

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: NEO-RAY

Report Number: P331886-935

Luminaire Tested: **S123DIP-S340D805U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331886-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S340D805U935-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4003.1 lumens  
Efficiency: N/A  
Efficacy: 128.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')  
CIE Type: Semi-Indirect

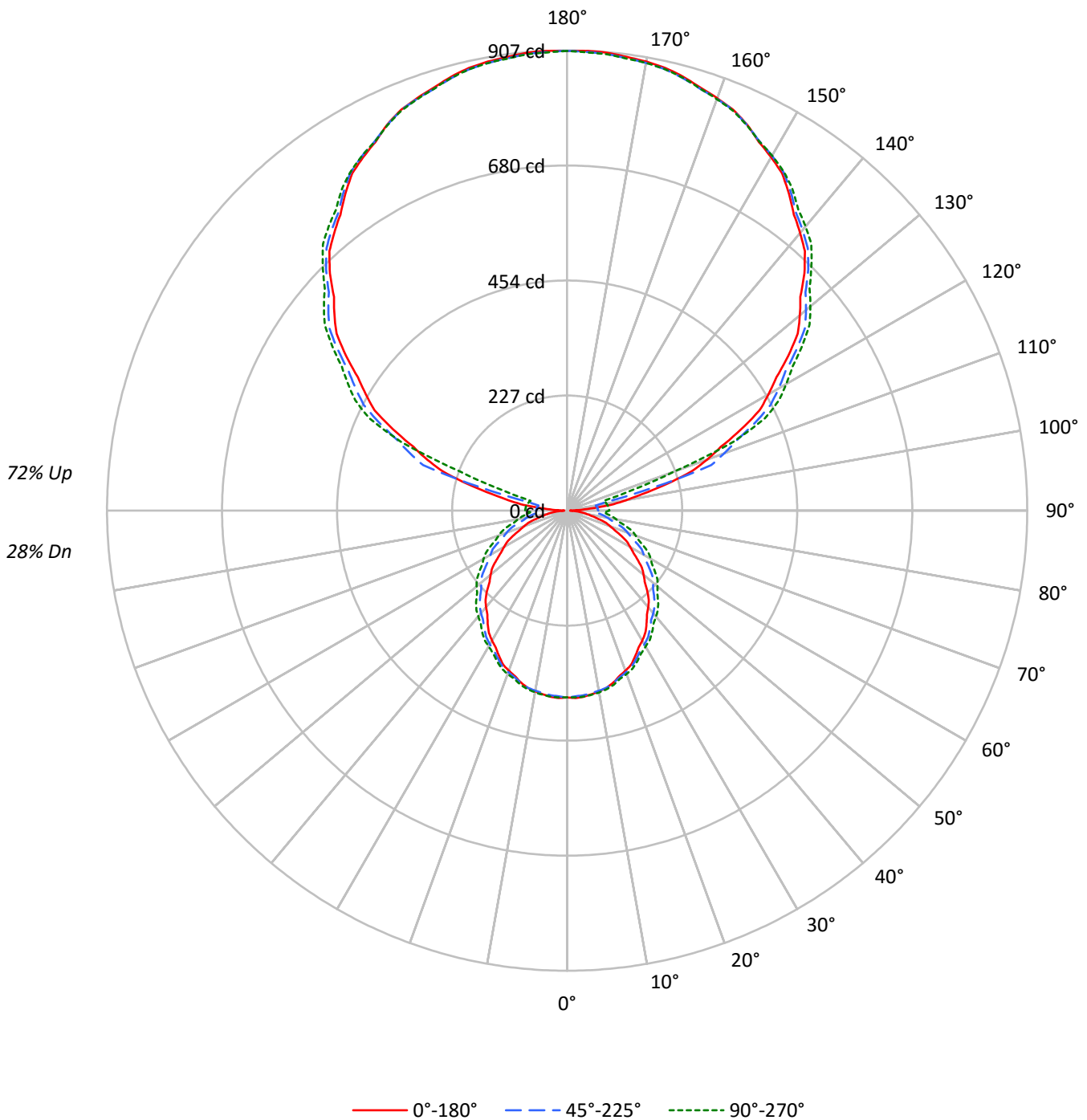
Input Watts (W): 31.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331886-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D

**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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	92	88	84	80	82	79	75	72	61	59	57	46	44	43	31	30	29	23
2	84	76	70	65	75	68	63	59	53	50	47	40	37	35	27	26	24	18
3	76	67	60	54	68	60	54	49	47	43	39	35	32	29	24	22	20	15
4	70	59	51	45	62	53	46	41	41	37	33	31	28	25	21	19	17	13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	11
6	59	47	39	33	52	42	35	30	33	28	24	25	21	19	17	15	13	10
7	54	42	34	29	48	38	31	26	30	25	21	22	19	16	16	13	12	9
8	50	38	30	25	45	34	28	23	27	22	19	20	17	14	14	12	10	8
9	46	34	27	22	41	31	25	20	25	20	17	19	15	13	13	11	9	7
10	43	31	24	20	39	28	22	18	23	18	15	17	14	12	12	10	8	6

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

	0°	45°	90°
0°	3963	3963	3963
5°	3977	3865	3866
10°	3941	3776	3757
15°	3890	3674	3636
20°	3818	3559	3504
25°	3728	3427	3365
30°	3637	3307	3224
35°	3533	3181	3112
40°	3435	3065	2991
45°	3327	2955	2895
50°	3219	2846	2789
55°	3100	2734	2693
60°	2984	2620	2596
65°	2865	2499	2479
70°	2685	2362	2359
75°	2462	2208	2239
80°	2201	2054	2100
85°	1955	1950	2018



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.9	0.9
10°-20°	99.5	2.5
20°-30°	148.9	3.7
30°-40°	177.8	4.4
40°-50°	186.0	4.6
50°-60°	174.5	4.4
60°-70°	145.8	3.6
70°-80°	104.3	2.6
80°-90°	64.7	1.6
90°-100°	72.0	1.8
100°-110°	185.7	4.6
110°-120°	396.2	9.9
120°-130°	491.1	12.3
130°-140°	518.0	12.9
140°-150°	480.8	12.0
150°-160°	387.0	9.7
160°-170°	249.8	6.2
170°-180°	86.1	2.2
0°-30°	283.3	7.1
0°-40°	461.0	11.5
0°-60°	821.6	20.5
0°-90°	1136.4	28.4
90°-120°	653.9	16.3
90°-150°	2143.8	53.6
90°-180°	2867.0	71.6
0°-180°	4003.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	369	368	366	368	368	35
15°	351	352	352	356	355	99
25°	317	321	322	327	327	146
35°	273	279	284	290	292	171
45°	223	233	243	250	254	172
55°	170	183	198	208	212	152
65°	118	133	151	162	167	116
75°	64	83	103	116	121	68
85°	20	40	61	74	79	21
90°	6	32	62	77	83	5
95°	46	36	61	77	82	54
105°	204	218	178	76	75	216
115°	378	388	408	423	430	373
125°	532	538	551	561	565	475
135°	661	665	672	681	681	509
145°	762	766	768	772	774	477
155°	839	838	839	842	838	387
165°	885	883	882	887	883	250
175°	906	903	903	907	903	86
180°	906	906	906	906	906	



TEST NUMBER: P331886-935

CATALOG NUMBER: S123DIP-S340D805U935-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	369.9	369.7	369.5	369.3	369.0	368.7	368.1	367.5	367.0	366.4	367.0
5°	368.7	368.5	368.3	368.2	368.0	367.6	367.0	366.5	366.0	365.5	366.2
7.5°	365.1	365.2	365.2	365.2	365.2	365.0	364.5	363.9	363.4	362.9	363.8
10°	361.9	362.1	362.2	362.4	362.6	362.5	362.0	361.5	361.1	360.7	361.5
12.5°	358.0	358.3	358.5	358.8	359.0	359.0	358.7	358.3	358.1	357.7	358.6
15°	351.0	351.3	351.5	351.8	352.1	352.2	352.1	352.0	351.9	351.8	352.8
17.5°	342.2	342.8	343.3	343.8	344.3	344.6	344.6	344.5	344.5	344.5	345.3
20°	335.8	336.3	336.8	337.4	337.9	338.3	338.5	338.6	338.8	339.0	339.8
22.5°	329.1	329.6	330.1	330.6	331.2	331.6	331.8	332.1	332.3	332.6	333.6
25°	316.9	317.8	318.7	319.6	320.5	321.1	321.3	321.6	321.8	322.2	323.3
27.5°	304.7	305.7	306.8	307.8	308.8	309.6	310.1	310.7	311.3	311.9	312.9
30°	296.1	297.2	298.4	299.5	300.7	301.6	302.4	303.1	303.8	304.5	305.6
32.5°	286.5	287.7	289.0	290.3	291.6	292.7	293.7	294.6	295.6	296.4	297.6
35°	272.8	274.2	275.7	277.1	278.5	279.8	280.9	282.1	283.3	284.5	285.8
37.5°	258.4	259.9	261.6	263.2	264.8	266.3	267.7	269.1	270.6	272.0	273.5
40°	248.7	250.4	251.9	253.6	255.1	256.8	258.6	260.5	262.2	264.0	265.5
42.5°	238.2	240.1	242.0	244.0	246.0	247.9	249.8	251.6	253.5	255.3	257.0
45°	223.1	225.2	227.3	229.5	231.6	233.8	236.0	238.2	240.5	242.7	244.4
47.5°	207.2	209.7	212.1	214.6	217.0	219.5	222.0	224.5	227.0	229.6	231.5
50°	197.0	199.5	202.0	204.5	207.0	209.6	212.3	215.2	217.9	220.7	222.7
52.5°	186.1	188.7	191.3	194.0	196.7	199.5	202.5	205.6	208.6	211.6	213.8
55°	170.1	173.1	176.0	178.9	181.8	184.9	188.1	191.4	194.6	197.8	200.2
57.5°	154.5	157.6	160.7	163.8	166.8	170.1	173.6	177.1	180.6	184.2	186.6
60°	143.6	146.8	150.1	153.3	156.4	159.9	163.6	167.2	170.8	174.5	177.0
62.5°	133.4	136.6	139.9	143.2	146.5	150.1	153.9	157.8	161.7	165.6	168.0
65°	117.5	121.1	124.5	127.9	131.5	135.2	139.1	143.0	146.9	150.8	153.5
67.5°	101.5	105.2	108.9	112.5	116.2	120.1	124.1	128.1	132.1	136.1	139.0
70°	90.2	94.1	97.9	101.8	105.6	109.7	113.9	118.2	122.5	126.7	129.7
72.5°	80.0	83.9	87.6	91.5	95.3	99.4	103.8	108.3	112.7	117.2	120.1
75°	63.8	68.0	72.2	76.4	80.6	84.9	89.4	93.8	98.2	102.7	105.6
77.5°	49.7	53.9	58.1	62.3	66.6	70.9	75.4	79.9	84.4	88.9	92.0
80°	39.7	44.1	48.5	52.9	57.2	61.7	66.3	70.9	75.6	80.2	83.3
82.5°	31.1	35.5	40.0	44.3	48.8	53.4	58.1	62.8	67.5	72.2	75.3
85°	19.6	24.1	28.6	33.1	37.5	42.1	46.8	51.5	56.2	61.0	64.0
87.5°	10.8	15.6	20.3	25.1	29.8	34.6	39.5	44.4	49.4	54.3	57.5
90°	5.9	11.8	17.7	23.5	29.4	35.6	42.0	48.5	55.0	61.5	65.1
92.5°	17.4	20.9	24.5	28.0	31.5	36.2	42.2	48.1	54.1	60.0	63.9
95°	45.5	42.8	40.1	37.5	34.9	36.5	42.5	48.6	54.6	60.6	64.4
97.5°	86.4	86.9	87.2	87.6	88.0	84.9	78.3	71.7	65.1	58.5	62.3
100°	117.4	123.2	129.1	134.9	140.8	134.1	114.9	95.6	76.4	57.1	60.9
102.5°	152.6	157.3	162.0	166.8	171.5	163.1	141.6	120.2	98.8	77.2	76.1
105°	203.8	207.6	211.4	215.2	219.0	216.0	206.4	196.7	187.1	177.5	153.5
107.5°	257.4	260.5	263.7	266.8	270.0	274.4	280.2	285.9	291.7	297.5	280.4
110°	293.2	296.0	298.8	301.6	304.4	308.4	313.7	318.8	324.1	329.2	326.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	327.7	330.0	332.4	334.8	337.3	341.0	346.0	351.1	356.2	361.3	363.6
115°	378.3	380.2	382.2	384.2	386.2	389.4	394.0	398.6	403.1	407.6	411.3
117.5°	427.6	429.4	431.1	432.9	434.7	437.4	441.1	444.8	448.5	452.2	455.6
120°	458.0	459.8	461.6	463.4	465.1	467.8	471.1	474.5	477.9	481.3	484.6
122.5°	489.2	490.6	491.9	493.3	494.6	496.9	500.3	503.7	507.0	510.4	513.2
125°	531.7	532.8	534.0	535.2	536.4	538.6	541.8	545.0	548.1	551.3	553.5
127.5°	573.1	574.2	575.3	576.4	577.6	579.5	582.4	585.2	588.1	590.9	593.1
130°	598.9	600.0	601.2	602.3	603.4	605.1	607.5	609.8	612.3	614.7	616.9
132.5°	623.4	624.6	625.8	626.9	628.1	629.6	631.5	633.4	635.3	637.2	639.5
135°	661.2	661.9	662.8	663.6	664.3	665.6	667.1	668.7	670.3	671.8	673.9
137.5°	693.4	694.4	695.5	696.5	697.7	698.6	699.5	700.3	701.3	702.1	704.3
140°	714.5	715.5	716.4	717.3	718.2	719.0	719.7	720.4	721.2	721.9	723.8
142.5°	734.5	735.4	736.2	737.0	737.8	738.5	739.0	739.5	740.0	740.5	742.2
145°	762.4	763.4	764.3	765.3	766.2	766.8	767.2	767.4	767.8	768.0	769.0
147.5°	788.2	788.9	789.6	790.3	791.0	791.5	791.8	792.0	792.4	792.6	793.2
150°	804.3	804.9	805.3	805.7	806.2	806.6	806.8	807.2	807.4	807.8	808.0
152.5°	818.9	819.2	819.3	819.6	819.8	819.9	820.1	820.3	820.5	820.7	821.2
155°	839.4	839.1	838.8	838.5	838.2	838.1	838.3	838.4	838.5	838.7	839.5
157.5°	855.2	855.2	855.2	855.1	855.1	855.1	854.9	854.8	854.6	854.5	855.4
160°	865.0	864.8	864.7	864.5	864.4	864.2	864.1	863.9	863.8	863.6	864.5
162.5°	874.1	873.7	873.3	873.0	872.5	872.3	872.1	872.0	871.8	871.7	872.7
165°	885.2	884.7	884.2	883.8	883.4	883.0	883.0	882.8	882.6	882.4	883.6
167.5°	893.8	893.2	892.6	892.0	891.4	891.0	891.0	891.0	891.0	891.0	892.3
170°	898.6	898.0	897.4	896.8	896.2	896.0	896.0	896.0	896.0	896.0	897.2
172.5°	901.8	901.1	900.4	899.7	899.0	898.7	898.8	898.9	899.1	899.1	900.3
175°	906.0	905.3	904.6	903.8	903.0	902.8	902.8	903.0	903.2	903.4	904.4
177.5°	907.1	906.5	905.9	905.3	904.7	904.5	904.6	904.7	904.8	904.9	905.9
180°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	367.5	368.1	368.7	368.9	368.9	368.8	368.7	368.6
5°	366.9	367.6	368.3	368.7	368.6	368.4	368.3	368.2
7.5°	364.7	365.6	366.4	366.9	366.8	366.6	366.5	366.4
10°	362.5	363.3	364.2	364.5	364.4	364.2	364.0	363.9
12.5°	359.4	360.2	361.0	361.4	361.2	361.0	360.8	360.7
15°	353.6	354.5	355.4	355.8	355.7	355.6	355.5	355.4
17.5°	346.0	346.9	347.7	348.0	347.8	347.8	347.7	347.5
20°	340.6	341.4	342.2	342.7	342.8	342.9	342.9	343.0
22.5°	334.6	335.6	336.7	337.2	337.1	337.0	337.0	336.9
25°	324.4	325.6	326.7	327.4	327.4	327.4	327.4	327.4
27.5°	313.8	314.9	315.9	316.4	316.5	316.6	316.6	316.7
30°	306.6	307.7	308.8	309.3	309.3	309.3	309.3	309.3
32.5°	298.8	299.9	301.0	301.7	302.0	302.1	302.4	302.6
35°	287.1	288.4	289.8	290.7	291.0	291.4	291.7	292.1
37.5°	275.0	276.6	278.1	279.0	279.2	279.6	279.8	280.1
40°	267.0	268.5	270.0	271.0	271.3	271.7	272.1	272.4
42.5°	258.6	260.3	261.9	263.0	263.6	264.0	264.5	265.0
45°	246.1	247.8	249.5	250.7	251.4	252.1	252.9	253.6
47.5°	233.4	235.4	237.3	238.5	239.0	239.6	240.1	240.7
50°	224.7	226.8	228.9	230.2	230.8	231.4	232.0	232.7
52.5°	215.9	218.0	220.2	221.6	222.4	223.2	223.9	224.6
55°	202.6	205.0	207.4	209.0	209.7	210.4	211.1	211.8
57.5°	189.0	191.4	193.8	195.4	196.3	197.2	198.0	198.8
60°	179.5	182.0	184.5	186.2	187.2	188.2	189.2	190.2
62.5°	170.5	173.0	175.5	177.2	178.1	179.0	179.9	180.9
65°	156.2	158.9	161.5	163.3	164.2	165.1	166.0	166.9
67.5°	141.9	144.8	147.7	149.6	150.3	151.1	151.9	152.6
70°	132.5	135.3	138.2	140.1	140.9	141.8	142.8	143.6
72.5°	123.0	125.9	128.8	130.8	131.6	132.5	133.5	134.3
75°	108.6	111.5	114.5	116.5	117.5	118.6	119.7	120.8
77.5°	95.1	98.2	101.3	103.2	104.1	105.0	105.7	106.6
80°	86.3	89.4	92.4	94.3	95.2	96.1	97.0	97.9
82.5°	78.3	81.3	84.4	86.3	87.2	88.1	88.9	89.9
85°	67.1	70.1	73.1	75.1	75.9	76.9	77.7	78.6
87.5°	60.6	63.8	67.0	69.0	69.9	70.9	71.8	72.8
90°	68.7	72.4	76.0	78.4	79.6	80.8	82.0	83.2
92.5°	67.8	71.7	75.7	78.1	79.1	80.2	81.1	82.1
95°	68.2	72.0	75.9	78.2	79.0	80.0	80.8	81.7
97.5°	66.2	70.1	73.9	76.4	77.4	78.4	79.5	80.5
100°	64.7	68.4	72.2	74.6	75.7	76.7	77.7	78.8
102.5°	74.9	73.7	72.5	72.5	73.6	74.8	75.9	77.1
105°	129.6	105.6	81.6	70.2	71.2	72.3	73.4	74.6
107.5°	263.4	246.4	229.4	211.3	192.1	172.9	153.8	134.6
110°	324.0	321.4	318.7	307.1	286.5	265.8	245.1	224.5





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	365.9	368.2	370.6	369.9	366.2	362.4	358.7	355.0
115°	414.9	418.5	422.1	424.6	425.9	427.3	428.6	429.9
117.5°	458.8	462.2	465.5	467.5	468.4	469.2	470.0	470.8
120°	487.8	491.0	494.3	496.2	496.9	497.5	498.1	498.7
122.5°	516.0	518.8	521.7	523.4	524.2	525.0	525.6	526.4
125°	555.7	557.8	560.0	561.5	562.5	563.4	564.3	565.2
127.5°	595.4	597.7	599.9	601.2	601.5	601.8	602.1	602.4
130°	619.2	621.6	623.8	625.1	625.3	625.5	625.8	626.0
132.5°	641.7	643.9	646.2	647.4	647.6	647.7	647.9	648.1
135°	676.0	678.0	680.1	681.1	681.1	681.1	681.1	681.1
137.5°	706.4	708.5	710.7	711.8	712.0	712.0	712.2	712.4
140°	725.7	727.6	729.6	730.6	730.8	730.9	731.1	731.2
142.5°	743.8	745.5	747.2	748.0	748.0	748.1	748.1	748.1
145°	770.1	771.1	772.1	772.7	773.1	773.5	773.9	774.2
147.5°	793.7	794.2	794.7	794.8	794.4	794.1	793.7	793.3
150°	808.3	808.7	808.9	809.0	808.7	808.4	808.1	807.9
152.5°	821.7	822.3	822.9	822.8	822.1	821.5	820.8	820.2
155°	840.2	840.9	841.7	841.6	840.8	839.8	839.0	838.0
157.5°	856.3	857.1	858.1	857.9	856.8	855.6	854.5	853.3
160°	865.4	866.3	867.2	867.1	866.1	865.0	864.0	863.0
162.5°	873.7	874.8	875.7	875.8	874.9	873.9	873.1	872.1
165°	884.8	886.1	887.3	887.3	886.3	885.2	884.2	883.1
167.5°	893.5	894.7	895.9	895.9	894.7	893.5	892.3	891.0
170°	898.3	899.5	900.7	900.7	899.5	898.3	897.2	896.0
172.5°	901.6	902.8	904.0	903.9	902.6	901.3	899.9	898.6
175°	905.4	906.5	907.5	907.4	906.3	905.1	903.9	902.7
177.5°	906.9	907.8	908.8	908.7	907.5	906.3	905.1	903.9
180°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0

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