88	78	72	67	86	77	71	66	76	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	69	63	60	67	63	59	58	58	58	58	58	58		
	7	78	67	60	55	76	66	60	55	65	59	55	64	59	55	63	58	54	53	53	53	53	53	53		
	8	73	62	56	51	72	62	55	51	61	55	51	59	54	50	58	54	50	48	48	48	48	48	48		
	9	69	58	51	47	68	58	51	47	57	51	47	56	50	46	55	50	46	45	45	45	45	45	45		
	10	65	54	48	43	64	54	48	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°	69008	69008	69008	69008
5°	68679	68826	68679	68826
10°	67786	67844	67786	67844
15°	66172	66090	66172	66090
20°	63783	63546	63783	63546
25°	60492	60291	60492	60291
30°	55943	55689	55943	55689
35°	49994	49734	49994	49734
40°	37127	37330	37127	37330
45°	19455	19946	19455	19946
50°	6312	6823	6312	6823
55°	2090	1919	2090	1919
60°	1583	1487	1583	1487
65°	1214	1163	1214	1163
70°	960	932	960	932
75°	787	787	787	787
80°	608	663	608	663
85°	440	440	440	440

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 41357 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	270.6	6.8
10°-20°	749.8	18.9
20°-30°	1050.3	26.5
30°-40°	1078.9	27.2
40°-50°	653.5	16.5
50°-60°	122.8	3.1
60°-70°	23.8	0.6
70°-80°	10.7	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°	2070.6	52.3
0°-40°	3149.5	79.5
0°-60°	3925.9	99.1
0°-90°	3962.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3962.6	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2878	2878	2878	2878	2878	
5°	2853	2859	2853	2859	2853	270
15°	2666	2662	2666	2662	2666	749
25°	2286	2279	2286	2279	2286	1047
35°	1708	1699	1708	1699	1708	1043
45°	574	588	574	588	574	459
55°	50	46	50	46	50	57
65°	21	20	21	20	21	22
75°	8	8	8	8	8	9
85°	2	2	2	2	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°	2877.9	2877.9	2877.9	2877.9	2877.9	2877.9	2877.9	2877.9	2877.9	2877.9	2877.9
0.5°	2875.1	2876.3	2878.3	2879.5	2878.7	2879.5	2878.3	2876.3	2875.1	2876.3	2878.3
1°	2874.7	2875.9	2877.5	2878.7	2878.3	2878.7	2877.5	2875.9	2874.7	2875.9	2877.5
1.5°	2873.5	2874.7	2876.7	2877.9	2877.5	2877.9	2876.7	2874.7	2873.5	2874.7	2876.7
2°	2871.9	2873.1	2875.1	2876.7	2875.9	2876.7	2875.1	2873.1	2871.9	2873.1	2875.1
2.5°	2869.8	2871.1	2873.5	2874.7	2874.3	2874.7	2873.5	2871.1	2869.8	2871.1	2873.5
3°	2867.4	2869.0	2871.1	2872.7	2872.3	2872.7	2871.1	2869.0	2867.4	2869.0	2871.1
3.5°	2864.6	2866.2	2868.6	2870.2	2869.8	2870.2	2868.6	2866.2	2864.6	2866.2	2868.6
4°	2861.4	2863.0	2865.4	2867.4	2867.0	2867.4	2865.4	2863.0	2861.4	2863.0	2865.4
4.5°	2857.8	2859.0	2861.8	2863.8	2863.4	2863.8	2861.8	2859.0	2857.8	2859.0	2861.8
5°	2853.3	2854.9	2858.2	2860.2	2859.4	2860.2	2858.2	2854.9	2853.3	2854.9	2858.2
5.5°	2848.9	2850.5	2853.7	2855.7	2854.5	2855.7	2853.7	2850.5	2848.9	2850.5	2853.7
6°	2843.3	2845.3	2848.9	2850.9	2849.7	2850.9	2848.9	2845.3	2843.3	2845.3	2848.9
6.5°	2837.6	2840.0	2843.7	2845.3	2843.7	2845.3	2843.7	2840.0	2837.6	2840.0	2843.7
7°	2831.6	2834.0	2837.6	2838.8	2837.2	2838.8	2837.6	2834.0	2831.6	2834.0	2837.6
7.5°	2824.7	2827.5	2831.2	2832.0	2830.0	2832.0	2831.2	2827.5	2824.7	2827.5	2831.2
8°	2817.5	2820.7	2824.3	2824.7	2822.7	2824.7	2824.3	2820.7	2817.5	2820.7	2824.3
8.5°	2809.8	2813.0	2816.7	2816.3	2814.2	2816.3	2816.7	2813.0	2809.8	2813.0	2816.7
9°	2801.8	2805.0	2808.6	2807.8	2805.4	2807.8	2808.6	2805.0	2801.8	2805.0	2808.6
9.5°	2793.3	2796.5	2800.1	2798.5	2796.1	2798.5	2800.1	2796.5	2793.3	2796.5	2800.1
10°	2784.0	2788.1	2790.9	2789.3	2786.4	2789.3	2790.9	2788.1	2784.0	2788.1	2790.9
10.5°	2774.4	2778.4	2781.2	2779.2	2776.4	2779.2	2781.2	2778.4	2774.4	2778.4	2781.2
11°	2764.3	2768.7	2771.1	2768.7	2765.5	2768.7	2771.1	2768.7	2764.3	2768.7	2771.1
11.5°	2753.8	2758.2	2760.3	2757.4	2754.2	2757.4	2760.3	2758.2	2753.8	2758.2	2760.3
12°	2742.5	2747.4	2749.0	2746.2	2742.9	2746.2	2749.0	2747.4	2742.5	2747.4	2749.0
12.5°	2730.8	2736.1	2737.3	2734.1	2730.4	2734.1	2737.3	2736.1	2730.8	2736.1	2737.3
13°	2718.8	2724.0	2725.2	2721.6	2717.9	2721.6	2725.2	2724.0	2718.8	2724.0	2725.2
13.5°	2706.3	2711.5	2712.3	2708.7	2704.7	2708.7	2712.3	2711.5	2706.3	2711.5	2712.3
14°	2693.0	2699.0	2699.4	2695.4	2691.0	2695.4	2699.4	2699.0	2693.0	2699.0	2699.4
14.5°	2679.7	2685.3	2685.7	2681.3	2676.9	2681.3	2685.7	2685.3	2679.7	2685.3	2685.7
15°	2665.6	2671.6	2672.0	2666.8	2662.3	2666.8	2672.0	2671.6	2665.6	2671.6	2672.0
15.5°	2651.1	2657.5	2657.1	2651.9	2647.0	2651.9	2657.1	2657.5	2651.1	2657.5	2657.1
16°	2636.2	2642.6	2642.2	2636.6	2631.7	2636.6	2642.2	2642.6	2636.2	2642.6	2642.2
16.5°	2620.9	2627.3	2626.5	2620.9	2615.6	2620.9	2626.5	2627.3	2620.9	2627.3	2626.5
17°	2605.1	2611.6	2610.8	2604.3	2599.1	2604.3	2610.8	2611.6	2605.1	2611.6	2610.8
17.5°	2588.6	2595.5	2594.3	2587.8	2582.2	2587.8	2594.3	2595.5	2588.6	2595.5	2594.3
18°	2571.7	2578.5	2576.9	2570.5	2564.4	2570.5	2576.9	2578.5	2571.7	2578.5	2576.9
18.5°	2554.4	2561.2	2560.0	2553.2	2546.3	2553.2	2560.0	2561.2	2554.4	2561.2	2560.0
19°	2536.6	2543.9	2542.3	2535.0	2528.2	2535.0	2542.3	2543.9	2536.6	2543.9	2542.3
19.5°	2518.1	2525.8	2523.8	2516.5	2509.2	2516.5	2523.8	2525.8	2518.1	2525.8	2523.8
20°	2499.6	2507.2	2505.2	2498.0	2490.3	2498.0	2505.2	2507.2	2499.6	2507.2	2505.2
20.5°	2480.6	2488.3	2486.3	2478.2	2470.6	2478.2	2486.3	2488.3	2480.6	2488.3	2486.3
21°	2460.9	2468.6	2466.9	2458.5	2450.4	2458.5	2466.9	2468.6	2460.9	2468.6	2466.9



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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°	2399.3	2407.7	2405.7	2396.8	2389.2	2396.8	2405.7	2407.7	2399.3	2407.7	2405.7
23°	2377.9	2386.4	2384.8	2375.5	2367.8	2375.5	2384.8	2386.4	2377.9	2386.4	2384.8
23.5°	2355.7	2365.0	2363.4	2354.1	2346.9	2354.1	2363.4	2365.0	2355.7	2365.0	2363.4
24°	2333.6	2342.4	2341.6	2332.4	2325.1	2332.4	2341.6	2342.4	2333.6	2342.4	2341.6
24.5°	2310.2	2319.9	2319.5	2310.6	2302.2	2310.6	2319.5	2319.9	2310.2	2319.9	2319.5
25°	2286.4	2296.9	2296.5	2288.5	2278.8	2288.5	2296.5	2296.9	2286.4	2296.9	2296.5
25.5°	2262.7	2273.6	2273.6	2265.1	2255.4	2265.1	2273.6	2273.6	2262.7	2273.6	2273.6
26°	2237.7	2249.4	2250.2	2242.5	2231.2	2242.5	2250.2	2249.4	2237.7	2249.4	2250.2
26.5°	2212.7	2224.8	2226.4	2218.8	2205.9	2218.8	2226.4	2224.8	2212.7	2224.8	2226.4
27°	2186.5	2199.8	2202.2	2194.6	2179.7	2194.6	2202.2	2199.8	2186.5	2199.8	2202.2
27.5°	2160.7	2174.4	2178.1	2169.6	2153.5	2169.6	2178.1	2174.4	2160.7	2174.4	2178.1
28°	2133.7	2148.3	2153.5	2143.8	2125.7	2143.8	2153.5	2148.3	2133.7	2148.3	2153.5
28.5°	2106.4	2121.7	2128.1	2117.6	2097.5	2117.6	2128.1	2121.7	2106.4	2121.7	2128.1
29°	2077.7	2095.5	2103.1	2091.0	2069.3	2091.0	2103.1	2095.5	2077.7	2095.5	2103.1
29.5°	2049.1	2068.5	2078.1	2063.2	2040.3	2063.2	2078.1	2068.5	2049.1	2068.5	2078.1
30°	2020.5	2040.7	2052.0	2035.4	2011.3	2035.4	2052.0	2040.7	2020.5	2040.7	2052.0
30.5°	1991.1	2012.5	2026.2	2006.8	1981.5	2006.8	2026.2	2012.5	1991.1	2012.5	2026.2
31°	1960.5	1983.9	1999.6	1978.6	1951.6	1978.6	1999.6	1983.9	1960.5	1983.9	1999.6
31.5°	1930.7	1955.3	1973.4	1949.6	1921.0	1949.6	1973.4	1955.3	1930.7	1955.3	1973.4
32°	1900.1	1925.9	1946.8	1920.6	1890.0	1920.6	1946.8	1925.9	1900.1	1925.9	1946.8
32.5°	1869.0	1896.0	1919.8	1890.4	1859.0	1890.4	1919.8	1896.0	1869.0	1896.0	1919.8
33°	1837.6	1866.2	1892.4	1861.4	1827.9	1861.4	1892.4	1866.2	1837.6	1866.2	1892.4
33.5°	1806.2	1836.8	1864.6	1831.6	1796.1	1831.6	1864.6	1836.8	1806.2	1836.8	1864.6
34°	1773.6	1806.6	1836.4	1801.8	1763.9	1801.8	1836.4	1806.6	1773.6	1806.6	1836.4
34.5°	1741.3	1776.0	1808.2	1771.9	1731.3	1771.9	1808.2	1776.0	1741.3	1776.0	1808.2
35°	1707.9	1745.4	1780.0	1741.3	1699.0	1741.3	1780.0	1745.4	1707.9	1745.4	1780.0
35.5°	1675.7	1715.1	1750.6	1711.1	1666.8	1711.1	1750.6	1715.1	1675.7	1715.1	1750.6
36°	1642.2	1684.1	1721.2	1680.5	1628.5	1680.5	1721.2	1684.1	1642.2	1684.1	1721.2
36.5°	1606.4	1652.3	1692.6	1649.5	1585.4	1649.5	1692.6	1652.3	1606.4	1652.3	1692.6
37°	1563.2	1621.3	1663.2	1618.4	1537.9	1618.4	1663.2	1621.3	1563.2	1621.3	1663.2
37.5°	1506.8	1589.4	1634.2	1587.0	1488.7	1587.0	1634.2	1589.4	1506.8	1589.4	1634.2
38°	1450.0	1558.0	1603.9	1556.0	1436.3	1556.0	1603.9	1558.0	1450.0	1558.0	1603.9
38.5°	1387.2	1526.2	1574.9	1521.7	1382.7	1521.7	1574.9	1526.2	1387.2	1526.2	1574.9
39°	1321.9	1493.1	1545.9	1481.9	1322.7	1481.9	1545.9	1493.1	1321.9	1493.1	1545.9
39.5°	1253.8	1445.2	1517.3	1437.1	1259.5	1437.1	1517.3	1445.2	1253.8	1445.2	1517.3
40°	1186.1	1393.6	1488.3	1388.4	1192.6	1388.4	1488.3	1393.6	1186.1	1393.6	1488.3
40.5°	1118.4	1335.2	1459.7	1336.4	1126.5	1336.4	1459.7	1335.2	1118.4	1335.2	1459.7
41°	1054.4	1274.8	1431.9	1280.8	1062.8	1280.8	1431.9	1274.8	1054.4	1274.8	1431.9
41.5°	990.7	1212.7	1404.9	1222.4	999.6	1222.4	1404.9	1212.7	990.7	1212.7	1404.9
42°	928.7	1150.7	1377.9	1161.2	938.3	1161.2	1377.9	1150.7	928.7	1150.7	1377.9
42.5°	866.6	1089.4	1351.3	1099.9	876.3	1099.9	1351.3	1089.4	866.6	1089.4	1351.3
43°	805.4	1027.4	1324.7	1038.3	816.3	1038.3	1324.7	1027.4	805.4	1027.4	1324.7
43.5°	743.7	967.0	1298.5	977.8	755.8	977.8	1298.5	967.0	743.7	967.0	1298.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	573.7	791.3	1219.6	805.0	588.2	805.0	1219.6	791.3	573.7	791.3	1219.6
45.5°	520.5	733.7	1193.4	747.8	537.1	747.8	1193.4	733.7	520.5	733.7	1193.4
46°	471.0	678.1	1166.8	691.4	487.9	691.4	1166.8	678.1	471.0	678.1	1166.8
46.5°	422.2	624.1	1139.4	636.6	438.0	636.6	1139.4	624.1	422.2	624.1	1139.4
47°	374.3	570.9	1101.1	583.0	389.6	583.0	1101.1	570.9	374.3	570.9	1101.1
47.5°	328.4	519.7	1054.4	533.0	346.5	533.0	1054.4	519.7	328.4	519.7	1054.4
48°	289.3	470.2	998.8	483.9	308.6	483.9	998.8	470.2	289.3	470.2	998.8
48.5°	253.4	423.0	940.0	436.3	273.2	436.3	940.0	423.0	253.4	423.0	940.0
49°	221.6	377.1	878.3	389.6	240.9	389.6	878.3	377.1	221.6	377.1	878.3
49.5°	193.8	332.8	815.1	347.7	210.7	347.7	815.1	332.8	193.8	332.8	815.1
50°	169.2	291.3	751.0	307.4	182.9	307.4	751.0	291.3	169.2	291.3	751.0
50.5°	146.3	253.8	687.7	270.3	156.7	270.3	687.7	253.8	146.3	253.8	687.7
51°	125.3	220.4	625.3	235.7	131.7	235.7	625.3	220.4	125.3	220.4	625.3
51.5°	108.4	191.0	566.9	204.3	110.8	204.3	566.9	191.0	108.4	191.0	566.9
52°	91.5	165.2	513.3	176.9	94.3	176.9	513.3	165.2	91.5	165.2	513.3
52.5°	77.0	142.2	460.9	151.5	83.0	151.5	460.9	142.2	77.0	142.2	460.9
53°	66.5	121.3	412.2	128.1	72.1	128.1	412.2	121.3	66.5	121.3	412.2
53.5°	56.8	103.5	364.2	106.4	60.8	106.4	364.2	103.5	56.8	103.5	364.2
54°	54.4	86.6	320.3	87.0	50.0	87.0	320.3	86.6	54.4	86.6	320.3
54.5°	52.0	72.5	278.4	72.1	47.5	72.1	278.4	72.5	52.0	72.5	278.4
55°	50.0	60.0	241.3	60.4	45.9	60.4	241.3	60.0	50.0	60.0	241.3
55.5°	47.9	51.2	207.9	52.0	43.9	52.0	207.9	51.2	47.9	51.2	207.9
56°	45.9	47.1	177.7	45.5	42.3	45.5	177.7	47.1	45.9	47.1	177.7
56.5°	43.9	45.1	150.7	42.3	40.7	42.3	150.7	45.1	43.9	45.1	150.7
57°	42.3	43.5	128.1	40.7	39.1	40.7	128.1	43.5	42.3	43.5	128.1
57.5°	40.3	41.9	108.4	39.1	37.5	39.1	108.4	41.9	40.3	41.9	108.4
58°	38.7	40.3	92.3	37.9	36.3	37.9	92.3	40.3	38.7	40.3	92.3
58.5°	37.1	38.7	77.8	36.3	34.6	36.3	77.8	38.7	37.1	38.7	77.8
59°	35.9	37.5	66.1	35.1	33.4	35.1	66.1	37.5	35.9	37.5	66.1
59.5°	34.2	36.3	56.0	33.8	32.2	33.8	56.0	36.3	34.2	36.3	56.0
60°	33.0	34.6	47.1	32.6	31.0	32.6	47.1	34.6	33.0	34.6	47.1
60.5°	31.4	33.4	41.9	31.4	29.4	31.4	41.9	33.4	31.4	33.4	41.9
61°	30.2	32.2	37.9	30.6	28.6	30.6	37.9	32.2	30.2	32.2	37.9
61.5°	29.0	31.0	34.6	29.4	27.4	29.4	34.6	31.0	29.0	31.0	34.6
62°	27.8	30.2	32.6	28.2	26.2	28.2	32.6	30.2	27.8	30.2	32.6
62.5°	26.6	29.0	31.0	27.4	25.4	27.4	31.0	29.0	26.6	29.0	31.0
63°	25.4	27.8	29.8	26.6	24.2	26.6	29.8	27.8	25.4	27.8	29.8
63.5°	24.6	27.0	28.6	25.4	23.4	25.4	28.6	27.0	24.6	27.0	28.6
64°	23.4	25.8	27.8	24.6	22.2	24.6	27.8	25.8	23.4	25.8	27.8
64.5°	22.6	25.0	26.6	23.8	21.4	23.8	26.6	25.0	22.6	25.0	26.6
65°	21.4	24.2	25.8	23.0	20.5	23.0	25.8	24.2	21.4	24.2	25.8
65.5°	20.5	23.0	24.6	22.2	19.7	22.2	24.6	23.0	20.5	23.0	24.6
66°	19.7	22.2	23.8	21.4	18.9	21.4	23.8	22.2	19.7	22.2	23.8



TEST NUMBER: P776518

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-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	21.4	18.9	16.5	18.9	21.4	19.7	17.3	19.7	21.4
68°	16.5	18.9	20.5	18.1	16.1	18.1	20.5	18.9	16.5	18.9	20.5
68.5°	15.7	18.1	19.7	17.7	15.3	17.7	19.7	18.1	15.7	18.1	19.7
69°	15.3	17.3	18.9	16.9	14.5	16.9	18.9	17.3	15.3	17.3	18.9
69.5°	14.5	16.9	18.1	16.1	14.1	16.1	18.1	16.9	14.5	16.9	18.1
70°	13.7	16.1	17.3	15.7	13.3	15.7	17.3	16.1	13.7	16.1	17.3
70.5°	13.3	15.3	16.9	14.9	12.9	14.9	16.9	15.3	13.3	15.3	16.9
71°	12.5	14.9	16.1	14.5	12.5	14.5	16.1	14.9	12.5	14.9	16.1
71.5°	12.1	14.1	15.3	13.7	11.7	13.7	15.3	14.1	12.1	14.1	15.3
72°	11.3	13.7	14.9	13.3	11.3	13.3	14.9	13.7	11.3	13.7	14.9
72.5°	10.9	12.9	14.1	12.5	10.9	12.5	14.1	12.9	10.9	12.9	14.1
73°	10.5	12.5	13.3	12.1	10.1	12.1	13.3	12.5	10.5	12.5	13.3
73.5°	9.7	11.7	12.9	11.7	9.7	11.7	12.9	11.7	9.7	11.7	12.9
74°	9.3	11.3	12.1	10.9	9.3	10.9	12.1	11.3	9.3	11.3	12.1
74.5°	8.9	10.9	11.7	10.5	8.9	10.5	11.7	10.9	8.9	10.9	11.7
75°	8.5	10.1	10.9	10.1	8.5	10.1	10.9	10.1	8.5	10.1	10.9
75.5°	8.1	9.7	10.5	9.7	8.1	9.7	10.5	9.7	8.1	9.7	10.5
76°	7.7	9.3	10.1	8.9	7.7	8.9	10.1	9.3	7.7	9.3	10.1
76.5°	7.3	8.5	9.3	8.5	7.3	8.5	9.3	8.5	7.3	8.5	9.3
77°	6.4	8.1	8.9	8.1	6.8	8.1	8.9	8.1	6.4	8.1	8.9
77.5°	6.0	7.7	8.5	7.7	6.4	7.7	8.5	7.7	6.0	7.7	8.5
78°	6.0	7.3	7.7	7.3	6.0	7.3	7.7	7.3	6.0	7.3	7.7
78.5°	5.6	6.8	7.3	6.8	5.6	6.8	7.3	6.8	5.6	6.8	7.3
79°	5.2	6.4	6.8	6.4	5.2	6.4	6.8	6.4	5.2	6.4	6.8
79.5°	4.8	5.6	6.4	6.0	4.8	6.0	6.4	5.6	4.8	5.6	6.4
80°	4.4	5.2	6.0	5.6	4.8	5.6	6.0	5.2	4.4	5.2	6.0
80.5°	4.0	4.8	5.6	5.2	4.4	5.2	5.6	4.8	4.0	4.8	5.6
81°	3.6	4.4	5.2	4.8	4.0	4.8	5.2	4.4	3.6	4.4	5.2
81.5°	3.6	4.0	4.8	4.4	3.6	4.4	4.8	4.0	3.6	4.0	4.8
82°	3.2	3.6	4.4	4.0	3.6	4.0	4.4	3.6	3.2	3.6	4.4
82.5°	2.8	3.2	4.0	3.6	3.2	3.6	4.0	3.2	2.8	3.2	4.0
83°	2.4	3.2	3.6	3.2	2.8	3.2	3.6	3.2	2.4	3.2	3.6
83.5°	2.4	2.8	3.2	3.2	2.4	3.2	3.2	2.8	2.4	2.8	3.2
84°	2.0	2.4	2.8	2.8	2.4	2.8	2.8	2.4	2.0	2.4	2.8
84.5°	1.6	2.0	2.4	2.4	2.0	2.4	2.4	2.0	1.6	2.0	2.4
85°	1.6	1.6	2.0	2.0	1.6	2.0	2.0	1.6	1.6	1.6	2.0
85.5°	1.2	1.2	1.6	1.6	1.6	1.6	1.6	1.2	1.2	1.2	1.6
86°	0.8	1.2	1.6	1.6	1.2	1.6	1.6	1.2	0.8	1.2	1.6
86.5°	0.8	0.8	1.2	1.2	1.2	1.2	1.2	0.8	0.8	0.8	1.2
87°	0.4	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.8	0.8
87.5°	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.8
88°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
88.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.0	0.0	0.4



TEST NUMBER: P776518

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-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	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776518

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2877.9	2877.9	2877.9	2877.9	2877.9	2877.9
0.5°	2879.5	2878.7	2879.5	2878.3	2876.3	2875.1
1°	2878.7	2878.3	2878.7	2877.5	2875.9	2874.7
1.5°	2877.9	2877.5	2877.9	2876.7	2874.7	2873.5
2°	2876.7	2875.9	2876.7	2875.1	2873.1	2871.9
2.5°	2874.7	2874.3	2874.7	2873.5	2871.1	2869.8
3°	2872.7	2872.3	2872.7	2871.1	2869.0	2867.4
3.5°	2870.2	2869.8	2870.2	2868.6	2866.2	2864.6
4°	2867.4	2867.0	2867.4	2865.4	2863.0	2861.4
4.5°	2863.8	2863.4	2863.8	2861.8	2859.0	2857.8
5°	2860.2	2859.4	2860.2	2858.2	2854.9	2853.3
5.5°	2855.7	2854.5	2855.7	2853.7	2850.5	2848.9
6°	2850.9	2849.7	2850.9	2848.9	2845.3	2843.3
6.5°	2845.3	2843.7	2845.3	2843.7	2840.0	2837.6
7°	2838.8	2837.2	2838.8	2837.6	2834.0	2831.6
7.5°	2832.0	2830.0	2832.0	2831.2	2827.5	2824.7
8°	2824.7	2822.7	2824.7	2824.3	2820.7	2817.5
8.5°	2816.3	2814.2	2816.3	2816.7	2813.0	2809.8
9°	2807.8	2805.4	2807.8	2808.6	2805.0	2801.8
9.5°	2798.5	2796.1	2798.5	2800.1	2796.5	2793.3
10°	2789.3	2786.4	2789.3	2790.9	2788.1	2784.0
10.5°	2779.2	2776.4	2779.2	2781.2	2778.4	2774.4
11°	2768.7	2765.5	2768.7	2771.1	2768.7	2764.3
11.5°	2757.4	2754.2	2757.4	2760.3	2758.2	2753.8
12°	2746.2	2742.9	2746.2	2749.0	2747.4	2742.5
12.5°	2734.1	2730.4	2734.1	2737.3	2736.1	2730.8
13°	2721.6	2717.9	2721.6	2725.2	2724.0	2718.8
13.5°	2708.7	2704.7	2708.7	2712.3	2711.5	2706.3
14°	2695.4	2691.0	2695.4	2699.4	2699.0	2693.0
14.5°	2681.3	2676.9	2681.3	2685.7	2685.3	2679.7
15°	2666.8	2662.3	2666.8	2672.0	2671.6	2665.6
15.5°	2651.9	2647.0	2651.9	2657.1	2657.5	2651.1
16°	2636.6	2631.7	2636.6	2642.2	2642.6	2636.2
16.5°	2620.9	2615.6	2620.9	2626.5	2627.3	2620.9
17°	2604.3	2599.1	2604.3	2610.8	2611.6	2605.1
17.5°	2587.8	2582.2	2587.8	2594.3	2595.5	2588.6
18°	2570.5	2564.4	2570.5	2576.9	2578.5	2571.7
18.5°	2553.2	2546.3	2553.2	2560.0	2561.2	2554.4
19°	2535.0	2528.2	2535.0	2542.3	2543.9	2536.6
19.5°	2516.5	2509.2	2516.5	2523.8	2525.8	2518.1
20°	2498.0	2490.3	2498.0	2505.2	2507.2	2499.6
20.5°	2478.2	2470.6	2478.2	2486.3	2488.3	2480.6
21°	2458.5	2450.4	2458.5	2466.9	2468.6	2460.9

TEST NUMBER: P776518

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2396.8	2389.2	2396.8	2405.7	2407.7	2399.3
23°	2375.5	2367.8	2375.5	2384.8	2386.4	2377.9
23.5°	2354.1	2346.9	2354.1	2363.4	2365.0	2355.7
24°	2332.4	2325.1	2332.4	2341.6	2342.4	2333.6
24.5°	2310.6	2302.2	2310.6	2319.5	2319.9	2310.2
25°	2288.5	2278.8	2288.5	2296.5	2296.9	2286.4
25.5°	2265.1	2255.4	2265.1	2273.6	2273.6	2262.7
26°	2242.5	2231.2	2242.5	2250.2	2249.4	2237.7
26.5°	2218.8	2205.9	2218.8	2226.4	2224.8	2212.7
27°	2194.6	2179.7	2194.6	2202.2	2199.8	2186.5
27.5°	2169.6	2153.5	2169.6	2178.1	2174.4	2160.7
28°	2143.8	2125.7	2143.8	2153.5	2148.3	2133.7
28.5°	2117.6	2097.5	2117.6	2128.1	2121.7	2106.4
29°	2091.0	2069.3	2091.0	2103.1	2095.5	2077.7
29.5°	2063.2	2040.3	2063.2	2078.1	2068.5	2049.1
30°	2035.4	2011.3	2035.4	2052.0	2040.7	2020.5
30.5°	2006.8	1981.5	2006.8	2026.2	2012.5	1991.1
31°	1978.6	1951.6	1978.6	1999.6	1983.9	1960.5
31.5°	1949.6	1921.0	1949.6	1973.4	1955.3	1930.7
32°	1920.6	1890.0	1920.6	1946.8	1925.9	1900.1
32.5°	1890.4	1859.0	1890.4	1919.8	1896.0	1869.0
33°	1861.4	1827.9	1861.4	1892.4	1866.2	1837.6
33.5°	1831.6	1796.1	1831.6	1864.6	1836.8	1806.2
34°	1801.8	1763.9	1801.8	1836.4	1806.6	1773.6
34.5°	1771.9	1731.3	1771.9	1808.2	1776.0	1741.3
35°	1741.3	1699.0	1741.3	1780.0	1745.4	1707.9
35.5°	1711.1	1666.8	1711.1	1750.6	1715.1	1675.7
36°	1680.5	1628.5	1680.5	1721.2	1684.1	1642.2
36.5°	1649.5	1585.4	1649.5	1692.6	1652.3	1606.4
37°	1618.4	1537.9	1618.4	1663.2	1621.3	1563.2
37.5°	1587.0	1488.7	1587.0	1634.2	1589.4	1506.8
38°	1556.0	1436.3	1556.0	1603.9	1558.0	1450.0
38.5°	1521.7	1382.7	1521.7	1574.9	1526.2	1387.2
39°	1481.9	1322.7	1481.9	1545.9	1493.1	1321.9
39.5°	1437.1	1259.5	1437.1	1517.3	1445.2	1253.8
40°	1388.4	1192.6	1388.4	1488.3	1393.6	1186.1
40.5°	1336.4	1126.5	1336.4	1459.7	1335.2	1118.4
41°	1280.8	1062.8	1280.8	1431.9	1274.8	1054.4
41.5°	1222.4	999.6	1222.4	1404.9	1212.7	990.7
42°	1161.2	938.3	1161.2	1377.9	1150.7	928.7
42.5°	1099.9	876.3	1099.9	1351.3	1089.4	866.6
43°	1038.3	816.3	1038.3	1324.7	1027.4	805.4
43.5°	977.8	755.8	977.8	1298.5	967.0	743.7



TEST NUMBER: P776518

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	805.0	588.2	805.0	1219.6	791.3	573.7
45.5°	747.8	537.1	747.8	1193.4	733.7	520.5
46°	691.4	487.9	691.4	1166.8	678.1	471.0
46.5°	636.6	438.0	636.6	1139.4	624.1	422.2
47°	583.0	389.6	583.0	1101.1	570.9	374.3
47.5°	533.0	346.5	533.0	1054.4	519.7	328.4
48°	483.9	308.6	483.9	998.8	470.2	289.3
48.5°	436.3	273.2	436.3	940.0	423.0	253.4
49°	389.6	240.9	389.6	878.3	377.1	221.6
49.5°	347.7	210.7	347.7	815.1	332.8	193.8
50°	307.4	182.9	307.4	751.0	291.3	169.2
50.5°	270.3	156.7	270.3	687.7	253.8	146.3
51°	235.7	131.7	235.7	625.3	220.4	125.3
51.5°	204.3	110.8	204.3	566.9	191.0	108.4
52°	176.9	94.3	176.9	513.3	165.2	91.5
52.5°	151.5	83.0	151.5	460.9	142.2	77.0
53°	128.1	72.1	128.1	412.2	121.3	66.5
53.5°	106.4	60.8	106.4	364.2	103.5	56.8
54°	87.0	50.0	87.0	320.3	86.6	54.4
54.5°	72.1	47.5	72.1	278.4	72.5	52.0
55°	60.4	45.9	60.4	241.3	60.0	50.0
55.5°	52.0	43.9	52.0	207.9	51.2	47.9
56°	45.5	42.3	45.5	177.7	47.1	45.9
56.5°	42.3	40.7	42.3	150.7	45.1	43.9
57°	40.7	39.1	40.7	128.1	43.5	42.3
57.5°	39.1	37.5	39.1	108.4	41.9	40.3
58°	37.9	36.3	37.9	92.3	40.3	38.7
58.5°	36.3	34.6	36.3	77.8	38.7	37.1
59°	35.1	33.4	35.1	66.1	37.5	35.9
59.5°	33.8	32.2	33.8	56.0	36.3	34.2
60°	32.6	31.0	32.6	47.1	34.6	33.0
60.5°	31.4	29.4	31.4	41.9	33.4	31.4
61°	30.6	28.6	30.6	37.9	32.2	30.2
61.5°	29.4	27.4	29.4	34.6	31.0	29.0
62°	28.2	26.2	28.2	32.6	30.2	27.8
62.5°	27.4	25.4	27.4	31.0	29.0	26.6
63°	26.6	24.2	26.6	29.8	27.8	25.4
63.5°	25.4	23.4	25.4	28.6	27.0	24.6
64°	24.6	22.2	24.6	27.8	25.8	23.4
64.5°	23.8	21.4	23.8	26.6	25.0	22.6
65°	23.0	20.5	23.0	25.8	24.2	21.4
65.5°	22.2	19.7	22.2	24.6	23.0	20.5
66°	21.4	18.9	21.4	23.8	22.2	19.7



TEST NUMBER: P776518

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	18.9	16.5	18.9	21.4	19.7	17.3
68°	18.1	16.1	18.1	20.5	18.9	16.5
68.5°	17.7	15.3	17.7	19.7	18.1	15.7
69°	16.9	14.5	16.9	18.9	17.3	15.3
69.5°	16.1	14.1	16.1	18.1	16.9	14.5
70°	15.7	13.3	15.7	17.3	16.1	13.7
70.5°	14.9	12.9	14.9	16.9	15.3	13.3
71°	14.5	12.5	14.5	16.1	14.9	12.5
71.5°	13.7	11.7	13.7	15.3	14.1	12.1
72°	13.3	11.3	13.3	14.9	13.7	11.3
72.5°	12.5	10.9	12.5	14.1	12.9	10.9
73°	12.1	10.1	12.1	13.3	12.5	10.5
73.5°	11.7	9.7	11.7	12.9	11.7	9.7
74°	10.9	9.3	10.9	12.1	11.3	9.3
74.5°	10.5	8.9	10.5	11.7	10.9	8.9
75°	10.1	8.5	10.1	10.9	10.1	8.5
75.5°	9.7	8.1	9.7	10.5	9.7	8.1
76°	8.9	7.7	8.9	10.1	9.3	7.7
76.5°	8.5	7.3	8.5	9.3	8.5	7.3
77°	8.1	6.8	8.1	8.9	8.1	6.4
77.5°	7.7	6.4	7.7	8.5	7.7	6.0
78°	7.3	6.0	7.3	7.7	7.3	6.0
78.5°	6.8	5.6	6.8	7.3	6.8	5.6
79°	6.4	5.2	6.4	6.8	6.4	5.2
79.5°	6.0	4.8	6.0	6.4	5.6	4.8
80°	5.6	4.8	5.6	6.0	5.2	4.4
80.5°	5.2	4.4	5.2	5.6	4.8	4.0
81°	4.8	4.0	4.8	5.2	4.4	3.6
81.5°	4.4	3.6	4.4	4.8	4.0	3.6
82°	4.0	3.6	4.0	4.4	3.6	3.2
82.5°	3.6	3.2	3.6	4.0	3.2	2.8
83°	3.2	2.8	3.2	3.6	3.2	2.4
83.5°	3.2	2.4	3.2	3.2	2.8	2.4
84°	2.8	2.4	2.8	2.8	2.4	2.0
84.5°	2.4	2.0	2.4	2.4	2.0	1.6
85°	2.0	1.6	2.0	2.0	1.6	1.6
85.5°	1.6	1.6	1.6	1.6	1.2	1.2
86°	1.6	1.2	1.6	1.6	1.2	0.8
86.5°	1.2	1.2	1.2	1.2	0.8	0.8
87°	0.8	0.8	0.8	0.8	0.8	0.4
87.5°	0.8	0.8	0.8	0.8	0.4	0.4
88°	0.4	0.4	0.4	0.4	0.4	0.4
88.5°	0.4	0.4	0.4	0.4	0.0	0.0



TEST NUMBER: P776518

CATALOG NUMBER: HCDJBL3040CSD-HCD8TSQH-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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Scaled Data Report





21.5°	2441.2	2448.8	2446.8	2438.3	2430.7	2438.3	2446.8	2448.8	2441.2	2448.8	2446.8
22°	2419.8	2428.7	2426.3	2417.8	2409.7	2417.8	2426.3	2428.7	2419.8	2428.7	2426.3



44°	684.5	908.1	1271.9	919.8	697.0	919.8	1271.9	908.1	684.5	908.1	1271.9
44.5°	628.9	850.5	1246.2	862.2	639.4	862.2	1246.2	850.5	628.9	850.5	1246.2



66.5°	18.9	21.4	23.0	20.5	18.1	20.5	23.0	21.4	18.9	21.4	23.0
67°	18.1	20.5	22.2	19.7	17.3	19.7	22.2	20.5	18.1	20.5	22.2



89°	0.0	0.0	0.0	0.0	0.4	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°	2438.3	2430.7	2438.3	2446.8	2448.8	2441.2
22°	2417.8	2409.7	2417.8	2426.3	2428.7	2419.8



44°	919.8	697.0	919.8	1271.9	908.1	684.5
44.5°	862.2	639.4	862.2	1246.2	850.5	628.9

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66.5°	20.5	18.1	20.5	23.0	21.4	18.9
67°	19.7	17.3	19.7	22.2	20.5	18.1

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89°	0.0	0.4	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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(END OF REPORT)