

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: P331289-935

Luminaire Tested: **SA2XXDIP-C485D330U935-4F0-1E-UDD-D1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331289-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D330U935-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

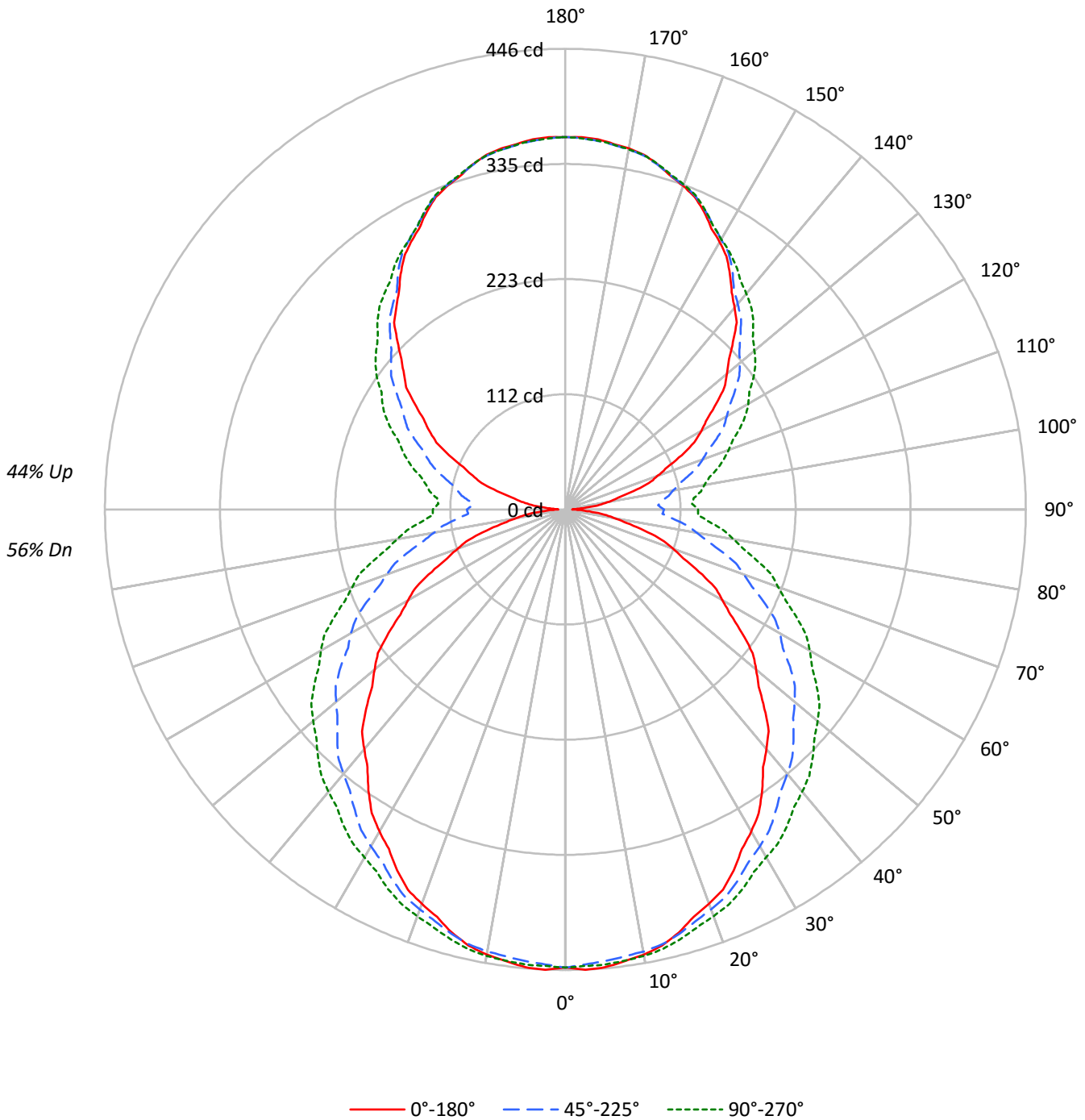
Lumens per Lamp: N/A
Luminaire Lumens: 2702.1 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 27.5
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	50	30	10	50	30	10	50	30	10	0																
RCR	0	109	109	109	109	101	101	101	101	87	87	87	73	73	73	61	61	61	56																											
	1	97	92	88	84	90	86	82	78	73	70	68	62	60	58	52	50	48	43																											
	2	88	80	73	67	81	74	68	63	63	59	55	54	50	47	44	42	40	35																											
	3	80	69	61	55	74	65	57	52	55	50	45	47	43	39	39	36	33	29																											
	4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24																											
	5	67	54	46	39	62	51	43	37	43	37	33	37	32	28	31	27	24	21																											
	6	61	49	40	34	57	45	38	32	39	33	28	33	28	25	28	24	21	18																											
	7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	21	19	16																											
	8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	23	19	16	14																											
	9	49	36	28	23	45	34	27	22	29	24	19	25	21	17	21	18	15	13																											
	10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11																											

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7164	7164	7164
5°	7199	6896	6870
10°	7153	6692	6617
15°	7055	6477	6350
20°	6930	6245	6094
25°	6807	6022	5862
30°	6634	5793	5628
35°	6458	5572	5464
40°	6275	5384	5299
45°	6100	5215	5159
50°	5912	5062	5019
55°	5713	4898	4878
60°	5473	4730	4729
65°	5222	4530	4552
70°	4938	4315	4361
75°	4578	4106	4186
80°	4008	3889	4005
85°	3471	3705	3868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.0	1.6
10°-20°	120.6	4.5
20°-30°	182.7	6.8
30°-40°	222.5	8.2
40°-50°	239.4	8.9
50°-60°	232.5	8.6
60°-70°	203.0	7.5
70°-80°	156.3	5.8
80°-90°	106.3	3.9
90°-100°	95.1	3.5
100°-110°	123.7	4.6
110°-120°	156.1	5.8
120°-130°	178.9	6.6
130°-140°	187.1	6.9
140°-150°	176.9	6.5
150°-160°	147.2	5.4
160°-170°	97.6	3.6
170°-180°	34.1	1.3
0°-30°	345.3	12.8
0°-40°	567.8	21.0
0°-60°	1039.7	38.5
0°-90°	1505.2	55.7
90°-120°	374.9	13.9
90°-150°	917.9	34.0
90°-180°	1197.0	44.3
0°-180°	2702.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	445	443	439	443	442	42
15°	424	426	426	431	431	119
25°	386	390	396	404	406	177
35°	332	343	356	369	374	208
45°	273	290	312	332	339	210
55°	209	233	266	288	297	187
65°	143	175	212	238	247	142
75°	79	115	156	183	192	84
85°	23	63	104	130	140	25
90°	7	48	96	120	129	5
95°	21	54	93	117	125	22
105°	69	89	122	144	152	73
115°	124	134	161	180	187	123
125°	178	182	201	216	223	159
135°	230	233	240	253	258	178
145°	278	280	282	286	288	174
155°	318	319	320	321	320	146
165°	346	346	346	347	346	98
175°	360	359	358	360	359	34
180°	360	360	360	360	360	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	446.3	445.9	445.6	445.2	444.9	444.3	443.5	442.7	442.0	441.1	441.7
5°	445.0	444.5	444.1	443.7	443.2	442.6	441.8	440.9	440.1	439.2	440.1
7.5°	441.0	440.7	440.4	440.1	439.9	439.4	438.7	438.1	437.4	436.7	437.7
10°	437.9	437.6	437.3	437.0	436.8	436.4	436.0	435.6	435.1	434.7	435.8
12.5°	432.7	432.8	432.9	432.9	433.0	432.8	432.6	432.2	431.9	431.6	432.7
15°	424.4	424.6	425.0	425.2	425.5	425.7	425.7	425.7	425.7	425.7	427.0
17.5°	413.6	414.2	414.8	415.4	416.0	416.6	417.0	417.4	417.9	418.4	419.7
20°	406.4	407.1	407.9	408.5	409.2	409.9	410.4	411.0	411.6	412.2	413.7
22.5°	398.6	399.5	400.4	401.1	402.0	402.8	403.6	404.4	405.2	406.0	407.6
25°	385.8	386.8	387.8	388.8	389.8	391.0	392.3	393.6	394.9	396.1	397.8
27.5°	370.4	372.0	373.7	375.3	376.9	378.5	380.0	381.5	383.0	384.5	386.7
30°	360.1	362.0	363.8	365.7	367.6	369.4	371.3	373.1	375.0	376.8	379.1
32.5°	348.8	350.9	352.9	355.1	357.1	359.3	361.4	363.7	365.8	368.1	370.7
35°	332.4	334.8	337.3	339.8	342.2	344.7	347.4	350.2	352.8	355.6	358.7
37.5°	314.7	317.5	320.3	323.1	325.9	329.1	332.6	336.0	339.6	343.1	346.6
40°	302.9	306.0	309.2	312.3	315.5	318.9	322.8	326.7	330.5	334.4	338.1
42.5°	291.5	294.7	297.8	301.0	304.1	307.9	312.4	316.8	321.2	325.6	329.7
45°	272.7	276.5	280.3	284.2	288.1	292.5	297.5	302.5	307.5	312.5	316.9
47.5°	254.0	258.2	262.4	266.6	270.8	275.9	281.7	287.6	293.4	299.3	303.9
50°	241.2	245.6	250.0	254.4	258.8	264.2	270.7	277.2	283.6	290.0	294.9
52.5°	228.8	233.4	238.1	242.8	247.5	253.1	259.9	266.7	273.5	280.3	285.2
55°	209.0	214.1	219.3	224.4	229.5	235.8	243.3	250.7	258.1	265.5	270.7
57.5°	189.4	195.3	201.0	206.8	212.7	219.3	226.9	234.5	242.0	249.6	255.2
60°	175.6	181.7	187.9	194.0	200.1	207.2	215.4	223.5	231.7	239.9	245.3
62.5°	163.2	169.5	176.0	182.4	188.7	196.0	204.1	212.2	220.4	228.5	234.3
65°	142.8	149.7	156.8	163.8	170.7	178.5	186.9	195.4	203.8	212.2	218.1
67.5°	124.0	131.3	138.6	145.9	153.3	161.2	169.9	178.5	187.1	195.7	201.6
70°	110.6	118.0	125.4	132.9	140.3	148.4	157.3	166.2	175.0	183.9	190.0
72.5°	98.2	105.9	113.6	121.2	128.9	137.2	146.2	155.2	164.1	173.1	179.2
75°	79.1	87.1	95.1	103.1	111.1	119.7	128.8	137.9	147.1	156.3	162.4
77.5°	60.6	69.0	77.3	85.7	94.1	102.9	112.2	121.5	130.8	140.1	146.2
80°	48.2	56.9	65.7	74.4	83.1	92.1	101.4	110.6	119.9	129.2	135.3
82.5°	38.0	46.6	55.1	63.7	72.3	81.4	90.7	100.1	109.5	119.0	124.9
85°	23.2	32.0	40.9	49.8	58.5	67.6	76.7	85.8	95.1	104.2	110.2
87.5°	12.7	21.4	30.0	38.7	47.4	56.5	65.9	75.3	84.8	94.2	100.0
90°	6.7	15.8	25.0	34.0	43.1	53.0	63.6	74.2	84.9	95.5	101.1
92.5°	11.4	19.6	28.0	36.2	44.6	53.3	62.4	71.6	80.8	89.9	95.6
95°	20.9	28.3	35.7	43.1	50.5	58.5	67.3	76.0	84.7	93.4	98.8
97.5°	33.4	40.0	46.5	53.1	59.7	67.2	75.7	84.2	92.6	101.2	106.4
100°	43.1	49.0	54.8	60.6	66.5	73.4	81.7	89.9	98.1	106.2	111.6
102.5°	52.9	58.1	63.4	68.6	73.9	80.5	88.6	96.6	104.6	112.6	117.9
105°	68.6	72.9	77.3	81.6	86.0	92.0	99.5	107.1	114.7	122.3	127.3
107.5°	85.2	88.8	92.4	96.0	99.6	105.0	112.1	119.2	126.3	133.5	138.3
110°	95.3	98.6	101.9	105.1	108.4	113.6	120.5	127.5	134.6	141.5	146.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	107.0	109.9	112.6	115.5	118.2	123.0	129.6	136.2	142.8	149.4	153.8
115°	124.2	126.2	128.2	130.2	132.2	136.3	142.6	148.9	155.2	161.4	165.7
117.5°	140.8	142.3	143.9	145.5	147.1	150.6	156.2	161.8	167.3	172.9	176.9
120°	152.2	153.3	154.5	155.5	156.6	159.8	165.0	170.1	175.3	180.5	184.5
122.5°	162.6	163.5	164.5	165.3	166.2	169.1	174.1	179.1	184.1	189.1	192.8
125°	178.3	178.9	179.5	180.1	180.7	183.2	187.6	192.0	196.4	200.7	204.4
127.5°	194.2	194.8	195.4	196.0	196.7	198.7	202.2	205.6	209.1	212.5	215.9
130°	204.1	204.9	205.7	206.4	207.2	209.0	211.8	214.6	217.5	220.4	223.7
132.5°	215.3	215.9	216.5	217.1	217.7	219.1	221.4	223.8	226.2	228.5	231.5
135°	229.7	230.4	231.2	232.0	232.6	233.8	235.4	236.9	238.5	240.0	243.1
137.5°	245.5	246.1	246.6	247.2	247.8	248.5	249.3	250.0	250.9	251.7	254.3
140°	254.9	255.4	255.9	256.3	256.8	257.4	258.0	258.6	259.2	259.8	262.2
142.5°	264.7	265.2	265.6	266.0	266.6	266.9	267.2	267.5	267.8	268.0	269.9
145°	278.0	278.5	279.0	279.5	279.9	280.3	280.8	281.2	281.5	282.0	282.9
147.5°	290.5	291.1	291.6	292.2	292.7	293.2	293.4	293.8	294.0	294.3	294.5
150°	299.0	299.5	299.8	300.2	300.7	301.0	301.3	301.5	301.8	302.0	302.3
152.5°	306.6	306.9	307.4	307.8	308.2	308.6	308.8	309.2	309.5	309.9	310.1
155°	317.9	318.1	318.3	318.5	318.7	318.9	319.1	319.3	319.5	319.7	320.0
157.5°	327.5	327.7	327.8	328.0	328.1	328.2	328.4	328.5	328.6	328.7	329.2
160°	333.4	333.6	333.6	333.8	333.9	334.1	334.1	334.2	334.2	334.3	334.7
162.5°	338.7	338.8	338.8	338.8	338.9	338.9	339.0	339.1	339.1	339.1	339.7
165°	345.9	345.8	345.7	345.7	345.6	345.5	345.5	345.5	345.5	345.5	346.0
167.5°	351.8	351.6	351.5	351.2	351.0	350.9	350.9	350.9	350.9	350.9	351.3
170°	355.0	354.8	354.6	354.4	354.2	354.0	354.0	353.9	353.9	353.8	354.2
172.5°	357.1	357.0	356.8	356.5	356.4	356.2	356.2	356.1	356.0	355.9	356.5
175°	359.9	359.6	359.5	359.2	359.0	358.9	358.8	358.6	358.4	358.3	358.8
177.5°	360.9	360.8	360.6	360.5	360.3	360.2	360.1	360.0	359.8	359.7	360.1
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	443.7	443.7	443.7	443.7	443.7	443.7	443.7	443.7
2.5°	442.3	442.8	443.4	443.6	443.3	443.2	442.9	442.6
5°	440.9	441.8	442.6	443.0	442.8	442.7	442.6	442.4
7.5°	438.8	439.8	440.8	441.3	441.2	441.0	440.8	440.7
10°	437.0	438.1	439.3	439.8	439.6	439.5	439.4	439.2
12.5°	433.9	435.1	436.2	436.7	436.5	436.4	436.3	436.1
15°	428.3	429.6	430.8	431.4	431.3	431.1	430.9	430.8
17.5°	421.0	422.4	423.7	424.4	424.4	424.4	424.4	424.4
20°	415.3	416.9	418.4	419.2	419.2	419.2	419.2	419.2
22.5°	409.1	410.7	412.3	413.2	413.5	413.6	413.9	414.1
25°	399.5	401.2	402.9	404.1	404.5	404.9	405.4	405.8
27.5°	388.9	391.1	393.2	394.4	394.8	395.1	395.4	395.7
30°	381.4	383.7	386.0	387.3	387.7	388.1	388.6	389.0
32.5°	373.3	375.9	378.6	380.3	381.1	381.9	382.6	383.4
35°	361.9	365.1	368.2	370.2	371.3	372.2	373.2	374.3
37.5°	350.1	353.6	357.1	359.3	360.4	361.4	362.5	363.6
40°	341.8	345.5	349.2	351.7	353.0	354.3	355.6	356.9
42.5°	333.7	337.8	341.8	344.6	345.8	347.1	348.4	349.7
45°	321.4	325.8	330.2	333.1	334.6	336.0	337.4	338.9
47.5°	308.5	313.1	317.8	320.9	322.4	324.0	325.6	327.2
50°	299.7	304.5	309.4	312.6	314.3	315.8	317.4	318.9
52.5°	290.2	295.2	300.1	303.4	305.1	306.9	308.5	310.2
55°	275.9	281.0	286.1	289.6	291.5	293.3	295.2	297.0
57.5°	260.7	266.2	271.8	275.5	277.4	279.3	281.2	283.1
60°	250.7	256.1	261.6	265.3	267.3	269.3	271.3	273.3
62.5°	240.0	245.8	251.6	255.5	257.4	259.2	261.1	263.0
65°	223.9	229.8	235.7	239.5	241.3	243.2	245.0	246.9
67.5°	207.6	213.4	219.4	223.3	225.2	227.2	229.2	231.1
70°	196.2	202.3	208.4	212.4	214.1	215.9	217.6	219.3
72.5°	185.2	191.2	197.3	201.3	203.3	205.3	207.4	209.5
75°	168.6	174.7	180.8	184.9	186.7	188.6	190.4	192.3
77.5°	152.3	158.4	164.5	168.6	170.6	172.5	174.6	176.6
80°	141.3	147.2	153.3	157.2	159.3	161.3	163.2	165.2
82.5°	131.0	137.0	142.9	146.9	148.8	150.7	152.6	154.5
85°	116.1	122.2	128.2	132.2	134.1	136.2	138.2	140.2
87.5°	105.8	111.6	117.4	121.2	123.1	124.9	126.7	128.6
90°	106.7	112.3	117.9	121.5	123.3	125.1	126.9	128.6
92.5°	101.2	106.9	112.4	116.1	117.9	119.6	121.3	123.0
95°	104.3	109.7	115.1	118.6	120.2	121.8	123.4	124.9
97.5°	111.8	117.0	122.3	125.8	127.4	129.2	130.8	132.5
100°	116.8	122.2	127.4	130.8	132.3	133.8	135.3	136.8
102.5°	123.1	128.4	133.5	136.9	138.4	139.9	141.5	142.9
105°	132.5	137.7	142.8	146.1	147.7	149.3	150.8	152.4
107.5°	143.2	148.0	152.8	155.9	157.2	158.4	159.7	160.9
110°	150.7	155.2	159.8	162.8	164.2	165.6	166.9	168.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	158.2	162.6	167.0	170.0	171.3	172.8	174.2	175.6
115°	169.9	174.1	178.3	181.2	182.5	183.9	185.3	186.7
117.5°	181.0	185.1	189.2	191.8	193.0	194.3	195.5	196.8
120°	188.5	192.5	196.5	199.1	200.5	201.9	203.3	204.7
122.5°	196.6	200.3	204.0	206.5	207.7	208.8	210.0	211.2
125°	208.0	211.7	215.3	217.7	219.0	220.2	221.4	222.7
127.5°	219.1	222.4	225.8	227.9	228.9	230.0	231.0	232.0
130°	227.0	230.2	233.6	235.7	236.5	237.4	238.2	239.1
132.5°	234.5	237.5	240.6	242.5	243.5	244.4	245.3	246.2
135°	246.0	248.9	251.8	253.7	254.7	255.6	256.6	257.5
137.5°	256.8	259.4	262.0	263.6	264.3	265.0	265.7	266.4
140°	264.4	266.7	269.0	270.4	271.0	271.6	272.2	272.8
142.5°	271.8	273.7	275.6	276.8	277.2	277.8	278.2	278.7
145°	283.9	284.7	285.7	286.4	286.8	287.2	287.7	288.2
147.5°	294.8	295.1	295.3	295.5	295.6	295.7	295.8	295.8
150°	302.5	302.6	302.9	302.9	302.6	302.5	302.3	302.0
152.5°	310.4	310.6	310.9	310.9	310.6	310.4	310.1	309.9
155°	320.4	320.7	321.1	321.2	320.9	320.7	320.6	320.3
157.5°	329.6	330.1	330.5	330.6	330.3	329.9	329.7	329.3
160°	335.1	335.5	336.0	336.0	335.7	335.4	335.2	334.9
162.5°	340.1	340.5	341.0	341.0	340.8	340.4	340.1	339.8
165°	346.5	347.0	347.4	347.5	347.2	346.8	346.5	346.2
167.5°	351.8	352.2	352.8	352.8	352.5	352.1	351.7	351.4
170°	354.7	355.2	355.7	355.7	355.3	354.9	354.5	354.0
172.5°	356.9	357.4	357.8	357.9	357.5	357.1	356.7	356.3
175°	359.3	359.7	360.2	360.2	359.9	359.5	359.0	358.6
177.5°	360.4	360.7	361.0	361.0	360.7	360.4	360.1	359.7
180°	360.5	360.5	360.5	360.5	360.5	360.5	360.5	360.5

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