

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: P331788-935

Luminaire Tested: **S122RDIW-S485D435U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331788-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S485D435U935-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2755.8 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

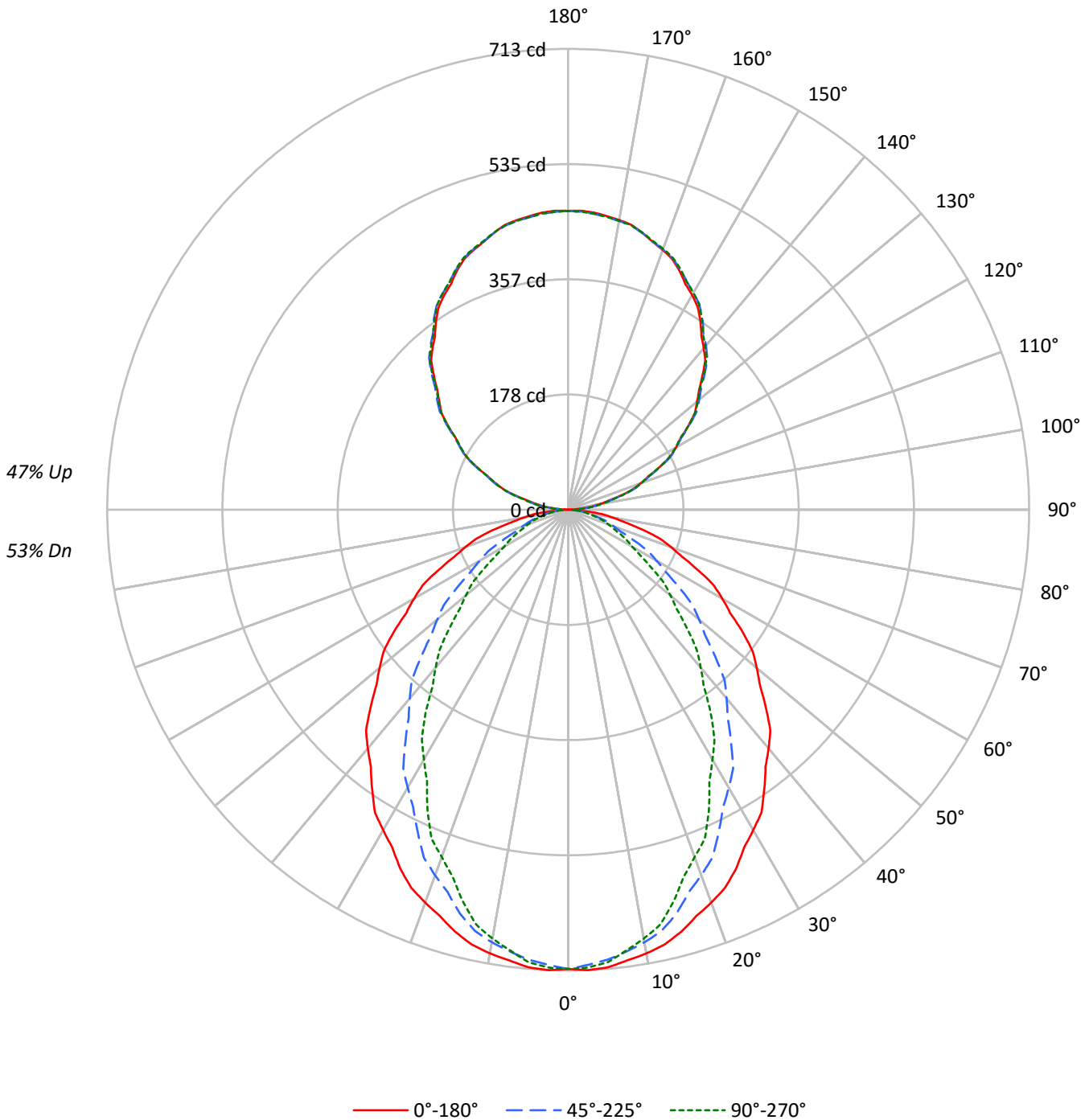
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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	71	71	71	59	59	59	53
1	99	95	91	88	92	88	85	82	75	73	71	64	62	61	53	52	51	46
2	91	83	77	72	84	78	72	68	67	63	59	56	54	51	47	45	44	39
3	83	74	67	61	77	69	62	57	59	55	51	50	47	44	42	40	38	34
4	76	66	58	52	70	61	54	49	53	48	44	45	41	38	38	35	33	29
5	70	59	51	45	65	55	48	43	48	42	38	41	37	33	35	31	29	26
6	65	53	45	39	60	50	42	37	43	38	33	37	33	30	32	28	26	23
7	60	48	40	35	56	45	38	33	39	34	30	34	30	26	29	26	23	21
8	56	44	36	31	52	41	34	29	36	30	27	31	27	24	27	23	21	19
9	52	40	33	28	48	38	31	26	33	28	24	29	25	21	25	21	19	17
10	49	37	30	25	45	35	28	24	31	25	22	27	22	19	23	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11472	11472	11472
5°	11515	11329	11391
10°	11429	11144	11049
15°	11296	10813	10502
20°	11115	10340	9821
25°	10929	9805	9164
30°	10670	9257	8321
35°	10419	8657	7579
40°	10163	8037	6721
45°	9866	7341	5948
50°	9560	6636	5184
55°	9250	5883	4453
60°	8887	5089	3694
65°	8478	4271	3366
70°	7983	3522	3097
75°	7380	3206	2888
80°	6518	2864	2631
85°	5113	2260	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	2.4
10°-20°	182.6	6.6
20°-30°	256.4	9.3
30°-40°	279.6	10.1
40°-50°	257.1	9.3
50°-60°	201.9	7.3
60°-70°	131.7	4.8
70°-80°	67.9	2.5
80°-90°	19.5	0.7
90°-100°	29.3	1.1
100°-110°	91.0	3.3
110°-120°	155.5	5.6
120°-130°	204.5	7.4
130°-140°	229.5	8.3
140°-150°	225.0	8.2
150°-160°	188.8	6.8
160°-170°	125.2	4.5
170°-180°	43.8	1.6
0°-30°	505.6	18.3
0°-40°	785.2	28.5
0°-60°	1244.3	45.2
0°-90°	1463.3	53.1
90°-120°	275.7	10.0
90°-150°	934.8	33.9
90°-180°	1293.0	46.9
0°-180°	2755.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	710	710	710	710	710	
5°	710	707	699	704	703	67
15°	676	668	647	635	628	190
25°	614	592	550	525	514	282
35°	529	494	439	400	384	331
45°	432	388	322	278	260	334
55°	329	277	209	172	158	293
65°	222	169	112	91	88	220
75°	118	75	51	47	46	125
85°	28	15	12	12	12	33
90°	0	5	14	13	13	2
95°	20	24	25	25	24	23
105°	84	85	86	87	87	89
115°	156	158	158	157	156	154
125°	227	230	229	228	228	203
135°	294	298	299	298	297	227
145°	356	359	362	362	360	223
155°	408	409	410	412	411	188
165°	444	443	443	446	444	125
175°	462	460	460	462	460	44
180°	462	462	462	462	462	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	713.1	712.6	712.0	711.4	710.8	709.9	708.7	707.4	706.1	704.9	706.0
5°	710.5	709.8	709.1	708.4	707.7	706.4	704.6	702.7	700.9	699.0	700.3
7.5°	703.2	702.3	701.5	700.5	699.6	698.1	695.9	693.8	691.6	689.5	689.8
10°	697.1	696.0	695.0	694.1	693.0	691.1	688.3	685.4	682.5	679.7	679.2
12.5°	689.3	688.1	686.8	685.6	684.4	682.0	678.3	674.7	671.0	667.4	666.6
15°	675.8	674.2	672.7	671.1	669.5	666.3	661.4	656.6	651.8	646.9	644.2
17.5°	659.3	656.9	654.4	652.0	649.6	645.3	639.1	632.8	626.6	620.4	617.2
20°	646.9	644.0	641.2	638.3	635.4	630.4	623.3	616.1	609.0	601.8	598.3
22.5°	633.5	630.3	627.1	623.9	620.7	615.1	607.0	598.9	590.9	582.8	578.2
25°	613.5	608.9	604.3	599.7	595.1	588.1	578.7	569.3	559.8	550.4	544.6
27.5°	589.3	584.3	579.3	574.4	569.4	561.5	551.0	540.3	529.7	519.0	512.2
30°	572.3	566.9	561.5	556.0	550.6	542.2	530.7	519.3	507.8	496.5	489.1
32.5°	555.9	549.5	543.1	536.8	530.5	521.4	509.8	498.1	486.5	474.8	466.5
35°	528.6	521.2	514.0	506.7	499.4	489.5	476.9	464.3	451.8	439.2	430.2
37.5°	501.3	493.3	485.3	477.3	469.3	458.6	445.2	431.8	418.4	405.0	395.0
40°	482.2	473.7	465.1	456.6	448.0	436.8	422.9	409.1	395.2	381.3	371.2
42.5°	462.7	453.7	444.6	435.7	426.6	414.9	400.6	386.2	372.0	357.7	347.2
45°	432.1	422.6	412.9	403.4	393.8	381.5	366.5	351.5	336.5	321.5	311.3
47.5°	402.3	392.1	382.0	371.9	361.7	348.9	333.4	317.9	302.4	286.9	276.8
50°	380.6	370.5	360.4	350.3	340.1	327.2	311.4	295.8	280.0	264.2	254.4
52.5°	359.6	349.0	338.4	327.8	317.2	304.2	288.8	273.5	258.0	242.7	233.2
55°	328.6	317.5	306.3	295.2	284.0	270.7	255.3	239.9	224.4	209.0	200.4
57.5°	296.8	285.4	274.0	262.5	251.1	238.0	223.2	208.3	193.5	178.7	170.7
60°	275.2	263.8	252.4	240.9	229.5	216.5	201.7	187.0	172.3	157.6	150.2
62.5°	254.1	242.7	231.3	219.8	208.4	195.7	181.7	167.6	153.6	139.6	132.6
65°	221.9	210.3	198.7	187.1	175.6	163.3	150.5	137.6	124.8	111.8	107.0
67.5°	190.7	179.3	167.7	156.3	144.7	133.2	121.7	110.1	98.5	87.0	84.7
70°	169.1	158.0	146.8	135.7	124.5	114.0	104.2	94.3	84.5	74.6	73.2
72.5°	148.5	137.8	127.2	116.5	105.8	96.5	88.6	80.7	72.8	64.8	63.6
75°	118.3	108.3	98.3	88.3	78.3	70.9	66.0	61.1	56.3	51.4	50.5
77.5°	88.6	79.8	71.0	62.3	53.6	48.0	45.6	43.3	40.9	38.6	38.0
80°	70.1	62.8	55.5	48.2	40.9	36.6	35.1	33.8	32.3	30.8	30.3
82.5°	53.1	47.4	41.8	36.1	30.4	27.0	26.1	25.1	24.1	23.2	22.8
85°	27.6	24.6	21.6	18.7	15.7	13.9	13.5	13.1	12.7	12.2	12.2
87.5°	8.4	7.6	6.9	6.2	5.5	5.3	5.7	6.1	6.5	6.9	6.7
90°	0.4	1.5	2.5	3.5	4.6	6.0	7.9	9.8	11.7	13.7	13.5
92.5°	7.0	7.7	8.4	9.2	10.0	10.6	11.0	11.5	12.0	12.4	12.4
95°	20.3	21.2	22.0	22.9	23.8	24.3	24.5	24.6	24.8	25.0	25.0
97.5°	37.0	37.8	38.6	39.3	40.1	40.6	41.0	41.3	41.7	41.9	41.9
100°	49.5	50.2	50.9	51.7	52.3	52.8	53.0	53.3	53.6	53.8	53.8
102.5°	62.7	63.2	63.7	64.3	64.8	65.3	65.6	66.0	66.3	66.6	66.7
105°	83.9	84.1	84.4	84.6	84.9	85.2	85.3	85.5	85.7	85.8	86.0
107.5°	105.2	105.6	106.0	106.4	106.8	106.9	106.9	106.9	106.9	106.9	107.0
110°	119.0	119.5	120.0	120.5	121.1	121.3	121.3	121.3	121.3	121.3	121.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	134.0	134.5	135.0	135.5	136.0	136.3	136.2	136.1	136.0	136.0	135.8
115°	156.0	156.5	157.0	157.6	158.1	158.3	158.1	157.9	157.7	157.6	157.5
117.5°	178.1	178.7	179.4	180.1	180.8	180.9	180.5	179.9	179.4	179.0	178.7
120°	192.7	193.4	194.1	194.8	195.4	195.4	194.8	194.1	193.4	192.7	192.7
122.5°	206.1	207.0	207.8	208.6	209.5	209.7	209.1	208.6	208.2	207.7	207.5
125°	227.0	227.8	228.6	229.4	230.1	230.4	230.1	229.9	229.6	229.4	229.1
127.5°	247.4	248.4	249.3	250.4	251.3	251.7	251.4	251.1	250.7	250.5	250.1
130°	260.2	261.3	262.4	263.6	264.7	265.2	265.0	264.8	264.7	264.5	264.3
132.5°	274.6	275.4	276.4	277.3	278.2	278.7	278.7	278.8	278.8	278.8	278.4
135°	293.8	294.7	295.7	296.6	297.6	298.1	298.3	298.4	298.6	298.8	298.7
137.5°	313.9	314.7	315.5	316.2	317.0	317.5	317.8	318.1	318.2	318.5	318.4
140°	326.1	326.9	327.7	328.5	329.2	329.8	330.3	330.7	331.1	331.6	331.6
142.5°	338.6	339.4	340.2	341.0	341.7	342.2	342.5	342.9	343.1	343.5	343.5
145°	356.5	357.1	357.7	358.3	359.0	359.6	360.1	360.6	361.1	361.6	361.7
147.5°	372.6	373.2	374.0	374.7	375.5	376.0	376.3	376.7	377.0	377.4	377.5
150°	383.5	384.0	384.5	385.0	385.6	386.0	386.3	386.7	387.0	387.4	387.6
152.5°	393.1	393.6	394.2	394.7	395.2	395.7	396.1	396.5	396.9	397.4	397.7
155°	407.6	407.9	408.1	408.5	408.7	409.0	409.2	409.5	409.7	410.0	410.4
157.5°	420.1	420.3	420.4	420.6	420.8	420.9	421.0	421.2	421.4	421.5	422.1
160°	427.6	427.7	427.9	428.1	428.3	428.3	428.4	428.5	428.6	428.7	429.2
162.5°	434.4	434.5	434.5	434.5	434.5	434.6	434.7	434.8	434.9	435.0	435.5
165°	443.5	443.4	443.3	443.2	443.2	443.2	443.2	443.2	443.2	443.2	443.8
167.5°	451.2	450.9	450.6	450.4	450.1	450.0	450.0	450.0	450.0	450.0	450.6
170°	455.2	455.0	454.7	454.4	454.2	454.0	453.9	453.8	453.7	453.7	454.3
172.5°	458.1	457.8	457.5	457.3	457.0	456.8	456.8	456.7	456.6	456.5	457.1
175°	461.5	461.2	461.0	460.7	460.5	460.2	460.0	459.9	459.7	459.5	460.1
177.5°	462.9	462.7	462.4	462.3	462.0	461.8	461.8	461.6	461.4	461.3	461.8
180°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	710.5	710.5	710.5	710.5	710.5	710.5	710.5	710.5
2.5°	707.1	708.3	709.5	709.9	709.7	709.5	709.2	709.0
5°	701.5	702.8	704.1	704.6	704.1	703.7	703.3	702.8
7.5°	690.2	690.5	691.0	690.8	690.0	689.2	688.5	687.8
10°	678.8	678.4	678.0	677.3	676.5	675.6	674.8	673.9
12.5°	665.8	665.0	664.3	663.1	661.7	660.3	658.8	657.5
15°	641.4	638.8	636.0	634.0	632.5	631.1	629.6	628.3
17.5°	613.9	610.7	607.4	604.6	602.2	599.7	597.3	594.8
20°	594.7	591.2	587.5	584.2	581.1	577.9	574.8	571.6
22.5°	573.6	569.0	564.5	560.9	558.6	556.3	554.0	551.6
25°	538.7	532.9	527.0	523.0	520.8	518.7	516.6	514.4
27.5°	505.4	498.5	491.7	486.6	483.2	479.8	476.4	473.0
30°	481.8	474.6	467.3	461.7	457.8	454.0	450.1	446.3
32.5°	458.1	449.9	441.5	435.6	432.0	428.3	424.6	421.0
35°	421.2	412.2	403.2	397.1	394.0	390.8	387.7	384.5
37.5°	385.1	375.2	365.3	358.5	355.0	351.4	347.8	344.1
40°	361.0	350.9	340.7	333.8	330.1	326.4	322.6	318.9
42.5°	336.7	326.1	315.7	308.7	305.1	301.4	297.8	294.2
45°	301.2	291.1	280.9	274.1	270.7	267.3	263.8	260.5
47.5°	266.7	256.7	246.6	240.0	236.9	233.8	230.6	227.5
50°	244.5	234.7	224.8	218.4	215.4	212.4	209.4	206.4
52.5°	223.6	214.1	204.6	198.5	195.7	193.0	190.1	187.4
55°	191.8	183.2	174.7	169.0	166.3	163.6	160.9	158.2
57.5°	162.9	155.1	147.2	142.2	139.8	137.6	135.3	132.9
60°	142.9	135.7	128.4	123.6	121.3	119.0	116.8	114.4
62.5°	125.6	118.7	111.8	107.6	106.2	104.9	103.5	102.1
65°	102.2	97.3	92.5	89.8	89.4	88.9	88.5	88.1
67.5°	82.5	80.2	78.0	76.7	76.2	75.8	75.3	74.8
70°	71.7	70.3	68.9	67.8	67.3	66.7	66.1	65.6
72.5°	62.4	61.2	60.0	59.2	58.9	58.5	58.2	57.9
75°	49.4	48.5	47.4	46.8	46.8	46.6	46.4	46.3
77.5°	37.5	36.9	36.3	35.9	35.6	35.5	35.2	35.0
80°	29.7	29.2	28.6	28.3	28.3	28.3	28.3	28.3
82.5°	22.5	22.1	21.8	21.6	21.6	21.6	21.6	21.6
85°	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
87.5°	6.5	6.4	6.3	6.2	6.2	6.2	6.2	6.3
90°	13.3	13.2	13.0	12.9	13.0	13.1	13.2	13.3
92.5°	12.5	12.5	12.6	12.6	12.6	12.6	12.7	12.7
95°	25.0	25.0	25.0	24.9	24.7	24.5	24.4	24.2
97.5°	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
100°	53.8	53.8	53.8	53.8	53.7	53.6	53.6	53.5
102.5°	66.7	66.8	66.9	66.9	66.8	66.7	66.6	66.6
105°	86.2	86.4	86.5	86.6	86.6	86.6	86.6	86.6
107.5°	107.1	107.2	107.3	107.1	106.7	106.2	105.9	105.5
110°	121.3	121.3	121.3	121.1	120.9	120.6	120.4	120.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	135.6	135.3	135.2	134.9	134.7	134.6	134.4	134.2
115°	157.4	157.3	157.2	157.0	156.8	156.5	156.3	156.0
117.5°	178.6	178.3	178.1	177.9	177.6	177.4	177.1	176.8
120°	192.7	192.7	192.7	192.6	192.3	192.1	191.8	191.6
122.5°	207.2	207.1	206.8	206.6	206.5	206.3	206.0	205.9
125°	228.9	228.6	228.3	228.2	228.1	228.0	227.9	227.8
127.5°	249.8	249.5	249.2	248.9	248.6	248.3	248.1	247.8
130°	264.2	264.0	263.8	263.6	263.2	262.9	262.5	262.2
132.5°	278.1	277.7	277.3	277.0	276.7	276.4	276.1	275.9
135°	298.6	298.5	298.4	298.3	298.0	297.7	297.5	297.2
137.5°	318.3	318.2	318.2	318.0	317.6	317.3	316.9	316.6
140°	331.6	331.6	331.6	331.4	331.1	330.7	330.4	330.0
142.5°	343.5	343.6	343.7	343.5	343.2	342.9	342.5	342.2
145°	361.8	361.9	362.0	361.8	361.4	361.1	360.8	360.4
147.5°	377.7	378.0	378.2	378.1	377.7	377.4	377.0	376.8
150°	387.9	388.1	388.4	388.4	388.1	387.9	387.6	387.4
152.5°	398.0	398.3	398.6	398.6	398.3	398.0	397.7	397.4
155°	410.9	411.3	411.7	411.8	411.6	411.3	411.0	410.8
157.5°	422.7	423.3	423.9	424.0	423.5	423.1	422.8	422.3
160°	429.7	430.2	430.8	430.8	430.5	430.2	429.8	429.5
162.5°	436.1	436.7	437.3	437.4	437.0	436.5	436.1	435.8
165°	444.4	445.0	445.6	445.7	445.2	444.8	444.4	443.9
167.5°	451.2	451.8	452.4	452.5	451.9	451.5	451.1	450.6
170°	454.9	455.5	456.1	456.2	455.6	455.1	454.6	454.1
172.5°	457.7	458.3	458.9	458.9	458.4	457.9	457.4	456.8
175°	460.7	461.3	461.9	462.0	461.5	461.0	460.5	459.9
177.5°	462.2	462.5	463.0	463.0	462.5	462.2	461.8	461.3
180°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3

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