

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: P331253-930

Luminaire Tested: **S122DIP-S290D530U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331253-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S290D530U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2517.6 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

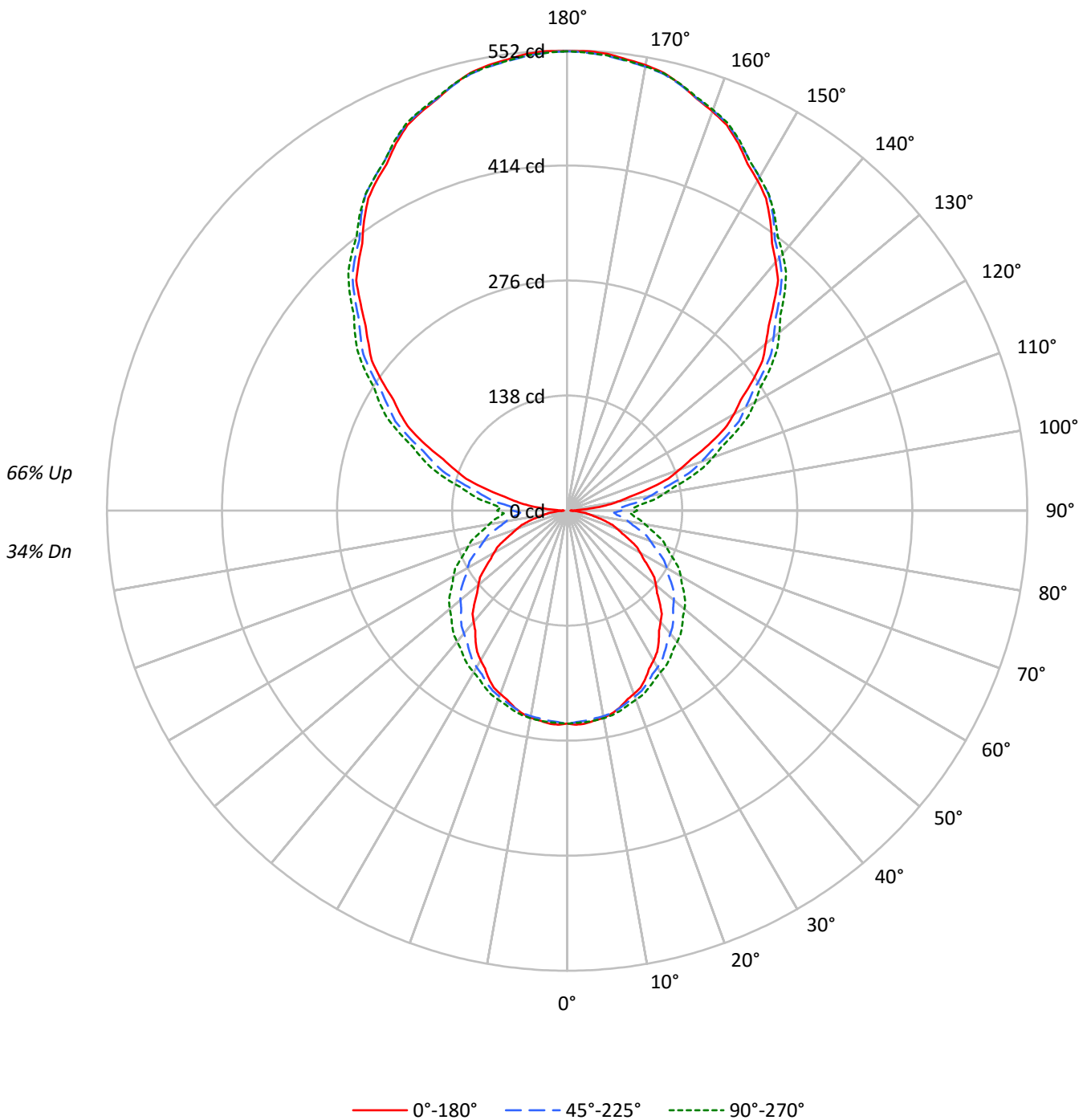
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	34
1	93	89	84	81	84	80	76	73	64	61	59	49	47	46	35	34	33	27
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	29	27	22
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	27	24	23	18
4	70	59	51	45	63	53	46	41	43	38	34	33	29	26	24	21	19	15
5	64	52	44	38	57	47	40	35	38	33	29	29	25	23	21	19	17	13
6	59	47	39	33	53	42	35	30	34	29	25	26	22	20	19	16	14	11
7	54	42	34	28	49	38	31	26	31	25	22	24	20	17	17	15	13	10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9
9	47	35	27	22	42	31	25	20	25	20	17	20	16	13	15	12	10	8
10	44	32	24	20	39	29	22	18	23	18	15	18	15	12	14	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4127	4127	4127
5°	4146	3973	3957
10°	4121	3855	3812
15°	4063	3730	3659
20°	3992	3597	3511
25°	3922	3468	3376
30°	3821	3336	3241
35°	3720	3209	3148
40°	3615	3101	3051
45°	3512	3004	2971
50°	3404	2917	2891
55°	3289	2822	2810
60°	3151	2723	2724
65°	3006	2608	2622
70°	2844	2485	2512
75°	2639	2365	2410
80°	2312	2240	2305
85°	2005	2134	2226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.2	1.0
10°-20°	69.4	2.8
20°-30°	105.2	4.2
30°-40°	128.2	5.1
40°-50°	137.9	5.5
50°-60°	133.9	5.3
60°-70°	116.9	4.6
70°-80°	90.0	3.6
80°-90°	62.6	2.5
90°-100°	76.5	3.0
100°-110°	138.8	5.5
110°-120°	205.4	8.2
120°-130°	254.9	10.1
130°-140°	278.2	11.1
140°-150°	269.0	10.7
150°-160°	225.0	8.9
160°-170°	149.2	5.9
170°-180°	52.2	2.1
0°-30°	198.9	7.9
0°-40°	327.1	13.0
0°-60°	598.8	23.8
0°-90°	868.4	34.5
90°-120°	420.7	16.7
90°-150°	1222.9	48.6
90°-180°	1649.0	65.5
0°-180°	2517.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	256	256	256	256	256	
5°	256	255	253	255	255	24
15°	244	245	245	248	248	69
25°	222	225	228	232	234	102
35°	192	198	205	213	216	120
45°	157	167	180	191	195	121
55°	120	134	153	166	171	108
65°	82	101	122	137	142	82
75°	46	66	90	105	111	48
85°	13	36	60	75	81	14
90°	4	32	65	79	84	4
95°	27	49	72	86	90	30
105°	102	114	134	148	152	108
115°	187	195	210	220	223	185
125°	271	276	286	294	297	243
135°	350	356	360	367	369	271
145°	425	428	431	434	434	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°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	257.1	256.8	256.7	256.4	256.2	255.9	255.4	255.0	254.5	254.0	254.4
5°	256.3	256.1	255.8	255.6	255.3	254.9	254.5	254.0	253.5	253.0	253.5
7.5°	254.0	253.8	253.6	253.5	253.3	253.1	252.7	252.3	251.9	251.5	252.2
10°	252.3	252.1	251.9	251.8	251.6	251.4	251.1	250.9	250.6	250.4	251.0
12.5°	249.2	249.3	249.3	249.4	249.4	249.3	249.2	249.0	248.7	248.6	249.2
15°	244.4	244.6	244.8	244.9	245.1	245.2	245.2	245.2	245.2	245.2	245.9
17.5°	238.2	238.6	238.9	239.3	239.6	239.9	240.2	240.4	240.7	241.0	241.7
20°	234.1	234.5	234.9	235.3	235.7	236.1	236.4	236.8	237.1	237.4	238.3
22.5°	229.7	230.1	230.6	231.1	231.5	232.0	232.4	232.9	233.4	233.8	234.7
25°	222.3	222.8	223.4	224.0	224.5	225.2	225.9	226.7	227.4	228.1	229.1
27.5°	213.4	214.3	215.2	216.1	217.1	218.0	218.8	219.7	220.6	221.5	222.7
30°	207.4	208.5	209.5	210.6	211.7	212.8	213.9	214.9	216.0	217.0	218.3
32.5°	200.9	202.1	203.3	204.5	205.7	206.9	208.2	209.5	210.8	212.0	213.5
35°	191.5	192.9	194.3	195.7	197.1	198.5	200.2	201.7	203.3	204.8	206.6
37.5°	181.2	182.9	184.5	186.1	187.7	189.6	191.6	193.6	195.6	197.6	199.7
40°	174.5	176.3	178.1	179.9	181.6	183.7	185.9	188.2	190.4	192.6	194.7
42.5°	168.0	169.7	171.5	173.3	175.2	177.3	179.9	182.5	185.0	187.5	189.9
45°	157.0	159.2	161.5	163.7	165.9	168.4	171.4	174.2	177.1	180.0	182.5
47.5°	146.3	148.7	151.2	153.5	156.0	158.9	162.2	165.6	169.0	172.4	175.0
50°	138.9	141.5	144.0	146.5	149.1	152.2	156.0	159.6	163.3	167.1	169.8
52.5°	131.8	134.4	137.1	139.8	142.5	145.8	149.7	153.6	157.5	161.4	164.3
55°	120.3	123.4	126.3	129.2	132.2	135.8	140.1	144.4	148.7	153.0	156.0
57.5°	109.1	112.4	115.8	119.1	122.5	126.3	130.7	135.0	139.4	143.8	147.0
60°	101.1	104.7	108.2	111.7	115.3	119.4	124.1	128.7	133.5	138.1	141.3
62.5°	94.0	97.7	101.3	105.0	108.7	112.8	117.6	122.2	126.9	131.7	134.9
65°	82.2	86.3	90.3	94.3	98.3	102.8	107.6	112.5	117.4	122.2	125.6
67.5°	71.4	75.7	79.8	84.1	88.3	92.9	97.8	102.8	107.8	112.8	116.2
70°	63.7	68.0	72.2	76.6	80.8	85.5	90.6	95.7	100.9	105.9	109.5
72.5°	56.6	61.0	65.4	69.8	74.3	79.0	84.2	89.4	94.6	99.7	103.2
75°	45.6	50.1	54.8	59.4	64.0	68.9	74.2	79.5	84.7	90.0	93.5
77.5°	34.9	39.7	44.5	49.3	54.2	59.3	64.7	70.0	75.3	80.6	84.2
80°	27.8	32.8	37.8	42.8	47.9	53.1	58.4	63.8	69.1	74.4	77.9
82.5°	21.9	26.8	31.8	36.7	41.7	46.9	52.3	57.7	63.1	68.5	72.0
85°	13.4	18.4	23.6	28.6	33.8	38.9	44.2	49.5	54.7	60.0	63.4
87.5°	7.3	12.5	17.7	22.8	28.0	33.4	39.1	44.8	50.5	56.3	59.6
90°	4.2	10.2	16.2	22.2	28.2	35.0	42.6	50.1	57.6	65.1	68.2
92.5°	11.7	17.0	22.4	27.7	33.1	38.6	44.2	49.8	55.4	61.0	64.2
95°	27.1	32.0	36.9	41.8	46.7	51.8	56.9	62.0	67.2	72.3	75.5
97.5°	46.8	51.1	55.4	59.8	64.2	68.9	74.0	79.2	84.3	89.4	92.5
100°	61.6	65.5	69.4	73.2	77.1	81.5	86.4	91.4	96.3	101.2	104.3
102.5°	77.0	80.4	83.8	87.3	90.7	94.9	99.8	104.6	109.5	114.4	117.4
105°	101.8	104.5	107.2	109.9	112.6	116.2	120.7	125.1	129.6	134.1	137.2
107.5°	127.2	129.6	131.9	134.3	136.6	139.9	144.0	148.1	152.2	156.3	159.1
110°	143.2	145.5	147.8	150.1	152.4	155.5	159.6	163.5	167.6	171.6	174.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.1	163.1	165.2	167.1	169.2	172.0	175.8	179.5	183.3	187.0	189.4
115°	187.4	189.0	190.5	192.0	193.6	196.1	199.6	203.1	206.5	210.0	212.4
117.5°	213.3	214.7	216.1	217.5	219.0	221.1	224.0	226.8	229.7	232.5	234.6
120°	230.8	232.0	233.1	234.2	235.4	237.3	239.7	242.1	244.6	247.1	249.4
122.5°	246.8	247.9	249.0	250.1	251.3	253.1	255.6	258.1	260.7	263.2	265.1
125°	271.3	272.2	273.2	274.1	275.1	276.6	279.0	281.3	283.6	285.9	287.9
127.5°	295.6	296.7	297.7	298.9	299.9	301.4	303.1	304.9	306.6	308.4	310.1
130°	310.9	312.1	313.4	314.6	315.8	317.3	318.8	320.3	321.9	323.3	325.1
132.5°	327.9	329.0	330.0	331.0	332.0	333.2	334.6	336.0	337.3	338.7	340.1
135°	350.4	351.6	352.7	353.8	355.0	356.1	357.1	358.2	359.1	360.2	361.8
137.5°	374.5	375.4	376.3	377.2	378.2	379.0	379.6	380.3	380.8	381.5	382.9
140°	389.1	389.9	390.8	391.6	392.4	393.2	393.9	394.5	395.3	395.9	397.2
142.5°	403.9	404.8	405.6	406.4	407.3	407.9	408.3	408.7	409.1	409.4	410.6
145°	424.9	425.7	426.4	427.1	427.9	428.5	429.1	429.7	430.4	431.0	431.5
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°	255.6	255.6	255.6	255.6	255.6	255.6	255.6	255.6
2.5°	254.7	255.0	255.4	255.5	255.4	255.2	255.1	254.9
5°	254.0	254.5	254.9	255.1	255.0	254.9	254.9	254.8
7.5°	252.7	253.3	254.0	254.2	254.1	254.0	254.0	253.9
10°	251.7	252.3	253.0	253.3	253.2	253.2	253.1	253.0
12.5°	249.9	250.5	251.2	251.5	251.4	251.4	251.3	251.2
15°	246.6	247.4	248.2	248.5	248.4	248.3	248.3	248.2
17.5°	242.6	243.3	244.0	244.4	244.4	244.4	244.4	244.4
20°	239.2	240.1	241.0	241.5	241.5	241.5	241.5	241.5
22.5°	235.7	236.6	237.5	238.0	238.1	238.2	238.4	238.6
25°	230.2	231.1	232.1	232.7	232.9	233.2	233.4	233.7
27.5°	224.0	225.3	226.5	227.2	227.4	227.6	227.7	228.0
30°	219.6	221.0	222.3	223.1	223.3	223.6	223.8	224.0
32.5°	215.0	216.5	218.1	219.1	219.5	220.0	220.4	220.8
35°	208.5	210.3	212.1	213.3	213.9	214.4	215.0	215.6
37.5°	201.6	203.7	205.7	207.0	207.6	208.2	208.8	209.4
40°	196.9	199.0	201.1	202.6	203.3	204.1	204.8	205.5
42.5°	192.2	194.5	196.9	198.4	199.2	199.9	200.6	201.4
45°	185.1	187.7	190.2	191.9	192.7	193.6	194.4	195.2
47.5°	177.7	180.3	183.0	184.8	185.7	186.6	187.5	188.4
50°	172.6	175.5	178.2	180.1	181.0	181.9	182.8	183.7
52.5°	167.1	170.0	172.8	174.8	175.8	176.8	177.7	178.6
55°	158.9	161.8	164.9	166.8	167.9	169.0	170.1	171.1
57.5°	150.2	153.4	156.5	158.7	159.8	160.9	161.9	163.1
60°	144.4	147.6	150.7	152.8	153.9	155.1	156.3	157.4
62.5°	138.3	141.6	145.0	147.2	148.2	149.3	150.4	151.5
65°	129.0	132.3	135.7	137.9	139.0	140.1	141.1	142.2
67.5°	119.5	122.9	126.4	128.7	129.7	130.9	132.0	133.1
70°	113.0	116.5	120.1	122.4	123.4	124.3	125.3	126.3
72.5°	106.6	110.1	113.6	115.9	117.1	118.3	119.5	120.7
75°	97.1	100.6	104.2	106.5	107.5	108.6	109.7	110.7
77.5°	87.7	91.2	94.7	97.1	98.2	99.4	100.5	101.7
80°	81.4	84.8	88.3	90.6	91.7	92.9	94.0	95.1
82.5°	75.4	78.9	82.3	84.6	85.7	86.8	87.9	88.9
85°	66.9	70.4	73.9	76.1	77.3	78.4	79.6	80.7
87.5°	62.9	66.2	69.5	71.7	72.8	73.9	75.0	76.1
90°	71.3	74.4	77.5	79.6	80.7	81.8	82.8	84.0
92.5°	67.5	70.8	74.1	76.2	77.2	78.3	79.2	80.2
95°	78.6	81.7	84.9	86.8	87.6	88.4	89.2	89.9
97.5°	95.6	98.6	101.6	103.6	104.6	105.5	106.5	107.4
100°	107.3	110.3	113.4	115.3	116.1	116.9	117.7	118.5
102.5°	120.5	123.5	126.6	128.6	129.4	130.1	130.9	131.8
105°	140.3	143.4	146.5	148.5	149.4	150.3	151.2	152.1
107.5°	162.0	164.9	167.7	169.3	169.7	170.2	170.6	171.0
110°	176.9	179.5	182.1	183.8	184.3	185.0	185.6	186.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	191.8	194.2	196.6	198.1	198.8	199.5	200.2	200.8
115°	214.7	217.1	219.5	221.0	221.6	222.2	222.7	223.4
117.5°	236.8	239.0	241.2	242.6	243.1	243.7	244.2	244.8
120°	251.7	254.0	256.3	257.7	258.4	258.9	259.5	260.2
122.5°	267.2	269.1	271.1	272.4	273.0	273.5	274.0	274.6
125°	289.8	291.7	293.6	294.9	295.5	296.2	296.8	297.4
127.5°	311.8	313.4	315.1	316.1	316.5	316.9	317.3	317.7
130°	326.9	328.6	330.4	331.4	331.7	331.9	332.2	332.4
132.5°	341.6	343.1	344.5	345.4	345.8	346.1	346.4	346.7
135°	363.5	365.1	366.7	367.7	368.0	368.4	368.8	369.1
137.5°	384.3	385.8	387.2	388.0	388.2	388.3	388.4	388.6
140°	398.5	399.9	401.2	401.9	401.9	402.0	402.1	402.2
142.5°	411.7	412.9	414.0	414.6	414.6	414.6	414.7	414.7
145°	432.2	432.8	433.3	433.7	433.7	433.7	433.7	433.7
147.5°	450.4	450.6	450.9	451.0	450.8	450.6	450.4	450.2
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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