

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: P197473

Luminaire Tested: **8WSL-LD2-80-UPL15-UNV-L830-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197473
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-L830-CD1-U
Description: 8FT. Linear Wavestream System, 15% Uplight, L830
Light Source: (476) 3000K CCT, 80 CRI LEDS
EL236N0119D830
Ballast/Driver: OSRAM
OT85W1202772A0DIML

Summary

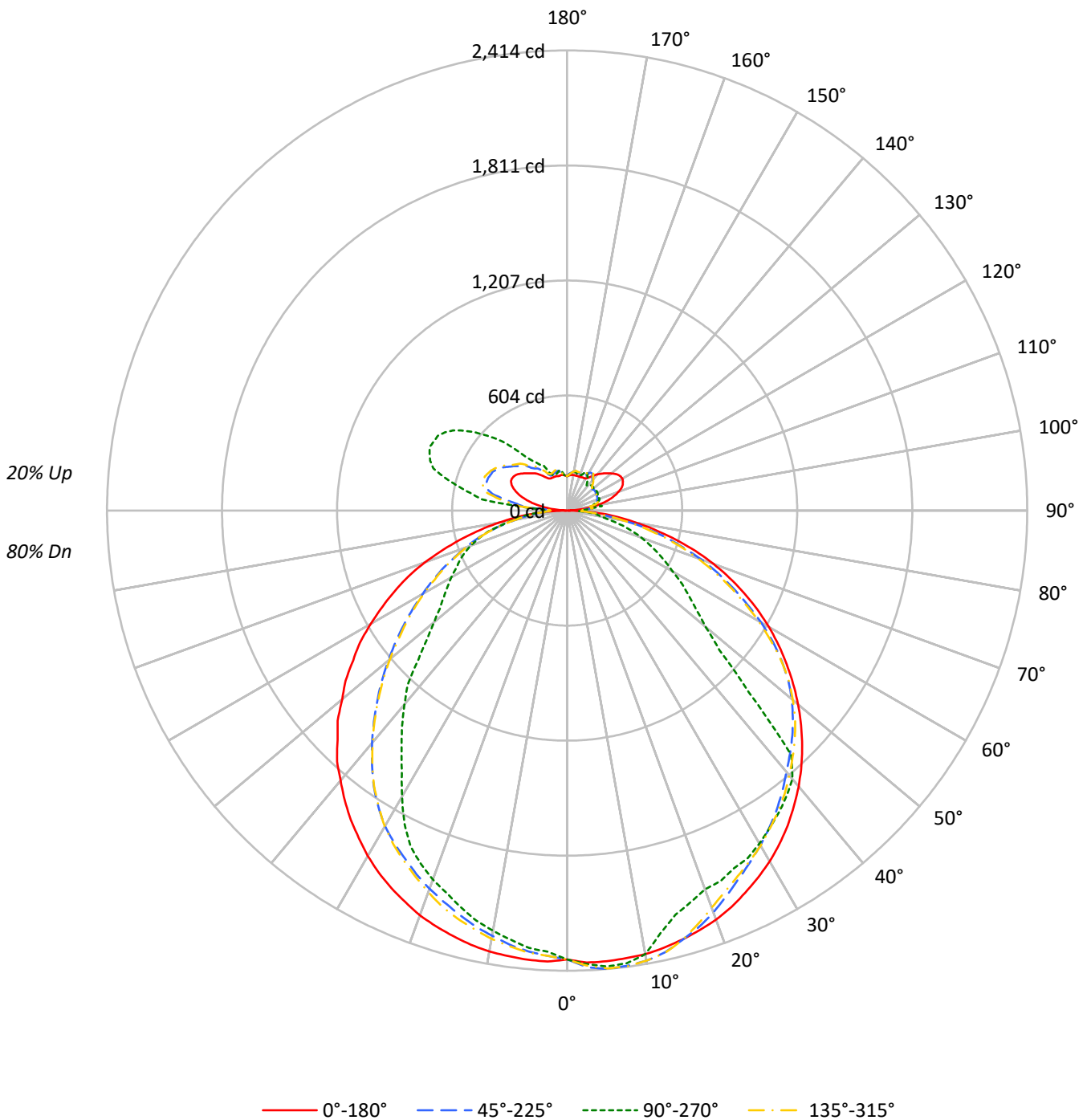
Lumens per Lamp: N/A
Luminaire Lumens: 8332.5 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

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°	6669	6669	6669	6669
5°	6749	6825	6726	6549
10°	6796	6796	6756	6438
15°	6833	6437	6778	6318
20°	6885	6372	6812	6209
25°	6911	6472	6827	6075
30°	6950	6596	6843	5667
35°	6973	6693	6842	5235
40°	6987	6797	6837	4908
45°	6984	5404	6822	4418
50°	6969	4169	6790	4015
55°	6942	3845	6768	3898
60°	6922	3629	6738	3982
65°	6867	3515	6686	4167
70°	6761	3425	6582	4455
75°	6450	3254	6243	4733
80°	6040	2954	5864	4718
85°	6061	3864	5623	5623



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.1	2.7
10°-20°	635.9	7.6
20°-30°	960.9	11.5
30°-40°	1156.5	13.9
40°-50°	1176.1	14.1
50°-60°	1023.7	12.3
60°-70°	798.5	9.6
70°-80°	493.7	5.9
80°-90°	173.7	2.1
90°-100°	163.5	2.0
100°-110°	316.6	3.8
110°-120°	346.4	4.2
120°-130°	303.7	3.6
130°-140°	227.6	2.7
140°-150°	155.8	1.9
150°-160°	99.2	1.2
160°-170°	58.0	0.7
170°-180°	18.7	0.2
0°-30°	1820.8	21.9
0°-40°	2977.3	35.7
0°-60°	5177.1	62.1
0°-90°	6643.0	79.7
90°-120°	826.6	9.9
90°-150°	1513.6	18.2
90°-180°	1690.0	20.3
0°-180°	8332.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2354	2354	2354	2354	2354	
5°	2373	2400	2365	2303	2373	226
15°	2330	2195	2311	2154	2330	659
25°	2211	2071	2184	1944	2211	1021
35°	2017	1936	1979	1514	2017	1262
45°	1744	1349	1703	1103	1744	1345
55°	1406	778	1370	789	1406	1257
65°	1024	524	998	622	1024	1012
75°	589	297	570	432	589	624
85°	186	119	173	173	186	186
90°	3	76	3	119	3	14
95°	73	124	57	249	73	76
105°	232	154	224	662	232	242
115°	322	176	322	795	322	315
125°	327	184	327	733	327	291
135°	276	184	276	535	276	214
145°	216	184	222	319	216	138
155°	192	222	189	219	192	89
165°	189	200	186	203	189	54
175°	186	195	186	189	186	18
180°	181	181	181	181	181	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2354.5	2354.5	2354.5	2354.5	2354.5	2354.5	2354.5	2354.5	2354.5	2354.5	2354.5
2.5°	2373.4	2362.6	2397.7	2400.4	2381.5	2389.6	2389.6	2359.9	2368.0	2332.8	2338.2
5°	2373.4	2376.1	2413.9	2411.2	2400.4	2403.1	2411.2	2373.4	2365.3	2316.6	2322.0
7.5°	2368.0	2381.5	2408.5	2405.8	2395.0	2397.7	2411.2	2378.8	2357.2	2300.4	2297.7
10°	2362.6	2376.1	2397.7	2384.2	2362.6	2370.7	2397.7	2376.1	2349.0	2281.5	2265.3
12.5°	2349.0	2362.6	2373.4	2305.8	2268.0	2300.4	2376.1	2362.6	2332.8	2254.4	2232.8
15°	2330.1	2346.3	2332.8	2238.2	2195.0	2224.7	2332.8	2343.6	2311.2	2219.3	2192.3
17.5°	2308.5	2327.4	2292.3	2186.9	2154.4	2167.9	2276.1	2319.3	2286.9	2184.2	2151.7
20°	2284.2	2305.8	2243.6	2132.8	2113.9	2124.7	2216.6	2292.3	2259.8	2146.3	2111.2
22.5°	2251.7	2276.1	2186.9	2095.0	2103.1	2095.0	2162.5	2257.1	2222.0	2105.8	2065.2
25°	2211.2	2238.2	2130.1	2062.5	2070.6	2067.9	2116.6	2211.2	2184.2	2057.1	2013.9
27.5°	2170.6	2197.7	2078.7	2040.9	2054.4	2038.2	2073.3	2162.5	2140.9	2005.7	1965.2
30°	2124.7	2154.4	2027.4	2003.0	2016.6	2005.7	2030.1	2113.9	2092.2	1951.7	1911.1
32.5°	2073.3	2103.1	1973.3	1957.1	1976.0	1962.5	1978.7	2059.8	2035.5	1892.2	1843.6
35°	2016.6	2046.3	1916.5	1916.5	1935.5	1919.2	1927.4	2005.7	1978.7	1832.7	1767.9
37.5°	1954.4	1986.8	1854.4	1867.9	1889.5	1873.3	1873.3	1949.0	1916.5	1767.9	1681.4
40°	1889.5	1924.7	1789.5	1819.2	1838.2	1819.2	1813.8	1889.5	1849.0	1703.0	1592.2
42.5°	1819.2	1857.1	1730.0	1765.2	1740.8	1765.2	1751.7	1827.3	1786.8	1632.7	1500.3
45°	1743.5	1792.2	1670.6	1648.9	1348.9	1632.7	1689.5	1762.5	1703.0	1565.1	1408.3
47.5°	1665.1	1716.5	1605.7	1448.9	1084.0	1432.7	1621.9	1692.2	1632.7	1492.1	1316.4
50°	1581.4	1640.8	1538.1	1275.9	946.1	1259.7	1546.2	1619.2	1540.8	1413.8	1224.5
52.5°	1494.8	1559.7	1462.4	1127.2	854.2	1111.0	1465.1	1540.8	1465.1	1330.0	1135.3
55°	1405.6	1473.2	1373.2	989.4	778.5	986.7	1370.5	1457.0	1370.5	1246.2	1046.1
57.5°	1316.4	1392.1	1278.6	889.3	713.6	875.8	1265.1	1370.5	1289.4	1159.7	959.6
60°	1221.8	1292.1	1175.9	781.2	640.6	778.5	1159.7	1281.3	1189.4	1070.5	875.8
62.5°	1124.5	1202.9	1065.0	686.6	581.2	683.9	1046.1	1181.3	1092.1	978.5	794.7
65°	1024.5	1100.2	959.6	610.9	524.4	605.5	940.7	1078.6	997.5	886.6	719.0
67.5°	921.8	992.1	854.2	537.9	467.6	532.5	832.6	970.4	900.2	792.0	637.9
70°	816.4	881.2	746.1	467.6	413.6	464.9	727.2	859.6	794.7	694.7	565.0
72.5°	705.5	765.0	632.5	400.1	356.8	397.4	616.3	746.1	678.5	592.0	500.1
75°	589.3	646.1	527.1	332.5	297.3	329.8	510.9	624.4	570.4	497.4	424.4
77.5°	478.5	535.2	419.0	256.8	227.1	251.4	400.1	510.9	464.9	402.8	346.0
80°	370.3	416.3	308.2	191.9	181.1	191.9	300.1	392.0	359.5	316.3	270.3
82.5°	273.0	300.1	208.1	156.8	156.8	156.8	202.7	278.4	264.9	235.2	205.4
85°	186.5	186.5	140.6	118.9	118.9	118.9	137.9	164.9	173.0	156.8	156.8
87.5°	78.4	81.1	73.0	64.9	62.2	64.9	70.3	67.6	67.6	75.7	94.6
90°	2.7	35.1	59.5	73.0	75.7	70.3	54.1	32.4	2.7	46.0	83.8
92.5°	18.9	75.7	70.3	91.9	94.6	86.5	73.0	59.5	10.8	83.8	89.2
95°	73.0	89.2	137.9	140.6	124.3	118.9	135.2	83.8	56.8	113.5	227.1
97.5°	116.2	135.2	124.3	162.2	183.8	162.2	129.8	129.8	108.1	175.7	264.9
100°	159.5	143.3	127.0	140.6	162.2	143.3	121.6	143.3	151.4	205.4	324.4
102.5°	200.0	159.5	159.5	137.9	140.6	135.2	154.1	156.8	189.2	232.5	400.1
105°	232.5	164.9	167.6	156.8	154.1	156.8	167.6	167.6	224.4	256.8	435.2
107.5°	262.2	170.3	164.9	173.0	175.7	173.0	164.9	170.3	256.8	273.0	443.3
110°	286.5	173.0	167.6	173.0	181.1	173.0	167.6	175.7	283.8	289.2	448.7



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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°	308.2	175.7	173.0	170.3	178.4	170.3	173.0	181.1	305.5	297.3	448.7
115°	321.7	178.4	173.0	173.0	175.7	173.0	175.7	183.8	321.7	300.1	443.3
117.5°	329.8	183.8	175.7	178.4	181.1	178.4	175.7	189.2	332.5	310.9	440.6
120°	335.2	202.7	175.7	181.1	183.8	181.1	175.7	205.4	335.2	316.3	429.8
122.5°	332.5	210.8	178.4	181.1	186.5	181.1	178.4	213.5	332.5	313.6	416.3
125°	327.1	219.0	178.4	178.4	183.8	181.1	181.1	219.0	327.1	308.2	397.4
127.5°	316.3	237.9	178.4	181.1	181.1	181.1	181.1	235.2	316.3	310.9	378.4
130°	302.8	251.4	173.0	183.8	181.1	186.5	178.4	251.4	302.8	302.8	362.2
132.5°	289.2	256.8	173.0	183.8	183.8	186.5	175.7	256.8	289.2	291.9	346.0
135°	275.7	262.2	183.8	181.1	183.8	183.8	186.5	262.2	275.7	281.1	335.2
137.5°	262.2	264.9	197.3	173.0	181.1	175.7	202.7	264.9	264.9	264.9	319.0
140°	248.7	262.2	208.1	167.6	170.3	173.0	213.5	264.9	254.1	256.8	291.9
142.5°	232.5	254.1	216.3	181.1	167.6	186.5	221.7	262.2	237.9	248.7	278.4
145°	216.3	246.0	232.5	200.0	183.8	208.1	240.6	254.1	221.7	243.3	270.3
147.5°	202.7	232.5	235.2	210.8	202.7	219.0	243.3	243.3	205.4	232.5	251.4
150°	194.6	219.0	227.1	219.0	210.8	229.8	237.9	224.4	194.6	224.4	235.2
152.5°	191.9	208.1	208.1	229.8	227.1	240.6	219.0	213.5	189.2	216.3	213.5
155°	191.9	205.4	200.0	210.8	221.7	221.7	208.1	208.1	189.2	216.3	202.7
157.5°	189.2	208.1	200.0	197.3	202.7	208.1	208.1	210.8	189.2	210.8	202.7
160°	189.2	210.8	202.7	194.6	197.3	205.4	210.8	210.8	189.2	210.8	205.4
162.5°	189.2	205.4	205.4	197.3	197.3	208.1	210.8	208.1	189.2	205.4	210.8
165°	189.2	205.4	208.1	202.7	200.0	213.5	210.8	202.7	186.5	202.7	213.5
167.5°	189.2	200.0	210.8	205.4	205.4	213.5	213.5	200.0	186.5	194.6	213.5
170°	189.2	197.3	208.1	205.4	208.1	216.3	208.1	197.3	189.2	191.9	205.4
172.5°	189.2	191.9	202.7	205.4	205.4	210.8	202.7	191.9	189.2	186.5	197.3
175°	186.5	191.9	197.3	197.3	194.6	202.7	194.6	189.2	186.5	183.8	189.2
177.5°	183.8	186.5	191.9	191.9	186.5	191.9	186.5	183.8	183.8	181.1	186.5
180°	181.1	181.1	181.1	181.1	181.1	181.1	181.1	181.1	181.1	181.1	181.1



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2354.5	2354.5	2354.5	2354.5	2354.5	2354.5
2.5°	2335.5	2316.6	2322.0	2338.2	2335.5	2373.4
5°	2311.2	2303.1	2303.1	2327.4	2324.7	2373.4
7.5°	2284.2	2270.7	2278.8	2305.8	2313.9	2368.0
10°	2249.0	2238.2	2240.9	2281.5	2295.0	2362.6
12.5°	2213.9	2203.1	2211.2	2249.0	2268.0	2349.0
15°	2173.3	2154.4	2176.0	2216.6	2240.9	2330.1
17.5°	2124.7	2103.1	2124.7	2178.7	2208.5	2308.5
20°	2081.4	2059.8	2073.3	2130.1	2170.6	2284.2
22.5°	2032.8	2005.7	2016.6	2078.7	2130.1	2251.7
25°	1978.7	1943.6	1959.8	2027.4	2084.1	2211.2
27.5°	1908.4	1849.0	1889.5	1973.3	2027.4	2170.6
30°	1811.1	1732.7	1797.6	1913.8	1976.0	2124.7
32.5°	1697.6	1613.8	1684.1	1840.9	1916.5	2073.3
35°	1586.8	1513.8	1578.6	1765.2	1857.1	2016.6
37.5°	1489.4	1421.9	1481.3	1678.7	1792.2	1954.4
40°	1389.4	1327.3	1386.7	1586.8	1727.3	1889.5
42.5°	1297.5	1238.0	1294.8	1494.8	1657.0	1819.2
45°	1200.2	1102.9	1194.8	1400.2	1581.4	1743.5
47.5°	1097.5	994.8	1089.4	1308.3	1505.7	1665.1
50°	1002.9	911.0	997.5	1213.7	1424.6	1581.4
52.5°	919.1	840.7	916.4	1119.1	1340.8	1494.8
55°	840.7	789.3	843.4	1032.6	1262.4	1405.6
57.5°	778.5	743.4	781.2	948.8	1175.9	1316.4
60°	724.4	702.8	727.2	865.0	1084.0	1221.8
62.5°	665.0	656.9	665.0	783.9	994.8	1124.5
65°	613.6	621.7	613.6	710.9	900.2	1024.5
67.5°	565.0	583.9	567.7	632.5	805.5	921.8
70°	510.9	537.9	513.6	562.3	708.2	816.4
72.5°	454.1	486.6	454.1	494.7	605.5	705.5
75°	394.7	432.5	397.4	421.7	508.2	589.3
77.5°	329.8	354.1	335.2	343.3	413.6	478.5
80°	262.2	289.2	264.9	270.3	327.1	370.3
82.5°	219.0	237.9	221.7	205.4	243.3	273.0
85°	162.2	173.0	167.6	159.5	167.6	186.5
87.5°	100.0	105.4	100.0	100.0	86.5	78.4
90°	110.8	118.9	110.8	86.5	48.7	2.7
92.5°	113.5	124.3	113.5	94.6	91.9	18.9
95°	254.1	248.7	270.3	246.0	140.6	73.0
97.5°	394.7	451.4	408.2	294.6	189.2	116.2
100°	454.1	508.2	473.1	367.6	216.3	159.5
102.5°	524.4	583.9	546.0	429.8	243.3	200.0
105°	610.9	662.3	629.8	454.1	267.6	232.5
107.5°	656.9	735.3	670.4	464.9	283.8	262.2
110°	681.2	765.0	702.8	467.6	297.3	286.5



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	700.1	781.2	716.3	467.6	302.8	308.2
115°	700.1	794.7	716.3	459.5	310.9	321.7
117.5°	700.1	786.6	716.3	451.4	321.7	329.8
120°	675.8	783.9	697.4	440.6	324.4	335.2
122.5°	656.9	762.3	670.4	427.1	324.4	332.5
125°	621.7	732.6	637.9	410.9	319.0	327.1
127.5°	583.9	689.3	597.4	392.0	321.7	316.3
130°	548.7	640.6	556.9	373.0	310.9	302.8
132.5°	502.8	586.6	510.9	359.5	300.1	289.2
135°	459.5	535.2	470.4	348.7	286.5	275.7
137.5°	413.6	481.2	424.4	327.1	273.0	262.2
140°	359.5	413.6	370.3	302.8	264.9	248.7
142.5°	324.4	354.1	335.2	291.9	254.1	232.5
145°	302.8	319.0	310.9	281.1	248.7	216.3
147.5°	281.1	297.3	289.2	259.5	235.2	202.7
150°	273.0	273.0	283.8	240.6	227.1	194.6
152.5°	243.3	264.9	254.1	219.0	221.7	191.9
155°	208.1	219.0	219.0	210.8	221.7	191.9
157.5°	194.6	202.7	205.4	210.8	216.3	189.2
160°	194.6	197.3	205.4	213.5	213.5	189.2
162.5°	200.0	197.3	210.8	219.0	208.1	189.2
165°	205.4	202.7	216.3	221.7	202.7	189.2
167.5°	210.8	210.8	221.7	219.0	197.3	189.2
170°	210.8	216.3	221.7	210.8	194.6	189.2
172.5°	202.7	205.4	210.8	197.3	186.5	189.2
175°	191.9	189.2	197.3	189.2	186.5	186.5
177.5°	186.5	178.4	186.5	183.8	181.1	183.8
180°	181.1	181.1	181.1	181.1	181.1	181.1

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