

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: P332494-830

Luminaire Tested: **SA4XXDIP-C350D365U830-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332494-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C350D365U830-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2554.2 lumens
Efficiency: N/A
Efficacy: 125.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

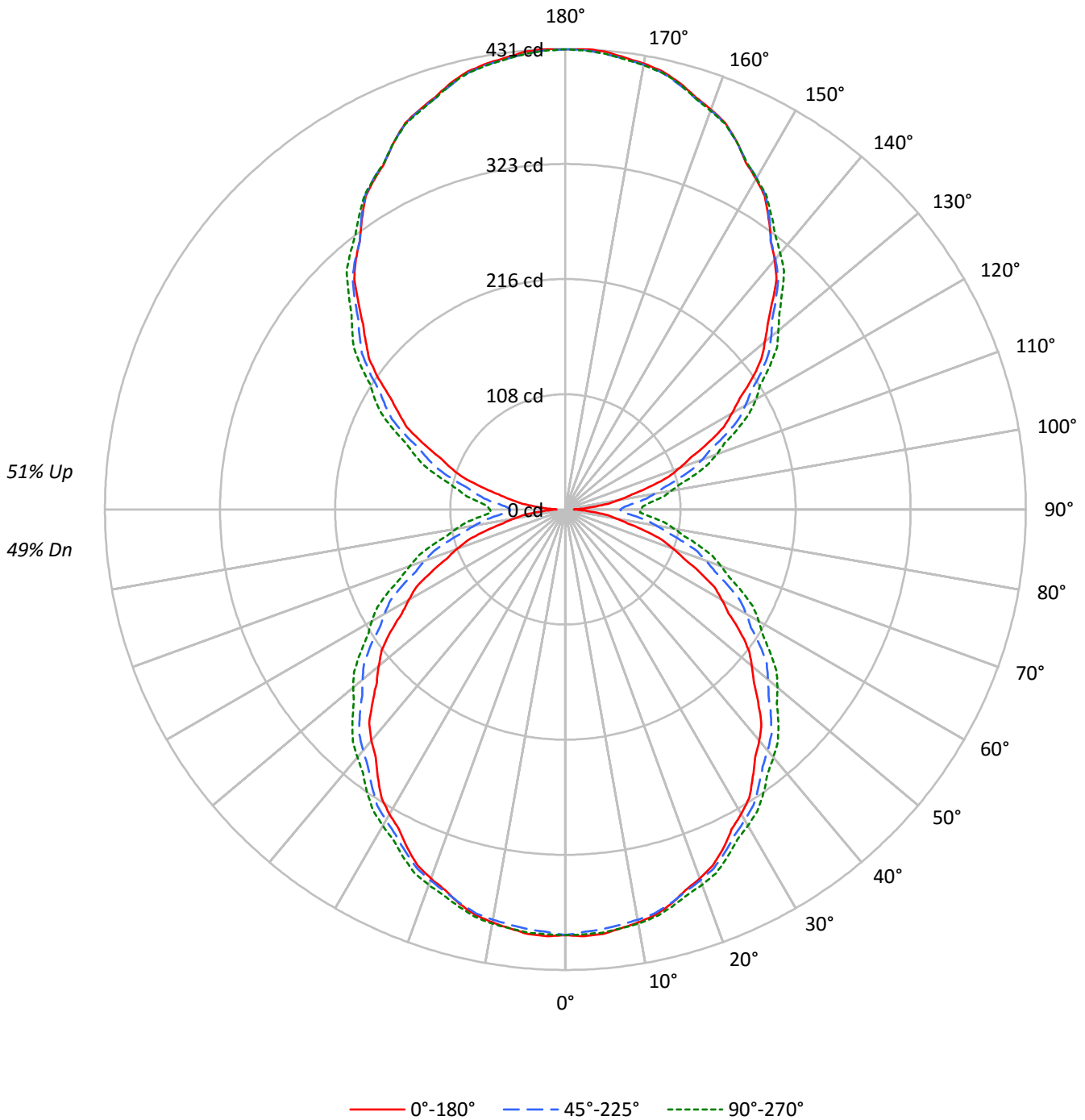
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49																			
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39																			
2	88	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32																			
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27																			
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	23																			
5	67	55	46	40	61	50	43	37	43	37	32	35	31	28	29	25	23	19																			
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	23	20	17																			
7	57	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	18	15																			
8	52	40	32	26	48	37	30	25	32	26	22	26	22	19	22	18	16	13																			
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12																			
10	46	33	26	21	42	31	24	20	27	21	17	22	18	15	18	15	13	11																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3216	3216	3216
5°	3227	3143	3152
10°	3207	3092	3090
15°	3177	3032	3016
20°	3134	2967	2944
25°	3086	2893	2865
30°	3032	2819	2784
35°	2972	2744	2713
40°	2925	2674	2639
45°	2853	2607	2575
50°	2794	2532	2508
55°	2732	2460	2429
60°	2635	2369	2357
65°	2529	2272	2269
70°	2400	2161	2166
75°	2220	2037	2074
80°	2021	1919	1981
85°	1773	1815	1928



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.7	1.5
10°-20°	108.1	4.2
20°-30°	163.4	6.4
30°-40°	197.8	7.7
40°-50°	209.1	8.2
50°-60°	196.8	7.7
60°-70°	163.2	6.4
70°-80°	114.7	4.5
80°-90°	66.1	2.6
90°-100°	66.9	2.6
100°-110°	112.6	4.4
110°-120°	161.9	6.3
120°-130°	199.1	7.8
130°-140°	216.2	8.5
140°-150°	208.8	8.2
150°-160°	174.8	6.8
160°-170°	116.3	4.6
170°-180°	40.7	1.6
0°-30°	309.3	12.1
0°-40°	507.0	19.9
0°-60°	912.9	35.7
0°-90°	1256.9	49.2
90°-120°	341.5	13.4
90°-150°	965.5	37.8
90°-180°	1297.0	50.8
0°-180°	2554.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	398	398	398	398	398	
5°	399	397	394	398	398	38
15°	382	383	381	385	385	108
25°	350	352	354	358	359	161
35°	306	311	316	322	324	192
45°	255	264	272	279	282	197
55°	200	210	223	231	234	178
65°	138	153	168	178	182	137
75°	77	93	112	124	128	82
85°	24	42	62	75	80	25
90°	8	30	52	66	71	6
95°	26	44	64	77	81	27
105°	82	91	109	120	126	87
115°	148	152	166	175	178	146
125°	213	214	224	231	234	190
135°	274	276	279	285	287	212
145°	332	333	333	335	336	208
155°	380	380	379	380	379	175
165°	413	412	412	413	412	116
175°	430	428	428	430	428	41
180°	431	431	431	431	431	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
2.5°	399.8	399.5	399.4	399.1	398.9	398.4	397.8	397.2	396.5	395.9	396.4
5°	398.9	398.5	398.2	397.9	397.7	397.2	396.4	395.8	395.1	394.4	395.2
7.5°	395.5	395.3	395.1	394.9	394.7	394.4	393.8	393.2	392.7	392.1	392.9
10°	392.6	392.5	392.4	392.3	392.2	391.9	391.4	390.9	390.4	389.9	390.8
12.5°	388.7	388.6	388.6	388.6	388.6	388.4	388.0	387.8	387.4	387.1	387.9
15°	382.3	382.5	382.6	382.7	382.8	382.7	382.3	382.0	381.7	381.4	382.3
17.5°	373.7	374.0	374.3	374.6	374.8	375.0	374.9	374.8	374.8	374.8	375.7
20°	367.6	367.9	368.3	368.5	368.8	369.0	369.1	369.2	369.3	369.4	370.4
22.5°	360.8	361.2	361.6	361.9	362.3	362.6	362.8	363.0	363.2	363.4	364.3
25°	349.8	350.3	351.0	351.6	352.1	352.6	352.9	353.2	353.5	353.8	354.9
27.5°	337.4	338.4	339.2	340.1	340.9	341.6	342.0	342.5	343.0	343.5	344.4
30°	329.2	330.1	330.8	331.6	332.4	333.2	333.8	334.5	335.3	335.9	337.1
32.5°	320.4	321.3	322.3	323.2	324.1	325.0	325.7	326.5	327.3	328.1	329.3
35°	306.0	307.3	308.4	309.6	310.9	311.9	312.9	313.9	314.9	315.8	317.3
37.5°	291.7	293.0	294.5	295.8	297.2	298.4	299.7	301.0	302.2	303.4	304.8
40°	282.4	283.7	285.0	286.3	287.6	288.9	290.3	291.7	293.0	294.5	296.0
42.5°	271.7	273.1	274.6	276.1	277.5	279.0	280.7	282.3	283.9	285.5	287.2
45°	255.1	257.0	258.9	260.8	262.7	264.6	266.5	268.3	270.2	272.1	273.8
47.5°	239.4	241.4	243.3	245.2	247.1	249.2	251.4	253.6	255.8	258.0	259.7
50°	228.0	230.2	232.3	234.5	236.7	238.8	241.1	243.3	245.4	247.6	249.6
52.5°	216.6	218.8	220.9	223.1	225.3	227.6	230.1	232.6	235.1	237.6	239.6
55°	199.9	202.0	204.1	206.1	208.2	210.8	213.7	216.7	219.6	222.6	224.6
57.5°	181.3	183.8	186.3	189.0	191.5	194.3	197.3	200.2	203.1	206.1	208.5
60°	169.1	171.6	174.3	176.8	179.4	182.3	185.6	188.9	192.1	195.4	197.7
62.5°	157.3	160.1	163.0	165.8	168.5	171.6	174.8	178.1	181.4	184.7	187.0
65°	138.3	141.5	144.7	147.8	151.0	154.3	157.6	161.0	164.4	167.8	170.2
67.5°	120.0	123.4	126.8	130.2	133.5	137.0	140.6	144.2	147.8	151.4	153.9
70°	107.5	110.8	114.2	117.6	121.0	124.6	128.4	132.1	135.9	139.7	142.3
72.5°	95.4	98.9	102.3	105.8	109.1	112.9	116.9	120.9	124.9	128.9	131.5
75°	76.7	80.4	84.1	87.8	91.4	95.3	99.5	103.7	107.8	112.0	114.8
77.5°	59.4	63.2	67.1	71.0	74.8	79.0	83.3	87.8	92.1	96.4	99.2
80°	48.6	52.6	56.6	60.5	64.5	68.6	73.0	77.4	81.7	86.1	89.1
82.5°	37.9	42.0	46.2	50.3	54.4	58.6	63.1	67.4	71.7	76.2	79.2
85°	23.7	27.8	32.0	36.1	40.3	44.6	49.1	53.5	58.0	62.5	65.4
87.5°	13.4	17.6	21.9	26.0	30.3	34.6	39.0	43.5	48.0	52.4	55.4
90°	8.1	12.9	17.7	22.4	27.2	32.0	36.9	41.8	46.7	51.5	54.9
92.5°	13.9	18.4	22.9	27.4	32.0	36.5	41.2	45.9	50.5	55.2	58.2
95°	25.8	29.7	33.6	37.6	41.6	45.8	50.3	55.0	59.6	64.1	67.0
97.5°	40.2	43.5	46.8	50.2	53.5	57.6	62.2	66.8	71.4	76.1	79.0
100°	51.6	54.4	57.3	60.1	63.1	66.7	71.3	75.8	80.3	84.8	87.7
102.5°	63.8	66.2	68.5	71.0	73.3	76.7	81.1	85.5	89.9	94.3	97.1
105°	81.6	83.7	85.8	87.8	89.8	92.8	96.8	100.8	104.7	108.7	111.4
107.5°	101.1	102.9	104.6	106.3	108.0	110.7	114.1	117.7	121.2	124.7	127.3
110°	114.1	115.6	117.3	118.8	120.3	122.7	126.1	129.5	132.9	136.4	138.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	127.6	128.9	130.2	131.4	132.7	134.9	138.1	141.3	144.4	147.6	149.8
115°	147.9	148.8	149.7	150.5	151.5	153.4	156.5	159.5	162.5	165.5	167.6
117.5°	167.4	168.0	168.6	169.2	169.8	171.4	174.4	177.2	180.0	182.9	184.7
120°	180.1	180.7	181.3	181.9	182.5	184.1	186.7	189.4	192.0	194.7	196.3
122.5°	193.7	193.9	194.1	194.2	194.4	195.8	198.4	201.0	203.6	206.2	207.9
125°	213.3	213.2	213.1	213.0	212.9	214.1	216.4	218.9	221.2	223.7	225.4
127.5°	231.4	231.5	231.6	231.8	231.9	232.8	234.6	236.4	238.2	240.0	241.6
130°	243.8	243.9	244.0	244.2	244.3	245.2	246.8	248.4	249.9	251.5	253.2
132.5°	256.8	256.9	257.0	257.0	257.1	257.8	259.0	260.1	261.4	262.6	264.2
135°	273.7	274.1	274.6	275.0	275.4	276.0	276.7	277.4	278.1	278.8	280.2
137.5°	292.5	292.6	292.7	292.8	292.8	293.1	293.6	294.1	294.5	295.0	296.2
140°	305.0	305.0	305.1	305.1	305.2	305.3	305.4	305.5	305.6	305.7	306.9
142.5°	316.0	316.2	316.3	316.5	316.6	316.6	316.5	316.3	316.2	316.1	317.3
145°	331.9	332.1	332.2	332.4	332.6	332.8	332.8	332.9	333.0	333.1	333.6
147.5°	347.6	347.8	348.1	348.4	348.6	348.6	348.6	348.6	348.6	348.5	348.5
150°	357.1	357.3	357.5	357.8	358.0	358.1	358.1	358.1	358.1	358.1	358.1
152.5°	365.9	366.0	366.2	366.4	366.5	366.6	366.6	366.7	366.7	366.8	367.0
155°	379.7	379.7	379.7	379.7	379.7	379.7	379.6	379.5	379.5	379.4	379.7
157.5°	391.4	391.2	391.2	391.1	390.9	390.8	390.8	390.8	390.8	390.8	391.0
160°	398.3	398.2	398.2	398.1	398.0	397.9	397.9	397.8	397.8	397.7	397.9
162.5°	404.7	404.5	404.4	404.2	404.0	403.9	403.8	403.7	403.6	403.5	404.0
165°	413.3	413.1	412.9	412.6	412.5	412.3	412.1	412.0	411.8	411.7	412.1
167.5°	419.9	419.6	419.3	419.0	418.7	418.5	418.6	418.6	418.6	418.6	419.1
170°	423.7	423.3	422.9	422.5	422.2	422.1	422.1	422.2	422.3	422.4	422.7
172.5°	426.3	426.0	425.7	425.4	425.1	424.9	424.9	425.0	425.0	425.0	425.5
175°	430.0	429.6	429.2	428.9	428.5	428.3	428.2	428.1	428.1	428.0	428.5
177.5°	431.2	430.9	430.6	430.3	430.0	429.9	429.9	429.9	429.9	429.9	430.3
180°	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4
2.5°	397.0	397.6	398.1	398.3	398.3	398.2	398.1	398.0
5°	396.0	396.7	397.6	397.9	397.8	397.7	397.6	397.5
7.5°	393.9	394.7	395.7	396.1	396.0	395.9	395.8	395.7
10°	391.7	392.6	393.5	393.9	393.8	393.7	393.6	393.5
12.5°	388.7	389.6	390.3	390.7	390.7	390.7	390.7	390.6
15°	383.2	384.1	385.0	385.4	385.3	385.2	385.1	385.0
17.5°	376.5	377.5	378.4	378.8	378.7	378.6	378.6	378.5
20°	371.4	372.4	373.3	373.9	373.9	373.9	373.9	373.9
22.5°	365.3	366.3	367.3	367.9	368.1	368.2	368.3	368.5
25°	356.0	357.0	358.2	358.7	358.8	358.9	359.0	359.1
27.5°	345.4	346.5	347.5	348.1	348.2	348.3	348.4	348.6
30°	338.1	339.2	340.3	340.9	341.1	341.4	341.6	341.8
32.5°	330.5	331.9	333.1	333.8	334.0	334.2	334.4	334.6
35°	318.7	320.0	321.4	322.3	322.5	322.8	323.2	323.5
37.5°	306.2	307.6	309.0	309.9	310.2	310.5	310.9	311.1
40°	297.5	298.9	300.4	301.3	301.7	302.2	302.6	302.9
42.5°	288.8	290.5	292.1	293.1	293.4	293.7	294.1	294.4
45°	275.5	277.2	278.9	279.9	280.5	281.0	281.4	281.9
47.5°	261.5	263.2	264.9	266.1	266.7	267.3	267.9	268.5
50°	251.6	253.5	255.5	256.8	257.4	258.0	258.6	259.2
52.5°	241.6	243.6	245.5	246.9	247.4	248.0	248.6	249.2
55°	226.6	228.6	230.5	231.9	232.4	233.0	233.7	234.2
57.5°	210.8	213.2	215.6	217.0	217.5	218.1	218.7	219.2
60°	200.0	202.3	204.5	206.0	206.9	207.6	208.5	209.2
62.5°	189.3	191.5	193.8	195.4	196.1	196.9	197.7	198.5
65°	172.7	175.2	177.7	179.3	180.1	180.9	181.7	182.5
67.5°	156.5	159.0	161.5	163.2	163.9	164.7	165.4	166.3
70°	145.0	147.7	150.3	152.0	152.7	153.4	154.1	154.8
72.5°	134.1	136.8	139.3	141.0	141.8	142.5	143.4	144.1
75°	117.5	120.3	123.1	124.9	125.8	126.7	127.6	128.5
77.5°	102.1	104.9	107.7	109.6	110.6	111.5	112.4	113.4
80°	92.1	95.0	98.0	99.9	100.7	101.5	102.3	103.0
82.5°	82.2	85.3	88.3	90.3	91.1	92.0	92.9	93.8
85°	68.4	71.4	74.4	76.3	77.3	78.3	79.3	80.3
87.5°	58.3	61.3	64.3	66.2	67.1	68.1	68.9	69.8
90°	58.2	61.5	64.8	66.9	67.9	68.8	69.7	70.7
92.5°	61.4	64.4	67.5	69.5	70.3	71.2	72.1	73.0
95°	69.9	72.9	75.7	77.6	78.5	79.4	80.3	81.2
97.5°	81.8	84.6	87.6	89.4	90.3	91.1	92.0	92.8
100°	90.5	93.3	96.1	97.9	98.6	99.3	100.0	100.7
102.5°	99.9	102.6	105.5	107.4	108.1	109.0	109.8	110.7
105°	114.1	116.8	119.5	121.4	122.3	123.4	124.4	125.5
107.5°	130.0	132.6	135.3	137.0	137.7	138.4	139.0	139.8
110°	140.6	142.7	144.9	146.5	147.4	148.5	149.5	150.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	151.9	154.1	156.3	157.8	158.6	159.5	160.3	161.2
115°	169.8	171.8	173.9	175.3	176.0	176.5	177.2	177.8
117.5°	186.5	188.3	190.1	191.3	192.0	192.7	193.3	194.0
120°	197.9	199.5	201.1	202.5	203.4	204.3	205.3	206.2
122.5°	209.7	211.4	213.2	214.2	214.7	215.2	215.6	216.0
125°	227.2	228.8	230.6	231.7	232.1	232.6	233.0	233.5
127.5°	243.3	244.9	246.5	247.6	248.2	248.7	249.3	249.9
130°	254.8	256.4	258.1	259.0	259.3	259.6	260.0	260.2
132.5°	265.7	267.3	268.8	269.8	270.3	270.8	271.3	271.7
135°	281.6	283.1	284.6	285.5	285.8	286.2	286.5	286.9
137.5°	297.5	298.8	300.0	301.0	301.4	302.0	302.6	303.0
140°	308.1	309.2	310.5	311.3	311.7	312.2	312.5	313.0
142.5°	318.4	319.4	320.6	321.3	321.8	322.2	322.5	322.9
145°	334.1	334.6	335.2	335.5	335.6	335.8	336.0	336.2
147.5°	348.5	348.6	348.6	348.6	348.9	349.1	349.4	349.6
150°	358.1	358.1	358.1	358.0	358.0	357.9	357.8	357.7
152.5°	367.2	367.4	367.6	367.5	367.3	367.1	366.9	366.7
155°	379.9	380.2	380.5	380.5	380.2	379.9	379.7	379.4
157.5°	391.2	391.4	391.6	391.6	391.3	391.2	390.9	390.6
160°	398.1	398.3	398.6	398.5	398.1	397.8	397.4	397.0
162.5°	404.4	404.7	405.1	405.1	404.8	404.4	404.1	403.7
165°	412.6	413.0	413.4	413.5	413.2	412.9	412.6	412.4
167.5°	419.5	419.9	420.4	420.4	419.9	419.4	419.0	418.5
170°	423.2	423.7	424.1	424.0	423.6	423.0	422.5	422.0
172.5°	426.0	426.5	427.0	427.0	426.5	425.9	425.5	424.9
175°	429.0	429.5	430.1	430.1	429.5	429.0	428.5	428.0
177.5°	430.6	431.1	431.5	431.5	431.0	430.6	430.1	429.6
180°	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6

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