

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: P332497-930

Luminaire Tested: **SA4XXDIP-C350D365U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332497-930  
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-C350D365U930-4F0-1E-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: 2270.5 lumens  
Efficiency: N/A  
Efficacy: 111.8 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

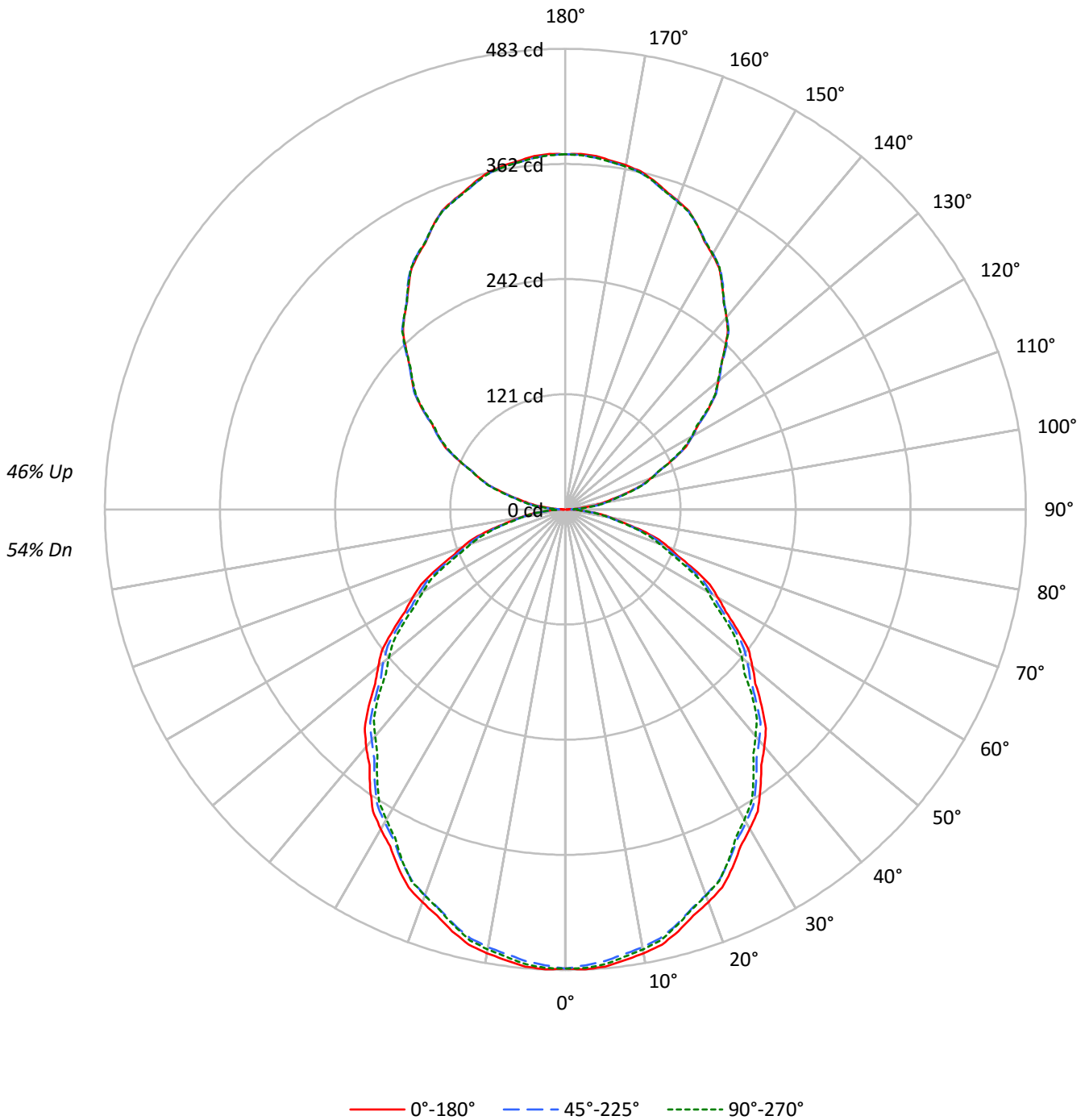
Input Watts (W): 20.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3888	3888	3888
5°	3900	3853	3881
10°	3875	3822	3841
15°	3828	3768	3777
20°	3766	3699	3703
25°	3695	3624	3613
30°	3608	3533	3500
35°	3517	3438	3392
40°	3424	3331	3270
45°	3327	3225	3164
50°	3218	3131	3034
55°	3102	3009	2911
60°	2984	2872	2785
65°	2854	2743	2632
70°	2705	2568	2469
75°	2480	2361	2299
80°	2208	2120	2064
85°	1936	1862	1815



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.4	2.0
10°-20°	127.8	5.6
20°-30°	188.1	8.3
30°-40°	218.7	9.6
40°-50°	218.7	9.6
50°-60°	191.3	8.4
60°-70°	142.1	6.3
70°-80°	80.7	3.6
80°-90°	24.4	1.1
90°-100°	24.6	1.1
100°-110°	72.8	3.2
110°-120°	123.5	5.4
120°-130°	162.9	7.2
130°-140°	182.9	8.1
140°-150°	179.8	7.9
150°-160°	151.2	6.7
160°-170°	100.6	4.4
170°-180°	35.2	1.6
0°-30°	361.2	15.9
0°-40°	579.9	25.5
0°-60°	989.8	43.6
0°-90°	1237.0	54.5
90°-120°	220.9	9.7
90°-150°	746.5	32.9
90°-180°	1034.0	45.5
0°-180°	2270.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	482	482	482	482	482	
5°	481	480	475	479	479	46
15°	458	456	451	453	452	129
25°	415	412	407	407	406	191
35°	357	354	349	346	344	223
45°	291	288	282	278	277	225
55°	220	219	214	209	207	197
65°	149	147	144	140	138	148
75°	80	78	76	74	74	84
85°	21	21	20	20	20	23
90°	1	4	6	8	9	2
95°	17	20	22	23	23	19
105°	67	67	69	69	70	71
115°	126	126	125	125	124	124
125°	183	183	183	182	182	163
135°	236	238	238	237	236	182
145°	287	288	288	288	287	179
155°	328	328	328	329	328	151
165°	358	357	356	358	357	101
175°	372	371	370	372	370	35
180°	372	372	372	372	372	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6
2.5°	482.8	482.7	482.4	482.2	482.0	481.5	480.8	480.0	479.3	478.5	479.2
5°	481.2	480.9	480.5	480.2	479.9	479.2	478.3	477.4	476.4	475.4	476.4
7.5°	476.8	476.4	476.1	475.7	475.4	474.7	473.6	472.6	471.6	470.5	471.2
10°	472.7	472.4	472.1	471.7	471.4	470.7	469.5	468.4	467.3	466.2	466.8
12.5°	467.5	467.2	466.8	466.4	466.1	465.4	464.1	463.0	461.8	460.6	461.4
15°	458.0	457.7	457.4	457.1	456.7	455.9	454.6	453.3	452.0	450.8	451.3
17.5°	446.7	446.3	445.9	445.5	445.0	444.2	443.0	441.7	440.5	439.3	439.6
20°	438.4	438.0	437.6	437.1	436.7	435.9	434.6	433.3	431.9	430.6	431.0
22.5°	429.4	428.8	428.3	427.7	427.1	426.2	424.9	423.7	422.4	421.1	421.6
25°	414.8	414.3	413.7	413.0	412.5	411.6	410.3	409.1	408.0	406.8	406.8
27.5°	398.2	397.5	397.0	396.3	395.7	394.8	393.7	392.6	391.5	390.4	390.2
30°	387.1	386.4	385.7	385.0	384.3	383.4	382.3	381.2	380.1	379.0	378.6
32.5°	375.4	374.7	374.1	373.5	372.8	371.9	370.8	369.6	368.4	367.2	366.8
35°	356.9	356.4	355.8	355.1	354.6	353.7	352.5	351.2	350.1	348.9	348.3
37.5°	337.6	337.0	336.5	336.0	335.4	334.5	333.2	331.9	330.6	329.3	328.6
40°	324.9	324.2	323.6	322.9	322.2	321.2	319.9	318.6	317.3	316.1	315.2
42.5°	311.4	311.0	310.5	310.1	309.7	308.8	307.4	305.9	304.5	303.1	302.1
45°	291.4	290.7	290.2	289.6	288.9	288.0	286.6	285.2	283.9	282.5	281.5
47.5°	270.4	270.0	269.6	269.2	268.8	268.0	266.7	265.4	264.2	262.9	261.8
50°	256.2	255.9	255.6	255.2	254.9	254.1	252.9	251.7	250.5	249.3	248.1
52.5°	242.4	241.9	241.5	241.1	240.7	239.9	238.6	237.3	236.0	234.8	233.7
55°	220.4	220.1	219.8	219.6	219.3	218.6	217.4	216.2	215.0	213.8	212.8
57.5°	199.3	199.1	198.8	198.5	198.2	197.5	196.2	195.1	193.9	192.7	191.8
60°	184.8	184.4	184.0	183.5	183.1	182.4	181.2	180.1	179.0	177.9	177.2
62.5°	170.6	170.3	169.9	169.6	169.2	168.4	167.2	166.1	164.9	163.7	163.0
65°	149.4	149.0	148.5	148.1	147.7	147.0	146.1	145.3	144.4	143.6	142.7
67.5°	127.9	127.5	127.1	126.7	126.3	125.7	124.9	124.1	123.3	122.4	121.6
70°	114.6	114.0	113.4	112.8	112.2	111.5	110.9	110.2	109.5	108.8	108.1
72.5°	100.4	99.8	99.2	98.7	98.0	97.4	96.9	96.4	95.8	95.2	94.7
75°	79.5	79.1	78.7	78.2	77.8	77.4	77.0	76.5	76.1	75.7	75.3
77.5°	59.5	59.4	59.1	58.9	58.8	58.5	58.1	57.7	57.3	57.0	56.8
80°	47.5	47.2	47.0	46.7	46.5	46.2	46.1	45.9	45.7	45.6	45.3
82.5°	35.7	35.6	35.5	35.4	35.2	35.1	35.1	35.1	35.1	35.1	35.0
85°	20.9	20.9	20.9	20.9	20.9	20.8	20.5	20.4	20.2	20.1	20.1
87.5°	8.2	8.2	8.3	8.4	8.5	8.6	8.6	8.6	8.6	8.6	8.7
90°	0.9	1.5	2.3	3.0	3.7	4.3	4.8	5.3	5.8	6.4	6.7
92.5°	6.2	7.0	7.7	8.6	9.4	9.9	10.4	10.7	11.1	11.4	11.7
95°	17.3	17.9	18.4	19.0	19.6	20.1	20.5	21.0	21.4	21.9	22.1
97.5°	30.2	30.7	31.1	31.6	32.0	32.5	33.0	33.6	34.1	34.7	34.9
100°	40.4	40.6	40.8	41.1	41.3	41.7	42.3	43.0	43.5	44.1	44.2
102.5°	51.0	51.0	51.1	51.3	51.4	51.7	52.2	52.7	53.2	53.7	54.0
105°	67.1	67.2	67.3	67.3	67.3	67.5	67.8	68.1	68.3	68.6	68.7
107.5°	84.1	84.2	84.3	84.4	84.5	84.5	84.5	84.5	84.6	84.6	84.8
110°	95.6	95.8	95.9	96.0	96.1	96.2	96.1	96.0	96.0	96.0	95.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	107.6	107.6	107.7	107.7	107.7	107.7	107.5	107.5	107.4	107.2	107.2
115°	125.6	125.6	125.6	125.6	125.6	125.6	125.4	125.3	125.1	125.1	125.0
117.5°	142.5	142.6	142.7	142.7	142.8	142.8	142.7	142.6	142.4	142.4	142.2
120°	153.8	154.1	154.3	154.6	154.9	154.9	154.7	154.5	154.3	154.2	153.8
122.5°	165.6	165.7	165.8	165.9	166.0	166.0	165.9	165.8	165.8	165.7	165.4
125°	183.0	183.0	183.0	183.0	183.0	182.9	182.9	182.8	182.7	182.6	182.5
127.5°	198.7	198.9	199.1	199.3	199.4	199.5	199.4	199.3	199.2	199.1	198.9
130°	209.8	209.9	210.1	210.3	210.5	210.6	210.6	210.6	210.6	210.6	210.5
132.5°	221.0	221.2	221.3	221.4	221.6	221.6	221.6	221.5	221.5	221.4	221.3
135°	235.9	236.4	236.7	237.1	237.5	237.7	237.7	237.7	237.7	237.7	237.6
137.5°	252.2	252.4	252.6	252.7	252.9	253.1	253.2	253.2	253.4	253.5	253.3
140°	263.0	263.2	263.3	263.4	263.6	263.6	263.6	263.6	263.6	263.6	263.6
142.5°	273.0	273.0	273.2	273.3	273.5	273.5	273.5	273.4	273.4	273.3	273.3
145°	286.7	286.9	287.1	287.4	287.7	287.9	287.9	288.0	288.0	288.1	288.0
147.5°	300.3	300.6	300.8	301.2	301.5	301.6	301.6	301.5	301.5	301.4	301.3
150°	308.6	308.8	309.1	309.3	309.6	309.7	309.7	309.7	309.7	309.7	309.7
152.5°	316.4	316.6	316.7	316.8	317.0	317.1	317.2	317.2	317.2	317.3	317.5
155°	328.4	328.4	328.4	328.4	328.4	328.4	328.3	328.2	328.2	328.2	328.4
157.5°	338.6	338.4	338.3	338.3	338.1	338.0	338.0	338.0	338.0	338.0	338.2
160°	344.5	344.5	344.5	344.4	344.3	344.2	344.2	344.1	344.1	344.0	344.2
162.5°	350.1	349.9	349.8	349.6	349.4	349.4	349.3	349.2	349.1	349.0	349.4
165°	357.5	357.3	357.2	356.9	356.8	356.6	356.4	356.4	356.2	356.1	356.4
167.5°	363.2	363.0	362.7	362.4	362.2	362.0	362.1	362.1	362.1	362.1	362.5
170°	366.5	366.2	365.8	365.5	365.2	365.1	365.1	365.2	365.3	365.3	365.7
172.5°	368.8	368.5	368.2	367.9	367.7	367.5	367.5	367.6	367.6	367.6	368.0
175°	371.9	371.6	371.3	371.0	370.6	370.5	370.4	370.3	370.3	370.2	370.6
177.5°	373.0	372.8	372.4	372.2	371.9	371.9	371.9	371.9	371.9	371.9	372.2
180°	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	481.6	481.6	481.6	481.6	481.6	481.6	481.6	481.6
2.5°	479.9	480.6	481.3	481.6	481.5	481.4	481.4	481.3
5°	477.4	478.3	479.2	479.6	479.4	479.2	479.1	478.9
7.5°	472.0	472.8	473.5	473.9	473.8	473.6	473.5	473.4
10°	467.6	468.2	469.0	469.2	469.0	468.8	468.6	468.5
12.5°	462.1	462.8	463.7	463.9	463.7	463.4	463.2	462.9
15°	451.8	452.2	452.8	452.9	452.7	452.4	452.2	451.9
17.5°	439.9	440.3	440.6	440.7	440.5	440.3	440.2	440.0
20°	431.2	431.5	431.7	431.8	431.5	431.4	431.2	431.0
22.5°	422.0	422.5	423.0	423.1	422.7	422.4	422.1	421.8
25°	406.9	407.0	407.1	407.0	406.6	406.3	405.9	405.6
27.5°	390.0	389.8	389.6	389.2	388.8	388.4	387.9	387.5
30°	378.3	378.0	377.6	377.2	376.7	376.3	375.9	375.5
32.5°	366.4	366.0	365.6	365.2	364.8	364.3	363.9	363.5
35°	347.6	347.1	346.4	345.9	345.5	345.1	344.6	344.2
37.5°	328.0	327.3	326.7	326.1	325.5	325.0	324.4	323.8
40°	314.4	313.5	312.7	312.0	311.5	311.1	310.7	310.3
42.5°	301.1	300.1	299.1	298.5	298.2	297.9	297.6	297.3
45°	280.6	279.6	278.8	278.1	277.9	277.6	277.4	277.1
47.5°	260.7	259.7	258.6	257.8	257.1	256.5	255.8	255.2
50°	246.9	245.7	244.5	243.6	243.1	242.6	242.1	241.6
52.5°	232.7	231.6	230.6	229.7	229.0	228.4	227.7	227.1
55°	211.7	210.7	209.7	208.9	208.4	207.9	207.3	206.8
57.5°	190.8	189.8	188.8	188.1	187.6	187.1	186.6	186.1
60°	176.3	175.6	174.8	174.2	173.8	173.3	172.9	172.5
62.5°	162.3	161.6	160.9	160.3	159.9	159.5	159.1	158.6
65°	141.9	141.0	140.1	139.5	139.1	138.6	138.2	137.8
67.5°	120.7	119.9	119.1	118.6	118.5	118.4	118.3	118.1
70°	107.5	106.8	106.1	105.6	105.3	105.1	104.8	104.6
72.5°	94.2	93.6	93.0	92.6	92.4	92.1	91.9	91.6
75°	74.9	74.6	74.3	74.0	73.9	73.9	73.8	73.7
77.5°	56.7	56.7	56.6	56.4	56.2	55.9	55.7	55.5
80°	45.2	45.0	44.8	44.8	44.6	44.5	44.4	44.4
82.5°	34.8	34.7	34.7	34.6	34.5	34.3	34.2	34.2
85°	20.1	20.1	20.1	20.1	20.0	19.9	19.7	19.6
87.5°	8.8	8.9	9.0	9.0	9.0	9.0	9.1	9.1
90°	7.1	7.5	7.9	8.2	8.2	8.4	8.5	8.6
92.5°	11.9	12.1	12.3	12.5	12.6	12.6	12.7	12.8
95°	22.3	22.5	22.7	22.7	22.7	22.7	22.7	22.7
97.5°	35.1	35.3	35.5	35.6	35.6	35.6	35.6	35.6
100°	44.4	44.4	44.6	44.7	44.7	44.7	44.7	44.7
102.5°	54.1	54.3	54.5	54.6	54.6	54.7	54.7	54.8
105°	69.0	69.1	69.3	69.5	69.7	70.0	70.1	70.3
107.5°	85.0	85.2	85.4	85.4	85.4	85.4	85.4	85.4
110°	95.7	95.6	95.4	95.5	95.6	95.9	96.0	96.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	107.2	107.1	107.1	107.1	107.2	107.2	107.2	107.3
115°	124.9	124.8	124.7	124.7	124.7	124.6	124.5	124.5
117.5°	141.9	141.7	141.5	141.4	141.2	141.0	141.0	140.8
120°	153.5	153.2	152.9	152.8	152.9	153.0	153.1	153.3
122.5°	165.3	165.0	164.8	164.5	164.4	164.1	163.9	163.6
125°	182.4	182.3	182.1	182.0	181.9	181.7	181.6	181.5
127.5°	198.9	198.7	198.5	198.4	198.4	198.3	198.1	198.0
130°	210.3	210.2	210.1	209.9	209.6	209.4	209.1	208.9
132.5°	221.2	221.0	220.9	220.8	220.7	220.6	220.5	220.4
135°	237.4	237.3	237.2	237.0	236.8	236.6	236.4	236.3
137.5°	253.2	253.0	252.8	252.7	252.7	252.8	252.8	252.9
140°	263.5	263.4	263.3	263.3	263.3	263.2	263.1	263.0
142.5°	273.3	273.3	273.2	273.2	273.2	273.2	273.2	273.2
145°	288.0	287.9	287.9	287.7	287.6	287.3	287.1	287.0
147.5°	301.3	301.3	301.2	301.2	301.1	301.0	300.9	300.9
150°	309.7	309.7	309.7	309.7	309.7	309.6	309.5	309.4
152.5°	317.6	317.8	318.0	317.9	317.7	317.6	317.4	317.2
155°	328.6	328.9	329.1	329.1	328.9	328.6	328.4	328.2
157.5°	338.3	338.6	338.8	338.8	338.5	338.3	338.1	337.9
160°	344.4	344.5	344.8	344.7	344.4	344.1	343.7	343.4
162.5°	349.8	350.1	350.4	350.4	350.2	349.8	349.5	349.2
165°	356.9	357.3	357.6	357.7	357.4	357.2	356.9	356.7
167.5°	362.9	363.2	363.6	363.6	363.2	362.8	362.4	362.0
170°	366.1	366.5	366.9	366.8	366.4	365.9	365.5	365.0
172.5°	368.5	368.9	369.3	369.3	368.9	368.4	368.0	367.5
175°	371.1	371.5	372.0	372.0	371.5	371.1	370.6	370.2
177.5°	372.5	372.9	373.2	373.2	372.8	372.4	372.0	371.6
180°	372.5	372.5	372.5	372.5	372.5	372.5	372.5	372.5

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