

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: P332494-940

Luminaire Tested: **SA4XXDIP-C350D365U940-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332494-940  
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-C350D365U940-4F0-1E-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: 2416.4 lumens  
Efficiency: N/A  
Efficacy: 119.0 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

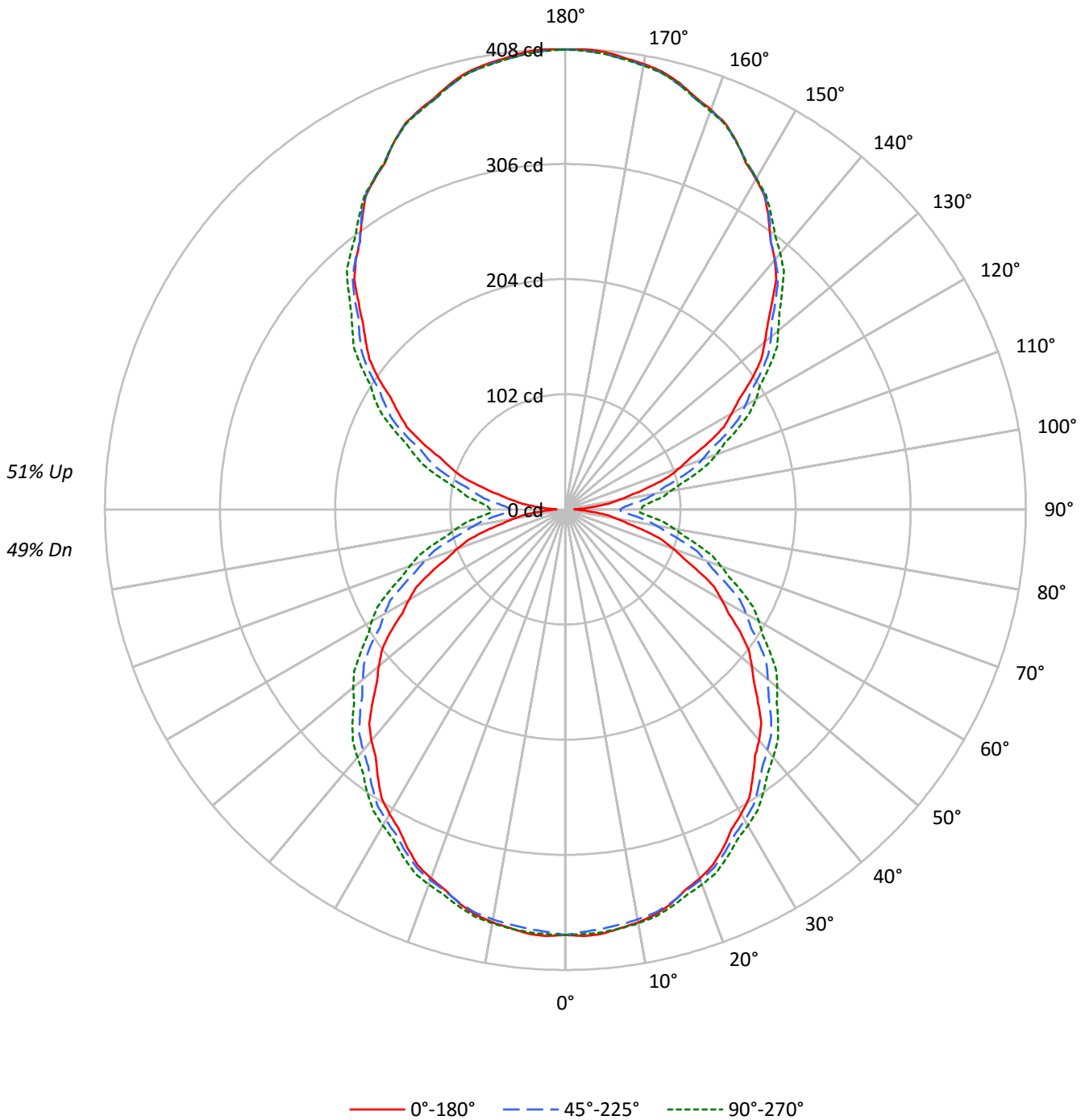
Input Watts (W): 20.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

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

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

	0°	45°	90°
0°	3043	3043	3043
5°	3053	2974	2982
10°	3033	2925	2923
15°	3006	2869	2854
20°	2965	2807	2785
25°	2919	2737	2710
30°	2869	2668	2634
35°	2812	2597	2566
40°	2768	2530	2497
45°	2700	2466	2436
50°	2643	2396	2373
55°	2585	2328	2298
60°	2493	2242	2231
65°	2392	2149	2146
70°	2271	2045	2049
75°	2101	1926	1961
80°	1913	1816	1875
85°	1676	1717	1825



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.7	1.5
10°-20°	102.3	4.2
20°-30°	154.6	6.4
30°-40°	187.1	7.7
40°-50°	197.8	8.2
50°-60°	186.2	7.7
60°-70°	154.4	6.4
70°-80°	108.5	4.5
80°-90°	62.6	2.6
90°-100°	63.3	2.6
100°-110°	106.6	4.4
110°-120°	153.2	6.3
120°-130°	188.4	7.8
130°-140°	204.5	8.5
140°-150°	197.5	8.2
150°-160°	165.4	6.8
160°-170°	110.0	4.6
170°-180°	38.5	1.6
0°-30°	292.6	12.1
0°-40°	479.7	19.9
0°-60°	863.6	35.7
0°-90°	1189.1	49.2
90°-120°	323.1	13.4
90°-150°	913.4	37.8
90°-180°	1227.0	50.8
0°-180°	2416.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	377	377	377	377	377	
5°	377	376	373	376	376	36
15°	362	362	361	364	364	102
25°	331	333	335	339	340	152
35°	290	295	299	304	306	181
45°	241	249	257	264	267	187
55°	189	198	211	219	222	168
65°	131	144	159	169	173	130
75°	73	88	106	117	122	77
85°	22	40	59	71	76	24
90°	8	28	49	62	67	6
95°	24	41	61	72	77	25
105°	77	86	103	114	119	82
115°	140	144	157	165	168	138
125°	202	202	212	219	221	180
135°	259	261	264	270	271	200
145°	314	315	315	317	318	196
155°	359	359	359	360	359	165
165°	391	390	390	391	390	110
175°	407	405	405	407	405	39
180°	407	407	407	407	407	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	378.3	378.0	377.8	377.6	377.4	376.9	376.4	375.8	375.1	374.5	375.1
5°	377.4	377.0	376.7	376.5	376.2	375.8	375.1	374.4	373.8	373.1	373.9
7.5°	374.2	374.0	373.8	373.6	373.4	373.1	372.6	372.0	371.5	371.0	371.8
10°	371.4	371.3	371.2	371.1	371.0	370.8	370.3	369.8	369.3	368.9	369.7
12.5°	367.7	367.7	367.7	367.7	367.7	367.5	367.1	366.8	366.5	366.2	366.9
15°	361.7	361.9	361.9	362.0	362.1	362.0	361.7	361.4	361.1	360.9	361.7
17.5°	353.6	353.8	354.1	354.4	354.6	354.8	354.7	354.6	354.6	354.5	355.4
20°	347.8	348.0	348.4	348.7	348.9	349.1	349.2	349.3	349.4	349.5	350.4
22.5°	341.3	341.7	342.1	342.4	342.8	343.0	343.2	343.4	343.6	343.8	344.6
25°	330.9	331.4	332.1	332.6	333.1	333.6	333.9	334.1	334.4	334.7	335.7
27.5°	319.2	320.1	320.9	321.7	322.5	323.2	323.6	324.0	324.5	324.9	325.8
30°	311.5	312.3	313.0	313.7	314.5	315.2	315.8	316.5	317.2	317.8	318.9
32.5°	303.1	304.0	304.9	305.8	306.7	307.5	308.2	308.9	309.7	310.4	311.6
35°	289.5	290.7	291.8	292.9	294.1	295.1	296.0	296.9	297.9	298.8	300.1
37.5°	276.0	277.2	278.6	279.8	281.2	282.3	283.6	284.7	285.9	287.0	288.4
40°	267.2	268.4	269.7	270.8	272.1	273.3	274.6	276.0	277.2	278.6	280.0
42.5°	257.1	258.4	259.8	261.2	262.5	263.9	265.6	267.1	268.6	270.1	271.7
45°	241.4	243.2	245.0	246.7	248.5	250.3	252.1	253.9	255.7	257.4	259.0
47.5°	226.5	228.4	230.2	232.0	233.8	235.8	237.8	240.0	242.0	244.1	245.7
50°	215.7	217.8	219.8	221.9	223.9	226.0	228.1	230.2	232.2	234.3	236.1
52.5°	204.9	207.0	209.0	211.1	213.1	215.3	217.7	220.1	222.4	224.8	226.7
55°	189.1	191.1	193.1	195.0	197.0	199.4	202.2	205.0	207.8	210.6	212.5
57.5°	171.5	173.9	176.3	178.8	181.2	183.8	186.6	189.4	192.2	195.0	197.2
60°	160.0	162.4	164.9	167.3	169.7	172.5	175.6	178.7	181.7	184.9	187.0
62.5°	148.8	151.5	154.2	156.9	159.4	162.4	165.4	168.5	171.7	174.8	176.9
65°	130.8	133.8	136.9	139.8	142.9	146.0	149.1	152.3	155.5	158.7	161.0
67.5°	113.5	116.7	119.9	123.1	126.3	129.6	133.0	136.4	139.8	143.2	145.6
70°	101.7	104.9	108.1	111.3	114.5	117.9	121.5	125.0	128.6	132.2	134.6
72.5°	90.2	93.5	96.8	100.0	103.3	106.8	110.6	114.4	118.2	122.0	124.4
75°	72.6	76.1	79.5	83.0	86.5	90.2	94.2	98.1	102.0	105.9	108.6
77.5°	56.2	59.8	63.5	67.1	70.8	74.7	78.8	83.0	87.1	91.2	93.9
80°	46.0	49.8	53.5	57.2	61.0	64.9	69.1	73.2	77.3	81.5	84.3
82.5°	35.8	39.8	43.7	47.6	51.5	55.5	59.7	63.8	67.9	72.1	74.9
85°	22.4	26.3	30.2	34.2	38.2	42.2	46.5	50.6	54.8	59.1	61.9
87.5°	12.7	16.7	20.7	24.6	28.6	32.7	36.9	41.1	45.4	49.6	52.4
90°	7.7	12.2	16.8	21.2	25.8	30.3	35.0	39.5	44.1	48.7	51.9
92.5°	13.2	17.4	21.7	25.9	30.2	34.5	39.0	43.4	47.8	52.3	55.1
95°	24.4	28.1	31.8	35.6	39.3	43.3	47.6	52.0	56.4	60.6	63.4
97.5°	38.0	41.2	44.3	47.5	50.6	54.5	58.9	63.2	67.6	72.0	74.7
100°	48.8	51.5	54.2	56.9	59.7	63.1	67.4	71.7	76.0	80.3	82.9
102.5°	60.4	62.6	64.8	67.1	69.4	72.6	76.7	80.9	85.1	89.2	91.8
105°	77.2	79.2	81.1	83.0	85.0	87.8	91.6	95.3	99.1	102.8	105.4
107.5°	95.7	97.4	99.0	100.6	102.2	104.7	108.0	111.4	114.7	118.0	120.5
110°	108.0	109.4	110.9	112.4	113.8	116.1	119.3	122.5	125.7	129.0	131.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	120.7	122.0	123.1	124.3	125.6	127.6	130.6	133.7	136.6	139.6	141.7
115°	139.9	140.8	141.6	142.4	143.3	145.2	148.0	150.9	153.7	156.6	158.5
117.5°	158.4	158.9	159.5	160.1	160.6	162.2	165.0	167.6	170.3	173.0	174.8
120°	170.4	170.9	171.5	172.1	172.6	174.2	176.6	179.1	181.6	184.2	185.7
122.5°	183.2	183.4	183.6	183.7	183.9	185.2	187.7	190.2	192.6	195.1	196.7
125°	201.8	201.7	201.6	201.5	201.4	202.5	204.7	207.1	209.3	211.6	213.2
127.5°	218.9	219.0	219.1	219.3	219.4	220.3	221.9	223.6	225.3	227.0	228.5
130°	230.7	230.8	230.9	231.0	231.1	231.9	233.4	235.0	236.4	237.9	239.5
132.5°	243.0	243.1	243.2	243.2	243.3	243.9	245.0	246.1	247.3	248.4	249.9
135°	259.0	259.3	259.8	260.2	260.6	261.1	261.8	262.4	263.1	263.8	265.1
137.5°	276.7	276.8	276.9	277.0	277.1	277.3	277.8	278.2	278.7	279.1	280.3
140°	288.6	288.6	288.6	288.6	288.7	288.8	288.9	289.0	289.1	289.2	290.3
142.5°	299.0	299.2	299.3	299.4	299.5	299.5	299.4	299.3	299.2	299.1	300.1
145°	314.0	314.1	314.3	314.5	314.7	314.9	314.9	315.0	315.0	315.1	315.6
147.5°	328.9	329.0	329.3	329.6	329.8	329.8	329.8	329.8	329.8	329.7	329.7
150°	337.9	338.0	338.2	338.5	338.7	338.8	338.8	338.8	338.8	338.8	338.8
152.5°	346.2	346.3	346.4	346.6	346.7	346.8	346.9	347.0	347.0	347.1	347.2
155°	359.2	359.2	359.2	359.2	359.2	359.2	359.1	359.0	359.0	358.9	359.2
157.5°	370.3	370.1	370.1	370.0	369.8	369.7	369.7	369.7	369.7	369.7	369.9
160°	376.8	376.7	376.7	376.7	376.6	376.5	376.5	376.4	376.3	376.2	376.5
162.5°	382.9	382.7	382.5	382.4	382.2	382.1	382.0	381.9	381.8	381.7	382.2
165°	391.0	390.8	390.7	390.4	390.2	390.0	389.9	389.8	389.6	389.5	389.9
167.5°	397.3	397.0	396.7	396.4	396.1	395.9	396.0	396.0	396.0	396.0	396.5
170°	400.8	400.5	400.1	399.8	399.4	399.3	399.3	399.4	399.5	399.6	399.9
172.5°	403.3	403.1	402.7	402.4	402.2	402.0	402.0	402.1	402.1	402.1	402.5
175°	406.8	406.4	406.1	405.7	405.4	405.2	405.1	405.0	405.0	404.9	405.4
177.5°	408.0	407.7	407.3	407.1	406.8	406.7	406.7	406.7	406.7	406.7	407.1
180°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	376.9	376.9	376.9	376.9	376.9	376.9	376.9	376.9
2.5°	375.6	376.1	376.7	376.8	376.8	376.7	376.7	376.6
5°	374.6	375.3	376.1	376.5	376.4	376.2	376.1	376.0
7.5°	372.6	373.4	374.3	374.7	374.6	374.5	374.4	374.3
10°	370.6	371.4	372.3	372.6	372.6	372.5	372.4	372.3
12.5°	367.7	368.5	369.3	369.6	369.6	369.6	369.6	369.5
15°	362.6	363.4	364.3	364.6	364.5	364.4	364.4	364.3
17.5°	356.2	357.1	358.0	358.4	358.3	358.2	358.2	358.1
20°	351.3	352.3	353.2	353.7	353.7	353.7	353.7	353.7
22.5°	345.6	346.5	347.5	348.0	348.2	348.3	348.5	348.7
25°	336.8	337.8	338.9	339.4	339.5	339.6	339.7	339.7
27.5°	326.8	327.8	328.8	329.3	329.4	329.5	329.6	329.8
30°	319.9	320.9	321.9	322.5	322.7	323.0	323.2	323.3
32.5°	312.7	314.0	315.1	315.8	316.0	316.2	316.4	316.6
35°	301.5	302.7	304.1	304.9	305.1	305.4	305.8	306.0
37.5°	289.7	291.0	292.3	293.2	293.5	293.7	294.1	294.4
40°	281.4	282.8	284.2	285.1	285.4	285.9	286.2	286.6
42.5°	273.2	274.8	276.3	277.3	277.6	277.9	278.2	278.5
45°	260.6	262.3	263.9	264.8	265.4	265.8	266.3	266.7
47.5°	247.4	249.0	250.7	251.7	252.4	252.9	253.4	254.0
50°	238.0	239.9	241.7	243.0	243.5	244.1	244.7	245.2
52.5°	228.5	230.4	232.3	233.5	234.1	234.6	235.2	235.8
55°	214.4	216.2	218.1	219.4	219.9	220.4	221.1	221.6
57.5°	199.5	201.7	203.9	205.3	205.8	206.3	206.9	207.4
60°	189.2	191.4	193.5	194.9	195.7	196.4	197.2	198.0
62.5°	179.1	181.2	183.3	184.9	185.6	186.3	187.1	187.8
65°	163.4	165.8	168.1	169.6	170.4	171.1	171.9	172.6
67.5°	148.0	150.4	152.8	154.4	155.1	155.8	156.5	157.3
70°	137.1	139.7	142.2	143.8	144.5	145.2	145.8	146.4
72.5°	126.9	129.4	131.8	133.4	134.1	134.8	135.6	136.3
75°	111.2	113.8	116.5	118.2	119.0	119.8	120.7	121.5
77.5°	96.6	99.2	101.9	103.7	104.6	105.5	106.4	107.3
80°	87.1	89.9	92.7	94.5	95.2	96.0	96.8	97.5
82.5°	77.8	80.7	83.6	85.4	86.2	87.0	87.9	88.7
85°	64.7	67.5	70.4	72.2	73.1	74.1	75.0	76.0
87.5°	55.2	58.0	60.8	62.6	63.5	64.4	65.2	66.1
90°	55.0	58.1	61.3	63.3	64.2	65.1	66.0	66.9
92.5°	58.1	60.9	63.8	65.7	66.5	67.3	68.2	69.0
95°	66.2	68.9	71.6	73.4	74.3	75.1	76.0	76.8
97.5°	77.4	80.1	82.8	84.5	85.4	86.2	87.0	87.8
100°	85.6	88.3	91.0	92.6	93.3	94.0	94.6	95.2
102.5°	94.5	97.1	99.8	101.6	102.3	103.1	103.9	104.7
105°	108.0	110.5	113.1	114.9	115.7	116.7	117.7	118.7
107.5°	123.0	125.5	128.0	129.6	130.3	130.9	131.5	132.2
110°	133.0	135.0	137.1	138.6	139.5	140.4	141.4	142.4





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	143.7	145.8	147.8	149.3	150.1	150.9	151.7	152.5
115°	160.6	162.6	164.5	165.9	166.5	167.0	167.6	168.2
117.5°	176.5	178.2	179.9	181.0	181.6	182.3	182.9	183.5
120°	187.3	188.8	190.3	191.5	192.4	193.3	194.2	195.1
122.5°	198.4	200.0	201.7	202.7	203.1	203.6	203.9	204.4
125°	214.9	216.5	218.2	219.2	219.6	220.1	220.4	220.9
127.5°	230.2	231.7	233.2	234.3	234.8	235.3	235.9	236.4
130°	241.0	242.5	244.2	245.0	245.3	245.6	245.9	246.2
132.5°	251.4	252.9	254.3	255.3	255.7	256.2	256.6	257.1
135°	266.4	267.9	269.2	270.1	270.4	270.7	271.1	271.4
137.5°	281.4	282.7	283.8	284.7	285.2	285.7	286.2	286.7
140°	291.5	292.6	293.7	294.5	294.9	295.3	295.7	296.1
142.5°	301.2	302.2	303.3	304.0	304.4	304.8	305.1	305.5
145°	316.1	316.6	317.1	317.4	317.5	317.7	317.9	318.1
147.5°	329.7	329.8	329.8	329.8	330.1	330.3	330.6	330.7
150°	338.8	338.8	338.8	338.7	338.7	338.6	338.5	338.4
152.5°	347.4	347.6	347.8	347.7	347.5	347.3	347.1	347.0
155°	359.4	359.7	360.0	360.0	359.7	359.4	359.2	358.9
157.5°	370.1	370.3	370.5	370.5	370.2	370.1	369.8	369.5
160°	376.7	376.8	377.1	377.0	376.7	376.3	375.9	375.6
162.5°	382.5	382.9	383.3	383.3	383.0	382.6	382.3	381.9
165°	390.3	390.7	391.1	391.2	390.9	390.7	390.4	390.1
167.5°	396.9	397.3	397.7	397.7	397.3	396.8	396.4	395.9
170°	400.4	400.8	401.3	401.2	400.7	400.2	399.8	399.2
172.5°	403.1	403.5	403.9	403.9	403.5	403.0	402.5	402.0
175°	405.9	406.4	406.9	406.9	406.4	405.9	405.4	404.9
177.5°	407.4	407.9	408.2	408.2	407.8	407.3	406.9	406.4
180°	407.4	407.4	407.4	407.4	407.4	407.4	407.4	407.4

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