

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

Luminaire Tested: **S123DIP-S340D365U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331869
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-S340D365U835-4F0-1E-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: 2685.2 lumens
Efficiency: N/A
Efficacy: 132.3 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

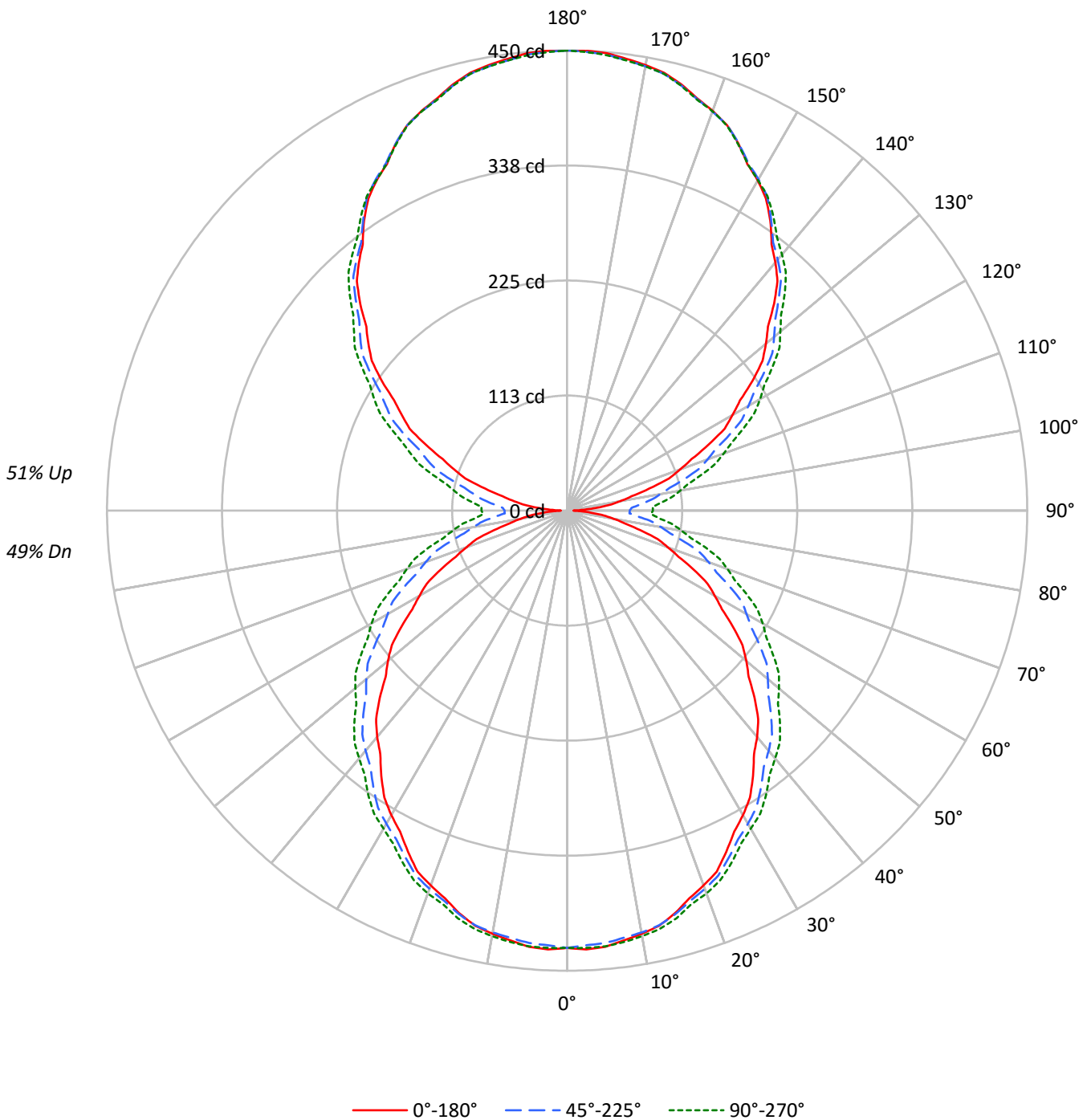
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4604	4604	4604
5°	4618	4488	4490
10°	4577	4385	4363
15°	4518	4267	4223
20°	4434	4133	4070
25°	4330	3980	3908
30°	4224	3841	3744
35°	4103	3694	3614
40°	3990	3560	3474
45°	3864	3432	3362
50°	3739	3305	3239
55°	3601	3175	3128
60°	3466	3044	3015
65°	3328	2903	2878
70°	3120	2744	2740
75°	2859	2565	2600
80°	2556	2387	2438
85°	2274	2264	2344



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	1.5
10°-20°	115.6	4.3
20°-30°	172.9	6.4
30°-40°	206.5	7.7
40°-50°	216.0	8.0
50°-60°	202.7	7.5
60°-70°	169.3	6.3
70°-80°	121.1	4.5
80°-90°	73.6	2.7
90°-100°	74.6	2.8
100°-110°	121.0	4.5
110°-120°	171.4	6.4
120°-130°	209.0	7.8
130°-140°	226.3	8.4
140°-150°	218.0	8.1
150°-160°	182.5	6.8
160°-170°	121.5	4.5
170°-180°	42.5	1.6
0°-30°	329.0	12.3
0°-40°	535.5	19.9
0°-60°	954.2	35.5
0°-90°	1318.2	49.1
90°-120°	367.1	13.7
90°-150°	1020.4	38.0
90°-180°	1367.0	50.9
0°-180°	2685.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	428	427	424	428	428	41
15°	408	409	409	413	413	115
25°	368	373	374	380	380	170
35°	317	324	330	337	339	198
45°	259	270	282	290	294	200
55°	198	213	230	242	246	177
65°	136	155	175	189	194	135
75°	74	96	119	134	140	79
85°	23	46	71	86	91	24
90°	6	33	61	78	84	5
95°	26	47	72	88	93	27
105°	83	96	118	131	136	89
115°	152	160	175	186	190	151
125°	221	223	235	243	245	197
135°	286	288	292	299	301	220
145°	346	347	348	351	352	216
155°	396	396	396	398	395	182
165°	432	430	430	432	430	122
175°	449	448	447	449	447	43
180°	450	450	450	450	450	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	429.6	429.4	429.1	428.9	428.6	428.2	427.5	426.8	426.2	425.5	426.2
5°	428.2	428.0	427.8	427.6	427.4	427.0	426.3	425.7	425.1	424.5	425.3
7.5°	424.0	424.1	424.1	424.1	424.2	423.9	423.3	422.7	422.1	421.5	422.5
10°	420.3	420.5	420.7	420.9	421.1	421.0	420.4	419.9	419.4	418.9	419.9
12.5°	415.8	416.1	416.4	416.7	417.0	416.9	416.6	416.2	415.9	415.5	416.5
15°	407.7	408.0	408.3	408.6	408.9	409.1	408.9	408.8	408.7	408.6	409.7
17.5°	397.5	398.1	398.7	399.3	399.9	400.2	400.2	400.1	400.1	400.1	401.0
20°	390.0	390.6	391.2	391.9	392.5	392.9	393.1	393.3	393.5	393.7	394.7
22.5°	382.2	382.8	383.4	384.0	384.7	385.1	385.4	385.7	386.0	386.3	387.5
25°	368.1	369.1	370.2	371.2	372.2	372.9	373.2	373.5	373.8	374.2	375.5
27.5°	353.9	355.1	356.3	357.5	358.7	359.6	360.2	360.9	361.6	362.2	363.4
30°	343.9	345.2	346.6	347.9	349.3	350.3	351.2	352.0	352.8	353.7	354.9
32.5°	332.7	334.2	335.7	337.2	338.7	340.0	341.1	342.2	343.3	344.3	345.7
35°	316.8	318.5	320.2	321.8	323.5	325.0	326.3	327.7	329.0	330.4	331.9
37.5°	300.1	301.9	303.8	305.7	307.5	309.3	310.9	312.6	314.3	315.9	317.7
40°	288.9	290.8	292.6	294.5	296.3	298.3	300.4	302.5	304.5	306.6	308.4
42.5°	276.6	278.9	281.1	283.4	285.7	287.9	290.1	292.2	294.4	296.5	298.5
45°	259.1	261.6	264.0	266.5	269.0	271.5	274.1	276.7	279.3	281.9	283.9
47.5°	240.7	243.5	246.3	249.2	252.0	254.9	257.8	260.8	263.7	266.7	268.9
50°	228.8	231.7	234.6	237.5	240.4	243.4	246.6	249.9	253.1	256.3	258.7
52.5°	216.1	219.2	222.2	225.3	228.4	231.7	235.2	238.8	242.3	245.8	248.3
55°	197.6	201.0	204.4	207.8	211.2	214.8	218.5	222.3	226.0	229.7	232.5
57.5°	179.5	183.0	186.6	190.2	193.7	197.6	201.6	205.7	209.8	213.9	216.7
60°	166.8	170.5	174.3	178.0	181.7	185.7	190.0	194.2	198.4	202.7	205.6
62.5°	154.9	158.7	162.5	166.3	170.1	174.3	178.8	183.3	187.8	192.3	195.1
65°	136.5	140.6	144.6	148.6	152.7	157.0	161.5	166.1	170.6	175.2	178.3
67.5°	117.9	122.2	126.5	130.7	135.0	139.5	144.1	148.8	153.4	158.1	161.4
70°	104.8	109.3	113.7	118.2	122.6	127.4	132.3	137.3	142.3	147.2	150.6
72.5°	92.9	97.4	101.8	106.3	110.7	115.5	120.6	125.8	130.9	136.1	139.5
75°	74.1	79.0	83.8	88.7	93.6	98.6	103.8	108.9	114.1	119.3	122.7
77.5°	57.7	62.6	67.5	72.4	77.3	82.4	87.6	92.8	98.0	103.3	106.9
80°	46.1	51.2	56.3	61.4	66.4	71.7	77.0	82.4	87.8	93.2	96.7
82.5°	36.1	41.2	46.4	51.5	56.7	62.0	67.5	72.9	78.4	83.9	87.4
85°	22.8	28.0	33.2	38.4	43.5	48.9	54.4	59.8	65.3	70.8	74.3
87.5°	12.5	17.8	23.1	28.4	33.7	39.1	44.6	50.1	55.6	61.1	64.6
90°	6.4	12.3	18.1	24.0	29.8	35.9	42.2	48.5	54.8	61.1	65.0
92.5°	14.2	19.3	24.5	29.6	34.7	40.1	45.9	51.7	57.5	63.2	66.9
95°	26.0	30.6	35.2	39.7	44.3	49.5	55.2	60.9	66.6	72.3	75.8
97.5°	41.6	45.7	49.7	53.8	57.8	62.5	67.8	73.1	78.4	83.7	87.1
100°	52.3	56.0	59.8	63.6	67.4	71.9	77.0	82.2	87.3	92.5	95.7
102.5°	64.6	67.9	71.1	74.4	77.7	81.9	87.1	92.3	97.5	102.7	105.8
105°	83.2	85.9	88.5	91.2	93.8	97.7	102.9	108.0	113.2	118.3	121.2
107.5°	104.5	106.7	108.9	111.1	113.3	116.6	121.1	125.6	130.2	134.7	137.7
110°	117.6	119.7	121.7	123.7	125.7	128.9	133.2	137.5	141.8	146.1	149.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	131.8	133.4	135.0	136.7	138.3	141.1	145.1	149.1	153.1	157.1	160.1
115°	152.5	154.0	155.5	157.0	158.4	161.0	164.5	168.1	171.7	175.2	177.8
117.5°	173.8	174.7	175.6	176.5	177.5	179.6	182.9	186.2	189.5	192.8	195.2
120°	186.7	187.7	188.7	189.7	190.6	192.6	195.7	198.7	201.7	204.7	207.0
122.5°	200.5	201.2	201.8	202.4	203.0	204.8	207.9	210.9	214.0	217.0	219.1
125°	221.2	221.4	221.7	221.9	222.1	223.7	226.5	229.4	232.2	235.1	236.9
127.5°	240.7	241.1	241.5	241.9	242.3	243.7	246.0	248.3	250.6	252.9	254.5
130°	253.7	254.2	254.8	255.3	255.8	257.0	258.8	260.7	262.5	264.3	266.0
132.5°	266.4	267.0	267.6	268.2	268.8	269.8	271.3	272.8	274.3	275.8	277.3
135°	286.1	286.5	286.9	287.2	287.6	288.3	289.4	290.4	291.5	292.5	294.1
137.5°	304.4	304.7	305.0	305.3	305.6	306.2	307.1	307.9	308.8	309.6	310.9
140°	316.8	317.1	317.5	317.9	318.3	318.7	319.1	319.5	319.9	320.3	321.7
142.5°	328.3	328.7	329.0	329.3	329.6	329.8	330.0	330.2	330.4	330.7	332.0
145°	346.4	346.5	346.5	346.6	346.6	346.8	347.0	347.3	347.5	347.7	348.5
147.5°	361.8	362.1	362.4	362.7	362.9	363.2	363.4	363.6	363.8	364.1	364.3
150°	372.8	373.0	373.1	373.3	373.5	373.6	373.8	373.9	374.1	374.2	374.2
152.5°	381.9	382.1	382.3	382.5	382.8	382.9	383.0	383.1	383.2	383.3	383.4
155°	396.2	396.2	396.2	396.2	396.2	396.2	396.3	396.3	396.4	396.5	396.8
157.5°	408.3	408.2	408.1	408.0	407.9	407.9	408.0	408.0	408.1	408.2	408.5
160°	415.9	415.8	415.6	415.5	415.3	415.2	415.2	415.2	415.2	415.2	415.6
162.5°	422.7	422.5	422.3	422.1	421.8	421.8	421.8	421.9	422.0	422.0	422.4
165°	431.5	431.3	431.0	430.8	430.5	430.4	430.4	430.4	430.4	430.4	430.9
167.5°	438.5	438.2	437.9	437.5	437.2	437.1	437.2	437.2	437.3	437.4	437.8
170°	442.4	442.1	441.8	441.5	441.2	441.0	441.0	441.0	441.0	441.0	441.6
172.5°	445.6	445.2	444.9	444.6	444.3	444.1	444.1	444.1	444.1	444.1	444.6
175°	448.8	448.5	448.2	447.9	447.6	447.4	447.4	447.4	447.4	447.4	447.9
177.5°	450.1	449.9	449.6	449.4	449.1	449.0	449.0	449.0	449.0	449.0	449.4
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	426.8	427.5	428.2	428.4	428.4	428.3	428.2	428.1
5°	426.1	427.0	427.8	428.2	428.1	427.9	427.8	427.7
7.5°	423.6	424.6	425.6	426.1	426.0	425.8	425.7	425.6
10°	421.0	422.0	423.0	423.4	423.2	423.0	422.8	422.6
12.5°	417.4	418.4	419.3	419.7	419.5	419.3	419.1	418.9
15°	410.7	411.7	412.8	413.2	413.1	413.0	412.9	412.8
17.5°	401.9	402.9	403.8	404.2	404.0	403.9	403.8	403.6
20°	395.6	396.5	397.5	398.0	398.1	398.2	398.3	398.4
22.5°	388.6	389.8	391.0	391.6	391.5	391.4	391.4	391.3
25°	376.8	378.2	379.5	380.2	380.2	380.2	380.2	380.2
27.5°	364.5	365.7	366.9	367.5	367.6	367.7	367.7	367.8
30°	356.1	357.4	358.6	359.2	359.2	359.2	359.2	359.2
32.5°	347.0	348.3	349.6	350.4	350.7	350.9	351.2	351.4
35°	333.5	335.0	336.6	337.6	338.0	338.4	338.8	339.2
37.5°	319.4	321.2	323.0	324.0	324.3	324.7	325.0	325.3
40°	310.1	311.9	313.6	314.7	315.1	315.6	316.0	316.4
42.5°	300.4	302.3	304.2	305.5	306.1	306.6	307.2	307.8
45°	285.8	287.8	289.8	291.2	292.0	292.8	293.7	294.5
47.5°	271.1	273.4	275.6	277.0	277.6	278.3	278.9	279.6
50°	261.0	263.4	265.8	267.4	268.1	268.8	269.5	270.3
52.5°	250.8	253.2	255.7	257.4	258.3	259.2	260.0	260.9
55°	235.3	238.1	240.9	242.7	243.5	244.4	245.2	246.0
57.5°	219.5	222.3	225.1	227.0	228.0	229.0	230.0	230.9
60°	208.5	211.4	214.3	216.3	217.4	218.6	219.7	220.9
62.5°	198.0	200.9	203.8	205.8	206.9	207.9	209.0	210.1
65°	181.4	184.5	187.6	189.7	190.7	191.8	192.8	193.8
67.5°	164.8	168.2	171.6	173.8	174.6	175.5	176.4	177.2
70°	153.9	157.2	160.5	162.7	163.7	164.7	165.8	166.8
72.5°	142.8	146.2	149.6	151.9	152.9	153.9	155.0	156.0
75°	126.1	129.5	133.0	135.3	136.5	137.8	139.0	140.3
77.5°	110.5	114.1	117.7	119.9	120.9	121.9	122.8	123.8
80°	100.2	103.8	107.3	109.5	110.6	111.6	112.7	113.7
82.5°	90.9	94.4	98.0	100.2	101.3	102.3	103.3	104.4
85°	77.9	81.4	84.9	87.2	88.2	89.3	90.3	91.3
87.5°	68.2	71.8	75.4	77.7	78.8	79.9	80.9	82.0
90°	68.8	72.6	76.5	79.0	80.2	81.4	82.6	83.8
92.5°	70.6	74.3	78.0	80.3	81.1	82.0	82.8	83.7
95°	79.3	82.9	86.4	88.7	89.7	90.7	91.8	92.8
97.5°	90.6	94.0	97.5	99.7	100.7	101.7	102.7	103.7
100°	99.0	102.2	105.4	107.7	108.8	110.0	111.2	112.4
102.5°	109.0	112.2	115.3	117.4	118.4	119.4	120.4	121.4
105°	124.1	127.0	129.9	131.9	133.0	134.1	135.2	136.3
107.5°	140.7	143.7	146.8	148.7	149.5	150.3	151.1	152.0
110°	152.1	155.1	158.1	160.0	160.6	161.3	162.0	162.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	163.1	166.1	169.1	171.0	171.9	172.8	173.7	174.5
115°	180.4	182.9	185.5	187.2	187.9	188.7	189.4	190.2
117.5°	197.7	200.1	202.6	204.1	204.7	205.2	205.8	206.4
120°	209.4	211.7	214.0	215.4	216.0	216.5	217.1	217.7
122.5°	221.2	223.3	225.4	226.7	227.2	227.7	228.2	228.7
125°	238.8	240.7	242.5	243.6	244.1	244.5	244.9	245.3
127.5°	256.1	257.7	259.4	260.3	260.7	261.0	261.4	261.7
130°	267.6	269.3	271.0	271.8	271.9	272.0	272.0	272.1
132.5°	278.8	280.3	281.8	282.7	283.0	283.2	283.5	283.8
135°	295.6	297.2	298.7	299.7	300.1	300.4	300.8	301.1
137.5°	312.2	313.5	314.8	315.6	315.8	316.0	316.2	316.5
140°	323.2	324.7	326.2	326.9	326.9	326.8	326.8	326.8
142.5°	333.3	334.6	335.9	336.6	336.7	336.8	336.9	337.0
145°	349.2	350.0	350.7	351.2	351.3	351.4	351.5	351.6
147.5°	364.6	364.8	365.1	365.1	365.0	364.9	364.8	364.7
150°	374.2	374.2	374.2	374.1	373.8	373.6	373.3	373.1
152.5°	383.5	383.7	383.8	383.7	383.3	382.9	382.6	382.2
155°	397.1	397.4	397.8	397.6	397.1	396.5	396.0	395.4
157.5°	408.8	409.2	409.5	409.4	409.0	408.6	408.1	407.7
160°	416.0	416.4	416.8	416.8	416.5	416.2	415.9	415.6
162.5°	422.8	423.2	423.6	423.5	423.0	422.5	422.0	421.5
165°	431.4	431.8	432.3	432.3	431.7	431.2	430.6	430.1
167.5°	438.3	438.8	439.3	439.3	438.8	438.3	437.8	437.4
170°	442.1	442.7	443.2	443.2	442.7	442.1	441.6	441.0
172.5°	445.1	445.6	446.1	446.1	445.5	445.0	444.4	443.9
175°	448.3	448.8	449.3	449.2	448.7	448.1	447.6	447.0
177.5°	449.8	450.1	450.5	450.5	450.1	449.6	449.2	448.7
180°	449.9	449.9	449.9	449.9	449.9	449.9	449.9	449.9

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