

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: P331500-830

Luminaire Tested: **S122DIW-S485D435U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331500-830
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-S485D435U830-4F0-1E-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: 3279.5 lumens
Efficiency: N/A
Efficacy: 108.6 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

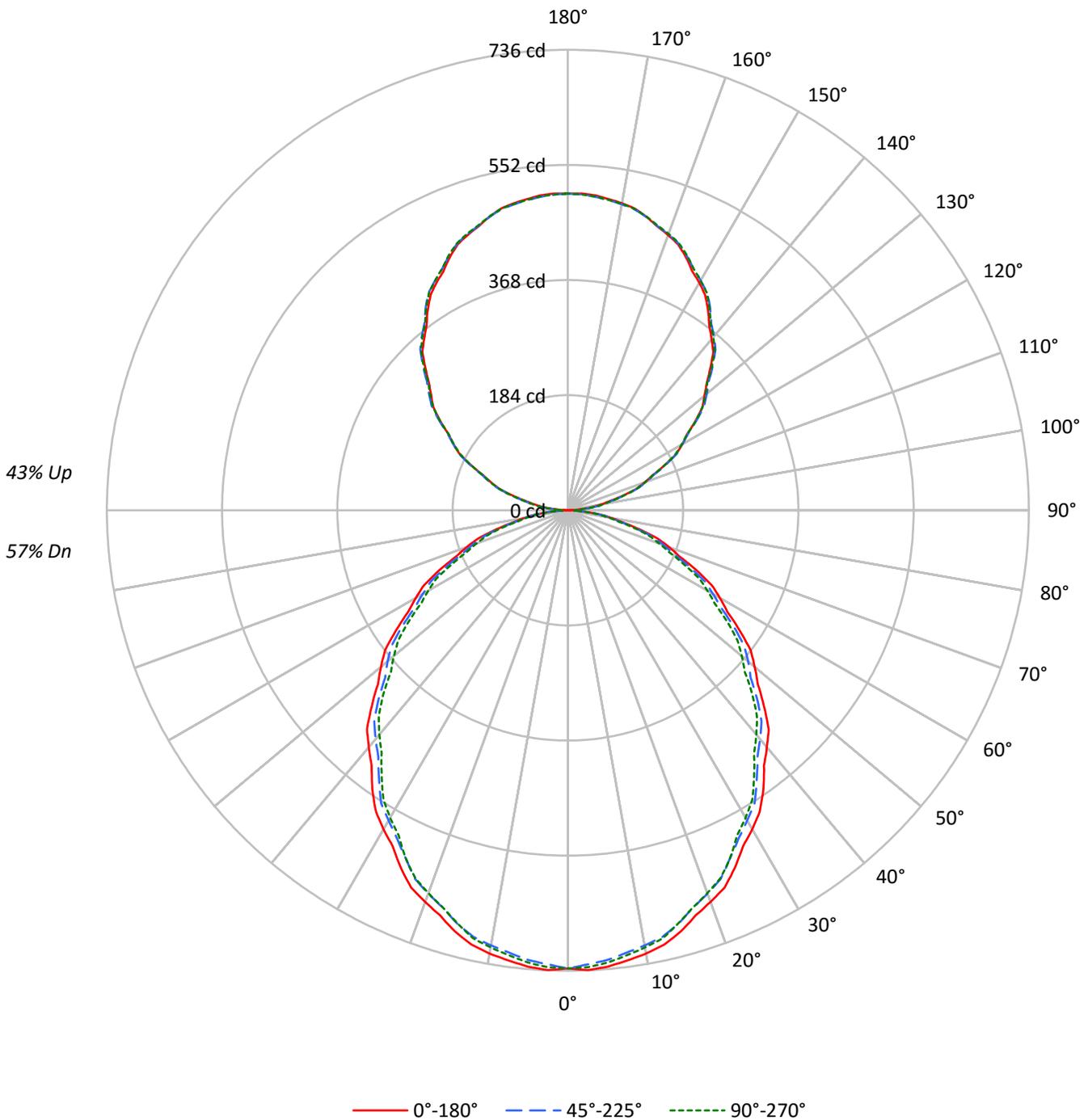
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	11820	11820	11820
5°	11866	11694	11763
10°	11795	11576	11632
15°	11649	11425	11413
20°	11442	11201	11187
25°	11236	10922	10922
30°	10972	10670	10577
35°	10724	10364	10212
40°	10416	10060	9866
45°	10111	9757	9515
50°	9779	9442	9105
55°	9433	9073	8740
60°	9045	8638	8318
65°	8630	8202	7824
70°	8105	7676	7312
75°	7380	7068	6900
80°	6546	6341	6025
85°	5335	5076	4557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	2.1
10°-20°	193.7	5.9
20°-30°	284.7	8.7
30°-40°	330.7	10.1
40°-50°	330.4	10.1
50°-60°	288.1	8.8
60°-70°	213.0	6.5
70°-80°	120.7	3.7
80°-90°	34.5	1.1
90°-100°	32.1	1.0
100°-110°	99.6	3.0
110°-120°	170.2	5.2
120°-130°	223.9	6.8
130°-140°	251.3	7.7
140°-150°	246.4	7.5
150°-160°	206.6	6.3
160°-170°	137.1	4.2
170°-180°	47.9	1.5
0°-30°	547.2	16.7
0°-40°	878.0	26.8
0°-60°	1496.4	45.6
0°-90°	1864.5	56.9
90°-120°	301.9	9.2
90°-150°	1023.3	31.2
90°-180°	1415.0	43.1
0°-180°	3279.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	732	729	722	727	726	69
15°	697	692	684	686	683	196
25°	631	625	613	614	613	290
35°	544	537	526	522	518	340
45°	443	438	427	420	417	342
55°	335	331	322	314	310	299
65°	226	222	215	208	205	223
75°	118	117	113	109	111	126
85°	29	28	27	25	25	33
90°	0	6	15	14	14	3
95°	22	26	27	27	26	25
105°	92	93	94	95	95	97
115°	171	173	172	172	171	169
125°	248	252	251	250	249	222
135°	322	326	327	327	325	248
145°	390	393	396	396	394	244
155°	446	448	449	451	450	205
165°	486	485	485	488	486	137
175°	505	504	503	506	504	48
180°	506	506	506	506	506	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	735.5	734.8	734.2	733.6	732.9	732.0	730.6	729.2	727.8	726.4	727.7
5°	732.1	731.4	730.8	730.2	729.6	728.4	726.7	725.0	723.2	721.5	722.7
7.5°	725.6	724.6	723.7	722.6	721.7	720.4	718.6	716.9	715.1	713.3	714.6
10°	719.4	718.3	717.2	716.1	715.0	713.5	711.6	709.8	707.9	706.1	707.3
12.5°	711.0	710.0	709.0	708.0	707.1	705.7	703.8	701.9	700.0	698.1	699.0
15°	696.9	696.0	695.0	694.1	693.1	691.6	689.6	687.6	685.5	683.5	684.1
17.5°	678.8	678.0	677.0	676.1	675.1	673.6	671.6	669.5	667.4	665.3	666.1
20°	665.9	665.0	664.0	663.1	662.1	660.6	658.4	656.2	654.0	651.9	652.3
22.5°	653.0	651.7	650.4	649.0	647.7	646.0	643.9	641.9	639.8	637.7	637.8
25°	630.7	629.4	628.2	627.0	625.8	623.8	621.1	618.4	615.8	613.1	613.4
27.5°	605.4	604.3	603.1	602.0	600.9	599.3	597.2	595.0	593.0	590.9	590.4
30°	588.5	587.2	586.0	584.8	583.4	581.6	579.3	577.0	574.7	572.3	571.8
32.5°	570.4	569.5	568.4	567.4	566.5	564.7	562.2	559.8	557.3	554.9	554.0
35°	544.1	542.5	541.0	539.4	537.9	535.8	533.4	530.8	528.3	525.8	524.9
37.5°	514.4	513.0	511.7	510.3	508.9	507.0	504.4	502.0	499.5	497.0	495.8
40°	494.2	492.9	491.6	490.4	489.2	487.3	484.7	482.3	479.8	477.3	475.9
42.5°	474.5	473.2	471.9	470.7	469.5	467.6	465.1	462.6	460.1	457.5	456.0
45°	442.8	441.7	440.5	439.5	438.4	436.7	434.3	432.0	429.6	427.3	425.6
47.5°	411.2	410.2	409.2	408.1	407.1	405.4	402.9	400.5	398.0	395.6	393.8
50°	389.3	388.5	387.7	386.9	386.2	384.7	382.5	380.3	378.1	375.9	373.7
52.5°	367.9	366.8	365.8	364.8	363.7	362.2	360.1	358.1	356.0	353.9	352.1
55°	335.1	334.1	333.2	332.2	331.3	329.9	328.0	326.1	324.2	322.3	320.6
57.5°	302.1	301.3	300.6	299.9	299.2	297.7	295.7	293.6	291.5	289.5	287.6
60°	280.1	279.6	278.9	278.2	277.7	276.3	274.1	271.8	269.7	267.5	265.8
62.5°	258.7	257.8	256.7	255.7	254.8	253.4	251.8	250.1	248.4	246.7	245.1
65°	225.9	225.0	224.0	223.1	222.3	220.9	219.4	217.8	216.2	214.7	213.3
67.5°	192.6	191.8	191.1	190.3	189.5	188.5	187.1	185.7	184.3	182.9	181.8
70°	171.7	171.2	170.5	169.8	169.3	168.2	166.8	165.4	164.0	162.6	161.6
72.5°	150.3	149.8	149.1	148.5	147.9	147.1	146.2	145.2	144.4	143.5	142.3
75°	118.3	117.9	117.6	117.3	117.0	116.5	115.6	114.9	114.1	113.3	112.4
77.5°	89.5	89.0	88.5	87.9	87.4	87.0	86.7	86.3	86.1	85.8	85.3
80°	70.4	70.2	70.1	69.9	69.7	69.6	69.2	68.9	68.6	68.2	67.8
82.5°	52.4	52.3	52.3	52.3	52.2	52.1	51.9	51.7	51.6	51.4	50.8
85°	28.8	28.7	28.6	28.4	28.3	28.1	27.9	27.8	27.6	27.4	27.0
87.5°	10.2	10.2	10.2	10.2	10.1	10.2	10.4	10.6	10.7	10.8	10.5
90°	0.5	1.6	2.7	3.9	5.0	6.6	8.7	10.7	12.8	15.0	14.8
92.5°	7.6	8.5	9.2	10.1	10.9	11.6	12.1	12.6	13.1	13.6	13.6
95°	22.2	23.2	24.1	25.1	26.0	26.6	26.8	27.0	27.1	27.3	27.3
97.5°	40.5	41.4	42.2	43.1	43.9	44.5	44.9	45.2	45.6	45.9	45.9
100°	54.2	55.0	55.7	56.6	57.3	57.8	58.1	58.3	58.6	58.9	58.9
102.5°	68.6	69.2	69.7	70.4	71.0	71.5	71.8	72.2	72.6	73.0	73.0
105°	91.8	92.1	92.4	92.7	92.9	93.2	93.4	93.6	93.8	94.0	94.2
107.5°	115.2	115.6	116.0	116.5	116.9	117.1	117.1	117.1	117.1	117.1	117.2
110°	130.3	130.8	131.4	132.0	132.5	132.8	132.8	132.8	132.8	132.8	132.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	146.7	147.2	147.8	148.4	148.9	149.2	149.1	149.0	148.9	148.8	148.6
115°	170.8	171.4	171.9	172.5	173.1	173.2	173.1	172.9	172.7	172.5	172.4
117.5°	194.9	195.7	196.4	197.2	197.9	198.0	197.6	197.0	196.4	196.0	195.7
120°	210.9	211.7	212.4	213.2	214.0	214.0	213.2	212.4	211.7	210.9	210.9
122.5°	225.6	226.6	227.4	228.4	229.3	229.5	228.9	228.4	227.9	227.3	227.2
125°	248.5	249.4	250.2	251.1	251.9	252.2	251.9	251.7	251.4	251.1	250.8
127.5°	270.8	271.9	273.0	274.1	275.1	275.5	275.2	274.8	274.5	274.2	273.8
130°	284.8	286.1	287.3	288.5	289.7	290.3	290.1	289.9	289.7	289.5	289.4
132.5°	300.6	301.5	302.6	303.6	304.5	305.1	305.1	305.2	305.2	305.2	304.8
135°	321.6	322.6	323.7	324.7	325.7	326.3	326.5	326.7	326.9	327.1	327.0
137.5°	343.7	344.5	345.3	346.2	347.0	347.6	347.9	348.2	348.4	348.6	348.6
140°	357.0	357.9	358.7	359.6	360.4	361.1	361.6	362.0	362.5	363.0	363.0
142.5°	370.7	371.6	372.4	373.2	374.1	374.7	374.9	375.3	375.6	376.0	376.1
145°	390.3	391.0	391.6	392.3	392.9	393.6	394.2	394.7	395.3	395.9	396.0
147.5°	407.8	408.6	409.4	410.2	411.0	411.6	412.0	412.4	412.7	413.1	413.3
150°	419.8	420.4	420.9	421.5	422.1	422.5	422.9	423.3	423.7	424.0	424.3
152.5°	430.4	430.9	431.5	432.1	432.6	433.2	433.6	434.0	434.5	435.0	435.4
155°	446.2	446.5	446.8	447.1	447.4	447.7	448.0	448.3	448.6	448.8	449.3
157.5°	459.9	460.1	460.2	460.4	460.6	460.7	460.9	461.1	461.3	461.5	462.1
160°	468.1	468.3	468.4	468.6	468.8	468.9	469.0	469.1	469.2	469.3	469.9
162.5°	475.5	475.6	475.6	475.6	475.7	475.8	475.9	476.0	476.1	476.2	476.7
165°	485.5	485.4	485.3	485.2	485.1	485.1	485.1	485.1	485.1	485.1	485.8
167.5°	493.9	493.6	493.3	493.0	492.8	492.6	492.6	492.6	492.6	492.6	493.2
170°	498.3	498.0	497.8	497.5	497.2	497.0	496.9	496.8	496.7	496.6	497.3
172.5°	501.4	501.1	500.9	500.6	500.3	500.1	500.0	499.9	499.8	499.7	500.4
175°	505.2	504.9	504.6	504.4	504.1	503.8	503.6	503.4	503.2	503.0	503.7
177.5°	506.7	506.5	506.2	506.1	505.8	505.6	505.5	505.3	505.1	505.0	505.5
180°	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	729.0	730.2	731.4	732.0	731.7	731.4	731.2	730.9
5°	724.1	725.3	726.5	727.0	726.7	726.3	726.0	725.8
7.5°	715.9	717.1	718.4	718.8	718.5	718.1	717.7	717.5
10°	708.5	709.8	711.1	711.4	711.0	710.5	710.0	709.5
12.5°	699.9	700.8	701.6	701.9	701.5	701.3	700.9	700.5
15°	684.8	685.4	686.0	685.9	685.1	684.4	683.6	682.8
17.5°	666.8	667.5	668.3	668.2	667.4	666.8	666.0	665.2
20°	652.8	653.3	653.7	653.7	653.0	652.3	651.8	651.1
22.5°	637.9	638.0	638.1	638.0	637.6	637.3	636.9	636.5
25°	613.8	614.1	614.3	614.3	614.1	613.8	613.4	613.1
27.5°	589.9	589.5	589.0	588.4	587.7	586.9	586.2	585.4
30°	571.4	570.9	570.4	569.9	569.2	568.6	568.0	567.3
32.5°	553.2	552.3	551.5	550.7	550.1	549.5	548.8	548.2
35°	524.0	523.0	522.1	521.2	520.5	519.6	518.9	518.1
37.5°	494.6	493.5	492.4	491.3	490.6	489.8	489.1	488.4
40°	474.5	473.1	471.6	470.6	470.0	469.4	468.7	468.1
42.5°	454.5	453.0	451.4	450.3	449.3	448.5	447.6	446.7
45°	423.9	422.2	420.4	419.2	418.6	418.0	417.4	416.7
47.5°	392.0	390.1	388.3	387.0	386.1	385.2	384.3	383.3
50°	371.6	369.3	367.1	365.6	364.9	364.1	363.3	362.5
52.5°	350.3	348.5	346.7	345.3	344.2	343.2	342.1	341.1
55°	318.7	316.8	314.9	313.6	312.7	312.0	311.2	310.5
57.5°	285.8	283.9	282.1	280.9	280.2	279.7	279.1	278.4
60°	264.0	262.3	260.6	259.5	259.0	258.5	258.1	257.6
62.5°	243.5	241.9	240.3	239.2	238.6	238.0	237.4	236.8
65°	211.9	210.5	209.1	207.9	207.2	206.4	205.7	204.8
67.5°	180.7	179.6	178.5	177.7	177.0	176.3	175.8	175.1
70°	160.4	159.3	158.3	157.4	156.7	156.1	155.5	154.9
72.5°	141.3	140.2	139.1	138.3	137.8	137.2	136.8	136.3
75°	111.4	110.6	109.6	109.2	109.6	109.9	110.2	110.6
77.5°	84.8	84.4	83.9	83.4	82.9	82.6	82.1	81.6
80°	67.3	66.8	66.4	66.0	65.7	65.4	65.0	64.8
82.5°	50.2	49.6	49.0	48.6	48.6	48.5	48.4	48.4
85°	26.5	26.0	25.5	25.3	25.1	25.0	24.8	24.6
87.5°	10.1	9.6	9.2	9.0	8.9	8.8	8.7	8.6
90°	14.6	14.4	14.2	14.1	14.2	14.3	14.4	14.5
92.5°	13.7	13.7	13.8	13.8	13.8	13.8	13.9	13.9
95°	27.3	27.3	27.3	27.2	27.1	26.9	26.7	26.5
97.5°	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9
100°	58.9	58.9	58.9	58.9	58.8	58.7	58.6	58.5
102.5°	73.0	73.1	73.2	73.2	73.1	73.0	73.0	72.9
105°	94.3	94.5	94.7	94.8	94.8	94.8	94.8	94.8
107.5°	117.3	117.3	117.4	117.3	116.8	116.3	115.9	115.5
110°	132.8	132.8	132.8	132.6	132.3	132.1	131.8	131.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	148.5	148.2	148.0	147.7	147.5	147.3	147.1	146.9
115°	172.3	172.2	172.1	171.9	171.6	171.4	171.1	170.8
117.5°	195.5	195.2	195.0	194.7	194.4	194.2	193.9	193.6
120°	210.9	210.9	210.9	210.8	210.6	210.3	210.0	209.7
122.5°	226.9	226.7	226.4	226.2	226.0	225.8	225.6	225.4
125°	250.5	250.2	250.0	249.8	249.7	249.6	249.5	249.4
127.5°	273.4	273.1	272.8	272.5	272.1	271.8	271.5	271.3
130°	289.2	289.0	288.8	288.5	288.1	287.8	287.4	287.0
132.5°	304.4	304.0	303.6	303.2	302.9	302.6	302.3	302.0
135°	326.9	326.8	326.7	326.5	326.2	325.9	325.6	325.4
137.5°	348.5	348.4	348.4	348.1	347.7	347.3	346.9	346.6
140°	363.0	363.0	363.0	362.8	362.4	362.0	361.7	361.3
142.5°	376.1	376.2	376.3	376.1	375.7	375.3	374.9	374.6
145°	396.1	396.2	396.2	396.1	395.7	395.3	394.9	394.5
147.5°	413.5	413.8	414.0	413.9	413.5	413.1	412.7	412.5
150°	424.6	424.9	425.2	425.2	424.9	424.6	424.3	424.0
152.5°	435.6	436.0	436.4	436.4	436.0	435.6	435.4	435.0
155°	449.8	450.3	450.7	450.8	450.5	450.3	450.0	449.7
157.5°	462.7	463.4	464.0	464.1	463.6	463.2	462.8	462.3
160°	470.4	471.0	471.6	471.6	471.3	470.9	470.5	470.1
162.5°	477.4	478.1	478.7	478.8	478.3	477.9	477.4	477.0
165°	486.4	487.1	487.8	487.9	487.4	486.9	486.4	486.0
167.5°	493.9	494.6	495.2	495.3	494.7	494.3	493.8	493.3
170°	497.9	498.6	499.3	499.4	498.8	498.2	497.7	497.1
172.5°	501.1	501.7	502.4	502.4	501.8	501.2	500.7	500.1
175°	504.4	505.0	505.7	505.8	505.2	504.6	504.1	503.5
177.5°	506.0	506.3	506.8	506.8	506.3	506.0	505.5	505.0
180°	506.1	506.1	506.1	506.1	506.1	506.1	506.1	506.1

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