

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: P776586

Luminaire Tested: HCDJBS4050CSD-HCD42TRMB-5000lm-3000K

Issue Date: 2/13/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P776586  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ( A2312156B051)  
Test Lab:  
Issue Date: 2/13/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO COMMERCIAL  
Catalog Number: HCDJBS4050CSD-HCD42TRMB-5000lm-3000K  
Description: 4 INCH ROUND NARROW MATTE BLACK TRIM  
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

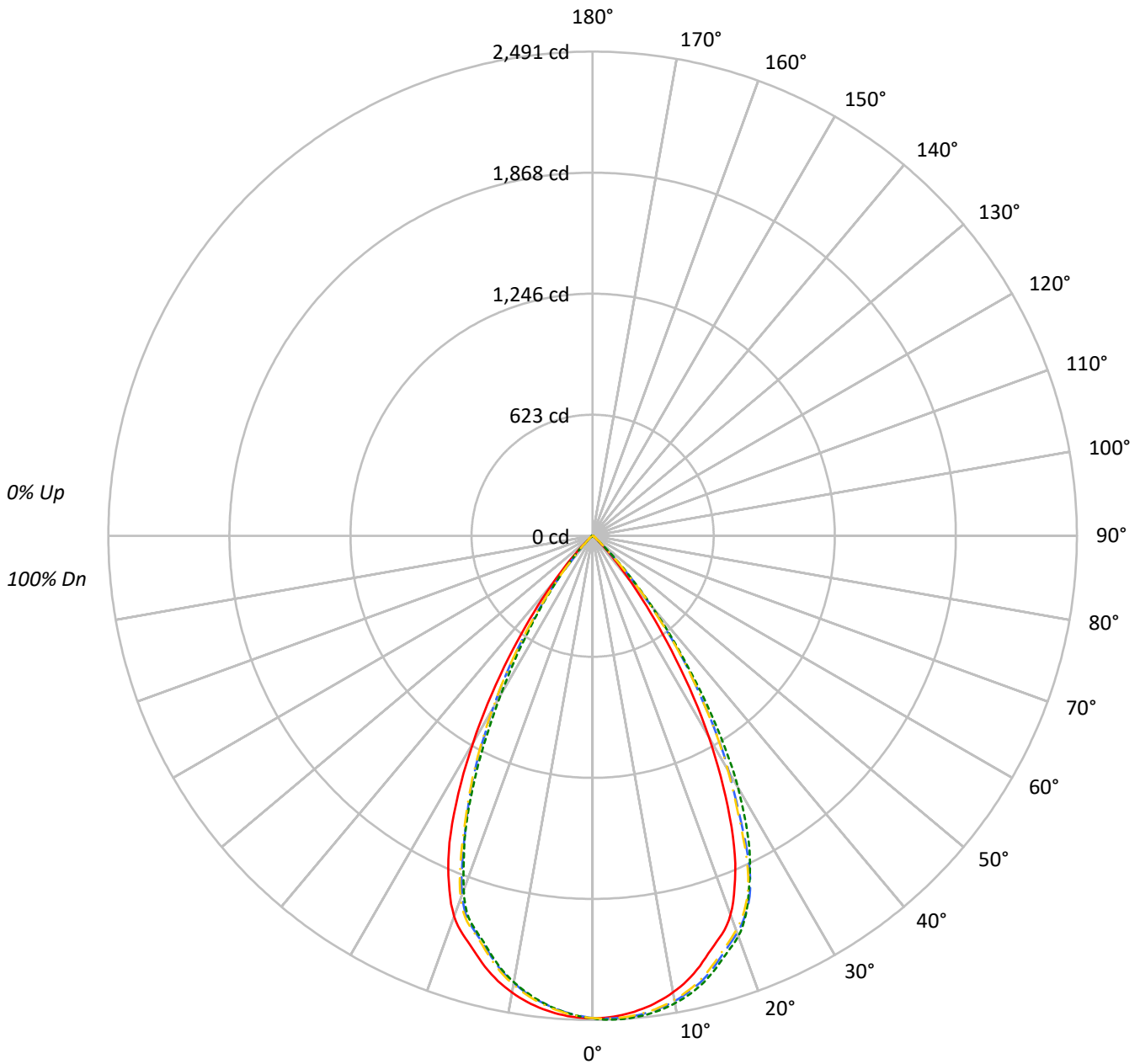
Lumens per Lamp: N/A  
Luminaire Lumens: 2191.5 lumens  
Efficiency: N/A  
Efficacy: 45.7 lumens/watt  
Spacing Criteria (0/90/45): 0.95 / 0.94 / 0.88  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 48  
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									
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	114	111	109	106	111	109	107	105	105	103	101	101	100	98	98	97	96	94																			
2	108	103	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	85	88	85	83	82																			
4	98	91	85	81	96	89	84	81	87	83	80	85	82	79	83	80	78	76																			
5	93	85	79	75	91	84	79	75	82	78	74	81	77	73	79	76	73	71																			
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67																			
7	84	75	69	65	83	74	69	65	73	68	65	72	68	64	71	67	64	63																			
8	80	71	65	61	79	70	65	61	69	64	61	68	64	60	67	63	60	59																			
9	76	67	61	57	75	67	61	57	66	61	57	65	60	57	64	60	57	55																			
10	73	63	58	54	72	63	58	54	62	57	54	61	57	54	61	56	53	52																			

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

	0°	90°	180°	270°
0°	312321	312321	312321	312321
5°	310520	314159	310634	307413
10°	304731	312092	304910	298035
15°	292734	304890	293516	282024
20°	277844	293634	278889	259563
25°	237089	265764	241783	205693
30°	173845	217281	178568	137544
35°	102704	145277	109971	78384
40°	47133	77477	52538	35617
45°	14541	26359	16605	10412
50°	4640	5267	4718	3994
55°	2852	3269	2852	2435
60°	1762	1988	1863	1636
65°	1251	1251	1251	1102
70°	846	846	846	699
75°	438	681	438	438
80°	362	362	362	362
85°	0	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 27515 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.3	10.6
10°-20°	631.8	28.8
20°-30°	766.8	35.0
30°-40°	451.8	20.6
40°-50°	90.9	4.1
50°-60°	12.4	0.6
60°-70°	4.2	0.2
70°-80°	1.3	0.1
80°-90°	0.1	0.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1630.9	74.4
0°-40°	2082.7	95.0
0°-60°	2186.0	99.7
0°-90°	2191.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2191.5	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	2482	2482	2482	2482	2482	
5°	2458	2487	2459	2433	2458	232
15°	2247	2340	2253	2165	2247	631
25°	1707	1914	1741	1481	1707	765
35°	668	946	716	510	668	425
45°	82	148	93	58	82	80
55°	13	15	13	11	13	12
65°	4	4	4	4	4	4
75°	1	1	1	1	1	1
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2481.7	2481.7	2481.7	2481.7	2481.7	2481.7	2481.7	2481.7	2481.7	2481.7	2481.7
0.5°	2482.1	2483.5	2482.1	2481.2	2486.3	2484.4	2483.1	2482.6	2482.1	2481.7	2478.0
1°	2481.2	2483.5	2483.5	2483.1	2488.2	2486.3	2484.4	2483.1	2481.7	2479.8	2474.7
1.5°	2480.3	2483.5	2484.9	2484.9	2489.6	2487.7	2484.9	2482.6	2480.3	2477.5	2471.5
2°	2478.4	2482.6	2485.4	2485.8	2490.5	2488.6	2485.4	2482.1	2478.9	2475.2	2467.3
2.5°	2476.1	2481.7	2485.4	2486.3	2491.4	2489.1	2484.9	2481.2	2476.6	2471.9	2462.6
3°	2473.3	2479.8	2484.9	2486.8	2491.4	2489.1	2484.4	2479.3	2474.2	2468.2	2458.0
3.5°	2470.5	2478.0	2484.4	2486.3	2490.9	2488.2	2483.1	2477.5	2471.0	2464.0	2452.9
4°	2466.8	2475.2	2483.1	2485.4	2490.0	2487.2	2481.7	2474.7	2467.3	2459.4	2446.8
4.5°	2462.6	2472.4	2481.7	2484.4	2488.6	2485.8	2479.3	2471.9	2463.6	2454.7	2440.3
5°	2458.0	2468.7	2479.3	2482.6	2486.8	2483.5	2477.0	2468.7	2458.9	2449.2	2433.4
5.5°	2452.9	2465.0	2476.6	2480.7	2484.4	2481.2	2473.8	2465.0	2453.8	2443.1	2426.4
6°	2447.3	2460.3	2473.3	2478.0	2481.7	2478.0	2470.1	2460.3	2448.2	2436.6	2418.5
6.5°	2441.3	2455.7	2469.6	2474.7	2478.9	2474.7	2465.9	2455.2	2442.2	2429.2	2410.2
7°	2435.2	2450.1	2465.4	2471.0	2474.7	2470.5	2461.7	2449.6	2436.2	2421.8	2400.9
7.5°	2427.8	2444.1	2460.8	2467.3	2470.5	2465.9	2457.1	2444.1	2429.2	2413.4	2391.6
8°	2420.4	2437.6	2456.1	2462.6	2465.9	2461.2	2451.0	2437.6	2421.3	2405.1	2381.9
8.5°	2412.0	2430.6	2450.1	2457.5	2460.8	2455.7	2445.0	2430.6	2413.4	2396.2	2371.2
9°	2403.7	2423.2	2444.1	2452.0	2455.2	2450.1	2438.5	2423.2	2405.1	2386.5	2360.5
9.5°	2394.4	2414.8	2437.6	2445.9	2449.2	2443.6	2431.5	2415.3	2395.8	2376.8	2348.4
10°	2384.6	2406.5	2430.6	2439.4	2442.2	2437.1	2424.1	2406.9	2386.0	2365.6	2336.4
10.5°	2374.0	2397.2	2423.2	2432.5	2435.2	2429.2	2416.2	2397.6	2375.8	2354.5	2323.8
11°	2363.8	2387.9	2414.8	2424.6	2427.4	2421.3	2407.4	2387.9	2365.6	2342.4	2310.4
11.5°	2352.1	2377.7	2406.0	2416.7	2419.0	2412.5	2398.1	2377.7	2354.0	2329.9	2295.5
12°	2339.6	2366.5	2396.7	2408.3	2410.2	2403.7	2388.4	2367.0	2341.9	2316.4	2280.2
12.5°	2326.2	2354.5	2387.0	2398.6	2400.9	2393.5	2377.7	2355.4	2328.9	2302.0	2263.9
13°	2311.8	2342.4	2375.8	2388.8	2390.2	2383.3	2366.5	2343.3	2315.5	2287.2	2246.8
13.5°	2296.4	2328.5	2365.1	2378.1	2379.1	2371.6	2354.5	2329.9	2300.6	2271.4	2229.1
14°	2280.7	2314.5	2353.1	2366.5	2367.5	2359.6	2341.5	2315.9	2285.3	2254.2	2210.1
14.5°	2263.9	2299.2	2340.1	2354.0	2354.0	2345.7	2328.0	2301.1	2269.5	2236.6	2192.0
15°	2246.8	2283.0	2326.2	2340.5	2340.1	2332.2	2313.2	2285.8	2252.8	2218.9	2173.9
15.5°	2229.6	2266.3	2311.3	2326.2	2326.2	2317.3	2297.8	2269.5	2235.6	2201.3	2157.6
16°	2213.4	2250.0	2295.5	2311.3	2310.8	2302.0	2282.1	2252.8	2218.5	2184.1	2141.9
16.5°	2198.5	2233.8	2279.3	2295.5	2294.6	2286.2	2265.8	2236.6	2202.7	2168.3	2126.1
17°	2183.2	2218.9	2263.0	2280.2	2279.3	2270.4	2249.6	2220.8	2187.4	2153.5	2110.3
17.5°	2168.8	2204.1	2247.7	2264.4	2264.4	2255.6	2234.2	2205.9	2172.5	2138.1	2094.5
18°	2153.9	2189.7	2232.4	2250.0	2251.0	2241.2	2220.3	2191.1	2157.2	2122.4	2075.9
18.5°	2138.1	2174.4	2218.0	2236.1	2236.6	2227.3	2205.0	2175.3	2141.4	2105.7	2054.6
19°	2119.6	2159.5	2203.1	2221.7	2222.6	2212.9	2190.1	2160.9	2124.2	2086.2	2028.6
19.5°	2098.2	2142.8	2188.7	2206.9	2208.7	2198.5	2175.3	2144.2	2104.7	2062.9	1998.9
20°	2074.6	2123.8	2173.4	2192.9	2192.5	2182.7	2159.5	2126.5	2082.4	2036.5	1964.1
20.5°	2047.2	2102.4	2157.6	2176.7	2173.9	2165.1	2142.3	2107.0	2056.9	2007.2	1925.1
21°	2017.5	2079.7	2140.0	2158.6	2152.5	2144.6	2123.8	2085.2	2030.0	1974.3	1880.0



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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°	1914.9	1993.8	2077.8	2090.8	2075.0	2071.8	2057.4	2006.8	1933.0	1855.9	1734.8
23°	1877.7	1959.9	2052.3	2063.9	2044.4	2042.1	2031.4	1975.7	1899.1	1811.3	1686.9
23.5°	1839.7	1924.1	2024.0	2033.7	2011.4	2010.0	2000.7	1940.9	1862.4	1764.9	1639.6
24°	1797.4	1886.1	1992.4	2000.3	1978.9	1977.5	1967.3	1904.2	1824.3	1718.0	1595.0
24.5°	1753.3	1845.7	1956.6	1965.9	1946.9	1941.8	1928.8	1866.1	1784.0	1671.2	1550.0
25°	1707.4	1803.9	1914.4	1928.8	1913.9	1906.5	1887.9	1825.3	1741.2	1626.6	1505.0
25.5°	1658.6	1759.4	1869.4	1892.6	1881.0	1871.2	1841.1	1781.6	1694.8	1582.5	1459.5
26°	1609.0	1711.1	1817.8	1853.6	1846.2	1835.0	1790.0	1735.2	1647.0	1539.3	1413.1
26.5°	1557.4	1659.1	1763.1	1813.7	1809.0	1794.6	1735.7	1686.0	1596.9	1494.8	1365.2
27°	1505.9	1605.2	1706.0	1770.5	1769.6	1752.9	1683.2	1634.0	1547.2	1449.7	1316.0
27.5°	1454.8	1548.6	1649.8	1726.9	1725.5	1708.8	1629.8	1579.7	1494.8	1404.2	1264.5
28°	1404.2	1490.6	1595.0	1678.1	1680.4	1663.3	1578.8	1521.7	1441.8	1357.3	1213.9
28.5°	1353.2	1433.0	1544.0	1628.4	1633.6	1613.1	1528.6	1466.0	1391.2	1309.1	1164.2
29°	1300.7	1376.4	1495.2	1575.5	1588.5	1561.6	1483.6	1411.2	1336.5	1258.5	1116.9
29.5°	1248.7	1318.8	1449.3	1521.7	1542.1	1508.2	1436.7	1357.8	1282.1	1204.6	1070.0
30°	1196.3	1265.4	1402.8	1466.4	1495.2	1455.3	1390.8	1306.3	1228.8	1152.2	1023.6
30.5°	1143.8	1210.2	1356.4	1414.0	1445.1	1401.9	1344.4	1254.3	1176.8	1098.8	978.6
31°	1089.0	1157.3	1306.7	1362.0	1394.5	1350.8	1296.5	1203.2	1122.9	1046.8	933.1
31.5°	1035.2	1103.4	1256.2	1310.5	1339.2	1299.8	1245.0	1152.2	1070.0	995.3	887.6
32°	980.9	1051.4	1203.2	1260.8	1283.5	1250.1	1193.0	1100.6	1017.5	946.1	841.6
32.5°	926.6	1000.8	1149.4	1213.0	1226.4	1199.1	1140.6	1048.2	966.9	897.8	792.9
33°	872.2	950.7	1094.6	1163.8	1169.3	1149.8	1088.1	994.3	914.5	850.4	745.1
33.5°	818.4	900.6	1041.7	1114.1	1113.2	1098.3	1036.1	942.8	863.4	802.6	698.2
34°	765.9	853.2	991.6	1063.5	1057.0	1048.2	986.9	893.1	813.3	753.9	652.7
34.5°	715.8	805.4	943.7	1012.9	1001.3	995.7	941.0	844.4	764.6	705.1	607.2
35°	668.5	758.5	895.5	960.4	945.6	944.7	893.1	797.5	715.8	656.4	564.0
35.5°	623.0	714.0	850.0	908.5	891.7	895.0	847.6	752.0	669.4	609.0	522.2
36°	578.9	672.2	804.5	856.9	839.3	844.9	800.8	709.3	624.4	562.2	481.8
36.5°	535.7	630.4	759.0	808.2	787.3	794.3	753.4	667.1	581.2	517.6	441.9
37°	494.8	588.2	712.1	759.9	737.6	744.6	705.1	625.8	537.1	474.4	402.0
37.5°	456.3	547.8	666.1	713.5	690.3	695.9	657.3	584.4	497.6	436.8	362.1
38°	418.7	506.9	619.3	667.5	644.3	648.5	610.4	544.5	459.1	399.7	322.6
38.5°	382.5	467.0	574.2	620.6	599.8	601.2	564.9	504.6	424.3	362.1	286.0
39°	349.1	428.0	532.0	576.5	556.1	556.1	520.4	465.1	389.5	324.9	252.1
39.5°	317.1	390.4	491.1	532.4	513.4	511.6	479.1	428.0	354.7	294.3	221.0
40°	286.9	354.7	453.5	488.8	471.6	469.3	442.4	391.3	319.8	262.7	193.6
40.5°	258.6	320.3	415.9	446.1	434.0	429.4	405.7	354.7	288.7	234.0	169.4
41°	231.6	287.8	380.7	403.9	396.4	389.9	369.0	318.0	260.4	207.0	148.5
41.5°	207.5	258.1	345.8	364.4	358.8	350.5	332.4	285.5	233.0	182.0	130.4
42°	184.8	230.2	311.5	326.8	321.2	310.6	295.7	255.3	208.0	159.2	115.6
42.5°	163.9	204.3	278.1	292.0	289.2	276.2	262.3	226.1	184.8	139.7	102.6
43°	147.2	179.6	244.6	259.0	257.2	243.7	229.8	199.1	163.4	122.1	90.1
43.5°	130.9	159.2	213.5	228.4	228.4	214.0	199.6	175.0	143.4	106.8	79.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	81.7	104.9	138.8	154.6	148.1	139.3	125.8	112.3	93.3	70.6	52.9
45.5°	70.1	87.3	119.8	135.5	125.3	119.3	106.3	96.1	79.8	60.8	47.3
46°	59.4	73.8	101.2	116.5	105.8	101.2	90.1	80.8	67.3	52.0	42.2
46.5°	49.7	61.7	82.2	97.5	88.2	85.4	75.7	68.2	56.6	46.9	36.7
47°	41.8	51.1	69.2	78.9	72.9	71.0	63.1	56.6	50.6	41.3	31.6
47.5°	34.8	42.2	57.1	65.5	59.9	59.0	57.1	50.6	44.6	36.2	26.0
48°	30.2	34.8	47.3	53.8	53.4	52.5	51.1	44.6	38.5	31.1	24.1
48.5°	27.4	30.2	39.0	43.6	46.4	46.4	45.0	39.0	32.5	26.0	23.2
49°	26.0	27.4	33.0	35.7	39.9	39.9	39.0	33.0	26.5	24.6	22.3
49.5°	24.6	26.0	29.2	30.6	33.4	33.4	32.5	27.4	25.1	23.2	21.4
50°	23.7	24.6	26.9	27.9	26.9	27.4	26.5	25.5	24.1	22.3	20.0
50.5°	22.3	23.7	25.5	26.0	25.5	26.0	25.5	24.6	22.7	21.4	19.0
51°	21.4	22.3	24.6	25.1	24.6	24.6	24.1	23.2	21.8	20.0	17.6
51.5°	20.0	21.4	23.2	23.7	23.2	23.2	22.7	21.8	20.4	19.0	16.7
52°	19.0	20.0	22.3	22.7	22.3	22.3	21.8	20.4	19.0	17.6	15.8
52.5°	17.6	18.6	20.9	21.4	20.9	20.9	20.4	19.5	18.1	16.7	14.9
53°	16.7	17.6	19.5	20.0	19.5	19.5	19.0	18.1	16.7	15.8	13.9
53.5°	15.8	16.2	18.1	18.6	18.1	18.1	17.6	17.2	15.8	14.9	13.0
54°	14.9	15.3	17.2	17.6	17.2	17.2	16.7	15.8	14.9	13.9	12.5
54.5°	13.9	14.4	16.2	16.7	15.8	15.8	15.8	14.9	13.9	13.0	11.6
55°	13.0	13.9	14.9	15.3	14.9	14.9	14.9	13.9	13.0	12.5	11.1
55.5°	12.1	13.0	13.9	14.4	13.9	13.9	13.9	13.0	12.5	11.6	10.2
56°	11.6	12.1	13.0	13.5	13.0	13.0	13.0	12.5	11.6	11.1	9.7
56.5°	10.7	11.1	12.5	12.5	12.5	12.5	12.1	11.6	11.1	10.2	9.3
57°	10.2	10.7	11.6	12.1	11.6	11.6	11.6	11.1	10.2	9.7	8.8
57.5°	9.3	9.7	10.7	11.1	10.7	10.7	10.7	10.2	9.7	9.3	8.4
58°	8.8	9.3	10.2	10.7	10.2	10.2	10.2	9.7	9.3	8.8	7.9
58.5°	8.4	8.8	9.7	9.7	9.7	9.7	9.3	9.3	8.8	8.4	7.4
59°	7.9	8.4	8.8	9.3	8.8	8.8	8.8	8.8	8.4	7.9	7.0
59.5°	7.4	7.9	8.4	8.8	8.4	8.4	8.4	7.9	7.9	7.4	6.5
60°	7.0	7.4	7.9	8.4	7.9	7.9	7.9	7.4	7.4	7.0	6.0
60.5°	6.5	7.0	7.4	7.9	7.4	7.4	7.4	7.0	7.0	6.5	6.0
61°	6.5	6.5	7.0	7.4	7.0	7.0	7.0	7.0	6.5	6.0	5.6
61.5°	6.0	6.0	6.5	7.0	6.5	6.5	6.5	6.5	6.0	5.6	5.1
62°	5.6	5.6	6.5	6.5	6.5	6.5	6.0	6.0	5.6	5.6	5.1
62.5°	5.1	5.6	6.0	6.0	6.0	6.0	6.0	5.6	5.6	5.1	4.6
63°	5.1	5.1	5.6	5.6	5.6	5.6	5.6	5.6	5.1	5.1	4.6
63.5°	4.6	4.6	5.1	5.6	5.1	5.1	5.1	5.1	4.6	4.6	4.2
64°	4.6	4.6	5.1	5.1	5.1	5.1	5.1	4.6	4.6	4.2	4.2
64.5°	4.2	4.2	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2	3.7
65°	4.2	4.2	4.6	4.6	4.2	4.2	4.2	4.2	4.2	3.7	3.7
65.5°	3.7	3.7	4.2	4.2	4.2	4.2	4.2	4.2	3.7	3.7	3.2
66°	3.7	3.7	3.7	4.2	3.7	3.7	3.7	3.7	3.7	3.2	3.2





TEST NUMBER: P776586

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	2.8	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	2.8	2.8
68°	2.8	2.8	3.2	3.2	3.2	3.2	3.2	2.8	2.8	2.8	2.3
68.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.3
69°	2.3	2.3	2.8	2.8	2.8	2.8	2.8	2.8	2.3	2.3	2.3
69.5°	2.3	2.3	2.8	2.8	2.8	2.8	2.3	2.3	2.3	2.3	2.3
70°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.9
70.5°	1.9	1.9	2.3	2.3	2.3	2.3	2.3	2.3	1.9	1.9	1.9
71°	1.9	1.9	2.3	2.3	2.3	2.3	2.3	1.9	1.9	1.9	1.9
71.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
72°	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.4
72.5°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.4
73°	1.4	1.4	1.9	1.9	1.9	1.9	1.9	1.4	1.4	1.4	1.4
73.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
74°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
74.5°	0.9	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9
75°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9
75.5°	0.9	0.9	1.4	1.4	1.4	1.4	1.4	0.9	0.9	0.9	0.9
76°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
76.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
77°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
77.5°	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5
78°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5
78.5°	0.5	0.5	0.9	0.9	0.9	0.9	0.9	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
81.5°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0
82.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0
83°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776586  
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3000K

**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: P776586

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2481.7	2481.7	2481.7	2481.7	2481.7	2481.7
0.5°	2475.6	2480.7	2479.3	2479.3	2480.3	2482.1
1°	2471.9	2477.5	2476.6	2476.6	2478.9	2481.2
1.5°	2468.2	2473.8	2472.8	2473.8	2476.6	2480.3
2°	2463.6	2469.1	2468.7	2470.1	2473.8	2478.4
2.5°	2458.5	2464.5	2464.0	2465.9	2470.5	2476.1
3°	2453.3	2459.4	2458.9	2461.7	2466.8	2473.3
3.5°	2447.3	2453.3	2453.3	2456.6	2463.1	2470.5
4°	2440.8	2447.3	2447.3	2451.0	2458.0	2466.8
4.5°	2434.3	2440.3	2440.8	2445.0	2452.9	2462.6
5°	2426.4	2433.4	2433.9	2439.0	2447.3	2458.0
5.5°	2419.0	2425.5	2426.0	2432.0	2441.7	2452.9
6°	2410.2	2417.1	2418.1	2424.6	2434.8	2447.3
6.5°	2401.8	2408.3	2409.7	2416.2	2427.8	2441.3
7°	2392.1	2399.0	2400.4	2408.3	2420.4	2435.2
7.5°	2381.9	2389.3	2391.1	2399.0	2412.0	2427.8
8°	2371.6	2378.6	2380.9	2389.3	2403.7	2420.4
8.5°	2360.5	2367.9	2370.3	2379.1	2394.4	2412.0
9°	2348.9	2356.3	2359.1	2368.9	2384.6	2403.7
9.5°	2337.3	2344.7	2347.5	2357.3	2374.4	2394.4
10°	2324.3	2332.2	2335.0	2346.1	2363.8	2384.6
10.5°	2311.3	2318.7	2322.0	2333.6	2352.1	2374.0
11°	2296.4	2304.8	2308.5	2320.1	2339.6	2363.8
11.5°	2281.6	2289.5	2293.2	2305.7	2326.6	2352.1
12°	2265.8	2274.2	2277.4	2290.9	2312.7	2339.6
12.5°	2248.6	2257.0	2260.2	2273.7	2297.4	2326.2
13°	2231.0	2238.9	2242.1	2257.0	2282.1	2311.8
13.5°	2212.4	2220.8	2224.5	2239.3	2264.9	2296.4
14°	2192.9	2201.7	2205.5	2220.8	2247.7	2280.7
14.5°	2174.4	2182.7	2186.4	2202.7	2229.6	2263.9
15°	2157.2	2164.6	2168.3	2183.6	2212.0	2246.8
15.5°	2140.9	2147.9	2152.1	2166.9	2194.3	2229.6
16°	2124.7	2132.1	2136.3	2151.1	2178.5	2213.4
16.5°	2108.4	2116.3	2120.0	2135.8	2163.7	2198.5
17°	2092.7	2100.5	2104.3	2120.5	2148.8	2183.2
17.5°	2075.5	2083.8	2088.0	2105.2	2133.5	2168.8
18°	2053.2	2064.8	2069.4	2088.5	2118.2	2153.9
18.5°	2028.1	2039.3	2045.3	2069.0	2100.5	2138.1
19°	1999.4	2011.0	2019.3	2045.3	2079.7	2119.6
19.5°	1966.4	1977.1	1987.7	2017.9	2055.5	2098.2
20°	1929.3	1938.1	1952.5	1985.0	2027.7	2074.6
20.5°	1888.9	1896.8	1913.0	1948.8	1995.2	2047.2
21°	1846.2	1853.6	1870.8	1907.4	1959.0	2017.5

TEST NUMBER: P776586

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1701.3	1725.0	1730.6	1763.5	1829.4	1914.9
23°	1650.7	1682.3	1682.3	1712.9	1780.7	1877.7
23.5°	1599.7	1635.9	1633.1	1662.8	1734.3	1839.7
24°	1550.9	1587.1	1581.6	1613.1	1687.9	1797.4
24.5°	1500.3	1535.6	1530.0	1566.7	1643.3	1753.3
25°	1451.1	1481.3	1479.4	1518.4	1600.1	1707.4
25.5°	1403.3	1428.4	1428.4	1472.0	1557.0	1658.6
26°	1356.0	1373.1	1375.9	1425.1	1512.9	1609.0
26.5°	1306.7	1320.2	1324.4	1379.2	1467.8	1557.4
27°	1258.0	1264.5	1274.3	1330.0	1420.5	1505.9
27.5°	1208.3	1210.2	1224.1	1280.3	1371.3	1454.8
28°	1160.1	1156.8	1173.5	1228.8	1318.4	1404.2
28.5°	1110.9	1102.5	1125.7	1177.2	1265.4	1353.2
29°	1061.6	1047.7	1075.6	1126.2	1209.3	1300.7
29.5°	1012.4	996.7	1026.8	1077.9	1157.7	1248.7
30°	963.7	946.5	976.7	1028.7	1103.9	1196.3
30.5°	914.0	896.9	927.0	980.9	1053.8	1143.8
31°	865.8	849.5	874.6	933.5	1003.6	1089.0
31.5°	817.0	804.9	824.4	889.0	954.9	1035.2
32°	770.1	760.4	776.6	843.9	906.6	980.9
32.5°	723.2	717.2	730.7	798.9	860.6	926.6
33°	679.1	673.6	686.6	752.0	812.8	872.2
33.5°	635.0	629.5	644.3	706.1	764.1	818.4
34°	592.8	588.2	602.5	660.6	714.4	765.9
34.5°	552.4	548.2	562.6	614.6	666.6	715.8
35°	512.5	510.2	522.7	570.5	617.9	668.5
35.5°	473.5	474.0	486.0	527.8	570.5	623.0
36°	439.6	441.0	448.9	486.5	525.0	578.9
36.5°	406.2	408.0	413.1	446.6	481.8	535.7
37°	372.3	377.4	379.3	407.6	441.0	494.8
37.5°	338.9	347.2	347.2	369.5	402.0	456.3
38°	305.0	317.5	317.5	332.4	364.9	418.7
38.5°	277.6	290.1	288.7	297.1	329.1	382.5
39°	250.2	264.1	262.3	264.1	295.7	349.1
39.5°	224.7	239.5	237.2	233.0	264.1	317.1
40°	200.1	216.8	213.5	203.8	233.0	286.9
40.5°	178.7	194.5	190.8	178.7	205.6	258.6
41°	157.4	174.5	169.4	158.3	180.1	231.6
41.5°	138.8	157.8	153.2	142.5	157.8	207.5
42°	121.6	141.6	136.9	126.7	142.0	184.8
42.5°	106.8	125.3	121.2	111.4	126.3	163.9
43°	93.3	109.1	104.9	95.6	110.5	147.2
43.5°	81.2	92.8	88.7	84.5	94.7	130.9



TEST NUMBER: P776586

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
45°	53.8	58.5	56.6	56.6	63.1	81.7
45.5°	47.3	49.2	47.8	49.2	55.2	70.1
46°	40.4	40.9	40.9	42.2	47.3	59.4
46.5°	33.9	33.9	34.4	36.2	40.4	49.7
47°	27.4	29.2	29.2	31.1	34.4	41.8
47.5°	25.1	26.5	26.5	27.9	30.2	34.8
48°	23.7	24.6	25.1	26.0	27.4	30.2
48.5°	22.7	23.7	23.7	24.6	25.5	27.4
49°	21.8	22.7	22.7	23.7	24.6	26.0
49.5°	20.4	21.4	21.8	22.3	23.7	24.6
50°	19.5	20.4	20.4	21.4	22.3	23.7
50.5°	18.1	19.0	19.5	20.0	21.4	22.3
51°	17.2	18.1	18.1	19.0	20.0	21.4
51.5°	16.2	17.2	17.2	17.6	19.0	20.0
52°	15.3	15.8	16.2	16.7	17.6	19.0
52.5°	14.4	14.9	15.3	15.8	16.7	17.6
53°	13.5	13.9	14.4	14.9	15.8	16.7
53.5°	13.0	13.5	13.5	13.9	14.9	15.8
54°	12.1	12.5	12.5	13.5	13.9	14.9
54.5°	11.6	11.6	12.1	12.5	13.0	13.9
55°	10.7	11.1	11.1	11.6	12.5	13.0
55.5°	10.2	10.7	10.7	11.1	11.6	12.1
56°	9.7	9.7	10.2	10.7	11.1	11.6
56.5°	8.8	9.3	9.3	9.7	10.2	10.7
57°	8.4	8.8	8.8	9.3	9.7	10.2
57.5°	7.9	8.4	8.4	8.8	9.3	9.3
58°	7.4	7.9	7.9	8.4	8.8	8.8
58.5°	7.4	7.4	7.4	7.9	8.4	8.4
59°	7.0	7.0	7.0	7.4	7.9	7.9
59.5°	6.5	6.5	7.0	7.0	7.4	7.4
60°	6.0	6.5	6.5	6.5	7.0	7.0
60.5°	5.6	6.0	6.0	6.0	6.5	6.5
61°	5.6	5.6	5.6	6.0	6.0	6.5
61.5°	5.1	5.1	5.6	5.6	5.6	6.0
62°	5.1	5.1	5.1	5.1	5.6	5.6
62.5°	4.6	4.6	4.6	5.1	5.1	5.1
63°	4.2	4.6	4.6	4.6	4.6	5.1
63.5°	4.2	4.2	4.2	4.6	4.6	4.6
64°	3.7	4.2	4.2	4.2	4.2	4.6
64.5°	3.7	3.7	3.7	3.7	4.2	4.2
65°	3.7	3.7	3.7	3.7	3.7	4.2
65.5°	3.2	3.2	3.2	3.7	3.7	3.7
66°	3.2	3.2	3.2	3.2	3.2	3.7



TEST NUMBER: P776586  
 CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	2.8	2.8	2.8	2.8	2.8	2.8
68°	2.3	2.8	2.8	2.8	2.8	2.8
68.5°	2.3	2.3	2.3	2.3	2.3	2.8
69°	2.3	2.3	2.3	2.3	2.3	2.3
69.5°	1.9	2.3	2.3	2.3	2.3	2.3
70°	1.9	1.9	1.9	1.9	2.3	2.3
70.5°	1.9	1.9	1.9	1.9	1.9	1.9
71°	1.9	1.9	1.9	1.9	1.9	1.9
71.5°	1.9	1.9	1.9	1.9	1.9	1.9
72°	1.4	1.4	1.4	1.4	1.4	1.4
72.5°	1.4	1.4	1.4	1.4	1.4	1.4
73°	1.4	1.4	1.4	1.4	1.4	1.4
73.5°	1.4	1.4	1.4	1.4	1.4	1.4
74°	1.4	1.4	1.4	1.4	1.4	1.4
74.5°	0.9	0.9	0.9	0.9	0.9	0.9
75°	0.9	0.9	0.9	0.9	0.9	0.9
75.5°	0.9	0.9	0.9	0.9	0.9	0.9
76°	0.9	0.9	0.9	0.9	0.9	0.9
76.5°	0.9	0.9	0.9	0.9	0.9	0.9
77°	0.9	0.9	0.9	0.9	0.9	0.9
77.5°	0.5	0.9	0.9	0.9	0.5	0.5
78°	0.5	0.5	0.5	0.5	0.5	0.5
78.5°	0.5	0.5	0.5	0.5	0.5	0.5
79°	0.5	0.5	0.5	0.5	0.5	0.5
79.5°	0.5	0.5	0.5	0.5	0.5	0.5
80°	0.5	0.5	0.5	0.5	0.5	0.5
80.5°	0.5	0.5	0.5	0.5	0.5	0.5
81°	0.5	0.5	0.5	0.5	0.5	0.5
81.5°	0.5	0.5	0.5	0.5	0.0	0.0
82°	0.5	0.5	0.5	0.5	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0
83°	0.0	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	0.0
84°	0.0	0.0	0.0	0.0	0.0	0.0
84.5°	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0
85.5°	0.0	0.0	0.0	0.0	0.0	0.0
86°	0.0	0.0	0.0	0.0	0.0	0.0
86.5°	0.0	0.0	0.0	0.0	0.0	0.0
87°	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0
88°	0.0	0.0	0.0	0.0	0.0	0.0
88.5°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P776586  
CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3000K

**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



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Scaled Data Report





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

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Scaled Data Report





21.5°	1985.0	2053.7	2121.0	2137.7	2129.3	2122.8	2103.3	2061.6	1999.4	1937.6	1833.2
22°	1950.1	2024.9	2099.6	2115.9	2103.3	2098.2	2082.0	2036.0	1966.9	1898.2	1784.0



44°	114.7	141.1	184.3	200.1	199.1	186.1	172.2	151.8	124.9	93.3	70.1
44.5°	97.9	123.0	157.8	173.6	172.7	161.5	147.6	130.9	108.2	81.2	61.3



66.5°	3.2	3.2	3.7	3.7	3.7	3.7	3.7	3.7	3.2	3.2	2.8
67°	3.2	3.2	3.7	3.7	3.2	3.2	3.2	3.2	3.2	3.2	2.8



89°	0.0	0.0	0.0	0.0	0.0	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°	1800.7	1810.4	1826.2	1861.9	1919.0	1985.0
22°	1752.9	1766.8	1779.3	1814.1	1874.9	1950.1

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44°	70.6	80.3	76.6	74.3	83.1	114.7
44.5°	60.3	69.2	66.4	65.5	72.9	97.9



66.5°	2.8	3.2	3.2	3.2	3.2	3.2
67°	2.8	2.8	2.8	2.8	3.2	3.2

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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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(END OF REPORT)