

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: P776272

Luminaire Tested: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776272
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2312156B054)
Test Lab:
Issue Date: 2/13/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBS3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K
Description: 4 INCH ROUND NARROW LENSED WALLWASH KIT
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3888.0 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.01 / 1.07
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

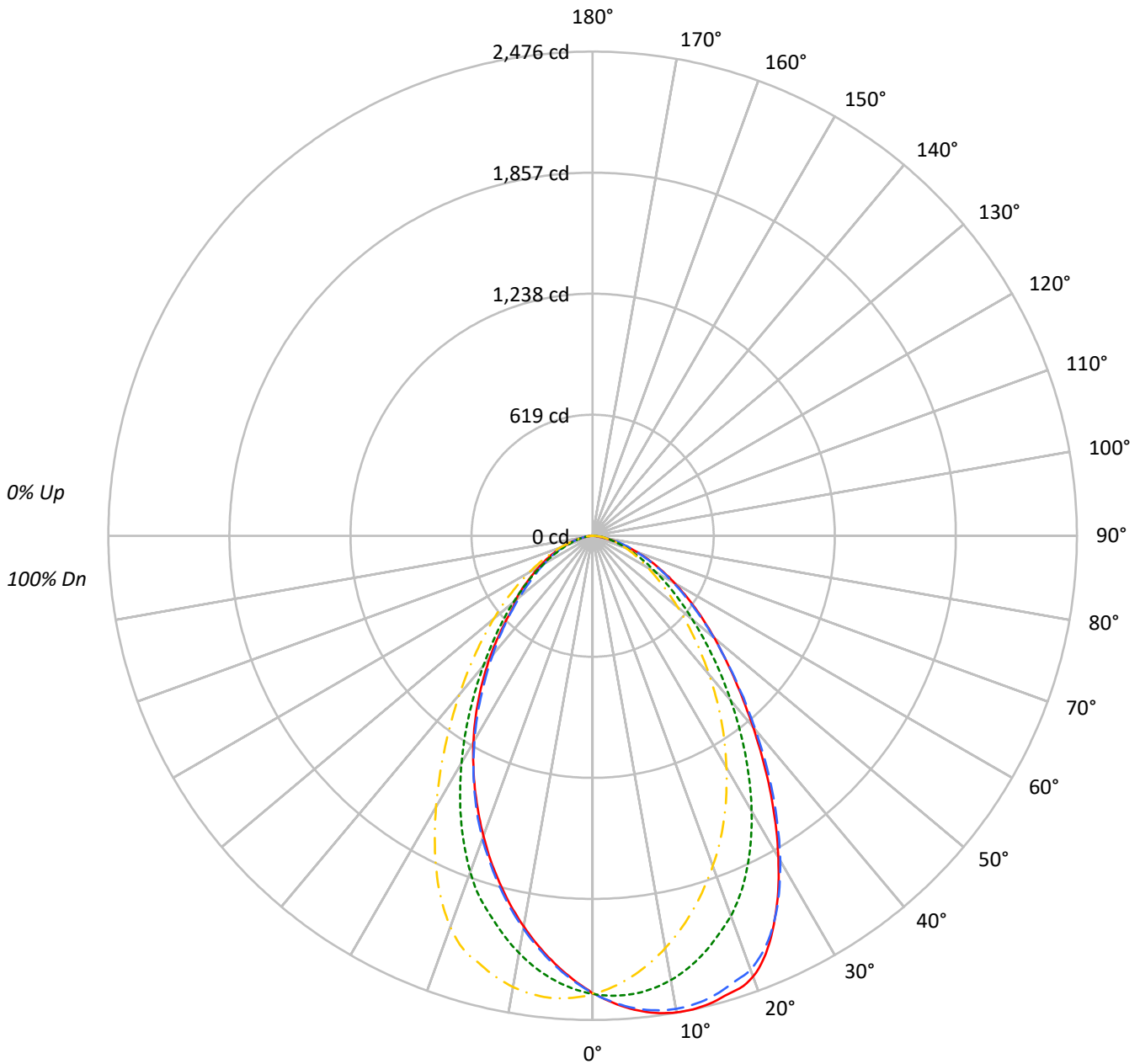
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	0					
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100				
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88				
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77				77				
3	95	86	79	74	93	85	78	73	82	77	72	79	75	71	77	73	70	68				68				
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	60				60				
5	82	71	63	57	80	70	63	57	68	62	57	66	60	56	64	59	56	54				54				
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50	48				48				
7	72	60	52	47	70	59	52	46	58	51	46	56	50	46	55	50	45	44				44				
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40				40				
9	63	51	44	39	62	51	44	39	50	43	38	49	43	38	48	42	38	36				36				
10	60	48	40	36	58	47	40	36	46	40	35	45	39	35	44	39	35	34				34				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	294640	294640	294640	294640
5°	307312	297167	277700	287983
10°	316296	294763	259225	276847
15°	320407	287535	239446	262272
20°	321263	277000	218675	244965
25°	304520	259835	197778	221218
30°	276019	236187	177129	194785
35°	242558	208927	156016	167968
40°	209579	180533	134517	142994
45°	181574	153862	113621	121684
50°	158842	130590	100341	103532
55°	139546	111045	89169	87611
60°	122099	94387	78606	73396
65°	105774	80224	69205	61046
70°	86397	67668	58469	50300
75°	64719	57377	47312	41720
80°	38846	50080	33700	33121
85°	14873	46496	11985	19494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 186379 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.9	5.6
10°-20°	598.5	15.4
20°-30°	810.8	20.9
30°-40°	788.1	20.3
40°-50°	623.9	16.0
50°-60°	436.8	11.2
60°-70°	264.9	6.8
70°-80°	121.4	3.1
80°-90°	24.7	0.6
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°	1628.2	41.9
0°-40°	2416.3	62.1
0°-60°	3477.0	89.4
0°-90°	3888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3888.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2341	2341	2341	2341	2341	
5°	2433	2352	2198	2280	2433	234
15°	2459	2207	1838	2013	2459	694
25°	2193	1871	1424	1593	2193	1001
35°	1579	1360	1016	1093	1579	985
45°	1020	864	638	684	1020	791
55°	636	506	406	399	636	571
65°	355	269	232	205	355	352
75°	133	118	97	86	133	144
85°	10	32	8	14	10	17
90°	0	4	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°	2341.2	2341.2	2341.2	2341.2	2341.2	2341.2	2341.2	2341.2	2341.2	2341.2	2341.2
0.5°	2348.3	2349.5	2348.7	2347.5	2346.4	2342.0	2338.8	2337.6	2324.5	2324.1	2326.5
1°	2359.5	2361.0	2359.9	2355.1	2349.1	2340.0	2332.4	2327.3	2311.8	2311.8	2315.0
1.5°	2370.2	2372.2	2369.0	2361.4	2351.5	2338.0	2325.7	2317.3	2298.7	2297.9	2302.6
2°	2380.5	2383.3	2378.1	2368.2	2353.1	2334.8	2318.5	2306.2	2285.6	2284.0	2289.5
2.5°	2390.4	2394.0	2387.3	2374.2	2354.7	2331.7	2310.6	2295.5	2271.7	2270.1	2276.4
3°	2400.0	2403.6	2396.0	2379.3	2355.1	2327.3	2302.3	2283.2	2257.4	2255.8	2263.3
3.5°	2409.1	2413.1	2403.6	2384.1	2355.5	2322.9	2293.5	2271.7	2243.1	2240.7	2249.4
4°	2417.5	2421.8	2411.1	2388.1	2354.7	2317.7	2284.4	2258.9	2228.8	2225.6	2235.5
4.5°	2425.4	2430.2	2417.9	2391.6	2353.9	2312.6	2274.8	2245.8	2213.3	2210.1	2220.8
5°	2432.6	2438.5	2424.2	2394.8	2352.3	2306.2	2264.5	2232.7	2198.2	2194.2	2206.5
5.5°	2439.3	2446.1	2430.2	2397.2	2350.3	2299.9	2254.2	2219.2	2181.9	2177.9	2190.6
6°	2445.7	2452.8	2435.3	2399.6	2347.5	2292.3	2242.7	2204.9	2166.4	2161.2	2175.5
6.5°	2451.2	2459.2	2440.1	2401.2	2344.4	2285.2	2231.5	2190.6	2150.1	2144.9	2159.2
7°	2456.4	2464.7	2444.1	2402.0	2340.8	2276.8	2219.6	2176.3	2133.4	2127.8	2142.5
7.5°	2461.2	2469.9	2447.7	2402.0	2336.0	2268.5	2207.7	2161.2	2116.7	2110.4	2126.3
8°	2464.7	2474.3	2450.8	2402.0	2331.3	2259.3	2195.0	2145.7	2099.6	2092.5	2109.6
8.5°	2468.3	2478.2	2453.2	2401.2	2326.1	2250.2	2181.9	2129.8	2082.2	2075.4	2092.9
9°	2471.1	2481.8	2455.2	2399.6	2320.1	2239.9	2168.4	2114.3	2064.7	2057.1	2075.4
9.5°	2473.5	2484.6	2456.0	2397.2	2313.8	2229.5	2154.9	2098.0	2046.4	2038.9	2057.5
10°	2475.1	2486.6	2456.8	2394.4	2306.6	2218.4	2141.0	2082.2	2028.5	2020.6	2039.6
10.5°	2475.9	2488.2	2456.4	2391.2	2299.1	2207.3	2126.3	2065.1	2010.2	2001.9	2021.8
11°	2476.3	2489.0	2456.0	2387.7	2290.7	2195.4	2111.2	2048.0	1992.0	1983.2	2003.5
11.5°	2476.3	2489.4	2454.8	2382.9	2282.0	2183.5	2096.5	2030.9	1973.3	1964.2	1984.8
12°	2475.5	2489.4	2452.8	2378.1	2272.9	2170.8	2081.0	2013.8	1954.6	1945.1	1965.8
12.5°	2474.3	2488.6	2450.4	2372.6	2262.9	2157.2	2065.1	1995.9	1935.6	1925.2	1947.1
13°	2472.3	2487.0	2447.3	2366.6	2253.0	2144.1	2049.2	1978.1	1916.5	1906.2	1928.4
13.5°	2469.5	2485.4	2444.1	2359.9	2242.3	2130.6	2032.9	1959.8	1897.0	1886.3	1908.9
14°	2466.7	2482.2	2439.7	2351.9	2231.1	2115.9	2015.8	1941.5	1877.6	1866.0	1889.5
14.5°	2463.2	2479.0	2434.9	2344.0	2219.2	2101.2	1998.7	1922.8	1857.7	1846.6	1869.6
15°	2459.2	2475.5	2429.4	2335.6	2206.9	2085.7	1981.6	1904.2	1837.8	1825.9	1849.7
15.5°	2454.0	2470.7	2423.4	2326.9	2194.6	2070.6	1964.2	1885.1	1818.0	1806.0	1829.5
16°	2448.5	2465.9	2416.7	2317.3	2181.1	2054.7	1945.9	1866.0	1798.1	1785.8	1809.6
16.5°	2444.1	2460.4	2409.5	2307.4	2167.6	2038.9	1928.0	1846.6	1777.8	1765.5	1789.4
17°	2440.5	2455.2	2402.4	2297.1	2153.3	2022.2	1910.1	1827.5	1757.6	1744.1	1769.5
17.5°	2437.3	2451.6	2394.8	2285.6	2139.4	2005.5	1891.5	1807.6	1736.9	1723.4	1749.2
18°	2434.1	2448.5	2388.9	2275.2	2125.1	1988.4	1872.4	1787.8	1716.3	1702.8	1728.6
18.5°	2428.2	2444.9	2383.3	2264.9	2111.2	1971.7	1853.7	1767.9	1695.6	1682.1	1708.3
19°	2420.6	2439.7	2377.7	2255.4	2097.3	1954.6	1834.7	1748.0	1674.9	1661.4	1688.8
19.5°	2410.3	2431.8	2370.6	2245.4	2083.3	1937.9	1816.4	1728.2	1653.9	1640.8	1668.6
20°	2398.8	2422.2	2361.0	2234.3	2068.3	1920.1	1796.5	1708.3	1632.8	1619.7	1647.9
20.5°	2385.7	2410.7	2349.5	2221.2	2051.6	1902.6	1777.8	1687.7	1611.8	1598.7	1626.9
21°	2370.2	2398.0	2336.0	2207.7	2033.7	1883.1	1757.6	1667.0	1591.5	1578.0	1605.4



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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°	2313.8	2349.5	2289.9	2156.8	1978.1	1823.9	1697.6	1605.4	1528.3	1515.2	1541.5
23°	2291.5	2330.1	2272.5	2139.0	1957.4	1803.3	1676.5	1584.4	1507.3	1494.6	1519.6
23.5°	2268.5	2309.8	2253.4	2119.9	1937.1	1782.6	1655.9	1563.7	1487.0	1473.5	1497.4
24°	2244.6	2287.9	2233.9	2099.6	1915.7	1760.4	1634.4	1543.0	1466.0	1452.9	1475.5
24.5°	2219.2	2264.5	2212.5	2078.2	1893.8	1738.5	1613.0	1521.6	1444.9	1431.8	1453.7
25°	2193.0	2239.9	2190.2	2056.3	1871.2	1716.3	1590.7	1500.5	1424.3	1411.1	1431.8
25.5°	2166.4	2214.1	2166.4	2034.1	1848.6	1693.6	1569.3	1479.5	1403.6	1389.7	1409.2
26°	2139.0	2187.8	2142.1	2010.6	1825.5	1671.0	1547.8	1458.4	1383.3	1368.2	1386.9
26.5°	2110.4	2161.2	2117.1	1987.2	1801.7	1647.5	1525.6	1437.0	1362.3	1347.6	1364.7
27°	2082.2	2133.0	2090.9	1962.6	1777.0	1624.1	1503.3	1415.5	1342.0	1326.5	1342.4
27.5°	2053.2	2104.4	2063.9	1937.5	1752.8	1601.0	1480.7	1394.5	1321.0	1305.5	1319.8
28°	2022.6	2074.6	2035.3	1911.3	1727.8	1578.0	1458.4	1373.4	1300.7	1284.4	1297.1
28.5°	1992.4	2044.4	2005.9	1885.1	1703.1	1553.8	1436.2	1351.6	1280.4	1263.4	1274.9
29°	1961.8	2014.2	1977.3	1858.5	1677.3	1529.5	1413.5	1330.1	1260.2	1242.3	1252.6
29.5°	1930.4	1983.6	1948.3	1830.7	1651.5	1506.1	1391.3	1309.0	1239.5	1221.6	1230.4
30°	1899.4	1951.8	1918.1	1803.7	1625.3	1481.9	1368.2	1288.0	1218.9	1200.6	1207.7
30.5°	1867.6	1920.5	1887.1	1775.5	1599.1	1457.2	1345.6	1266.5	1198.2	1179.9	1185.9
31°	1835.4	1888.3	1856.1	1746.5	1573.6	1433.4	1323.3	1245.1	1177.9	1158.9	1164.0
31.5°	1804.1	1855.7	1825.1	1717.8	1546.6	1408.8	1300.7	1224.0	1157.7	1137.8	1142.6
32°	1771.5	1822.7	1793.3	1688.1	1520.0	1384.9	1278.5	1203.0	1137.4	1117.6	1120.7
32.5°	1738.9	1789.8	1761.6	1658.7	1493.4	1360.7	1255.4	1181.9	1116.8	1096.9	1098.5
33°	1706.7	1757.2	1730.2	1629.3	1466.4	1336.1	1233.2	1161.3	1096.5	1076.2	1076.6
33.5°	1674.1	1724.6	1699.6	1599.5	1440.1	1311.8	1210.9	1139.4	1076.2	1055.6	1056.0
34°	1642.4	1691.6	1667.4	1569.3	1413.1	1286.8	1188.7	1118.7	1056.0	1034.9	1034.1
34.5°	1610.6	1658.3	1635.2	1539.5	1386.1	1262.6	1166.4	1098.1	1035.3	1014.7	1013.1
35°	1578.8	1625.7	1603.0	1509.7	1359.9	1238.7	1143.8	1077.4	1015.5	994.8	991.6
35.5°	1547.0	1593.5	1571.3	1480.3	1332.9	1214.5	1122.3	1056.4	995.6	974.9	971.4
36°	1514.8	1561.3	1539.9	1450.9	1306.3	1190.3	1100.5	1036.1	975.3	955.1	950.7
36.5°	1484.2	1529.5	1508.5	1421.1	1279.2	1166.0	1078.2	1015.9	955.5	935.2	930.4
37°	1452.9	1497.0	1477.1	1392.5	1253.8	1143.0	1056.0	995.6	935.2	915.3	910.2
37.5°	1422.7	1465.2	1446.5	1363.5	1226.8	1118.7	1034.1	975.3	916.1	896.3	890.3
38°	1392.1	1434.2	1414.7	1333.7	1201.4	1095.3	1013.1	955.9	896.3	876.8	870.4
38.5°	1362.7	1403.2	1384.5	1305.9	1175.6	1071.9	990.8	935.6	876.8	857.3	851.8
39°	1333.3	1372.6	1353.9	1276.9	1150.1	1049.2	969.4	916.1	857.7	838.3	832.3
39.5°	1304.7	1342.8	1325.3	1249.9	1123.9	1025.8	947.9	896.3	838.3	819.6	813.2
40°	1275.7	1313.4	1295.5	1220.8	1098.9	1002.7	927.3	876.8	818.8	800.5	794.6
40.5°	1248.3	1284.8	1266.5	1194.6	1074.3	979.3	906.2	856.5	800.1	781.9	776.7
41°	1220.8	1255.4	1237.9	1167.2	1049.2	957.8	885.9	837.5	781.5	763.6	758.4
41.5°	1193.4	1228.4	1210.1	1140.2	1024.6	934.8	865.7	818.0	762.8	745.3	740.9
42°	1167.2	1200.6	1182.3	1113.2	1001.2	913.0	845.8	799.7	744.1	727.8	724.2
42.5°	1141.8	1173.6	1155.7	1088.6	977.7	891.9	826.0	780.7	726.2	710.7	707.6
43°	1116.4	1147.7	1129.5	1063.1	954.3	870.8	806.9	762.4	708.0	693.7	690.5
43.5°	1091.7	1121.9	1102.9	1038.1	931.2	849.8	787.4	743.7	690.1	677.4	673.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	1020.2	1047.2	1027.8	965.0	864.5	789.8	731.8	691.7	638.4	630.9	626.5
45.5°	997.2	1023.8	1003.5	941.6	843.0	770.3	714.3	675.4	621.7	616.2	611.4
46°	974.9	1000.8	980.1	918.9	822.0	751.7	696.8	659.1	605.9	601.1	596.3
46.5°	953.1	977.7	956.7	896.3	801.3	732.6	680.1	642.8	590.4	586.4	581.2
47°	931.6	955.1	934.4	874.0	780.7	713.9	663.1	626.9	575.7	572.5	566.5
47.5°	911.0	933.2	911.8	852.6	760.8	696.0	646.4	611.4	561.8	559.0	552.2
48°	889.9	911.4	889.5	830.3	740.9	677.8	630.1	596.3	549.4	545.5	538.7
48.5°	869.3	890.7	868.5	810.1	721.9	660.7	613.8	581.2	538.7	532.4	524.8
49°	849.8	870.0	847.4	789.8	703.2	643.6	598.3	566.9	529.2	519.6	511.7
49.5°	830.3	849.8	827.1	769.9	684.9	626.9	582.4	552.6	520.4	507.7	498.6
50°	811.3	830.3	807.3	750.1	667.0	610.6	567.3	538.7	512.5	496.6	485.9
50.5°	792.6	810.5	787.0	730.6	649.2	594.3	552.6	525.2	504.5	485.5	472.8
51°	773.9	791.4	767.5	711.9	631.7	578.8	537.9	512.1	495.4	475.5	460.8
51.5°	755.6	772.7	748.9	693.7	615.4	563.7	524.0	499.4	484.7	466.4	449.3
52°	737.8	754.0	730.2	675.0	598.7	548.6	509.7	487.1	472.8	455.7	437.4
52.5°	720.3	735.8	711.9	657.5	582.4	533.9	496.2	475.1	461.2	445.0	425.9
53°	703.2	718.3	693.7	640.4	566.5	519.2	482.7	464.0	450.1	434.2	414.8
53.5°	685.7	700.4	676.2	622.9	551.0	504.9	469.6	452.5	438.6	423.5	403.6
54°	669.0	683.3	658.7	606.3	535.9	491.0	456.9	442.2	427.5	413.2	392.9
54.5°	652.3	665.8	641.2	590.0	520.4	477.5	444.2	432.6	417.1	402.8	382.6
55°	636.0	649.6	625.3	573.7	506.1	464.4	432.2	422.7	406.4	393.3	372.7
55.5°	619.8	632.9	608.6	558.2	491.8	450.9	420.3	412.8	396.5	382.6	362.7
56°	603.9	616.6	592.3	542.3	477.9	437.8	408.4	402.4	386.2	372.7	353.2
56.5°	588.4	600.7	576.5	527.2	464.4	425.5	396.9	392.5	376.2	363.5	344.4
57°	573.3	585.2	561.0	512.5	450.5	412.8	385.8	382.6	366.3	354.4	335.7
57.5°	557.4	569.3	545.9	497.8	437.4	400.9	375.0	373.0	357.2	344.8	327.4
58°	542.7	553.8	530.4	483.5	424.3	388.9	364.7	363.5	347.6	336.1	318.6
58.5°	528.0	538.7	515.7	469.2	412.4	377.4	354.4	354.0	338.9	327.4	310.3
59°	513.3	524.4	501.4	455.3	399.7	365.9	344.4	344.8	329.7	318.6	301.5
59.5°	499.0	508.9	486.7	441.8	387.4	354.8	335.3	336.1	321.0	309.9	293.6
60°	485.1	495.4	472.8	428.7	375.0	344.0	326.2	327.4	312.3	301.1	285.6
60.5°	471.2	481.1	458.9	415.2	363.9	334.1	317.0	318.6	303.5	292.8	277.7
61°	457.3	467.2	445.4	402.8	352.4	323.8	307.9	309.9	295.2	284.9	269.8
61.5°	443.8	452.9	431.4	390.1	341.7	313.5	298.8	301.1	286.8	276.5	262.2
62°	430.7	440.2	418.7	377.8	330.9	303.1	290.8	292.8	278.9	268.6	254.7
62.5°	417.9	426.7	406.0	365.9	320.2	293.2	282.5	284.9	270.5	260.6	247.1
63°	404.8	413.6	392.9	354.0	309.5	283.7	274.5	276.5	263.0	253.5	239.6
63.5°	392.1	400.5	380.6	342.5	298.8	274.5	266.6	268.6	255.1	245.5	232.4
64°	379.8	387.7	368.3	330.9	288.4	265.4	259.4	260.6	247.5	238.4	225.3
64.5°	367.5	375.4	356.4	319.8	278.9	256.6	251.9	253.1	240.0	230.8	218.5
65°	355.2	363.5	344.4	308.7	269.4	247.9	244.7	245.9	232.4	223.7	211.4
65.5°	342.9	350.8	332.5	298.4	259.8	239.6	237.2	238.4	224.5	216.5	204.6
66°	330.1	339.3	321.4	288.0	250.7	231.2	230.4	230.8	216.9	209.4	198.2



TEST NUMBER: P776272

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	293.6	303.9	288.0	257.4	224.5	208.2	209.4	209.4	194.3	188.3	178.8
68°	281.7	292.4	277.3	247.9	216.1	200.6	203.0	202.2	187.1	181.6	172.4
68.5°	269.4	280.9	267.0	238.8	207.8	193.5	196.3	195.1	180.0	174.4	166.5
69°	257.8	269.4	257.0	229.2	199.8	186.3	189.9	188.3	172.8	168.1	160.5
69.5°	246.3	258.2	247.1	220.5	191.9	180.0	183.1	181.2	165.7	161.3	154.5
70°	234.8	247.1	237.2	211.4	183.9	173.2	177.2	174.4	158.9	154.9	148.6
70.5°	224.1	236.4	227.6	202.6	176.4	166.9	170.8	168.1	152.6	148.6	143.0
71°	212.9	226.1	218.1	194.3	169.2	160.9	164.9	161.3	145.8	141.8	137.1
71.5°	202.2	215.3	209.0	185.9	162.1	154.9	158.9	154.9	139.4	135.9	131.5
72°	191.5	205.4	200.2	178.0	155.3	149.0	153.0	148.6	133.1	129.9	125.9
72.5°	181.6	195.9	191.1	170.4	148.6	143.4	147.4	142.2	126.7	123.6	120.4
73°	171.6	185.9	182.4	162.9	142.2	137.5	141.4	136.3	120.4	118.0	115.2
73.5°	161.3	176.8	174.0	154.9	135.9	132.3	135.9	129.9	114.4	112.0	110.0
74°	151.8	167.3	165.3	147.8	129.9	127.1	130.3	124.3	108.5	106.1	104.9
74.5°	141.8	158.1	157.3	142.6	124.0	122.0	125.1	118.4	102.9	100.5	99.3
75°	133.1	149.4	149.4	135.9	118.0	116.8	119.6	112.8	97.3	95.0	94.6
75.5°	124.3	140.6	141.0	129.1	112.4	112.0	114.4	107.3	91.8	89.8	89.4
76°	115.6	133.1	133.9	122.0	107.3	107.3	109.3	101.7	86.2	84.2	84.6
76.5°	106.9	125.1	126.7	115.2	101.7	102.5	104.1	96.1	80.6	79.1	79.9
77°	98.5	117.2	120.0	108.9	96.9	97.7	98.9	91.0	75.5	73.9	75.1
77.5°	90.2	109.3	112.8	102.9	91.8	93.4	93.8	85.8	70.3	69.1	70.7
78°	82.2	101.7	105.7	97.3	87.0	89.0	89.4	80.6	65.6	64.0	66.3
78.5°	74.7	95.0	98.9	91.8	82.2	84.2	84.2	75.5	60.4	59.2	61.6
79°	67.1	87.8	92.6	86.2	77.5	79.9	79.9	70.3	55.6	54.4	57.2
79.5°	60.4	81.0	86.2	80.6	73.1	75.9	75.1	65.6	50.9	50.1	53.2
80°	53.6	74.3	79.9	75.5	69.1	71.5	70.7	60.8	46.5	45.3	48.9
80.5°	47.7	68.3	73.9	70.7	64.8	67.5	66.3	56.4	41.7	40.9	44.9
81°	41.7	62.4	68.3	65.9	60.8	63.6	62.0	51.6	37.7	36.9	40.9
81.5°	36.2	56.8	62.8	61.2	56.8	59.6	57.6	47.3	33.4	33.0	37.3
82°	30.6	51.2	57.2	56.8	52.8	55.6	53.6	42.9	29.4	29.0	33.8
82.5°	25.4	45.7	52.0	52.4	49.3	51.6	49.3	38.9	25.0	25.0	30.2
83°	21.1	40.5	47.3	48.1	45.7	48.1	45.3	35.0	20.7	21.1	26.6
83.5°	17.1	35.8	42.5	44.1	42.1	44.5	41.7	31.0	17.1	17.9	23.0
84°	13.9	30.6	38.1	40.1	38.5	40.5	38.1	27.0	13.5	15.1	19.9
84.5°	11.9	26.2	33.8	36.5	35.4	37.3	34.6	23.0	10.3	12.7	17.1
85°	10.3	21.9	29.8	33.0	32.2	33.8	31.4	19.9	8.3	10.7	13.9
85.5°	8.3	17.9	26.2	29.4	29.0	30.6	27.8	17.1	7.2	8.7	11.1
86°	6.8	14.3	22.6	26.2	25.8	27.0	24.2	14.7	6.0	7.2	7.9
86.5°	5.6	11.9	19.5	22.6	22.6	23.4	21.1	12.7	4.8	5.2	5.6
87°	4.8	9.5	16.3	19.9	19.9	20.3	17.9	10.3	3.6	3.6	3.2
87.5°	3.6	7.2	13.9	17.1	17.1	17.1	14.7	8.3	2.4	2.0	1.2
88°	2.8	4.8	11.5	14.3	13.9	14.3	11.9	6.4	1.6	0.8	0.4
88.5°	2.0	3.2	8.7	11.5	11.1	11.1	9.1	4.4	0.4	0.4	0.0



TEST NUMBER: P776272

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	0.0	0.8	2.4	4.4	3.6	3.2	1.6	0.4	0.0	0.4	0.0



TEST NUMBER: P776272

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2341.2	2341.2	2341.2	2341.2	2341.2	2341.2
0.5°	2330.5	2339.2	2343.6	2349.9	2355.9	2348.3
1°	2321.7	2334.4	2344.0	2354.3	2364.2	2359.5
1.5°	2312.2	2329.3	2343.6	2358.7	2372.2	2370.2
2°	2302.6	2324.1	2342.4	2362.2	2379.7	2380.5
2.5°	2292.3	2317.7	2341.2	2365.4	2386.9	2390.4
3°	2281.6	2311.4	2338.8	2367.8	2393.2	2400.0
3.5°	2270.1	2304.2	2336.4	2370.2	2399.2	2409.1
4°	2258.6	2296.7	2332.8	2371.4	2404.0	2417.5
4.5°	2246.6	2288.3	2329.3	2372.2	2408.7	2425.4
5°	2233.9	2279.6	2324.9	2372.6	2413.5	2432.6
5.5°	2220.8	2270.9	2319.7	2372.2	2417.1	2439.3
6°	2207.7	2260.9	2314.6	2371.4	2419.8	2445.7
6.5°	2194.2	2250.6	2308.6	2369.8	2422.2	2451.2
7°	2179.5	2239.9	2301.9	2367.4	2424.2	2456.4
7.5°	2165.2	2228.8	2294.7	2364.6	2425.8	2461.2
8°	2150.5	2217.6	2287.2	2361.4	2426.2	2464.7
8.5°	2135.0	2205.3	2278.8	2357.9	2426.2	2468.3
9°	2119.5	2192.6	2270.1	2353.5	2425.8	2471.1
9.5°	2103.2	2179.5	2260.9	2348.3	2425.0	2473.5
10°	2086.9	2166.4	2251.4	2342.8	2423.4	2475.1
10.5°	2070.2	2152.5	2241.5	2336.8	2421.4	2475.9
11°	2053.6	2138.6	2230.3	2330.1	2418.7	2476.3
11.5°	2036.5	2123.9	2218.8	2322.9	2415.1	2476.3
12°	2019.0	2108.4	2207.7	2315.4	2411.1	2475.5
12.5°	2001.5	2093.3	2195.8	2307.0	2406.7	2474.3
13°	1983.6	2077.8	2183.1	2298.3	2402.0	2472.3
13.5°	1965.0	2061.9	2170.0	2289.5	2396.4	2469.5
14°	1946.3	2045.2	2156.4	2279.2	2390.1	2466.7
14.5°	1927.6	2029.3	2143.7	2269.3	2384.1	2463.2
15°	1909.7	2013.0	2130.2	2259.7	2376.5	2459.2
15.5°	1891.1	1997.1	2117.9	2251.4	2370.6	2454.0
16°	1872.8	1980.9	2105.6	2243.9	2365.8	2448.5
16.5°	1854.1	1965.0	2093.3	2235.1	2361.0	2444.1
17°	1835.4	1948.7	2079.0	2224.8	2355.5	2440.5
17.5°	1816.4	1931.2	2062.7	2211.7	2347.9	2437.3
18°	1797.3	1912.5	2045.2	2197.8	2337.2	2434.1
18.5°	1777.4	1893.1	2026.5	2181.9	2324.5	2428.2
19°	1756.8	1872.0	2007.1	2165.2	2310.2	2420.6
19.5°	1735.7	1850.9	1987.2	2146.9	2295.5	2410.3
20°	1714.3	1829.1	1966.9	2127.8	2278.4	2398.8
20.5°	1692.0	1807.6	1945.1	2108.0	2260.9	2385.7
21°	1670.2	1784.6	1922.8	2086.5	2241.5	2370.2



TEST NUMBER: P776272

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1601.8	1715.1	1854.1	2018.6	2176.3	2313.8
23°	1578.8	1691.2	1829.9	1994.8	2152.1	2291.5
23.5°	1555.0	1667.0	1804.9	1969.3	2127.1	2268.5
24°	1531.5	1642.4	1780.2	1943.9	2100.4	2244.6
24.5°	1507.7	1617.7	1754.4	1916.9	2073.8	2219.2
25°	1484.2	1593.1	1728.6	1889.9	2045.6	2193.0
25.5°	1460.4	1568.5	1702.0	1862.5	2017.8	2166.4
26°	1436.6	1543.4	1675.3	1834.3	1988.8	2139.0
26.5°	1413.1	1518.0	1649.5	1806.0	1960.2	2110.4
27°	1389.3	1492.6	1622.1	1777.0	1930.8	2082.2
27.5°	1365.5	1467.2	1595.1	1748.0	1900.2	2053.2
28°	1341.6	1441.7	1566.9	1718.2	1869.6	2022.6
28.5°	1318.2	1415.9	1539.9	1688.8	1839.8	1992.4
29°	1294.3	1391.3	1512.9	1659.4	1809.6	1961.8
29.5°	1270.5	1365.9	1485.0	1629.3	1778.6	1930.4
30°	1247.1	1340.4	1457.2	1601.0	1747.6	1899.4
30.5°	1223.6	1315.0	1429.4	1571.3	1716.7	1867.6
31°	1200.2	1290.4	1402.0	1541.5	1686.5	1835.4
31.5°	1177.1	1264.9	1375.0	1512.5	1655.9	1804.1
32°	1153.3	1239.9	1347.6	1483.5	1624.5	1771.5
32.5°	1131.1	1215.3	1320.6	1454.1	1593.9	1738.9
33°	1108.0	1190.3	1293.6	1426.6	1563.3	1706.7
33.5°	1085.0	1165.6	1267.3	1398.0	1532.7	1674.1
34°	1062.7	1141.4	1240.7	1369.8	1503.7	1642.4
34.5°	1040.5	1117.2	1214.9	1342.0	1473.1	1610.6
35°	1018.2	1093.3	1189.1	1314.6	1443.7	1578.8
35.5°	996.4	1069.1	1163.2	1287.2	1414.3	1547.0
36°	974.9	1046.4	1139.0	1261.4	1385.7	1514.8
36.5°	953.5	1023.0	1114.0	1233.6	1357.5	1484.2
37°	932.0	1000.4	1090.5	1208.1	1328.5	1452.9
37.5°	911.8	977.3	1065.9	1182.3	1300.7	1422.7
38°	891.1	955.5	1042.5	1157.3	1272.9	1392.1
38.5°	871.2	933.6	1019.0	1131.5	1245.5	1362.7
39°	851.8	912.2	996.4	1107.6	1219.7	1333.3
39.5°	831.5	890.7	974.1	1083.4	1193.0	1304.7
40°	812.0	870.4	951.5	1059.6	1166.8	1275.7
40.5°	793.4	849.8	930.0	1035.3	1141.4	1248.3
41°	774.7	830.3	908.6	1012.7	1116.4	1220.8
41.5°	756.0	810.5	887.9	989.6	1091.7	1193.4
42°	738.5	791.4	867.3	967.8	1067.5	1167.2
42.5°	720.7	772.3	846.6	945.9	1043.7	1141.8
43°	703.6	754.4	826.7	924.5	1020.2	1116.4
43.5°	686.5	735.8	806.9	903.0	997.6	1091.7

TEST NUMBER: P776272

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	638.0	683.7	750.1	841.8	931.6	1020.2
45.5°	622.5	666.6	732.2	822.0	910.6	997.2
46°	607.0	650.4	713.9	802.5	889.9	974.9
46.5°	592.0	634.1	696.8	783.4	869.3	953.1
47°	576.9	618.2	679.0	764.4	849.4	931.6
47.5°	562.6	602.7	662.3	746.1	829.5	911.0
48°	548.2	587.6	645.6	727.8	810.5	889.9
48.5°	534.3	572.5	628.9	709.9	791.4	869.3
49°	520.0	557.8	613.0	692.9	773.1	849.8
49.5°	506.5	543.1	597.1	675.8	754.8	830.3
50°	493.4	528.8	581.2	658.3	736.6	811.3
50.5°	480.3	514.9	566.1	641.6	719.1	792.6
51°	467.6	501.0	551.0	625.7	701.6	773.9
51.5°	454.9	487.1	536.3	609.4	684.9	755.6
52°	442.2	474.4	521.6	593.9	667.4	737.8
52.5°	429.9	461.2	507.7	578.4	651.1	720.3
53°	417.9	448.5	493.4	562.9	634.9	703.2
53.5°	406.0	435.8	479.9	548.2	618.6	685.7
54°	394.5	423.1	466.4	533.2	602.7	669.0
54.5°	383.4	411.2	453.3	518.5	587.6	652.3
55°	372.3	399.3	440.2	504.2	571.7	636.0
55.5°	361.1	387.7	427.5	490.2	557.0	619.8
56°	350.8	376.2	414.4	476.3	541.9	603.9
56.5°	340.9	365.1	402.4	462.8	527.2	588.4
57°	330.9	353.6	390.1	449.3	512.5	573.3
57.5°	321.0	343.3	378.2	436.2	498.2	557.4
58°	311.1	332.1	366.7	423.1	483.9	542.7
58.5°	301.1	321.8	355.6	410.8	470.4	528.0
59°	292.0	311.5	344.0	398.1	456.5	513.3
59.5°	282.9	301.5	333.3	385.8	443.4	499.0
60°	274.5	291.6	322.2	373.8	429.9	485.1
60.5°	265.8	282.1	311.9	361.9	417.1	471.2
61°	257.4	272.9	301.1	350.4	403.6	457.3
61.5°	249.1	263.4	291.2	338.9	391.7	443.8
62°	241.2	254.3	281.3	327.4	379.4	430.7
62.5°	233.2	245.5	271.3	316.6	367.1	417.9
63°	225.7	237.2	261.8	305.5	354.8	404.8
63.5°	218.1	228.8	252.7	295.2	343.3	392.1
64°	211.0	220.5	243.1	284.5	331.7	379.8
64.5°	204.2	212.5	234.4	274.1	320.2	367.5
65°	197.4	205.0	225.7	264.2	309.1	355.2
65.5°	191.1	197.1	217.3	254.3	298.4	342.9
66°	184.7	189.5	208.6	244.3	287.6	330.1



TEST NUMBER: P776272

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	166.5	168.4	184.3	216.5	255.1	293.6
68°	160.9	161.7	176.8	207.8	244.7	281.7
68.5°	154.9	155.3	169.6	199.0	234.4	269.4
69°	149.4	149.0	162.5	190.3	224.1	257.8
69.5°	143.8	142.2	154.9	182.4	214.1	246.3
70°	138.3	136.7	148.2	174.4	204.6	234.8
70.5°	133.1	131.5	141.8	166.5	195.1	224.1
71°	127.9	125.9	135.9	158.5	185.5	212.9
71.5°	122.4	120.4	129.5	151.0	176.4	202.2
72°	117.6	115.2	123.2	143.8	167.3	191.5
72.5°	112.8	110.0	116.8	136.7	158.5	181.6
73°	107.3	104.9	111.2	129.9	150.2	171.6
73.5°	102.5	100.1	105.3	122.8	141.0	161.3
74°	97.7	95.3	99.7	116.0	133.5	151.8
74.5°	93.4	90.6	94.6	109.3	125.9	141.8
75°	88.6	85.8	89.4	102.9	118.4	133.1
75.5°	84.2	81.4	84.2	96.5	110.8	124.3
76°	79.9	77.1	79.5	90.2	103.7	115.6
76.5°	75.5	72.7	74.3	84.6	96.5	106.9
77°	71.1	68.7	69.9	78.7	89.8	98.5
77.5°	67.1	64.8	65.2	73.1	83.0	90.2
78°	62.8	60.8	60.8	67.9	76.7	82.2
78.5°	58.8	56.8	56.8	62.4	70.3	74.7
79°	54.8	53.2	52.8	57.6	64.4	67.1
79.5°	50.9	49.3	48.5	52.4	58.4	60.4
80°	46.9	45.7	44.9	48.1	52.8	53.6
80.5°	43.3	42.5	40.9	43.7	47.3	47.7
81°	39.7	38.9	37.7	39.3	42.1	41.7
81.5°	36.2	35.4	34.2	35.0	36.9	36.2
82°	32.6	32.2	30.6	31.4	32.2	30.6
82.5°	29.0	29.0	27.4	27.8	27.4	25.4
83°	25.8	25.8	24.2	24.2	23.0	21.1
83.5°	22.2	22.2	21.1	21.1	19.5	17.1
84°	19.1	19.5	18.3	17.9	15.9	13.9
84.5°	15.9	16.3	15.5	15.1	13.5	11.9
85°	12.7	13.5	13.1	12.7	10.7	10.3
85.5°	9.5	11.1	10.3	10.3	8.3	8.3
86°	6.8	8.3	7.9	7.9	6.0	6.8
86.5°	4.0	5.6	5.2	5.6	4.4	5.6
87°	2.0	2.8	3.2	4.0	3.2	4.8
87.5°	0.4	0.8	1.2	2.0	2.0	3.6
88°	0.0	0.0	0.0	0.4	1.2	2.8
88.5°	0.0	0.0	0.0	0.0	0.4	2.0



TEST NUMBER: P776272

CATALOG NUMBER: HCDJBL3040CSD-HCD42TRH-HCD42TRLWW-4000lm-3500K

CANDELA DISTRIBUTION (continued):

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



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Peachtree City, GA 30269

Scaled Data Report





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

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Scaled Data Report



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Scaled Data Report





21.5°	2352.3	2383.3	2322.1	2191.8	2015.8	1863.7	1738.1	1646.7	1570.5	1556.6	1584.8
22°	2333.2	2367.4	2306.6	2174.7	1997.1	1844.2	1717.8	1626.1	1549.4	1535.9	1562.9



44°	1067.1	1096.1	1077.0	1011.9	909.0	829.5	768.7	726.2	672.6	661.9	658.3
44.5°	1043.3	1071.5	1052.8	988.8	886.7	809.3	750.1	708.4	655.9	646.8	642.4



66.5°	317.8	327.8	309.9	277.3	241.5	223.3	223.3	224.1	209.4	202.2	191.5
67°	305.5	315.4	299.2	267.4	232.8	215.7	216.1	216.5	201.8	195.5	185.1



89°	1.2	2.4	6.4	9.1	8.3	8.3	6.4	2.8	0.0	0.4	0.0
89.5°	0.4	1.6	4.0	6.8	6.0	5.6	3.6	1.2	0.0	0.4	0.0

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21.5°	1647.9	1761.6	1900.6	2065.1	2221.2	2352.3
22°	1625.3	1738.9	1877.6	2042.4	2199.0	2333.2



44°	670.2	717.9	787.8	882.0	974.9	1067.1
44.5°	653.9	700.4	769.1	861.7	953.1	1043.3



66.5°	178.4	182.4	200.2	234.8	276.5	317.8
67°	172.4	175.2	192.3	225.7	265.8	305.5

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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	0.4

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(END OF REPORT)