

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: P331474-927

Luminaire Tested: **S122DIW-S290D710U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331474-927
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: S122DIW-S290D710U927-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2897.9 lumens
Efficiency: N/A
Efficacy: 95.3 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: Semi-Indirect

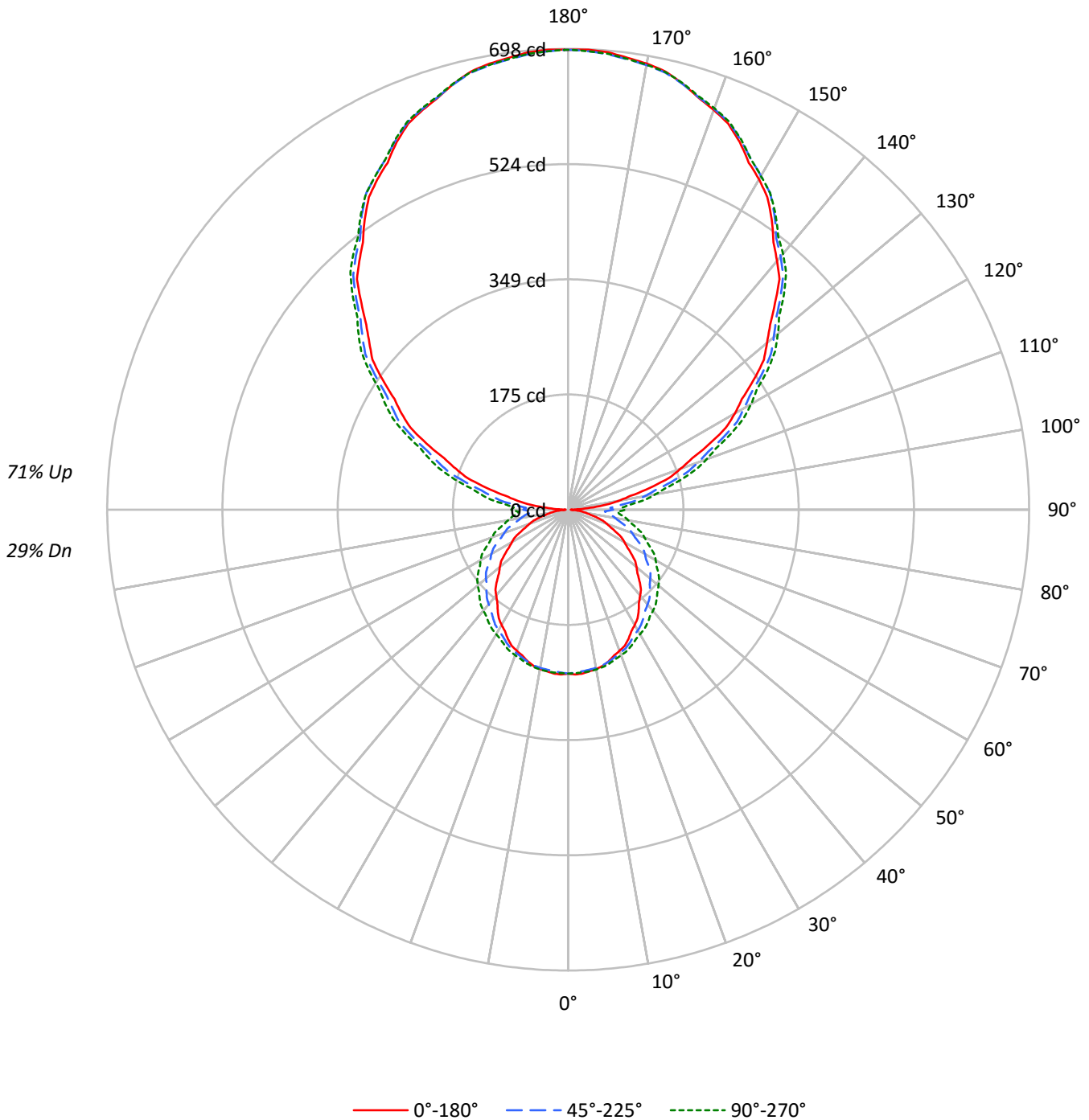
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	92	92	92	92	72	72	72	54	54	54	37	37	37	29
1	92	88	84	80	82	79	75	72	61	59	57	46	44	43	31	30	29	23
2	84	76	70	64	74	68	63	58	53	50	46	40	37	35	27	25	24	18
3	76	66	59	53	68	60	53	48	47	42	38	35	32	29	24	22	20	15
4	69	58	51	45	62	52	46	40	41	36	32	31	27	25	21	19	17	13
5	63	52	44	38	56	47	40	34	37	32	28	27	24	21	19	16	15	11
6	58	46	38	32	52	42	35	30	33	28	24	25	21	18	17	15	13	9
7	54	42	34	28	48	37	31	26	30	25	21	22	19	16	15	13	11	8
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	7
9	46	34	27	22	41	31	24	20	24	20	16	19	15	13	13	11	9	7
10	43	31	24	19	38	28	22	18	22	18	14	17	14	11	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4009	4009	4009
5°	4030	3859	3845
10°	4004	3746	3703
15°	3948	3624	3554
20°	3878	3495	3410
25°	3809	3371	3279
30°	3712	3242	3150
35°	3615	3118	3059
40°	3511	3013	2965
45°	3413	2919	2886
50°	3309	2833	2810
55°	3196	2741	2731
60°	3061	2646	2648
65°	2922	2534	2548
70°	2764	2415	2440
75°	2564	2299	2342
80°	2245	2177	2240
85°	1945	2073	2163



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.5	0.8
10°-20°	67.5	2.3
20°-30°	102.2	3.5
30°-40°	124.5	4.3
40°-50°	134.0	4.6
50°-60°	130.1	4.5
60°-70°	113.6	3.9
70°-80°	87.5	3.0
80°-90°	61.5	2.1
90°-100°	84.6	2.9
100°-110°	166.6	5.7
110°-120°	253.8	8.8
120°-130°	319.0	11.0
130°-140°	350.4	12.1
140°-150°	339.9	11.7
150°-160°	284.5	9.8
160°-170°	188.7	6.5
170°-180°	65.9	2.3
0°-30°	193.2	6.7
0°-40°	317.8	11.0
0°-60°	581.9	20.1
0°-90°	844.4	29.1
90°-120°	505.0	17.4
90°-150°	1514.5	52.3
90°-180°	2054.0	70.9
0°-180°	2897.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	248	248	248	248	248	
5°	249	248	246	248	248	24
15°	238	238	238	241	241	67
25°	216	218	222	226	227	99
35°	186	192	199	207	210	116
45°	153	162	175	186	190	118
55°	117	130	149	161	166	105
65°	80	98	119	133	138	79
75°	44	65	88	102	108	47
85°	13	35	58	73	78	14
90°	4	33	68	81	86	4
95°	33	56	79	92	96	37
105°	128	141	160	174	178	136
115°	236	244	259	269	272	234
125°	343	348	358	366	368	306
135°	443	449	454	461	462	342
145°	537	541	545	548	547	336
155°	614	616	618	620	619	283
165°	668	668	668	672	669	188
175°	695	694	692	696	693	66
180°	697	697	697	697	697	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	249.8	249.5	249.4	249.1	249.0	248.7	248.2	247.8	247.3	246.8	247.2
5°	249.1	248.8	248.6	248.3	248.0	247.7	247.2	246.8	246.3	245.8	246.3
7.5°	246.8	246.6	246.4	246.3	246.1	245.9	245.5	245.2	244.8	244.4	245.0
10°	245.1	244.9	244.8	244.6	244.5	244.2	244.0	243.8	243.5	243.3	243.9
12.5°	242.2	242.2	242.2	242.3	242.3	242.2	242.1	241.9	241.7	241.5	242.2
15°	237.5	237.7	237.8	238.0	238.1	238.2	238.2	238.2	238.2	238.2	238.9
17.5°	231.5	231.8	232.1	232.5	232.8	233.1	233.4	233.6	233.9	234.2	234.9
20°	227.4	227.8	228.2	228.6	229.0	229.4	229.7	230.0	230.4	230.7	231.6
22.5°	223.2	223.6	224.0	224.5	225.0	225.5	225.9	226.3	226.8	227.2	228.1
25°	215.9	216.5	217.1	217.6	218.2	218.8	219.5	220.2	220.9	221.7	222.6
27.5°	207.3	208.2	209.1	210.0	211.0	211.8	212.6	213.5	214.4	215.2	216.4
30°	201.5	202.6	203.6	204.6	205.7	206.8	207.8	208.8	209.8	210.9	212.1
32.5°	195.2	196.4	197.5	198.7	199.9	201.1	202.3	203.5	204.8	206.0	207.5
35°	186.1	187.4	188.8	190.1	191.5	192.9	194.5	196.0	197.5	199.0	200.7
37.5°	176.1	177.7	179.3	180.9	182.4	184.2	186.2	188.1	190.0	192.0	194.0
40°	169.5	171.3	173.0	174.8	176.5	178.5	180.6	182.8	185.0	187.1	189.2
42.5°	163.2	164.9	166.7	168.4	170.2	172.3	174.8	177.3	179.7	182.2	184.5
45°	152.6	154.7	156.9	159.1	161.2	163.7	166.5	169.3	172.1	174.9	177.4
47.5°	142.1	144.5	146.9	149.2	151.5	154.4	157.6	160.9	164.2	167.5	170.1
50°	135.0	137.4	139.9	142.4	144.9	147.9	151.5	155.1	158.7	162.3	165.0
52.5°	128.0	130.6	133.2	135.9	138.5	141.6	145.4	149.2	153.0	156.9	159.6
55°	116.9	119.9	122.7	125.6	128.5	132.0	136.2	140.3	144.5	148.6	151.5
57.5°	106.0	109.2	112.5	115.7	119.0	122.7	127.0	131.2	135.5	139.7	142.8
60°	98.2	101.7	105.1	108.5	112.0	116.0	120.6	125.1	129.7	134.2	137.3
62.5°	91.3	94.9	98.5	102.0	105.6	109.6	114.2	118.7	123.3	127.9	131.1
65°	79.9	83.8	87.7	91.7	95.5	99.9	104.6	109.3	114.1	118.7	122.1
67.5°	69.4	73.5	77.6	81.7	85.8	90.2	95.1	99.9	104.7	109.6	112.9
70°	61.9	66.1	70.2	74.4	78.5	83.1	88.0	93.0	98.0	102.9	106.4
72.5°	55.0	59.3	63.5	67.8	72.2	76.8	81.8	86.8	91.9	96.9	100.3
75°	44.3	48.7	53.2	57.7	62.2	66.9	72.1	77.2	82.3	87.5	90.9
77.5°	33.9	38.6	43.3	47.9	52.7	57.6	62.8	68.0	73.2	78.3	81.8
80°	27.0	31.8	36.8	41.6	46.5	51.6	56.7	61.9	67.1	72.3	75.7
82.5°	21.2	26.1	30.9	35.6	40.5	45.6	50.8	56.1	61.3	66.5	69.9
85°	13.0	17.9	22.9	27.8	32.8	37.8	42.9	48.1	53.2	58.3	61.6
87.5°	7.2	12.3	17.3	22.4	27.5	32.9	38.6	44.3	50.0	55.6	58.9
90°	4.2	10.4	16.6	22.8	29.0	36.1	44.1	52.1	60.0	68.0	71.0
92.5°	13.8	19.3	24.7	30.2	35.6	41.2	46.8	52.4	58.0	63.6	66.8
95°	33.4	38.5	43.6	48.6	53.7	58.8	63.8	68.9	73.9	79.0	82.1
97.5°	58.4	62.8	67.3	71.9	76.4	81.1	86.3	91.3	96.4	101.6	104.5
100°	77.2	81.2	85.2	89.2	93.2	97.6	102.5	107.3	112.3	117.1	120.1
102.5°	96.6	100.2	103.7	107.3	110.8	115.0	119.9	124.7	129.5	134.4	137.4
105°	128.2	130.9	133.6	136.3	139.0	142.6	147.0	151.5	155.8	160.3	163.3
107.5°	160.3	162.8	165.2	167.6	170.1	173.3	177.2	181.3	185.2	189.2	191.9
110°	180.7	183.2	185.5	187.9	190.3	193.5	197.3	201.2	205.2	209.1	211.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	203.3	205.4	207.6	209.7	211.8	214.7	218.3	222.0	225.5	229.2	231.4
115°	236.5	238.2	239.9	241.5	243.2	245.7	249.1	252.4	255.7	259.0	261.3
117.5°	269.3	271.0	272.6	274.3	275.8	278.0	280.6	283.1	285.7	288.4	290.4
120°	291.4	292.9	294.2	295.6	296.9	298.7	300.9	303.0	305.1	307.3	309.6
122.5°	311.7	313.1	314.5	315.8	317.2	319.0	321.3	323.6	325.9	328.1	330.0
125°	342.9	344.0	345.2	346.3	347.5	349.2	351.4	353.6	355.7	357.9	359.7
127.5°	373.5	374.9	376.4	377.8	379.1	380.6	382.2	383.8	385.5	387.1	388.6
130°	392.8	394.4	396.0	397.7	399.3	400.8	402.2	403.6	405.0	406.5	408.1
132.5°	414.5	415.7	417.1	418.4	419.7	421.0	422.3	423.7	425.0	426.4	427.6
135°	443.0	444.4	445.8	447.3	448.8	450.0	451.1	452.1	453.2	454.2	455.8
137.5°	473.5	474.6	475.8	476.9	478.1	479.0	479.7	480.4	481.1	481.8	483.2
140°	491.8	492.9	494.0	495.1	496.1	497.1	498.0	498.8	499.6	500.4	501.7
142.5°	510.6	511.7	512.8	513.9	515.0	515.8	516.3	516.7	517.2	517.7	518.8
145°	537.3	538.2	539.1	540.0	541.0	541.8	542.6	543.4	544.2	544.9	545.6
147.5°	561.4	562.4	563.6	564.7	565.8	566.6	567.1	567.6	568.2	568.7	569.0
150°	577.8	578.6	579.4	580.2	581.0	581.6	582.2	582.7	583.2	583.8	584.2
152.5°	592.4	593.2	594.0	594.8	595.6	596.3	596.9	597.5	598.2	598.8	599.3
155°	614.3	614.7	615.1	615.4	615.8	616.2	616.6	617.0	617.4	617.8	618.5
157.5°	633.0	633.3	633.5	633.7	634.1	634.3	634.5	634.8	635.0	635.3	636.1
160°	644.3	644.5	644.8	645.1	645.3	645.5	645.6	645.8	645.9	646.0	646.8
162.5°	654.6	654.7	654.7	654.7	654.8	654.9	655.1	655.2	655.3	655.5	656.3
165°	668.4	668.2	668.1	668.0	667.9	667.8	667.8	667.8	667.8	667.8	668.7
167.5°	679.9	679.5	679.1	678.7	678.3	678.1	678.1	678.0	678.0	678.0	678.9
170°	686.0	685.6	685.2	684.8	684.4	684.2	684.0	683.9	683.8	683.7	684.6
172.5°	690.2	689.8	689.4	689.0	688.6	688.4	688.2	688.2	688.0	687.9	688.8
175°	695.4	695.1	694.7	694.3	693.9	693.6	693.2	693.0	692.8	692.4	693.4
177.5°	697.5	697.2	696.9	696.6	696.2	696.0	695.8	695.6	695.4	695.1	695.8
180°	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	248.3	248.3	248.3	248.3	248.3	248.3	248.3	248.3
2.5°	247.5	247.8	248.1	248.3	248.1	248.0	247.9	247.7
5°	246.8	247.2	247.7	247.9	247.8	247.7	247.6	247.6
7.5°	245.6	246.1	246.8	247.0	246.9	246.8	246.8	246.7
10°	244.5	245.2	245.8	246.1	246.1	246.0	245.9	245.8
12.5°	242.8	243.4	244.1	244.4	244.3	244.2	244.2	244.1
15°	239.6	240.4	241.1	241.5	241.4	241.3	241.2	241.1
17.5°	235.7	236.4	237.1	237.5	237.5	237.5	237.5	237.5
20°	232.4	233.3	234.2	234.6	234.6	234.6	234.6	234.6
22.5°	229.0	229.9	230.8	231.2	231.4	231.5	231.6	231.8
25°	223.6	224.6	225.5	226.1	226.3	226.6	226.8	227.0
27.5°	217.6	218.9	220.1	220.8	220.9	221.1	221.3	221.5
30°	213.4	214.8	216.0	216.7	217.0	217.2	217.5	217.7
32.5°	208.9	210.4	211.9	212.9	213.3	213.7	214.1	214.5
35°	202.6	204.3	206.0	207.2	207.8	208.3	208.9	209.5
37.5°	195.9	197.9	199.9	201.1	201.7	202.3	202.9	203.4
40°	191.3	193.4	195.4	196.9	197.6	198.3	199.0	199.7
42.5°	186.8	189.0	191.3	192.8	193.5	194.2	195.0	195.7
45°	179.8	182.4	184.8	186.5	187.3	188.1	188.9	189.6
47.5°	172.7	175.2	177.8	179.6	180.5	181.3	182.2	183.1
50°	167.7	170.5	173.2	175.0	175.9	176.7	177.6	178.5
52.5°	162.4	165.2	167.9	169.8	170.8	171.7	172.7	173.6
55°	154.4	157.2	160.2	162.1	163.1	164.2	165.2	166.3
57.5°	145.9	149.0	152.1	154.2	155.3	156.3	157.3	158.4
60°	140.3	143.4	146.4	148.5	149.6	150.7	151.9	153.0
62.5°	134.4	137.6	140.9	143.0	144.0	145.0	146.2	147.2
65°	125.3	128.6	131.9	134.0	135.1	136.1	137.1	138.2
67.5°	116.1	119.5	122.8	125.0	126.0	127.1	128.3	129.4
70°	109.8	113.2	116.7	118.9	119.9	120.8	121.8	122.7
72.5°	103.6	107.0	110.4	112.6	113.8	114.9	116.1	117.2
75°	94.3	97.8	101.2	103.5	104.5	105.5	106.5	107.6
77.5°	85.2	88.6	92.1	94.3	95.5	96.6	97.7	98.8
80°	79.1	82.4	85.8	88.0	89.1	90.2	91.3	92.4
82.5°	73.3	76.7	80.0	82.2	83.3	84.4	85.4	86.4
85°	65.0	68.4	71.8	74.0	75.1	76.2	77.3	78.4
87.5°	62.1	65.3	68.5	70.6	71.7	72.7	73.8	74.8
90°	74.0	76.9	79.9	81.8	82.9	84.1	85.1	86.2
92.5°	69.9	73.2	76.4	78.4	79.5	80.4	81.4	82.4
95°	85.1	88.1	91.2	93.0	93.7	94.4	95.1	95.9
97.5°	107.5	110.4	113.4	115.3	116.2	117.2	118.0	119.0
100°	123.0	126.0	129.0	130.8	131.6	132.3	133.0	133.8
102.5°	140.4	143.4	146.4	148.2	149.0	149.7	150.5	151.2
105°	166.4	169.4	172.5	174.5	175.4	176.3	177.1	178.0
107.5°	194.8	197.6	200.3	201.8	202.2	202.5	202.7	203.0
110°	214.2	216.7	219.4	220.9	221.3	221.8	222.3	222.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	233.7	235.9	238.1	239.6	240.2	240.7	241.4	241.9
115°	263.6	265.9	268.2	269.5	270.1	270.5	271.0	271.5
117.5°	292.5	294.5	296.6	297.8	298.3	298.7	299.0	299.5
120°	311.8	314.0	316.2	317.7	318.1	318.6	319.1	319.6
122.5°	331.8	333.7	335.6	336.8	337.2	337.7	338.2	338.7
125°	361.4	363.2	365.0	366.1	366.7	367.3	367.9	368.5
127.5°	390.1	391.6	393.1	394.0	394.3	394.6	394.8	395.1
130°	409.8	411.5	413.1	414.0	414.1	414.2	414.3	414.5
132.5°	429.0	430.2	431.5	432.2	432.5	432.7	432.9	433.2
135°	457.3	458.9	460.4	461.4	461.6	461.8	462.1	462.3
137.5°	484.5	485.8	487.3	488.0	488.0	488.0	488.0	488.1
140°	503.0	504.2	505.5	506.1	506.0	506.0	506.0	506.0
142.5°	519.9	521.1	522.2	522.7	522.6	522.5	522.4	522.3
145°	546.1	546.8	547.4	547.6	547.5	547.4	547.2	547.2
147.5°	569.3	569.7	570.1	570.1	569.8	569.5	569.2	568.9
150°	584.5	584.9	585.3	585.3	584.9	584.5	584.2	583.8
152.5°	599.8	600.2	600.8	600.8	600.2	599.8	599.3	598.8
155°	619.1	619.8	620.4	620.6	620.2	619.8	619.4	619.0
157.5°	637.0	637.9	638.7	638.9	638.3	637.6	637.0	636.4
160°	647.6	648.4	649.2	649.3	648.8	648.2	647.8	647.2
162.5°	657.2	658.1	659.0	659.1	658.5	657.9	657.3	656.6
165°	669.6	670.5	671.5	671.6	670.9	670.3	669.6	669.0
167.5°	679.9	680.7	681.7	681.8	681.1	680.4	679.8	679.1
170°	685.5	686.4	687.3	687.4	686.6	685.8	685.0	684.2
172.5°	689.8	690.6	691.6	691.6	690.9	690.1	689.3	688.5
175°	694.3	695.2	696.2	696.2	695.4	694.7	693.9	693.1
177.5°	696.4	697.0	697.7	697.7	697.0	696.4	695.8	695.1
180°	696.6	696.6	696.6	696.6	696.6	696.6	696.6	696.6

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