

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: P332495-940

Luminaire Tested: **SA4XXDIP-C350D365U940-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332495-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
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-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

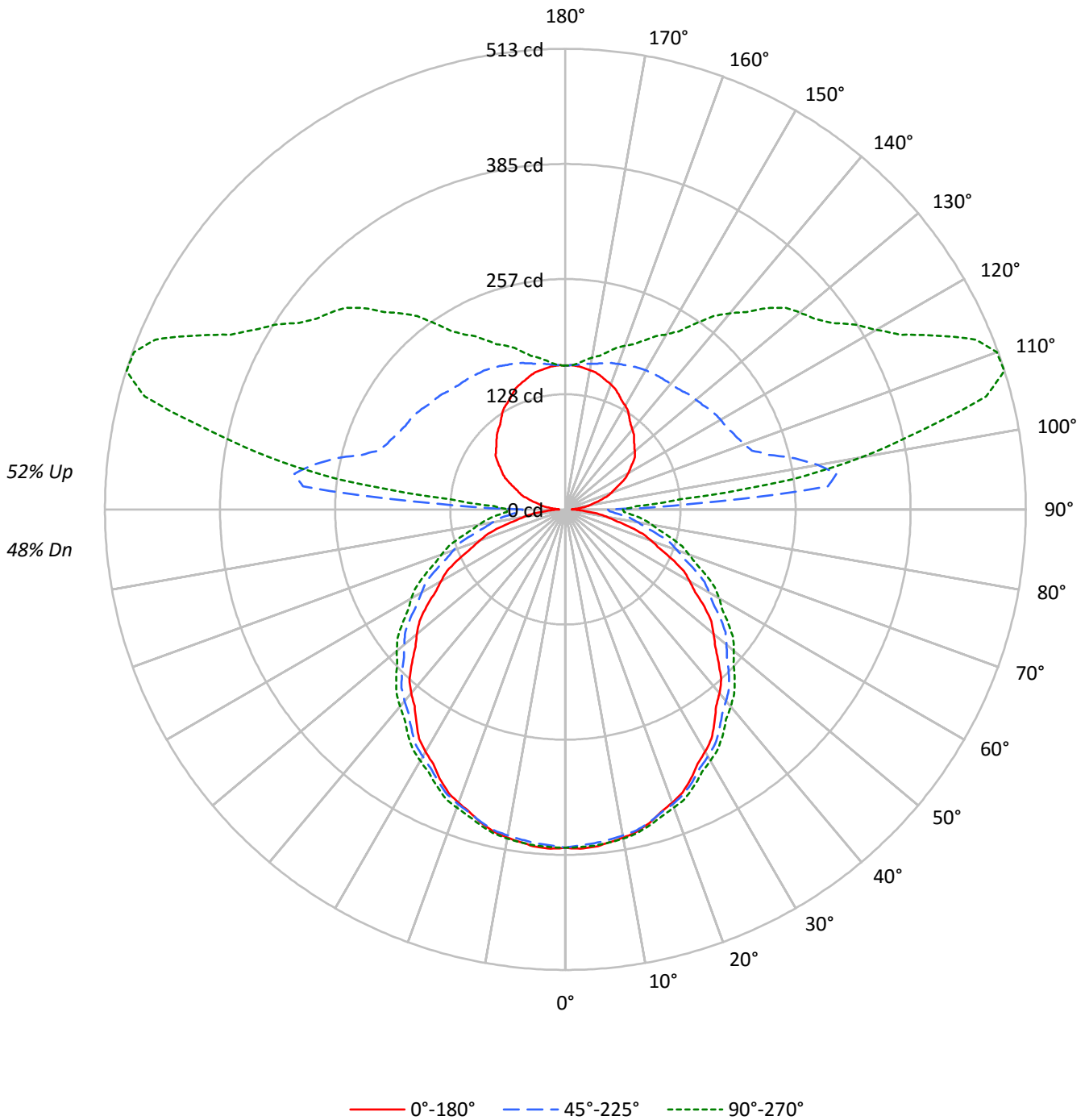
Lumens per Lamp: N/A
Luminaire Lumens: 2452.4 lumens
Efficiency: N/A
Efficacy: 120.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

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					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	98	98	98	98	82	82	82	68	68	68	55	55	55	48				48
1	96	92	87	84	89	84	81	77	71	68	66	58	56	55	47	45	44	39				39
2	87	79	73	67	80	73	68	63	61	57	54	51	48	45	41	38	36	32				32
3	79	70	62	56	73	64	57	52	54	49	45	44	41	37	36	33	31	26				26
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	29	26	22				22
5	66	54	46	40	61	50	43	37	42	37	32	35	31	27	28	25	22	19				19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17				17
7	56	44	36	30	52	41	33	28	34	29	24	29	24	21	23	20	17	15				15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	21	18	15	13				13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12				12
10	45	33	26	21	42	31	24	20	26	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	6.3
30°-40°	187.1	7.6
40°-50°	197.8	8.1
50°-60°	186.2	7.6
60°-70°	154.4	6.3
70°-80°	108.5	4.4
80°-90°	62.2	2.5
90°-100°	152.3	6.2
100°-110°	268.1	10.9
110°-120°	234.1	9.5
120°-130°	191.9	7.8
130°-140°	155.9	6.4
140°-150°	116.6	4.8
150°-160°	81.4	3.3
160°-170°	47.8	2.0
170°-180°	15.6	0.6
0°-30°	292.6	11.9
0°-40°	479.7	19.6
0°-60°	863.6	35.2
0°-90°	1188.8	48.5
90°-120°	654.5	26.7
90°-150°	1118.9	45.6
90°-180°	1264.0	51.5
0°-180°	2452.4	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°	7	26	47	60	64	5
95°	16	52	294	175	129	16
105°	41	66	235	483	485	44
115°	67	88	204	383	458	67
125°	92	109	195	321	362	82
135°	108	129	186	278	317	84
145°	124	142	181	228	252	78
155°	141	152	176	199	208	65
165°	154	158	169	178	181	43
175°	160	160	162	164	163	15
180°	160	160	160	160	160	



TEST NUMBER: P332495-940

CATALOG NUMBER: SA4XXDIP-C350D365U940-4F0-1E-UDD-D4

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°	12.6	16.5	20.5	24.4	28.3	32.3	36.7	40.8	45.1	49.3	52.0
90°	7.0	11.4	16.1	20.2	24.3	28.2	34.1	38.2	42.8	47.4	49.8
92.5°	10.0	15.0	21.4	28.6	36.6	46.8	66.9	95.3	123.2	139.7	125.6
95°	15.9	19.9	26.2	33.3	44.1	60.7	92.0	147.5	226.7	293.6	303.4
97.5°	23.6	26.3	31.7	38.2	47.3	61.6	86.5	133.0	211.7	304.6	368.4
100°	28.6	31.0	35.7	41.9	50.3	63.5	85.7	125.0	193.0	285.4	368.6
102.5°	33.6	36.3	40.4	46.0	53.9	66.3	86.8	121.7	179.9	262.3	348.0
105°	40.7	43.5	46.9	52.6	60.2	72.0	90.6	120.2	167.8	234.6	311.0
107.5°	49.3	51.5	54.6	60.1	67.1	78.6	95.7	122.8	163.7	218.0	280.8
110°	54.8	56.7	59.6	64.6	71.7	82.5	99.6	124.9	162.9	211.9	265.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	59.9	61.7	64.7	69.5	76.2	86.9	103.4	127.3	162.9	207.9	255.8
115°	67.4	69.3	72.3	76.3	83.1	93.5	109.1	131.1	163.4	204.2	245.9
117.5°	75.7	77.0	79.5	83.6	89.6	100.1	114.9	135.1	164.2	201.3	240.0
120°	80.9	81.8	84.3	88.0	93.7	104.0	118.7	137.9	164.8	199.7	236.5
122.5°	86.0	86.6	88.9	92.2	98.1	108.0	122.5	140.4	165.5	197.7	232.8
125°	92.1	93.3	95.1	98.4	104.3	114.3	128.0	144.8	167.0	195.2	227.3
127.5°	97.9	98.8	101.0	104.9	111.0	120.7	133.6	148.6	167.7	192.0	220.2
130°	100.9	102.0	104.4	109.1	114.9	124.8	137.1	150.8	168.4	190.1	215.7
132.5°	104.2	105.0	108.3	112.6	119.0	128.2	140.1	153.4	169.2	188.5	211.8
135°	108.3	109.6	112.7	118.1	124.7	133.2	144.3	156.3	169.9	185.7	205.5
137.5°	112.9	114.0	117.3	122.4	129.2	137.1	147.1	158.0	169.9	183.6	200.1
140°	116.2	117.1	120.4	125.6	132.2	139.7	149.3	159.5	170.3	182.4	197.2
142.5°	119.4	120.3	123.5	128.6	134.9	142.2	151.3	160.6	170.8	181.7	194.8
145°	124.3	125.1	128.2	132.5	138.4	145.3	153.5	162.0	171.1	180.9	191.5
147.5°	129.9	130.1	132.8	137.2	142.1	148.3	156.0	163.5	171.5	179.8	188.7
150°	133.4	133.7	136.1	139.7	144.4	150.3	157.3	164.2	171.5	179.0	186.9
152.5°	136.3	136.4	138.9	142.4	146.6	152.1	158.3	164.7	170.9	177.7	184.9
155°	140.9	141.2	143.1	146.2	149.7	154.4	159.8	165.1	170.2	175.8	181.8
157.5°	145.3	145.3	147.1	149.5	152.6	156.3	160.9	165.1	169.3	173.9	178.8
160°	148.1	148.1	149.4	151.6	154.1	157.6	161.4	165.1	168.6	172.4	176.5
162.5°	150.6	150.4	151.4	153.4	155.6	158.4	161.8	165.1	167.8	170.9	174.5
165°	153.5	153.5	154.1	155.7	157.3	159.2	162.0	164.5	166.4	168.6	171.1
167.5°	156.3	156.0	156.3	157.5	158.4	159.9	161.9	163.7	164.9	166.3	168.1
170°	157.6	157.3	157.6	158.5	159.2	160.1	161.7	163.3	163.9	164.8	166.1
172.5°	158.8	158.5	158.5	159.3	159.6	160.3	161.4	162.7	162.9	163.3	164.3
175°	160.1	159.8	159.8	160.1	160.4	160.4	161.0	162.0	161.7	161.7	162.3
177.5°	160.7	160.4	160.2	160.4	160.4	160.4	160.7	161.1	160.7	160.7	161.0
180°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4



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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°	54.8	57.5	60.4	62.2	63.0	63.9	64.6	65.5
90°	52.9	55.9	58.9	60.7	61.8	62.9	63.3	64.0
92.5°	106.9	94.3	87.4	82.8	79.8	78.9	78.6	79.3
95°	275.3	229.0	189.3	160.4	145.8	136.9	132.1	128.9
97.5°	384.1	368.4	340.0	308.7	286.9	268.8	260.1	254.3
100°	417.2	426.1	413.1	391.5	364.6	346.1	337.3	335.5
102.5°	413.6	447.4	454.2	446.1	430.1	416.9	407.6	406.4
105°	385.5	442.4	475.9	490.4	491.8	490.0	486.3	485.2
107.5°	347.0	407.3	453.6	483.2	499.4	507.3	511.1	512.6
110°	323.7	380.3	428.2	464.3	487.5	501.4	507.8	511.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	305.9	356.2	401.5	437.6	463.8	480.5	489.2	494.5
115°	287.4	328.2	367.2	398.8	424.4	443.9	454.7	457.9
117.5°	276.9	310.9	341.9	368.8	390.8	407.5	418.4	421.2
120°	271.5	302.6	329.8	353.5	372.2	386.8	395.7	399.9
122.5°	266.8	296.9	321.8	342.7	358.6	371.0	378.6	382.8
125°	259.3	288.2	311.7	330.2	343.4	353.1	359.6	362.1
127.5°	250.3	277.9	301.2	318.9	332.2	340.9	346.6	349.2
130°	243.5	270.2	293.3	311.1	324.6	333.1	338.6	341.1
132.5°	236.7	261.7	284.3	302.1	315.3	324.8	330.1	332.6
135°	226.8	248.8	269.5	286.2	299.4	308.8	314.4	316.9
137.5°	217.9	236.7	254.2	269.4	281.7	290.8	295.4	298.2
140°	212.9	228.9	244.3	258.4	269.8	277.2	282.1	285.2
142.5°	208.4	222.5	235.7	247.9	258.1	264.9	269.2	271.3
145°	202.2	213.5	223.5	232.8	241.0	246.7	250.3	252.3
147.5°	197.2	205.7	213.4	220.4	226.6	231.5	234.2	235.1
150°	194.5	201.7	208.0	213.7	218.7	222.8	224.7	225.0
152.5°	191.7	198.0	203.8	208.4	212.7	216.0	217.1	217.5
155°	187.5	192.5	197.2	201.1	204.2	206.7	207.7	207.7
157.5°	183.1	187.3	191.3	194.3	196.6	198.6	199.1	199.1
160°	180.3	183.7	187.2	189.8	191.6	193.5	193.9	193.9
162.5°	177.5	180.5	183.2	185.5	186.8	188.7	189.0	188.8
165°	173.6	175.6	177.7	179.3	180.6	181.8	181.6	181.2
167.5°	170.0	171.4	173.2	174.1	174.7	175.6	175.5	175.2
170°	167.6	168.6	169.9	170.9	171.5	171.7	171.5	171.5
172.5°	165.7	166.3	167.1	167.8	168.2	168.4	168.2	167.6
175°	162.9	163.3	163.9	163.9	163.9	164.5	163.9	163.3
177.5°	161.1	161.4	161.4	161.7	161.4	161.7	161.1	160.7
180°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4

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