

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: P197472

Luminaire Tested: **8WSL-LD2-75-UPL15-UNV-L850-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P197472
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-LD2-75-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

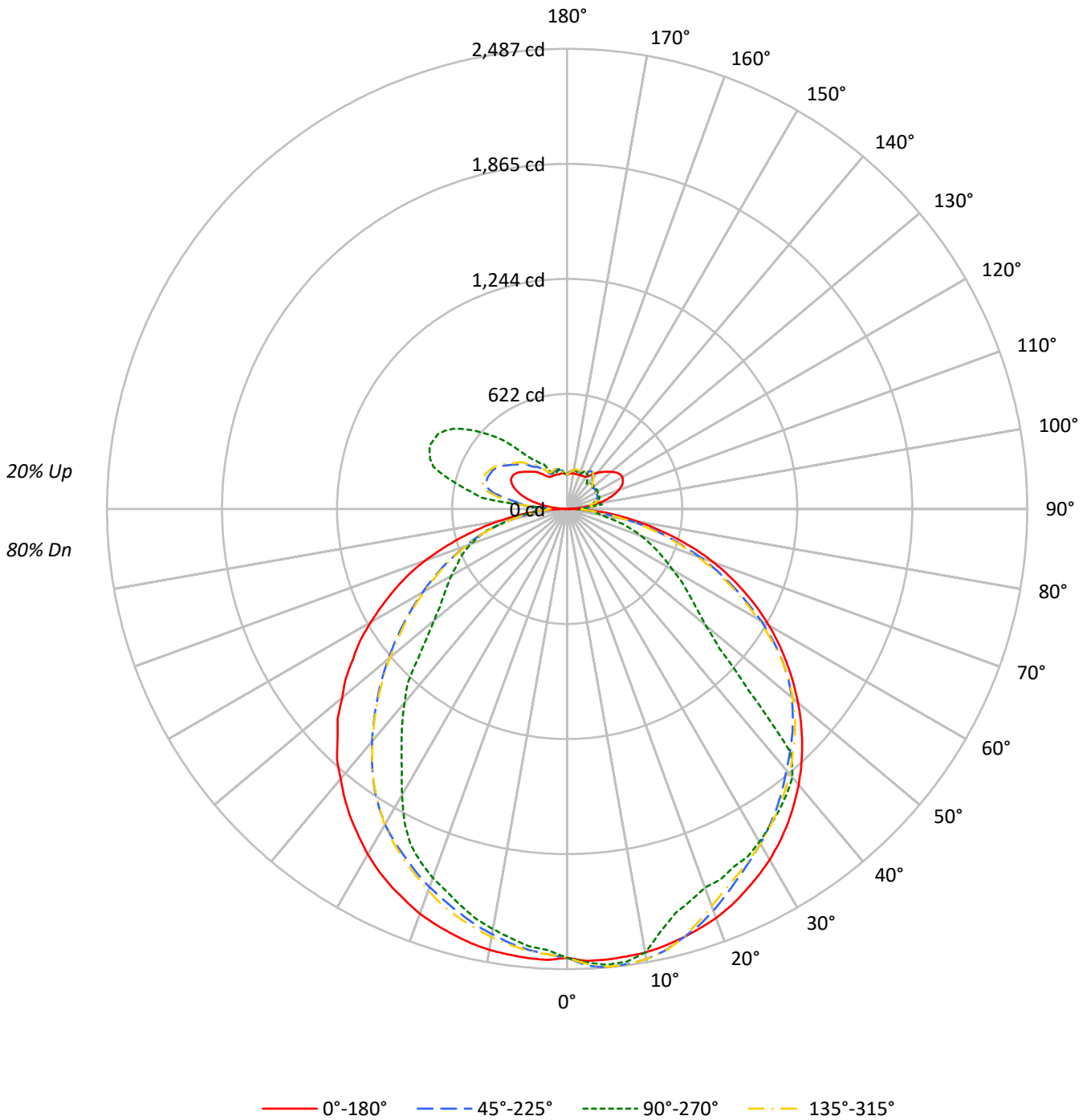
Lumens per Lamp: N/A
Luminaire Lumens: 8584.0 lumens
Efficiency: N/A
Efficacy: 127.7 lumens/watt
Spacing Criteria (0/90/45): 1.32 / 1.19 / 1.35
Luminous Opening: Rectangular (W 0.5' x L: 7.6' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 67.2
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°	6870	6870	6870	6870
5°	6952	7031	6928	6746
10°	7001	7001	6960	6632
15°	7039	6631	6982	6508
20°	7093	6564	7018	6397
25°	7119	6667	7033	6258
30°	7159	6795	7050	5838
35°	7184	6895	7049	5393
40°	7198	7002	7043	5056
45°	7195	5567	7028	4552
50°	7179	4295	6995	4136
55°	7151	3961	6973	4015
60°	7131	3739	6942	4102
65°	7074	3621	6888	4293
70°	6965	3529	6780	4590
75°	6644	3352	6431	4877
80°	6223	3044	6042	4861
85°	6243	3981	5792	5792



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.8	2.7
10°-20°	655.1	7.6
20°-30°	989.9	11.5
30°-40°	1191.4	13.9
40°-50°	1211.6	14.1
50°-60°	1054.6	12.3
60°-70°	822.6	9.6
70°-80°	508.5	5.9
80°-90°	178.9	2.1
90°-100°	168.5	2.0
100°-110°	326.2	3.8
110°-120°	356.9	4.2
120°-130°	312.9	3.6
130°-140°	234.4	2.7
140°-150°	160.5	1.9
150°-160°	102.2	1.2
160°-170°	59.7	0.7
170°-180°	19.3	0.2
0°-30°	1875.8	21.9
0°-40°	3067.1	35.7
0°-60°	5333.4	62.1
0°-90°	6843.5	79.7
90°-120°	851.5	9.9
90°-150°	1559.3	18.2
90°-180°	1741.0	20.3
0°-180°	8584.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2426	2426	2426	2426	2426	
5°	2445	2473	2437	2373	2445	233
15°	2400	2261	2381	2219	2400	679
25°	2278	2133	2250	2002	2278	1051
35°	2077	1994	2038	1560	2077	1300
45°	1796	1390	1754	1136	1796	1386
55°	1448	802	1412	813	1448	1295
65°	1055	540	1028	640	1055	1043
75°	607	306	588	446	607	643
85°	192	122	178	178	192	192
90°	3	78	3	122	3	15
95°	75	128	58	256	75	78
105°	240	159	231	682	240	250
115°	331	181	331	819	331	324
125°	337	189	337	755	337	299
135°	284	189	284	551	284	221
145°	223	189	228	329	223	142
155°	198	228	195	226	198	91
165°	195	206	192	209	195	55
175°	192	200	192	195	192	18
180°	187	187	187	187	187	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	2425.5	2425.5	2425.5	2425.5	2425.5	2425.5	2425.5	2425.5	2425.5	2425.5	2425.5
2.5°	2445.0	2433.9	2470.1	2472.8	2453.4	2461.7	2461.7	2431.1	2439.4	2403.2	2408.8
5°	2445.0	2447.8	2486.8	2484.0	2472.8	2475.6	2484.0	2445.0	2436.6	2386.5	2392.1
7.5°	2439.4	2453.4	2481.2	2478.4	2467.3	2470.1	2484.0	2450.6	2428.3	2369.8	2367.0
10°	2433.9	2447.8	2470.1	2456.1	2433.9	2442.2	2470.1	2447.8	2419.9	2350.3	2333.6
12.5°	2419.9	2433.9	2445.0	2375.4	2336.4	2369.8	2447.8	2433.9	2403.2	2322.5	2300.2
15°	2400.4	2417.2	2403.2	2305.8	2261.2	2291.8	2403.2	2414.4	2381.0	2286.3	2258.4
17.5°	2378.2	2397.7	2361.5	2252.9	2219.4	2233.4	2344.8	2389.3	2355.9	2250.1	2216.7
20°	2353.1	2375.4	2311.3	2197.2	2177.7	2188.8	2283.5	2361.5	2328.0	2211.1	2174.9
22.5°	2319.7	2344.8	2252.9	2158.2	2166.5	2158.2	2227.8	2325.3	2289.1	2169.3	2127.5
25°	2277.9	2305.8	2194.4	2124.8	2133.1	2130.3	2180.5	2277.9	2250.1	2119.2	2074.6
27.5°	2236.1	2264.0	2141.5	2102.5	2116.4	2099.7	2135.9	2227.8	2205.5	2066.3	2024.5
30°	2188.8	2219.4	2088.6	2063.5	2077.4	2066.3	2091.3	2177.7	2155.4	2010.6	1968.8
32.5°	2135.9	2166.5	2032.9	2016.2	2035.6	2021.7	2038.4	2122.0	2096.9	1949.3	1899.2
35°	2077.4	2108.0	1974.4	1974.4	1993.9	1977.2	1985.5	2066.3	2038.4	1888.1	1821.2
37.5°	2013.4	2046.8	1910.3	1924.3	1946.5	1929.8	1929.8	2007.8	1974.4	1821.2	1732.1
40°	1946.5	1982.7	1843.5	1874.1	1893.6	1874.1	1868.6	1946.5	1904.8	1754.4	1640.2
42.5°	1874.1	1913.1	1782.2	1818.4	1793.4	1818.4	1804.5	1882.5	1840.7	1682.0	1545.5
45°	1796.2	1846.3	1721.0	1698.7	1389.6	1682.0	1740.5	1815.6	1754.4	1612.4	1450.8
47.5°	1715.4	1768.3	1654.1	1492.6	1116.7	1475.9	1670.8	1743.2	1682.0	1537.2	1356.2
50°	1629.1	1690.3	1584.5	1314.4	974.7	1297.7	1592.9	1668.1	1587.3	1456.4	1261.5
52.5°	1540.0	1606.8	1506.5	1161.2	880.0	1144.5	1509.3	1587.3	1509.3	1370.1	1169.6
55°	1448.1	1517.7	1414.6	1019.2	802.0	1016.4	1411.9	1501.0	1411.9	1283.8	1077.7
57.5°	1356.2	1434.1	1317.2	916.2	735.2	902.3	1303.3	1411.9	1328.3	1194.7	988.6
60°	1258.7	1331.1	1211.4	804.8	660.0	802.0	1194.7	1320.0	1225.3	1102.8	902.3
62.5°	1158.5	1239.2	1097.2	707.3	598.7	704.5	1077.7	1216.9	1125.0	1008.1	818.7
65°	1055.4	1133.4	988.6	629.4	540.2	623.8	969.1	1111.1	1027.6	913.4	740.7
67.5°	949.6	1022.0	880.0	554.2	481.8	548.6	857.7	999.7	927.3	815.9	657.2
70°	841.0	907.8	768.6	481.8	426.1	479.0	749.1	885.5	818.7	715.7	582.0
72.5°	726.8	788.1	651.6	412.1	367.6	409.4	634.9	768.6	699.0	609.9	515.2
75°	607.1	665.6	543.0	342.5	306.3	339.7	526.3	643.3	587.6	512.4	437.2
77.5°	492.9	551.4	431.6	264.6	233.9	259.0	412.1	526.3	479.0	414.9	356.4
80°	381.5	428.8	317.5	197.7	186.6	197.7	309.1	403.8	370.4	325.8	278.5
82.5°	281.3	309.1	214.4	161.5	161.5	161.5	208.9	286.8	272.9	242.3	211.6
85°	192.1	192.1	144.8	122.5	122.5	122.5	142.0	169.9	178.2	161.5	161.5
87.5°	80.8	83.5	75.2	66.8	64.0	66.8	72.4	69.6	69.6	78.0	97.5
90°	2.8	36.2	61.3	75.2	78.0	72.4	55.7	33.4	2.8	47.3	86.3
92.5°	19.5	78.0	72.4	94.7	97.5	89.1	75.2	61.3	11.1	86.3	91.9
95°	75.2	91.9	142.0	144.8	128.1	122.5	139.2	86.3	58.5	117.0	233.9
97.5°	119.7	139.2	128.1	167.1	189.4	167.1	133.7	133.7	111.4	181.0	272.9
100°	164.3	147.6	130.9	144.8	167.1	147.6	125.3	147.6	155.9	211.6	334.2
102.5°	206.1	164.3	164.3	142.0	144.8	139.2	158.7	161.5	194.9	239.5	412.1
105°	239.5	169.9	172.7	161.5	158.7	161.5	172.7	172.7	231.1	264.6	448.3
107.5°	270.1	175.4	169.9	178.2	181.0	178.2	169.9	175.4	264.6	281.3	456.7
110°	295.2	178.2	172.7	178.2	186.6	178.2	172.7	181.0	292.4	298.0	462.3



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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°	317.5	181.0	178.2	175.4	183.8	175.4	178.2	186.6	314.7	306.3	462.3
115°	331.4	183.8	178.2	178.2	181.0	178.2	181.0	189.4	331.4	309.1	456.7
117.5°	339.7	189.4	181.0	183.8	186.6	183.8	181.0	194.9	342.5	320.2	453.9
120°	345.3	208.9	181.0	186.6	189.4	186.6	181.0	211.6	345.3	325.8	442.8
122.5°	342.5	217.2	183.8	186.6	192.1	186.6	183.8	220.0	342.5	323.0	428.8
125°	337.0	225.6	183.8	183.8	189.4	186.6	186.6	225.6	337.0	317.5	409.4
127.5°	325.8	245.1	183.8	186.6	186.6	186.6	186.6	242.3	325.8	320.2	389.9
130°	311.9	259.0	178.2	189.4	186.6	192.1	183.8	259.0	311.9	311.9	373.2
132.5°	298.0	264.6	178.2	189.4	189.4	192.1	181.0	264.6	298.0	300.8	356.4
135°	284.0	270.1	189.4	186.6	189.4	189.4	192.1	270.1	284.0	289.6	345.3
137.5°	270.1	272.9	203.3	178.2	186.6	181.0	208.9	272.9	272.9	272.9	328.6
140°	256.2	270.1	214.4	172.7	175.4	178.2	220.0	272.9	261.8	264.6	300.8
142.5°	239.5	261.8	222.8	186.6	172.7	192.1	228.3	270.1	245.1	256.2	286.8
145°	222.8	253.4	239.5	206.1	189.4	214.4	247.8	261.8	228.3	250.6	278.5
147.5°	208.9	239.5	242.3	217.2	208.9	225.6	250.6	250.6	211.6	239.5	259.0
150°	200.5	225.6	233.9	225.6	217.2	236.7	245.1	231.1	200.5	231.1	242.3
152.5°	197.7	214.4	214.4	236.7	233.9	247.8	225.6	220.0	194.9	222.8	220.0
155°	197.7	211.6	206.1	217.2	228.3	228.3	214.4	214.4	194.9	222.8	208.9
157.5°	194.9	214.4	206.1	203.3	208.9	214.4	214.4	217.2	194.9	217.2	208.9
160°	194.9	217.2	208.9	200.5	203.3	211.6	217.2	217.2	194.9	217.2	211.6
162.5°	194.9	211.6	211.6	203.3	203.3	214.4	217.2	214.4	194.9	211.6	217.2
165°	194.9	211.6	214.4	208.9	206.1	220.0	217.2	208.9	192.1	208.9	220.0
167.5°	194.9	206.1	217.2	211.6	211.6	220.0	220.0	206.1	192.1	200.5	220.0
170°	194.9	203.3	214.4	211.6	214.4	222.8	214.4	203.3	194.9	197.7	211.6
172.5°	194.9	197.7	208.9	211.6	211.6	217.2	208.9	197.7	194.9	192.1	203.3
175°	192.1	197.7	203.3	203.3	200.5	208.9	200.5	194.9	192.1	189.4	194.9
177.5°	189.4	192.1	197.7	197.7	192.1	197.7	192.1	189.4	189.4	186.6	192.1
180°	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6	186.6



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	2425.5	2425.5	2425.5	2425.5	2425.5	2425.5
2.5°	2406.0	2386.5	2392.1	2408.8	2406.0	2445.0
5°	2381.0	2372.6	2372.6	2397.7	2394.9	2445.0
7.5°	2353.1	2339.2	2347.5	2375.4	2383.7	2439.4
10°	2316.9	2305.8	2308.5	2350.3	2364.2	2433.9
12.5°	2280.7	2269.6	2277.9	2316.9	2336.4	2419.9
15°	2238.9	2219.4	2241.7	2283.5	2308.5	2400.4
17.5°	2188.8	2166.5	2188.8	2244.5	2275.1	2378.2
20°	2144.2	2122.0	2135.9	2194.4	2236.1	2353.1
22.5°	2094.1	2066.3	2077.4	2141.5	2194.4	2319.7
25°	2038.4	2002.2	2018.9	2088.6	2147.0	2277.9
27.5°	1966.0	1904.8	1946.5	2032.9	2088.6	2236.1
30°	1865.8	1785.0	1851.9	1971.6	2035.6	2188.8
32.5°	1748.8	1662.5	1734.9	1896.4	1974.4	2135.9
35°	1634.6	1559.5	1626.3	1818.4	1913.1	2077.4
37.5°	1534.4	1464.8	1526.0	1729.3	1846.3	2013.4
40°	1431.4	1367.3	1428.6	1634.6	1779.4	1946.5
42.5°	1336.7	1275.4	1333.9	1540.0	1707.0	1874.1
45°	1236.4	1136.2	1230.9	1442.5	1629.1	1796.2
47.5°	1130.6	1024.8	1122.2	1347.8	1551.1	1715.4
50°	1033.1	938.5	1027.6	1250.3	1467.6	1629.1
52.5°	946.8	866.1	944.0	1152.9	1381.2	1540.0
55°	866.1	813.1	868.8	1063.8	1300.5	1448.1
57.5°	802.0	765.8	804.8	977.4	1211.4	1356.2
60°	746.3	724.0	749.1	891.1	1116.7	1258.7
62.5°	685.0	676.7	685.0	807.6	1024.8	1158.5
65°	632.1	640.5	632.1	732.4	927.3	1055.4
67.5°	582.0	601.5	584.8	651.6	829.9	949.6
70°	526.3	554.2	529.1	579.2	729.6	841.0
72.5°	467.8	501.3	467.8	509.6	623.8	726.8
75°	406.6	445.6	409.4	434.4	523.5	607.1
77.5°	339.7	364.8	345.3	353.7	426.1	492.9
80°	270.1	298.0	272.9	278.5	337.0	381.5
82.5°	225.6	245.1	228.3	211.6	250.6	281.3
85°	167.1	178.2	172.7	164.3	172.7	192.1
87.5°	103.0	108.6	103.0	103.0	89.1	80.8
90°	114.2	122.5	114.2	89.1	50.1	2.8
92.5°	117.0	128.1	117.0	97.5	94.7	19.5
95°	261.8	256.2	278.5	253.4	144.8	75.2
97.5°	406.6	465.1	420.5	303.5	194.9	119.7
100°	467.8	523.5	487.3	378.7	222.8	164.3
102.5°	540.2	601.5	562.5	442.8	250.6	206.1
105°	629.4	682.3	648.8	467.8	275.7	239.5
107.5°	676.7	757.4	690.6	479.0	292.4	270.1
110°	701.8	788.1	724.0	481.8	306.3	295.2



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CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	721.2	804.8	738.0	481.8	311.9	317.5
115°	721.2	818.7	738.0	473.4	320.2	331.4
117.5°	721.2	810.4	738.0	465.1	331.4	339.7
120°	696.2	807.6	718.5	453.9	334.2	345.3
122.5°	676.7	785.3	690.6	440.0	334.2	342.5
125°	640.5	754.7	657.2	423.3	328.6	337.0
127.5°	601.5	710.1	615.4	403.8	331.4	325.8
130°	565.3	660.0	573.7	384.3	320.2	311.9
132.5°	518.0	604.3	526.3	370.4	309.1	298.0
135°	473.4	551.4	484.5	359.2	295.2	284.0
137.5°	426.1	495.7	437.2	337.0	281.3	270.1
140°	370.4	426.1	381.5	311.9	272.9	256.2
142.5°	334.2	364.8	345.3	300.8	261.8	239.5
145°	311.9	328.6	320.2	289.6	256.2	222.8
147.5°	289.6	306.3	298.0	267.3	242.3	208.9
150°	281.3	281.3	292.4	247.8	233.9	200.5
152.5°	250.6	272.9	261.8	225.6	228.3	197.7
155°	214.4	225.6	225.6	217.2	228.3	197.7
157.5°	200.5	208.9	211.6	217.2	222.8	194.9
160°	200.5	203.3	211.6	220.0	220.0	194.9
162.5°	206.1	203.3	217.2	225.6	214.4	194.9
165°	211.6	208.9	222.8	228.3	208.9	194.9
167.5°	217.2	217.2	228.3	225.6	203.3	194.9
170°	217.2	222.8	228.3	217.2	200.5	194.9
172.5°	208.9	211.6	217.2	203.3	192.1	194.9
175°	197.7	194.9	203.3	194.9	192.1	192.1
177.5°	192.1	183.8	192.1	189.4	186.6	189.4
180°	186.6	186.6	186.6	186.6	186.6	186.6

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