

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: P331500-940

Luminaire Tested: **S122DIW-S485D435U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331500-940
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: S122DIW-S485D435U940-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3102.6 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

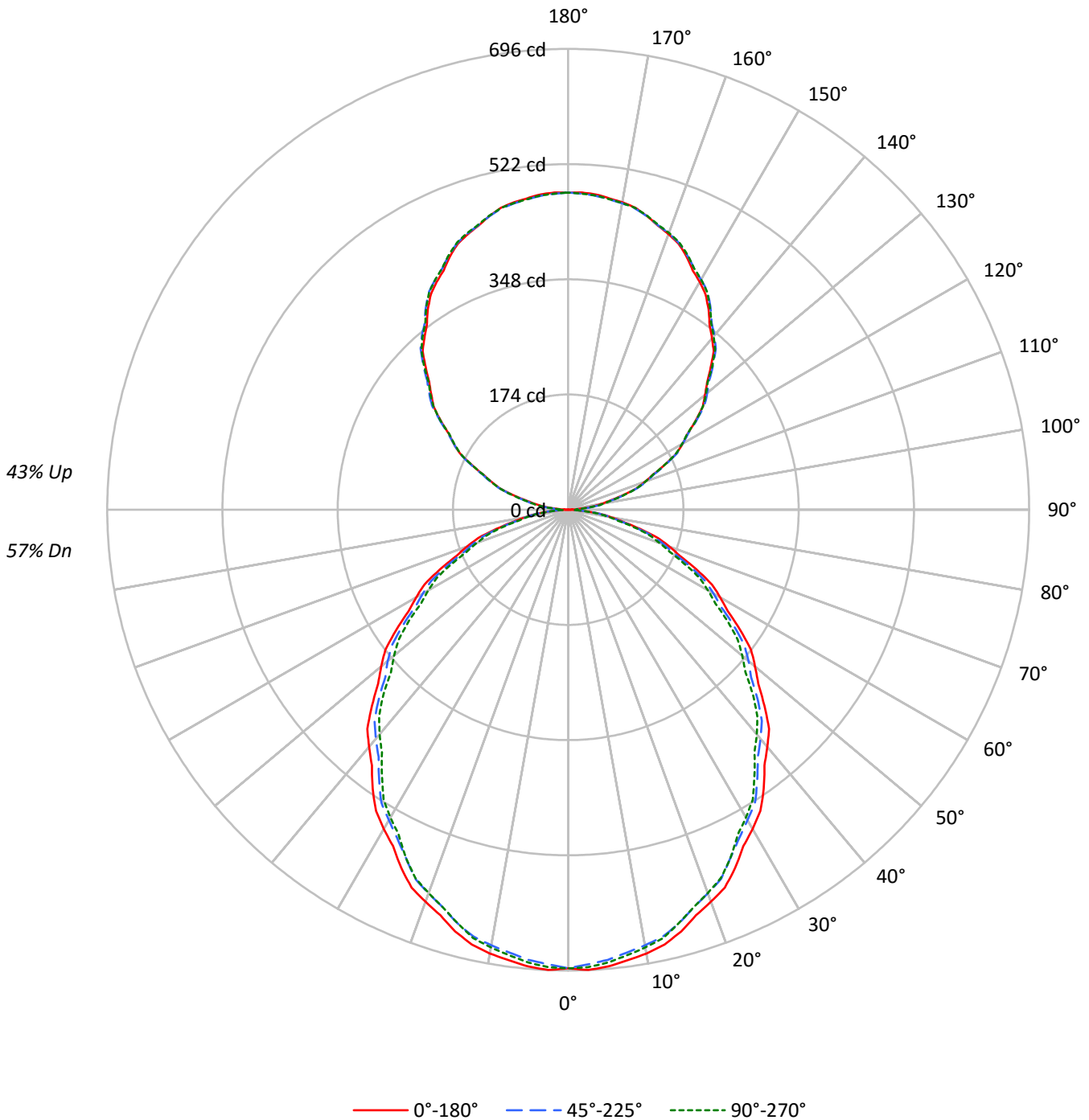
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	57
1	99	95	91	87	92	88	85	82	76	74	72	65	64	62	55	54	53	48
2	90	83	77	71	84	77	72	67	67	63	59	57	54	52	49	46	44	40
3	83	73	65	60	76	68	62	56	59	54	50	51	47	44	43	40	38	34
4	76	65	57	50	70	60	53	48	53	47	43	45	41	37	38	35	33	29
5	69	58	49	43	64	54	47	41	47	41	37	41	36	33	35	31	28	25
6	64	52	43	38	59	48	41	36	42	37	32	37	32	29	31	28	25	22
7	59	47	39	33	55	44	37	31	39	33	28	33	29	25	29	25	22	20
8	55	42	35	29	51	40	33	28	35	29	25	31	26	23	26	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	24	21	18	16
10	48	36	28	23	45	34	27	22	30	24	20	26	22	18	23	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11183	11183	11183
5°	11225	11063	11128
10°	11158	10952	11006
15°	11020	10810	10798
20°	10825	10596	10584
25°	10630	10334	10334
30°	10381	10094	10006
35°	10147	9806	9662
40°	9853	9518	9333
45°	9565	9229	9001
50°	9251	8932	8616
55°	8923	8586	8267
60°	8557	8173	7869
65°	8164	7759	7404
70°	7671	7260	6916
75°	6981	6687	6525
80°	6192	6007	5700
85°	5057	4798	4316



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	2.1
10°-20°	183.3	5.9
20°-30°	269.4	8.7
30°-40°	312.9	10.1
40°-50°	312.5	10.1
50°-60°	272.6	8.8
60°-70°	201.5	6.5
70°-80°	114.1	3.7
80°-90°	32.6	1.1
90°-100°	30.3	1.0
100°-110°	94.2	3.0
110°-120°	161.0	5.2
120°-130°	211.8	6.8
130°-140°	237.7	7.7
140°-150°	233.1	7.5
150°-160°	195.5	6.3
160°-170°	129.7	4.2
170°-180°	45.3	1.5
0°-30°	517.7	16.7
0°-40°	830.6	26.8
0°-60°	1415.7	45.6
0°-90°	1764.0	56.9
90°-120°	285.6	9.2
90°-150°	968.1	31.2
90°-180°	1339.0	43.2
0°-180°	3102.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	693	693	693	693	693	
5°	693	690	683	688	687	66
15°	659	655	647	649	646	186
25°	597	591	580	581	580	274
35°	515	508	498	494	490	321
45°	419	414	404	397	394	323
55°	317	313	305	297	294	283
65°	214	210	203	197	194	211
75°	112	110	107	104	105	120
85°	27	27	26	24	23	31
90°	0	5	14	13	14	2
95°	21	25	26	26	25	24
105°	87	88	89	90	90	92
115°	162	164	163	163	162	160
125°	235	238	238	236	236	210
135°	304	308	309	309	308	235
145°	369	372	374	375	373	231
155°	422	423	425	426	425	194
165°	459	459	459	462	460	129
175°	478	477	476	478	476	45
180°	479	479	479	479	479	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	695.8	695.2	694.6	694.0	693.4	692.5	691.2	689.9	688.6	687.2	688.5
5°	692.6	692.0	691.4	690.8	690.3	689.1	687.5	685.9	684.2	682.6	683.8
7.5°	686.4	685.5	684.7	683.7	682.8	681.5	679.8	678.2	676.5	674.8	676.1
10°	680.6	679.6	678.5	677.5	676.5	675.0	673.2	671.5	669.8	668.0	669.1
12.5°	672.6	671.7	670.7	669.9	669.0	667.6	665.8	664.1	662.3	660.5	661.3
15°	659.3	658.4	657.5	656.7	655.8	654.3	652.4	650.5	648.5	646.7	647.2
17.5°	642.2	641.4	640.5	639.6	638.7	637.3	635.3	633.4	631.4	629.5	630.2
20°	630.0	629.1	628.2	627.3	626.4	625.0	622.9	620.8	618.8	616.7	617.2
22.5°	617.8	616.5	615.3	614.0	612.8	611.2	609.2	607.3	605.3	603.3	603.4
25°	596.7	595.5	594.3	593.2	592.0	590.1	587.6	585.1	582.6	580.1	580.3
27.5°	572.7	571.7	570.6	569.5	568.5	566.9	565.0	562.9	561.0	559.0	558.6
30°	556.8	555.5	554.4	553.2	552.0	550.3	548.0	545.9	543.7	541.4	541.0
32.5°	539.7	538.8	537.8	536.8	535.9	534.2	531.9	529.6	527.3	525.0	524.1
35°	514.8	513.3	511.8	510.3	508.9	506.9	504.6	502.2	499.8	497.5	496.6
37.5°	486.7	485.4	484.1	482.8	481.4	479.7	477.2	474.9	472.5	470.2	469.0
40°	467.5	466.3	465.1	464.0	462.8	461.0	458.6	456.3	453.9	451.6	450.2
42.5°	448.9	447.6	446.5	445.3	444.2	442.4	440.0	437.7	435.2	432.8	431.4
45°	418.9	417.9	416.8	415.8	414.7	413.1	410.9	408.7	406.4	404.2	402.6
47.5°	389.1	388.1	387.1	386.1	385.1	383.5	381.2	378.9	376.6	374.3	372.6
50°	368.3	367.6	366.8	366.0	365.3	363.9	361.9	359.8	357.7	355.6	353.6
52.5°	348.0	347.1	346.1	345.1	344.1	342.7	340.7	338.8	336.8	334.8	333.1
55°	317.0	316.1	315.2	314.3	313.4	312.1	310.3	308.5	306.7	305.0	303.3
57.5°	285.8	285.1	284.4	283.7	283.0	281.7	279.7	277.8	275.8	273.8	272.1
60°	265.0	264.5	263.9	263.2	262.7	261.4	259.3	257.2	255.1	253.1	251.5
62.5°	244.8	243.9	242.9	241.9	241.0	239.8	238.2	236.6	235.0	233.4	231.8
65°	213.7	212.9	212.0	211.1	210.3	209.0	207.6	206.1	204.6	203.1	201.8
67.5°	182.2	181.5	180.7	180.0	179.3	178.3	177.0	175.7	174.3	173.0	172.0
70°	162.5	161.9	161.3	160.7	160.2	159.2	157.8	156.5	155.2	153.8	152.8
72.5°	142.2	141.7	141.1	140.4	139.9	139.2	138.3	137.4	136.6	135.7	134.6
75°	111.9	111.6	111.3	111.0	110.7	110.2	109.4	108.7	108.0	107.2	106.3
77.5°	84.7	84.2	83.7	83.2	82.7	82.3	82.0	81.7	81.4	81.1	80.7
80°	66.6	66.4	66.3	66.2	66.0	65.8	65.5	65.2	64.9	64.6	64.1
82.5°	49.6	49.5	49.5	49.5	49.4	49.3	49.1	49.0	48.8	48.6	48.1
85°	27.3	27.2	27.0	26.8	26.8	26.6	26.4	26.3	26.1	25.9	25.5
87.5°	9.6	9.6	9.6	9.6	9.5	9.6	9.8	10.0	10.2	10.3	9.9
90°	0.4	1.5	2.6	3.7	4.7	6.2	8.2	10.2	12.1	14.2	14.0
92.5°	7.2	8.0	8.7	9.5	10.3	11.0	11.4	11.9	12.4	12.8	12.8
95°	21.0	21.9	22.8	23.7	24.6	25.1	25.3	25.5	25.7	25.9	25.9
97.5°	38.3	39.1	39.9	40.8	41.6	42.1	42.4	42.8	43.2	43.4	43.4
100°	51.3	52.0	52.7	53.5	54.2	54.7	54.9	55.2	55.5	55.7	55.7
102.5°	64.9	65.5	66.0	66.6	67.1	67.7	67.9	68.3	68.7	69.0	69.1
105°	86.9	87.1	87.4	87.7	87.9	88.2	88.4	88.5	88.7	88.9	89.1
107.5°	109.0	109.4	109.8	110.2	110.6	110.8	110.8	110.8	110.8	110.8	110.8
110°	123.2	123.8	124.3	124.8	125.4	125.6	125.6	125.6	125.6	125.6	125.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	138.8	139.3	139.8	140.4	140.9	141.2	141.1	141.0	140.9	140.8	140.6
115°	161.6	162.1	162.6	163.2	163.7	163.9	163.7	163.5	163.4	163.2	163.1
117.5°	184.4	185.1	185.8	186.5	187.3	187.3	186.9	186.4	185.8	185.4	185.1
120°	199.6	200.3	201.0	201.7	202.4	202.4	201.7	201.0	200.3	199.6	199.6
122.5°	213.5	214.4	215.2	216.1	217.0	217.1	216.6	216.1	215.6	215.1	214.9
125°	235.1	235.9	236.7	237.6	238.4	238.6	238.4	238.1	237.8	237.6	237.3
127.5°	256.2	257.3	258.2	259.3	260.3	260.6	260.4	260.0	259.7	259.4	259.0
130°	269.5	270.6	271.8	273.0	274.1	274.6	274.5	274.3	274.1	273.9	273.8
132.5°	284.4	285.3	286.2	287.2	288.1	288.6	288.6	288.7	288.7	288.7	288.4
135°	304.3	305.2	306.2	307.2	308.2	308.7	308.9	309.1	309.2	309.4	309.3
137.5°	325.1	325.9	326.7	327.5	328.3	328.9	329.1	329.4	329.6	329.8	329.8
140°	337.8	338.6	339.4	340.2	341.0	341.6	342.1	342.5	343.0	343.4	343.4
142.5°	350.7	351.5	352.3	353.1	353.9	354.5	354.7	355.1	355.3	355.7	355.8
145°	369.3	369.9	370.5	371.1	371.8	372.4	372.9	373.4	374.0	374.5	374.6
147.5°	385.8	386.6	387.4	388.1	388.9	389.4	389.8	390.1	390.5	390.8	391.0
150°	397.2	397.7	398.2	398.8	399.3	399.8	400.1	400.5	400.8	401.2	401.4
152.5°	407.2	407.7	408.2	408.8	409.3	409.8	410.2	410.6	411.1	411.5	411.9
155°	422.1	422.4	422.7	423.0	423.3	423.6	423.8	424.1	424.4	424.6	425.1
157.5°	435.1	435.2	435.4	435.6	435.8	435.9	436.0	436.2	436.4	436.6	437.2
160°	442.8	443.0	443.2	443.4	443.5	443.6	443.7	443.8	443.9	444.0	444.5
162.5°	449.9	450.0	450.0	450.0	450.0	450.1	450.2	450.3	450.4	450.5	451.0
165°	459.3	459.2	459.1	459.1	459.0	459.0	459.0	459.0	459.0	459.0	459.6
167.5°	467.3	467.0	466.7	466.5	466.2	466.0	466.0	466.0	466.0	466.0	466.6
170°	471.4	471.2	470.9	470.6	470.4	470.2	470.1	470.0	469.9	469.8	470.5
172.5°	474.4	474.1	473.9	473.6	473.3	473.1	473.1	473.0	472.9	472.8	473.4
175°	478.0	477.7	477.4	477.2	476.9	476.6	476.4	476.3	476.1	475.9	476.5
177.5°	479.4	479.2	478.9	478.8	478.5	478.3	478.2	478.0	477.9	477.8	478.2
180°	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	692.6	692.6	692.6	692.6	692.6	692.6	692.6	692.6
2.5°	689.6	690.8	692.0	692.5	692.2	692.0	691.8	691.5
5°	685.0	686.2	687.3	687.8	687.5	687.2	686.9	686.6
7.5°	677.3	678.4	679.7	680.0	679.8	679.4	679.0	678.8
10°	670.3	671.5	672.7	673.1	672.6	672.2	671.7	671.3
12.5°	662.2	663.0	663.8	664.1	663.7	663.4	663.1	662.7
15°	647.8	648.5	649.0	648.9	648.2	647.5	646.8	646.0
17.5°	630.8	631.5	632.2	632.1	631.4	630.8	630.1	629.4
20°	617.6	618.0	618.5	618.4	617.8	617.2	616.6	616.0
22.5°	603.5	603.6	603.7	603.6	603.2	602.9	602.5	602.2
25°	580.7	580.9	581.2	581.2	580.9	580.7	580.3	580.1
27.5°	558.1	557.7	557.2	556.7	556.0	555.3	554.6	553.8
30°	540.6	540.1	539.7	539.1	538.5	538.0	537.3	536.7
32.5°	523.3	522.5	521.7	521.0	520.4	519.9	519.2	518.6
35°	495.7	494.8	493.9	493.1	492.4	491.6	490.9	490.2
37.5°	468.0	466.9	465.8	464.8	464.1	463.4	462.7	462.1
40°	448.9	447.5	446.2	445.2	444.6	444.1	443.4	442.8
42.5°	430.0	428.6	427.0	426.0	425.1	424.3	423.5	422.6
45°	401.0	399.4	397.7	396.6	396.0	395.5	394.8	394.2
47.5°	370.9	369.1	367.4	366.1	365.2	364.4	363.6	362.7
50°	351.5	349.4	347.3	345.9	345.2	344.5	343.7	343.0
52.5°	331.4	329.7	328.0	326.6	325.7	324.7	323.7	322.7
55°	301.5	299.7	297.9	296.7	295.9	295.2	294.4	293.7
57.5°	270.4	268.6	266.9	265.7	265.1	264.6	264.0	263.4
60°	249.8	248.2	246.6	245.5	245.0	244.6	244.2	243.7
62.5°	230.3	228.8	227.3	226.3	225.7	225.2	224.6	224.0
65°	200.5	199.1	197.8	196.7	196.0	195.3	194.6	193.8
67.5°	170.9	169.9	168.9	168.1	167.5	166.8	166.3	165.7
70°	151.8	150.7	149.7	148.9	148.3	147.7	147.1	146.5
72.5°	133.7	132.6	131.6	130.8	130.4	129.8	129.4	128.9
75°	105.4	104.6	103.7	103.3	103.7	104.0	104.2	104.6
77.5°	80.3	79.8	79.4	78.9	78.5	78.1	77.7	77.2
80°	63.7	63.2	62.9	62.4	62.2	61.9	61.5	61.3
82.5°	47.5	46.9	46.4	46.0	46.0	45.9	45.8	45.8
85°	25.1	24.6	24.2	23.9	23.7	23.6	23.5	23.3
87.5°	9.5	9.1	8.7	8.5	8.4	8.3	8.2	8.1
90°	13.8	13.6	13.5	13.4	13.5	13.6	13.6	13.7
92.5°	12.9	12.9	13.0	13.0	13.0	13.0	13.1	13.1
95°	25.9	25.9	25.9	25.8	25.6	25.4	25.2	25.1
97.5°	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
100°	55.7	55.7	55.7	55.7	55.6	55.6	55.5	55.4
102.5°	69.1	69.2	69.3	69.3	69.2	69.1	69.0	68.9
105°	89.3	89.4	89.6	89.7	89.7	89.7	89.7	89.7
107.5°	110.9	111.0	111.1	110.9	110.5	110.0	109.7	109.2
110°	125.6	125.6	125.6	125.5	125.2	124.9	124.7	124.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	140.4	140.2	140.0	139.7	139.6	139.4	139.2	139.0
115°	163.0	162.9	162.8	162.6	162.4	162.1	161.8	161.6
117.5°	184.9	184.7	184.5	184.2	184.0	183.7	183.4	183.2
120°	199.6	199.6	199.6	199.5	199.2	198.9	198.7	198.4
122.5°	214.6	214.5	214.2	214.0	213.8	213.7	213.4	213.2
125°	237.0	236.7	236.5	236.3	236.2	236.1	236.0	235.9
127.5°	258.7	258.4	258.1	257.8	257.4	257.2	256.9	256.6
130°	273.6	273.4	273.2	273.0	272.6	272.2	271.9	271.5
132.5°	288.0	287.6	287.2	286.9	286.6	286.2	286.0	285.7
135°	309.2	309.2	309.1	308.9	308.6	308.4	308.1	307.8
137.5°	329.7	329.6	329.6	329.3	329.0	328.6	328.2	327.9
140°	343.4	343.4	343.4	343.2	342.9	342.5	342.1	341.8
142.5°	355.8	355.9	356.0	355.8	355.4	355.1	354.7	354.4
145°	374.7	374.8	374.9	374.7	374.3	374.0	373.6	373.3
147.5°	391.2	391.5	391.6	391.6	391.2	390.8	390.5	390.2
150°	401.7	402.0	402.3	402.3	402.0	401.7	401.4	401.2
152.5°	412.1	412.5	412.9	412.9	412.5	412.1	411.9	411.5
155°	425.5	426.0	426.4	426.5	426.2	426.0	425.7	425.4
157.5°	437.7	438.4	439.0	439.1	438.6	438.2	437.8	437.4
160°	445.1	445.6	446.1	446.2	445.9	445.5	445.1	444.8
162.5°	451.7	452.3	452.9	453.0	452.5	452.1	451.7	451.3
165°	460.2	460.8	461.5	461.5	461.1	460.7	460.2	459.8
167.5°	467.3	467.9	468.5	468.6	468.1	467.6	467.2	466.7
170°	471.1	471.7	472.3	472.4	471.9	471.4	470.8	470.3
172.5°	474.0	474.7	475.3	475.3	474.7	474.2	473.7	473.1
175°	477.2	477.8	478.4	478.5	478.0	477.4	476.9	476.4
177.5°	478.7	479.0	479.5	479.5	479.0	478.7	478.2	477.8
180°	478.8	478.8	478.8	478.8	478.8	478.8	478.8	478.8

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