

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: P197476

Luminaire Tested: **8WSL-LD2-80-UPL15-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197476
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P28105)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 8WSL-LD2-80-UPL15-UNV-L850-CD1-U
Description: 8FT. Linear Wavestream System, 15% Uplight, L850
Light Source: (476) 5000K CCT, 80 CRI LEDS
EL236N0119D850
Ballast/Driver: OSRAM
OT85W1202772A0DIML

Summary

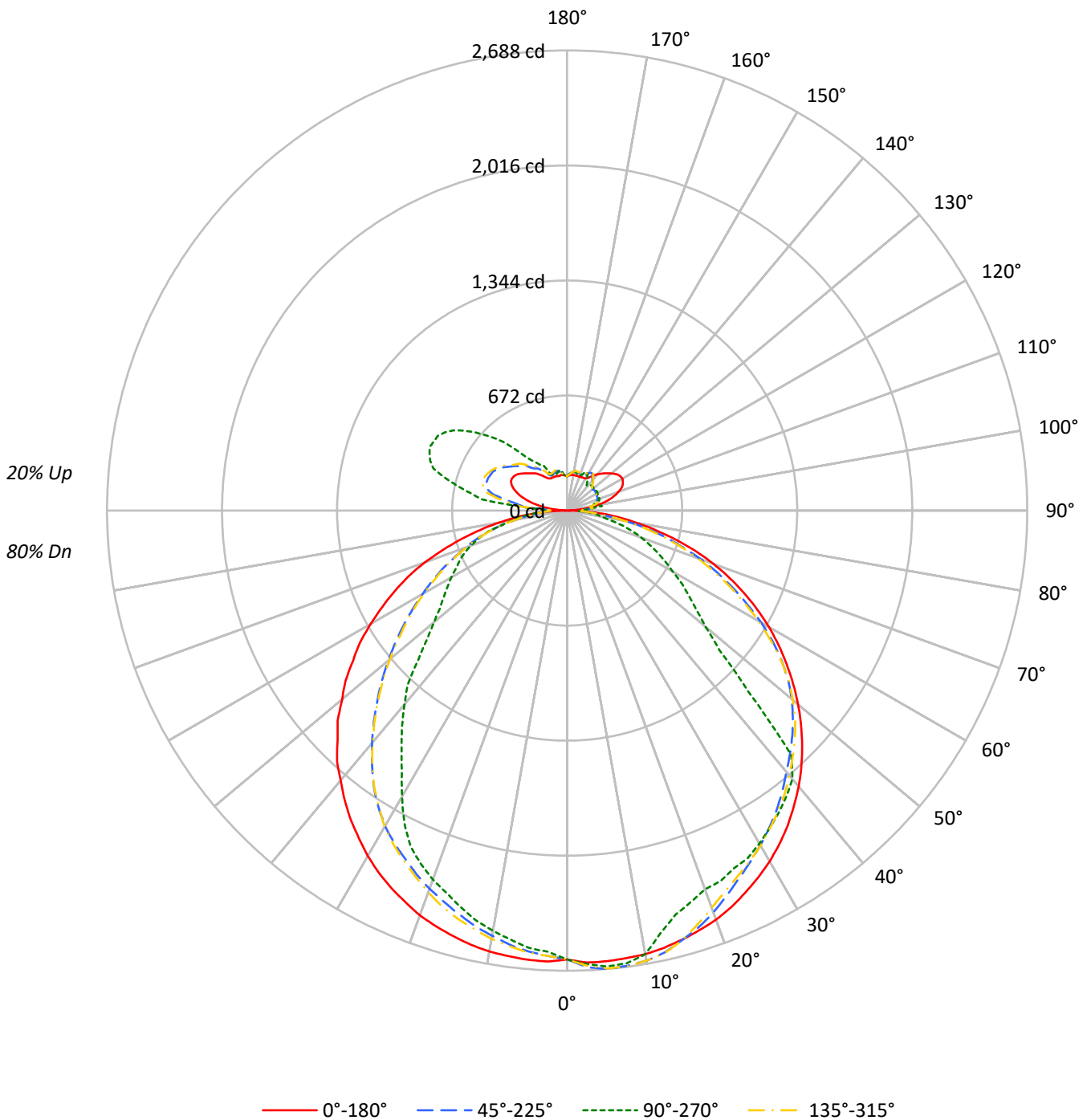
Lumens per Lamp: N/A
Luminaire Lumens: 9278.3 lumens
Efficiency: N/A
Efficacy: 126.9 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 73.1
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				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	0
RCR																		
0	114	114	114	114	109	109	109	109	100	100	100	91	91	91	83	83	83	80
1	104	99	95	91	99	95	91	88	87	84	81	80	77	75	73	71	70	66
2	94	86	80	74	90	83	77	72	76	71	67	70	66	62	64	61	58	55
3	86	76	68	62	82	73	66	60	67	61	56	61	57	53	56	53	49	46
4	79	67	59	52	75	64	57	51	59	53	48	55	49	45	50	46	42	40
5	72	60	51	45	69	58	50	44	53	46	41	49	43	39	45	41	37	34
6	67	54	45	39	64	52	44	38	48	41	36	44	39	34	41	36	32	30
7	62	49	40	34	59	47	39	33	44	37	32	40	35	30	38	33	29	26
8	58	44	36	30	55	43	35	30	40	33	28	37	31	27	34	29	26	24
9	54	41	33	27	51	39	32	27	37	30	26	34	28	24	32	27	23	21
10	50	37	30	25	48	36	29	24	34	27	23	32	26	22	30	25	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	7426	7426	7426	7426
5°	7514	7600	7489	7292
10°	7567	7567	7524	7169
15°	7609	7167	7547	7035
20°	7667	7095	7585	6914
25°	7695	7206	7601	6764
30°	7738	7344	7620	6311
35°	7765	7452	7619	5829
40°	7780	7568	7613	5465
45°	7777	6017	7596	4920
50°	7759	4643	7561	4470
55°	7730	4281	7537	4340
60°	7708	4042	7503	4434
65°	7646	3914	7444	4640
70°	7528	3814	7329	4961
75°	7182	3624	6951	5271
80°	6727	3290	6530	5254
85°	6750	4303	6260	6260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	249.5	2.7
10°-20°	708.0	7.6
20°-30°	1070.0	11.5
30°-40°	1287.7	13.9
40°-50°	1309.6	14.1
50°-60°	1139.9	12.3
60°-70°	889.2	9.6
70°-80°	549.7	5.9
80°-90°	193.4	2.1
90°-100°	182.1	2.0
100°-110°	352.5	3.8
110°-120°	385.7	4.2
120°-130°	338.2	3.6
130°-140°	253.4	2.7
140°-150°	173.5	1.9
150°-160°	110.5	1.2
160°-170°	64.6	0.7
170°-180°	20.8	0.2
0°-30°	2027.5	21.9
0°-40°	3315.2	35.7
0°-60°	5764.7	62.1
0°-90°	7397.0	79.7
90°-120°	920.4	9.9
90°-150°	1685.4	18.2
90°-180°	1881.0	20.3
0°-180°	9278.3	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2622	2622	2622	2622	2622	
5°	2643	2673	2634	2564	2643	252
15°	2595	2444	2574	2399	2595	733
25°	2462	2306	2432	2164	2462	1136
35°	2245	2155	2203	1686	2245	1405
45°	1941	1502	1896	1228	1941	1498
55°	1565	867	1526	879	1565	1400
65°	1141	584	1111	692	1141	1127
75°	656	331	635	482	656	695
85°	208	132	193	193	208	207
90°	3	84	3	132	3	16
95°	81	138	63	277	81	84
105°	259	172	250	737	259	270
115°	358	196	358	885	358	351
125°	364	205	364	816	364	324
135°	307	205	307	596	307	238
145°	241	205	247	355	241	153
155°	214	247	211	244	214	99
165°	211	223	208	226	211	60
175°	208	217	208	211	208	20
180°	202	202	202	202	202	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2621.7	2621.7	2621.7	2621.7	2621.7	2621.7	2621.7	2621.7	2621.7	2621.7	2621.7
2.5°	2642.7	2630.7	2669.8	2672.8	2651.8	2660.8	2660.8	2627.7	2636.7	2597.6	2603.6
5°	2642.7	2645.8	2687.9	2684.9	2672.8	2675.9	2684.9	2642.7	2633.7	2579.5	2585.6
7.5°	2636.7	2651.8	2681.9	2678.9	2666.8	2669.8	2684.9	2648.8	2624.7	2561.5	2558.5
10°	2630.7	2645.8	2669.8	2654.8	2630.7	2639.7	2669.8	2645.8	2615.7	2540.4	2522.4
12.5°	2615.7	2630.7	2642.7	2567.5	2525.4	2561.5	2645.8	2630.7	2597.6	2510.3	2486.2
15°	2594.6	2612.6	2597.6	2492.3	2444.1	2477.2	2597.6	2609.6	2573.5	2471.2	2441.1
17.5°	2570.5	2591.6	2552.4	2435.1	2398.9	2414.0	2534.4	2582.5	2546.4	2432.1	2395.9
20°	2543.4	2567.5	2498.3	2374.9	2353.8	2365.8	2468.2	2552.4	2516.3	2389.9	2350.8
22.5°	2507.3	2534.4	2435.1	2332.7	2341.8	2332.7	2408.0	2513.3	2474.2	2344.8	2299.6
25°	2462.2	2492.3	2371.9	2296.6	2305.6	2302.6	2356.8	2462.2	2432.1	2290.6	2242.4
27.5°	2417.0	2447.1	2314.7	2272.5	2287.6	2269.5	2308.6	2408.0	2383.9	2233.4	2188.2
30°	2365.8	2398.9	2257.5	2230.4	2245.4	2233.4	2260.5	2353.8	2329.7	2173.2	2128.0
32.5°	2308.6	2341.8	2197.3	2179.2	2200.3	2185.2	2203.3	2293.6	2266.5	2107.0	2052.8
35°	2245.4	2278.5	2134.1	2134.1	2155.1	2137.1	2146.1	2233.4	2203.3	2040.8	1968.5
37.5°	2176.2	2212.3	2064.8	2079.9	2104.0	2085.9	2085.9	2170.2	2134.1	1968.5	1872.2
40°	2104.0	2143.1	1992.6	2025.7	2046.8	2025.7	2019.7	2104.0	2058.8	1896.3	1772.9
42.5°	2025.7	2067.8	1926.4	1965.5	1938.4	1965.5	1950.5	2034.7	1989.6	1818.0	1670.5
45°	1941.4	1995.6	1860.2	1836.1	1502.0	1818.0	1881.2	1962.5	1896.3	1742.8	1568.2
47.5°	1854.1	1911.3	1787.9	1613.3	1207.0	1595.3	1806.0	1884.2	1818.0	1661.5	1465.9
50°	1760.8	1827.0	1712.7	1420.7	1053.5	1402.6	1721.7	1803.0	1715.7	1574.2	1363.5
52.5°	1664.5	1736.7	1628.4	1255.2	951.1	1237.1	1631.4	1715.7	1631.4	1480.9	1264.2
55°	1565.2	1640.4	1529.1	1101.6	866.9	1098.6	1526.1	1622.4	1526.1	1387.6	1164.9
57.5°	1465.9	1550.1	1423.7	990.3	794.6	975.2	1408.7	1526.1	1435.8	1291.3	1068.5
60°	1360.5	1438.8	1309.3	869.9	713.4	866.9	1291.3	1426.7	1324.4	1191.9	975.2
62.5°	1252.1	1339.4	1185.9	764.5	647.1	761.5	1164.9	1315.4	1216.0	1089.6	884.9
65°	1140.8	1225.1	1068.5	680.3	583.9	674.2	1047.5	1201.0	1110.7	987.3	800.7
67.5°	1026.4	1104.7	951.1	599.0	520.7	593.0	927.1	1080.6	1002.3	881.9	710.4
70°	909.0	981.2	830.8	520.7	460.5	517.7	809.7	957.2	884.9	773.6	629.1
72.5°	785.6	851.8	704.3	445.5	397.3	442.5	686.3	830.8	755.5	659.2	556.8
75°	656.2	719.4	586.9	370.2	331.1	367.2	568.9	695.3	635.1	553.8	472.6
77.5°	532.8	596.0	466.5	285.9	252.8	279.9	445.5	568.9	517.7	448.5	385.3
80°	412.4	463.5	343.1	213.7	201.7	213.7	334.1	436.4	400.3	352.2	301.0
82.5°	304.0	334.1	231.8	174.6	174.6	174.6	225.7	310.0	295.0	261.9	228.8
85°	207.7	207.7	156.5	132.4	132.4	132.4	153.5	183.6	192.6	174.6	174.6
87.5°	87.3	90.3	81.3	72.2	69.2	72.2	78.3	75.2	75.2	84.3	105.3
90°	3.0	39.1	66.2	81.3	84.3	78.3	60.2	36.1	3.0	51.2	93.3
92.5°	21.1	84.3	78.3	102.3	105.3	96.3	81.3	66.2	12.0	93.3	99.3
95°	81.3	99.3	153.5	156.5	138.5	132.4	150.5	93.3	63.2	126.4	252.8
97.5°	129.4	150.5	138.5	180.6	204.7	180.6	144.5	144.5	120.4	195.6	295.0
100°	177.6	159.5	141.5	156.5	180.6	159.5	135.4	159.5	168.6	228.8	361.2
102.5°	222.7	177.6	177.6	153.5	156.5	150.5	171.6	174.6	210.7	258.9	445.5
105°	258.9	183.6	186.6	174.6	171.6	174.6	186.6	186.6	249.8	285.9	484.6
107.5°	292.0	189.6	183.6	192.6	195.6	192.6	183.6	189.6	285.9	304.0	493.6
110°	319.1	192.6	186.6	192.6	201.7	192.6	186.6	195.6	316.0	322.1	499.7



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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°	343.1	195.6	192.6	189.6	198.7	189.6	192.6	201.7	340.1	331.1	499.7
115°	358.2	198.7	192.6	192.6	195.6	192.6	195.6	204.7	358.2	334.1	493.6
117.5°	367.2	204.7	195.6	198.7	201.7	198.7	195.6	210.7	370.2	346.1	490.6
120°	373.2	225.7	195.6	201.7	204.7	201.7	195.6	228.8	373.2	352.2	478.6
122.5°	370.2	234.8	198.7	201.7	207.7	201.7	198.7	237.8	370.2	349.2	463.5
125°	364.2	243.8	198.7	198.7	204.7	201.7	201.7	243.8	364.2	343.1	442.5
127.5°	352.2	264.9	198.7	201.7	201.7	201.7	201.7	261.9	352.2	346.1	421.4
130°	337.1	279.9	192.6	204.7	201.7	207.7	198.7	279.9	337.1	337.1	403.3
132.5°	322.1	285.9	192.6	204.7	204.7	207.7	195.6	285.9	322.1	325.1	385.3
135°	307.0	292.0	204.7	201.7	204.7	204.7	207.7	292.0	307.0	313.0	373.2
137.5°	292.0	295.0	219.7	192.6	201.7	195.6	225.7	295.0	295.0	295.0	355.2
140°	276.9	292.0	231.8	186.6	189.6	192.6	237.8	295.0	282.9	285.9	325.1
142.5°	258.9	282.9	240.8	201.7	186.6	207.7	246.8	292.0	264.9	276.9	310.0
145°	240.8	273.9	258.9	222.7	204.7	231.8	267.9	282.9	246.8	270.9	301.0
147.5°	225.7	258.9	261.9	234.8	225.7	243.8	270.9	270.9	228.8	258.9	279.9
150°	216.7	243.8	252.8	243.8	234.8	255.8	264.9	249.8	216.7	249.8	261.9
152.5°	213.7	231.8	231.8	255.8	252.8	267.9	243.8	237.8	210.7	240.8	237.8
155°	213.7	228.8	222.7	234.8	246.8	246.8	231.8	231.8	210.7	240.8	225.7
157.5°	210.7	231.8	222.7	219.7	225.7	231.8	231.8	234.8	210.7	234.8	225.7
160°	210.7	234.8	225.7	216.7	219.7	228.8	234.8	234.8	210.7	234.8	228.8
162.5°	210.7	228.8	228.8	219.7	219.7	231.8	234.8	231.8	210.7	228.8	234.8
165°	210.7	228.8	231.8	225.7	222.7	237.8	234.8	225.7	207.7	225.7	237.8
167.5°	210.7	222.7	234.8	228.8	228.8	237.8	237.8	222.7	207.7	216.7	237.8
170°	210.7	219.7	231.8	228.8	231.8	240.8	231.8	219.7	210.7	213.7	228.8
172.5°	210.7	213.7	225.7	228.8	228.8	234.8	225.7	213.7	210.7	207.7	219.7
175°	207.7	213.7	219.7	219.7	216.7	225.7	216.7	210.7	207.7	204.7	210.7
177.5°	204.7	207.7	213.7	213.7	207.7	213.7	207.7	204.7	204.7	201.7	207.7
180°	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7	201.7



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2621.7	2621.7	2621.7	2621.7	2621.7	2621.7
2.5°	2600.6	2579.5	2585.6	2603.6	2600.6	2642.7
5°	2573.5	2564.5	2564.5	2591.6	2588.6	2642.7
7.5°	2543.4	2528.4	2537.4	2567.5	2576.5	2636.7
10°	2504.3	2492.3	2495.3	2540.4	2555.5	2630.7
12.5°	2465.2	2453.1	2462.2	2504.3	2525.4	2615.7
15°	2420.0	2398.9	2423.0	2468.2	2495.3	2594.6
17.5°	2365.8	2341.8	2365.8	2426.0	2459.1	2570.5
20°	2317.7	2293.6	2308.6	2371.9	2417.0	2543.4
22.5°	2263.5	2233.4	2245.4	2314.7	2371.9	2507.3
25°	2203.3	2164.2	2182.2	2257.5	2320.7	2462.2
27.5°	2125.0	2058.8	2104.0	2197.3	2257.5	2417.0
30°	2016.7	1929.4	2001.6	2131.1	2200.3	2365.8
32.5°	1890.3	1796.9	1875.2	2049.8	2134.1	2308.6
35°	1766.8	1685.6	1757.8	1965.5	2067.8	2245.4
37.5°	1658.5	1583.2	1649.5	1869.2	1995.6	2176.2
40°	1547.1	1477.9	1544.1	1766.8	1923.4	2104.0
42.5°	1444.8	1378.6	1441.8	1664.5	1845.1	2025.7
45°	1336.4	1228.1	1330.4	1559.2	1760.8	1941.4
47.5°	1222.0	1107.7	1213.0	1456.8	1676.6	1854.1
50°	1116.7	1014.4	1110.7	1351.5	1586.3	1760.8
52.5°	1023.4	936.1	1020.4	1246.1	1492.9	1664.5
55°	936.1	878.9	939.1	1149.8	1405.7	1565.2
57.5°	866.9	827.7	869.9	1056.5	1309.3	1465.9
60°	806.7	782.6	809.7	963.2	1207.0	1360.5
62.5°	740.5	731.4	740.5	872.9	1107.7	1252.1
65°	683.3	692.3	683.3	791.6	1002.3	1140.8
67.5°	629.1	650.2	632.1	704.3	897.0	1026.4
70°	568.9	599.0	571.9	626.1	788.6	909.0
72.5°	505.7	541.8	505.7	550.8	674.2	785.6
75°	439.5	481.6	442.5	469.6	565.9	656.2
77.5°	367.2	394.3	373.2	382.3	460.5	532.8
80°	292.0	322.1	295.0	301.0	364.2	412.4
82.5°	243.8	264.9	246.8	228.8	270.9	304.0
85°	180.6	192.6	186.6	177.6	186.6	207.7
87.5°	111.4	117.4	111.4	111.4	96.3	87.3
90°	123.4	132.4	123.4	96.3	54.2	3.0
92.5°	126.4	138.5	126.4	105.3	102.3	21.1
95°	282.9	276.9	301.0	273.9	156.5	81.3
97.5°	439.5	502.7	454.5	328.1	210.7	129.4
100°	505.7	565.9	526.7	409.4	240.8	177.6
102.5°	583.9	650.2	608.0	478.6	270.9	222.7
105°	680.3	737.4	701.3	505.7	298.0	258.9
107.5°	731.4	818.7	746.5	517.7	316.0	292.0
110°	758.5	851.8	782.6	520.7	331.1	319.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	779.6	869.9	797.6	520.7	337.1	343.1
115°	779.6	884.9	797.6	511.7	346.1	358.2
117.5°	779.6	875.9	797.6	502.7	358.2	367.2
120°	752.5	872.9	776.6	490.6	361.2	373.2
122.5°	731.4	848.8	746.5	475.6	361.2	370.2
125°	692.3	815.7	710.4	457.5	355.2	364.2
127.5°	650.2	767.5	665.2	436.4	358.2	352.2
130°	611.0	713.4	620.1	415.4	346.1	337.1
132.5°	559.9	653.2	568.9	400.3	334.1	322.1
135°	511.7	596.0	523.7	388.3	319.1	307.0
137.5°	460.5	535.8	472.6	364.2	304.0	292.0
140°	400.3	460.5	412.4	337.1	295.0	276.9
142.5°	361.2	394.3	373.2	325.1	282.9	258.9
145°	337.1	355.2	346.1	313.0	276.9	240.8
147.5°	313.0	331.1	322.1	289.0	261.9	225.7
150°	304.0	304.0	316.0	267.9	252.8	216.7
152.5°	270.9	295.0	282.9	243.8	246.8	213.7
155°	231.8	243.8	243.8	234.8	246.8	213.7
157.5°	216.7	225.7	228.8	234.8	240.8	210.7
160°	216.7	219.7	228.8	237.8	237.8	210.7
162.5°	222.7	219.7	234.8	243.8	231.8	210.7
165°	228.8	225.7	240.8	246.8	225.7	210.7
167.5°	234.8	234.8	246.8	243.8	219.7	210.7
170°	234.8	240.8	246.8	234.8	216.7	210.7
172.5°	225.7	228.8	234.8	219.7	207.7	210.7
175°	213.7	210.7	219.7	210.7	207.7	207.7
177.5°	207.7	198.7	207.7	204.7	201.7	204.7
180°	201.7	201.7	201.7	201.7	201.7	201.7

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