

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: P331926-940

Luminaire Tested: **S123DIP-S560D585U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331926-940
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: S123DIP-S560D585U940-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3863.0 lumens
Efficiency: N/A
Efficacy: 117.8 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: General Diffuse

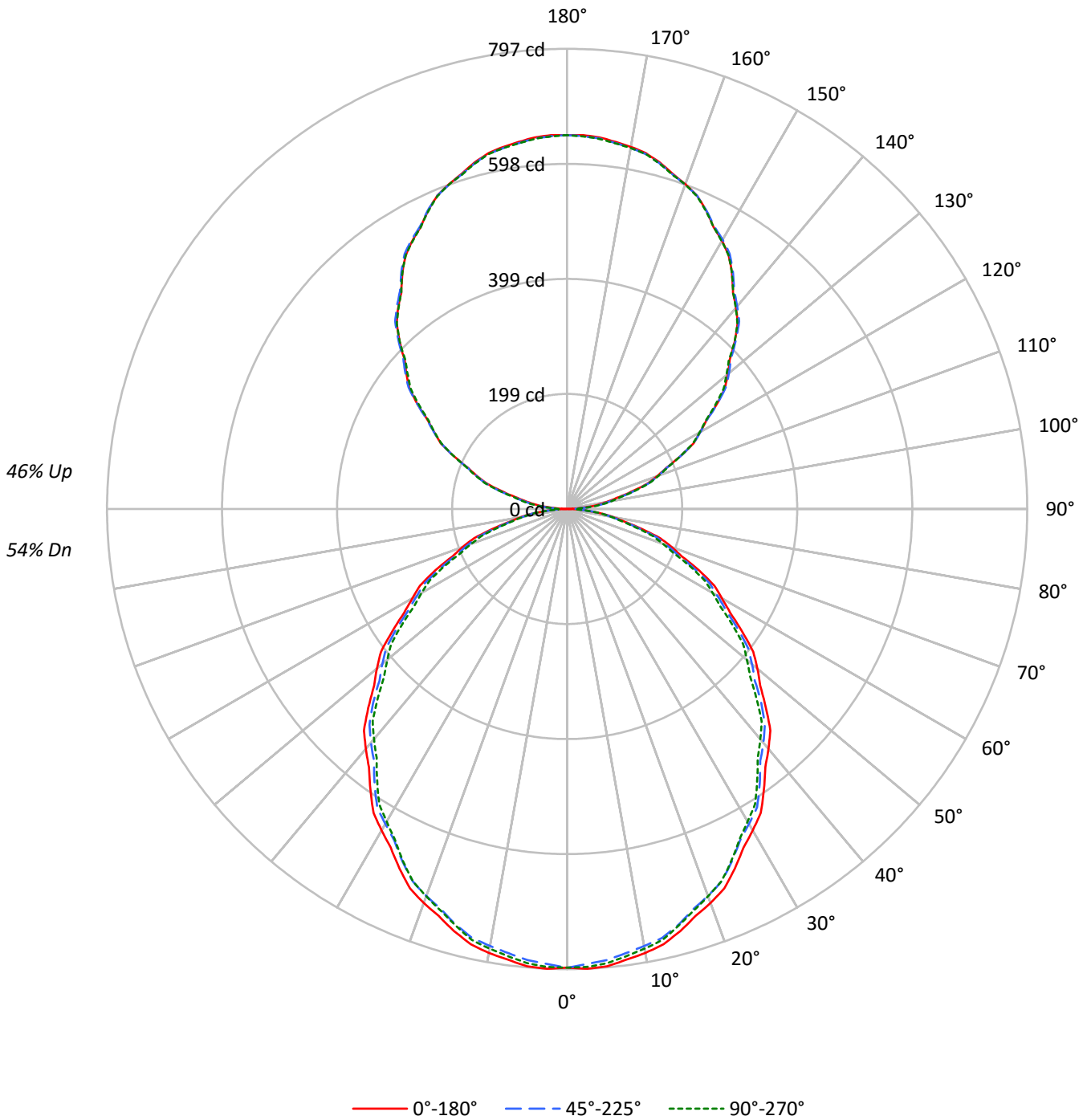
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	54
1	99	94	90	87	91	87	84	81	75	72	70	63	61	60	52	51	50	45
2	90	82	76	71	83	76	71	66	65	61	58	55	52	50	46	44	42	38
3	82	72	65	59	75	67	61	55	58	53	49	49	45	42	41	38	36	32
4	75	64	56	50	69	60	52	47	51	46	41	44	39	36	36	33	31	27
5	69	57	49	43	63	53	46	40	46	40	36	39	35	31	33	29	27	24
6	63	51	43	37	58	48	40	35	41	36	31	35	31	27	30	26	24	21
7	59	46	38	32	54	43	36	31	37	32	27	32	28	24	27	24	21	18
8	54	42	34	29	50	39	32	27	34	28	24	29	25	22	25	21	19	16
9	51	38	31	26	47	36	29	24	31	26	22	27	23	19	23	20	17	15
10	47	35	28	23	44	33	26	22	29	23	20	25	21	18	21	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8551	8551	8551
5°	8590	8473	8532
10°	8534	8400	8451
15°	8433	8304	8320
20°	8317	8168	8176
25°	8162	8007	7991
30°	7988	7828	7768
35°	7808	7638	7540
40°	7620	7429	7314
45°	7415	7237	7060
50°	7206	7000	6805
55°	6934	6756	6549
60°	6661	6469	6265
65°	6421	6159	5968
70°	6061	5803	5545
75°	5540	5340	5115
80°	4996	4785	4742
85°	4384	4224	4051



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.8	1.9
10°-20°	211.3	5.5
20°-30°	312.1	8.1
30°-40°	364.6	9.4
40°-50°	366.5	9.5
50°-60°	322.0	8.3
60°-70°	239.9	6.2
70°-80°	136.7	3.5
80°-90°	41.1	1.1
90°-100°	42.2	1.1
100°-110°	126.2	3.3
110°-120°	214.7	5.6
120°-130°	282.4	7.3
130°-140°	317.5	8.2
140°-150°	312.1	8.1
150°-160°	262.7	6.8
160°-170°	174.9	4.5
170°-180°	61.2	1.6
0°-30°	598.2	15.5
0°-40°	962.8	24.9
0°-60°	1651.3	42.7
0°-90°	2069.0	53.6
90°-120°	383.2	9.9
90°-150°	1295.1	33.5
90°-180°	1794.0	46.4
0°-180°	3863.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	794	794	794	794	794	
5°	795	791	784	791	790	75
15°	757	754	745	750	747	213
25°	687	683	674	675	673	316
35°	594	590	581	577	574	372
45°	487	484	475	467	464	376
55°	370	368	360	353	349	331
65°	252	248	242	236	234	249
75°	133	131	128	125	123	142
85°	36	34	34	33	33	39
90°	0	6	12	14	15	4
95°	30	34	38	40	40	34
105°	114	116	120	120	121	123
115°	216	218	217	217	217	214
125°	316	318	317	315	313	282
135°	410	413	413	411	410	316
145°	498	499	500	500	498	311
155°	570	570	571	572	569	262
165°	621	620	620	622	619	175
175°	646	644	644	647	643	61
180°	648	648	648	648	648	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4
2.5°	797.1	796.7	796.2	795.7	795.2	794.2	792.9	791.6	790.3	789.0	790.1
5°	795.0	794.3	793.5	792.8	792.0	790.9	789.2	787.5	785.9	784.2	785.7
7.5°	787.3	786.6	785.8	785.1	784.3	783.0	781.3	779.5	777.8	776.1	777.5
10°	780.8	780.0	779.3	778.5	777.8	776.3	774.4	772.4	770.4	768.5	769.8
12.5°	772.0	771.3	770.7	770.1	769.5	768.2	766.3	764.5	762.7	760.8	761.8
15°	756.8	756.3	755.6	755.0	754.4	753.1	751.2	749.2	747.2	745.2	746.5
17.5°	739.2	738.4	737.6	736.8	736.0	734.7	732.7	730.8	728.8	726.7	727.6
20°	726.1	725.2	724.2	723.4	722.5	721.0	719.1	717.1	715.1	713.1	713.7
22.5°	711.3	710.4	709.5	708.6	707.7	706.2	704.3	702.3	700.3	698.4	698.8
25°	687.2	686.3	685.4	684.5	683.5	682.1	680.1	678.1	676.2	674.2	674.3
27.5°	661.4	660.5	659.6	658.7	657.8	656.3	654.2	652.1	650.0	647.8	647.9
30°	642.7	642.0	641.2	640.5	639.7	638.3	636.1	634.0	632.0	629.8	629.8
32.5°	624.2	623.2	622.1	621.2	620.2	618.8	617.2	615.5	613.9	612.3	611.4
35°	594.2	593.3	592.5	591.6	590.7	589.2	587.2	585.2	583.3	581.3	580.4
37.5°	563.7	562.5	561.3	560.2	559.0	557.5	555.4	553.5	551.4	549.5	548.4
40°	542.3	541.4	540.6	539.7	538.7	537.2	535.0	533.0	530.8	528.7	527.4
42.5°	521.0	520.0	519.0	517.9	516.9	515.3	513.2	511.1	509.0	506.8	505.6
45°	487.1	486.4	485.8	485.2	484.6	483.3	481.3	479.4	477.4	475.4	473.6
47.5°	453.3	452.4	451.6	450.7	449.8	448.4	446.6	444.7	442.8	441.0	439.2
50°	430.3	429.5	428.8	428.0	427.3	426.0	423.9	422.0	420.0	418.0	416.3
52.5°	406.3	405.7	405.3	404.7	404.2	402.9	400.8	398.8	396.6	394.6	393.2
55°	369.5	369.3	369.3	369.1	368.9	367.8	365.9	363.9	361.9	360.0	358.3
57.5°	334.6	334.0	333.5	333.1	332.5	331.4	329.8	328.3	326.7	325.1	323.7
60°	309.4	309.2	309.2	309.0	308.8	307.8	306.0	304.2	302.4	300.5	299.2
62.5°	287.0	286.6	286.2	285.9	285.4	284.4	282.5	280.7	278.8	277.1	275.7
65°	252.1	251.3	250.6	249.8	249.1	247.9	246.4	244.9	243.3	241.8	240.6
67.5°	215.0	214.4	213.7	213.0	212.3	211.4	210.3	209.1	207.9	206.9	205.8
70°	192.6	191.7	190.8	189.9	189.0	188.1	187.2	186.3	185.3	184.4	183.3
72.5°	169.2	168.4	167.8	167.1	166.5	165.6	164.6	163.5	162.5	161.5	160.5
75°	133.2	132.6	132.0	131.3	130.8	130.3	129.7	129.3	128.9	128.4	127.7
77.5°	101.4	101.0	100.7	100.4	100.0	99.6	99.1	98.5	97.9	97.4	96.9
80°	80.6	80.2	79.7	79.3	78.7	78.4	78.1	77.8	77.5	77.2	77.0
82.5°	60.4	60.3	60.2	60.1	60.0	59.9	59.9	59.8	59.7	59.7	59.4
85°	35.5	35.2	35.0	34.6	34.3	34.2	34.2	34.2	34.2	34.2	33.9
87.5°	14.3	14.2	14.0	13.9	13.7	13.7	13.9	14.1	14.3	14.4	14.4
90°	0.5	1.6	2.8	3.9	5.0	6.3	7.8	9.3	10.7	12.2	12.7
92.5°	12.3	13.1	13.8	14.6	15.4	16.2	17.0	17.8	18.7	19.5	19.9
95°	30.1	30.8	31.6	32.4	33.2	34.1	35.0	35.8	36.7	37.6	38.1
97.5°	53.3	53.9	54.5	55.1	55.6	56.3	56.9	57.6	58.2	58.9	59.4
100°	69.2	69.8	70.5	71.2	71.9	72.5	73.0	73.7	74.2	74.7	75.1
102.5°	87.5	87.9	88.3	88.7	89.1	89.7	90.4	91.2	91.9	92.6	93.0
105°	114.4	114.7	114.9	115.1	115.4	115.9	117.0	118.0	119.0	120.0	120.0
107.5°	145.8	145.9	146.1	146.2	146.3	146.6	147.0	147.4	147.8	148.2	148.6
110°	165.3	165.5	165.8	165.9	166.2	166.4	166.7	166.9	167.1	167.4	167.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	185.7	185.7	185.9	186.0	186.2	186.3	186.4	186.4	186.5	186.5	187.0
115°	216.2	216.5	216.9	217.2	217.5	217.6	217.3	217.1	216.9	216.7	216.8
117.5°	246.9	247.1	247.4	247.5	247.8	247.7	247.4	247.2	246.9	246.6	246.6
120°	266.0	266.7	267.3	268.0	268.8	268.8	268.2	267.7	267.1	266.5	266.4
122.5°	286.0	286.4	287.0	287.4	287.9	288.0	287.8	287.5	287.1	286.9	286.6
125°	316.4	316.7	317.0	317.4	317.7	317.8	317.5	317.4	317.1	316.9	316.4
127.5°	344.5	345.2	345.9	346.6	347.3	347.6	347.3	347.1	346.8	346.6	346.0
130°	363.2	364.1	365.0	365.9	366.8	367.0	366.8	366.4	366.0	365.7	365.2
132.5°	381.8	382.8	383.7	384.6	385.5	385.8	385.6	385.3	385.0	384.9	384.2
135°	410.5	411.2	411.8	412.5	413.1	413.5	413.3	413.2	413.1	413.0	412.6
137.5°	436.9	437.5	438.0	438.6	439.2	439.6	439.9	440.1	440.5	440.8	440.3
140°	455.2	455.8	456.4	456.9	457.4	457.8	457.9	458.1	458.2	458.3	458.2
142.5°	471.9	472.4	473.1	473.6	474.1	474.6	474.7	474.9	475.2	475.4	475.3
145°	497.9	498.2	498.4	498.6	498.8	499.1	499.4	499.8	500.2	500.5	500.3
147.5°	520.8	521.1	521.6	521.9	522.4	522.7	523.1	523.3	523.7	524.0	524.0
150°	536.6	536.8	537.1	537.3	537.5	537.7	538.0	538.1	538.4	538.6	538.6
152.5°	549.7	549.9	550.3	550.5	550.9	551.1	551.3	551.3	551.5	551.6	551.8
155°	570.2	570.2	570.2	570.2	570.2	570.2	570.3	570.4	570.6	570.7	571.1
157.5°	587.6	587.5	587.4	587.3	587.1	587.1	587.2	587.3	587.4	587.5	587.9
160°	598.6	598.4	598.2	598.0	597.7	597.6	597.6	597.6	597.6	597.6	598.2
162.5°	608.4	608.1	607.8	607.4	607.2	607.1	607.2	607.3	607.3	607.4	608.0
165°	621.0	620.7	620.4	620.0	619.6	619.5	619.5	619.5	619.5	619.5	620.2
167.5°	631.1	630.6	630.2	629.7	629.3	629.1	629.2	629.3	629.4	629.5	630.2
170°	636.8	636.3	635.9	635.4	635.0	634.7	634.7	634.7	634.7	634.7	635.5
172.5°	641.2	640.8	640.3	639.9	639.4	639.3	639.3	639.3	639.3	639.3	640.0
175°	646.0	645.5	645.1	644.6	644.2	643.9	643.9	643.9	643.9	643.9	644.6
177.5°	647.9	647.6	647.2	646.8	646.4	646.2	646.2	646.2	646.2	646.2	646.8
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	794.4	794.4	794.4	794.4	794.4	794.4	794.4	794.4
2.5°	791.4	792.6	793.8	794.3	794.2	794.1	794.0	793.9
5°	787.2	788.7	790.2	790.9	790.5	790.2	790.0	789.6
7.5°	778.8	780.2	781.6	782.1	781.9	781.8	781.6	781.4
10°	771.2	772.6	773.9	774.5	774.2	773.8	773.6	773.2
12.5°	762.8	763.8	764.8	765.2	765.0	764.8	764.6	764.5
15°	747.7	748.9	750.1	750.2	749.3	748.4	747.5	746.6
17.5°	728.5	729.3	730.2	730.4	730.1	729.8	729.4	729.1
20°	714.3	715.0	715.5	715.6	715.2	714.7	714.3	713.8
22.5°	699.4	699.8	700.3	700.3	699.7	699.1	698.6	697.9
25°	674.5	674.7	674.8	674.7	674.2	673.8	673.2	672.8
27.5°	648.1	648.2	648.3	648.1	647.5	646.9	646.3	645.8
30°	629.8	629.8	629.8	629.3	628.2	627.1	626.1	625.0
32.5°	610.6	609.8	608.9	608.1	607.6	607.1	606.5	605.9
35°	579.4	578.5	577.7	576.8	576.0	575.3	574.5	573.8
37.5°	547.2	546.2	545.1	544.3	543.9	543.3	542.9	542.3
40°	526.3	525.0	523.9	522.9	522.3	521.7	521.1	520.5
42.5°	504.4	503.2	501.9	501.1	500.4	499.9	499.3	498.6
45°	471.8	469.9	468.1	466.8	466.1	465.3	464.6	463.8
47.5°	437.4	435.6	433.8	432.6	431.9	431.2	430.6	429.9
50°	414.7	413.0	411.3	410.1	409.1	408.2	407.3	406.4
52.5°	391.7	390.3	388.9	387.6	386.7	385.8	385.0	384.1
55°	356.6	355.0	353.3	352.0	351.3	350.5	349.8	349.0
57.5°	322.2	320.7	319.2	318.0	317.1	316.3	315.4	314.5
60°	297.8	296.5	295.1	294.0	293.3	292.5	291.8	291.0
62.5°	274.3	273.0	271.6	270.6	270.1	269.7	269.1	268.6
65°	239.3	238.2	236.9	236.1	235.7	235.2	234.8	234.3
67.5°	204.7	203.7	202.6	201.7	201.1	200.5	199.8	199.2
70°	182.3	181.3	180.2	179.2	178.5	177.7	177.0	176.2
72.5°	159.6	158.6	157.7	157.0	156.7	156.2	155.9	155.4
75°	126.9	126.2	125.4	124.8	124.3	123.9	123.4	123.0
77.5°	96.4	95.9	95.3	95.1	95.1	95.1	95.1	95.1
80°	76.9	76.7	76.6	76.5	76.5	76.5	76.5	76.5
82.5°	59.1	58.9	58.6	58.4	58.3	58.1	58.1	58.0
85°	33.5	33.3	32.9	32.8	32.8	32.8	32.8	32.8
87.5°	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.5
90°	13.1	13.6	14.0	14.4	14.6	14.8	15.1	15.2
92.5°	20.2	20.6	21.0	21.1	21.0	20.8	20.7	20.5
95°	38.5	39.0	39.4	39.7	39.7	39.7	39.7	39.7
97.5°	59.9	60.5	61.0	61.2	61.2	61.1	61.1	61.0
100°	75.4	75.8	76.2	76.4	76.6	76.9	77.0	77.3
102.5°	93.4	93.7	94.0	94.2	94.2	94.1	94.1	94.0
105°	120.0	120.0	120.0	120.1	120.4	120.6	120.8	121.1
107.5°	148.9	149.3	149.6	149.8	149.6	149.5	149.4	149.3
110°	168.3	168.7	169.2	169.2	169.1	168.8	168.6	168.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	187.5	188.1	188.6	188.9	188.9	188.8	188.8	188.7
115°	216.9	217.0	217.1	217.1	217.0	216.9	216.8	216.7
117.5°	246.6	246.5	246.5	246.3	246.0	245.7	245.4	245.0
120°	266.3	266.2	266.1	265.9	265.6	265.5	265.2	265.0
122.5°	286.2	286.0	285.7	285.3	285.1	284.7	284.5	284.1
125°	315.9	315.5	315.0	314.6	314.1	313.7	313.3	312.8
127.5°	345.3	344.6	344.0	343.5	343.0	342.4	341.9	341.3
130°	364.8	364.4	363.9	363.3	362.5	361.7	360.9	360.1
132.5°	383.7	383.2	382.6	382.1	381.5	380.8	380.2	379.6
135°	412.1	411.6	411.2	410.8	410.6	410.4	410.2	409.9
137.5°	439.8	439.3	438.9	438.5	438.0	437.6	437.1	436.7
140°	458.1	457.9	457.8	457.4	456.6	455.8	455.0	454.2
142.5°	475.1	475.0	474.9	474.6	473.9	473.3	472.7	472.1
145°	500.2	500.2	500.1	499.7	499.3	498.8	498.4	497.9
147.5°	524.0	524.0	524.0	523.6	523.0	522.3	521.7	520.9
150°	538.6	538.6	538.6	538.3	537.6	536.9	536.3	535.6
152.5°	552.1	552.2	552.4	552.1	551.6	551.0	550.5	549.8
155°	571.6	572.0	572.5	572.3	571.5	570.7	570.0	569.2
157.5°	588.4	588.9	589.3	589.2	588.6	588.0	587.4	586.7
160°	598.8	599.3	599.9	599.9	599.5	599.1	598.6	598.2
162.5°	608.5	609.1	609.7	609.6	608.9	608.1	607.4	606.7
165°	620.9	621.5	622.2	622.1	621.3	620.5	619.8	619.0
167.5°	630.9	631.6	632.3	632.3	631.6	630.9	630.2	629.5
170°	636.3	637.1	637.9	637.9	637.1	636.3	635.5	634.7
172.5°	640.6	641.3	642.0	642.0	641.2	640.4	639.6	638.8
175°	645.2	646.0	646.7	646.6	645.8	645.0	644.2	643.4
177.5°	647.4	647.9	648.5	648.4	647.7	647.1	646.5	645.9
180°	647.5	647.5	647.5	647.5	647.5	647.5	647.5	647.5

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