

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P197425

Luminaire Tested: **8WSL-LD2-90-UPL8-UNV-L830-CD2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197425
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28106)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8WSL-LD2-90-UPL8-UNV-L830-CD2-U
Description: 8FT. Linear Wavestream System, 8% Uplight, L830
Light Source: (476) 3000K CCT, 80 CRI LEDS
EL236N0119D830
Ballast/Driver: OSRAM
OT50W

Summary

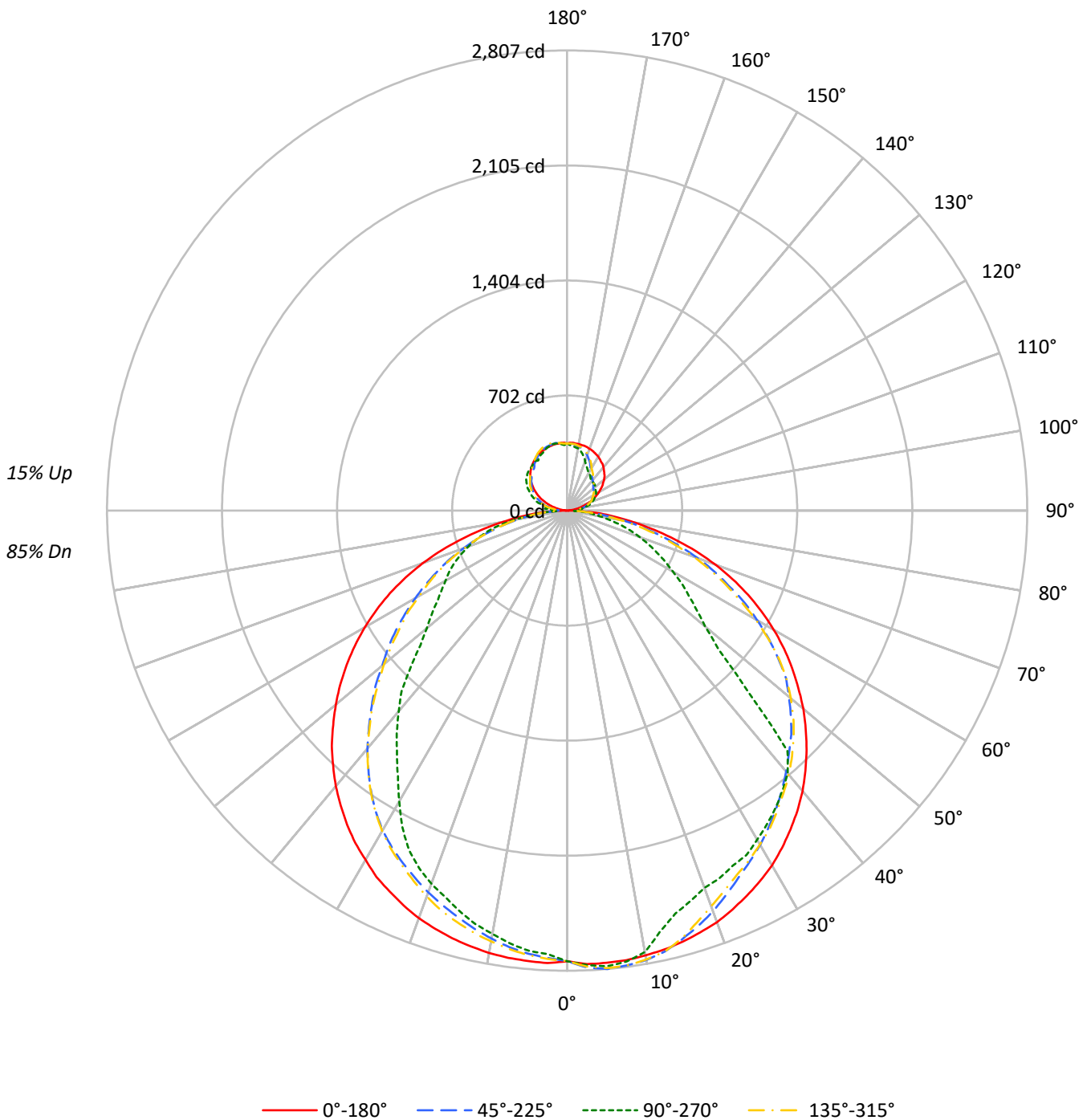
Lumens per Lamp: N/A
Luminaire Lumens: 9116.7 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.34 / 1.19 / 1.36
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 80.6
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: 25 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	115	115	115	115	111	111	111	111	103	103	103	95	95	95	88	88	88	85																				
1	105	101	96	92	101	97	93	90	90	87	84	83	81	79	78	76	74	71																				
2	96	88	81	75	92	84	78	73	78	73	69	73	69	65	68	65	62	59																				
3	87	77	69	62	83	74	67	61	69	63	58	64	59	55	60	56	52	50																				
4	80	68	59	53	76	66	58	52	61	55	49	57	52	47	53	49	45	42																				
5	73	61	52	45	70	59	51	44	55	48	43	51	45	41	48	43	39	37																				
6	68	55	46	40	65	53	45	39	50	43	37	47	40	36	44	38	34	32																				
7	63	49	41	35	60	48	40	34	45	38	33	42	36	32	40	35	31	28																				
8	58	45	37	31	56	44	36	30	41	34	29	39	33	28	37	31	27	25																				
9	54	41	33	28	52	40	33	27	38	31	26	36	30	26	34	29	25	23																				
10	51	38	30	25	49	37	30	25	35	28	24	33	27	23	31	26	22	21																				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	7786	7786	7786	7786
5°	7874	7933	7840	7665
10°	7922	7863	7880	7542
15°	7983	7465	7922	7422
20°	8054	7380	7975	7301
25°	8103	7468	8011	7137
30°	8172	7585	8047	6699
35°	8212	7663	8090	6258
40°	8259	7737	8118	5909
45°	8275	6224	8134	5399
50°	8286	4837	8118	4928
55°	8269	4476	8110	4781
60°	8253	4218	8069	4851
65°	8166	4044	7988	5089
70°	7945	3899	7750	5313
75°	7440	3672	7215	5604
80°	6768	3360	6481	5328
85°	6601	3634	5931	4781



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.3	2.9
10°-20°	742.0	8.1
20°-30°	1123.2	12.3
30°-40°	1356.3	14.9
40°-50°	1384.7	15.2
50°-60°	1210.6	13.3
60°-70°	938.3	10.3
70°-80°	564.1	6.2
80°-90°	174.2	1.9
90°-100°	73.4	0.8
100°-110°	140.4	1.5
110°-120°	190.7	2.1
120°-130°	216.8	2.4
130°-140°	219.9	2.4
140°-150°	202.4	2.2
150°-160°	167.0	1.8
160°-170°	112.3	1.2
170°-180°	39.0	0.4
0°-30°	2126.5	23.3
0°-40°	3482.8	38.2
0°-60°	6078.1	66.7
0°-90°	7754.7	85.1
90°-120°	404.6	4.4
90°-150°	1043.7	11.4
90°-180°	1362.0	14.9
0°-180°	9116.7	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2749	2749	2749	2749	2749	
5°	2769	2790	2757	2696	2769	264
15°	2722	2546	2702	2531	2722	770
25°	2593	2390	2563	2284	2593	1196
35°	2375	2216	2340	1810	2375	1487
45°	2066	1554	2030	1348	2066	1593
55°	1674	906	1642	968	1674	1497
65°	1218	603	1192	759	1218	1202
75°	680	336	659	512	680	721
85°	203	112	182	147	203	205
90°	3	62	3	71	3	13
95°	18	85	18	135	18	22
105°	94	144	91	182	94	101
115°	182	185	180	247	182	181
125°	262	212	256	303	262	232
135°	321	232	318	336	321	248
145°	362	247	359	356	362	227
155°	391	288	388	377	391	181
165°	409	359	406	409	409	115
175°	415	394	415	406	415	39
180°	409	409	409	409	409	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2748.6	2748.6	2748.6	2748.6	2748.6	2748.6	2748.6	2748.6	2748.6	2748.6	2748.6
2.5°	2769.2	2754.4	2789.8	2795.6	2775.0	2780.9	2783.9	2751.5	2763.3	2719.1	2730.9
5°	2769.2	2766.2	2807.4	2801.5	2789.8	2792.7	2801.5	2763.3	2757.4	2704.4	2713.2
7.5°	2766.2	2772.1	2798.6	2792.7	2775.0	2783.9	2798.6	2769.2	2751.5	2689.7	2686.8
10°	2754.4	2763.3	2783.9	2766.2	2733.8	2748.6	2780.9	2763.3	2739.7	2666.2	2651.4
12.5°	2742.7	2748.6	2754.4	2680.9	2627.9	2663.2	2754.4	2748.6	2722.1	2639.7	2613.2
15°	2722.1	2730.9	2707.4	2601.4	2545.5	2580.8	2701.5	2725.0	2701.5	2601.4	2569.0
17.5°	2698.5	2707.4	2657.3	2539.6	2498.4	2516.1	2633.8	2695.6	2675.0	2566.1	2524.9
20°	2672.0	2680.9	2601.4	2474.9	2448.4	2463.1	2569.0	2663.2	2645.6	2524.9	2477.8
22.5°	2633.8	2648.5	2536.7	2430.7	2427.8	2427.8	2507.2	2625.0	2607.3	2474.9	2424.9
25°	2592.6	2607.3	2471.9	2389.5	2389.5	2389.5	2451.3	2574.9	2563.2	2421.9	2371.9
27.5°	2548.4	2563.2	2413.1	2360.1	2368.9	2354.2	2404.3	2519.0	2519.0	2368.9	2316.0
30°	2498.4	2513.1	2354.2	2313.0	2318.9	2313.0	2351.3	2460.2	2460.2	2307.1	2251.2
32.5°	2439.6	2454.3	2289.5	2257.1	2268.9	2263.0	2301.3	2401.3	2404.3	2242.4	2174.7
35°	2374.8	2392.5	2221.8	2204.1	2215.9	2207.1	2233.6	2339.5	2339.5	2171.8	2086.4
37.5°	2307.1	2324.8	2151.2	2145.3	2157.1	2148.2	2168.8	2274.8	2268.9	2098.2	1992.3
40°	2233.6	2254.2	2077.6	2077.6	2092.3	2086.4	2104.1	2207.1	2195.3	2024.6	1895.2
42.5°	2151.2	2177.7	2004.0	2007.0	1989.3	2012.9	2030.5	2136.5	2112.9	1942.2	1789.2
45°	2065.8	2098.2	1933.4	1880.4	1553.8	1859.8	1954.0	2065.8	2030.5	1859.8	1686.2
47.5°	1974.6	2015.8	1851.0	1656.8	1250.7	1630.3	1871.6	1977.5	1936.3	1771.6	1586.2
50°	1880.4	1927.5	1765.7	1465.5	1097.7	1436.1	1780.4	1889.3	1842.2	1680.3	1471.4
52.5°	1777.4	1830.4	1683.3	1297.8	994.7	1271.3	1686.2	1803.9	1745.1	1583.2	1377.2
55°	1674.4	1730.4	1571.4	1153.6	906.4	1130.0	1577.3	1695.0	1642.1	1483.2	1274.2
57.5°	1568.5	1624.4	1459.6	1027.0	829.9	1003.5	1453.7	1595.0	1536.1	1380.2	1171.2
60°	1456.7	1512.6	1339.0	912.3	744.5	894.6	1327.2	1483.2	1424.3	1274.2	1071.2
62.5°	1339.0	1394.9	1224.2	806.3	673.9	791.6	1188.9	1374.3	1309.5	1162.4	968.2
65°	1218.3	1259.5	1088.8	706.3	603.3	694.5	1065.3	1238.9	1191.8	1044.7	871.1
67.5°	1091.8	1133.0	971.1	618.0	535.6	606.2	944.6	1118.3	1065.3	929.9	774.0
70°	959.3	994.7	847.5	532.6	470.8	523.8	818.1	982.9	935.8	809.3	671.0
72.5°	824.0	856.3	715.1	453.2	403.2	447.3	685.7	847.5	800.4	682.7	576.8
75°	679.8	712.2	591.5	373.7	335.5	367.8	565.0	703.3	659.2	562.1	479.7
77.5°	544.4	582.7	467.9	294.3	267.8	288.4	444.4	568.0	523.8	450.2	385.5
80°	414.9	447.3	347.2	223.7	206.0	220.7	323.7	432.6	397.3	347.2	300.2
82.5°	300.2	317.8	238.4	164.8	156.0	161.9	220.7	306.0	288.4	250.1	220.7
85°	203.1	200.1	147.1	114.8	111.8	114.8	132.4	185.4	182.5	167.7	141.3
87.5°	85.3	79.5	67.7	47.1	41.2	44.1	53.0	70.6	67.7	70.6	67.7
90°	2.9	29.4	47.1	58.9	61.8	58.9	47.1	29.4	2.9	32.4	53.0
92.5°	5.9	38.3	55.9	64.7	70.6	64.7	53.0	38.3	5.9	50.0	53.0
95°	17.7	53.0	64.7	79.5	85.3	79.5	64.7	50.0	17.7	44.1	79.5
97.5°	35.3	67.7	76.5	88.3	91.2	85.3	73.6	67.7	32.4	79.5	82.4
100°	53.0	85.3	100.1	100.1	103.0	100.1	97.1	82.4	50.0	88.3	100.1
102.5°	73.6	97.1	114.8	123.6	123.6	123.6	114.8	97.1	67.7	108.9	138.3
105°	94.2	105.9	126.5	138.3	144.2	138.3	126.5	108.9	91.2	126.5	147.1
107.5°	117.7	114.8	138.3	150.1	156.0	150.1	138.3	117.7	111.8	141.3	164.8
110°	141.3	126.5	150.1	161.9	164.8	161.9	150.1	126.5	135.4	158.9	182.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	161.9	135.4	161.9	173.6	176.6	173.6	161.9	138.3	156.0	170.7	200.1
115°	182.5	144.2	167.7	182.5	185.4	182.5	167.7	147.1	179.5	185.4	214.8
117.5°	203.1	156.0	173.6	191.3	194.2	191.3	176.6	158.9	200.1	203.1	229.5
120°	223.7	170.7	182.5	197.2	203.1	200.1	182.5	173.6	217.8	217.8	241.3
122.5°	241.3	182.5	191.3	203.1	208.9	203.1	191.3	188.3	238.4	232.5	256.0
125°	261.9	194.2	197.2	208.9	211.9	208.9	200.1	197.2	256.0	244.3	264.9
127.5°	276.6	208.9	203.1	214.8	217.8	214.8	206.0	211.9	273.7	267.8	273.7
130°	294.3	223.7	208.9	220.7	223.7	223.7	208.9	229.5	288.4	285.4	285.4
132.5°	309.0	238.4	214.8	226.6	229.5	229.5	217.8	241.3	303.1	300.2	294.3
135°	320.8	259.0	226.6	226.6	232.5	232.5	229.5	261.9	317.8	314.9	309.0
137.5°	332.5	276.6	235.4	229.5	232.5	232.5	241.3	279.6	329.6	329.6	317.8
140°	344.3	294.3	241.3	235.4	235.4	241.3	250.1	297.2	341.4	341.4	320.8
142.5°	356.1	309.0	250.1	244.3	238.4	250.1	259.0	314.9	350.2	353.1	329.6
145°	362.0	323.7	261.9	253.1	247.2	261.9	273.7	329.6	359.0	364.9	347.2
147.5°	370.8	338.4	276.6	259.0	259.0	267.8	285.4	341.4	367.8	373.7	356.1
150°	379.6	350.2	288.4	267.8	261.9	276.6	297.2	353.1	376.7	382.6	367.8
152.5°	385.5	362.0	306.0	279.6	273.7	291.3	317.8	362.0	382.6	388.4	379.6
155°	391.4	370.8	326.6	291.3	288.4	303.1	335.5	370.8	388.4	394.3	388.4
157.5°	397.3	379.6	341.4	309.0	297.2	320.8	350.2	382.6	394.3	400.2	397.3
160°	400.2	385.5	359.0	326.6	320.8	341.4	364.9	385.5	397.3	406.1	403.2
162.5°	406.1	391.4	370.8	347.2	341.4	359.0	376.7	394.3	403.2	409.0	409.0
165°	409.0	397.3	382.6	364.9	359.0	376.7	385.5	400.2	406.1	409.0	412.0
167.5°	409.0	403.2	391.4	376.7	373.7	388.4	397.3	406.1	409.0	409.0	414.9
170°	412.0	406.1	397.3	388.4	385.5	397.3	400.2	409.0	412.0	409.0	417.9
172.5°	412.0	409.0	403.2	394.3	388.4	403.2	406.1	409.0	412.0	409.0	414.9
175°	414.9	409.0	409.0	403.2	394.3	409.0	409.0	409.0	414.9	409.0	412.0
177.5°	414.9	409.0	409.0	406.1	400.2	409.0	409.0	409.0	414.9	409.0	412.0
180°	409.0	409.0	409.0	409.0	409.0	409.0	409.0	409.0	409.0	409.0	409.0



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2748.6	2748.6	2748.6	2748.6	2748.6	2748.6
2.5°	2728.0	2707.4	2713.2	2736.8	2728.0	2769.2
5°	2707.4	2695.6	2695.6	2722.1	2719.1	2769.2
7.5°	2675.0	2663.2	2669.1	2698.5	2704.4	2766.2
10°	2636.7	2622.0	2627.9	2669.1	2683.8	2754.4
12.5°	2595.5	2583.8	2589.6	2636.7	2657.3	2742.7
15°	2548.4	2530.8	2548.4	2598.5	2625.0	2722.1
17.5°	2495.5	2471.9	2492.5	2557.3	2589.6	2698.5
20°	2442.5	2421.9	2433.7	2504.3	2551.4	2672.0
22.5°	2389.5	2360.1	2371.9	2445.4	2504.3	2633.8
25°	2327.7	2283.6	2307.1	2386.6	2454.3	2592.6
27.5°	2245.3	2177.7	2227.7	2327.7	2395.4	2548.4
30°	2136.5	2048.2	2121.7	2257.1	2333.6	2498.4
32.5°	2015.8	1921.6	2004.0	2177.7	2268.9	2439.6
35°	1895.2	1809.8	1883.4	2089.4	2201.2	2374.8
37.5°	1780.4	1706.8	1774.5	1995.2	2130.6	2307.1
40°	1671.5	1597.9	1668.6	1892.2	2054.1	2233.6
42.5°	1562.6	1494.9	1562.6	1783.3	1974.6	2151.2
45°	1453.7	1347.8	1447.8	1677.4	1889.3	2065.8
47.5°	1336.0	1212.4	1327.2	1562.6	1798.0	1974.6
50°	1224.2	1118.3	1218.3	1456.7	1703.9	1880.4
52.5°	1127.1	1041.7	1121.2	1347.8	1606.8	1777.4
55°	1035.9	968.2	1035.9	1241.9	1503.8	1674.4
57.5°	953.5	909.3	956.4	1150.6	1397.8	1568.5
60°	882.8	856.3	885.8	1038.8	1291.9	1456.7
62.5°	815.1	812.2	818.1	950.5	1180.1	1339.0
65°	744.5	759.2	744.5	856.3	1068.2	1218.3
67.5°	673.9	703.3	679.8	762.2	947.6	1091.8
70°	609.2	641.5	609.2	665.1	826.9	959.3
72.5°	535.6	576.8	535.6	573.8	700.4	824.0
75°	465.0	512.0	467.9	479.7	579.7	679.8
77.5°	388.4	432.6	397.3	388.4	467.9	544.4
80°	309.0	326.6	309.0	306.0	362.0	414.9
82.5°	214.8	229.5	214.8	223.7	264.9	300.2
85°	141.3	147.1	141.3	144.2	176.6	203.1
87.5°	58.9	58.9	58.9	73.6	79.5	85.3
90°	64.7	70.6	64.7	53.0	32.4	2.9
92.5°	67.7	73.6	67.7	58.9	38.3	5.9
95°	120.7	135.4	114.8	73.6	61.8	17.7
97.5°	97.1	105.9	100.1	85.3	76.5	35.3
100°	114.8	123.6	114.8	120.7	94.2	53.0
102.5°	135.4	141.3	138.3	141.3	114.8	73.6
105°	176.6	182.5	176.6	153.0	132.4	94.2
107.5°	188.3	203.1	191.3	170.7	150.1	117.7
110°	203.1	214.8	206.0	188.3	164.8	141.3



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	217.8	232.5	223.7	208.9	176.6	161.9
115°	235.4	247.2	241.3	223.7	194.2	182.5
117.5°	253.1	261.9	256.0	235.4	211.9	203.1
120°	267.8	279.6	273.7	250.1	226.6	223.7
122.5°	279.6	291.3	285.4	264.9	241.3	241.3
125°	291.3	303.1	297.2	276.6	253.1	261.9
127.5°	300.2	314.9	309.0	285.4	279.6	276.6
130°	311.9	320.8	317.8	294.3	294.3	294.3
132.5°	317.8	329.6	323.7	306.0	311.9	309.0
135°	320.8	335.5	329.6	320.8	326.6	320.8
137.5°	326.6	338.4	335.5	329.6	341.4	332.5
140°	335.5	341.4	344.3	335.5	353.1	344.3
142.5°	344.3	347.2	353.1	344.3	364.9	356.1
145°	350.2	356.1	362.0	362.0	373.7	362.0
147.5°	350.2	359.0	359.0	367.8	385.5	370.8
150°	359.0	353.1	370.8	379.6	391.4	379.6
152.5°	370.8	367.8	382.6	391.4	397.3	385.5
155°	373.7	376.7	385.5	400.2	403.2	391.4
157.5°	385.5	382.6	397.3	409.0	409.0	397.3
160°	394.3	394.3	409.0	414.9	412.0	400.2
162.5°	403.2	403.2	417.9	417.9	414.9	406.1
165°	409.0	409.0	423.8	420.8	414.9	409.0
167.5°	412.0	414.9	426.7	423.8	414.9	409.0
170°	414.9	414.9	426.7	420.8	414.9	412.0
172.5°	414.9	412.0	423.8	417.9	412.0	412.0
175°	412.0	406.1	417.9	412.0	412.0	414.9
177.5°	409.0	400.2	409.0	409.0	412.0	414.9
180°	409.0	409.0	409.0	409.0	409.0	409.0

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