

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: P332256-935

Luminaire Tested: **S123RDIP-S340D805U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332256-935
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: S123RDIP-S340D805U935-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3494.3 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

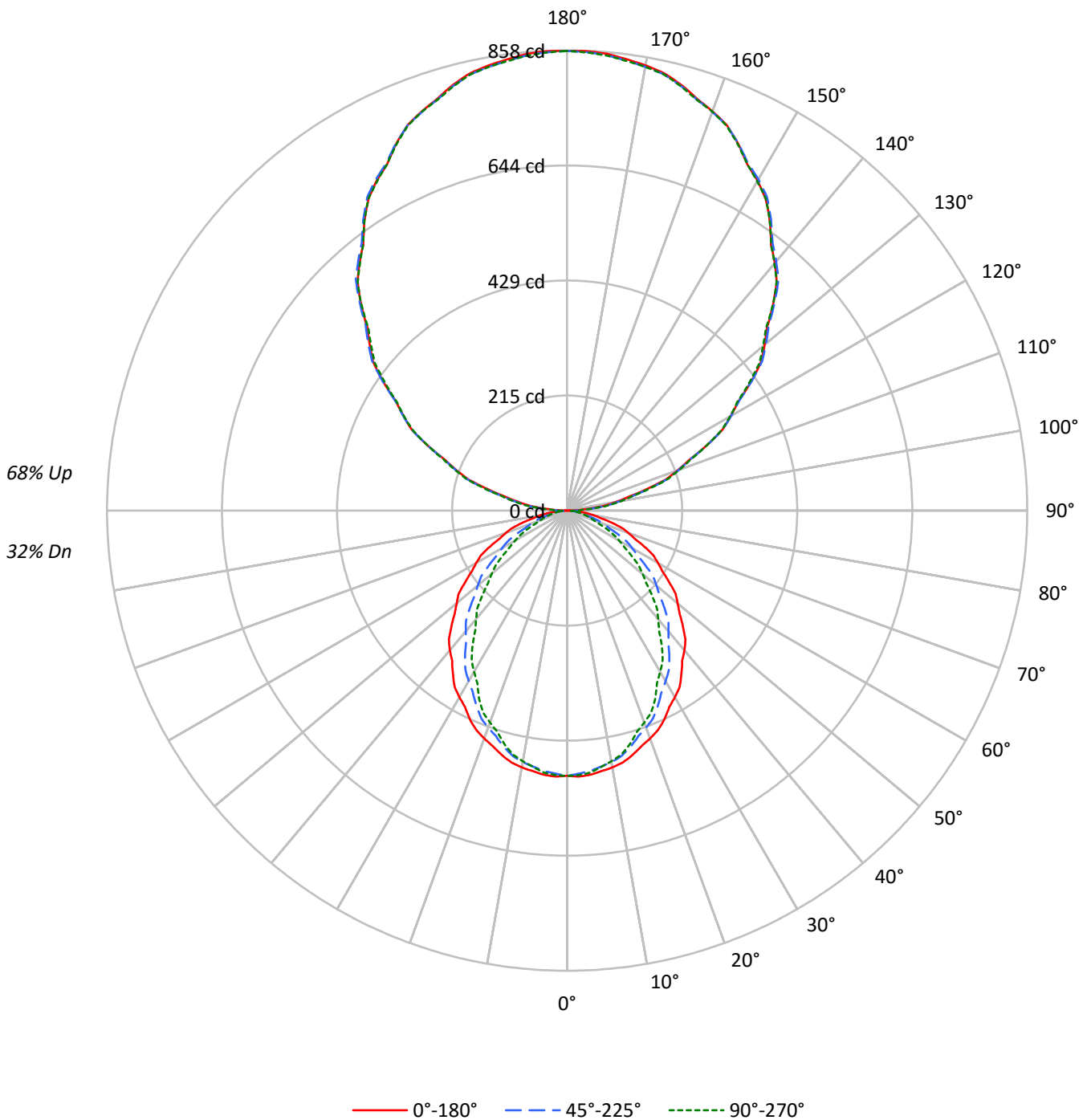
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	103	103	103	103	93	93	93	93	73	73	73	56	56	56	40	40	40	32
1	94	90	86	83	84	81	78	75	64	62	60	49	48	47	35	35	34	27
2	86	79	73	68	77	71	66	62	57	53	50	44	41	39	31	30	29	23
3	78	69	62	57	70	63	57	52	50	46	42	39	36	33	28	26	25	20
4	72	61	54	48	64	56	49	44	45	40	36	34	31	29	25	23	21	17
5	66	55	47	41	59	49	43	38	40	35	31	31	28	25	23	20	19	15
6	60	49	41	36	54	44	38	33	36	31	27	28	25	22	21	18	17	13
7	56	44	36	31	50	40	33	29	33	28	24	25	22	19	19	16	15	12
8	52	40	33	27	47	36	30	25	30	25	21	23	20	17	17	15	13	11
9	48	36	29	24	43	33	27	23	27	22	19	21	18	15	16	14	12	10
10	45	33	26	22	40	30	24	20	25	20	17	20	16	14	15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5324	5324	5324
5°	5344	5271	5302
10°	5314	5205	5187
15°	5258	5084	5029
20°	5179	4931	4816
25°	5099	4760	4608
30°	4992	4561	4313
35°	4882	4365	4043
40°	4780	4131	3710
45°	4647	3902	3408
50°	4501	3641	3069
55°	4352	3342	2755
60°	4215	3023	2409
65°	4037	2677	2063
70°	3811	2247	1668
75°	3489	1768	1568
80°	3106	1568	1438
85°	2631	1383	1284



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	1.3
10°-20°	129.2	3.7
20°-30°	186.1	5.3
30°-40°	209.6	6.0
40°-50°	200.5	5.7
50°-60°	164.2	4.7
60°-70°	110.8	3.2
70°-80°	55.7	1.6
80°-90°	17.3	0.5
90°-100°	55.8	1.6
100°-110°	167.1	4.8
110°-120°	284.2	8.1
120°-130°	373.8	10.7
130°-140°	420.2	12.0
140°-150°	413.0	11.8
150°-160°	347.7	10.0
160°-170°	231.4	6.6
170°-180°	81.0	2.3
0°-30°	361.8	10.4
0°-40°	571.4	16.4
0°-60°	936.2	26.8
0°-90°	1120.0	32.1
90°-120°	507.1	14.5
90°-150°	1714.1	49.1
90°-180°	2374.0	67.9
0°-180°	3494.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	495	495	495	495	495	
5°	495	492	488	491	491	47
15°	472	467	456	454	451	133
25°	429	419	401	393	388	197
35°	372	356	332	315	308	232
45°	305	286	256	234	224	235
55°	232	211	178	156	147	208
65°	158	136	105	86	81	157
75°	84	64	42	39	38	89
85°	21	13	11	10	10	24
90°	1	8	16	19	20	3
95°	40	44	50	52	52	45
105°	151	153	159	159	160	162
115°	286	288	287	287	287	283
125°	419	421	419	417	414	373
135°	543	547	547	544	543	418
145°	659	660	662	662	659	411
155°	755	755	755	758	753	347
165°	822	820	820	824	819	232
175°	855	852	852	856	852	81
180°	857	857	857	857	857	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6
2.5°	496.3	495.9	495.7	495.4	495.2	494.6	493.7	492.8	492.0	491.1	491.9
5°	494.6	494.2	493.8	493.4	492.8	492.1	491.0	490.0	488.9	487.8	488.6
7.5°	490.1	489.6	489.1	488.6	488.2	487.2	485.9	484.5	483.0	481.6	482.1
10°	486.2	485.6	485.0	484.4	483.7	482.6	481.0	479.4	477.8	476.2	476.3
12.5°	480.8	480.1	479.4	478.7	478.0	476.6	474.7	472.8	470.8	468.8	468.7
15°	471.8	470.8	469.8	468.8	467.9	466.1	463.6	461.2	458.7	456.2	455.7
17.5°	460.5	459.3	458.2	457.0	455.9	453.7	450.6	447.4	444.3	441.1	440.1
20°	452.1	450.7	449.3	447.9	446.4	444.0	440.7	437.2	433.9	430.5	429.3
22.5°	442.8	441.2	439.5	437.9	436.3	433.7	430.1	426.5	422.8	419.2	417.8
25°	429.3	427.1	424.8	422.6	420.3	417.2	413.1	409.0	404.8	400.8	398.9
27.5°	412.8	410.4	407.9	405.4	402.9	399.5	394.9	390.3	385.7	381.2	378.6
30°	401.6	398.9	396.2	393.6	390.9	387.0	382.0	377.0	372.0	367.0	364.0
32.5°	390.4	387.3	384.3	381.3	378.2	374.1	368.8	363.5	358.3	352.9	349.7
35°	371.5	368.2	365.1	361.9	358.7	354.3	348.8	343.2	337.7	332.2	328.4
37.5°	352.4	348.8	345.3	341.7	338.1	333.4	327.5	321.6	315.7	309.8	305.5
40°	340.2	336.3	332.3	328.5	324.5	319.3	313.1	306.7	300.4	294.0	289.5
42.5°	326.4	322.4	318.6	314.6	310.7	305.5	298.9	292.4	285.9	279.3	274.2
45°	305.3	301.3	297.3	293.3	289.2	283.8	277.0	270.1	263.2	256.3	251.2
47.5°	284.2	279.8	275.3	271.0	266.6	261.0	254.1	247.2	240.4	233.5	228.0
50°	268.8	264.6	260.5	256.2	252.0	246.3	239.1	231.9	224.6	217.4	211.9
52.5°	255.0	250.5	245.9	241.3	236.8	230.9	223.8	216.6	209.5	202.3	196.7
55°	231.9	227.5	223.2	218.8	214.4	208.4	200.9	193.3	185.7	178.1	173.0
57.5°	210.5	205.8	201.0	196.2	191.5	185.3	177.7	170.0	162.5	154.9	150.0
60°	195.8	190.9	186.0	181.1	176.2	170.0	162.6	155.2	147.8	140.4	135.6
62.5°	181.0	176.1	171.2	166.3	161.4	155.2	147.8	140.4	133.0	125.6	121.1
65°	158.5	153.6	148.7	143.8	138.9	132.9	126.0	119.0	112.1	105.1	100.7
67.5°	136.0	131.0	126.0	121.1	116.1	110.3	103.6	96.9	90.2	83.6	80.3
70°	121.1	116.3	111.5	106.7	101.9	96.3	90.1	83.9	77.7	71.4	68.3
72.5°	106.4	101.7	96.9	92.1	87.4	82.2	76.5	70.9	65.2	59.5	57.0
75°	83.9	79.6	75.3	71.0	66.7	62.2	57.3	52.3	47.4	42.5	41.7
77.5°	63.3	59.4	55.5	51.7	47.9	44.3	41.2	38.0	34.9	31.7	31.3
80°	50.1	46.5	42.9	39.2	35.6	32.8	30.9	29.0	27.1	25.3	25.0
82.5°	37.6	34.4	31.3	28.2	25.0	23.0	22.1	21.3	20.4	19.5	19.2
85°	21.3	19.3	17.3	15.4	13.4	12.3	12.1	11.8	11.5	11.2	11.0
87.5°	7.8	7.3	6.9	6.4	5.9	5.9	6.2	6.6	7.0	7.4	7.5
90°	0.7	2.2	3.7	5.2	6.6	8.4	10.3	12.2	14.2	16.2	16.8
92.5°	16.3	17.3	18.3	19.4	20.3	21.4	22.6	23.7	24.7	25.8	26.3
95°	39.7	40.7	41.8	42.9	43.9	45.0	46.2	47.4	48.6	49.9	50.5
97.5°	70.5	71.3	72.1	72.8	73.7	74.5	75.3	76.2	77.1	77.9	78.6
100°	91.5	92.5	93.3	94.3	95.1	96.0	96.7	97.5	98.2	98.9	99.4
102.5°	115.8	116.3	116.8	117.4	118.0	118.7	119.7	120.7	121.7	122.7	123.1
105°	151.4	151.8	152.1	152.4	152.7	153.5	154.8	156.2	157.6	158.9	158.9
107.5°	193.0	193.1	193.3	193.5	193.6	194.0	194.6	195.1	195.6	196.1	196.7
110°	218.8	219.0	219.4	219.6	220.0	220.2	220.6	220.8	221.2	221.4	222.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	245.7	245.9	246.1	246.2	246.4	246.5	246.6	246.7	246.8	246.8	247.5
115°	286.1	286.5	287.0	287.4	287.9	288.0	287.7	287.4	287.1	286.8	286.9
117.5°	326.7	327.1	327.4	327.6	328.0	327.9	327.5	327.1	326.7	326.3	326.3
120°	352.1	352.9	353.9	354.7	355.7	355.8	355.0	354.2	353.5	352.8	352.6
122.5°	378.5	379.1	379.8	380.4	381.1	381.3	380.8	380.5	380.0	379.7	379.3
125°	418.7	419.1	419.6	420.1	420.5	420.6	420.3	420.0	419.7	419.4	418.8
127.5°	455.9	456.8	457.8	458.7	459.7	460.0	459.7	459.3	459.0	458.7	457.9
130°	480.6	481.8	483.0	484.2	485.4	485.8	485.3	484.9	484.5	484.0	483.4
132.5°	505.4	506.6	507.8	509.0	510.2	510.7	510.3	510.0	509.6	509.3	508.6
135°	543.2	544.2	545.0	546.0	546.8	547.3	547.1	546.9	546.7	546.6	546.0
137.5°	578.2	579.0	579.7	580.5	581.3	581.8	582.2	582.6	583.0	583.3	582.7
140°	602.4	603.2	604.0	604.8	605.5	605.9	606.1	606.2	606.4	606.5	606.4
142.5°	624.6	625.3	626.0	626.8	627.6	628.1	628.4	628.6	628.9	629.1	629.0
145°	659.0	659.4	659.6	660.0	660.2	660.6	661.1	661.5	661.9	662.4	662.3
147.5°	689.2	689.7	690.3	690.8	691.4	691.8	692.2	692.7	693.1	693.5	693.5
150°	710.2	710.5	710.8	711.1	711.4	711.7	712.0	712.3	712.6	712.9	712.9
152.5°	727.5	727.8	728.2	728.7	729.1	729.4	729.6	729.8	730.0	730.1	730.4
155°	754.6	754.6	754.6	754.6	754.6	754.7	754.8	755.0	755.2	755.3	755.9
157.5°	777.7	777.6	777.4	777.2	777.1	777.1	777.1	777.3	777.4	777.5	778.2
160°	792.3	792.0	791.7	791.4	791.1	791.0	791.0	791.0	791.0	791.0	791.7
162.5°	805.2	804.9	804.4	804.0	803.6	803.4	803.6	803.7	803.7	803.9	804.6
165°	821.9	821.5	821.0	820.6	820.1	819.9	819.9	819.9	819.9	819.9	820.8
167.5°	835.3	834.7	834.1	833.4	832.8	832.7	832.8	832.8	833.0	833.1	834.1
170°	842.8	842.2	841.6	841.0	840.4	840.1	840.1	840.1	840.1	840.1	841.2
172.5°	848.7	848.2	847.6	847.0	846.4	846.0	846.0	846.0	846.0	846.0	847.0
175°	854.9	854.3	853.8	853.2	852.6	852.2	852.2	852.2	852.2	852.2	853.2
177.5°	857.5	857.0	856.5	856.0	855.6	855.3	855.3	855.3	855.3	855.3	856.0
180°	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6
2.5°	492.7	493.4	494.3	494.6	494.5	494.3	494.1	494.0
5°	489.5	490.3	491.0	491.4	491.2	491.0	490.9	490.7
7.5°	482.6	483.0	483.5	483.5	483.2	482.9	482.6	482.3
10°	476.4	476.5	476.6	476.4	476.0	475.5	475.0	474.6
12.5°	468.7	468.6	468.6	468.3	467.8	467.3	466.7	466.2
15°	455.2	454.8	454.3	453.8	453.2	452.5	451.9	451.3
17.5°	439.2	438.2	437.3	436.4	435.4	434.5	433.6	432.7
20°	428.2	427.0	425.9	424.7	423.6	422.6	421.5	420.4
22.5°	416.4	414.9	413.5	412.2	411.2	410.3	409.2	408.3
25°	397.0	395.2	393.3	391.8	390.9	389.9	388.9	388.0
27.5°	376.0	373.4	370.8	368.8	367.2	365.8	364.3	362.7
30°	361.0	358.0	355.0	352.8	351.3	349.9	348.4	347.0
32.5°	346.3	343.0	339.7	337.3	335.8	334.3	332.8	331.3
35°	324.5	320.6	316.8	314.1	312.5	310.9	309.3	307.7
37.5°	301.1	296.7	292.4	289.2	287.2	285.2	283.3	281.3
40°	284.8	280.2	275.5	272.2	270.1	268.1	266.0	264.0
42.5°	269.1	264.2	259.1	255.6	253.7	251.9	250.1	248.2
45°	246.2	241.1	236.0	232.4	230.3	228.2	226.0	223.9
47.5°	222.4	216.9	211.4	207.7	205.8	203.9	201.9	200.0
50°	206.4	200.9	195.4	191.6	189.5	187.4	185.4	183.3
52.5°	190.9	185.1	179.4	175.6	173.7	171.9	170.1	168.2
55°	167.8	162.6	157.5	153.9	152.2	150.4	148.6	146.8
57.5°	145.1	140.2	135.3	132.1	130.6	129.1	127.6	126.1
60°	130.8	126.0	121.1	118.0	116.5	114.9	113.5	111.9
62.5°	116.6	112.1	107.5	104.4	102.9	101.3	99.7	98.2
65°	96.3	92.0	87.6	85.0	83.9	83.0	82.1	81.0
67.5°	77.1	73.8	70.5	68.4	67.3	66.3	65.3	64.2
70°	65.2	62.1	58.9	56.9	55.9	54.9	53.9	53.0
72.5°	54.4	51.9	49.3	47.9	47.4	47.0	46.7	46.2
75°	40.7	39.9	38.9	38.4	38.2	38.1	37.9	37.7
77.5°	30.7	30.2	29.8	29.4	29.3	29.1	28.9	28.8
80°	24.7	24.5	24.2	24.0	23.8	23.6	23.4	23.2
82.5°	18.9	18.7	18.4	18.3	18.3	18.2	18.2	18.2
85°	10.8	10.7	10.5	10.4	10.4	10.4	10.4	10.4
87.5°	7.5	7.6	7.6	7.6	7.6	7.6	7.6	7.6
90°	17.4	17.9	18.5	19.0	19.3	19.6	19.9	20.2
92.5°	26.8	27.3	27.7	27.9	27.7	27.6	27.4	27.2
95°	51.0	51.6	52.2	52.5	52.5	52.5	52.5	52.5
97.5°	79.3	80.0	80.7	81.0	80.9	80.9	80.8	80.8
100°	99.9	100.3	100.7	101.2	101.4	101.7	102.0	102.3
102.5°	123.6	124.0	124.4	124.7	124.6	124.5	124.5	124.4
105°	158.9	158.9	158.9	159.0	159.3	159.6	159.9	160.2
107.5°	197.1	197.6	198.1	198.2	198.0	197.9	197.7	197.5
110°	222.7	223.3	223.9	224.0	223.7	223.4	223.1	222.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	248.2	248.9	249.7	249.9	249.9	249.9	249.8	249.8
115°	287.1	287.2	287.4	287.4	287.2	287.1	286.9	286.8
117.5°	326.3	326.2	326.2	326.0	325.6	325.2	324.8	324.3
120°	352.4	352.3	352.1	351.9	351.6	351.3	351.0	350.7
122.5°	378.9	378.5	378.2	377.7	377.3	376.9	376.4	376.0
125°	418.2	417.6	417.0	416.4	415.8	415.2	414.6	414.0
127.5°	457.0	456.2	455.4	454.6	453.9	453.2	452.5	451.9
130°	482.8	482.2	481.6	480.8	479.7	478.7	477.7	476.6
132.5°	507.9	507.1	506.4	505.7	504.9	504.0	503.3	502.5
135°	545.4	544.8	544.2	543.8	543.5	543.2	542.9	542.6
137.5°	582.1	581.5	580.8	580.2	579.7	579.1	578.6	578.0
140°	606.2	606.1	605.9	605.4	604.2	603.2	602.2	601.2
142.5°	628.9	628.7	628.5	628.1	627.2	626.5	625.6	624.8
145°	662.1	661.9	661.8	661.4	660.8	660.2	659.6	659.0
147.5°	693.5	693.5	693.5	693.0	692.2	691.2	690.3	689.5
150°	712.9	712.9	712.9	712.5	711.5	710.7	709.7	708.9
152.5°	730.6	730.8	731.1	730.8	730.0	729.3	728.5	727.7
155°	756.5	757.1	757.7	757.4	756.4	755.4	754.3	753.3
157.5°	778.8	779.4	780.0	779.9	779.1	778.3	777.4	776.5
160°	792.5	793.2	793.9	794.0	793.4	792.8	792.2	791.6
162.5°	805.4	806.2	806.9	806.8	805.8	804.9	803.9	803.0
165°	821.7	822.6	823.5	823.5	822.4	821.3	820.3	819.2
167.5°	835.0	835.9	836.8	836.8	835.9	835.0	834.1	833.1
170°	842.2	843.3	844.3	844.3	843.3	842.2	841.2	840.1
172.5°	847.9	848.9	849.7	849.7	848.6	847.6	846.5	845.5
175°	854.0	854.9	855.8	855.7	854.7	853.7	852.6	851.5
177.5°	856.8	857.5	858.2	858.2	857.3	856.4	855.7	854.8
180°	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0

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