

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: P332497-935

Luminaire Tested: **SA4XXDIP-C350D365U935-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332497-935
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-C350D365U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

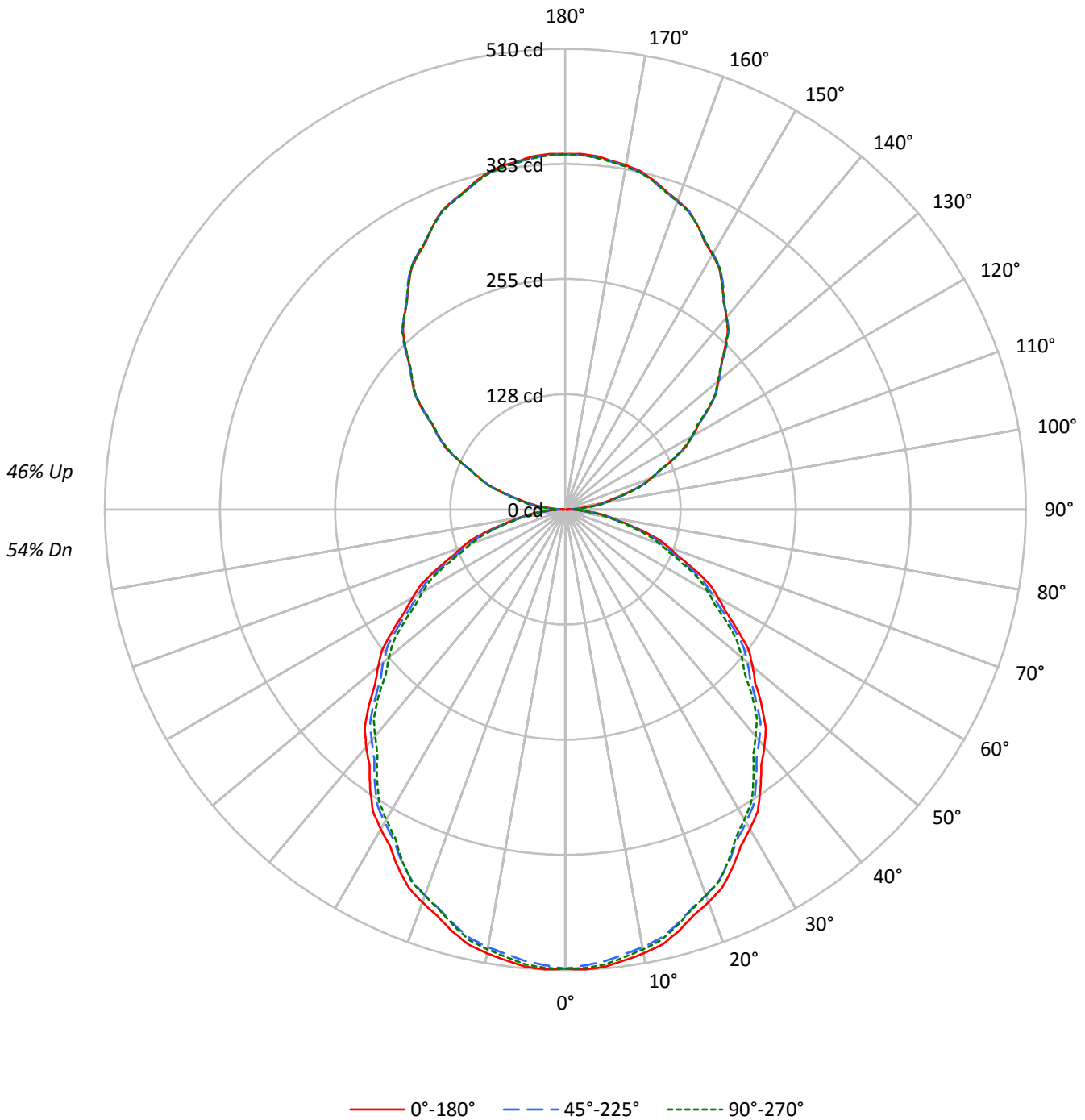
Lumens per Lamp: N/A
Luminaire Lumens: 2397.8 lumens
Efficiency: N/A
Efficacy: 118.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

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					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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54				
1	99	94	90	87	91	88	84	81	75	73	70	64	62	60	53	52	51	46				
2	90	82	76	71	83	77	71	67	66	62	58	56	53	50	47	45	43	38				
3	82	72	65	59	76	67	61	56	58	53	49	49	46	43	41	39	36	32				
4	75	64	56	50	69	60	53	47	52	46	42	44	40	36	37	34	31	28				
5	69	57	49	43	64	53	46	41	46	40	36	40	35	32	33	30	27	24				
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24	21				
7	59	46	38	33	54	43	36	31	38	32	28	33	28	25	28	24	21	19				
8	55	42	34	29	51	39	32	27	35	29	25	30	25	22	25	22	19	17				
9	51	38	31	26	47	36	29	25	32	26	22	27	23	20	23	20	17	15				
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4106	4106	4106
5°	4118	4068	4099
10°	4092	4036	4055
15°	4043	3978	3989
20°	3978	3907	3911
25°	3902	3827	3815
30°	3811	3731	3697
35°	3714	3631	3582
40°	3616	3518	3453
45°	3513	3406	3342
50°	3399	3307	3204
55°	3275	3178	3074
60°	3152	3034	2942
65°	3012	2896	2779
70°	2858	2712	2608
75°	2617	2492	2427
80°	2329	2236	2176
85°	2038	1964	1927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.9	2.0
10°-20°	135.0	5.6
20°-30°	198.6	8.3
30°-40°	230.9	9.6
40°-50°	230.9	9.6
50°-60°	202.0	8.4
60°-70°	150.0	6.3
70°-80°	85.2	3.6
80°-90°	25.8	1.1
90°-100°	25.9	1.1
100°-110°	76.9	3.2
110°-120°	130.5	5.4
120°-130°	172.0	7.2
130°-140°	193.2	8.1
140°-150°	189.8	7.9
150°-160°	159.7	6.7
160°-170°	106.2	4.4
170°-180°	37.2	1.6
0°-30°	381.5	15.9
0°-40°	612.4	25.5
0°-60°	1045.3	43.6
0°-90°	1306.3	54.5
90°-120°	233.3	9.7
90°-150°	788.3	32.9
90°-180°	1091.0	45.5
0°-180°	2397.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	508	506	502	506	506	48
15°	484	482	476	478	477	136
25°	438	435	430	430	428	201
35°	377	374	368	366	364	236
45°	308	305	298	294	293	237
55°	233	231	226	221	218	208
65°	158	156	152	148	146	156
75°	84	82	80	78	78	89
85°	22	22	21	21	21	24
90°	1	4	7	8	9	2
95°	18	21	23	24	24	20
105°	71	71	72	73	74	75
115°	133	133	132	132	132	131
125°	193	193	193	192	192	172
135°	249	251	251	250	250	193
145°	303	304	304	304	303	189
155°	347	347	347	348	347	160
165°	378	377	376	378	377	106
175°	393	391	391	393	391	37
180°	393	393	393	393	393	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6
2.5°	509.9	509.7	509.5	509.3	509.0	508.5	507.7	507.0	506.2	505.3	506.1
5°	508.2	507.8	507.5	507.1	506.8	506.1	505.1	504.1	503.1	502.0	503.1
7.5°	503.5	503.1	502.7	502.4	502.0	501.3	500.2	499.1	498.0	496.9	497.7
10°	499.2	498.9	498.5	498.2	497.8	497.1	495.8	494.6	493.5	492.3	493.0
12.5°	493.7	493.4	493.0	492.6	492.2	491.5	490.2	489.0	487.7	486.5	487.2
15°	483.7	483.4	483.0	482.7	482.3	481.5	480.1	478.7	477.3	476.0	476.6
17.5°	471.7	471.3	470.9	470.5	469.9	469.1	467.8	466.5	465.2	463.9	464.3
20°	463.0	462.5	462.1	461.6	461.2	460.3	458.9	457.5	456.2	454.8	455.1
22.5°	453.5	452.9	452.3	451.7	451.1	450.1	448.8	447.5	446.1	444.7	445.2
25°	438.1	437.5	436.9	436.2	435.6	434.6	433.3	432.0	430.8	429.6	429.6
27.5°	420.5	419.8	419.2	418.5	417.9	417.0	415.8	414.7	413.5	412.2	412.1
30°	408.8	408.0	407.3	406.6	405.9	404.9	403.7	402.5	401.4	400.2	399.8
32.5°	396.4	395.7	395.0	394.4	393.7	392.8	391.6	390.3	389.1	387.8	387.4
35°	376.9	376.3	375.7	375.1	374.4	373.5	372.2	370.9	369.7	368.4	367.8
37.5°	356.5	355.9	355.3	354.8	354.2	353.3	351.9	350.5	349.1	347.8	347.1
40°	343.1	342.4	341.7	341.0	340.3	339.2	337.9	336.5	335.1	333.8	332.9
42.5°	328.8	328.4	328.0	327.5	327.1	326.1	324.6	323.0	321.6	320.1	319.0
45°	307.7	307.0	306.4	305.8	305.1	304.1	302.6	301.2	299.8	298.3	297.3
47.5°	285.6	285.2	284.7	284.3	283.9	283.0	281.6	280.3	279.0	277.6	276.5
50°	270.6	270.3	269.9	269.5	269.1	268.4	267.1	265.8	264.5	263.3	262.0
52.5°	256.0	255.5	255.0	254.6	254.2	253.3	251.9	250.6	249.3	248.0	246.8
55°	232.7	232.5	232.1	231.9	231.6	230.8	229.5	228.3	227.0	225.8	224.7
57.5°	210.5	210.3	209.9	209.7	209.3	208.5	207.2	206.0	204.7	203.5	202.5
60°	195.2	194.8	194.3	193.8	193.4	192.6	191.4	190.2	189.1	187.9	187.1
62.5°	180.2	179.9	179.4	179.1	178.7	177.9	176.6	175.4	174.1	172.9	172.1
65°	157.7	157.3	156.8	156.4	155.9	155.2	154.3	153.4	152.5	151.6	150.7
67.5°	135.1	134.7	134.2	133.8	133.4	132.8	131.9	131.0	130.2	129.2	128.4
70°	121.1	120.4	119.8	119.2	118.5	117.8	117.1	116.4	115.6	114.9	114.2
72.5°	106.1	105.4	104.8	104.2	103.5	102.9	102.3	101.8	101.2	100.6	100.0
75°	83.9	83.5	83.1	82.6	82.1	81.7	81.3	80.8	80.3	79.9	79.6
77.5°	62.9	62.7	62.4	62.3	62.1	61.7	61.4	61.0	60.5	60.2	60.0
80°	50.1	49.9	49.6	49.3	49.1	48.8	48.6	48.5	48.3	48.1	47.9
82.5°	37.7	37.6	37.5	37.4	37.2	37.1	37.1	37.1	37.0	37.0	36.9
85°	22.0	22.0	22.0	22.0	22.0	22.0	21.7	21.5	21.4	21.2	21.2
87.5°	8.7	8.7	8.8	8.9	9.0	9.0	9.0	9.1	9.1	9.1	9.2
90°	0.9	1.6	2.4	3.2	3.9	4.6	5.1	5.6	6.1	6.7	7.1
92.5°	6.5	7.4	8.2	9.0	9.9	10.5	10.9	11.3	11.7	12.1	12.3
95°	18.3	18.9	19.5	20.1	20.7	21.3	21.7	22.2	22.6	23.2	23.3
97.5°	31.9	32.4	32.9	33.3	33.8	34.4	34.9	35.5	36.0	36.6	36.9
100°	42.6	42.9	43.1	43.4	43.7	44.1	44.7	45.4	46.0	46.6	46.7
102.5°	53.8	53.9	54.0	54.2	54.2	54.6	55.1	55.7	56.2	56.7	57.0
105°	70.9	70.9	71.0	71.1	71.1	71.3	71.6	71.9	72.2	72.4	72.6
107.5°	88.9	88.9	89.0	89.1	89.2	89.2	89.3	89.3	89.4	89.4	89.5
110°	101.0	101.2	101.3	101.4	101.5	101.6	101.5	101.4	101.3	101.3	101.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	113.7	113.7	113.7	113.7	113.7	113.7	113.6	113.5	113.4	113.2	113.2
115°	132.7	132.7	132.7	132.7	132.7	132.6	132.4	132.3	132.2	132.1	132.0
117.5°	150.5	150.6	150.7	150.7	150.8	150.8	150.7	150.6	150.4	150.3	150.2
120°	162.5	162.7	163.0	163.2	163.6	163.6	163.4	163.2	163.0	162.8	162.5
122.5°	174.9	175.0	175.1	175.2	175.3	175.3	175.2	175.1	175.0	175.0	174.7
125°	193.2	193.2	193.2	193.2	193.2	193.1	193.1	193.0	193.0	192.9	192.8
127.5°	209.8	210.0	210.3	210.4	210.6	210.7	210.6	210.4	210.3	210.3	210.1
130°	221.5	221.7	221.9	222.1	222.3	222.4	222.4	222.4	222.4	222.4	222.3
132.5°	233.4	233.6	233.7	233.8	234.0	234.0	234.0	233.9	233.9	233.8	233.7
135°	249.2	249.6	249.9	250.4	250.8	251.0	251.0	251.0	251.0	251.0	250.9
137.5°	266.3	266.6	266.7	266.9	267.1	267.3	267.3	267.4	267.6	267.7	267.5
140°	277.8	277.9	278.0	278.2	278.4	278.4	278.4	278.4	278.4	278.4	278.4
142.5°	288.3	288.3	288.5	288.6	288.8	288.9	288.8	288.7	288.7	288.6	288.6
145°	302.7	303.0	303.2	303.5	303.8	304.0	304.0	304.1	304.2	304.3	304.2
147.5°	317.1	317.5	317.7	318.1	318.4	318.5	318.5	318.4	318.4	318.3	318.2
150°	325.9	326.1	326.4	326.7	326.9	327.1	327.1	327.1	327.1	327.1	327.1
152.5°	334.2	334.3	334.4	334.6	334.8	334.8	334.9	335.0	335.0	335.1	335.3
155°	346.8	346.8	346.8	346.8	346.8	346.8	346.7	346.6	346.6	346.6	346.8
157.5°	357.6	357.4	357.3	357.2	357.1	357.0	357.0	357.0	357.0	357.0	357.1
160°	363.9	363.8	363.8	363.7	363.6	363.5	363.5	363.4	363.3	363.3	363.5
162.5°	369.7	369.5	369.4	369.2	369.0	368.9	368.9	368.8	368.7	368.6	369.0
165°	377.5	377.4	377.2	376.9	376.8	376.6	376.4	376.3	376.2	376.1	376.4
167.5°	383.6	383.3	383.1	382.7	382.5	382.3	382.4	382.4	382.4	382.4	382.8
170°	387.0	386.7	386.3	386.0	385.6	385.6	385.6	385.6	385.7	385.8	386.2
172.5°	389.4	389.2	388.8	388.6	388.3	388.1	388.1	388.2	388.2	388.2	388.7
175°	392.8	392.4	392.1	391.8	391.4	391.2	391.2	391.1	391.1	391.0	391.4
177.5°	393.9	393.6	393.3	393.0	392.8	392.7	392.7	392.7	392.7	392.7	393.0
180°	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	508.6	508.6	508.6	508.6	508.6	508.6	508.6	508.6
2.5°	506.8	507.6	508.2	508.6	508.5	508.4	508.3	508.2
5°	504.1	505.1	506.1	506.4	506.3	506.1	505.9	505.8
7.5°	498.4	499.3	500.1	500.4	500.3	500.2	500.1	500.0
10°	493.8	494.5	495.2	495.5	495.3	495.1	494.9	494.7
12.5°	488.0	488.8	489.7	489.9	489.7	489.4	489.1	488.9
15°	477.1	477.6	478.2	478.3	478.0	477.8	477.5	477.3
17.5°	464.6	464.9	465.3	465.4	465.2	465.0	464.9	464.7
20°	455.4	455.6	455.9	456.0	455.7	455.6	455.4	455.2
22.5°	445.7	446.2	446.7	446.8	446.4	446.1	445.7	445.5
25°	429.7	429.8	429.9	429.8	429.4	429.0	428.7	428.3
27.5°	411.8	411.6	411.4	411.0	410.6	410.2	409.7	409.2
30°	399.5	399.2	398.7	398.4	397.9	397.4	397.0	396.6
32.5°	386.9	386.5	386.1	385.6	385.2	384.7	384.3	383.8
35°	367.1	366.5	365.8	365.3	364.9	364.5	363.9	363.5
37.5°	346.4	345.7	345.0	344.4	343.8	343.2	342.6	342.0
40°	332.0	331.1	330.2	329.5	329.0	328.6	328.1	327.7
42.5°	318.0	316.9	315.9	315.2	314.9	314.6	314.3	314.0
45°	296.4	295.3	294.4	293.7	293.4	293.2	292.9	292.7
47.5°	275.3	274.2	273.1	272.2	271.6	270.9	270.2	269.5
50°	260.7	259.5	258.2	257.3	256.8	256.2	255.6	255.1
52.5°	245.7	244.6	243.5	242.5	241.9	241.2	240.5	239.8
55°	223.6	222.5	221.4	220.6	220.1	219.6	219.0	218.4
57.5°	201.5	200.4	199.4	198.6	198.1	197.6	197.1	196.5
60°	186.2	185.5	184.6	184.0	183.6	183.0	182.6	182.2
62.5°	171.4	170.7	169.9	169.3	168.8	168.4	168.0	167.5
65°	149.8	148.9	148.0	147.3	146.9	146.4	145.9	145.5
67.5°	127.5	126.7	125.8	125.3	125.2	125.0	124.9	124.8
70°	113.5	112.8	112.0	111.5	111.2	111.0	110.7	110.5
72.5°	99.4	98.8	98.2	97.8	97.6	97.3	97.0	96.8
75°	79.1	78.8	78.4	78.2	78.1	78.0	77.9	77.8
77.5°	59.9	59.8	59.8	59.6	59.3	59.1	58.8	58.6
80°	47.7	47.5	47.4	47.3	47.1	47.0	46.9	46.8
82.5°	36.8	36.7	36.6	36.5	36.4	36.2	36.2	36.1
85°	21.2	21.2	21.2	21.2	21.1	21.0	20.8	20.8
87.5°	9.3	9.4	9.5	9.6	9.6	9.6	9.6	9.6
90°	7.5	7.9	8.4	8.6	8.7	8.9	9.0	9.1
92.5°	12.6	12.7	13.0	13.2	13.3	13.3	13.4	13.5
95°	23.5	23.8	23.9	24.0	24.0	24.0	24.0	24.0
97.5°	37.0	37.3	37.5	37.6	37.6	37.6	37.6	37.6
100°	46.8	46.9	47.1	47.2	47.2	47.2	47.2	47.2
102.5°	57.2	57.3	57.5	57.7	57.7	57.8	57.8	57.9
105°	72.8	73.0	73.2	73.4	73.6	73.9	74.0	74.2
107.5°	89.8	90.0	90.1	90.2	90.2	90.2	90.2	90.1
110°	101.1	100.9	100.7	100.8	101.0	101.3	101.4	101.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	113.2	113.1	113.1	113.1	113.2	113.2	113.2	113.3
115°	131.9	131.8	131.7	131.7	131.6	131.6	131.5	131.5
117.5°	149.9	149.6	149.5	149.3	149.1	149.0	148.9	148.7
120°	162.1	161.8	161.4	161.4	161.4	161.6	161.7	161.9
122.5°	174.5	174.3	174.0	173.7	173.6	173.3	173.1	172.8
125°	192.6	192.5	192.3	192.2	192.1	191.9	191.8	191.7
127.5°	210.0	209.8	209.7	209.6	209.5	209.4	209.2	209.1
130°	222.1	222.0	221.9	221.6	221.4	221.1	220.8	220.6
132.5°	233.6	233.4	233.3	233.2	233.1	233.0	232.9	232.7
135°	250.7	250.6	250.5	250.3	250.1	249.9	249.7	249.5
137.5°	267.3	267.2	267.0	266.9	266.9	267.0	267.0	267.1
140°	278.3	278.2	278.1	278.0	278.0	277.9	277.8	277.8
142.5°	288.6	288.6	288.5	288.5	288.5	288.5	288.5	288.5
145°	304.1	304.0	304.0	303.8	303.7	303.4	303.2	303.1
147.5°	318.2	318.1	318.1	318.1	318.0	317.9	317.8	317.8
150°	327.1	327.1	327.1	327.0	327.0	326.9	326.8	326.7
152.5°	335.4	335.6	335.8	335.7	335.5	335.4	335.2	335.0
155°	347.1	347.3	347.6	347.6	347.3	347.1	346.8	346.6
157.5°	357.3	357.6	357.7	357.7	357.5	357.3	357.1	356.8
160°	363.7	363.9	364.1	364.0	363.7	363.3	363.0	362.7
162.5°	369.4	369.7	370.1	370.1	369.8	369.5	369.1	368.8
165°	376.9	377.3	377.6	377.7	377.5	377.2	376.9	376.7
167.5°	383.2	383.6	384.0	384.0	383.6	383.1	382.7	382.3
170°	386.6	387.0	387.4	387.4	386.9	386.4	386.0	385.5
172.5°	389.2	389.6	390.0	390.0	389.6	389.1	388.7	388.1
175°	391.9	392.4	392.9	392.9	392.4	391.9	391.4	391.0
177.5°	393.4	393.8	394.2	394.2	393.7	393.3	392.9	392.4
180°	393.4	393.4	393.4	393.4	393.4	393.4	393.4	393.4

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