

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: P332101-935

Luminaire Tested: **S123DIW-S340D755U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332101-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S340D755U935-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3470.5 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

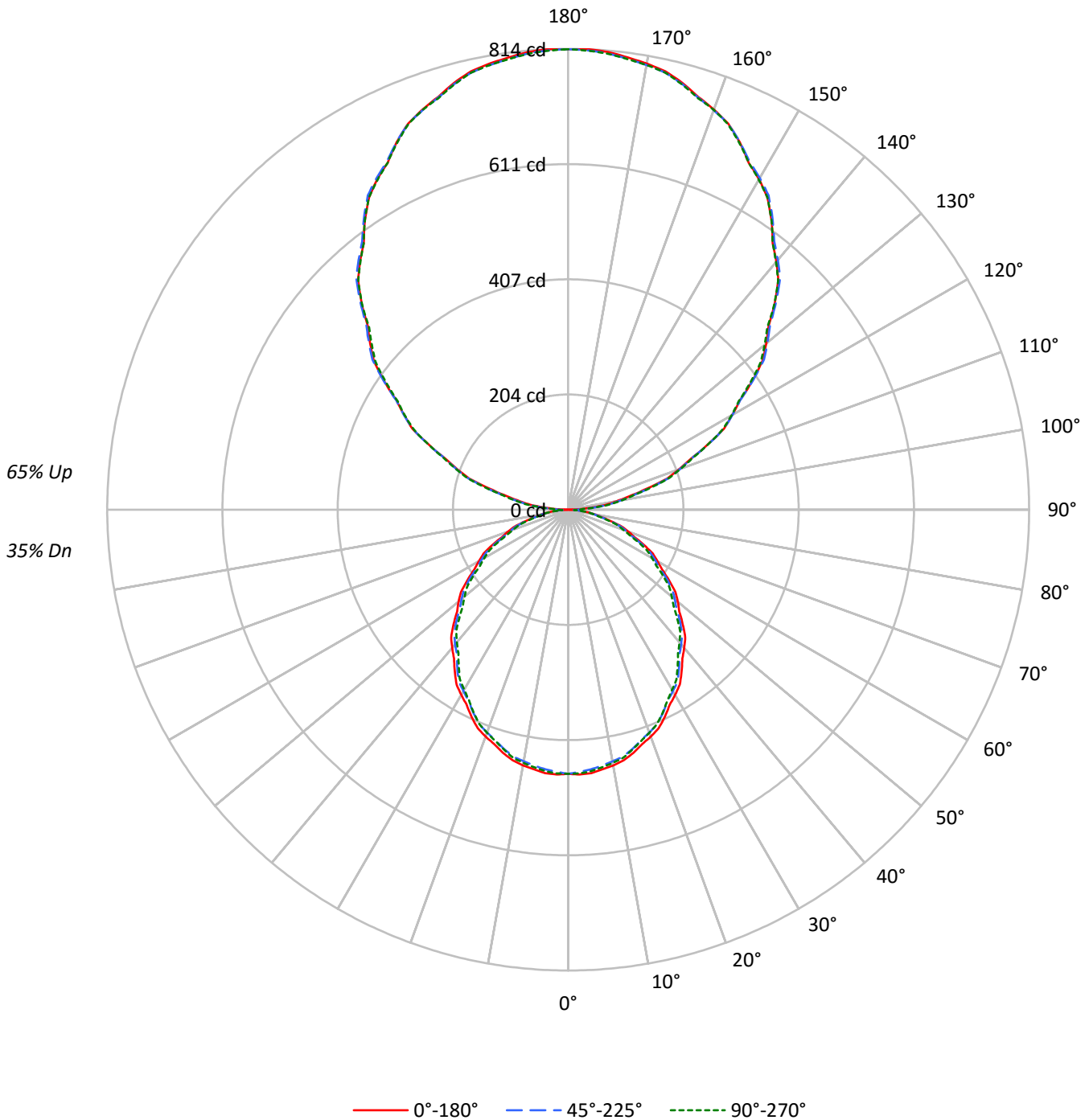
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35
1	94	90	86	83	85	82	78	75	66	63	61	51	49	48	37	36	36	29
2	86	79	73	68	77	71	66	62	57	54	51	45	42	40	33	31	30	25
3	78	69	62	56	70	63	57	52	51	46	43	39	36	34	29	27	25	21
4	72	61	53	47	64	55	49	44	45	40	36	35	32	29	26	24	22	18
5	66	54	46	40	59	49	42	37	40	35	31	31	28	25	23	21	19	15
6	60	49	41	35	54	44	37	32	36	31	27	28	25	22	21	19	17	14
7	56	44	36	31	50	40	33	28	33	27	24	26	22	19	19	17	15	12
8	52	40	32	27	47	36	30	25	30	25	21	23	20	17	18	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5022	5022	5022
5°	5046	4976	5010
10°	5012	4933	4964
15°	4953	4878	4886
20°	4885	4798	4802
25°	4793	4703	4694
30°	4692	4598	4561
35°	4586	4486	4428
40°	4477	4363	4295
45°	4354	4250	4147
50°	4232	4113	3997
55°	4074	3969	3847
60°	3914	3800	3679
65°	3769	3617	3505
70°	3559	3408	3257
75°	3256	3136	3003
80°	2938	2814	2783
85°	2569	2482	2384



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	1.3
10°-20°	124.1	3.6
20°-30°	183.3	5.3
30°-40°	214.1	6.2
40°-50°	215.3	6.2
50°-60°	189.1	5.4
60°-70°	140.9	4.1
70°-80°	80.3	2.3
80°-90°	25.4	0.7
90°-100°	53.0	1.5
100°-110°	158.6	4.6
110°-120°	269.8	7.8
120°-130°	354.9	10.2
130°-140°	398.9	11.5
140°-150°	392.1	11.3
150°-160°	330.1	9.5
160°-170°	219.7	6.3
170°-180°	76.9	2.2
0°-30°	351.4	10.1
0°-40°	565.5	16.3
0°-60°	969.9	27.9
0°-90°	1216.5	35.1
90°-120°	481.4	13.9
90°-150°	1627.3	46.9
90°-180°	2254.0	64.9
0°-180°	3470.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	467	465	460	464	464	44
15°	444	443	438	441	438	125
25°	404	401	396	396	395	186
35°	349	346	341	339	337	218
45°	286	284	279	275	272	221
55°	217	216	212	207	205	194
65°	148	146	142	139	138	146
75°	78	77	75	73	72	84
85°	21	20	20	19	19	23
90°	1	7	15	18	19	3
95°	38	42	47	50	50	42
105°	144	145	151	151	152	154
115°	272	273	272	273	272	269
125°	398	399	398	396	393	354
135°	516	519	519	516	515	397
145°	626	627	629	628	626	391
155°	716	716	717	719	715	330
165°	780	778	778	782	778	220
175°	812	809	809	812	808	77
180°	814	814	814	814	814	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6
2.5°	468.2	467.9	467.6	467.4	467.0	466.5	465.7	464.9	464.2	463.4	464.1
5°	467.0	466.5	466.1	465.6	465.2	464.5	463.5	462.5	461.5	460.5	461.4
7.5°	462.4	461.9	461.5	461.1	460.6	459.9	458.9	457.9	456.8	455.8	456.6
10°	458.6	458.1	457.6	457.2	456.8	456.0	454.8	453.7	452.5	451.3	452.1
12.5°	453.4	453.1	452.6	452.3	451.9	451.2	450.1	449.0	447.9	446.9	447.5
15°	444.5	444.2	443.8	443.4	443.1	442.3	441.2	440.0	438.9	437.7	438.4
17.5°	434.1	433.7	433.3	432.7	432.3	431.5	430.3	429.2	428.0	426.9	427.3
20°	426.5	425.9	425.4	424.8	424.3	423.4	422.3	421.1	420.0	418.9	419.2
22.5°	417.8	417.2	416.7	416.2	415.7	414.8	413.6	412.5	411.3	410.2	410.4
25°	403.6	403.0	402.5	402.0	401.5	400.6	399.4	398.3	397.1	396.0	396.1
27.5°	388.4	387.9	387.4	386.8	386.3	385.5	384.3	383.0	381.8	380.5	380.6
30°	377.5	377.0	376.6	376.2	375.7	374.9	373.7	372.4	371.2	369.9	369.9
32.5°	366.6	366.0	365.4	364.8	364.3	363.4	362.5	361.5	360.6	359.6	359.1
35°	349.0	348.5	347.9	347.4	346.9	346.0	344.9	343.7	342.6	341.4	340.9
37.5°	331.1	330.4	329.7	329.0	328.4	327.4	326.2	325.0	323.9	322.7	322.1
40°	318.6	318.0	317.5	316.9	316.4	315.5	314.3	313.0	311.8	310.5	309.8
42.5°	306.0	305.4	304.8	304.2	303.6	302.6	301.4	300.1	298.9	297.6	297.0
45°	286.0	285.7	285.3	285.0	284.6	283.9	282.7	281.5	280.3	279.2	278.2
47.5°	266.2	265.7	265.2	264.7	264.2	263.4	262.3	261.1	260.1	259.0	258.0
50°	252.7	252.3	251.8	251.4	251.0	250.1	249.0	247.9	246.7	245.6	244.5
52.5°	238.6	238.3	238.0	237.7	237.4	236.6	235.4	234.2	233.0	231.7	230.9
55°	217.1	217.0	216.9	216.8	216.7	216.0	214.9	213.7	212.6	211.5	210.4
57.5°	196.5	196.2	195.9	195.6	195.3	194.7	193.7	192.8	191.9	191.0	190.1
60°	181.8	181.7	181.6	181.5	181.4	180.8	179.7	178.7	177.6	176.5	175.7
62.5°	168.6	168.3	168.2	167.9	167.6	167.0	165.9	164.9	163.8	162.7	162.0
65°	148.0	147.6	147.1	146.7	146.3	145.6	144.7	143.8	142.9	142.0	141.3
67.5°	126.3	125.9	125.5	125.1	124.8	124.2	123.6	122.9	122.2	121.5	120.9
70°	113.1	112.6	112.1	111.5	111.0	110.5	109.9	109.3	108.8	108.3	107.7
72.5°	99.4	98.9	98.6	98.2	97.7	97.3	96.7	96.1	95.5	94.9	94.3
75°	78.3	77.8	77.5	77.1	76.8	76.5	76.2	75.9	75.7	75.4	75.0
77.5°	59.5	59.3	59.2	59.0	58.7	58.5	58.2	57.9	57.5	57.2	56.9
80°	47.4	47.1	46.8	46.6	46.2	46.1	45.9	45.7	45.5	45.4	45.2
82.5°	35.5	35.4	35.4	35.3	35.2	35.2	35.1	35.1	35.1	35.0	34.9
85°	20.8	20.7	20.5	20.3	20.1	20.1	20.1	20.1	20.1	20.1	19.9
87.5°	8.4	8.5	8.6	8.7	8.8	9.0	9.2	9.6	9.8	10.2	10.2
90°	0.6	2.1	3.4	4.9	6.3	7.9	9.8	11.6	13.5	15.3	15.9
92.5°	15.5	16.4	17.4	18.3	19.3	20.3	21.4	22.5	23.5	24.5	25.0
95°	37.7	38.7	39.7	40.7	41.7	42.7	43.9	45.0	46.1	47.3	47.9
97.5°	67.0	67.7	68.4	69.2	69.9	70.7	71.5	72.3	73.2	74.0	74.6
100°	86.9	87.7	88.6	89.5	90.3	91.1	91.8	92.6	93.2	93.9	94.4
102.5°	109.9	110.5	111.0	111.4	111.9	112.7	113.7	114.6	115.5	116.4	116.8
105°	143.8	144.0	144.4	144.6	144.9	145.7	147.0	148.3	149.6	150.8	150.8
107.5°	183.1	183.3	183.5	183.7	183.8	184.2	184.7	185.2	185.7	186.2	186.7
110°	207.7	208.0	208.3	208.5	208.8	209.1	209.4	209.7	210.0	210.3	210.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	233.2	233.4	233.6	233.8	233.9	234.0	234.1	234.2	234.2	234.3	235.0
115°	271.6	272.0	272.4	272.9	273.3	273.4	273.1	272.9	272.5	272.2	272.4
117.5°	310.2	310.5	310.7	311.1	311.3	311.3	310.9	310.6	310.2	309.8	309.8
120°	334.2	335.1	336.0	336.8	337.7	337.7	337.0	336.3	335.6	334.8	334.8
122.5°	359.3	359.9	360.5	361.2	361.8	361.9	361.5	361.2	360.8	360.4	360.1
125°	397.5	398.0	398.4	398.8	399.2	399.2	399.0	398.7	398.4	398.1	397.6
127.5°	432.7	433.7	434.6	435.5	436.4	436.7	436.4	436.1	435.8	435.5	434.6
130°	456.3	457.4	458.6	459.7	460.8	461.2	460.8	460.4	459.9	459.5	458.9
132.5°	479.8	481.0	482.1	483.2	484.4	484.7	484.5	484.1	483.8	483.5	482.8
135°	515.7	516.6	517.5	518.3	519.1	519.5	519.4	519.2	519.1	518.9	518.3
137.5°	549.0	549.7	550.4	551.1	551.8	552.3	552.7	553.1	553.5	553.8	553.2
140°	572.0	572.7	573.4	574.1	574.8	575.2	575.4	575.5	575.7	575.8	575.7
142.5°	593.0	593.7	594.3	595.0	595.7	596.2	596.5	596.8	597.0	597.3	597.1
145°	625.7	625.9	626.2	626.5	626.8	627.2	627.6	628.0	628.4	628.9	628.7
147.5°	654.3	654.8	655.3	655.8	656.3	656.8	657.2	657.5	658.0	658.4	658.4
150°	674.2	674.5	674.8	675.1	675.4	675.6	675.9	676.2	676.5	676.7	676.7
152.5°	690.6	691.0	691.4	691.8	692.2	692.4	692.6	692.8	692.9	693.1	693.4
155°	716.4	716.4	716.4	716.4	716.4	716.4	716.6	716.8	716.9	717.0	717.6
157.5°	738.4	738.2	738.0	737.9	737.7	737.7	737.8	737.9	738.0	738.1	738.7
160°	752.2	751.9	751.7	751.3	751.1	750.9	750.9	750.9	750.9	750.9	751.7
162.5°	764.5	764.1	763.6	763.3	762.8	762.8	762.8	762.9	763.1	763.2	763.9
165°	780.3	779.9	779.5	779.0	778.6	778.3	778.3	778.3	778.3	778.3	779.2
167.5°	793.0	792.4	791.9	791.3	790.7	790.5	790.6	790.7	790.8	790.9	791.8
170°	800.1	799.5	799.0	798.4	797.8	797.5	797.5	797.5	797.5	797.5	798.6
172.5°	805.7	805.2	804.6	804.0	803.5	803.1	803.1	803.1	803.1	803.1	804.1
175°	811.6	811.1	810.5	809.9	809.3	809.1	809.1	809.1	809.1	809.1	809.9
177.5°	814.1	813.6	813.1	812.7	812.3	812.0	812.0	812.0	812.0	812.0	812.7
180°	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6
2.5°	464.8	465.5	466.2	466.6	466.5	466.4	466.3	466.2
5°	462.4	463.2	464.2	464.5	464.3	464.2	463.9	463.7
7.5°	457.4	458.2	459.0	459.3	459.3	459.2	459.1	458.9
10°	453.0	453.7	454.5	454.9	454.7	454.5	454.3	454.2
12.5°	448.0	448.6	449.2	449.4	449.4	449.2	449.1	449.0
15°	439.1	439.8	440.6	440.7	440.1	439.5	439.0	438.5
17.5°	427.8	428.3	428.9	429.0	428.8	428.6	428.4	428.3
20°	419.6	419.9	420.3	420.3	420.0	419.7	419.5	419.2
22.5°	410.7	411.0	411.3	411.3	411.0	410.6	410.3	409.9
25°	396.1	396.2	396.3	396.2	396.0	395.7	395.5	395.2
27.5°	380.6	380.7	380.7	380.6	380.3	380.0	379.6	379.3
30°	369.9	369.9	369.9	369.5	368.9	368.3	367.7	367.0
32.5°	358.6	358.1	357.7	357.2	356.9	356.5	356.2	355.9
35°	340.4	339.8	339.2	338.8	338.4	337.9	337.4	337.0
37.5°	321.4	320.8	320.1	319.7	319.4	319.1	318.8	318.6
40°	309.1	308.4	307.6	307.1	306.8	306.4	306.1	305.7
42.5°	296.3	295.5	294.8	294.3	293.9	293.6	293.3	292.8
45°	277.1	276.0	274.9	274.2	273.7	273.3	272.9	272.4
47.5°	256.9	255.9	254.8	254.1	253.7	253.3	252.9	252.5
50°	243.6	242.5	241.6	240.8	240.3	239.8	239.3	238.7
52.5°	230.1	229.2	228.3	227.6	227.1	226.6	226.1	225.6
55°	209.5	208.4	207.5	206.8	206.4	205.9	205.4	205.0
57.5°	189.2	188.3	187.4	186.8	186.2	185.7	185.2	184.7
60°	175.0	174.1	173.3	172.7	172.2	171.8	171.3	170.9
62.5°	161.1	160.3	159.5	158.9	158.7	158.3	158.1	157.7
65°	140.6	139.9	139.1	138.7	138.4	138.1	137.8	137.6
67.5°	120.2	119.6	119.0	118.5	118.1	117.7	117.4	117.0
70°	107.1	106.4	105.8	105.3	104.9	104.4	103.9	103.5
72.5°	93.8	93.2	92.6	92.2	92.0	91.8	91.5	91.3
75°	74.6	74.0	73.6	73.3	73.0	72.8	72.5	72.2
77.5°	56.6	56.3	56.0	55.9	55.9	55.9	55.9	55.9
80°	45.1	45.0	44.9	44.9	44.9	44.9	44.9	44.9
82.5°	34.8	34.6	34.4	34.3	34.3	34.2	34.1	34.0
85°	19.7	19.5	19.4	19.3	19.3	19.3	19.3	19.3
87.5°	10.2	10.2	10.3	10.3	10.4	10.4	10.5	10.6
90°	16.4	17.0	17.7	18.0	18.3	18.6	18.9	19.2
92.5°	25.5	25.9	26.3	26.5	26.3	26.2	26.0	25.8
95°	48.4	49.0	49.6	49.9	49.9	49.9	49.9	49.9
97.5°	75.3	75.9	76.6	76.9	76.9	76.8	76.7	76.7
100°	94.8	95.2	95.7	96.0	96.3	96.6	96.9	97.1
102.5°	117.3	117.7	118.1	118.3	118.3	118.2	118.1	118.1
105°	150.8	150.8	150.8	150.9	151.3	151.5	151.8	152.1
107.5°	187.1	187.6	188.0	188.2	188.0	187.9	187.7	187.5
110°	211.4	212.0	212.5	212.7	212.4	212.1	211.8	211.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	235.7	236.3	237.0	237.3	237.3	237.2	237.1	237.1
115°	272.5	272.7	272.9	272.9	272.7	272.5	272.4	272.2
117.5°	309.8	309.7	309.7	309.5	309.1	308.7	308.3	307.9
120°	334.6	334.4	334.3	334.1	333.8	333.6	333.2	332.9
122.5°	359.7	359.3	359.0	358.6	358.2	357.7	357.4	357.0
125°	397.0	396.4	395.9	395.3	394.8	394.2	393.6	393.0
127.5°	433.9	433.1	432.3	431.5	430.9	430.2	429.6	429.0
130°	458.4	457.8	457.2	456.4	455.5	454.4	453.5	452.5
132.5°	482.2	481.5	480.8	480.1	479.3	478.5	477.8	477.0
135°	517.8	517.2	516.7	516.3	515.9	515.7	515.4	515.1
137.5°	552.6	552.0	551.5	550.9	550.4	549.7	549.2	548.7
140°	575.5	575.4	575.2	574.6	573.7	572.7	571.7	570.7
142.5°	597.0	596.8	596.7	596.2	595.5	594.7	593.9	593.1
145°	628.5	628.4	628.3	627.9	627.3	626.8	626.2	625.7
147.5°	658.4	658.4	658.4	658.0	657.1	656.3	655.4	654.5
150°	676.7	676.7	676.7	676.3	675.5	674.7	673.8	673.0
152.5°	693.6	693.8	694.1	693.8	693.0	692.3	691.6	690.9
155°	718.2	718.8	719.3	719.1	718.1	717.1	716.1	715.1
157.5°	739.3	739.9	740.5	740.4	739.6	738.8	738.0	737.2
160°	752.3	753.0	753.7	753.8	753.3	752.7	752.1	751.6
162.5°	764.6	765.3	766.0	765.9	765.0	764.1	763.2	762.2
165°	780.1	780.9	781.8	781.7	780.8	779.7	778.8	777.7
167.5°	792.6	793.6	794.4	794.4	793.6	792.6	791.8	790.9
170°	799.5	800.6	801.5	801.5	800.6	799.5	798.6	797.5
172.5°	804.9	805.8	806.7	806.7	805.6	804.7	803.7	802.7
175°	810.8	811.6	812.4	812.4	811.4	810.4	809.4	808.4
177.5°	813.4	814.1	814.8	814.7	813.9	813.0	812.3	811.5
180°	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6

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