

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: P332286-935

Luminaire Tested: **S123RDIP-S560D805U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332286-935
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-S560D805U935-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 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: 4214.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.23
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

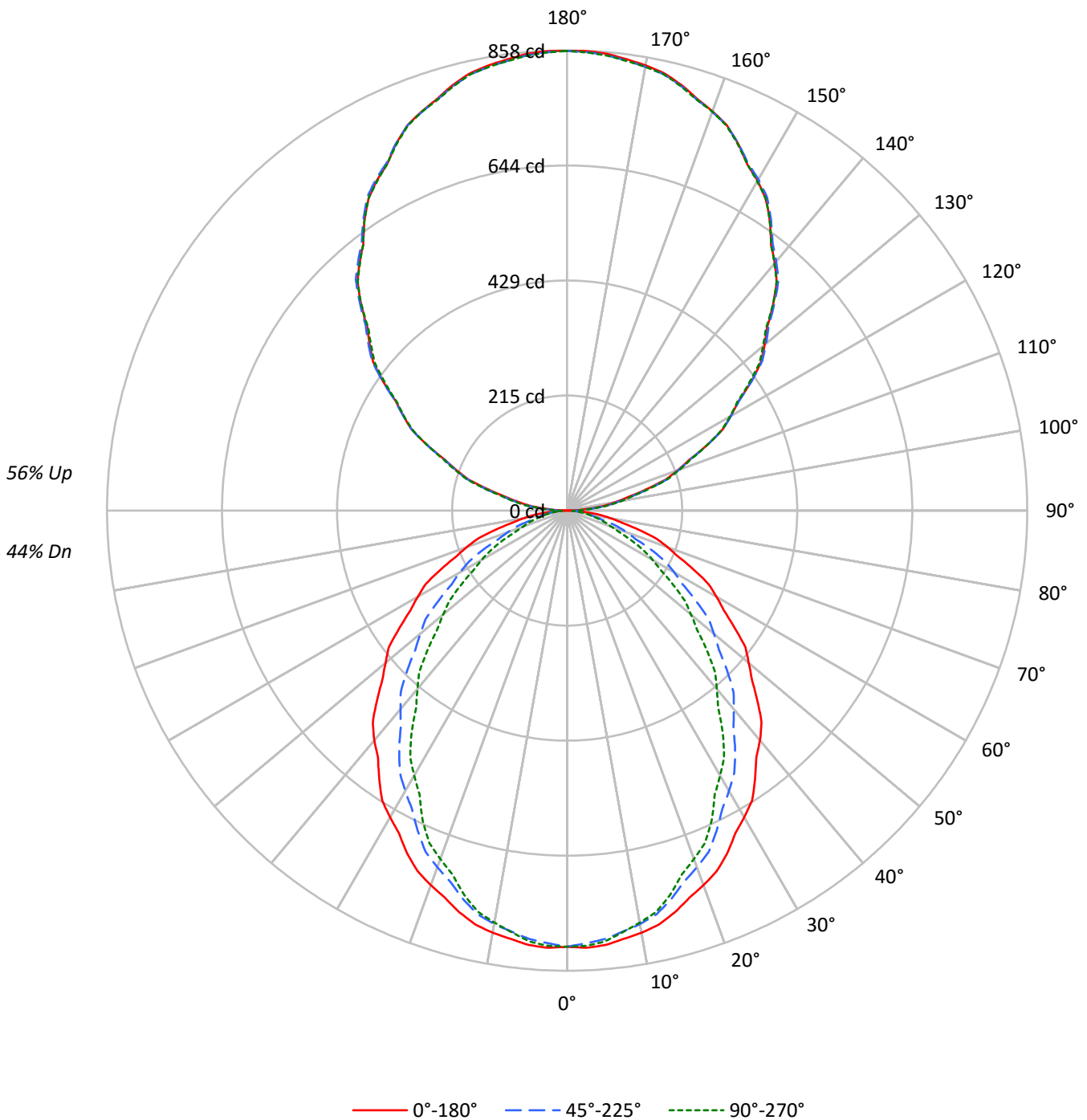
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	97	92	89	85	88	85	82	79	70	68	66	57	56	54	45	44	43	37
2	88	81	75	70	80	74	69	65	62	58	55	50	48	46	40	38	37	32
3	81	71	64	59	74	66	60	55	55	50	47	45	42	39	36	33	31	27
4	74	63	56	50	67	58	52	46	49	44	40	40	36	34	32	29	27	24
5	68	57	49	43	62	52	45	40	44	39	35	36	32	29	29	26	24	21
6	63	51	43	37	57	47	40	35	40	34	30	33	29	26	26	23	21	18
7	58	46	38	33	53	42	36	31	36	31	27	30	26	23	24	21	19	16
8	54	42	34	29	49	39	32	27	33	27	24	27	23	20	22	19	17	15
9	50	38	31	26	46	35	29	24	30	25	21	25	21	18	20	18	15	13
10	47	35	28	23	43	32	26	22	28	23	19	23	19	17	19	16	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8753	8753	8753
5°	8787	8666	8715
10°	8737	8557	8528
15°	8643	8357	8269
20°	8514	8107	7918
25°	8381	7826	7574
30°	8206	7501	7091
35°	8025	7176	6646
40°	7859	6794	6097
45°	7640	6416	5602
50°	7400	5987	5047
55°	7156	5495	4530
60°	6928	4969	3961
65°	6635	4401	3393
70°	6266	3695	2738
75°	5731	2907	2578
80°	5114	2579	2368
85°	4323	2272	2112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.4	1.8
10°-20°	212.5	5.0
20°-30°	305.9	7.3
30°-40°	344.6	8.2
40°-50°	329.7	7.8
50°-60°	270.0	6.4
60°-70°	182.2	4.3
70°-80°	91.6	2.2
80°-90°	26.8	0.6
90°-100°	55.8	1.3
100°-110°	167.1	4.0
110°-120°	284.2	6.7
120°-130°	373.8	8.9
130°-140°	420.2	10.0
140°-150°	413.0	9.8
150°-160°	347.7	8.3
160°-170°	231.4	5.5
170°-180°	81.0	1.9
0°-30°	594.8	14.1
0°-40°	939.4	22.3
0°-60°	1539.1	36.5
0°-90°	1839.7	43.7
90°-120°	507.1	12.0
90°-150°	1714.1	40.7
90°-180°	2374.0	56.3
0°-180°	4214.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	813	813	813	813	813	
5°	813	810	802	808	807	77
15°	776	768	750	747	742	218
25°	706	688	659	645	638	324
35°	611	586	546	519	506	382
45°	502	471	422	385	368	387
55°	381	348	293	256	241	342
65°	260	223	173	142	133	258
75°	138	106	70	64	62	147
85°	35	21	18	17	17	39
90°	1	8	16	19	20	4
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°	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2
2.5°	815.9	815.4	814.9	814.4	814.0	813.0	811.7	810.2	808.8	807.4	808.7
5°	813.2	812.5	811.8	811.1	810.3	809.1	807.3	805.6	803.7	802.0	803.3
7.5°	805.7	804.9	804.1	803.3	802.5	801.0	798.7	796.4	794.1	791.9	792.6
10°	799.4	798.3	797.3	796.3	795.3	793.4	790.8	788.2	785.5	782.9	783.0
12.5°	790.4	789.3	788.1	787.0	785.8	783.7	780.4	777.2	774.0	770.8	770.7
15°	775.6	774.0	772.4	770.8	769.2	766.3	762.2	758.1	754.0	749.9	749.2
17.5°	757.0	755.2	753.3	751.4	749.5	746.0	740.7	735.6	730.3	725.1	723.6
20°	743.3	741.0	738.7	736.2	733.9	730.0	724.4	718.8	713.3	707.7	705.8
22.5°	728.0	725.3	722.6	719.9	717.2	712.9	707.0	701.0	695.2	689.2	686.8
25°	705.7	702.1	698.4	694.7	691.0	685.9	679.1	672.4	665.6	658.9	655.8
27.5°	678.6	674.6	670.5	666.5	662.5	656.7	649.2	641.7	634.2	626.7	622.4
30°	660.2	655.8	651.4	647.0	642.7	636.3	628.1	619.9	611.7	603.5	598.5
32.5°	641.7	636.8	631.8	626.8	621.8	615.0	606.3	597.6	588.9	580.2	574.8
35°	610.7	605.5	600.2	595.0	589.6	582.5	573.3	564.3	555.2	546.1	539.8
37.5°	579.4	573.5	567.7	561.7	555.9	548.1	538.4	528.7	519.0	509.3	502.1
40°	559.3	552.8	546.4	539.9	533.5	525.0	514.7	504.3	493.9	483.5	475.8
42.5°	536.6	530.1	523.7	517.3	510.8	502.2	491.5	480.7	469.9	459.2	450.8
45°	501.9	495.3	488.7	482.2	475.5	466.6	455.3	444.0	432.7	421.5	413.1
47.5°	467.2	459.9	452.7	445.5	438.2	429.0	417.7	406.4	395.1	383.8	374.8
50°	441.9	435.0	428.1	421.2	414.3	404.9	393.0	381.3	369.4	357.5	348.4
52.5°	419.2	411.7	404.2	396.7	389.3	379.7	367.9	356.2	344.4	332.7	323.2
55°	381.3	374.0	366.9	359.6	352.5	342.7	330.2	317.8	305.3	292.8	284.3
57.5°	346.1	338.3	330.5	322.6	314.8	304.6	292.1	279.7	267.1	254.6	246.6
60°	321.8	313.8	305.7	297.6	289.6	279.5	267.3	255.2	243.0	230.8	222.9
62.5°	297.6	289.6	281.5	273.4	265.4	255.2	243.1	230.9	218.7	206.6	199.1
65°	260.5	252.4	244.4	236.3	228.3	218.5	207.1	195.7	184.3	172.8	165.7
67.5°	223.4	215.3	207.2	199.0	190.9	181.3	170.3	159.4	148.4	137.4	132.1
70°	199.1	191.2	183.4	175.5	167.6	158.4	148.2	137.9	127.7	117.4	112.3
72.5°	174.9	167.1	159.3	151.5	143.7	135.2	125.9	116.5	107.2	97.9	93.7
75°	137.8	130.8	123.8	116.8	109.7	102.1	94.1	86.0	78.0	69.9	68.4
77.5°	104.1	97.7	91.4	85.0	78.6	72.8	67.7	62.5	57.3	52.1	51.3
80°	82.5	76.5	70.4	64.4	58.4	53.9	50.8	47.7	44.6	41.6	41.1
82.5°	61.9	56.7	51.5	46.3	41.1	37.8	36.3	35.0	33.5	32.0	31.6
85°	35.0	31.8	28.5	25.3	22.0	20.2	19.8	19.4	18.9	18.4	18.2
87.5°	12.8	11.8	10.8	9.8	8.9	8.5	9.0	9.3	9.7	10.1	10.1
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°	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2
2.5°	810.0	811.3	812.6	813.1	812.9	812.6	812.4	812.2
5°	804.6	806.0	807.3	807.8	807.5	807.2	806.9	806.6
7.5°	793.3	794.0	794.8	794.9	794.4	793.9	793.4	792.9
10°	783.2	783.3	783.4	783.2	782.5	781.7	781.0	780.2
12.5°	770.6	770.5	770.4	769.9	769.0	768.2	767.4	766.5
15°	748.5	747.7	747.0	746.1	745.0	744.1	743.0	742.0
17.5°	722.0	720.5	718.8	717.4	715.8	714.3	712.7	711.3
20°	703.9	702.0	700.1	698.3	696.5	694.7	692.9	691.2
22.5°	684.5	682.1	679.8	677.7	676.1	674.4	672.8	671.1
25°	652.7	649.6	646.6	644.2	642.7	641.0	639.4	637.7
27.5°	618.1	613.9	609.6	606.2	603.7	601.3	598.8	596.3
30°	593.5	588.5	583.6	579.9	577.6	575.2	572.8	570.5
32.5°	569.4	563.9	558.4	554.5	552.1	549.6	547.1	544.7
35°	533.5	527.2	520.9	516.4	513.8	511.2	508.5	505.8
37.5°	495.0	487.8	480.7	475.5	472.3	469.0	465.7	462.4
40°	468.2	460.5	453.0	447.5	444.1	440.7	437.4	433.9
42.5°	442.6	434.2	425.9	420.2	417.2	414.1	411.1	408.1
45°	404.8	396.4	388.1	382.1	378.6	375.1	371.5	368.0
47.5°	365.7	356.6	347.5	341.4	338.3	335.1	332.0	328.8
50°	339.3	330.2	321.2	314.9	311.5	308.2	304.8	301.4
52.5°	313.8	304.4	294.9	288.7	285.7	282.7	279.7	276.6
55°	275.9	267.3	258.8	253.1	250.2	247.3	244.4	241.4
57.5°	238.5	230.5	222.5	217.2	214.7	212.2	209.7	207.2
60°	215.0	207.1	199.1	194.0	191.5	189.0	186.5	184.0
62.5°	191.7	184.3	176.8	171.8	169.2	166.5	163.9	161.4
65°	158.4	151.3	144.0	139.7	138.1	136.5	134.8	133.2
67.5°	126.7	121.3	116.0	112.4	110.7	109.0	107.3	105.6
70°	107.1	102.0	96.9	93.5	91.9	90.3	88.7	87.0
72.5°	89.5	85.3	81.1	78.7	78.0	77.3	76.6	75.9
75°	67.0	65.5	64.1	63.2	62.9	62.6	62.3	62.0
77.5°	50.5	49.8	48.9	48.4	48.1	47.8	47.5	47.2
80°	40.6	40.2	39.8	39.4	39.2	38.8	38.6	38.2
82.5°	31.2	30.7	30.3	30.0	30.0	30.0	29.9	29.8
85°	17.9	17.6	17.3	17.1	17.1	17.1	17.1	17.1
87.5°	10.1	10.1	10.1	10.1	10.0	10.0	9.9	9.8
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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