

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: P775977

Luminaire Tested: HCDJBL51525CSD-HCD4TRC-2500lm-3500K

Issue Date: 2/7/2024

Test Information

Test Method: LM-79-2019
Report Number: P775977
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A2310613A001)
Test Lab:
Issue Date: 2/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO COMMERCIAL
Catalog Number: HCDJBL51525CSD-HCD4TRC-2500lm-3500K
Description: 4 INCH ROUND MEDIUM SPECULAR CLEAR TRIM
Light Source: SELECTABLE LUMENS AND CCT ARRAY 90CRI / 3500K CCT
Ballast/Driver: -

Summary

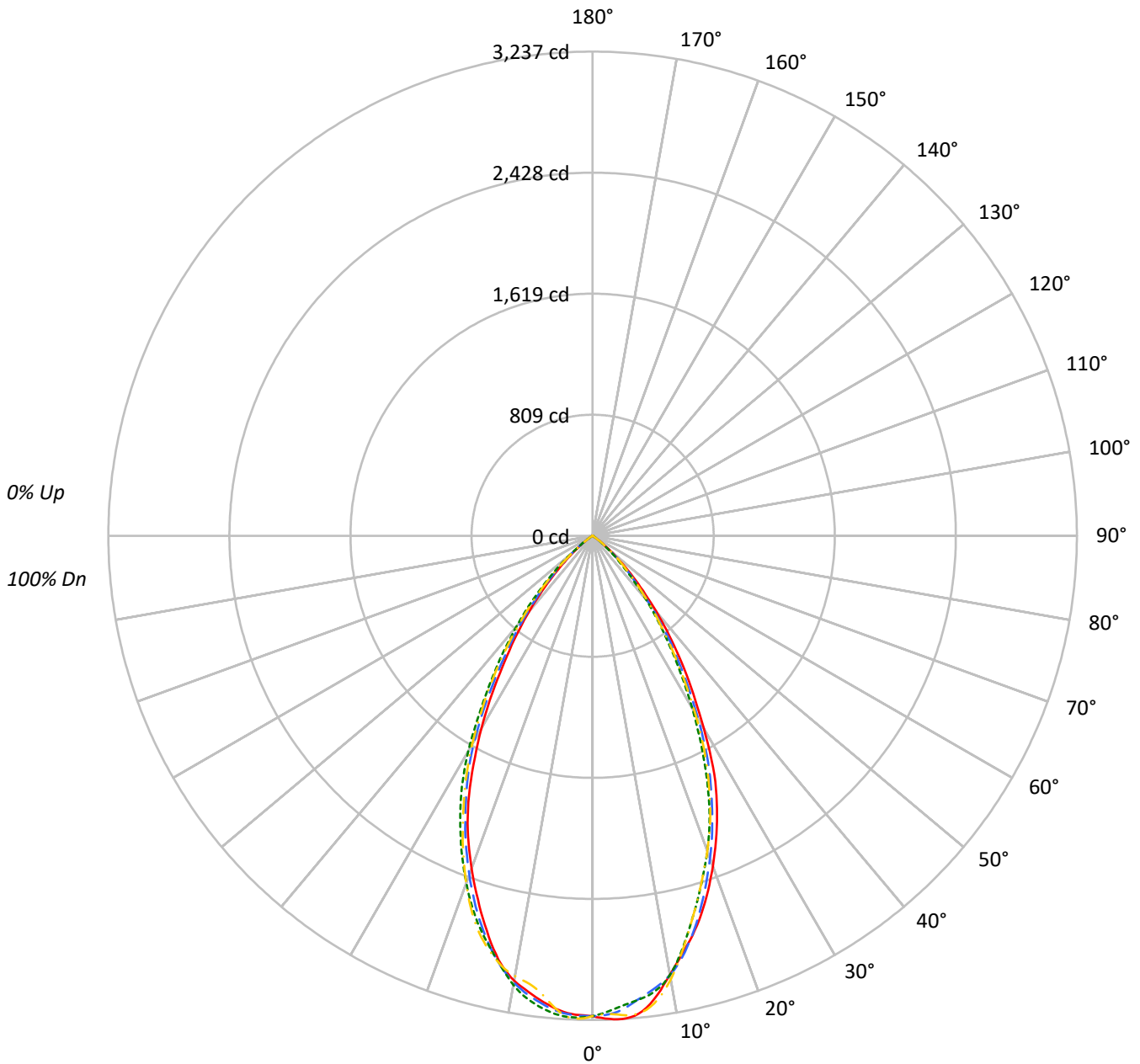
Lumens per Lamp: N/A
Luminaire Lumens: 2922.1 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.87 / 0.88
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 25
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20										
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93								
2	108	103	98	95	105	101	97	94	98	95	92	95	92	90	92	90	88	86								
3	102	95	90	86	100	94	89	86	91	87	84	89	86	83	87	84	82	80								
4	97	89	83	79	95	88	82	78	85	81	77	83	80	76	82	78	76	74								
5	91	83	77	72	90	82	76	72	80	75	71	78	74	71	77	73	70	69								
6	87	78	71	67	85	77	71	67	75	70	66	74	69	66	72	68	65	64								
7	82	73	66	62	81	72	66	62	71	65	62	69	65	61	68	64	61	60								
8	78	68	62	58	77	68	62	58	67	61	57	66	61	57	65	60	57	56								
9	74	64	58	54	73	64	58	54	63	58	54	62	57	54	61	57	53	52								
10	71	61	55	51	70	60	54	51	59	54	50	59	54	50	58	53	50	49								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	404230	404230	404230	404230
5°	406974	395023	399116	404093
10°	380588	380780	385942	389725
15°	351364	340537	356159	362699
20°	314674	300196	316897	330665
25°	272624	251656	272874	290703
30°	215798	193230	215755	241418
35°	159319	138010	157383	182133
40°	108790	90998	107837	130015
45°	63983	49692	62987	81301
50°	27214	22104	29329	39432
55°	5507	5398	9303	11607
60°	881	1082	1007	1384
65°	536	596	536	834
70°	294	368	368	478
75°	146	243	243	389
80°	0	217	217	217
85°	0	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 270°

Vertical Angle: 45°

Luminance: 81301 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.3	10.2
10°-20°	755.9	25.9
20°-30°	886.7	30.3
30°-40°	649.1	22.2
40°-50°	286.4	9.8
50°-60°	43.7	1.5
60°-70°	2.2	0.1
70°-80°	0.6	0.0
80°-90°	0.0	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°	1940.0	66.4
0°-40°	2589.1	88.6
0°-60°	2919.2	99.9
0°-90°	2922.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2922.1	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	3212	3212	3212	3212	3212	
5°	3222	3127	3159	3199	3222	299
15°	2697	2614	2734	2784	2697	751
25°	1963	1812	1965	2094	1963	889
35°	1037	898	1024	1186	1037	648
45°	360	279	354	457	360	283
55°	25	25	42	53	25	36
65°	2	2	2	3	2	2
75°	0	0	0	1	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P775977

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	3212.0	3212.0	3212.0	3212.0	3212.0	3212.0	3212.0	3212.0	3212.0	3212.0	3212.0
0.5°	3218.0	3213.7	3209.5	3208.7	3204.0	3204.0	3206.5	3208.2	3210.0	3210.7	3211.2
1°	3223.3	3215.2	3207.5	3203.5	3197.2	3197.7	3201.9	3205.0	3207.5	3209.2	3211.0
1.5°	3228.0	3217.0	3204.7	3196.7	3188.7	3192.7	3198.9	3203.5	3205.7	3207.2	3210.0
2°	3232.3	3218.0	3200.7	3188.2	3179.1	3187.6	3198.9	3204.5	3204.0	3204.7	3208.0
2.5°	3235.6	3217.5	3194.4	3176.6	3169.3	3183.4	3201.2	3206.7	3200.7	3200.2	3205.5
3°	3237.3	3214.7	3186.4	3164.1	3159.3	3180.9	3205.0	3209.0	3196.2	3193.4	3201.7
3.5°	3237.1	3209.7	3175.6	3150.5	3150.3	3179.1	3209.7	3211.0	3188.9	3184.4	3197.4
4°	3234.6	3201.9	3162.8	3136.0	3141.7	3177.9	3213.2	3211.2	3180.4	3173.4	3191.4
4.5°	3229.5	3191.2	3148.0	3122.4	3134.2	3176.4	3214.7	3209.7	3170.6	3160.1	3183.4
5°	3221.5	3178.1	3133.0	3109.6	3126.9	3173.6	3213.2	3205.0	3159.3	3145.3	3173.9
5.5°	3209.7	3163.1	3118.2	3097.6	3119.7	3168.8	3208.5	3198.2	3147.0	3129.0	3162.8
6°	3194.9	3145.8	3103.6	3087.3	3112.1	3161.3	3199.9	3188.2	3134.5	3113.4	3151.0
6.5°	3175.9	3127.4	3089.6	3077.5	3103.6	3152.0	3188.2	3176.1	3121.2	3097.6	3138.7
7°	3153.3	3107.4	3076.5	3068.0	3093.3	3139.0	3172.8	3160.8	3108.1	3084.1	3125.9
7.5°	3128.2	3085.8	3062.2	3058.5	3081.5	3121.9	3154.5	3143.8	3094.3	3070.3	3112.6
8°	3100.9	3063.0	3048.2	3048.2	3067.5	3101.9	3131.0	3123.7	3080.0	3058.0	3098.6
8.5°	3072.0	3037.4	3033.4	3036.4	3050.7	3079.0	3104.9	3101.9	3066.0	3047.4	3084.3
9°	3040.4	3012.1	3017.6	3022.6	3030.1	3051.4	3075.8	3077.8	3051.2	3037.9	3068.0
9.5°	3008.8	2986.2	3000.3	3006.5	3006.8	3021.3	3044.9	3050.9	3036.6	3028.1	3050.9
10°	2978.2	2960.1	2981.2	2988.0	2979.7	2988.7	3010.1	3022.3	3020.1	3017.6	3031.9
10.5°	2948.6	2933.5	2959.9	2965.7	2950.1	2952.6	2974.4	2991.2	3001.8	3006.3	3012.6
11°	2920.0	2907.0	2936.3	2938.1	2918.5	2915.0	2935.8	2958.6	2980.7	2993.8	2991.0
11.5°	2892.2	2879.1	2909.2	2910.7	2881.9	2877.6	2896.9	2923.5	2957.9	2977.9	2968.4
12°	2864.3	2850.8	2879.9	2878.4	2844.5	2833.5	2854.0	2886.6	2932.3	2959.9	2944.3
12.5°	2837.0	2821.7	2849.8	2842.2	2806.6	2792.8	2814.4	2848.5	2904.2	2937.8	2917.7
13°	2810.4	2792.8	2817.2	2805.6	2768.5	2756.2	2773.3	2810.4	2871.8	2912.2	2890.4
13.5°	2783.8	2761.5	2784.6	2771.0	2729.6	2712.6	2732.9	2771.8	2839.2	2885.1	2862.1
14°	2755.7	2729.4	2750.7	2732.4	2690.2	2674.2	2692.5	2732.6	2805.9	2854.0	2832.7
14.5°	2726.4	2696.5	2716.3	2694.3	2651.4	2636.8	2654.4	2695.0	2770.5	2821.7	2802.1
15°	2696.8	2663.1	2680.2	2655.9	2613.7	2597.4	2613.7	2657.4	2733.6	2788.3	2769.8
15.5°	2665.7	2628.0	2643.8	2617.0	2575.9	2558.8	2576.4	2619.8	2697.8	2754.5	2737.1
16°	2633.8	2593.4	2606.2	2578.1	2538.2	2521.9	2536.7	2583.1	2660.9	2718.3	2704.0
16.5°	2599.2	2556.8	2568.6	2540.0	2500.1	2485.3	2499.1	2548.0	2625.0	2682.2	2670.2
17°	2566.1	2520.7	2529.7	2501.1	2464.0	2447.7	2461.5	2510.4	2588.9	2645.8	2635.3
17.5°	2530.7	2483.0	2491.3	2462.5	2426.6	2411.6	2425.6	2474.5	2550.5	2608.5	2598.9
18°	2495.3	2445.9	2451.9	2424.1	2389.0	2374.2	2386.2	2439.1	2514.1	2570.8	2562.6
18.5°	2459.2	2407.5	2412.8	2385.5	2351.6	2337.8	2349.1	2403.3	2478.5	2531.5	2524.9
19°	2423.3	2370.2	2372.2	2346.1	2315.2	2301.4	2312.5	2366.4	2441.2	2493.8	2487.3
19.5°	2386.5	2331.8	2334.0	2307.5	2278.4	2266.6	2277.6	2331.5	2404.0	2454.2	2448.9
20°	2349.6	2294.9	2293.9	2269.3	2241.5	2230.5	2240.2	2295.9	2366.2	2415.1	2410.6
20.5°	2312.2	2256.8	2254.8	2230.7	2204.9	2194.8	2203.9	2259.3	2328.8	2375.4	2371.7
21°	2274.8	2217.7	2215.2	2191.6	2165.7	2157.7	2167.7	2223.7	2290.7	2336.6	2332.3



TEST NUMBER: P775977

CATALOG NUMBER: HCDJBL5125CSD-HCD4TRC-2500lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
22.5°	2161.0	2098.5	2089.7	2065.9	2042.6	2040.6	2054.6	2113.1	2176.3	2218.9	2215.4
23°	2122.6	2056.9	2046.8	2022.5	1998.4	1997.7	2012.7	2073.2	2138.1	2180.0	2177.0
23.5°	2083.2	2016.0	2003.7	1977.6	1952.0	1956.8	1971.3	2032.8	2096.3	2138.9	2136.1
24°	2043.3	1974.1	1961.1	1932.0	1905.4	1912.6	1927.7	1989.1	2053.4	2097.5	2093.7
24.5°	2004.2	1932.7	1917.7	1884.5	1858.7	1868.5	1883.8	1944.7	2008.5	2054.9	2052.4
25°	1963.3	1889.6	1874.5	1838.1	1812.3	1824.3	1840.1	1900.3	1965.1	2011.7	2012.7
25.5°	1922.9	1847.7	1831.4	1790.5	1765.6	1779.9	1796.3	1856.2	1917.9	1968.1	1969.1
26°	1881.3	1805.3	1788.0	1742.3	1716.7	1731.0	1752.4	1811.8	1870.5	1924.2	1927.9
26.5°	1837.4	1761.4	1743.8	1694.2	1667.3	1685.1	1708.0	1767.4	1823.3	1880.5	1886.8
27°	1789.7	1715.5	1699.2	1646.5	1618.7	1635.2	1661.0	1719.5	1775.9	1836.6	1845.7
27.5°	1741.3	1670.3	1651.3	1599.6	1570.0	1586.3	1617.2	1669.8	1725.8	1793.0	1804.5
28°	1691.7	1622.4	1603.1	1552.7	1520.6	1537.6	1568.0	1619.2	1675.6	1749.3	1763.1
28.5°	1640.2	1573.0	1555.4	1505.3	1472.2	1488.5	1519.8	1569.5	1627.7	1701.9	1718.2
29°	1587.8	1523.8	1506.8	1459.1	1424.3	1439.3	1471.4	1519.1	1580.0	1654.5	1672.1
29.5°	1535.1	1473.2	1457.6	1413.0	1376.8	1390.1	1421.5	1471.7	1532.6	1606.6	1624.4
30°	1485.0	1422.8	1410.0	1367.1	1329.7	1340.7	1370.6	1421.5	1484.7	1558.0	1576.0
30.5°	1435.8	1371.8	1362.6	1321.4	1282.3	1292.8	1322.4	1372.3	1437.1	1509.0	1527.1
31°	1387.6	1319.7	1315.1	1274.0	1236.6	1244.4	1273.3	1325.7	1388.9	1461.9	1477.7
31.5°	1341.0	1270.5	1269.2	1228.4	1191.0	1197.8	1225.3	1279.8	1341.0	1415.2	1429.3
32°	1294.3	1223.3	1223.8	1183.0	1146.1	1154.9	1177.9	1233.1	1294.8	1368.6	1380.6
32.5°	1250.9	1176.7	1179.2	1136.8	1102.4	1110.2	1133.8	1189.0	1247.4	1322.9	1332.2
33°	1208.8	1131.3	1135.5	1091.1	1059.0	1067.3	1088.4	1144.6	1200.8	1277.0	1284.8
33.5°	1165.9	1086.4	1092.4	1049.3	1016.6	1027.4	1045.2	1101.2	1154.9	1233.1	1235.4
34°	1122.5	1043.5	1049.5	1007.4	976.3	983.5	1002.9	1059.0	1110.2	1189.5	1188.0
34.5°	1078.9	1002.1	1008.1	965.7	936.6	943.7	961.0	1017.1	1066.3	1146.1	1142.3
35°	1037.0	961.2	966.0	926.3	898.3	907.5	920.6	976.3	1024.4	1103.2	1098.2
35.5°	996.1	921.8	924.1	894.7	860.4	867.9	881.4	937.1	984.0	1059.8	1053.3
36°	954.2	898.8	896.5	856.4	824.3	827.3	843.8	897.2	946.2	1017.1	1010.4
36.5°	915.1	857.9	854.6	818.2	788.6	792.4	807.2	860.1	908.0	974.8	968.5
37°	878.2	816.7	812.5	779.9	753.3	755.5	770.8	822.0	870.7	933.1	929.1
37.5°	841.6	775.6	770.1	741.7	718.9	719.7	736.7	784.1	835.0	893.0	889.0
38°	804.9	734.7	727.9	706.4	684.5	685.5	703.1	750.0	797.9	852.6	851.1
38.5°	768.1	699.8	689.6	671.5	650.4	651.9	670.0	715.9	763.0	815.0	813.5
39°	731.4	666.5	655.7	636.1	617.6	620.6	637.9	679.3	726.9	777.1	776.6
39.5°	696.3	633.4	621.3	602.0	585.0	589.2	605.5	646.4	691.8	740.5	739.5
40°	662.2	600.0	588.5	568.4	553.9	558.6	574.7	614.3	656.4	703.6	704.4
40.5°	628.3	568.1	554.4	534.8	521.5	529.3	545.1	581.7	624.1	668.5	669.7
41°	594.5	537.8	524.3	502.9	492.1	500.2	516.2	550.6	590.0	633.6	635.9
41.5°	562.4	507.4	493.9	472.3	462.0	472.3	488.6	520.2	557.4	599.8	602.0
42°	530.3	478.1	464.6	442.5	433.4	445.5	461.5	491.1	526.3	566.1	570.2
42.5°	499.7	449.5	435.0	413.6	405.4	419.2	435.7	462.8	496.2	534.3	538.3
43°	469.8	420.7	408.6	386.5	378.3	393.8	411.4	434.7	467.1	502.4	507.7
43.5°	441.2	393.3	382.3	360.0	352.4	369.0	386.8	408.4	437.7	471.8	477.8



TEST NUMBER: P775977

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRC-2500lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	359.5	317.1	308.8	286.0	279.2	301.0	318.6	334.4	353.9	387.0	395.6
45.5°	333.9	293.0	286.2	263.9	257.6	280.4	297.2	311.0	327.8	361.2	369.7
46°	308.8	270.7	264.9	242.6	239.3	260.1	276.7	289.0	303.0	336.1	344.1
46.5°	283.9	249.1	244.6	222.7	221.0	242.1	256.9	268.1	278.2	312.3	320.1
47°	259.9	228.3	225.0	204.2	202.4	224.0	239.3	247.8	255.6	289.0	297.7
47.5°	236.8	208.4	206.2	186.6	184.1	205.9	222.0	229.8	237.3	266.9	275.4
48°	215.7	189.4	188.4	170.6	166.1	187.9	204.4	211.7	219.0	248.1	253.6
48.5°	194.7	171.3	171.6	155.5	151.5	170.1	186.9	193.6	200.7	229.3	234.3
49°	174.8	154.5	155.5	141.0	138.0	154.8	169.3	175.6	182.1	210.2	215.0
49.5°	156.5	138.5	140.5	127.9	125.2	140.0	153.3	159.8	164.0	191.4	195.7
50°	139.0	123.2	125.7	115.6	112.9	125.9	138.7	144.5	149.8	172.6	176.6
50.5°	123.2	108.6	112.1	103.8	101.3	112.6	124.4	130.7	136.5	156.5	160.0
51°	108.1	95.1	99.3	92.3	90.6	99.8	111.1	117.9	123.7	141.5	144.5
51.5°	93.8	84.3	86.8	82.8	80.3	88.0	98.1	105.4	111.6	127.7	128.9
52°	82.8	73.5	76.5	73.2	70.2	77.0	86.5	93.6	100.3	114.6	114.6
52.5°	72.0	62.7	66.5	63.7	60.5	66.5	74.7	82.3	89.5	102.1	100.8
53°	61.2	51.9	56.4	53.9	51.4	56.4	64.2	71.7	79.5	90.3	88.3
53.5°	50.4	41.1	46.4	44.6	42.9	47.4	54.4	61.5	69.0	79.3	76.3
54°	39.6	33.4	38.1	36.6	35.6	39.1	45.2	52.2	59.2	68.7	65.2
54.5°	31.9	26.6	30.9	29.6	30.1	33.1	37.1	43.4	50.2	58.4	55.2
55°	25.1	19.8	24.1	22.8	24.6	27.1	31.1	35.9	42.4	49.4	45.7
55.5°	18.3	13.8	17.6	16.6	19.1	21.1	25.3	30.1	36.4	41.1	37.4
56°	12.5	9.3	12.0	11.5	13.5	15.1	19.6	24.3	30.6	34.6	31.6
56.5°	8.3	8.0	8.3	8.3	8.3	9.3	13.8	18.6	24.6	28.3	25.6
57°	7.3	7.0	7.5	7.5	7.0	7.0	8.0	13.0	18.6	22.1	19.8
57.5°	6.3	5.8	6.5	6.8	6.3	6.3	6.3	7.3	12.8	15.8	14.0
58°	5.3	4.8	5.8	6.0	5.8	5.5	5.5	5.8	6.8	9.5	8.3
58.5°	4.5	4.3	5.0	5.3	5.3	5.3	5.0	5.0	5.5	6.8	6.3
59°	4.0	4.0	4.5	4.8	4.8	4.8	4.5	4.5	4.8	5.5	5.5
59.5°	3.8	3.8	4.3	4.5	4.5	4.5	4.3	4.3	4.3	4.8	5.0
60°	3.5	3.3	3.8	4.0	4.3	4.0	4.0	3.8	4.0	4.3	4.5
60.5°	3.3	3.0	3.5	3.8	4.0	3.8	3.5	3.5	3.8	4.0	4.3
61°	3.0	3.0	3.3	3.5	3.5	3.5	3.3	3.3	3.3	3.8	3.8
61.5°	2.8	2.8	3.0	3.3	3.5	3.3	3.0	3.0	3.0	3.3	3.5
62°	2.5	2.5	2.8	3.0	3.3	3.0	3.0	2.8	2.8	3.0	3.3
62.5°	2.3	2.3	2.8	3.0	3.0	2.8	2.8	2.8	2.8	3.0	3.0
63°	2.3	2.3	2.5	2.8	2.8	2.8	2.5	2.5	2.5	2.8	2.8
63.5°	2.0	2.0	2.3	2.5	2.5	2.5	2.3	2.3	2.3	2.5	2.8
64°	2.0	2.0	2.3	2.3	2.5	2.3	2.3	2.3	2.3	2.3	2.5
64.5°	1.8	1.8	2.0	2.3	2.3	2.3	2.0	2.0	2.0	2.3	2.3
65°	1.8	1.8	2.0	2.0	2.0	2.0	2.0	1.8	1.8	2.0	2.3
65.5°	1.5	1.5	1.8	2.0	2.0	2.0	1.8	1.8	1.8	2.0	2.0
66°	1.5	1.5	1.8	1.8	1.8	1.8	1.8	1.5	1.5	1.8	1.8



TEST NUMBER: P775977

CATALOG NUMBER: HCDJBL1525CSD-HCD4TRC-2500lm-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
67.5°	1.3	1.3	1.3	1.5	1.5	1.5	1.5	1.3	1.3	1.5	1.5
68°	1.0	1.0	1.3	1.5	1.5	1.3	1.3	1.3	1.3	1.3	1.5
68.5°	1.0	1.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
69°	1.0	1.0	1.0	1.3	1.3	1.3	1.0	1.0	1.0	1.3	1.3
69.5°	0.8	0.8	1.0	1.3	1.3	1.0	1.0	1.0	1.0	1.0	1.3
70°	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
70.5°	0.8	0.8	1.0	1.0	1.0	1.0	1.0	0.8	0.8	1.0	1.0
71°	0.8	0.8	0.8	1.0	1.0	1.0	0.8	0.8	0.8	1.0	1.0
71.5°	0.5	0.5	0.8	0.8	1.0	0.8	0.8	0.8	0.8	0.8	1.0
72°	0.5	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
72.5°	0.5	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
73°	0.5	0.5	0.5	0.8	0.8	0.8	0.5	0.5	0.5	0.8	0.8
73.5°	0.5	0.5	0.5	0.8	0.8	0.8	0.5	0.5	0.5	0.5	0.8
74°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74.5°	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75.5°	0.3	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
76°	0.3	0.3	0.3	0.5	0.5	0.5	0.5	0.3	0.3	0.5	0.5
76.5°	0.3	0.3	0.3	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.5
77°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
77.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
78°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
79.5°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
80°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
80.5°	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3
81°	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.0	0.0	0.3	0.3
81.5°	0.0	0.0	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.3
82°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0
83.5°	0.0	0.0	0.0	0.0	0.0	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	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: P775977

CATALOG NUMBER: HCDJBL1525CSD-HCD4TRC-2500lm-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: P775977

CATALOG NUMBER: HCDJBLS1525CSD-HCD4TRC-2500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	3212.0	3212.0	3212.0	3212.0	3212.0	3212.0
0.5°	3215.0	3214.7	3217.0	3219.5	3219.8	3218.0
1°	3216.7	3218.5	3222.3	3225.8	3226.3	3223.3
1.5°	3217.7	3221.3	3225.5	3229.5	3231.5	3228.0
2°	3218.5	3222.8	3225.8	3230.8	3235.3	3232.3
2.5°	3219.0	3222.5	3223.0	3228.3	3236.6	3235.6
3°	3218.8	3220.8	3215.7	3220.5	3235.1	3237.3
3.5°	3218.5	3217.7	3204.5	3208.7	3230.0	3237.1
4°	3218.3	3213.0	3189.9	3190.9	3221.8	3234.6
4.5°	3217.0	3206.7	3171.6	3169.8	3210.0	3229.5
5°	3215.0	3198.7	3149.8	3146.3	3194.4	3221.5
5.5°	3212.7	3189.2	3127.7	3120.9	3176.4	3209.7
6°	3209.2	3178.4	3105.4	3097.1	3158.8	3194.9
6.5°	3203.2	3167.1	3083.8	3075.0	3140.5	3175.9
7°	3194.4	3154.8	3065.2	3056.0	3118.7	3153.3
7.5°	3182.9	3141.7	3050.2	3039.9	3098.4	3128.2
8°	3166.6	3126.9	3037.4	3026.6	3076.8	3100.9
8.5°	3147.0	3111.1	3026.6	3016.6	3054.5	3072.0
9°	3124.9	3092.8	3016.8	3006.8	3031.4	3040.4
9.5°	3099.4	3072.3	3009.3	2997.8	3009.1	3008.8
10°	3070.0	3049.7	2999.5	2988.5	2985.7	2978.2
10.5°	3041.4	3024.6	2989.0	2978.7	2962.6	2948.6
11°	3010.8	2998.5	2977.2	2967.2	2938.8	2920.0
11.5°	2979.0	2971.2	2963.4	2953.9	2915.7	2892.2
12°	2949.1	2944.1	2946.3	2937.8	2892.4	2864.3
12.5°	2920.3	2916.7	2928.3	2919.3	2869.1	2837.0
13°	2890.7	2889.4	2909.0	2900.4	2846.8	2810.4
13.5°	2861.3	2863.1	2887.6	2879.4	2822.4	2783.8
14°	2833.0	2836.5	2865.3	2857.3	2797.3	2755.7
14.5°	2804.4	2810.9	2842.5	2834.5	2771.3	2726.4
15°	2775.3	2783.8	2816.9	2809.9	2744.2	2696.8
15.5°	2746.4	2757.5	2790.6	2784.8	2714.8	2665.7
16°	2715.3	2729.4	2762.7	2757.0	2685.0	2633.8
16.5°	2684.7	2700.8	2734.4	2726.9	2654.4	2599.2
17°	2650.9	2670.4	2704.3	2695.8	2622.0	2566.1
17.5°	2618.0	2639.8	2671.7	2662.1	2588.6	2530.7
18°	2582.9	2607.5	2636.8	2626.8	2554.3	2495.3
18.5°	2548.0	2574.1	2601.9	2589.4	2517.4	2459.2
19°	2511.1	2539.0	2564.8	2550.3	2481.8	2423.3
19.5°	2474.8	2505.4	2527.4	2510.4	2445.2	2386.5
20°	2436.9	2469.0	2490.1	2471.3	2407.8	2349.6
20.5°	2400.3	2434.1	2449.4	2430.6	2369.9	2312.2
21°	2362.4	2396.8	2411.1	2389.5	2332.0	2274.8

TEST NUMBER: P775977

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRC-2500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
22.5°	2250.8	2286.9	2292.7	2263.6	2214.9	2161.0
23°	2211.9	2249.5	2251.3	2221.4	2175.3	2122.6
23.5°	2173.0	2210.6	2209.1	2178.0	2133.1	2083.2
24°	2135.4	2172.3	2167.7	2132.9	2092.5	2043.3
24.5°	2097.0	2133.1	2124.8	2088.7	2049.8	2004.2
25°	2057.1	2093.5	2080.5	2045.1	2009.5	1963.3
25.5°	2018.5	2053.9	2038.3	2001.9	1965.3	1922.9
26°	1979.9	2013.7	1996.7	1960.0	1924.4	1881.3
26.5°	1939.0	1973.8	1954.3	1917.2	1881.8	1837.4
27°	1897.8	1933.2	1912.6	1875.5	1838.6	1789.7
27.5°	1857.0	1891.6	1869.7	1833.1	1791.7	1741.3
28°	1815.8	1847.9	1826.4	1790.0	1749.3	1691.7
28.5°	1774.9	1802.5	1783.2	1745.8	1702.9	1640.2
29°	1729.0	1757.1	1739.3	1702.4	1655.0	1587.8
29.5°	1681.6	1710.0	1695.9	1657.0	1607.6	1535.1
30°	1631.7	1661.3	1650.3	1610.9	1558.7	1485.0
30.5°	1580.8	1611.6	1602.6	1563.5	1507.5	1435.8
31°	1533.6	1560.5	1555.7	1516.1	1458.4	1387.6
31.5°	1481.2	1508.8	1507.8	1468.9	1407.7	1341.0
32°	1426.8	1459.1	1460.6	1423.3	1359.5	1294.3
32.5°	1379.1	1410.2	1412.2	1377.1	1311.9	1250.9
33°	1329.7	1363.1	1366.8	1333.0	1264.7	1208.8
33.5°	1280.3	1314.9	1317.7	1288.6	1220.3	1165.9
34°	1233.6	1271.7	1272.5	1243.7	1177.4	1122.5
34.5°	1189.2	1228.4	1229.1	1199.8	1135.5	1078.9
35°	1146.3	1185.5	1184.0	1156.9	1093.9	1037.0
35.5°	1104.2	1143.3	1140.6	1113.5	1054.0	996.1
36°	1062.5	1101.9	1098.9	1071.1	1013.9	954.2
36.5°	1020.9	1061.3	1057.0	1027.7	975.3	915.1
37°	980.0	1020.4	1014.6	985.0	936.6	878.2
37.5°	939.6	980.0	975.8	944.9	895.5	841.6
38°	899.8	939.1	934.6	905.8	858.4	804.9
38.5°	860.4	900.0	891.5	867.6	821.7	768.1
39°	821.5	863.9	855.4	829.3	784.9	731.4
39.5°	784.4	827.5	819.2	791.1	748.0	696.3
40°	748.2	791.4	783.4	752.8	711.4	662.2
40.5°	712.9	755.3	747.2	714.6	676.8	628.3
41°	680.8	719.2	711.1	678.8	642.6	594.5
41.5°	646.2	684.8	675.3	643.7	609.3	562.4
42°	613.8	651.2	639.9	609.5	576.4	530.3
42.5°	581.9	617.1	605.8	576.9	544.6	499.7
43°	552.6	583.7	571.7	544.6	512.7	469.8
43.5°	521.0	550.8	538.5	512.0	481.1	441.2



TEST NUMBER: P775977

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRC-2500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	435.5	456.8	445.5	421.9	390.8	359.5
45.5°	406.6	427.2	415.6	393.6	362.7	333.9
46°	380.3	398.6	387.0	365.7	335.9	308.8
46.5°	353.7	370.7	360.0	339.1	309.5	283.9
47°	328.6	343.6	332.9	313.3	284.5	259.9
47.5°	303.3	317.3	307.0	288.2	259.9	236.8
48°	279.7	292.2	281.4	263.9	237.3	215.7
48.5°	256.6	267.9	257.9	241.6	216.0	194.7
49°	235.8	245.1	235.3	219.0	195.2	174.8
49.5°	215.2	223.0	213.7	197.9	175.6	156.5
50°	194.4	201.4	191.6	177.3	157.8	139.0
50.5°	173.8	181.4	172.6	158.3	140.0	123.2
51°	156.0	162.5	154.0	140.7	123.7	108.1
51.5°	139.2	144.7	137.2	123.9	108.9	93.8
52°	122.9	128.2	120.4	107.9	94.3	82.8
52.5°	108.1	112.9	105.6	93.8	83.3	72.0
53°	94.6	98.1	91.3	82.8	72.0	61.2
53.5°	81.5	85.3	80.5	71.5	61.0	50.4
54°	69.2	74.5	69.7	60.5	49.7	39.6
54.5°	58.7	63.7	58.9	49.4	38.6	31.9
55°	48.7	52.9	48.2	38.4	31.4	25.1
55.5°	39.6	41.9	37.4	30.9	24.3	18.3
56°	33.6	34.1	30.1	24.3	17.8	12.5
56.5°	27.6	27.3	23.8	17.6	11.8	8.3
57°	21.6	20.6	17.1	12.0	8.0	7.3
57.5°	15.6	14.8	11.8	8.3	7.3	6.3
58°	9.5	10.3	8.5	7.3	6.3	5.3
58.5°	7.3	9.0	7.8	6.5	5.3	4.5
59°	6.3	8.0	6.8	5.5	4.5	4.0
59.5°	5.8	6.8	6.0	4.8	4.0	3.8
60°	5.3	5.5	5.0	4.3	3.8	3.5
60.5°	4.8	5.0	4.8	4.0	3.5	3.3
61°	4.5	4.8	4.3	3.8	3.3	3.0
61.5°	4.0	4.3	4.0	3.5	3.0	2.8
62°	3.8	4.0	3.8	3.3	2.8	2.5
62.5°	3.5	3.8	3.5	3.0	2.5	2.3
63°	3.3	3.5	3.3	2.8	2.5	2.3
63.5°	3.0	3.3	3.0	2.5	2.3	2.0
64°	2.8	3.0	2.8	2.3	2.0	2.0
64.5°	2.8	2.8	2.5	2.3	2.0	1.8
65°	2.5	2.8	2.5	2.0	1.8	1.8
65.5°	2.3	2.5	2.3	2.0	1.8	1.5
66°	2.3	2.3	2.0	1.8	1.5	1.5



TEST NUMBER: P775977

CATALOG NUMBER: HCDJBL51525CSD-HCD4TRC-2500lm-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
67.5°	1.8	2.0	1.8	1.5	1.3	1.3
68°	1.8	1.8	1.5	1.3	1.3	1.0
68.5°	1.5	1.8	1.5	1.3	1.0	1.0
69°	1.5	1.5	1.5	1.3	1.0	1.0
69.5°	1.3	1.5	1.3	1.0	1.0	0.8
70°	1.3	1.3	1.3	1.0	0.8	0.8
70.5°	1.3	1.3	1.3	1.0	0.8	0.8
71°	1.0	1.3	1.0	1.0	0.8	0.8
71.5°	1.0	1.0	1.0	0.8	0.8	0.5
72°	1.0	1.0	1.0	0.8	0.8	0.5
72.5°	1.0	1.0	0.8	0.8	0.5	0.5
73°	0.8	0.8	0.8	0.8	0.5	0.5
73.5°	0.8	0.8	0.8	0.5	0.5	0.5
74°	0.8	0.8	0.8	0.5	0.5	0.5
74.5°	0.8	0.8	0.8	0.5	0.5	0.3
75°	0.5	0.8	0.5	0.5	0.5	0.3
75.5°	0.5	0.5	0.5	0.5	0.3	0.3
76°	0.5	0.5	0.5	0.5	0.3	0.3
76.5°	0.5	0.5	0.5	0.3	0.3	0.3
77°	0.5	0.5	0.5	0.3	0.3	0.3
77.5°	0.5	0.5	0.5	0.3	0.3	0.3
78°	0.5	0.5	0.3	0.3	0.3	0.3
78.5°	0.3	0.3	0.3	0.3	0.3	0.3
79°	0.3	0.3	0.3	0.3	0.3	0.3
79.5°	0.3	0.3	0.3	0.3	0.3	0.0
80°	0.3	0.3	0.3	0.3	0.0	0.0
80.5°	0.3	0.3	0.3	0.3	0.0	0.0
81°	0.3	0.3	0.3	0.3	0.0	0.0
81.5°	0.3	0.3	0.3	0.0	0.0	0.0
82°	0.3	0.3	0.3	0.0	0.0	0.0
82.5°	0.3	0.3	0.3	0.0	0.0	0.0
83°	0.3	0.3	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: P775977
CATALOG NUMBER: HCDJBL1525CSD-HCD4TRC-2500lm-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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Scaled Data Report





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

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21.5°	2237.5	2178.8	2174.3	2150.2	2126.1	2120.6	2133.1	2187.8	2252.3	2296.4	2293.7
22°	2199.8	2138.6	2133.1	2108.0	2085.0	2081.2	2094.7	2151.4	2214.4	2258.0	2254.5



44°	413.1	367.0	356.7	333.9	327.6	345.7	363.2	382.8	408.6	442.5	449.8
44.5°	385.5	341.6	332.4	309.3	302.8	322.8	340.4	357.9	381.0	414.4	421.9



66.5°	1.3	1.3	1.5	1.8	1.8	1.8	1.5	1.5	1.5	1.8	1.8
67°	1.3	1.3	1.5	1.5	1.8	1.5	1.5	1.5	1.5	1.5	1.8



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°	2325.0	2360.6	2371.9	2348.1	2293.4	2237.5
22°	2287.1	2323.3	2331.8	2306.7	2255.3	2199.8



44°	491.6	519.0	506.4	481.1	449.8	413.1
44.5°	462.8	487.6	476.1	451.3	420.7	385.5



66.5°	2.0	2.3	2.0	1.8	1.5	1.3
67°	2.0	2.0	1.8	1.5	1.3	1.3

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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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(END OF REPORT)