

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: P331869-927

Luminaire Tested: **S123DIP-S340D365U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331869-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D365U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 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: 2127.1 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

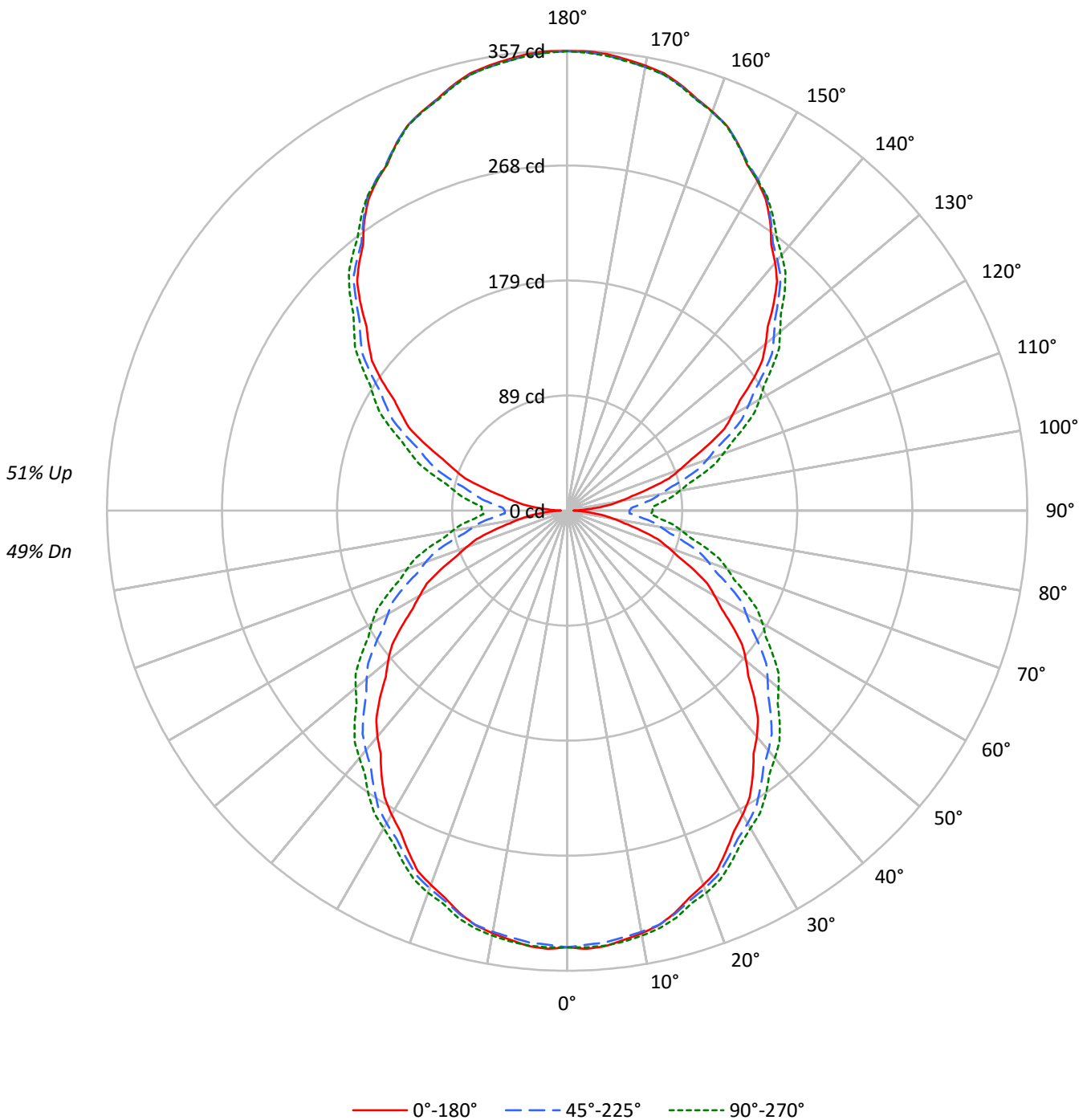
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55	49
1	97	92	87	84	89	85	81	77	71	68	66	59	57	55	47	46	45	39
2	87	80	73	67	80	73	68	63	62	57	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	23
5	67	55	46	40	61	50	43	37	43	37	32	35	31	28	29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	18	15
8	52	40	32	27	48	37	30	25	32	26	22	26	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	22	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3647	3647	3647
5°	3658	3556	3557
10°	3626	3473	3456
15°	3579	3380	3345
20°	3513	3274	3224
25°	3430	3152	3096
30°	3345	3043	2966
35°	3251	2926	2863
40°	3161	2820	2752
45°	3061	2718	2664
50°	2962	2618	2566
55°	2852	2516	2478
60°	2745	2411	2388
65°	2636	2300	2280
70°	2471	2174	2170
75°	2265	2031	2059
80°	2023	1890	1932
85°	1805	1794	1856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	1.5
10°-20°	91.6	4.3
20°-30°	137.0	6.4
30°-40°	163.6	7.7
40°-50°	171.1	8.0
50°-60°	160.6	7.5
60°-70°	134.1	6.3
70°-80°	96.0	4.5
80°-90°	58.3	2.7
90°-100°	59.1	2.8
100°-110°	95.9	4.5
110°-120°	135.8	6.4
120°-130°	165.5	7.8
130°-140°	179.2	8.4
140°-150°	172.7	8.1
150°-160°	144.6	6.8
160°-170°	96.3	4.5
170°-180°	33.7	1.6
0°-30°	260.6	12.3
0°-40°	424.2	19.9
0°-60°	755.9	35.5
0°-90°	1044.3	49.1
90°-120°	290.8	13.7
90°-150°	808.3	38.0
90°-180°	1083.0	50.9
0°-180°	2127.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	339	338	336	339	339	32
15°	323	324	324	327	327	91
25°	292	295	296	301	301	134
35°	251	257	262	267	269	157
45°	205	214	223	230	233	158
55°	156	169	182	192	195	140
65°	108	123	139	149	154	107
75°	59	76	94	106	111	63
85°	18	37	56	68	72	19
90°	5	26	48	62	66	4
95°	21	37	57	69	74	22
105°	66	76	94	104	108	70
115°	121	126	139	148	151	120
125°	175	177	186	193	194	156
135°	227	228	232	237	238	175
145°	274	275	275	278	278	171
155°	314	314	314	315	313	144
165°	342	341	341	342	341	96
175°	356	354	354	356	354	34
180°	356	356	356	356	356	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	340.3	340.2	339.9	339.8	339.5	339.2	338.7	338.1	337.6	337.1	337.6
5°	339.2	339.1	338.9	338.7	338.6	338.3	337.7	337.2	336.8	336.3	336.9
7.5°	335.9	336.0	336.0	336.0	336.0	335.8	335.3	334.9	334.4	333.9	334.7
10°	333.0	333.1	333.3	333.4	333.6	333.5	333.0	332.6	332.2	331.8	332.6
12.5°	329.4	329.6	329.9	330.1	330.3	330.3	330.0	329.7	329.5	329.2	329.9
15°	323.0	323.2	323.4	323.7	323.9	324.1	323.9	323.8	323.8	323.7	324.6
17.5°	314.9	315.4	315.8	316.3	316.8	317.0	317.0	317.0	317.0	317.0	317.7
20°	309.0	309.4	309.9	310.5	310.9	311.2	311.4	311.6	311.7	311.9	312.7
22.5°	302.8	303.2	303.7	304.2	304.8	305.1	305.3	305.5	305.8	306.0	307.0
25°	291.6	292.4	293.3	294.1	294.9	295.4	295.6	295.9	296.1	296.4	297.5
27.5°	280.4	281.3	282.3	283.2	284.2	284.9	285.3	285.9	286.5	286.9	287.9
30°	272.4	273.5	274.6	275.6	276.7	277.5	278.2	278.8	279.5	280.2	281.1
32.5°	263.6	264.7	265.9	267.1	268.3	269.3	270.2	271.1	272.0	272.7	273.9
35°	251.0	252.3	253.7	254.9	256.3	257.5	258.5	259.6	260.6	261.7	262.9
37.5°	237.7	239.2	240.7	242.2	243.6	245.0	246.3	247.6	249.0	250.3	251.7
40°	228.9	230.4	231.8	233.3	234.7	236.3	238.0	239.6	241.2	242.9	244.3
42.5°	219.1	220.9	222.7	224.5	226.3	228.1	229.8	231.5	233.2	234.9	236.5
45°	205.3	207.2	209.1	211.1	213.1	215.1	217.1	219.2	221.3	223.3	224.9
47.5°	190.7	192.9	195.1	197.4	199.6	201.9	204.2	206.6	208.9	211.3	213.0
50°	181.3	183.5	185.8	188.1	190.4	192.8	195.4	198.0	200.5	203.0	204.9
52.5°	171.2	173.6	176.0	178.5	180.9	183.5	186.3	189.2	191.9	194.7	196.7
55°	156.5	159.2	161.9	164.6	167.3	170.2	173.1	176.1	179.0	182.0	184.2
57.5°	142.2	145.0	147.8	150.7	153.4	156.5	159.7	163.0	166.2	169.4	171.7
60°	132.1	135.1	138.1	141.0	143.9	147.1	150.5	153.8	157.2	160.6	162.9
62.5°	122.7	125.7	128.7	131.7	134.8	138.1	141.6	145.2	148.8	152.3	154.6
65°	108.1	111.4	114.5	117.7	121.0	124.4	127.9	131.6	135.1	138.8	141.2
67.5°	93.4	96.8	100.2	103.5	106.9	110.5	114.2	117.9	121.5	125.2	127.9
70°	83.0	86.6	90.1	93.6	97.1	100.9	104.8	108.8	112.7	116.6	119.3
72.5°	73.6	77.2	80.6	84.2	87.7	91.5	95.5	99.7	103.7	107.8	110.5
75°	58.7	62.6	66.4	70.3	74.1	78.1	82.2	86.3	90.4	94.5	97.2
77.5°	45.7	49.6	53.5	57.4	61.2	65.3	69.4	73.5	77.6	81.8	84.7
80°	36.5	40.6	44.6	48.6	52.6	56.8	61.0	65.3	69.6	73.8	76.6
82.5°	28.6	32.6	36.8	40.8	44.9	49.1	53.5	57.8	62.1	66.5	69.2
85°	18.1	22.2	26.3	30.4	34.5	38.7	43.1	47.4	51.7	56.1	58.9
87.5°	9.9	14.1	18.3	22.5	26.7	31.0	35.3	39.7	44.0	48.4	51.2
90°	5.1	9.7	14.3	19.0	23.6	28.4	33.4	38.4	43.4	48.4	51.5
92.5°	11.2	15.3	19.4	23.4	27.5	31.8	36.4	41.0	45.6	50.1	53.0
95°	20.6	24.2	27.9	31.4	35.1	39.2	43.7	48.2	52.8	57.3	60.0
97.5°	33.0	36.2	39.4	42.6	45.8	49.5	53.7	57.9	62.1	66.3	69.0
100°	41.4	44.4	47.4	50.4	53.4	57.0	61.0	65.1	69.2	73.3	75.8
102.5°	51.2	53.8	56.3	58.9	61.6	64.9	69.0	73.1	77.2	81.4	83.8
105°	65.9	68.0	70.1	72.2	74.3	77.4	81.5	85.6	89.7	93.7	96.0
107.5°	82.8	84.5	86.3	88.0	89.8	92.4	95.9	99.5	103.1	106.7	109.1
110°	93.2	94.8	96.4	98.0	99.6	102.1	105.5	108.9	112.3	115.7	118.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	104.4	105.7	106.9	108.3	109.6	111.8	114.9	118.1	121.3	124.5	126.8
115°	120.8	122.0	123.2	124.4	125.5	127.5	130.3	133.2	136.0	138.8	140.9
117.5°	137.7	138.4	139.1	139.8	140.6	142.3	144.9	147.5	150.1	152.7	154.6
120°	147.9	148.7	149.5	150.3	151.0	152.6	155.0	157.4	159.8	162.2	164.0
122.5°	158.8	159.4	159.9	160.3	160.8	162.2	164.7	167.1	169.5	171.9	173.6
125°	175.2	175.4	175.6	175.8	175.9	177.2	179.4	181.7	183.9	186.2	187.7
127.5°	190.7	191.0	191.3	191.6	191.9	193.1	194.9	196.7	198.5	200.3	201.6
130°	201.0	201.4	201.8	202.2	202.6	203.6	205.0	206.5	207.9	209.4	210.7
132.5°	211.0	211.5	212.0	212.5	212.9	213.7	214.9	216.1	217.3	218.5	219.7
135°	226.6	227.0	227.3	227.5	227.8	228.4	229.3	230.0	230.9	231.7	233.0
137.5°	241.1	241.4	241.6	241.9	242.1	242.6	243.3	243.9	244.6	245.3	246.3
140°	251.0	251.2	251.5	251.8	252.2	252.5	252.8	253.1	253.4	253.7	254.8
142.5°	260.1	260.4	260.6	260.9	261.1	261.3	261.4	261.6	261.7	262.0	263.0
145°	274.4	274.5	274.5	274.6	274.6	274.7	274.9	275.1	275.3	275.4	276.1
147.5°	286.6	286.8	287.1	287.3	287.5	287.7	287.9	288.0	288.2	288.4	288.6
150°	295.3	295.5	295.6	295.7	295.9	296.0	296.1	296.2	296.4	296.4	296.4
152.5°	302.5	302.7	302.9	303.0	303.2	303.3	303.4	303.5	303.6	303.6	303.7
155°	313.9	313.9	313.9	313.9	313.9	313.9	313.9	313.9	314.0	314.1	314.3
157.5°	323.4	323.4	323.3	323.2	323.1	323.1	323.2	323.2	323.3	323.4	323.6
160°	329.5	329.4	329.2	329.2	329.0	328.9	328.9	328.9	328.9	328.9	329.2
162.5°	334.9	334.7	334.5	334.4	334.1	334.1	334.1	334.2	334.3	334.3	334.6
165°	341.8	341.7	341.4	341.3	341.0	341.0	341.0	341.0	341.0	341.0	341.4
167.5°	347.4	347.1	346.9	346.6	346.3	346.3	346.3	346.3	346.4	346.5	346.8
170°	350.5	350.2	350.0	349.7	349.5	349.4	349.4	349.4	349.4	349.4	349.8
172.5°	353.0	352.7	352.4	352.2	352.0	351.8	351.8	351.8	351.8	351.8	352.2
175°	355.5	355.3	355.1	354.8	354.6	354.4	354.4	354.4	354.4	354.4	354.8
177.5°	356.6	356.4	356.2	356.0	355.8	355.7	355.7	355.7	355.7	355.7	356.0
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	338.1	338.7	339.2	339.4	339.4	339.3	339.2	339.1
5°	337.5	338.3	338.9	339.2	339.1	339.0	338.9	338.8
7.5°	335.6	336.4	337.2	337.5	337.5	337.3	337.2	337.2
10°	333.5	334.3	335.1	335.4	335.3	335.1	334.9	334.8
12.5°	330.7	331.4	332.2	332.5	332.3	332.2	332.0	331.8
15°	325.3	326.1	327.0	327.3	327.3	327.2	327.1	327.0
17.5°	318.4	319.2	319.9	320.2	320.0	320.0	319.9	319.7
20°	313.4	314.1	314.9	315.3	315.4	315.4	315.5	315.6
22.5°	307.8	308.8	309.7	310.2	310.1	310.1	310.1	310.0
25°	298.5	299.6	300.6	301.2	301.2	301.2	301.2	301.2
27.5°	288.8	289.7	290.7	291.1	291.2	291.3	291.3	291.4
30°	282.1	283.1	284.1	284.6	284.6	284.6	284.6	284.6
32.5°	274.9	275.9	276.9	277.6	277.8	278.0	278.2	278.4
35°	264.2	265.4	266.6	267.4	267.8	268.1	268.4	268.7
37.5°	253.0	254.4	255.9	256.7	256.9	257.2	257.5	257.7
40°	245.7	247.1	248.4	249.3	249.6	250.0	250.3	250.6
42.5°	238.0	239.5	241.0	242.0	242.5	242.9	243.4	243.8
45°	226.4	228.0	229.6	230.7	231.3	232.0	232.7	233.3
47.5°	214.8	216.6	218.3	219.4	219.9	220.5	220.9	221.5
50°	206.8	208.7	210.6	211.8	212.4	212.9	213.5	214.1
52.5°	198.7	200.6	202.6	203.9	204.6	205.3	206.0	206.7
55°	186.4	188.6	190.8	192.3	192.9	193.6	194.2	194.9
57.5°	173.9	176.1	178.3	179.8	180.6	181.4	182.2	182.9
60°	165.2	167.5	169.8	171.3	172.2	173.2	174.0	175.0
62.5°	156.9	159.1	161.4	163.0	163.9	164.7	165.6	166.4
65°	143.7	146.2	148.6	150.3	151.1	151.9	152.7	153.5
67.5°	130.6	133.2	135.9	137.7	138.3	139.0	139.7	140.4
70°	121.9	124.5	127.1	128.9	129.7	130.5	131.3	132.1
72.5°	113.1	115.8	118.5	120.3	121.1	121.9	122.8	123.6
75°	99.9	102.6	105.4	107.2	108.1	109.2	110.1	111.1
77.5°	87.5	90.4	93.2	95.0	95.8	96.6	97.3	98.1
80°	79.4	82.2	85.0	86.7	87.6	88.4	89.3	90.1
82.5°	72.0	74.8	77.6	79.4	80.2	81.0	81.8	82.7
85°	61.7	64.5	67.3	69.1	69.9	70.7	71.5	72.3
87.5°	54.0	56.9	59.7	61.6	62.4	63.3	64.1	65.0
90°	54.5	57.5	60.6	62.6	63.5	64.5	65.4	66.4
92.5°	55.9	58.9	61.8	63.6	64.2	65.0	65.6	66.3
95°	62.8	65.7	68.4	70.3	71.1	71.9	72.7	73.5
97.5°	71.8	74.5	77.2	79.0	79.8	80.6	81.4	82.1
100°	78.4	81.0	83.5	85.3	86.2	87.1	88.1	89.0
102.5°	86.3	88.9	91.3	93.0	93.8	94.6	95.4	96.2
105°	98.3	100.6	102.9	104.5	105.4	106.2	107.1	108.0
107.5°	111.5	113.8	116.3	117.8	118.4	119.1	119.7	120.4
110°	120.5	122.9	125.2	126.7	127.2	127.8	128.3	128.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	129.2	131.6	134.0	135.5	136.2	136.9	137.6	138.2
115°	142.9	144.9	146.9	148.3	148.9	149.5	150.0	150.7
117.5°	156.6	158.5	160.5	161.7	162.2	162.6	163.0	163.5
120°	165.9	167.7	169.5	170.6	171.1	171.5	172.0	172.5
122.5°	175.2	176.9	178.6	179.6	180.0	180.4	180.8	181.2
125°	189.2	190.7	192.1	193.0	193.4	193.7	194.0	194.3
127.5°	202.9	204.1	205.5	206.2	206.5	206.8	207.1	207.3
130°	212.0	213.3	214.7	215.3	215.4	215.5	215.5	215.6
132.5°	220.9	222.0	223.2	223.9	224.2	224.3	224.6	224.8
135°	234.2	235.4	236.6	237.4	237.7	238.0	238.3	238.5
137.5°	247.3	248.3	249.4	250.0	250.2	250.3	250.5	250.7
140°	256.0	257.2	258.4	259.0	259.0	258.9	258.9	258.9
142.5°	264.0	265.1	266.1	266.6	266.7	266.8	266.9	267.0
145°	276.6	277.3	277.8	278.2	278.3	278.4	278.5	278.5
147.5°	288.8	289.0	289.2	289.2	289.1	289.1	289.0	288.9
150°	296.4	296.4	296.4	296.4	296.1	296.0	295.7	295.6
152.5°	303.8	304.0	304.0	304.0	303.6	303.3	303.1	302.8
155°	314.6	314.8	315.1	315.0	314.6	314.1	313.7	313.2
157.5°	323.8	324.2	324.4	324.3	324.0	323.7	323.3	323.0
160°	329.5	329.9	330.2	330.2	329.9	329.7	329.5	329.2
162.5°	334.9	335.3	335.6	335.5	335.1	334.7	334.3	333.9
165°	341.7	342.1	342.5	342.5	342.0	341.6	341.1	340.7
167.5°	347.2	347.6	348.0	348.0	347.6	347.2	346.8	346.5
170°	350.2	350.7	351.1	351.1	350.7	350.2	349.8	349.4
172.5°	352.6	353.0	353.4	353.4	352.9	352.5	352.0	351.6
175°	355.1	355.5	355.9	355.8	355.5	355.0	354.6	354.1
177.5°	356.3	356.6	356.9	356.9	356.6	356.2	355.8	355.5
180°	356.4	356.4	356.4	356.4	356.4	356.4	356.4	356.4

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