

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: P776587

Luminaire Tested: HCDJBS4050CSD-HCD42TRMB-5000lm-3500K

Issue Date: 2/13/2024

Test Information

Test Method: LM-79-2019
Report Number: P776587
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-3500K
Description: 4 INCH ROUND NARROW MATTE BLACK TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

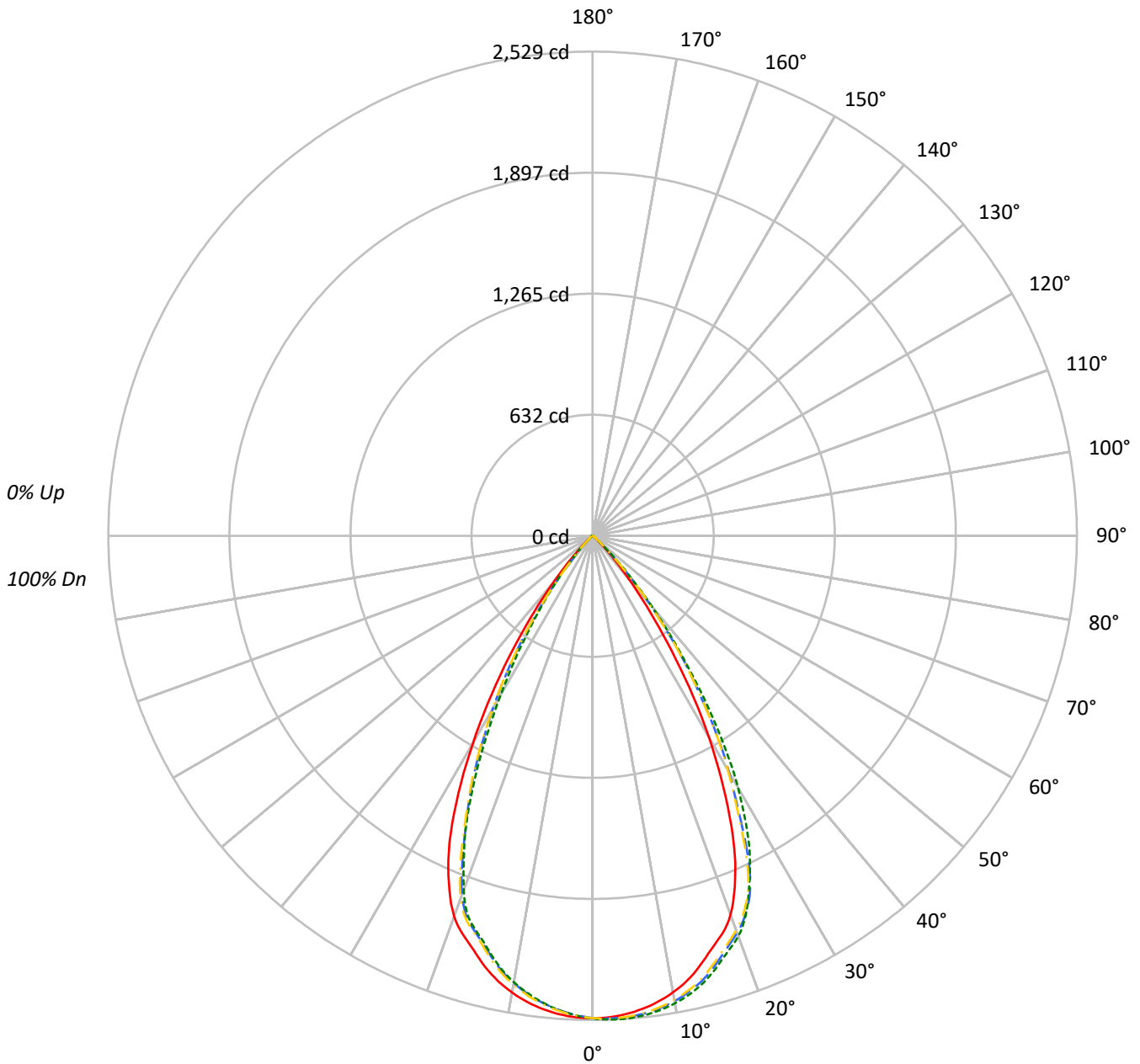
Lumens per Lamp: N/A
Luminaire Lumens: 2224.9 lumens
Efficiency: N/A
Efficacy: 46.4 lumens/watt
Spacing Criteria (0/90/45): 0.95 / 0.94 / 0.88
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	317079	317079	317079	317079
5°	315258	318947	315372	312100
10°	309383	316846	309561	302571
15°	297190	309541	297998	286324
20°	282076	298107	283148	263514
25°	240700	269819	245476	208831
30°	176490	220594	181285	139651
35°	104272	147489	111646	79567
40°	47856	78660	53343	36159
45°	14754	26750	16855	10572
50°	4699	5345	4797	4053
55°	2896	3313	2896	2479
60°	1787	2014	1888	1661
65°	1251	1251	1251	1132
70°	883	883	883	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: 27925 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.9	10.6
10°-20°	641.4	28.8
20°-30°	778.5	35.0
30°-40°	458.7	20.6
40°-50°	92.3	4.1
50°-60°	12.5	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°	1655.8	74.4
0°-40°	2114.4	95.0
0°-60°	2219.3	99.7
0°-90°	2224.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2224.9	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2520	2520	2520	2520	2520	
5°	2496	2525	2496	2470	2496	236
15°	2281	2376	2287	2198	2281	641
25°	1733	1943	1768	1504	1733	777
35°	679	960	727	518	679	431
45°	83	150	95	59	83	81
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	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°	2519.5	2519.5	2519.5	2519.5	2519.5	2519.5	2519.5	2519.5	2519.5	2519.5	2519.5
0.5°	2520.0	2521.4	2520.0	2519.0	2524.2	2522.3	2520.9	2520.4	2520.0	2519.5	2515.7
1°	2519.0	2521.4	2521.4	2520.9	2526.1	2524.2	2522.3	2520.9	2519.5	2517.6	2512.4
1.5°	2518.1	2521.4	2522.8	2522.8	2527.5	2525.6	2522.8	2520.4	2518.1	2515.3	2509.1
2°	2516.2	2520.4	2523.3	2523.7	2528.4	2526.6	2523.3	2520.0	2516.7	2512.9	2504.9
2.5°	2513.8	2519.5	2523.3	2524.2	2529.4	2527.0	2522.8	2519.0	2514.3	2509.6	2500.2
3°	2511.0	2517.6	2522.8	2524.7	2529.4	2527.0	2522.3	2517.1	2512.0	2505.8	2495.5
3.5°	2508.2	2515.7	2522.3	2524.2	2528.9	2526.1	2520.9	2515.3	2508.7	2501.6	2490.3
4°	2504.4	2512.9	2520.9	2523.3	2528.0	2525.1	2519.5	2512.4	2504.9	2496.9	2484.1
4.5°	2500.2	2510.1	2519.5	2522.3	2526.6	2523.7	2517.1	2509.6	2501.1	2492.2	2477.5
5°	2495.5	2506.3	2517.1	2520.4	2524.7	2521.4	2514.8	2506.3	2496.4	2486.5	2470.5
5.5°	2490.3	2502.5	2514.3	2518.6	2522.3	2519.0	2511.5	2502.5	2491.2	2480.4	2463.4
6°	2484.6	2497.8	2511.0	2515.7	2519.5	2515.7	2507.7	2497.8	2485.6	2473.8	2455.4
6.5°	2478.5	2493.1	2507.2	2512.4	2516.7	2512.4	2503.5	2492.6	2479.4	2466.2	2446.9
7°	2472.4	2487.4	2503.0	2508.7	2512.4	2508.2	2499.2	2487.0	2473.3	2458.7	2437.5
7.5°	2464.8	2481.3	2498.3	2504.9	2508.2	2503.5	2494.5	2481.3	2466.2	2450.2	2428.1
8°	2457.3	2474.7	2493.6	2500.2	2503.5	2498.8	2488.4	2474.7	2458.2	2441.7	2418.2
8.5°	2448.8	2467.7	2487.4	2495.0	2498.3	2493.1	2482.3	2467.7	2450.2	2432.8	2407.3
9°	2440.3	2460.1	2481.3	2489.3	2492.6	2487.4	2475.7	2460.1	2441.7	2422.9	2396.5
9.5°	2430.9	2451.6	2474.7	2483.2	2486.5	2480.8	2468.6	2452.1	2432.3	2413.0	2384.2
10°	2421.0	2443.1	2467.7	2476.6	2479.4	2474.3	2461.1	2443.6	2422.4	2401.7	2372.0
10.5°	2410.2	2433.7	2460.1	2469.5	2472.4	2466.2	2453.0	2434.2	2412.0	2390.4	2359.3
11°	2399.8	2424.3	2451.6	2461.5	2464.4	2458.2	2444.1	2424.3	2401.7	2378.1	2345.6
11.5°	2388.0	2413.9	2442.7	2453.5	2455.9	2449.3	2434.7	2413.9	2389.9	2365.4	2330.5
12°	2375.3	2402.6	2433.2	2445.0	2446.9	2440.3	2424.8	2403.1	2377.6	2351.7	2315.0
12.5°	2361.6	2390.4	2423.4	2435.1	2437.5	2430.0	2413.9	2391.3	2364.4	2337.1	2298.5
13°	2347.0	2378.1	2412.0	2425.2	2426.7	2419.6	2402.6	2379.1	2350.8	2322.0	2281.0
13.5°	2331.5	2364.0	2401.2	2414.4	2415.3	2407.8	2390.4	2365.4	2335.7	2306.0	2263.1
14°	2315.4	2349.8	2388.9	2402.6	2403.6	2395.5	2377.2	2351.2	2320.1	2288.6	2243.8
14.5°	2298.5	2334.3	2375.8	2389.9	2389.9	2381.4	2363.5	2336.2	2304.1	2270.7	2225.4
15°	2281.0	2317.8	2361.6	2376.2	2375.8	2367.7	2348.4	2320.6	2287.2	2252.7	2207.0
15.5°	2263.6	2300.8	2346.5	2361.6	2361.6	2352.7	2332.9	2304.1	2269.7	2234.8	2190.5
16°	2247.1	2284.3	2330.5	2346.5	2346.1	2337.1	2316.8	2287.2	2252.3	2217.4	2174.5
16.5°	2232.0	2267.8	2314.0	2330.5	2329.6	2321.1	2300.3	2270.7	2236.3	2201.4	2158.5
17°	2216.5	2252.7	2297.5	2315.0	2314.0	2305.1	2283.9	2254.6	2220.7	2186.3	2142.5
17.5°	2201.8	2237.7	2282.0	2298.9	2298.9	2290.0	2268.3	2239.6	2205.6	2170.7	2126.4
18°	2186.8	2223.1	2266.4	2284.3	2285.3	2275.4	2254.2	2224.5	2190.1	2154.7	2107.6
18.5°	2170.7	2207.5	2251.8	2270.2	2270.7	2261.2	2238.6	2208.4	2174.0	2137.8	2085.9
19°	2151.9	2192.4	2236.7	2255.6	2256.5	2246.6	2223.5	2193.8	2156.6	2118.0	2059.5
19.5°	2130.2	2175.5	2222.1	2240.5	2242.4	2232.0	2208.4	2176.9	2136.8	2094.4	2029.4
20°	2106.2	2156.1	2206.6	2226.4	2225.9	2216.0	2192.4	2159.0	2114.2	2067.5	1994.0
20.5°	2078.4	2134.5	2190.5	2209.9	2207.0	2198.1	2175.0	2139.2	2088.3	2037.8	1954.4
21°	2048.2	2111.4	2172.6	2191.5	2185.4	2177.3	2156.1	2117.0	2060.9	2004.4	1908.7



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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°	1944.1	2024.2	2109.5	2122.7	2106.6	2103.3	2088.7	2037.4	1962.4	1884.2	1761.2
23°	1906.4	1989.8	2083.6	2095.3	2075.5	2073.2	2062.3	2005.8	1928.0	1839.0	1712.7
23.5°	1867.7	1953.5	2054.8	2064.7	2042.1	2040.7	2031.2	1970.4	1890.8	1791.8	1664.6
24°	1824.8	1914.8	2022.8	2030.8	2009.1	2007.7	1997.3	1933.2	1852.2	1744.2	1619.3
24.5°	1780.0	1873.8	1986.5	1995.9	1976.6	1971.4	1958.2	1894.6	1811.2	1696.6	1573.6
25°	1733.4	1831.4	1943.6	1958.2	1943.1	1935.6	1916.7	1853.1	1767.8	1651.4	1527.9
25.5°	1683.9	1786.2	1897.9	1921.4	1909.7	1899.8	1869.1	1808.8	1720.7	1606.6	1481.7
26°	1633.5	1737.2	1845.6	1881.8	1874.3	1863.0	1817.3	1761.7	1672.1	1562.8	1434.6
26.5°	1581.2	1684.4	1789.9	1841.3	1836.6	1822.0	1762.1	1711.7	1621.2	1517.5	1386.1
27°	1528.9	1629.7	1732.0	1797.5	1796.5	1779.6	1708.9	1658.9	1570.8	1471.8	1336.1
27.5°	1477.0	1572.2	1675.0	1753.2	1751.8	1734.8	1654.7	1603.8	1517.5	1425.6	1283.8
28°	1425.6	1513.3	1619.3	1703.7	1706.1	1688.6	1602.8	1544.9	1463.8	1378.0	1232.4
28.5°	1373.8	1454.9	1567.5	1653.3	1658.5	1637.7	1551.9	1488.3	1412.4	1329.0	1182.0
29°	1320.5	1397.4	1518.0	1599.5	1612.7	1585.4	1506.2	1432.7	1356.8	1277.7	1133.9
29.5°	1267.8	1338.9	1471.4	1544.9	1565.6	1531.2	1458.6	1378.5	1301.7	1223.0	1086.3
30°	1214.5	1284.7	1424.2	1488.8	1518.0	1477.5	1412.0	1326.2	1247.5	1169.7	1039.2
30.5°	1161.2	1228.6	1377.1	1435.5	1467.1	1423.3	1364.8	1273.4	1194.7	1115.5	993.5
31°	1105.6	1174.9	1326.7	1382.8	1415.7	1371.4	1316.3	1221.6	1140.0	1062.7	947.3
31.5°	1051.0	1120.2	1275.3	1330.4	1359.7	1319.6	1264.0	1169.7	1086.3	1010.4	901.1
32°	995.8	1067.5	1221.6	1280.0	1303.1	1269.2	1211.2	1117.4	1033.1	960.5	854.4
32.5°	940.7	1016.1	1166.9	1231.5	1245.1	1217.3	1157.9	1064.2	981.7	911.5	805.0
33°	885.5	965.2	1111.3	1181.5	1187.2	1167.4	1104.7	1009.5	928.4	863.4	756.4
33.5°	830.9	914.3	1057.6	1131.1	1130.1	1115.1	1051.9	957.2	876.6	814.9	708.8
34°	777.6	866.2	1006.7	1079.7	1073.1	1064.2	1002.0	906.8	825.7	765.4	662.6
34.5°	726.7	817.7	958.1	1028.3	1016.6	1010.9	955.3	857.3	776.2	715.9	616.4
35°	678.7	770.1	909.1	975.1	960.0	959.1	906.8	809.7	726.7	666.4	572.6
35.5°	632.5	724.8	862.9	922.3	905.3	908.6	860.6	763.5	679.6	618.3	530.2
36°	587.7	682.4	816.7	870.0	852.1	857.7	813.0	720.1	633.9	570.7	489.2
36.5°	543.9	640.0	770.6	820.5	799.3	806.4	764.9	677.2	590.0	525.5	448.7
37°	502.4	597.1	723.0	771.5	748.9	755.9	715.9	635.3	545.3	481.7	408.1
37.5°	463.3	556.1	676.3	724.4	700.8	706.5	667.3	593.3	505.2	443.5	367.6
38°	425.1	514.6	628.7	677.7	654.1	658.4	619.7	552.8	466.1	405.8	327.5
38.5°	388.3	474.1	583.0	630.1	608.9	610.3	573.6	512.3	430.8	367.6	290.3
39°	354.4	434.5	540.1	585.3	564.6	564.6	528.3	472.2	395.4	329.9	255.9
39.5°	321.9	396.4	498.6	540.6	521.2	519.4	486.4	434.5	360.1	298.8	224.3
40°	291.3	360.1	460.4	496.3	478.8	476.5	449.1	397.3	324.7	266.7	196.5
40.5°	262.5	325.2	422.3	452.9	440.7	435.9	411.9	360.1	293.1	237.5	172.0
41°	235.2	292.2	386.5	410.0	402.5	395.9	374.7	322.8	264.4	210.2	150.8
41.5°	210.7	262.0	351.1	370.0	364.3	355.8	337.4	289.8	236.6	184.7	132.4
42°	187.6	233.8	316.2	331.8	326.1	315.3	300.2	259.2	211.1	161.7	117.4
42.5°	166.4	207.4	282.3	296.4	293.6	280.4	266.3	229.5	187.6	141.9	104.2
43°	149.4	182.4	248.4	263.0	261.1	247.4	233.3	202.2	165.9	123.9	91.4
43.5°	132.9	161.7	216.8	231.9	231.9	217.3	202.7	177.7	145.6	108.4	80.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	82.9	106.5	140.9	156.9	150.3	141.4	127.7	114.1	94.7	71.6	53.7
45.5°	71.2	88.6	121.6	137.6	127.2	121.1	107.9	97.6	81.1	61.7	48.1
46°	60.3	74.9	102.7	118.3	107.5	102.7	91.4	82.0	68.3	52.8	42.9
46.5°	50.4	62.7	83.4	99.0	89.5	86.7	76.8	69.3	57.5	47.6	37.2
47°	42.4	51.8	70.2	80.1	74.0	72.1	64.1	57.5	51.4	41.9	32.0
47.5°	35.3	42.9	58.0	66.5	60.8	59.9	58.0	51.4	45.2	36.8	26.4
48°	30.6	35.3	48.1	54.7	54.2	53.3	51.8	45.2	39.1	31.6	24.5
48.5°	27.8	30.6	39.6	44.3	47.1	47.1	45.7	39.6	33.0	26.4	23.6
49°	26.4	27.8	33.5	36.3	40.5	40.5	39.6	33.5	26.9	25.0	22.6
49.5°	25.0	26.4	29.7	31.1	33.9	33.9	33.0	27.8	25.4	23.6	21.7
50°	24.0	25.0	27.3	28.3	27.3	27.8	26.9	25.9	24.5	22.6	20.3
50.5°	22.6	24.0	25.9	26.4	25.9	26.4	25.9	25.0	23.1	21.7	19.3
51°	21.7	22.6	25.0	25.4	25.0	25.0	24.5	23.6	22.2	20.3	17.9
51.5°	20.3	21.7	23.6	24.0	23.6	23.6	23.1	22.2	20.7	19.3	17.0
52°	19.3	20.3	22.6	23.1	22.6	22.6	22.2	20.7	19.3	17.9	16.0
52.5°	17.9	18.9	21.2	21.7	21.2	21.2	20.7	19.8	18.4	17.0	15.1
53°	17.0	17.9	19.8	20.3	19.8	19.8	19.3	18.4	17.0	16.0	14.1
53.5°	16.0	16.5	18.4	18.9	18.4	18.4	17.9	17.4	16.0	15.1	13.2
54°	15.1	15.6	17.4	17.9	17.4	17.4	17.0	16.0	15.1	14.1	12.7
54.5°	14.1	14.6	16.5	17.0	16.0	16.0	16.0	15.1	14.1	13.2	11.8
55°	13.2	14.1	15.1	15.6	15.1	15.1	15.1	14.1	13.2	12.7	11.3
55.5°	12.3	13.2	14.1	14.6	14.1	14.1	14.1	13.2	12.7	11.8	10.4
56°	11.8	12.3	13.2	13.7	13.2	13.2	13.2	12.7	11.8	11.3	9.9
56.5°	10.8	11.3	12.7	12.7	12.7	12.7	12.3	11.8	11.3	10.4	9.4
57°	10.4	10.8	11.8	12.3	11.8	11.8	11.8	11.3	10.4	9.9	9.0
57.5°	9.4	9.9	10.8	11.3	10.8	10.8	10.8	10.4	9.9	9.4	8.5
58°	9.0	9.4	10.4	10.8	10.4	10.4	10.4	9.9	9.4	9.0	8.0
58.5°	8.5	9.0	9.9	9.9	9.9	9.9	9.4	9.4	9.0	8.5	7.5
59°	8.0	8.5	9.0	9.4	9.0	9.0	9.0	9.0	8.5	8.0	7.1
59.5°	7.5	8.0	8.5	9.0	8.5	8.5	8.5	8.0	8.0	7.5	6.6
60°	7.1	7.5	8.0	8.5	8.0	8.0	8.0	7.5	7.5	7.1	6.1
60.5°	6.6	7.1	7.5	8.0	7.5	7.5	7.5	7.1	7.1	6.6	6.1
61°	6.6	6.6	7.1	7.5	7.1	7.1	7.1	7.1	6.6	6.1	5.7
61.5°	6.1	6.1	6.6	7.1	6.6	6.6	6.6	6.6	6.1	5.7	5.2
62°	5.7	5.7	6.6	6.6	6.6	6.6	6.1	6.1	5.7	5.7	5.2
62.5°	5.2	5.7	6.1	6.1	6.1	6.1	6.1	5.7	5.7	5.2	4.7
63°	5.2	5.2	5.7	5.7	5.7	5.7	5.7	5.7	5.2	5.2	4.7
63.5°	4.7	4.7	5.2	5.7	5.2	5.2	5.2	5.2	4.7	4.7	4.2
64°	4.7	4.7	5.2	5.2	5.2	5.2	5.2	4.7	4.7	4.2	4.2
64.5°	4.2	4.2	4.7	4.7	4.7	4.7	4.7	4.7	4.2	4.2	3.8
65°	4.2	4.2	4.7	4.7	4.2	4.2	4.2	4.2	4.2	3.8	3.8
65.5°	3.8	3.8	4.2	4.2	4.2	4.2	4.2	4.2	3.8	3.8	3.3
66°	3.8	3.8	3.8	4.2	3.8	3.8	3.8	3.8	3.8	3.3	3.3



TEST NUMBER: P776587

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	2.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.8	2.8
68°	2.8	2.8	3.3	3.3	3.3	3.3	3.3	2.8	2.8	2.8	2.4
68.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.4
69°	2.4	2.4	2.8	2.8	2.8	2.8	2.8	2.8	2.4	2.4	2.4
69.5°	2.4	2.4	2.8	2.8	2.8	2.8	2.4	2.4	2.4	2.4	2.4
70°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.9
70.5°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9
71°	1.9	1.9	2.4	2.4	2.4	2.4	2.4	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: P776587

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3500K

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: P776587

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2519.5	2519.5	2519.5	2519.5	2519.5	2519.5
0.5°	2513.4	2518.6	2517.1	2517.1	2518.1	2520.0
1°	2509.6	2515.3	2514.3	2514.3	2516.7	2519.0
1.5°	2505.8	2511.5	2510.5	2511.5	2514.3	2518.1
2°	2501.1	2506.8	2506.3	2507.7	2511.5	2516.2
2.5°	2495.9	2502.1	2501.6	2503.5	2508.2	2513.8
3°	2490.7	2496.9	2496.4	2499.2	2504.4	2511.0
3.5°	2484.6	2490.7	2490.7	2494.0	2500.6	2508.2
4°	2478.0	2484.6	2484.6	2488.4	2495.5	2504.4
4.5°	2471.4	2477.5	2478.0	2482.3	2490.3	2500.2
5°	2463.4	2470.5	2471.0	2476.1	2484.6	2495.5
5.5°	2455.9	2462.5	2462.9	2469.1	2479.0	2490.3
6°	2446.9	2454.0	2454.9	2461.5	2471.9	2484.6
6.5°	2438.4	2445.0	2446.4	2453.0	2464.8	2478.5
7°	2428.5	2435.6	2437.0	2445.0	2457.3	2472.4
7.5°	2418.2	2425.7	2427.6	2435.6	2448.8	2464.8
8°	2407.8	2414.9	2417.2	2425.7	2440.3	2457.3
8.5°	2396.5	2404.0	2406.4	2415.3	2430.9	2448.8
9°	2384.7	2392.2	2395.1	2405.0	2421.0	2440.3
9.5°	2372.9	2380.5	2383.3	2393.2	2410.6	2430.9
10°	2359.7	2367.7	2370.6	2381.9	2399.8	2421.0
10.5°	2346.5	2354.1	2357.4	2369.2	2388.0	2410.2
11°	2331.5	2339.9	2343.7	2355.5	2375.3	2399.8
11.5°	2316.4	2324.4	2328.2	2340.9	2362.1	2388.0
12°	2300.3	2308.8	2312.1	2325.8	2347.9	2375.3
12.5°	2282.9	2291.4	2294.7	2308.4	2332.4	2361.6
13°	2265.0	2273.0	2276.3	2291.4	2316.8	2347.0
13.5°	2246.1	2254.6	2258.4	2273.5	2299.4	2331.5
14°	2226.4	2235.3	2239.1	2254.6	2282.0	2315.4
14.5°	2207.5	2216.0	2219.8	2236.3	2263.6	2298.5
15°	2190.1	2197.6	2201.4	2216.9	2245.7	2281.0
15.5°	2173.6	2180.6	2184.9	2200.0	2227.8	2263.6
16°	2157.1	2164.6	2168.9	2183.9	2211.7	2247.1
16.5°	2140.6	2148.6	2152.4	2168.4	2196.7	2232.0
17°	2124.6	2132.6	2136.3	2152.8	2181.6	2216.5
17.5°	2107.1	2115.6	2119.8	2137.3	2166.0	2201.8
18°	2084.5	2096.3	2101.0	2120.3	2150.5	2186.8
18.5°	2059.0	2070.4	2076.5	2100.5	2132.6	2170.7
19°	2029.8	2041.6	2050.1	2076.5	2111.4	2151.9
19.5°	1996.4	2007.2	2018.0	2048.7	2086.9	2130.2
20°	1958.7	1967.6	1982.2	2015.2	2058.6	2106.2
20.5°	1917.7	1925.7	1942.2	1978.5	2025.6	2078.4
21°	1874.3	1881.8	1899.3	1936.5	1988.8	2048.2



TEST NUMBER: P776587

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	1727.3	1751.3	1757.0	1790.4	1857.3	1944.1
23°	1675.9	1707.9	1707.9	1739.0	1807.9	1906.4
23.5°	1624.1	1660.8	1658.0	1688.1	1760.7	1867.7
24°	1574.6	1611.3	1605.7	1637.7	1713.6	1824.8
24.5°	1523.2	1559.0	1553.4	1590.6	1668.4	1780.0
25°	1473.2	1503.9	1502.0	1541.6	1624.5	1733.4
25.5°	1424.7	1450.1	1450.1	1494.4	1580.7	1683.9
26°	1376.6	1394.1	1396.9	1446.8	1535.9	1633.5
26.5°	1326.7	1340.3	1344.6	1400.2	1490.2	1581.2
27°	1277.2	1283.8	1293.7	1350.2	1442.1	1528.9
27.5°	1226.8	1228.6	1242.8	1299.8	1392.2	1477.0
28°	1177.7	1174.4	1191.4	1247.5	1338.5	1425.6
28.5°	1127.8	1119.3	1142.9	1195.2	1284.7	1373.8
29°	1077.8	1063.7	1092.0	1143.3	1227.7	1320.5
29.5°	1027.9	1011.9	1042.5	1094.3	1175.4	1267.8
30°	978.4	961.0	991.6	1044.4	1120.7	1214.5
30.5°	928.0	910.5	941.2	995.8	1069.8	1161.2
31°	878.9	862.5	887.9	947.8	1018.9	1105.6
31.5°	829.5	817.2	837.0	902.5	969.4	1051.0
32°	781.9	772.0	788.5	856.8	920.4	995.8
32.5°	734.3	728.1	741.8	811.1	873.8	940.7
33°	689.5	683.8	697.0	763.5	825.2	885.5
33.5°	644.7	639.1	654.1	716.8	775.7	830.9
34°	601.8	597.1	611.7	670.6	725.3	777.6
34.5°	560.8	556.6	571.2	624.0	676.8	726.7
35°	520.3	517.9	530.7	579.2	627.3	678.7
35.5°	480.7	481.2	493.4	535.9	579.2	632.5
36°	446.3	447.7	455.7	493.9	533.0	587.7
36.5°	412.4	414.3	419.4	453.4	489.2	543.9
37°	378.0	383.2	385.0	413.8	447.7	502.4
37.5°	344.0	352.5	352.5	375.1	408.1	463.3
38°	309.6	322.4	322.4	337.4	370.4	425.1
38.5°	281.8	294.6	293.1	301.6	334.1	388.3
39°	254.0	268.2	266.3	268.2	300.2	354.4
39.5°	228.1	243.2	240.8	236.6	268.2	321.9
40°	203.1	220.1	216.8	206.9	236.6	291.3
40.5°	181.4	197.5	193.7	181.4	208.8	262.5
41°	159.8	177.2	172.0	160.7	182.9	235.2
41.5°	140.9	160.2	155.5	144.7	160.2	210.7
42°	123.5	143.7	139.0	128.7	144.2	187.6
42.5°	108.4	127.2	123.0	113.1	128.2	166.4
43°	94.7	110.8	106.5	97.1	112.2	149.4
43.5°	82.5	94.3	90.0	85.8	96.1	132.9



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CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	54.7	59.4	57.5	57.5	64.1	82.9
45.5°	48.1	50.0	48.5	50.0	56.1	71.2
46°	41.0	41.5	41.5	42.9	48.1	60.3
46.5°	34.4	34.4	34.9	36.8	41.0	50.4
47°	27.8	29.7	29.7	31.6	34.9	42.4
47.5°	25.4	26.9	26.9	28.3	30.6	35.3
48°	24.0	25.0	25.4	26.4	27.8	30.6
48.5°	23.1	24.0	24.0	25.0	25.9	27.8
49°	22.2	23.1	23.1	24.0	25.0	26.4
49.5°	20.7	21.7	22.2	22.6	24.0	25.0
50°	19.8	20.7	20.7	21.7	22.6	24.0
50.5°	18.4	19.3	19.8	20.3	21.7	22.6
51°	17.4	18.4	18.4	19.3	20.3	21.7
51.5°	16.5	17.4	17.4	17.9	19.3	20.3
52°	15.6	16.0	16.5	17.0	17.9	19.3
52.5°	14.6	15.1	15.6	16.0	17.0	17.9
53°	13.7	14.1	14.6	15.1	16.0	17.0
53.5°	13.2	13.7	13.7	14.1	15.1	16.0
54°	12.3	12.7	12.7	13.7	14.1	15.1
54.5°	11.8	11.8	12.3	12.7	13.2	14.1
55°	10.8	11.3	11.3	11.8	12.7	13.2
55.5°	10.4	10.8	10.8	11.3	11.8	12.3
56°	9.9	9.9	10.4	10.8	11.3	11.8
56.5°	9.0	9.4	9.4	9.9	10.4	10.8
57°	8.5	9.0	9.0	9.4	9.9	10.4
57.5°	8.0	8.5	8.5	9.0	9.4	9.4
58°	7.5	8.0	8.0	8.5	9.0	9.0
58.5°	7.5	7.5	7.5	8.0	8.5	8.5
59°	7.1	7.1	7.1	7.5	8.0	8.0
59.5°	6.6	6.6	7.1	7.1	7.5	7.5
60°	6.1	6.6	6.6	6.6	7.1	7.1
60.5°	5.7	6.1	6.1	6.1	6.6	6.6
61°	5.7	5.7	5.7	6.1	6.1	6.6
61.5°	5.2	5.2	5.7	5.7	5.7	6.1
62°	5.2	5.2	5.2	5.2	5.7	5.7
62.5°	4.7	4.7	4.7	5.2	5.2	5.2
63°	4.2	4.7	4.7	4.7	4.7	5.2
63.5°	4.2	4.2	4.2	4.7	4.7	4.7
64°	3.8	4.2	4.2	4.2	4.2	4.7
64.5°	3.8	3.8	3.8	3.8	4.2	4.2
65°	3.8	3.8	3.8	3.8	3.8	4.2
65.5°	3.3	3.3	3.3	3.8	3.8	3.8
66°	3.3	3.3	3.3	3.3	3.3	3.8



TEST NUMBER: P776587

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-3500K

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°	2.4	2.8	2.8	2.8	2.8	2.8
68.5°	2.4	2.4	2.4	2.4	2.4	2.8
69°	2.4	2.4	2.4	2.4	2.4	2.4
69.5°	1.9	2.4	2.4	2.4	2.4	2.4
70°	1.9	1.9	1.9	1.9	2.4	2.4
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: P776587

CATALOG NUMBER: HCDJBL54050CSD-HCD42TRMB-5000lm-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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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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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21.5°	2015.2	2085.0	2153.3	2170.3	2161.8	2155.2	2135.4	2093.0	2029.8	1967.1	1861.1
22°	1979.9	2055.7	2131.6	2148.1	2135.4	2130.2	2113.7	2067.1	1996.8	1927.1	1811.2



44°	116.4	143.3	187.1	203.1	202.2	189.0	174.8	154.1	126.8	94.7	71.2
44.5°	99.4	124.9	160.2	176.3	175.3	164.0	149.9	132.9	109.8	82.5	62.2



66.5°	3.3	3.3	3.8	3.8	3.8	3.8	3.8	3.8	3.3	3.3	2.8
67°	3.3	3.3	3.8	3.8	3.3	3.3	3.3	3.3	3.3	3.3	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°	1828.1	1838.0	1854.0	1890.3	1948.3	2015.2
22°	1779.6	1793.7	1806.4	1841.8	1903.5	1979.9



44°	71.6	81.5	77.8	75.4	84.4	116.4
44.5°	61.3	70.2	67.4	66.5	74.0	99.4

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66.5°	2.8	3.3	3.3	3.3	3.3	3.3
67°	2.8	2.8	2.8	2.8	3.3	3.3

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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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Scaled Data Report



(END OF REPORT)