

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: P331497-927

Luminaire Tested: **S122DIW-S485D435U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331497-927
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-S485D435U927-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 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: 2929.9 lumens
Efficiency: N/A
Efficacy: 97.0 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

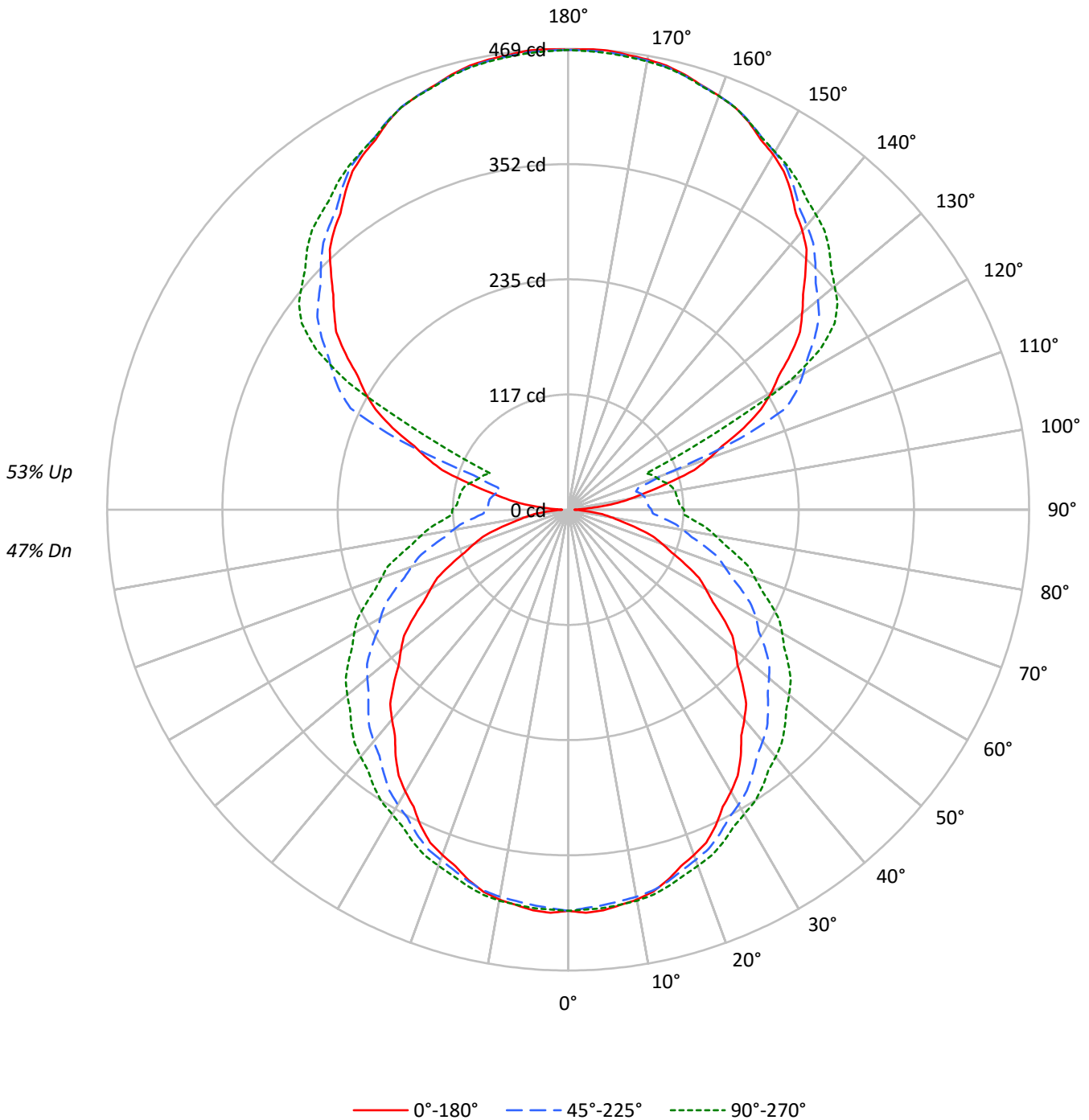
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331497-927

CATALOG NUMBER: S122DIW-S485D435U927-4F0-1E-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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	54	54	54	47
1	96	91	86	82	88	83	80	76	70	67	64	57	55	53	45	44	42	37
2	87	78	72	66	79	72	66	61	60	56	52	49	46	43	39	37	35	30
3	79	69	61	54	72	63	56	51	53	47	43	43	39	36	34	31	29	25
4	72	60	52	46	65	56	48	42	46	41	36	38	34	30	30	27	24	21
5	66	54	45	39	60	49	42	36	41	35	31	34	29	26	27	24	21	18
6	60	48	39	33	55	44	37	31	37	31	27	31	26	23	24	21	18	15
7	56	43	35	29	51	40	32	27	34	28	23	28	23	20	22	19	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	21	28	22	18	23	19	16	19	15	13	11
10	45	33	25	20	41	30	23	19	26	20	17	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	1.3
10°-20°	110.9	3.8
20°-30°	168.1	5.7
30°-40°	204.7	7.0
40°-50°	220.3	7.5
50°-60°	213.9	7.3
60°-70°	186.8	6.4
70°-80°	143.8	4.9
80°-90°	97.6	3.3
90°-100°	82.1	2.8
100°-110°	105.8	3.6
110°-120°	185.1	6.3
120°-130°	270.5	9.2
130°-140°	276.1	9.4
140°-150°	251.0	8.6
150°-160°	200.7	6.9
160°-170°	129.3	4.4
170°-180°	44.5	1.5
0°-30°	317.7	10.8
0°-40°	522.4	17.8
0°-60°	956.6	32.6
0°-90°	1384.8	47.3
90°-120°	372.9	12.7
90°-150°	1170.5	40.0
90°-180°	1545.0	52.7
0°-180°	2929.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	6	44	85	109	118	5
95°	27	45	81	104	112	31
105°	106	128	72	95	104	113
115°	197	211	244	112	88	194
125°	276	282	306	324	331	247
135°	341	347	356	371	376	264
145°	395	395	400	406	408	247
155°	435	432	436	438	436	200
165°	458	457	457	460	457	129
175°	469	467	467	469	466	45
180°	468	468	468	468	468	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.6	19.6	27.6	35.6	43.6	52.0	60.4	69.0	77.6	86.1	91.5
90°	6.3	14.7	23.1	31.6	40.1	48.8	57.8	66.9	75.8	84.8	90.5
92.5°	12.3	19.3	26.3	33.4	40.4	48.1	56.5	64.9	73.3	81.7	87.1
95°	26.8	30.4	34.1	37.9	41.5	47.6	56.0	64.4	72.8	81.3	86.6
97.5°	47.8	46.3	44.8	43.3	41.8	45.5	54.3	63.1	71.9	80.6	85.8
100°	64.1	58.6	53.2	47.8	42.3	43.9	52.5	61.2	69.8	78.4	83.9
102.5°	81.5	83.7	86.0	88.2	90.5	89.9	86.3	82.8	79.2	75.7	81.2
105°	105.9	111.9	118.0	124.1	130.2	126.4	112.6	98.9	85.2	71.5	77.0
107.5°	134.4	139.3	144.2	149.0	153.9	147.3	129.2	111.1	93.0	74.9	78.5
110°	152.3	156.5	160.8	165.0	169.2	163.7	148.4	133.1	117.7	102.4	99.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.7	173.3	176.9	180.5	184.1	186.3	187.0	187.8	188.5	189.3	166.1
115°	197.1	199.8	202.5	205.3	207.9	213.3	221.0	228.8	236.6	244.4	213.5
117.5°	220.9	223.3	225.7	228.1	230.4	235.0	241.8	248.5	255.2	262.1	257.5
120°	238.8	240.4	242.1	243.8	245.4	249.5	256.2	262.8	269.3	276.0	280.6
122.5°	254.0	255.3	256.7	258.2	259.5	263.5	269.9	276.3	282.7	289.1	293.3
125°	276.5	277.4	278.5	279.4	280.4	283.7	289.3	294.9	300.6	306.3	310.3
127.5°	297.4	298.3	299.3	300.2	301.2	303.9	308.4	312.8	317.3	321.7	325.7
130°	310.7	311.7	312.8	313.9	315.0	317.3	320.8	324.5	328.0	331.6	335.6
132.5°	324.2	325.1	326.0	326.9	327.8	329.7	332.6	335.6	338.6	341.5	345.3
135°	341.2	342.4	343.6	344.8	346.0	347.6	349.6	351.6	353.6	355.6	359.1
137.5°	359.0	359.8	360.7	361.5	362.3	363.4	364.7	366.1	367.4	368.8	371.9
140°	370.7	371.1	371.6	372.1	372.6	373.4	374.5	375.5	376.6	377.7	380.5
142.5°	380.4	380.8	381.3	381.7	382.1	382.8	383.7	384.8	385.8	386.7	389.0
145°	395.1	395.1	395.0	394.9	394.8	395.5	396.7	398.0	399.3	400.5	401.9
147.5°	408.4	408.2	407.9	407.7	407.3	407.8	409.1	410.4	411.6	412.9	413.4
150°	417.2	416.6	416.1	415.6	415.0	415.3	416.6	417.8	419.0	420.2	420.6
152.5°	424.5	423.9	423.3	422.7	422.1	422.4	423.5	424.7	425.8	427.0	427.4
155°	435.1	434.4	433.7	433.1	432.4	432.5	433.4	434.3	435.2	436.1	436.6
157.5°	443.4	442.8	442.3	441.7	441.2	441.2	441.8	442.4	443.1	443.7	444.2
160°	448.3	447.8	447.4	446.9	446.5	446.5	446.9	447.4	447.8	448.3	448.8
162.5°	452.7	452.2	451.7	451.3	450.8	450.8	451.1	451.5	451.9	452.3	452.9
165°	458.4	458.0	457.6	457.1	456.6	456.5	456.8	457.0	457.2	457.4	458.0
167.5°	462.8	462.3	461.9	461.4	461.0	460.9	461.1	461.3	461.5	461.7	462.2
170°	465.2	464.8	464.3	463.9	463.4	463.3	463.4	463.6	463.7	463.9	464.4
172.5°	466.8	466.4	466.0	465.5	465.0	464.9	465.0	465.2	465.3	465.5	466.0
175°	469.0	468.4	467.9	467.4	466.8	466.7	466.8	467.0	467.1	467.2	467.8
177.5°	469.3	468.9	468.4	468.0	467.6	467.4	467.5	467.5	467.6	467.6	468.1
180°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	97.0	102.4	107.8	111.4	113.1	114.9	116.5	118.3
90°	96.2	101.8	107.4	111.1	112.8	114.5	116.3	118.0
92.5°	92.4	97.8	103.1	106.6	108.3	110.0	111.6	113.3
95°	92.0	97.4	102.7	106.2	107.7	109.2	110.7	112.2
97.5°	90.9	96.1	101.3	104.7	106.3	108.0	109.6	111.2
100°	89.4	94.8	100.3	103.9	105.4	107.0	108.7	110.3
102.5°	86.7	92.3	97.8	101.5	103.1	104.8	106.4	108.1
105°	82.4	87.9	93.2	96.8	98.5	100.4	102.1	103.9
107.5°	82.1	85.6	89.3	91.9	93.6	95.4	97.1	98.9
110°	95.8	92.5	89.2	88.4	90.2	91.9	93.6	95.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	142.8	119.6	96.3	85.6	87.3	89.0	90.6	92.4
115°	182.6	151.7	120.8	103.4	99.4	95.5	91.5	87.5
117.5°	252.9	248.4	243.9	233.4	216.9	200.5	184.0	167.5
120°	285.2	289.8	294.3	292.2	283.5	274.8	266.1	257.5
122.5°	297.4	301.5	305.6	307.3	306.6	305.9	305.1	304.4
125°	314.4	318.5	322.5	325.3	326.7	328.1	329.5	330.9
127.5°	329.8	333.8	337.9	340.5	341.7	342.9	344.0	345.3
130°	339.6	343.6	347.5	350.1	351.0	352.0	353.0	353.9
132.5°	349.0	352.8	356.6	358.9	359.9	360.8	361.9	362.8
135°	362.7	366.1	369.6	371.9	372.7	373.7	374.5	375.5
137.5°	375.1	378.2	381.4	383.3	383.9	384.5	385.2	385.8
140°	383.3	386.0	388.8	390.4	390.9	391.3	391.7	392.1
142.5°	391.3	393.6	395.9	397.3	397.6	397.9	398.2	398.5
145°	403.2	404.5	405.8	406.6	406.9	407.2	407.4	407.7
147.5°	413.8	414.4	414.9	415.1	415.1	415.1	415.1	415.1
150°	421.1	421.5	422.0	422.1	421.7	421.3	420.9	420.6
152.5°	427.9	428.3	428.8	428.7	428.3	427.8	427.2	426.7
155°	437.0	437.4	437.9	437.8	437.2	436.7	436.0	435.5
157.5°	444.7	445.2	445.8	445.7	445.1	444.5	443.9	443.4
160°	449.2	449.6	450.1	450.0	449.6	449.0	448.5	448.0
162.5°	453.4	453.9	454.4	454.3	453.7	453.0	452.4	451.8
165°	458.5	459.0	459.5	459.5	459.0	458.5	458.0	457.4
167.5°	462.8	463.3	463.8	463.7	463.0	462.4	461.7	461.1
170°	464.9	465.5	466.0	465.9	465.2	464.5	463.9	463.2
172.5°	466.5	467.1	467.6	467.5	466.8	466.2	465.5	464.9
175°	468.3	468.8	469.4	469.3	468.5	467.8	467.0	466.3
177.5°	468.5	468.9	469.4	469.3	468.7	468.2	467.6	467.1
180°	467.9	467.9	467.9	467.9	467.9	467.9	467.9	467.9

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