

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: P776373

Luminaire Tested: HCDJBL3040CSD-HCD62TRH-HCD62TRLWW-4000lm-4000K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776373
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B061)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD62TRH-HCD62TRLWW-4000lm-4000K
Description: 6 INCH ROUND NARROW LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4594.9 lumens
Efficiency: N/A
Efficacy: 119.3 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.09 / 1.15
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

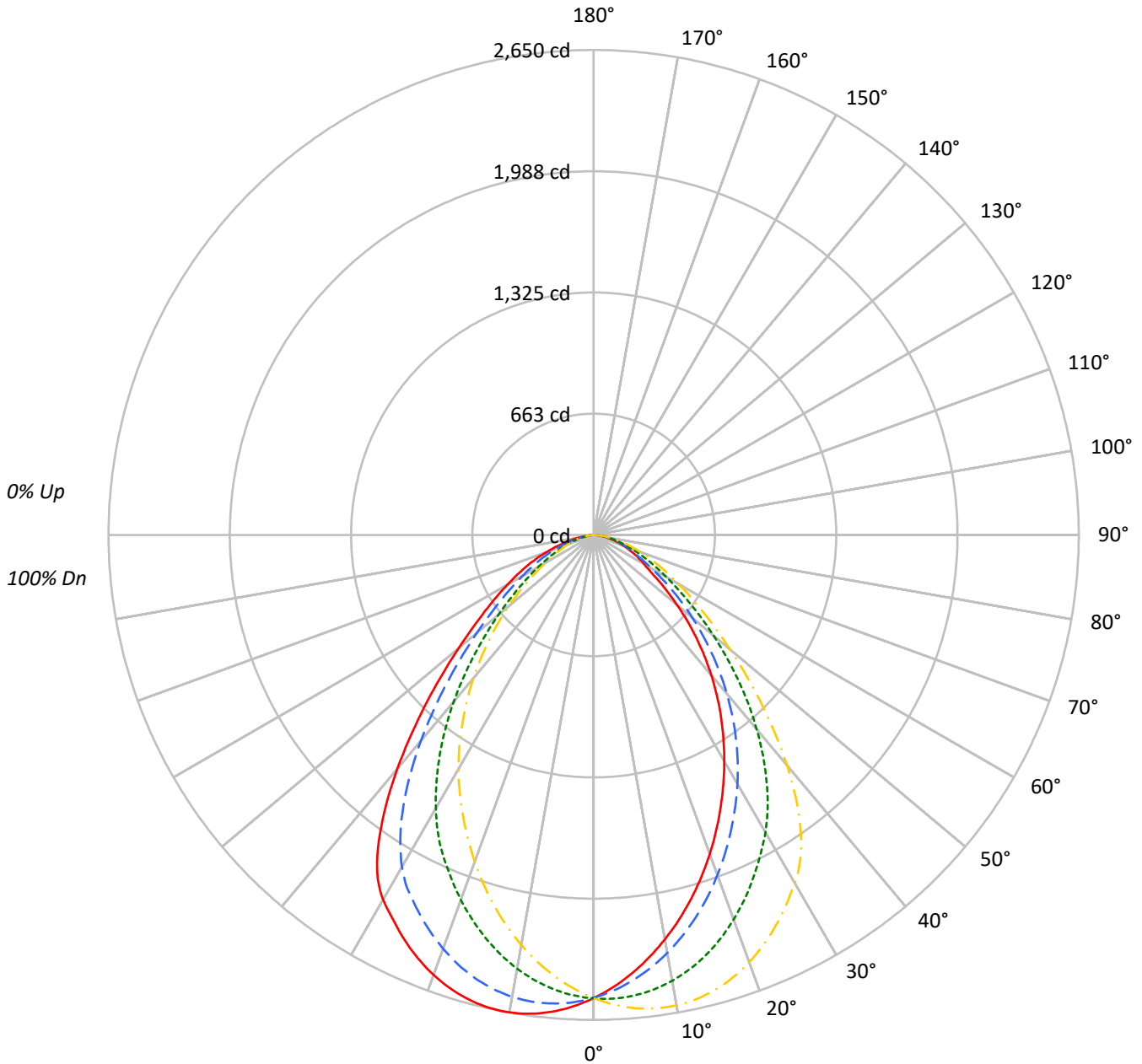
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	82	87	84	81	84	81	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	74	71	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	67	62	70	65	61	60																			
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	51	62	55	50	60	54	50	59	53	49	48																			
7	71	59	51	46	70	58	51	46	57	50	45	55	49	45	54	49	45	43																			
8	67	54	47	41	65	54	46	41	53	46	41	51	45	41	50	45	41	39																			
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	36																			
10	59	47	40	35	58	46	39	35	45	39	35	44	39	34	44	38	34	33																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	138739	138739	138739	138739
5°	132308	139049	143924	137161
10°	124886	137695	147476	133993
15°	116805	134779	149235	129428
20°	108194	130433	149241	123759
25°	99284	124925	147771	117370
30°	90280	118771	145636	109156
35°	81097	110249	136951	98062
40°	71548	99150	119338	85102
45°	61332	86234	99599	71046
50°	50728	72791	82147	57840
55°	40907	60395	69140	46794
60°	34778	50106	59732	38045
65°	31573	42184	52223	30898
70°	28034	35391	44174	24668
75°	24591	29865	35076	19381
80°	20362	25824	23677	14490
85°	12643	24845	8366	8114

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°

Vertical Angle: 45°

Luminance: 101724 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.4	5.2
10°-20°	656.3	14.3
20°-30°	929.5	20.2
30°-40°	990.3	21.6
40°-50°	794.8	17.3
50°-60°	516.0	11.2
60°-70°	299.2	6.5
70°-80°	140.7	3.1
80°-90°	30.7	0.7
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°	1823.2	39.7
0°-40°	2813.5	61.2
0°-60°	4124.3	89.8
0°-90°	4594.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4594.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2531	2531	2531	2531	2531	
5°	2404	2527	2615	2492	2404	224
15°	2058	2375	2630	2280	2058	576
25°	1641	2065	2443	1940	1641	753
35°	1212	1647	2046	1465	1212	756
45°	791	1112	1285	916	791	610
55°	428	632	723	490	428	390
65°	243	325	403	238	243	242
75°	116	141	166	92	116	124
85°	20	40	13	13	20	27
90°	0	6	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°	2530.8	2530.8	2530.8	2530.8	2530.8	2530.8	2530.8	2530.8	2530.8	2530.8	2530.8
0.5°	2520.3	2520.3	2523.1	2527.6	2534.8	2537.3	2539.7	2540.9	2542.1	2538.9	2536.0
1°	2509.0	2510.7	2516.3	2524.4	2535.6	2542.1	2547.7	2551.0	2551.8	2547.7	2541.7
1.5°	2497.4	2500.6	2508.2	2520.7	2536.0	2546.9	2555.4	2560.2	2561.4	2555.8	2546.9
2°	2485.3	2489.7	2500.6	2516.3	2536.4	2551.0	2562.6	2569.1	2570.3	2563.4	2551.8
2.5°	2472.4	2478.4	2492.1	2511.5	2535.6	2554.2	2569.5	2577.6	2579.2	2570.7	2556.2
3°	2459.5	2467.1	2483.2	2506.6	2534.8	2557.4	2575.5	2585.6	2587.2	2577.6	2559.8
3.5°	2446.6	2455.0	2474.0	2501.0	2533.6	2559.8	2581.2	2593.3	2595.3	2583.6	2563.4
4°	2432.9	2443.0	2464.3	2494.9	2532.0	2562.2	2586.4	2600.5	2602.1	2589.6	2565.9
4.5°	2418.8	2430.5	2454.2	2488.5	2529.6	2563.8	2591.3	2607.0	2609.0	2594.9	2568.7
5°	2404.3	2417.2	2443.8	2481.2	2526.8	2564.7	2595.7	2613.4	2615.4	2599.7	2570.3
5.5°	2389.8	2403.9	2432.9	2474.4	2523.5	2565.5	2599.3	2619.1	2621.1	2604.1	2571.9
6°	2374.4	2390.2	2422.0	2466.3	2519.9	2565.5	2602.5	2623.9	2626.3	2607.8	2572.7
6.5°	2359.1	2376.1	2410.3	2458.3	2515.5	2565.1	2605.4	2628.3	2631.1	2611.4	2573.1
7°	2343.4	2361.5	2398.2	2449.4	2511.1	2564.3	2607.4	2632.4	2635.2	2613.8	2573.1
7.5°	2327.7	2346.6	2386.1	2440.1	2505.8	2563.0	2609.0	2636.0	2638.8	2616.2	2572.7
8°	2311.6	2331.7	2373.2	2430.9	2500.2	2561.0	2610.2	2638.8	2642.0	2617.8	2571.9
8.5°	2294.6	2316.4	2359.9	2421.2	2494.1	2558.6	2611.0	2641.6	2644.4	2619.1	2570.3
9°	2278.1	2300.3	2346.6	2410.7	2487.7	2555.8	2611.0	2643.2	2646.9	2619.9	2568.3
9.5°	2260.8	2284.2	2332.9	2399.8	2480.8	2552.6	2610.6	2644.9	2648.1	2620.3	2565.9
10°	2243.5	2268.5	2318.8	2388.5	2473.6	2548.5	2609.8	2645.7	2649.3	2619.9	2563.0
10.5°	2225.7	2252.3	2304.3	2377.3	2465.5	2544.5	2608.6	2646.1	2649.7	2618.7	2559.4
11°	2208.4	2235.4	2289.4	2365.2	2457.5	2539.7	2606.6	2645.7	2649.7	2617.4	2555.4
11.5°	2189.9	2218.1	2274.1	2353.1	2448.2	2534.4	2604.1	2644.9	2648.9	2615.4	2550.5
12°	2171.7	2201.2	2258.8	2340.2	2439.3	2528.4	2601.3	2643.6	2647.7	2613.0	2545.7
12.5°	2153.2	2183.0	2243.1	2326.9	2430.1	2522.3	2597.7	2641.6	2646.1	2610.2	2540.5
13°	2134.7	2166.1	2227.3	2313.6	2420.0	2515.5	2593.7	2639.2	2643.6	2606.6	2534.4
13.5°	2115.3	2148.0	2210.8	2300.3	2409.1	2508.2	2588.8	2636.4	2640.8	2602.9	2528.0
14°	2096.8	2129.8	2194.3	2286.2	2398.2	2500.6	2584.0	2632.8	2637.6	2598.5	2521.1
14.5°	2077.0	2110.9	2177.8	2271.3	2386.9	2492.1	2578.4	2628.7	2634.0	2593.3	2513.9
15°	2058.1	2092.7	2160.5	2256.8	2374.8	2483.2	2572.3	2624.3	2629.5	2587.6	2506.2
15.5°	2037.5	2073.4	2142.7	2241.1	2363.2	2474.4	2565.9	2619.1	2624.3	2581.6	2497.8
16°	2018.2	2054.5	2125.8	2226.1	2350.3	2464.7	2558.6	2613.4	2619.1	2575.1	2489.3
16.5°	1998.4	2035.1	2108.1	2210.0	2337.4	2454.6	2551.0	2607.4	2613.0	2568.3	2480.4
17°	1978.3	2016.2	2089.9	2193.9	2323.7	2444.2	2542.9	2600.5	2606.6	2561.0	2471.2
17.5°	1957.7	1996.4	2071.4	2177.4	2310.4	2433.3	2534.4	2593.7	2599.7	2553.0	2461.1
18°	1937.6	1977.1	2053.3	2160.9	2295.9	2421.2	2525.2	2585.6	2592.5	2544.9	2450.6
18.5°	1916.6	1956.9	2034.3	2143.5	2281.3	2409.5	2515.5	2577.6	2584.4	2536.0	2439.7
19°	1896.5	1937.2	2015.8	2126.2	2266.4	2397.4	2505.8	2569.1	2575.9	2526.8	2428.8
19.5°	1875.5	1916.6	1996.4	2108.9	2251.5	2384.9	2495.3	2560.2	2567.1	2517.1	2417.6
20°	1854.6	1896.9	1977.5	2091.5	2235.8	2372.0	2484.5	2550.5	2558.2	2507.4	2405.9
20.5°	1833.2	1876.3	1958.1	2073.0	2220.1	2358.3	2473.2	2540.5	2548.1	2497.0	2393.4
21°	1812.7	1855.8	1938.4	2055.3	2203.6	2344.6	2461.5	2530.4	2538.1	2485.7	2380.9



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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°	1748.6	1793.7	1878.8	1999.3	2154.4	2301.1	2424.8	2497.0	2505.4	2451.4	2341.4
23°	1727.2	1772.4	1858.6	1980.3	2136.7	2285.8	2411.5	2485.3	2493.7	2438.9	2327.3
23.5°	1706.3	1751.8	1838.9	1961.0	2119.3	2270.9	2397.8	2472.4	2481.6	2426.4	2313.2
24°	1684.9	1730.5	1818.3	1942.0	2101.2	2254.3	2384.1	2459.9	2469.1	2413.1	2298.7
24.5°	1663.2	1709.5	1797.8	1922.3	2083.5	2238.6	2370.0	2446.6	2456.2	2399.8	2283.8
25°	1641.4	1688.5	1777.6	1902.5	2065.3	2222.5	2355.1	2433.7	2443.0	2386.1	2268.1
25.5°	1620.0	1666.8	1757.1	1882.4	2047.2	2205.6	2340.6	2419.6	2429.7	2372.0	2253.1
26°	1598.7	1645.8	1736.1	1863.0	2028.3	2189.1	2325.7	2405.5	2415.5	2357.5	2237.8
26.5°	1577.3	1624.5	1715.9	1843.7	2010.1	2172.1	2310.0	2390.6	2401.0	2343.0	2222.5
27°	1555.6	1603.9	1695.4	1823.5	1990.8	2154.8	2293.8	2376.5	2386.5	2328.1	2208.0
27.5°	1533.8	1582.6	1674.8	1803.4	1972.3	2137.1	2278.1	2360.7	2372.0	2314.4	2192.7
28°	1512.0	1560.4	1653.9	1783.7	1952.9	2119.3	2262.0	2345.8	2357.5	2300.3	2176.2
28.5°	1491.1	1539.0	1633.3	1763.9	1934.4	2101.6	2245.5	2330.5	2343.8	2286.6	2157.6
29°	1469.3	1518.1	1612.4	1743.4	1915.0	2083.9	2229.0	2315.6	2330.5	2271.3	2137.5
29.5°	1447.6	1496.7	1591.4	1722.8	1896.1	2067.0	2213.2	2301.1	2316.0	2254.3	2116.5
30°	1426.2	1475.4	1570.5	1702.7	1876.3	2048.4	2197.5	2286.6	2300.7	2235.4	2094.4
30.5°	1404.8	1454.0	1549.1	1681.7	1856.2	2029.9	2180.2	2270.9	2284.2	2214.5	2071.0
31°	1383.1	1432.6	1528.2	1659.5	1835.2	2010.1	2162.9	2254.3	2265.6	2192.3	2045.6
31.5°	1361.7	1411.7	1506.4	1638.6	1813.5	1989.6	2143.5	2235.0	2245.1	2168.9	2019.8
32°	1340.0	1389.5	1485.0	1616.4	1791.7	1967.4	2122.6	2214.9	2222.9	2143.5	1993.6
32.5°	1318.6	1368.2	1463.7	1594.2	1768.7	1944.0	2100.0	2193.1	2198.3	2116.5	1965.8
33°	1297.6	1346.8	1441.5	1572.1	1745.0	1920.3	2077.4	2169.7	2171.7	2087.5	1936.8
33.5°	1276.3	1325.4	1420.2	1549.1	1721.6	1896.1	2052.4	2143.5	2142.7	2056.9	1907.0
34°	1254.9	1303.7	1398.0	1526.1	1697.0	1871.1	2027.1	2115.7	2111.7	2025.9	1877.1
34.5°	1233.6	1282.7	1376.2	1502.4	1672.4	1845.7	2000.1	2085.9	2080.3	1993.2	1844.9
35°	1211.8	1261.0	1354.1	1479.0	1647.4	1818.7	1971.4	2054.5	2046.4	1959.8	1813.1
35.5°	1191.3	1239.6	1331.9	1455.2	1622.1	1792.1	1942.0	2022.2	2011.7	1924.7	1780.4
36°	1170.3	1218.3	1309.7	1431.4	1596.7	1764.7	1911.8	1988.8	1976.3	1889.2	1747.0
36.5°	1148.9	1196.9	1287.6	1407.3	1570.9	1736.9	1880.4	1953.7	1939.2	1853.8	1713.1
37°	1127.2	1174.7	1265.0	1383.5	1545.1	1708.3	1848.5	1917.8	1901.3	1816.7	1678.1
37.5°	1106.2	1153.4	1242.8	1359.7	1518.9	1678.9	1815.1	1881.6	1863.4	1779.2	1643.0
38°	1084.9	1132.0	1219.9	1335.5	1491.9	1651.1	1781.6	1845.3	1824.8	1740.9	1607.9
38.5°	1063.5	1110.7	1198.1	1311.3	1466.1	1620.0	1747.8	1807.8	1786.1	1703.9	1572.9
39°	1042.5	1088.9	1175.9	1287.6	1439.1	1590.2	1713.5	1770.0	1746.2	1664.8	1537.4
39.5°	1021.2	1067.9	1153.4	1263.0	1412.5	1559.6	1678.1	1731.3	1707.1	1626.9	1502.4
40°	999.8	1046.6	1130.4	1238.8	1385.5	1529.8	1642.6	1692.6	1667.6	1588.2	1465.7
40.5°	978.9	1025.2	1108.6	1214.6	1357.7	1496.7	1607.5	1653.9	1628.1	1550.7	1430.2
41°	957.5	1003.9	1086.1	1190.4	1330.7	1466.1	1572.1	1615.2	1588.6	1511.2	1394.8
41.5°	936.6	983.3	1063.9	1166.3	1303.3	1434.7	1536.6	1575.7	1548.7	1474.2	1359.7
42°	915.2	961.9	1041.7	1141.7	1276.3	1404.4	1499.9	1537.0	1510.0	1435.1	1323.8
42.5°	894.6	941.4	1020.0	1117.9	1248.9	1371.4	1464.5	1499.1	1471.7	1398.4	1290.0
43°	873.7	920.4	997.8	1092.9	1221.1	1340.4	1429.0	1461.3	1433.0	1360.5	1254.9
43.5°	852.7	899.5	976.1	1070.4	1193.7	1308.1	1394.0	1423.8	1395.2	1324.2	1220.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	791.1	837.4	910.8	998.2	1112.3	1214.6	1289.2	1312.1	1284.7	1217.0	1121.5
45.5°	770.5	817.3	889.4	976.1	1084.9	1183.2	1254.9	1277.5	1248.9	1182.8	1089.7
46°	750.8	797.1	868.5	952.7	1058.7	1152.6	1221.5	1242.0	1214.2	1148.5	1058.3
46.5°	730.6	777.0	847.1	929.3	1031.7	1122.7	1188.4	1208.6	1179.6	1115.5	1027.2
47°	710.5	757.2	826.1	905.5	1005.1	1092.9	1154.6	1173.5	1146.1	1083.2	997.0
47.5°	690.7	737.1	805.6	883.8	978.9	1062.7	1122.7	1141.3	1113.5	1051.4	968.0
48°	671.0	717.3	785.0	861.2	953.5	1033.7	1091.7	1109.0	1082.0	1020.8	939.0
48.5°	651.6	698.0	764.5	839.4	927.7	1005.5	1060.7	1078.4	1051.4	991.0	911.2
49°	632.7	678.6	744.7	816.5	902.7	977.7	1030.9	1046.6	1020.8	962.4	883.4
49.5°	613.8	659.7	724.6	795.1	877.7	949.1	1001.4	1017.6	992.2	933.7	857.2
50°	594.8	640.4	704.4	773.3	853.5	922.1	972.4	988.1	963.2	906.3	831.4
50.5°	576.7	621.0	685.1	752.0	828.6	895.5	943.8	960.3	935.3	879.3	806.4
51°	558.5	602.9	665.7	731.0	805.2	869.3	917.2	932.5	908.3	853.5	781.8
51.5°	540.8	584.7	646.4	709.7	783.0	843.9	891.0	905.9	883.0	829.0	758.4
52°	523.5	567.0	627.9	689.1	759.6	818.5	864.4	880.1	857.6	805.2	735.9
52.5°	506.6	548.9	608.9	669.0	736.7	793.5	839.4	856.0	833.4	781.8	713.3
53°	490.0	531.5	590.8	648.8	714.9	770.1	814.9	831.0	810.0	758.8	691.9
53.5°	473.5	514.2	571.8	629.5	693.1	746.7	791.5	807.6	786.6	737.5	671.4
54°	458.2	498.1	554.5	610.1	672.6	724.2	768.5	784.6	764.9	716.5	650.8
54.5°	442.9	482.0	537.6	591.2	651.6	702.0	745.5	762.5	743.5	696.0	631.5
55°	428.0	465.9	520.3	572.7	631.9	680.7	724.6	741.1	723.4	676.6	612.6
55.5°	413.5	450.5	503.3	554.9	612.1	660.1	702.8	720.2	702.8	656.9	594.4
56°	400.2	435.2	487.2	536.8	592.8	640.0	682.3	699.6	683.1	639.1	576.7
56.5°	386.9	420.3	470.7	519.9	574.3	620.2	662.1	679.4	664.1	620.6	559.0
57°	374.4	406.6	454.6	502.9	555.7	601.3	642.4	660.5	646.0	603.3	542.4
57.5°	362.3	392.5	438.5	486.0	538.4	582.3	623.8	641.6	627.9	586.0	525.9
58°	351.8	379.2	423.9	470.3	521.1	565.0	605.3	623.8	610.5	569.8	510.6
58.5°	341.3	365.9	409.0	454.6	504.5	547.7	587.6	606.1	593.6	553.3	494.9
59°	332.1	354.2	394.5	439.7	488.4	530.3	570.2	588.8	576.7	537.2	479.6
59.5°	323.6	342.5	380.4	424.4	472.3	513.4	552.5	571.8	560.6	521.9	465.1
60°	317.2	331.7	367.5	409.8	457.0	497.3	536.0	555.3	544.8	507.4	451.0
60.5°	310.3	321.2	354.2	396.1	442.1	481.6	520.3	539.2	529.5	491.7	436.8
61°	303.1	312.7	341.7	382.4	427.6	466.3	504.5	523.5	513.8	477.1	423.1
61.5°	295.8	304.7	330.1	368.7	413.5	451.4	489.2	508.2	499.3	463.4	409.4
62°	288.1	298.2	318.8	356.2	399.8	437.2	473.9	493.3	485.2	449.7	396.5
62.5°	280.5	291.0	307.5	343.4	386.1	422.7	459.0	478.4	470.7	435.6	383.2
63°	272.8	283.7	297.4	331.3	373.2	408.6	444.5	463.8	456.2	421.9	370.8
63.5°	265.6	276.5	286.9	319.2	360.3	395.7	430.4	449.3	442.5	408.6	358.3
64°	257.9	269.2	277.3	308.3	348.6	382.4	416.7	435.6	429.2	396.1	346.6
64.5°	250.7	261.5	268.0	297.0	336.9	369.9	403.0	422.3	415.5	382.8	334.9
65°	243.4	254.7	259.5	286.1	325.2	357.1	390.1	409.0	402.6	370.8	323.2
65.5°	236.2	247.8	251.1	275.6	313.5	345.4	377.2	395.7	389.3	357.9	311.5
66°	228.9	240.6	243.0	265.6	301.4	333.7	364.3	382.4	376.0	345.8	299.8



TEST NUMBER: P776373

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-HCD62TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	207.9	219.6	221.2	236.6	270.0	298.2	328.4	345.4	337.7	309.9	267.2
68°	201.5	212.8	214.8	228.1	259.5	287.3	316.8	333.3	325.2	297.8	256.3
68.5°	194.6	205.9	208.3	219.2	249.5	276.5	304.7	321.2	312.7	285.7	246.2
69°	188.2	199.5	202.3	210.8	239.8	265.6	293.4	309.1	299.8	274.0	236.2
69.5°	181.3	193.0	196.3	202.7	230.1	255.5	281.7	296.6	287.7	262.8	226.1
70°	174.9	186.6	190.2	195.0	220.8	245.0	270.8	285.3	275.6	251.1	216.0
70.5°	168.5	180.1	184.2	187.4	212.0	235.3	260.3	273.6	264.0	240.2	206.7
71°	162.4	173.7	178.1	180.1	203.1	225.7	249.9	262.8	252.3	229.7	197.5
71.5°	156.4	167.6	172.5	172.9	194.6	216.4	239.4	251.1	240.6	218.8	187.8
72°	150.3	161.6	166.4	166.4	186.2	207.1	229.3	240.6	229.3	208.3	178.9
72.5°	145.5	155.6	160.8	159.6	178.1	197.9	219.2	229.7	218.4	197.9	170.1
73°	139.4	149.5	155.2	153.5	170.5	189.4	209.6	219.2	207.5	187.8	161.2
73.5°	133.8	145.5	149.5	147.5	162.8	180.5	199.9	209.2	196.3	178.1	152.7
74°	127.7	139.8	146.3	141.9	155.6	172.5	190.6	199.1	186.2	168.5	144.3
74.5°	121.7	133.8	140.2	136.2	148.3	164.0	181.8	189.0	175.7	158.8	136.2
75°	116.1	127.7	134.6	131.0	141.0	156.0	172.9	179.3	165.6	149.5	128.2
75.5°	110.8	121.7	129.0	125.3	134.2	148.3	164.0	170.1	155.6	140.6	120.5
76°	105.2	116.1	122.9	120.1	127.7	141.0	155.2	160.8	145.5	131.8	112.8
76.5°	99.9	110.8	117.7	114.9	121.3	133.4	146.7	151.5	136.2	123.3	105.2
77°	94.7	105.2	112.4	110.0	115.3	126.1	138.6	142.7	126.9	114.9	98.3
77.5°	89.5	99.9	107.6	105.2	108.8	119.3	130.6	134.2	117.7	106.8	91.1
78°	84.2	94.7	102.4	100.7	103.2	112.4	122.9	126.1	108.8	98.7	84.6
78.5°	79.4	89.5	97.5	95.9	97.5	106.0	115.3	117.7	99.9	91.1	77.8
79°	74.2	84.6	92.7	91.5	92.3	99.5	108.0	109.6	91.5	83.8	71.3
79.5°	69.3	79.4	87.9	87.0	86.6	93.5	100.7	102.4	83.0	76.6	65.3
80°	64.5	74.6	83.0	82.6	81.8	87.4	93.9	94.7	75.0	69.3	59.2
80.5°	60.0	69.7	78.2	78.6	77.0	81.8	87.0	87.4	67.3	62.9	53.6
81°	55.2	64.9	73.7	74.2	72.1	76.2	80.6	80.2	59.6	56.4	48.0
81.5°	50.4	60.0	68.9	69.7	67.7	70.5	74.2	72.9	52.4	50.0	42.7
82°	45.9	55.6	64.5	65.7	63.3	65.3	67.7	65.7	45.5	44.3	38.3
82.5°	41.5	50.8	60.0	61.3	58.8	60.0	61.7	58.8	39.9	39.1	33.4
83°	37.1	46.3	55.6	57.2	54.8	55.6	56.0	52.4	34.3	33.9	29.0
83.5°	33.0	41.9	51.2	53.2	50.8	50.8	50.8	46.3	28.6	28.6	24.6
84°	28.6	37.5	47.2	49.2	46.7	45.9	45.1	40.7	23.0	23.4	19.7
84.5°	24.2	33.0	43.1	45.5	43.1	41.9	40.7	35.1	17.3	18.1	16.5
85°	20.1	28.6	39.1	41.5	39.5	37.9	36.3	29.8	13.3	14.1	12.9
85.5°	16.1	24.6	35.1	37.5	35.9	33.9	31.4	24.2	10.5	10.5	10.1
86°	13.7	20.6	31.4	33.9	32.2	30.2	27.0	18.9	8.1	7.7	7.3
86.5°	11.3	17.3	27.4	29.8	29.0	26.2	22.2	14.9	6.4	5.2	4.8
87°	8.9	14.5	23.8	26.2	25.4	22.2	18.5	11.7	4.8	3.2	2.8
87.5°	6.0	12.1	20.1	22.6	22.2	18.9	14.9	8.5	3.6	1.6	1.2
88°	4.4	9.3	16.5	18.9	18.9	15.3	11.7	5.6	2.4	0.8	0.4
88.5°	2.4	6.9	13.7	15.3	15.3	12.5	8.5	3.6	1.2	0.4	0.0



TEST NUMBER: P776373

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-HCD62TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.4	4.0	5.6	6.0	4.0	1.6	0.4	0.0	0.0	0.0



TEST NUMBER: P776373

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-HCD62TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2530.8	2530.8	2530.8	2530.8	2530.8	2530.8
0.5°	2532.8	2531.2	2526.0	2522.3	2519.9	2520.3
1°	2534.8	2528.8	2519.5	2512.7	2508.6	2509.0
1.5°	2536.4	2526.0	2512.7	2502.6	2497.0	2497.4
2°	2537.3	2522.3	2505.4	2492.5	2484.9	2485.3
2.5°	2538.1	2518.7	2497.8	2481.6	2472.8	2472.4
3°	2538.1	2514.3	2489.7	2470.8	2459.9	2459.5
3.5°	2537.3	2509.4	2481.2	2459.1	2446.6	2446.6
4°	2536.4	2504.2	2472.0	2447.4	2433.3	2432.9
4.5°	2535.2	2498.6	2462.7	2434.9	2419.6	2418.8
5°	2533.2	2492.5	2452.6	2422.4	2405.1	2404.3
5.5°	2530.8	2486.1	2442.5	2409.1	2390.2	2389.8
6°	2528.0	2478.8	2432.1	2395.8	2375.7	2374.4
6.5°	2524.8	2471.6	2420.8	2381.7	2360.3	2359.1
7°	2521.1	2463.5	2409.5	2367.6	2344.6	2343.4
7.5°	2516.7	2455.0	2397.4	2353.1	2328.5	2327.7
8°	2511.9	2446.2	2384.9	2338.2	2312.4	2311.6
8.5°	2506.6	2436.9	2372.4	2322.9	2295.9	2294.6
9°	2501.4	2427.2	2359.1	2307.5	2279.3	2278.1
9.5°	2495.3	2417.2	2345.8	2291.4	2261.6	2260.8
10°	2488.9	2407.1	2332.1	2275.3	2244.7	2243.5
10.5°	2481.6	2395.8	2318.0	2258.8	2226.9	2225.7
11°	2474.4	2384.5	2303.1	2241.9	2209.2	2208.4
11.5°	2466.3	2372.8	2288.2	2224.9	2191.1	2189.9
12°	2457.9	2360.7	2273.3	2207.6	2172.5	2171.7
12.5°	2449.4	2348.6	2257.6	2189.9	2154.0	2153.2
13°	2440.1	2335.4	2241.9	2171.7	2135.1	2134.7
13.5°	2430.9	2322.1	2225.7	2153.6	2116.5	2115.3
14°	2420.4	2308.8	2209.2	2135.5	2097.2	2096.8
14.5°	2409.9	2295.1	2192.7	2116.9	2077.8	2077.0
15°	2399.0	2280.5	2175.8	2098.0	2058.1	2058.1
15.5°	2387.7	2266.0	2158.4	2079.0	2037.9	2037.5
16°	2376.5	2251.1	2140.3	2059.7	2018.2	2018.2
16.5°	2364.0	2235.8	2122.6	2040.4	1998.4	1998.4
17°	2351.9	2220.5	2104.4	2020.6	1977.9	1978.3
17.5°	2339.0	2204.8	2086.3	2000.9	1957.7	1957.7
18°	2325.7	2188.3	2067.8	1981.1	1936.8	1937.6
18.5°	2312.4	2172.1	2048.8	1960.6	1916.6	1916.6
19°	2298.7	2155.2	2030.3	1940.4	1895.7	1896.5
19.5°	2285.0	2138.7	2010.9	1920.3	1874.7	1875.5
20°	2270.1	2121.4	1992.0	1899.7	1853.8	1854.6
20.5°	2255.6	2104.0	1972.7	1879.2	1832.4	1833.2
21°	2240.2	2086.3	1952.9	1857.8	1811.5	1812.7

TEST NUMBER: P776373

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-HCD62TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2193.5	2031.9	1893.3	1795.7	1747.4	1748.6
23°	2177.4	2013.8	1873.5	1774.4	1726.0	1727.2
23.5°	2160.9	1995.2	1853.4	1753.4	1704.7	1706.3
24°	2144.3	1977.1	1833.6	1732.9	1682.9	1684.9
24.5°	2127.4	1958.6	1813.9	1711.9	1661.5	1663.2
25°	2110.9	1940.4	1794.1	1689.8	1640.2	1641.4
25.5°	2094.4	1921.5	1773.2	1670.0	1618.8	1620.0
26°	2077.8	1902.9	1753.4	1647.8	1597.5	1598.7
26.5°	2060.9	1883.6	1733.3	1627.7	1575.7	1577.3
27°	2043.2	1862.6	1712.3	1606.3	1553.9	1555.6
27.5°	2023.8	1840.1	1690.2	1585.4	1532.6	1533.8
28°	2002.9	1818.3	1668.0	1563.2	1511.2	1512.0
28.5°	1981.1	1794.9	1645.4	1542.3	1489.9	1491.1
29°	1959.0	1772.4	1622.9	1520.5	1468.1	1469.3
29.5°	1936.0	1748.6	1600.3	1498.7	1446.7	1447.6
30°	1911.4	1724.4	1576.9	1475.4	1425.8	1426.2
30.5°	1886.8	1699.8	1553.5	1454.4	1404.4	1404.8
31°	1861.4	1675.2	1529.4	1431.4	1382.3	1383.1
31.5°	1835.6	1649.9	1505.2	1408.9	1360.9	1361.7
32°	1808.6	1624.1	1481.0	1385.5	1339.1	1340.0
32.5°	1781.6	1597.9	1456.8	1363.7	1317.4	1318.6
33°	1754.2	1572.1	1432.2	1340.8	1296.0	1297.6
33.5°	1726.4	1545.5	1407.3	1317.8	1274.3	1276.3
34°	1697.4	1519.3	1383.1	1294.8	1252.5	1254.9
34.5°	1668.0	1491.1	1357.7	1271.8	1230.3	1233.6
35°	1639.0	1465.3	1333.5	1248.9	1208.6	1211.8
35.5°	1609.6	1437.5	1308.1	1225.9	1187.2	1191.3
36°	1579.7	1410.5	1284.3	1202.9	1165.5	1170.3
36.5°	1548.7	1383.1	1259.4	1180.4	1143.7	1148.9
37°	1517.3	1355.7	1235.2	1157.4	1121.9	1127.2
37.5°	1486.2	1328.3	1209.8	1135.2	1100.6	1106.2
38°	1454.8	1300.1	1186.0	1111.9	1078.4	1084.9
38.5°	1423.4	1272.3	1161.0	1089.3	1057.1	1063.5
39°	1391.5	1244.8	1136.4	1067.1	1035.3	1042.5
39.5°	1359.7	1217.4	1111.5	1044.6	1013.9	1021.2
40°	1327.9	1189.2	1086.9	1021.2	992.6	999.8
40.5°	1296.0	1161.4	1061.9	998.2	971.2	978.9
41°	1264.6	1133.6	1036.9	975.6	950.3	957.5
41.5°	1232.4	1106.2	1012.3	953.5	928.9	936.6
42°	1201.3	1078.8	988.5	931.7	907.9	915.2
42.5°	1169.9	1051.4	964.4	910.4	887.4	894.6
43°	1138.9	1024.0	940.6	888.6	866.8	873.7
43.5°	1107.8	996.6	917.2	867.2	846.3	852.7



TEST NUMBER: P776373

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-HCD62TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	1018.8	916.4	848.3	804.0	784.2	791.1
45.5°	989.8	890.6	825.3	783.4	763.7	770.5
46°	961.5	865.6	803.6	763.3	743.9	750.8
46.5°	932.9	840.2	781.4	742.7	723.8	730.6
47°	904.7	816.1	759.6	723.0	704.4	710.5
47.5°	878.1	791.5	737.9	703.2	685.5	690.7
48°	851.9	767.7	716.1	683.1	666.6	671.0
48.5°	826.1	744.7	694.8	663.7	647.2	651.6
49°	801.2	721.8	674.6	644.8	629.1	632.7
49.5°	776.2	700.4	654.5	625.4	610.9	613.8
50°	752.8	678.2	634.3	606.9	592.4	594.8
50.5°	729.0	656.9	614.2	588.4	574.3	576.7
51°	706.0	636.3	594.8	569.8	557.3	558.5
51.5°	684.7	616.6	576.3	551.7	540.0	540.8
52°	663.7	596.8	558.1	534.8	523.1	523.5
52.5°	642.4	577.5	540.0	517.4	506.2	506.6
53°	622.2	559.0	522.3	500.1	489.6	490.0
53.5°	602.5	540.8	505.0	483.2	473.1	473.5
54°	583.5	523.1	488.0	466.7	457.0	458.2
54.5°	564.6	506.2	471.9	450.5	441.3	442.9
55°	547.3	489.6	456.2	434.8	426.4	428.0
55.5°	529.5	473.5	440.1	419.5	411.1	413.5
56°	512.6	457.8	425.2	404.6	396.9	400.2
56.5°	496.1	442.5	410.2	390.1	382.4	386.9
57°	480.4	427.6	395.7	376.0	368.7	374.4
57.5°	464.7	413.1	382.0	362.3	355.8	362.3
58°	449.7	399.0	368.3	349.4	343.4	351.8
58.5°	434.8	385.7	355.4	336.5	331.7	341.3
59°	420.3	372.4	342.5	324.4	320.4	332.1
59.5°	406.6	359.5	330.5	312.7	309.9	323.6
60°	392.9	347.0	318.4	301.0	300.2	317.2
60.5°	380.0	334.5	306.3	290.2	291.0	310.3
61°	367.5	322.8	295.4	279.7	282.1	303.1
61.5°	354.6	311.1	284.1	269.6	274.4	295.8
62°	342.9	300.2	273.6	260.3	267.6	288.1
62.5°	330.9	288.9	263.6	251.1	260.7	280.5
63°	319.2	278.1	253.1	241.8	253.9	272.8
63.5°	307.1	267.6	243.4	233.3	247.0	265.6
64°	296.6	257.5	234.1	225.3	240.2	257.9
64.5°	285.7	247.8	225.3	217.6	233.3	250.7
65°	274.8	238.2	216.4	210.0	226.9	243.4
65.5°	264.4	228.5	207.5	202.7	220.4	236.2
66°	254.3	219.2	199.5	195.9	213.6	228.9



TEST NUMBER: P776373

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-HCD62TRLWW-4000lm-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	224.9	193.0	176.1	177.3	194.6	207.9
68°	215.2	185.0	168.9	171.7	188.2	201.5
68.5°	206.3	176.9	162.0	166.4	181.8	194.6
69°	197.5	169.3	155.2	160.8	175.7	188.2
69.5°	188.6	161.6	148.7	155.6	169.3	181.3
70°	180.1	153.9	143.1	150.3	163.6	174.9
70.5°	171.7	147.1	137.0	144.7	157.6	168.5
71°	164.0	140.6	131.4	139.4	151.5	162.4
71.5°	156.0	133.8	125.7	134.6	145.5	156.4
72°	147.9	127.3	119.7	129.8	139.8	150.3
72.5°	140.6	120.9	114.5	124.9	134.6	145.5
73°	133.4	114.5	109.2	120.1	129.0	139.4
73.5°	126.1	108.0	104.4	114.9	123.7	133.8
74°	118.9	102.4	99.5	110.0	118.1	127.7
74.5°	112.4	96.7	95.1	105.2	112.8	121.7
75°	106.0	91.5	90.7	100.3	107.6	116.1
75.5°	99.5	86.2	86.2	95.9	102.4	110.8
76°	93.5	81.0	81.8	91.1	97.1	105.2
76.5°	87.4	76.2	77.8	86.2	92.3	99.9
77°	81.8	71.3	73.7	81.8	87.0	94.7
77.5°	76.2	66.9	69.7	77.4	82.2	89.5
78°	70.9	62.5	65.7	72.9	77.4	84.2
78.5°	65.3	58.0	61.7	68.5	72.5	79.4
79°	60.4	53.6	58.0	64.1	67.7	74.2
79.5°	55.6	49.6	54.0	59.6	62.9	69.3
80°	50.8	45.9	50.4	55.6	58.4	64.5
80.5°	46.3	42.3	46.7	51.6	53.6	60.0
81°	41.9	38.7	43.1	47.6	49.2	55.2
81.5°	37.9	35.1	39.1	43.5	44.7	50.4
82°	34.3	31.4	35.9	39.5	40.3	45.9
82.5°	30.2	28.2	32.2	35.5	35.9	41.5
83°	26.2	25.0	28.6	31.8	31.4	37.1
83.5°	22.6	21.8	25.4	28.2	27.4	33.0
84°	18.9	18.5	21.8	24.6	23.4	28.6
84.5°	15.7	15.7	18.5	21.4	19.7	24.2
85°	12.9	12.9	15.3	17.7	16.5	20.1
85.5°	9.7	10.1	12.1	14.5	14.1	16.1
86°	7.3	6.9	8.9	11.7	11.7	13.7
86.5°	4.8	4.0	6.0	8.5	9.3	11.3
87°	2.4	1.6	2.8	5.6	6.9	8.9
87.5°	0.8	0.4	0.8	2.4	4.4	6.0
88°	0.0	0.0	0.0	0.4	2.4	4.4
88.5°	0.0	0.0	0.0	0.0	0.8	2.4



TEST NUMBER: P776373

CATALOG NUMBER: HCDJBL3040CSD-HCD62TRH-HCD62TRLWW-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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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°	1791.3	1835.2	1918.7	2036.3	2187.5	2330.5	2449.8	2519.5	2527.6	2474.8	2368.0
22°	1770.4	1814.7	1898.9	2018.2	2170.9	2315.6	2437.3	2508.2	2516.7	2463.1	2355.1



44°	832.2	878.5	953.9	1046.2	1166.7	1277.5	1358.5	1385.1	1357.3	1287.2	1187.2
44.5°	811.6	858.4	932.1	1022.4	1139.7	1245.3	1323.0	1348.4	1321.4	1251.7	1154.6



66.5°	221.6	233.3	235.3	255.5	291.0	321.6	352.2	369.9	362.7	334.1	288.5
67°	214.8	226.5	228.1	246.2	280.1	309.9	340.5	357.9	350.2	322.0	278.1



89°	1.2	4.4	10.5	12.1	12.1	9.7	5.6	2.0	0.4	0.0	0.0
89.5°	0.0	2.4	7.3	8.9	9.3	6.9	3.6	0.8	0.0	0.0	0.0

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21.5°	2225.3	2068.2	1932.4	1837.3	1789.7	1791.3
22°	2209.2	2050.4	1913.4	1816.7	1768.7	1770.4



44°	1077.6	969.6	894.2	845.5	825.3	832.2
44.5°	1048.2	943.4	871.3	824.9	804.8	811.6



66.5°	244.2	210.4	191.4	189.4	207.1	221.6
67°	234.1	201.9	183.8	183.4	200.7	214.8

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89°	0.0	0.0	0.0	0.0	0.4	1.2
89.5°	0.0	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



(END OF REPORT)