

Scaled data based on original data using  
LM-66-11 Electrical and Photometric Measurements of Single-Ended Compact  
Fluorescent Lamps

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: SHAPER

Report Number: 253P216

Luminaire Tested: **1200-OB-44-CFL/4/39**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-66-11  
Report Number: 253P216  
Test Lab: METALUX LABORATORIES  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: SHAPER  
Catalog Number: 1200-OB-44-CFL/4/39  
Description: SHAPER 44 INCH 1200 SERIES DIRECT/INDIRECT INDOOR PENDANT FIXTURE  
Light Source: FOUR - F39BX/SPX35 - 2850 LUMENS - 39 WATTS  
Ballast/Driver: -

**Summary**

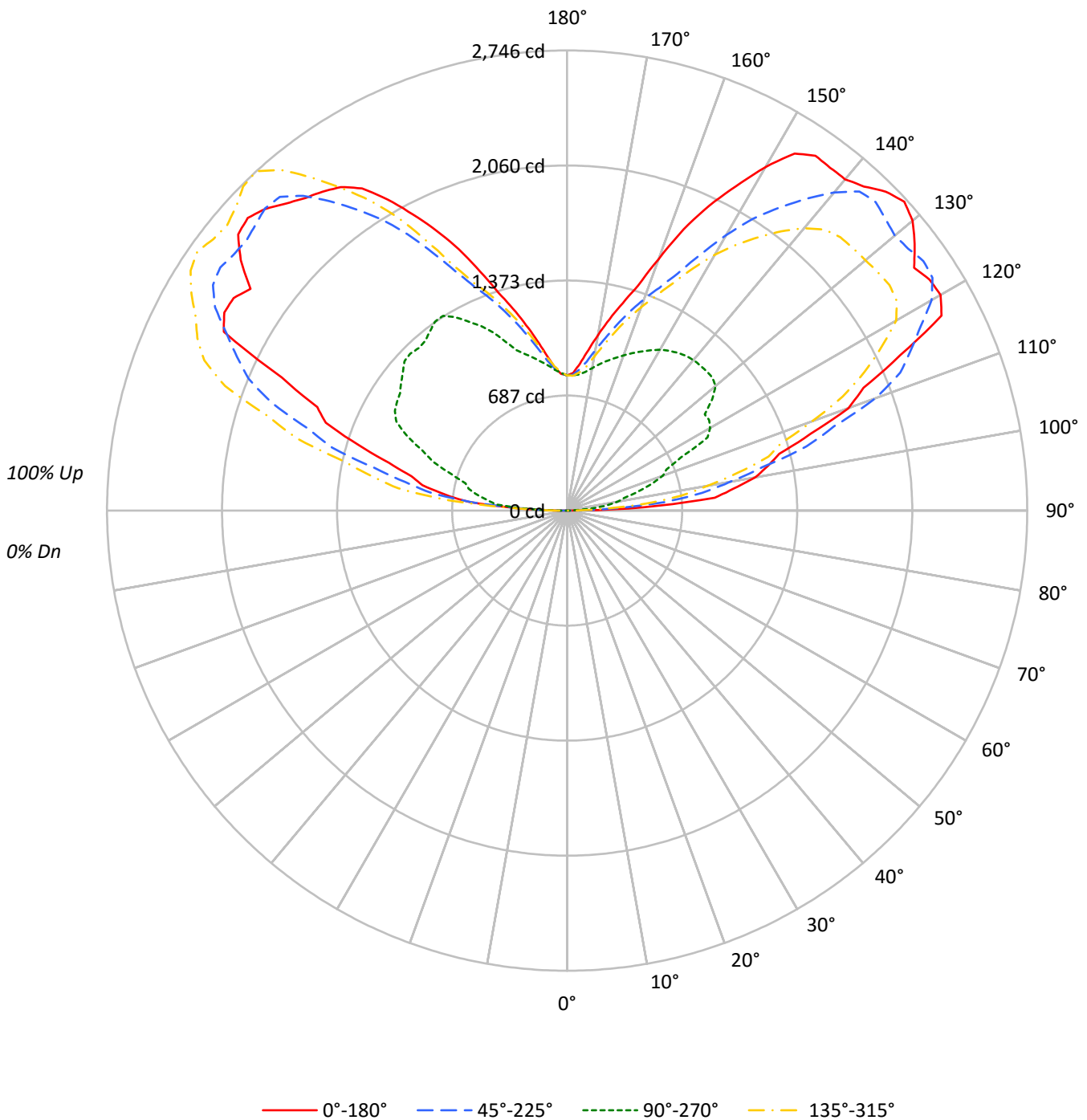
Lumens per Lamp: 2850 (4 lamps)  
Luminaire Lumens: 9852.3 lumens  
Efficiency: 86.4%  
Efficacy: 61.6 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Vertical Cylinder (Dia: 3.67' x H: 0.1')  
CIE Type: Indirect

Input Watts (W): 160  
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	82	82	82	82	70	70	70	70	48	48	48	28	28	28	9	9	9	0
1	75	71	68	65	64	61	59	56	42	40	39	24	23	23	8	8	7	0
2	68	62	57	53	58	53	49	46	37	34	32	21	20	19	7	6	6	0
3	62	55	49	44	53	47	42	38	32	29	27	19	17	16	6	6	5	0
4	57	48	42	37	48	41	36	32	28	25	23	16	15	13	5	5	4	0
5	52	43	36	31	44	37	31	27	25	22	19	15	13	11	5	4	4	0
6	47	38	31	27	40	33	27	23	22	19	17	13	11	10	4	4	3	0
7	44	34	28	23	37	29	24	20	20	17	14	12	10	9	4	3	3	0
8	40	30	24	20	34	26	21	18	18	15	12	11	9	7	3	3	2	0
9	37	28	22	18	32	24	19	15	16	13	11	10	8	7	3	3	2	0
10	35	25	19	16	29	22	17	14	15	12	10	9	7	6	3	2	2	0

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	0	0	0	0
5°	0	0	0	0
10°	0	0	0	0
15°	0	0	0	0
20°	0	0	0	0
25°	0	0	0	0
30°	0	0	0	0
35°	0	0	0	0
40°	0	0	0	0
45°	0	0	0	0
50°	0	0	0	0
55°	0	0	0	0
60°	0	0	0	0
65°	0	0	0	0
70°	0	0	0	0
75°	0	0	0	0
80°	0	0	0	0
85°	0	0	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	0.0	0.0	0.0
10°-20°	0.0	0.0	0.0
20°-30°	0.0	0.0	0.0
30°-40°	0.0	0.0	0.0
40°-50°	0.0	0.0	0.0
50°-60°	0.0	0.0	0.0
60°-70°	0.0	0.0	0.0
70°-80°	0.0	0.0	0.0
80°-90°	0.3	0.0	0.0
90°-100°	548.1	5.6	4.8
100°-110°	1301.2	13.2	11.4
110°-120°	1889.1	19.2	16.6
120°-130°	1987.1	20.2	17.4
130°-140°	1720.6	17.5	15.1
140°-150°	1265.6	12.8	11.1
150°-160°	730.8	7.4	6.4
160°-170°	324.9	3.3	2.8
170°-180°	84.8	0.9	0.7
0°-30°	0.0	0.0	0.0
0°-40°	0.0	0.0	0.0
0°-60°	0.0	0.0	0.0
0°-90°	0.3	0.0	0.0
90°-120°	3738.3	37.9	32.8
90°-150°	8711.6	88.4	76.4
90°-180°	9852.0	100.0	86.4
0°-180°	9852.3	100.0	86.4

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	1	1	2	0	1	63
95°	885	144	589	427	885	730
105°	1310	436	1100	628	1310	1458
115°	2194	746	1878	1055	2194	2179
125°	2527	1002	2307	1218	2527	2318
135°	2691	1177	2546	1324	2691	2069
145°	2584	1149	2357	1376	2584	1598
155°	2009	1047	1843	1214	2009	935
165°	1281	926	1246	966	1281	375
175°	878	815	857	844	878	90
180°	807	807	807	807	807	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	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
85°	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
90°	1.0	2.0	3.0	1.0	1.0	4.0	6.0	3.0	2.0	0.0	0.0
92.5°	458.7	547.4	265.1	48.0	35.3	125.8	179.1	238.9	261.5	324.8	228.0
95°	884.9	862.2	586.3	246.1	143.9	356.5	469.6	550.1	589.0	661.4	569.1
97.5°	999.8	1007.0	812.5	488.6	237.0	532.0	685.8	751.0	737.4	841.4	821.5
100°	1139.1	1169.9	986.2	716.6	307.6	655.0	849.6	884.9	877.6	1003.4	979.9
102.5°	1225.0	1315.5	1193.4	958.1	348.3	825.1	1045.9	1029.6	951.8	1164.4	1179.8
105°	1310.1	1478.4	1479.3	1125.5	436.1	1020.6	1244.0	1220.5	1100.2	1352.6	1452.1
107.5°	1522.7	1758.0	1670.2	1299.2	526.6	1169.9	1339.0	1474.8	1309.2	1586.0	1616.8
110°	1786.0	1945.2	1957.9	1433.1	608.0	1264.0	1553.5	1618.6	1532.7	1747.1	1872.9



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CATALOG NUMBER: 1200-OB-44-CFL/4/39

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	1914.5	2151.5	2151.5	1501.9	641.5	1331.8	1780.6	1730.8	1614.1	1899.1	2058.3
115°	2194.0	2472.7	2262.8	1653.0	746.4	1491.0	1958.8	2052.9	1878.3	2260.1	2174.1
117.5°	2518.9	2564.1	2376.8	1840.3	945.5	1565.2	2115.3	2302.6	2309.9	2385.0	2292.7
120°	2573.1	2575.0	2510.7	1961.5	984.4	1609.6	2267.3	2419.3	2363.2	2431.1	2425.7
122.5°	2565.0	2572.2	2584.9	1931.7	1004.3	1648.5	2330.7	2348.8	2359.6	2474.5	2506.2
125°	2527.0	2655.5	2595.8	1948.9	1001.6	1713.6	2347.9	2455.5	2307.1	2614.8	2527.9
127.5°	2614.8	2742.3	2565.9	1960.6	1090.2	1751.6	2336.1	2568.6	2454.6	2724.2	2508.9
130°	2690.8	2783.0	2553.2	1926.2	1156.3	1738.0	2324.3	2594.0	2563.2	2741.4	2501.7
132.5°	2728.8	2753.2	2575.9	1855.7	1175.3	1704.6	2315.3	2562.3	2584.9	2698.9	2522.5
135°	2690.8	2682.6	2603.9	1775.1	1177.1	1663.9	2306.2	2507.1	2546.0	2627.4	2550.5
137.5°	2622.9	2632.9	2582.2	1691.9	1175.3	1611.4	2273.7	2452.8	2484.5	2555.0	2538.8
140°	2580.4	2629.2	2478.1	1619.5	1172.6	1556.2	2199.5	2413.9	2433.8	2504.4	2451.9
142.5°	2578.6	2636.5	2345.1	1560.7	1164.4	1501.0	2100.0	2374.1	2398.5	2454.6	2326.1
145°	2584.0	2587.6	2205.8	1507.3	1149.0	1445.8	1991.4	2310.8	2356.9	2378.6	2194.0
147.5°	2526.1	2438.3	2064.7	1447.6	1131.0	1389.7	1881.9	2191.3	2279.1	2249.2	2059.2
150°	2367.8	2266.4	1897.3	1387.0	1108.3	1332.7	1763.4	2052.9	2144.3	2107.2	1903.6
152.5°	2181.4	2093.6	1720.9	1321.9	1078.5	1271.2	1629.5	1906.3	1991.4	1961.5	1732.6
155°	2008.6	1912.7	1558.9	1256.7	1046.8	1207.9	1499.2	1762.5	1843.0	1809.5	1572.5
157.5°	1816.8	1701.0	1439.5	1191.6	1017.0	1145.4	1384.3	1600.5	1687.4	1643.0	1446.7
160°	1597.8	1501.0	1341.8	1125.5	986.2	1083.9	1290.2	1443.1	1517.3	1481.1	1348.1
162.5°	1406.0	1349.0	1244.0	1062.2	954.5	1023.3	1195.2	1307.4	1362.6	1344.5	1248.6
165°	1281.1	1238.6	1148.1	1002.5	925.6	969.0	1103.8	1197.9	1245.9	1231.4	1154.5
167.5°	1169.9	1134.6	1054.0	944.6	894.8	919.2	1011.5	1093.0	1133.7	1121.9	1060.4
170°	1063.1	1036.0	970.8	899.3	863.1	876.7	932.8	998.0	1028.7	1018.8	975.3
172.5°	965.4	944.6	896.6	855.9	835.1	840.5	865.0	910.2	933.7	925.6	901.1
175°	878.5	867.7	845.0	824.2	815.2	817.0	827.9	845.0	856.8	854.1	850.5
177.5°	821.5	817.0	810.7	807.0	808.0	806.1	805.2	811.6	817.0	817.0	817.9
180°	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0	807.0



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CATALOG NUMBER: 1200-OB-44-CFL/4/39

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0
80°	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
85°	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
90°	1.0	0.0	2.0	3.0	3.0	1.0
92.5°	206.3	228.9	348.3	286.8	364.6	458.7
95°	456.9	427.0	675.0	709.3	770.0	884.9
97.5°	659.6	479.5	829.7	1017.0	1007.0	999.8
100°	847.8	545.6	993.4	1183.4	1238.6	1139.1
102.5°	1028.7	601.7	1164.4	1368.9	1406.0	1225.0
105°	1169.9	627.9	1312.8	1672.9	1554.4	1310.1
107.5°	1379.8	723.8	1479.3	1870.1	1835.8	1522.7
110°	1530.9	850.5	1619.5	2172.3	2040.2	1786.0





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	1663.0	932.8	1765.2	2344.2	2226.6	1914.5
115°	1792.3	1055.0	1893.7	2434.7	2521.6	2194.0
117.5°	1877.4	1149.0	1961.5	2498.0	2712.5	2518.9
120°	1929.9	1187.0	2015.8	2589.4	2805.7	2573.1
122.5°	1928.0	1204.2	2048.4	2664.5	2752.3	2565.0
125°	1920.8	1217.8	2052.9	2694.4	2791.2	2527.0
127.5°	1918.1	1248.6	2046.6	2660.9	2850.0	2614.8
130°	1913.6	1280.2	2031.2	2649.1	2874.4	2690.8
132.5°	1876.5	1317.3	1992.3	2679.9	2829.2	2728.8
135°	1815.0	1323.7	1925.3	2734.2	2740.5	2690.8
137.5°	1761.6	1313.7	1857.5	2746.0	2667.2	2622.9
140°	1733.5	1319.1	1815.0	2652.8	2636.5	2580.4
142.5°	1724.5	1346.3	1786.0	2504.4	2632.0	2578.6
145°	1701.0	1376.1	1748.9	2348.8	2594.9	2584.0
147.5°	1629.5	1378.0	1671.1	2195.0	2458.2	2526.1
150°	1542.6	1331.8	1582.4	2017.6	2291.8	2367.8
152.5°	1452.1	1270.3	1492.0	1811.3	2116.2	2181.4
155°	1364.4	1214.2	1396.0	1619.5	1946.1	2008.6
157.5°	1258.5	1150.0	1286.6	1476.6	1739.9	1816.8
160°	1154.5	1070.3	1181.6	1379.8	1539.0	1597.8
162.5°	1074.0	1003.4	1100.2	1281.1	1380.7	1406.0
165°	1015.1	966.3	1041.4	1186.1	1264.9	1281.1
167.5°	962.7	934.6	986.2	1090.2	1154.5	1169.9
170°	921.0	903.0	937.3	1004.3	1054.0	1063.1
172.5°	878.5	874.0	890.3	923.8	956.3	965.4
175°	842.3	844.1	852.3	864.0	875.8	878.5
177.5°	816.1	821.5	824.2	823.3	822.4	821.5
180°	807.0	807.0	807.0	807.0	807.0	807.0

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