

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: P331625-930

Luminaire Tested: **SA2XXRDIP-C290D530U930-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331625-930
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: SA2XXRDIP-C290D530U930-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

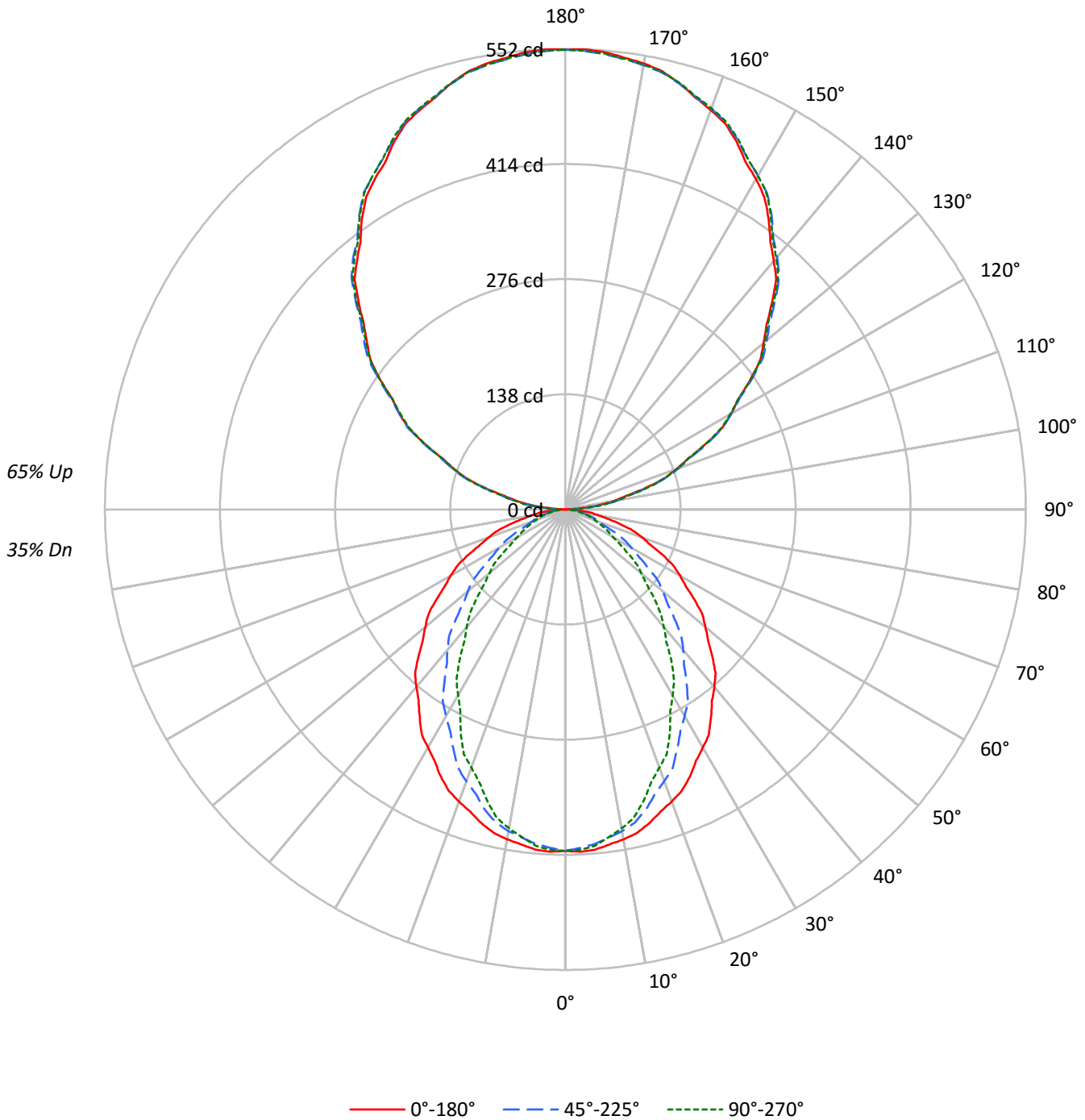
Lumens per Lamp: N/A
Luminaire Lumens: 2384.4 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 25.6
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	0
RCR																		
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35
1	95	91	87	84	86	82	79	76	66	64	62	52	50	49	38	37	37	30
2	87	80	74	69	78	72	67	63	58	55	52	46	43	41	34	33	31	26
3	79	70	63	58	71	64	58	53	52	48	44	41	38	35	30	29	27	22
4	73	62	55	49	65	57	50	45	46	42	38	36	33	31	27	25	24	20
5	67	56	48	42	60	51	44	39	41	37	33	33	29	27	25	23	21	17
6	61	50	42	37	55	46	39	34	37	32	29	30	26	23	23	20	18	15
7	57	45	37	32	51	41	35	30	34	29	25	27	24	21	21	18	16	14
8	53	41	33	28	48	37	31	26	31	26	22	25	21	19	19	17	15	12
9	49	37	30	25	44	34	28	24	28	24	20	23	19	17	18	15	13	11
10	46	34	27	23	42	31	25	21	26	21	18	21	18	15	16	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6608	6608	6608
5°	6634	6525	6561
10°	6583	6419	6365
15°	6506	6228	6048
20°	6402	5957	5658
25°	6296	5649	5279
30°	6145	5330	4793
35°	6000	4987	4366
40°	5855	4628	3872
45°	5683	4229	3425
50°	5506	3823	2987
55°	5326	3386	2567
60°	5118	2929	2131
65°	4883	2460	1937
70°	4598	2030	1780
75°	4255	1847	1666
80°	3756	1655	1516
85°	2946	1297	1297



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.3	1.6
10°-20°	105.2	4.4
20°-30°	147.7	6.2
30°-40°	161.1	6.8
40°-50°	148.1	6.2
50°-60°	116.3	4.9
60°-70°	75.8	3.2
70°-80°	39.1	1.6
80°-90°	12.3	0.5
90°-100°	34.9	1.5
100°-110°	108.4	4.5
110°-120°	185.3	7.8
120°-130°	243.7	10.2
130°-140°	273.5	11.5
140°-150°	268.2	11.2
150°-160°	225.0	9.4
160°-170°	149.2	6.3
170°-180°	52.2	2.2
0°-30°	291.2	12.2
0°-40°	452.3	19.0
0°-60°	716.7	30.1
0°-90°	843.9	35.4
90°-120°	328.7	13.8
90°-150°	1114.2	46.7
90°-180°	1540.0	64.6
0°-180°	2384.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	409	409	409	409	409	
5°	409	407	403	406	405	39
15°	389	385	373	366	362	110
25°	353	341	317	302	296	162
35°	304	285	253	230	222	190
45°	249	223	185	160	150	192
55°	189	160	120	99	91	169
65°	128	98	64	52	51	127
75°	68	43	30	27	27	72
85°	16	8	7	7	7	19
90°	0	6	16	15	16	2
95°	24	29	30	30	29	28
105°	100	101	102	103	103	106
115°	186	189	188	187	186	184
125°	271	274	273	272	272	242
135°	350	355	356	356	354	270
145°	425	428	431	431	430	265
155°	486	487	489	491	490	224
165°	529	528	528	531	529	149
175°	550	549	548	551	548	52
180°	551	551	551	551	551	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	409.3	409.3	409.3	409.3	409.3	409.3	409.3	409.3	409.3	409.3	409.3
2.5°	410.7	410.4	410.1	409.8	409.4	408.9	408.1	407.5	406.8	406.0	406.7
5°	409.3	408.9	408.5	408.1	407.6	406.8	405.8	404.7	403.7	402.6	403.3
7.5°	405.0	404.6	404.0	403.5	403.0	402.1	400.9	399.6	398.4	397.1	397.3
10°	401.5	400.9	400.3	399.7	399.2	398.0	396.4	394.8	393.1	391.5	391.3
12.5°	397.1	396.3	395.6	394.9	394.2	392.8	390.7	388.6	386.5	384.3	383.9
15°	389.2	388.3	387.4	386.5	385.6	383.8	381.0	378.2	375.4	372.6	371.0
17.5°	379.7	378.3	376.9	375.5	374.1	371.7	368.1	364.5	360.9	357.3	355.5
20°	372.6	371.0	369.3	367.6	366.0	363.1	359.0	354.9	350.8	346.7	344.6
22.5°	364.9	363.1	361.2	359.4	357.5	354.2	349.6	345.0	340.4	335.7	333.0
25°	353.4	350.7	348.1	345.4	342.8	338.8	333.3	327.9	322.5	317.1	313.6
27.5°	339.4	336.6	333.7	330.8	327.9	323.4	317.3	311.2	305.1	299.0	295.1
30°	329.6	326.5	323.3	320.2	317.2	312.3	305.7	299.1	292.5	285.9	281.8
32.5°	320.2	316.5	312.8	309.2	305.5	300.4	293.7	286.9	280.2	273.5	268.7
35°	304.4	300.3	296.0	291.9	287.6	281.9	274.7	267.4	260.2	253.0	247.8
37.5°	288.8	284.1	279.5	274.9	270.3	264.2	256.4	248.7	241.0	233.3	227.6
40°	277.8	272.9	267.9	262.9	258.0	251.6	243.6	235.6	227.6	219.6	213.8
42.5°	266.5	261.3	256.1	250.9	245.7	239.0	230.7	222.5	214.3	206.0	200.0
45°	248.9	243.4	237.8	232.4	226.8	219.7	211.1	202.4	193.8	185.2	179.4
47.5°	231.7	225.8	220.0	214.2	208.3	201.0	192.0	183.1	174.1	165.3	159.5
50°	219.2	213.4	207.6	201.7	195.9	188.4	179.4	170.3	161.3	152.2	146.5
52.5°	207.1	201.0	194.9	188.8	182.7	175.2	166.3	157.5	148.6	139.7	134.3
55°	189.2	182.9	176.4	170.0	163.5	156.0	147.0	138.1	129.2	120.3	115.4
57.5°	171.0	164.4	157.8	151.2	144.6	137.1	128.5	120.0	111.5	102.9	98.3
60°	158.5	152.0	145.4	138.8	132.2	124.7	116.2	107.7	99.2	90.7	86.5
62.5°	146.3	139.8	133.2	126.6	120.0	112.7	104.6	96.5	88.5	80.4	76.4
65°	127.8	121.1	114.5	107.8	101.1	94.1	86.7	79.2	71.8	64.4	61.6
67.5°	109.8	103.2	96.6	90.0	83.4	76.7	70.0	63.4	56.7	50.1	48.8
70°	97.4	91.0	84.5	78.2	71.7	65.7	60.0	54.3	48.7	43.0	42.2
72.5°	85.5	79.4	73.2	67.1	60.9	55.6	51.0	46.5	41.9	37.3	36.6
75°	68.2	62.4	56.7	50.9	45.1	40.8	38.0	35.2	32.4	29.6	29.0
77.5°	51.0	46.0	40.9	35.9	30.8	27.6	26.3	24.9	23.6	22.3	21.9
80°	40.4	36.2	32.0	27.8	23.6	21.0	20.2	19.4	18.6	17.8	17.4
82.5°	30.6	27.3	24.1	20.8	17.5	15.6	15.0	14.4	13.9	13.4	13.1
85°	15.9	14.2	12.5	10.8	9.0	8.0	7.7	7.5	7.3	7.0	7.0
87.5°	4.8	4.6	4.2	4.0	3.8	3.8	4.2	4.7	5.1	5.6	5.5
90°	0.5	1.7	2.9	4.2	5.5	7.2	9.5	11.7	14.0	16.3	16.1
92.5°	8.3	9.2	10.1	11.0	11.9	12.6	13.2	13.7	14.3	14.8	14.8
95°	24.2	25.2	26.3	27.3	28.3	28.9	29.1	29.4	29.5	29.8	29.8
97.5°	44.2	45.1	46.0	46.9	47.8	48.4	48.8	49.2	49.7	50.1	50.1
100°	59.0	59.8	60.7	61.6	62.4	62.9	63.3	63.5	63.8	64.2	64.2
102.5°	74.7	75.3	76.0	76.6	77.3	77.9	78.3	78.6	79.0	79.4	79.5
105°	100.0	100.3	100.6	100.9	101.2	101.4	101.7	101.8	102.1	102.3	102.5
107.5°	125.5	125.9	126.4	126.8	127.3	127.5	127.5	127.5	127.5	127.5	127.6
110°	141.8	142.4	143.0	143.7	144.3	144.6	144.6	144.6	144.6	144.6	144.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	159.6	160.3	160.9	161.5	162.2	162.4	162.3	162.2	162.2	162.1	161.8
115°	186.0	186.6	187.2	187.8	188.4	188.7	188.4	188.3	188.0	187.8	187.8
117.5°	212.2	213.0	213.9	214.7	215.5	215.6	215.1	214.4	213.9	213.3	213.0
120°	229.7	230.5	231.3	232.1	233.0	233.0	232.1	231.3	230.5	229.7	229.7
122.5°	245.6	246.6	247.7	248.7	249.6	249.8	249.2	248.7	248.1	247.5	247.3
125°	270.6	271.5	272.5	273.4	274.3	274.6	274.3	274.0	273.7	273.4	273.0
127.5°	294.8	296.0	297.2	298.4	299.5	299.9	299.6	299.2	298.9	298.5	298.1
130°	310.1	311.4	312.7	314.1	315.4	316.0	315.8	315.6	315.4	315.2	315.0
132.5°	327.2	328.3	329.4	330.5	331.6	332.2	332.2	332.2	332.3	332.3	331.9
135°	350.1	351.2	352.4	353.5	354.7	355.3	355.5	355.7	356.0	356.1	356.0
137.5°	374.1	375.1	376.0	377.0	377.9	378.5	378.8	379.0	379.3	379.5	379.4
140°	388.7	389.6	390.5	391.4	392.4	393.1	393.6	394.1	394.7	395.2	395.2
142.5°	403.6	404.5	405.4	406.3	407.2	407.9	408.3	408.6	409.0	409.3	409.4
145°	424.9	425.7	426.4	427.1	427.9	428.5	429.1	429.7	430.4	431.0	431.0
147.5°	444.0	444.8	445.7	446.6	447.4	448.1	448.5	448.9	449.3	449.8	450.0
150°	457.1	457.6	458.3	458.9	459.5	460.0	460.4	460.8	461.2	461.7	461.9
152.5°	468.6	469.2	469.8	470.4	471.0	471.6	472.1	472.5	473.0	473.6	473.9
155°	485.8	486.2	486.5	486.7	487.1	487.4	487.7	488.0	488.3	488.6	489.2
157.5°	500.6	500.8	501.0	501.2	501.5	501.7	501.8	502.1	502.2	502.4	503.1
160°	509.6	509.7	510.0	510.1	510.4	510.5	510.6	510.7	510.9	510.9	511.6
162.5°	517.7	517.8	517.8	517.9	517.9	518.0	518.0	518.2	518.3	518.4	519.1
165°	528.6	528.5	528.4	528.3	528.2	528.2	528.2	528.2	528.2	528.2	528.9
167.5°	537.7	537.4	537.1	536.8	536.5	536.3	536.3	536.3	536.2	536.2	537.0
170°	542.6	542.3	541.9	541.6	541.4	541.1	541.0	540.9	540.8	540.7	541.4
172.5°	545.9	545.6	545.3	544.9	544.7	544.5	544.4	544.3	544.1	544.0	544.8
175°	550.0	549.7	549.3	549.1	548.8	548.5	548.3	548.1	547.9	547.6	548.4
177.5°	551.7	551.4	551.1	550.9	550.7	550.5	550.3	550.2	550.0	549.8	550.3
180°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	409.3	409.3	409.3	409.3	409.3	409.3	409.3	409.3
2.5°	407.3	408.0	408.6	408.9	408.8	408.6	408.5	408.4
5°	404.1	404.8	405.5	405.8	405.5	405.3	405.0	404.8
7.5°	397.5	397.8	397.9	397.9	397.5	397.0	396.6	396.2
10°	391.0	390.8	390.5	390.1	389.6	389.1	388.7	388.2
12.5°	383.5	383.0	382.6	382.0	381.2	380.3	379.5	378.7
15°	369.5	367.9	366.3	365.2	364.4	363.5	362.6	361.8
17.5°	353.6	351.7	349.9	348.3	346.8	345.4	344.0	342.6
20°	342.6	340.5	338.4	336.5	334.7	332.9	331.1	329.3
22.5°	330.4	327.8	325.1	323.1	321.7	320.4	319.0	317.7
25°	310.3	306.9	303.5	301.3	300.0	298.7	297.5	296.3
27.5°	291.1	287.1	283.2	280.3	278.3	276.4	274.4	272.5
30°	277.5	273.4	269.1	266.0	263.7	261.5	259.3	257.1
32.5°	263.9	259.1	254.3	250.9	248.8	246.7	244.6	242.6
35°	242.6	237.4	232.2	228.7	226.9	225.1	223.3	221.5
37.5°	221.8	216.1	210.4	206.5	204.5	202.4	200.3	198.2
40°	208.0	202.1	196.2	192.2	190.1	188.0	185.8	183.7
42.5°	193.9	187.8	181.8	177.8	175.7	173.7	171.5	169.5
45°	173.5	167.6	161.8	157.9	156.0	153.9	152.0	150.0
47.5°	153.6	147.8	142.0	138.2	136.4	134.6	132.8	131.0
50°	140.9	135.2	129.5	125.8	124.1	122.4	120.6	118.9
52.5°	128.8	123.4	117.9	114.3	112.8	111.1	109.5	107.9
55°	110.5	105.6	100.6	97.3	95.8	94.2	92.7	91.2
57.5°	93.8	89.3	84.8	81.9	80.6	79.2	77.9	76.6
60°	82.3	78.2	73.9	71.2	69.9	68.6	67.3	66.0
62.5°	72.4	68.4	64.4	62.0	61.1	60.4	59.6	58.8
65°	58.9	56.0	53.2	51.7	51.4	51.2	51.0	50.7
67.5°	47.5	46.2	44.9	44.2	43.9	43.6	43.4	43.1
70°	41.3	40.5	39.7	39.1	38.7	38.4	38.1	37.7
72.5°	36.0	35.2	34.6	34.2	33.9	33.8	33.5	33.3
75°	28.5	27.9	27.3	27.0	26.9	26.8	26.7	26.7
77.5°	21.5	21.2	20.9	20.7	20.5	20.4	20.3	20.1
80°	17.1	16.8	16.5	16.3	16.3	16.3	16.3	16.3
82.5°	13.0	12.7	12.6	12.5	12.5	12.5	12.5	12.5
85°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
87.5°	5.4	5.3	5.2	5.1	5.1	5.2	5.2	5.2
90°	15.9	15.7	15.4	15.4	15.5	15.6	15.7	15.8
92.5°	14.8	14.9	14.9	15.0	15.0	15.0	15.1	15.1
95°	29.8	29.8	29.8	29.7	29.4	29.3	29.0	28.9
97.5°	50.1	50.1	50.1	50.0	50.0	50.0	50.0	49.9
100°	64.2	64.2	64.2	64.1	64.0	63.9	63.8	63.7
102.5°	79.6	79.7	79.7	79.7	79.7	79.5	79.4	79.3
105°	102.7	102.9	103.1	103.2	103.2	103.2	103.2	103.2
107.5°	127.7	127.8	127.8	127.6	127.1	126.7	126.2	125.7
110°	144.6	144.6	144.6	144.5	144.1	143.8	143.5	143.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	161.6	161.3	161.1	160.9	160.6	160.4	160.1	160.0
115°	187.6	187.5	187.4	187.2	186.9	186.6	186.3	186.0
117.5°	212.8	212.5	212.3	212.1	211.7	211.4	211.1	210.8
120°	229.7	229.7	229.7	229.5	229.2	228.9	228.6	228.3
122.5°	247.0	246.8	246.5	246.3	246.1	245.8	245.6	245.4
125°	272.7	272.5	272.1	271.9	271.8	271.7	271.6	271.5
127.5°	297.7	297.3	297.0	296.6	296.3	296.0	295.6	295.3
130°	314.8	314.6	314.4	314.1	313.6	313.2	312.8	312.4
132.5°	331.4	330.9	330.5	330.1	329.8	329.5	329.1	328.8
135°	356.0	355.8	355.7	355.5	355.2	354.9	354.6	354.2
137.5°	379.4	379.3	379.2	379.0	378.5	378.1	377.7	377.3
140°	395.2	395.2	395.2	395.0	394.5	394.1	393.7	393.3
142.5°	409.4	409.5	409.6	409.4	409.0	408.6	408.2	407.8
145°	431.2	431.3	431.4	431.2	430.8	430.4	430.0	429.6
147.5°	450.2	450.5	450.7	450.6	450.2	449.8	449.4	449.0
150°	462.3	462.6	462.9	462.9	462.6	462.3	461.9	461.7
152.5°	474.3	474.7	475.2	475.2	474.7	474.3	473.9	473.6
155°	489.7	490.2	490.7	490.8	490.5	490.2	489.8	489.6
157.5°	503.8	504.5	505.2	505.3	504.8	504.3	503.9	503.3
160°	512.2	512.8	513.4	513.6	513.1	512.7	512.3	511.8
162.5°	519.8	520.5	521.2	521.3	520.8	520.3	519.8	519.3
165°	529.6	530.4	531.0	531.2	530.6	530.1	529.6	529.0
167.5°	537.7	538.4	539.2	539.2	538.7	538.2	537.6	537.0
170°	542.2	542.9	543.6	543.6	543.0	542.4	541.8	541.2
172.5°	545.5	546.3	546.9	547.0	546.4	545.8	545.1	544.5
175°	549.1	549.8	550.6	550.7	550.0	549.3	548.8	548.1
177.5°	550.8	551.3	551.8	551.8	551.3	550.8	550.3	549.8
180°	550.9	550.9	550.9	550.9	550.9	550.9	550.9	550.9

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