

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: P331498-935

Luminaire Tested: **S122DIW-S485D435U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331498-935
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-S485D435U935-4F0-1E-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: 2987.1 lumens
Efficiency: N/A
Efficacy: 98.9 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

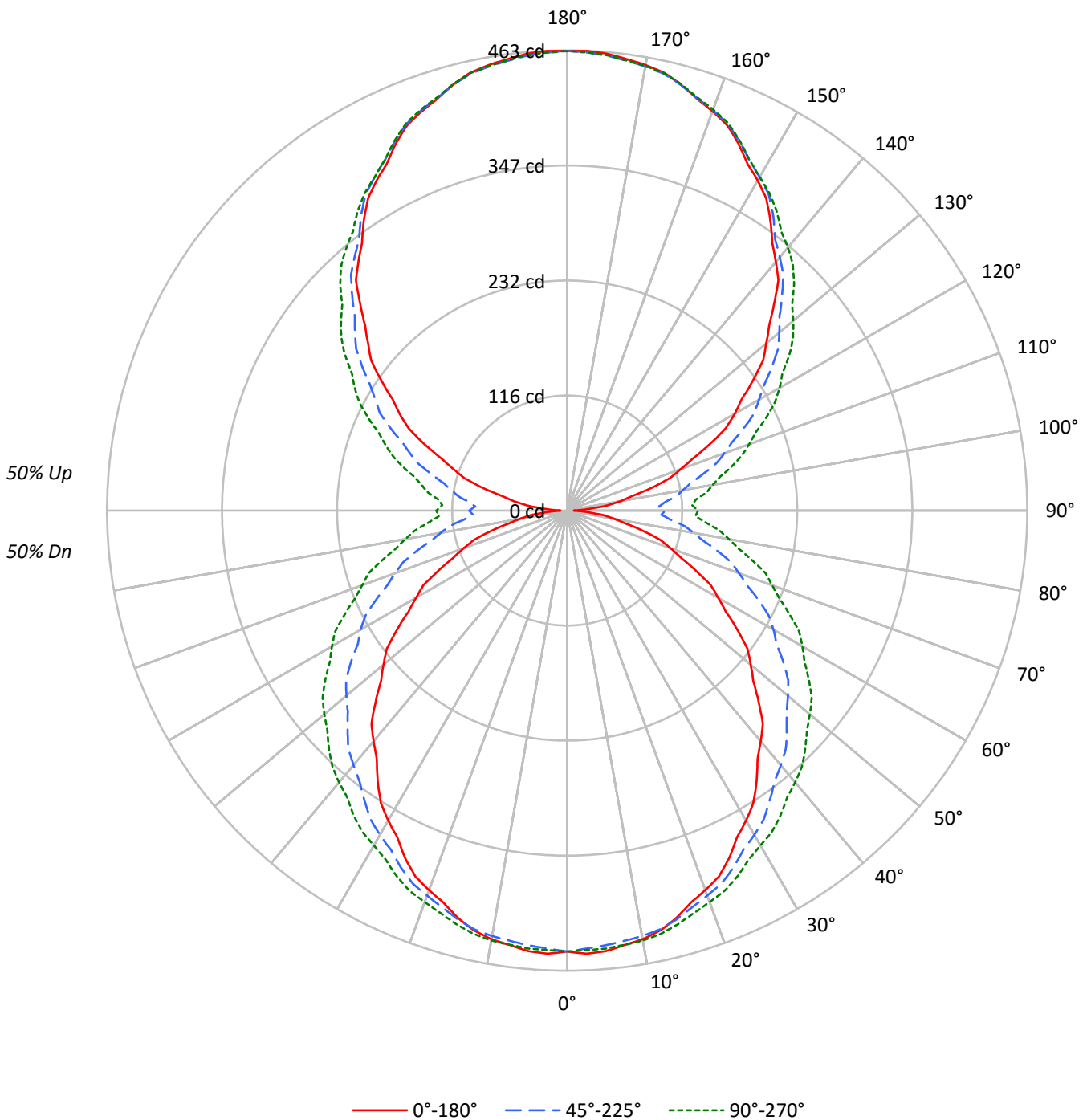
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	1.4
10°-20°	120.6	4.0
20°-30°	182.7	6.1
30°-40°	222.5	7.4
40°-50°	239.4	8.0
50°-60°	232.5	7.8
60°-70°	203.0	6.8
70°-80°	156.3	5.2
80°-90°	106.7	3.6
90°-100°	101.5	3.4
100°-110°	143.7	4.8
110°-120°	190.3	6.4
120°-130°	223.9	7.5
130°-140°	237.7	8.0
140°-150°	226.5	7.6
150°-160°	188.8	6.3
160°-170°	125.2	4.2
170°-180°	43.8	1.5
0°-30°	345.3	11.6
0°-40°	567.8	19.0
0°-60°	1039.7	34.8
0°-90°	1505.7	50.4
90°-120°	435.6	14.6
90°-150°	1123.7	37.6
90°-180°	1481.0	49.6
0°-180°	2987.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	7	49	98	123	132	5
95°	25	60	99	122	130	27
105°	87	108	141	164	172	92
115°	159	169	196	214	221	157
125°	228	233	251	267	273	204
135°	294	299	306	318	323	228
145°	356	359	362	366	368	223
155°	408	409	410	412	411	188
165°	444	443	443	446	444	125
175°	462	460	460	462	460	44
180°	462	462	462	462	462	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.7	21.4	30.1	38.8	47.6	56.7	66.2	75.8	85.3	94.8	100.6
90°	6.8	16.2	25.5	34.8	44.2	54.3	65.3	76.5	87.5	98.5	104.1
92.5°	12.8	21.4	29.8	38.3	46.8	55.6	64.9	74.1	83.4	92.6	98.3
95°	25.4	33.0	40.6	48.2	55.8	63.9	72.7	81.5	90.1	98.9	104.4
97.5°	41.6	48.3	55.0	61.7	68.5	76.1	84.7	93.2	101.9	110.4	115.7
100°	54.1	60.0	66.0	72.0	78.0	85.1	93.3	101.6	109.9	118.1	123.4
102.5°	66.6	72.0	77.4	82.8	88.2	94.9	103.1	111.2	119.2	127.3	132.6
105°	87.0	91.5	95.9	100.3	104.7	110.7	118.3	125.9	133.5	141.1	146.3
107.5°	108.3	112.0	115.7	119.4	123.1	128.5	135.6	142.8	149.9	157.0	161.9
110°	121.6	124.9	128.3	131.6	135.1	140.3	147.2	154.3	161.3	168.2	172.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	136.6	139.5	142.4	145.3	148.2	153.0	159.5	166.2	172.7	179.3	183.7
115°	158.6	160.7	162.8	164.9	166.9	171.2	177.4	183.7	189.9	196.1	200.4
117.5°	179.9	181.7	183.4	185.1	186.8	190.5	195.9	201.4	206.8	212.2	216.3
120°	194.7	195.9	197.2	198.5	199.7	202.9	207.8	212.8	217.9	222.9	227.0
122.5°	208.0	209.1	210.2	211.2	212.3	215.2	220.2	225.1	229.9	234.8	238.5
125°	228.3	229.1	229.9	230.7	231.4	234.0	238.3	242.6	246.9	251.2	254.9
127.5°	248.7	249.5	250.4	251.2	252.0	254.2	257.5	260.9	264.3	267.7	270.9
130°	261.5	262.4	263.5	264.4	265.4	267.3	270.2	272.9	275.8	278.6	281.9
132.5°	275.9	276.6	277.4	278.2	279.0	280.5	282.8	285.2	287.6	289.9	292.8
135°	294.4	295.3	296.3	297.2	298.2	299.5	301.1	302.6	304.3	305.9	308.8
137.5°	314.6	315.3	316.1	316.8	317.6	318.4	319.3	320.1	321.0	321.8	324.3
140°	326.7	327.4	328.0	328.6	329.3	330.0	330.7	331.4	332.2	332.9	335.1
142.5°	339.2	339.8	340.5	341.1	341.8	342.2	342.6	343.0	343.4	343.7	345.6
145°	356.5	357.1	357.7	358.3	359.0	359.6	360.1	360.6	361.1	361.6	362.6
147.5°	372.6	373.2	374.0	374.7	375.5	376.0	376.3	376.7	377.0	377.4	377.6
150°	383.5	384.0	384.5	385.0	385.6	386.0	386.3	386.7	387.0	387.4	387.6
152.5°	393.1	393.6	394.2	394.7	395.2	395.7	396.1	396.5	396.9	397.4	397.7
155°	407.6	407.9	408.1	408.5	408.7	409.0	409.2	409.5	409.7	410.0	410.4
157.5°	420.1	420.3	420.4	420.6	420.8	420.9	421.0	421.2	421.4	421.5	422.1
160°	427.6	427.7	427.9	428.1	428.3	428.3	428.4	428.5	428.6	428.7	429.2
162.5°	434.4	434.5	434.5	434.5	434.5	434.6	434.7	434.8	434.9	435.0	435.5
165°	443.5	443.4	443.3	443.2	443.2	443.2	443.2	443.2	443.2	443.2	443.8
167.5°	451.2	450.9	450.6	450.4	450.1	450.0	450.0	450.0	450.0	450.0	450.6
170°	455.2	455.0	454.7	454.4	454.2	454.0	453.9	453.8	453.7	453.7	454.3
172.5°	458.1	457.8	457.5	457.3	457.0	456.8	456.8	456.7	456.6	456.5	457.1
175°	461.5	461.2	461.0	460.7	460.5	460.2	460.0	459.9	459.7	459.5	460.1
177.5°	462.9	462.7	462.4	462.3	462.0	461.8	461.8	461.6	461.4	461.3	461.8
180°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	106.4	112.2	118.0	121.8	123.6	125.5	127.3	129.2
90°	109.6	115.2	120.7	124.4	126.1	127.9	129.8	131.6
92.5°	103.9	109.6	115.2	118.9	120.6	122.3	124.1	125.8
95°	109.8	115.2	120.6	124.2	125.6	127.2	128.7	130.3
97.5°	121.0	126.2	131.6	135.0	136.7	138.4	140.0	141.7
100°	128.7	134.0	139.3	142.7	144.1	145.7	147.1	148.6
102.5°	137.8	143.0	148.3	151.6	153.2	154.6	156.1	157.6
105°	151.4	156.6	161.8	165.2	166.8	168.3	169.9	171.5
107.5°	166.7	171.6	176.5	179.5	180.6	181.8	183.0	184.2
110°	177.4	182.0	186.6	189.5	190.8	192.1	193.5	194.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	188.0	192.4	196.7	199.7	201.0	202.4	203.8	205.2
115°	204.6	208.8	213.0	215.8	217.1	218.3	219.6	221.0
117.5°	220.3	224.4	228.3	231.0	232.2	233.3	234.5	235.7
120°	230.9	235.0	238.9	241.6	242.9	244.2	245.6	246.8
122.5°	242.2	245.8	249.5	251.9	253.1	254.3	255.4	256.6
125°	258.4	262.0	265.6	268.0	269.2	270.4	271.6	272.9
127.5°	274.1	277.3	280.6	282.7	283.7	284.6	285.7	286.6
130°	285.2	288.3	291.6	293.7	294.5	295.2	296.1	296.9
132.5°	295.8	298.7	301.6	303.5	304.4	305.2	306.1	306.9
135°	311.7	314.6	317.5	319.4	320.3	321.2	322.1	323.0
137.5°	326.9	329.5	332.1	333.6	334.2	334.9	335.5	336.1
140°	337.4	339.8	342.0	343.4	343.9	344.4	344.9	345.4
142.5°	347.5	349.4	351.3	352.4	352.8	353.2	353.6	354.0
145°	363.5	364.5	365.4	366.0	366.4	366.8	367.1	367.5
147.5°	378.0	378.3	378.6	378.8	378.8	378.8	378.8	378.8
150°	387.9	388.1	388.4	388.4	388.1	387.9	387.6	387.4
152.5°	398.0	398.3	398.6	398.6	398.3	398.0	397.7	397.4
155°	410.9	411.3	411.7	411.8	411.6	411.3	411.0	410.8
157.5°	422.7	423.3	423.9	424.0	423.5	423.1	422.8	422.3
160°	429.7	430.2	430.8	430.8	430.5	430.2	429.8	429.5
162.5°	436.1	436.7	437.3	437.4	437.0	436.5	436.1	435.8
165°	444.4	445.0	445.6	445.7	445.2	444.8	444.4	443.9
167.5°	451.2	451.8	452.4	452.5	451.9	451.5	451.1	450.6
170°	454.9	455.5	456.1	456.2	455.6	455.1	454.6	454.1
172.5°	457.7	458.3	458.9	458.9	458.4	457.9	457.4	456.8
175°	460.7	461.3	461.9	462.0	461.5	461.0	460.5	459.9
177.5°	462.2	462.5	463.0	463.0	462.5	462.2	461.8	461.3
180°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3

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