

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: P331557-935

Luminaire Tested: **S122DIW-S865D435U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331557-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D435U935-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4499.2 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

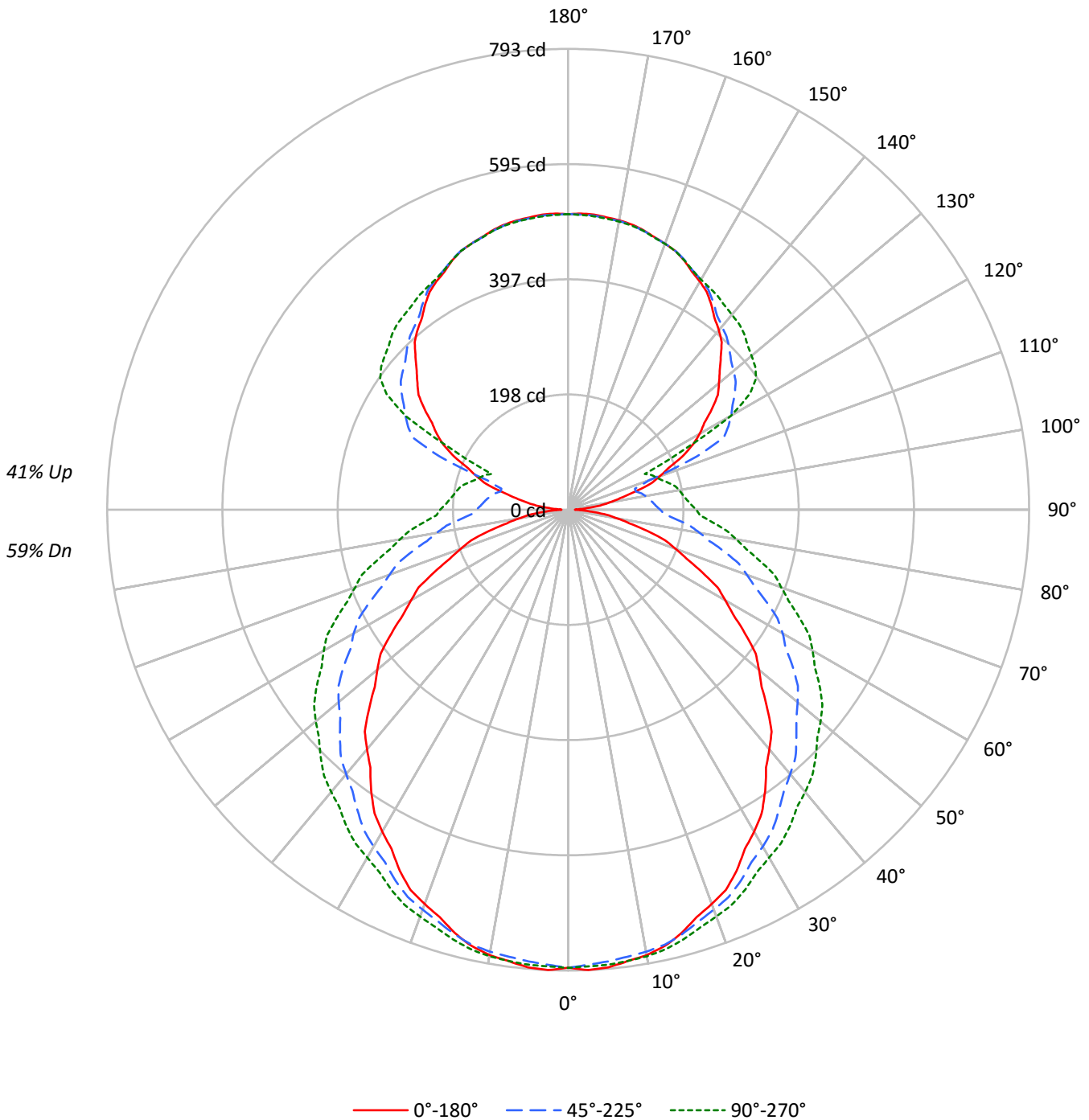
Input Watts (W): 46.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331557-935

CATALOG NUMBER: S122DIW-S865D435U935-4F0-1E-UDD-D

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	102	102	102	102	89	89	89	76	76	76	65	65	65	59
1	98	93	88	84	91	87	83	79	75	72	69	64	62	60	54	53	51	46
2	89	80	73	67	82	75	69	63	65	60	56	55	52	49	47	44	42	37
3	80	70	62	55	75	65	58	52	57	51	46	48	44	40	41	38	35	31
4	73	62	53	46	68	58	50	44	50	44	39	43	38	34	36	33	29	26
5	67	55	46	39	62	51	43	37	44	38	33	38	33	29	32	29	25	22
6	62	49	40	34	57	46	38	32	40	34	29	34	29	25	29	25	22	19
7	57	44	36	30	53	41	34	28	36	30	25	31	26	22	27	23	20	17
8	53	40	32	26	49	38	30	25	33	27	22	29	24	20	25	20	17	15
9	49	36	29	23	46	34	27	22	30	24	20	26	21	18	23	19	16	13
10	46	33	26	21	43	31	25	20	28	22	18	24	19	16	21	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12728	12728	12728
5°	12790	12252	12205
10°	12710	11890	11756
15°	12535	11506	11284
20°	12312	11097	10828
25°	12095	10701	10415
30°	11786	10293	10000
35°	11474	9900	9708
40°	11147	9566	9415
45°	10835	9267	9165
50°	10500	8995	8920
55°	10150	8703	8668
60°	9721	8403	8403
65°	9278	8047	8088
70°	8774	7666	7748
75°	8132	7293	7435
80°	7126	6912	7117
85°	6164	6582	6872



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.7	1.7
10°-20°	214.2	4.8
20°-30°	324.6	7.2
30°-40°	395.4	8.8
40°-50°	425.3	9.5
50°-60°	413.1	9.2
60°-70°	360.7	8.0
70°-80°	277.7	6.2
80°-90°	187.6	4.2
90°-100°	145.3	3.2
100°-110°	156.0	3.5
110°-120°	228.2	5.1
120°-130°	309.1	6.9
130°-140°	306.4	6.8
140°-150°	273.9	6.1
150°-160°	218.2	4.8
160°-170°	140.6	3.1
170°-180°	48.4	1.1
0°-30°	613.5	13.6
0°-40°	1008.9	22.4
0°-60°	1847.2	41.1
0°-90°	2673.2	59.4
90°-120°	529.5	11.8
90°-150°	1418.9	31.5
90°-180°	1826.0	40.6
0°-180°	4499.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	788	788	788	788	788	
5°	791	787	780	787	786	75
15°	754	756	756	766	766	212
25°	686	694	704	717	721	315
35°	591	610	632	656	665	369
45°	484	516	555	589	602	374
55°	371	413	472	512	528	332
65°	254	310	377	422	439	252
75°	140	205	278	325	342	149
85°	41	112	185	231	249	44
90°	12	82	158	204	220	9
95°	33	76	146	189	204	36
105°	118	157	121	163	179	126
115°	216	237	296	166	146	212
125°	301	308	350	382	395	269
135°	371	378	392	419	428	287
145°	430	429	435	444	449	269
155°	473	470	474	476	473	218
165°	498	496	497	500	497	141
175°	510	507	508	510	507	48
180°	509	509	509	509	509	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	792.9	792.3	791.7	791.1	790.5	789.5	788.0	786.6	785.1	783.8	784.8
5°	790.6	789.9	789.1	788.3	787.6	786.4	784.9	783.3	781.9	780.3	781.9
7.5°	783.5	783.0	782.5	782.0	781.5	780.7	779.5	778.3	777.1	776.0	777.8
10°	778.1	777.6	777.1	776.5	776.0	775.4	774.6	773.9	773.1	772.3	774.4
12.5°	768.9	769.0	769.1	769.2	769.3	769.0	768.5	767.9	767.4	766.8	768.9
15°	754.1	754.6	755.1	755.6	756.0	756.3	756.3	756.3	756.3	756.3	758.6
17.5°	734.9	735.9	737.0	738.0	739.1	740.0	740.9	741.7	742.5	743.3	745.7
20°	722.0	723.3	724.6	725.9	727.1	728.3	729.3	730.3	731.3	732.4	735.1
22.5°	708.3	709.8	711.3	712.7	714.2	715.7	717.1	718.5	720.0	721.3	724.2
25°	685.5	687.3	689.1	690.9	692.6	694.7	696.9	699.2	701.5	703.8	706.8
27.5°	658.1	661.0	663.8	666.8	669.7	672.4	675.1	677.9	680.5	683.2	687.1
30°	639.8	643.1	646.4	649.7	653.0	656.3	659.6	662.9	666.2	669.5	673.6
32.5°	619.7	623.4	627.1	630.9	634.6	638.3	642.2	646.2	650.1	653.9	658.7
35°	590.6	595.0	599.3	603.6	608.0	612.5	617.3	622.2	627.0	631.8	637.4
37.5°	559.1	564.1	569.1	574.0	579.0	584.6	590.9	597.2	603.4	609.7	615.9
40°	538.1	543.7	549.3	554.9	560.4	566.7	573.5	580.4	587.3	594.1	600.7
42.5°	518.0	523.6	529.2	534.8	540.4	547.1	554.9	562.8	570.7	578.6	585.7
45°	484.4	491.3	498.1	505.0	511.9	519.7	528.6	537.5	546.4	555.3	563.1
47.5°	451.3	458.7	466.2	473.7	481.1	490.1	500.5	510.9	521.3	531.8	539.9
50°	428.4	436.3	444.2	452.0	459.9	469.6	481.0	492.4	503.9	515.3	523.9
52.5°	406.5	414.7	423.1	431.4	439.6	449.8	461.8	473.8	485.9	497.9	506.7
55°	371.3	380.5	389.6	398.7	407.9	419.0	432.2	445.5	458.7	471.8	481.0
57.5°	336.6	346.9	357.2	367.5	377.8	389.7	403.1	416.6	430.1	443.5	453.4
60°	311.9	322.8	333.7	344.7	355.6	368.2	382.7	397.2	411.6	426.2	435.8
62.5°	290.0	301.3	312.6	323.9	335.3	348.2	362.7	377.1	391.6	406.0	416.3
65°	253.7	266.0	278.5	290.9	303.4	317.1	332.1	347.1	362.1	377.0	387.4
67.5°	220.2	233.2	246.2	259.2	272.2	286.5	301.8	317.1	332.4	347.8	358.3
70°	196.5	209.7	222.9	236.1	249.3	263.8	279.6	295.2	311.0	326.7	337.7
72.5°	174.6	188.2	201.8	215.4	229.0	243.7	259.8	275.7	291.6	307.5	318.3
75°	140.5	154.7	168.9	183.2	197.4	212.7	228.9	245.1	261.4	277.6	288.5
77.5°	107.6	122.5	137.4	152.2	167.1	182.8	199.3	215.9	232.3	248.8	259.7
80°	85.7	101.2	116.7	132.2	147.7	163.6	180.1	196.7	213.1	229.6	240.3
82.5°	67.4	82.7	98.0	113.2	128.5	144.6	161.3	178.0	194.7	211.4	222.1
85°	41.2	56.9	72.6	88.3	104.1	120.1	136.3	152.6	168.8	185.1	195.8
87.5°	22.5	37.8	53.1	68.4	83.7	99.5	116.0	132.3	148.7	165.1	175.6
90°	11.8	27.4	43.0	58.6	74.3	90.6	107.5	124.3	141.3	158.2	168.8
92.5°	17.9	31.6	45.2	58.8	72.5	87.2	103.2	119.2	135.2	151.1	161.3
95°	33.1	42.3	51.5	60.8	70.0	82.5	98.3	114.2	129.9	145.8	155.8
97.5°	55.4	58.5	61.5	64.5	67.5	77.0	92.9	108.9	124.8	140.8	150.5
100°	73.1	71.3	69.5	67.7	65.9	72.8	88.4	104.0	119.6	135.3	145.3
102.5°	91.6	97.9	104.1	110.3	116.5	120.7	122.9	125.0	127.3	129.4	139.5
105°	117.6	127.4	137.2	147.1	156.9	157.2	148.1	139.0	129.8	120.7	130.5
107.5°	148.5	156.4	164.2	172.1	179.9	176.8	162.7	148.6	134.4	120.3	127.9
110°	167.6	174.4	181.2	188.0	194.8	192.6	181.4	170.2	159.0	147.8	147.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	186.4	192.3	198.0	203.8	209.6	215.5	221.4	227.5	233.4	239.4	217.7
115°	216.2	220.3	224.5	228.7	232.9	241.8	255.2	268.6	282.1	295.6	265.4
117.5°	241.6	245.0	248.4	251.8	255.1	262.8	274.7	286.7	298.7	310.6	309.0
120°	261.1	263.3	265.5	267.8	270.0	276.9	288.5	300.2	311.9	323.5	331.6
122.5°	277.5	279.2	280.9	282.6	284.3	290.8	301.9	313.1	324.2	335.4	342.9
125°	301.4	302.6	303.6	304.6	305.7	311.1	320.8	330.5	340.1	349.8	357.2
127.5°	324.3	325.1	326.1	327.0	327.9	332.3	339.9	347.7	355.3	363.1	370.2
130°	338.6	339.7	340.8	341.8	342.9	346.5	352.8	359.0	365.2	371.4	378.4
132.5°	353.4	354.2	355.1	355.9	356.8	359.7	364.7	369.7	374.8	379.8	386.4
135°	371.3	372.6	373.9	375.3	376.6	378.8	382.2	385.5	388.7	392.0	398.1
137.5°	390.7	391.6	392.4	393.3	394.2	395.5	397.5	399.5	401.4	403.4	408.9
140°	403.4	403.8	404.2	404.6	405.0	405.9	407.3	408.7	410.1	411.5	416.3
142.5°	414.0	414.3	414.7	415.0	415.3	416.0	417.2	418.3	419.5	420.6	424.5
145°	429.5	429.4	429.3	429.2	429.1	429.8	431.2	432.6	433.9	435.3	437.5
147.5°	443.9	443.7	443.3	443.1	442.7	443.2	444.6	446.0	447.4	448.8	449.4
150°	453.4	452.8	452.2	451.7	451.1	451.4	452.8	454.1	455.4	456.7	457.2
152.5°	461.3	460.7	460.0	459.4	458.7	459.1	460.3	461.6	462.8	464.1	464.5
155°	472.9	472.2	471.4	470.7	469.9	470.1	471.1	472.0	473.0	474.0	474.5
157.5°	481.9	481.3	480.7	480.1	479.5	479.5	480.2	480.9	481.6	482.2	482.8
160°	487.2	486.7	486.3	485.8	485.3	485.3	485.8	486.3	486.7	487.2	487.8
162.5°	492.0	491.5	490.9	490.5	490.0	490.0	490.3	490.8	491.2	491.6	492.2
165°	498.3	497.8	497.3	496.8	496.3	496.2	496.5	496.7	497.0	497.1	497.7
167.5°	503.0	502.5	502.0	501.5	501.0	500.9	501.1	501.4	501.6	501.8	502.4
170°	505.7	505.1	504.6	504.2	503.7	503.5	503.7	503.9	504.0	504.2	504.7
172.5°	507.4	507.0	506.4	505.9	505.4	505.3	505.4	505.6	505.8	505.9	506.5
175°	509.7	509.1	508.5	508.0	507.4	507.2	507.4	507.6	507.6	507.8	508.4
177.5°	510.1	509.6	509.1	508.7	508.2	508.0	508.1	508.2	508.2	508.2	508.8
180°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	788.3	788.3	788.3	788.3	788.3	788.3	788.3	788.3
2.5°	785.7	786.8	787.8	788.2	787.7	787.3	786.9	786.5
5°	783.3	784.9	786.4	787.0	786.8	786.5	786.3	786.0
7.5°	779.6	781.4	783.3	784.1	783.9	783.6	783.3	783.1
10°	776.4	778.4	780.5	781.4	781.1	780.8	780.6	780.3
12.5°	770.9	772.9	775.0	775.8	775.6	775.3	775.1	774.8
15°	760.9	763.2	765.5	766.5	766.2	765.9	765.7	765.5
17.5°	748.1	750.4	752.9	754.1	754.1	754.1	754.1	754.1
20°	738.0	740.7	743.5	744.9	744.9	744.9	744.9	744.9
22.5°	726.9	729.8	732.5	734.2	734.5	734.9	735.4	735.8
25°	709.9	712.9	716.0	717.9	718.6	719.4	720.1	720.9
27.5°	691.0	694.8	698.6	700.9	701.5	702.0	702.6	703.1
30°	677.6	681.7	685.8	688.2	688.9	689.7	690.4	691.2
32.5°	663.3	668.0	672.6	675.7	677.0	678.4	679.8	681.1
35°	643.0	648.6	654.2	657.8	659.6	661.4	663.1	665.0
37.5°	622.0	628.2	634.4	638.4	640.3	642.2	644.1	646.0
40°	607.3	613.9	620.5	624.9	627.2	629.5	631.8	634.1
42.5°	593.0	600.2	607.4	612.2	614.4	616.7	619.0	621.3
45°	571.0	578.9	586.8	591.9	594.5	597.0	599.6	602.1
47.5°	548.2	556.4	564.6	570.2	572.9	575.8	578.5	581.3
50°	532.5	541.1	549.8	555.5	558.3	561.1	563.9	566.7
52.5°	515.6	524.4	533.2	539.2	542.2	545.2	548.1	551.1
55°	490.2	499.3	508.4	514.6	517.9	521.2	524.5	527.8
57.5°	463.2	473.0	482.9	489.6	492.8	496.2	499.6	502.9
60°	445.5	455.1	464.8	471.3	474.9	478.5	482.0	485.6
62.5°	426.5	436.8	447.0	453.9	457.2	460.5	463.9	467.3
65°	397.9	408.3	418.7	425.5	428.8	432.1	435.4	438.7
67.5°	368.8	379.3	389.9	396.8	400.3	403.7	407.2	410.6
70°	348.6	359.5	370.4	377.4	380.5	383.5	386.6	389.6
72.5°	329.0	339.7	350.4	357.6	361.3	364.9	368.6	372.2
75°	299.5	310.4	321.3	328.4	331.7	335.0	338.3	341.6
77.5°	270.6	281.5	292.3	299.5	303.1	306.6	310.2	313.7
80°	251.0	261.7	272.3	279.4	282.9	286.5	290.1	293.6
82.5°	232.7	243.3	254.0	261.1	264.4	267.7	271.0	274.4
85°	206.4	217.1	227.7	234.9	238.4	241.9	245.5	249.1
87.5°	186.0	196.4	206.8	213.7	217.0	220.2	223.5	226.9
90°	179.3	189.9	200.4	207.3	210.5	213.7	217.0	220.2
92.5°	171.4	181.6	191.7	198.5	201.6	204.7	207.8	211.0
95°	165.8	175.9	186.0	192.5	195.4	198.4	201.4	204.3
97.5°	160.2	170.0	179.7	186.1	189.2	192.3	195.4	198.5
100°	155.3	165.4	175.4	181.9	184.9	187.9	190.8	193.7
102.5°	149.5	159.5	169.6	176.1	179.2	182.2	185.2	188.2
105°	140.3	150.1	159.9	166.3	169.4	172.5	175.6	178.7
107.5°	135.5	143.2	150.8	156.1	159.3	162.4	165.5	168.6
110°	147.7	147.7	147.6	149.1	152.2	155.3	158.5	161.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	196.0	174.4	152.6	143.3	146.4	149.4	152.5	155.5
115°	235.1	204.8	174.6	157.9	154.9	151.8	148.7	145.6
117.5°	307.4	305.7	304.1	294.9	278.1	261.4	244.6	227.8
120°	339.7	347.8	355.8	355.8	347.5	339.2	331.0	322.7
122.5°	350.3	357.8	365.3	369.2	369.5	369.6	369.9	370.1
125°	364.6	372.1	379.5	384.5	387.0	389.5	392.1	394.6
127.5°	377.4	384.4	391.6	396.3	398.6	400.9	403.1	405.4
130°	385.4	392.4	399.4	403.9	405.8	407.8	409.7	411.6
132.5°	393.1	399.8	406.4	410.7	412.7	414.7	416.6	418.5
135°	404.2	410.4	416.6	420.6	422.5	424.3	426.2	428.1
137.5°	414.3	419.8	425.2	428.8	430.2	431.6	433.1	434.5
140°	421.1	425.9	430.7	433.7	434.8	435.9	437.0	438.1
142.5°	428.4	432.3	436.3	438.7	439.5	440.5	441.4	442.3
145°	439.5	441.6	443.8	445.2	446.1	446.9	447.8	448.7
147.5°	450.0	450.6	451.3	451.7	451.9	452.2	452.5	452.8
150°	457.7	458.1	458.7	458.7	458.3	457.9	457.4	457.1
152.5°	465.0	465.5	466.1	466.0	465.5	464.9	464.3	463.8
155°	475.0	475.4	476.0	475.9	475.2	474.6	473.9	473.3
157.5°	483.4	483.9	484.5	484.4	483.8	483.1	482.5	481.9
160°	488.2	488.7	489.2	489.1	488.6	488.0	487.4	486.9
162.5°	492.8	493.4	493.9	493.8	493.1	492.4	491.7	491.0
165°	498.3	498.9	499.5	499.5	498.9	498.3	497.7	497.1
167.5°	503.0	503.5	504.1	504.0	503.3	502.6	501.8	501.1
170°	505.3	505.9	506.4	506.4	505.7	504.9	504.2	503.4
172.5°	507.0	507.6	508.2	508.2	507.4	506.7	505.9	505.2
175°	509.0	509.5	510.1	510.1	509.2	508.4	507.6	506.8
177.5°	509.2	509.6	510.1	510.1	509.5	508.9	508.2	507.7
180°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6

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