

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: P331498-830

Luminaire Tested: **S122DIW-S485D435U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331498-830
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-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP 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: 3270.0 lumens
Efficiency: N/A
Efficacy: 108.3 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

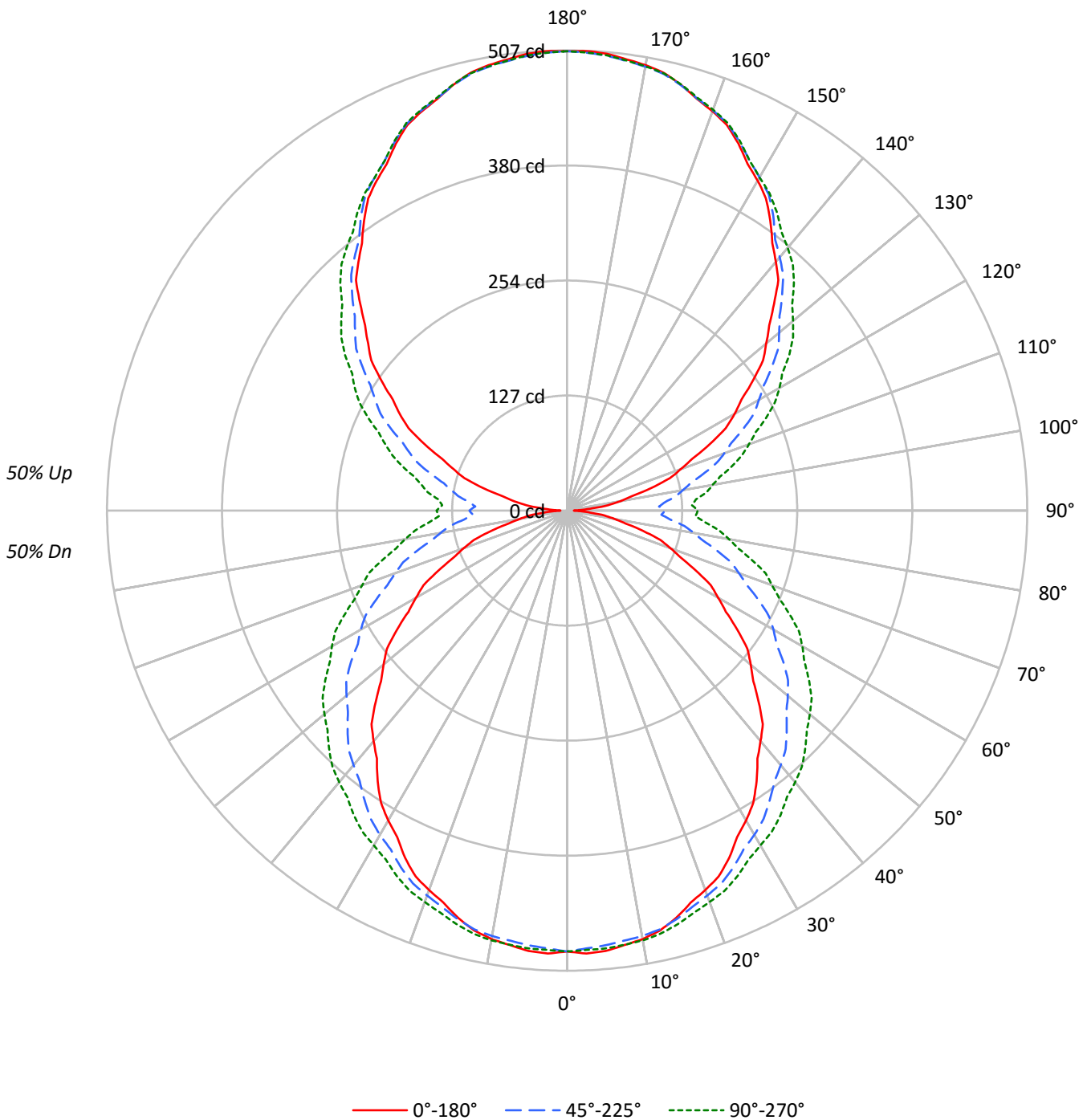
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50
1	96	91	87	83	89	84	80	77	71	68	65	59	57	55	48	46	45	39
2	87	79	72	66	80	73	67	62	61	57	53	51	47	45	41	39	36	32
3	79	69	61	55	72	64	57	51	54	48	44	44	40	37	36	33	30	26
4	72	61	52	46	66	56	49	43	47	42	37	39	35	31	32	28	26	22
5	66	54	45	39	60	50	42	36	42	36	32	35	30	27	28	25	22	19
6	61	48	40	34	56	45	37	31	38	32	27	32	27	23	26	22	19	16
7	56	43	35	29	51	40	33	27	34	28	24	29	24	20	23	20	17	14
8	52	39	31	26	48	36	29	24	31	25	21	26	22	18	21	18	15	13
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	20	16	14	11
10	45	33	25	20	42	30	24	19	26	21	17	22	18	15	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7842	7842	7842
5°	7880	7549	7520
10°	7831	7327	7244
15°	7723	7090	6952
20°	7587	6836	6671
25°	7453	6592	6417
30°	7262	6342	6160
35°	7069	6100	5981
40°	6869	5895	5801
45°	6677	5709	5648
50°	6471	5541	5495
55°	6254	5363	5341
60°	5990	5177	5178
65°	5716	4959	4983
70°	5407	4723	4775
75°	5013	4495	4582
80°	4391	4260	4385
85°	3800	4054	4232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.0	1.4
10°-20°	132.0	4.0
20°-30°	200.0	6.1
30°-40°	243.6	7.4
40°-50°	262.1	8.0
50°-60°	254.5	7.8
60°-70°	222.2	6.8
70°-80°	171.1	5.2
80°-90°	116.8	3.6
90°-100°	111.2	3.4
100°-110°	157.4	4.8
110°-120°	208.4	6.4
120°-130°	245.2	7.5
130°-140°	260.2	8.0
140°-150°	247.9	7.6
150°-160°	206.6	6.3
160°-170°	137.1	4.2
170°-180°	47.9	1.5
0°-30°	378.0	11.6
0°-40°	621.6	19.0
0°-60°	1138.1	34.8
0°-90°	1648.3	50.4
90°-120°	476.9	14.6
90°-150°	1230.1	37.6
90°-180°	1622.0	49.6
0°-180°	3270.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	486	486	486	486	486	
5°	487	485	481	485	484	46
15°	465	466	466	472	472	131
25°	422	427	434	442	444	194
35°	364	376	389	404	410	227
45°	298	318	342	363	371	230
55°	229	255	291	315	325	204
65°	156	191	232	260	270	155
75°	87	126	171	200	210	92
85°	25	69	114	142	153	27
90°	7	54	108	134	144	6
95°	28	66	108	134	143	30
105°	95	118	154	179	188	101
115°	174	185	215	235	242	171
125°	250	255	275	292	299	224
135°	322	327	335	349	354	249
145°	390	393	396	400	402	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°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	488.5	488.1	487.8	487.4	487.0	486.4	485.5	484.7	483.8	482.9	483.5
5°	487.1	486.6	486.2	485.7	485.2	484.6	483.6	482.7	481.7	480.8	481.7
7.5°	482.8	482.4	482.1	481.8	481.5	481.0	480.2	479.6	478.8	478.1	479.2
10°	479.4	479.1	478.7	478.4	478.2	477.8	477.3	476.8	476.4	475.9	477.1
12.5°	473.7	473.8	473.9	473.9	474.0	473.8	473.5	473.2	472.8	472.5	473.7
15°	464.6	464.9	465.2	465.5	465.8	466.0	466.0	466.0	466.0	466.0	467.4
17.5°	452.8	453.5	454.1	454.8	455.4	456.0	456.5	456.9	457.5	458.0	459.4
20°	444.9	445.6	446.5	447.2	448.0	448.7	449.3	450.0	450.6	451.2	452.9
22.5°	436.4	437.3	438.3	439.1	440.1	440.9	441.9	442.7	443.6	444.5	446.2
25°	422.4	423.5	424.5	425.7	426.7	428.0	429.4	430.8	432.3	433.6	435.5
27.5°	405.5	407.3	409.1	410.9	412.6	414.3	415.9	417.6	419.2	420.9	423.3
30°	394.2	396.2	398.2	400.3	402.4	404.4	406.4	408.4	410.5	412.5	415.0
32.5°	381.8	384.1	386.3	388.7	391.0	393.3	395.7	398.1	400.5	402.9	405.8
35°	363.9	366.6	369.3	371.9	374.6	377.4	380.3	383.3	386.3	389.3	392.7
37.5°	344.5	347.6	350.6	353.7	356.8	360.2	364.1	367.9	371.7	375.6	379.5
40°	331.6	335.0	338.5	341.9	345.3	349.1	353.4	357.6	361.8	366.1	370.1
42.5°	319.1	322.6	326.0	329.5	332.9	337.1	342.0	346.8	351.7	356.5	360.9
45°	298.5	302.7	306.9	311.1	315.4	320.2	325.6	331.1	336.7	342.1	346.9
47.5°	278.1	282.7	287.3	291.8	296.4	302.0	308.4	314.8	321.2	327.6	332.7
50°	264.0	268.8	273.7	278.5	283.3	289.3	296.3	303.4	310.5	317.4	322.8
52.5°	250.4	255.5	260.6	265.8	270.9	277.1	284.6	291.9	299.4	306.8	312.2
55°	228.8	234.4	240.1	245.6	251.3	258.2	266.4	274.5	282.6	290.7	296.3
57.5°	207.4	213.8	220.1	226.4	232.8	240.1	248.4	256.7	264.9	273.2	279.4
60°	192.2	198.9	205.7	212.4	219.0	226.9	235.8	244.7	253.6	262.6	268.5
62.5°	178.6	185.6	192.7	199.6	206.6	214.5	223.4	232.3	241.3	250.2	256.5
65°	156.3	163.9	171.6	179.3	186.9	195.4	204.6	213.9	223.1	232.3	238.7
67.5°	135.7	143.7	151.7	159.8	167.8	176.4	186.0	195.4	204.8	214.2	220.7
70°	121.1	129.2	137.3	145.4	153.6	162.5	172.2	181.9	191.6	201.3	208.0
72.5°	107.5	115.9	124.3	132.7	141.1	150.2	160.0	169.8	179.6	189.5	196.1
75°	86.6	95.4	104.1	112.8	121.6	131.0	141.0	151.0	161.1	171.1	177.8
77.5°	66.4	75.5	84.6	93.8	103.0	112.6	122.8	133.0	143.2	153.4	160.0
80°	52.8	62.3	71.9	81.4	91.0	100.9	111.0	121.1	131.3	141.5	148.1
82.5°	41.6	51.0	60.3	69.7	79.2	89.1	99.3	109.6	119.9	130.3	136.8
85°	25.4	35.1	44.8	54.5	64.1	74.0	84.0	94.0	104.1	114.0	120.6
87.5°	13.9	23.5	33.0	42.5	52.1	62.1	72.5	82.9	93.4	103.8	110.1
90°	7.4	17.7	27.9	38.1	48.4	59.5	71.5	83.7	95.8	107.8	114.0
92.5°	14.0	23.4	32.6	41.9	51.2	60.9	71.1	81.2	91.3	101.4	107.6
95°	27.8	36.1	44.4	52.8	61.1	69.9	79.6	89.2	98.7	108.3	114.2
97.5°	45.5	52.9	60.2	67.6	75.0	83.3	92.7	102.1	111.5	120.8	126.7
100°	59.2	65.7	72.3	78.8	85.4	93.1	102.2	111.2	120.3	129.3	135.1
102.5°	73.0	78.8	84.7	90.7	96.5	103.9	112.8	121.7	130.5	139.4	145.2
105°	95.3	100.2	105.0	109.8	114.6	121.2	129.5	137.8	146.2	154.5	160.1
107.5°	118.6	122.6	126.7	130.7	134.8	140.7	148.5	156.3	164.1	171.8	177.2
110°	133.1	136.8	140.4	144.1	147.9	153.5	161.2	168.9	176.5	184.2	189.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	149.5	152.7	155.9	159.0	162.2	167.5	174.7	181.9	189.1	196.3	201.0
115°	173.6	175.9	178.2	180.5	182.8	187.4	194.2	201.0	207.9	214.7	219.3
117.5°	197.0	198.9	200.8	202.6	204.5	208.5	214.4	220.5	226.4	232.3	236.8
120°	213.1	214.4	215.8	217.3	218.6	222.1	227.5	233.0	238.6	244.0	248.5
122.5°	227.7	228.9	230.1	231.2	232.4	235.6	241.0	246.4	251.7	257.0	261.1
125°	250.0	250.8	251.7	252.5	253.4	256.2	260.9	265.6	270.3	275.0	279.0
127.5°	272.2	273.1	274.1	275.0	275.9	278.2	281.9	285.6	289.4	293.0	296.5
130°	286.3	287.3	288.4	289.5	290.6	292.7	295.8	298.8	301.9	305.0	308.6
132.5°	302.0	302.8	303.7	304.5	305.4	307.1	309.6	312.2	314.8	317.4	320.6
135°	322.3	323.3	324.3	325.4	326.4	327.8	329.6	331.3	333.1	334.9	338.0
137.5°	344.4	345.2	346.0	346.9	347.7	348.6	349.5	350.4	351.4	352.3	355.1
140°	357.7	358.4	359.1	359.8	360.5	361.3	362.0	362.8	363.6	364.4	366.8
142.5°	371.4	372.0	372.8	373.4	374.2	374.7	375.0	375.5	375.9	376.3	378.3
145°	390.3	391.0	391.6	392.3	392.9	393.6	394.2	394.7	395.3	395.9	396.9
147.5°	407.8	408.6	409.4	410.2	411.0	411.6	412.0	412.4	412.7	413.1	413.4
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°	485.7	485.7	485.7	485.7	485.7	485.7	485.7	485.7
2.5°	484.2	484.7	485.4	485.6	485.3	485.1	484.8	484.6
5°	482.7	483.6	484.6	484.9	484.7	484.7	484.5	484.3
7.5°	480.3	481.5	482.6	483.1	483.0	482.8	482.6	482.5
10°	478.3	479.6	480.9	481.5	481.3	481.1	481.0	480.8
12.5°	474.9	476.3	477.5	478.1	477.9	477.7	477.6	477.4
15°	468.8	470.2	471.6	472.2	472.1	471.9	471.7	471.6
17.5°	460.9	462.4	463.8	464.6	464.6	464.6	464.6	464.6
20°	454.7	456.4	458.1	458.9	458.9	458.9	458.9	458.9
22.5°	447.9	449.6	451.4	452.3	452.6	452.8	453.1	453.4
25°	437.3	439.2	441.1	442.3	442.8	443.3	443.7	444.2
27.5°	425.7	428.1	430.5	431.8	432.2	432.5	432.8	433.2
30°	417.5	420.0	422.5	424.0	424.4	424.9	425.4	425.8
32.5°	408.7	411.5	414.4	416.3	417.2	418.0	418.9	419.7
35°	396.2	399.6	403.0	405.3	406.4	407.5	408.6	409.7
37.5°	383.2	387.1	390.9	393.3	394.5	395.7	396.8	398.0
40°	374.2	378.2	382.3	385.0	386.4	387.9	389.3	390.7
42.5°	365.3	369.8	374.2	377.2	378.5	379.9	381.4	382.8
45°	351.9	356.7	361.5	364.7	366.3	367.9	369.4	371.0
47.5°	337.7	342.8	347.9	351.3	353.0	354.7	356.5	358.2
50°	328.1	333.4	338.7	342.2	344.0	345.7	347.4	349.1
52.5°	317.6	323.1	328.6	332.2	334.0	335.9	337.7	339.6
55°	302.0	307.6	313.2	317.1	319.1	321.1	323.2	325.2
57.5°	285.4	291.4	297.6	301.6	303.7	305.8	307.8	309.9
60°	274.5	280.4	286.3	290.4	292.6	294.8	297.0	299.2
62.5°	262.8	269.1	275.4	279.7	281.7	283.8	285.9	287.9
65°	245.2	251.6	258.0	262.2	264.2	266.3	268.2	270.3
67.5°	227.2	233.7	240.2	244.5	246.6	248.7	250.9	253.0
70°	214.8	221.5	228.2	232.5	234.4	236.3	238.2	240.1
72.5°	202.7	209.3	215.9	220.4	222.5	224.8	227.1	229.3
75°	184.5	191.2	197.9	202.4	204.3	206.4	208.4	210.5
77.5°	166.7	173.4	180.1	184.5	186.7	188.9	191.1	193.3
80°	154.7	161.2	167.8	172.1	174.4	176.5	178.7	180.9
82.5°	143.4	150.0	156.5	160.8	162.9	164.9	167.0	169.1
85°	127.1	133.7	140.3	144.7	146.8	149.1	151.3	153.4
87.5°	116.5	122.8	129.1	133.4	135.3	137.4	139.4	141.5
90°	120.0	126.1	132.1	136.2	138.1	140.1	142.0	144.0
92.5°	113.8	120.0	126.1	130.2	132.1	133.9	135.8	137.7
95°	120.2	126.1	132.1	135.9	137.5	139.2	140.9	142.6
97.5°	132.4	138.2	144.0	147.8	149.7	151.5	153.3	155.1
100°	140.9	146.7	152.5	156.2	157.8	159.5	161.1	162.7
102.5°	150.9	156.6	162.3	166.0	167.7	169.3	170.9	172.5
105°	165.8	171.4	177.1	180.9	182.6	184.3	186.0	187.8
107.5°	182.5	187.8	193.2	196.5	197.7	199.1	200.4	201.6
110°	194.2	199.3	204.2	207.5	208.9	210.3	211.8	213.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	205.9	210.7	215.4	218.6	220.1	221.6	223.1	224.6
115°	223.9	228.6	233.2	236.2	237.6	239.0	240.4	242.0
117.5°	241.2	245.6	250.0	252.9	254.2	255.4	256.7	258.1
120°	252.8	257.2	261.6	264.5	265.9	267.3	268.8	270.2
122.5°	265.1	269.1	273.1	275.8	277.1	278.3	279.6	280.9
125°	282.9	286.8	290.8	293.4	294.7	296.1	297.4	298.7
127.5°	300.1	303.6	307.2	309.4	310.6	311.6	312.7	313.8
130°	312.2	315.7	319.2	321.5	322.3	323.2	324.1	325.0
132.5°	323.8	327.0	330.2	332.2	333.2	334.1	335.1	336.0
135°	341.2	344.4	347.6	349.7	350.6	351.7	352.6	353.5
137.5°	357.9	360.7	363.5	365.2	365.9	366.6	367.3	368.0
140°	369.4	371.9	374.4	375.9	376.5	377.0	377.6	378.1
142.5°	380.4	382.5	384.6	385.8	386.3	386.6	387.1	387.6
145°	397.9	399.0	400.0	400.7	401.1	401.5	401.9	402.3
147.5°	413.8	414.2	414.4	414.6	414.6	414.6	414.6	414.7
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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