

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: P331636-927

Luminaire Tested: **S122RDIP-S290D925U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331636-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIP-S290D925U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3750.5 lumens
Efficiency: N/A
Efficacy: 100.5 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

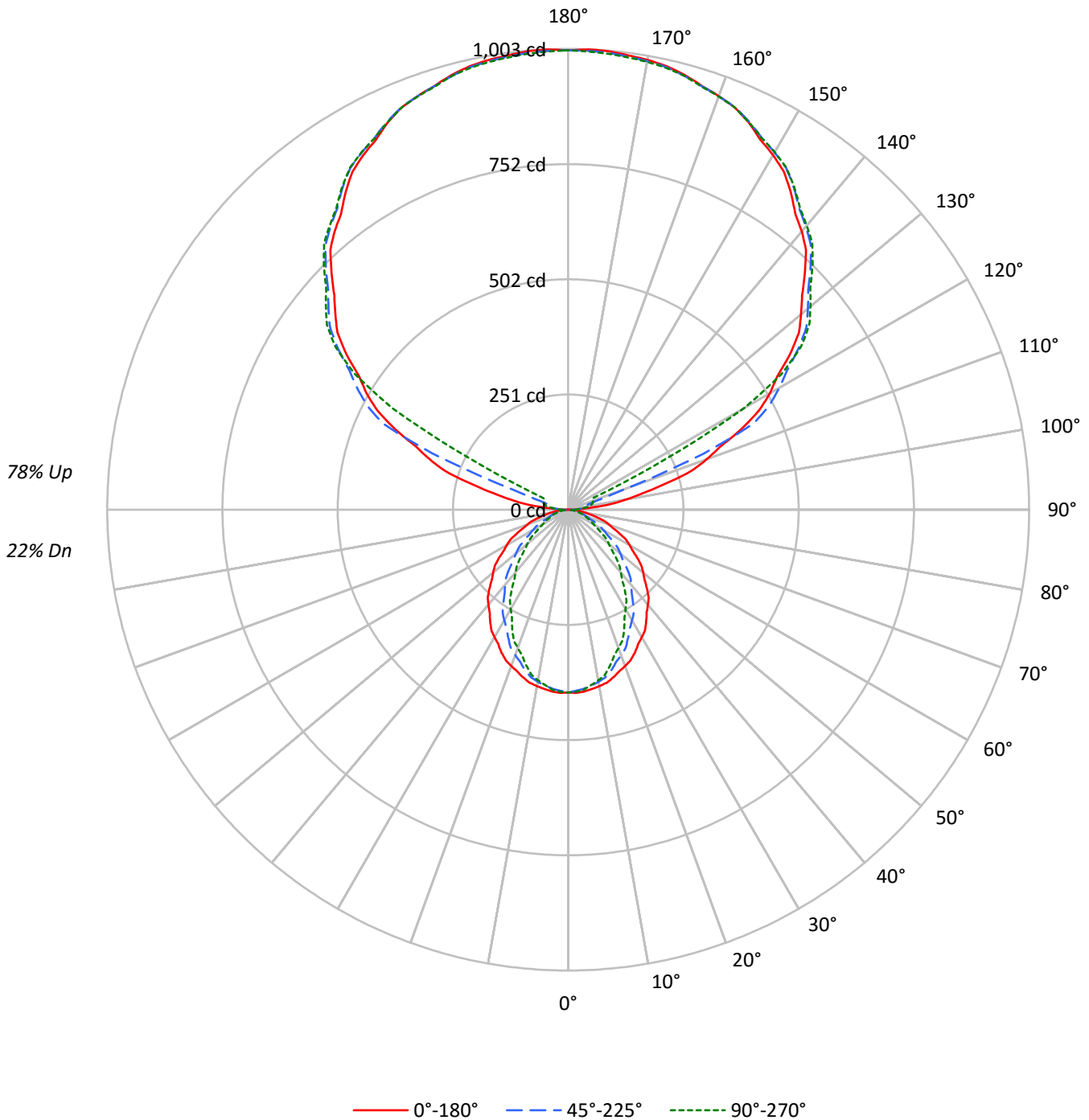
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100	100	100	89	89	89	89	68	68	68	48	48	48	30	30	30	22
1	92	88	84	81	81	78	75	72	59	57	56	43	41	40	27	26	26	19
2	84	77	71	66	74	68	63	59	52	49	46	38	36	34	24	23	22	16
3	76	67	61	55	67	60	54	50	46	42	39	33	31	29	21	20	19	14
4	70	60	52	47	62	53	47	42	41	37	33	30	27	25	19	18	17	12
5	64	53	46	40	57	47	41	36	37	32	29	27	24	22	17	16	14	11
6	59	48	40	34	52	43	36	31	33	28	25	24	21	19	16	14	13	9
7	54	43	35	30	48	38	32	27	30	25	22	22	19	17	14	13	11	8
8	50	39	31	26	45	35	28	24	27	23	19	20	17	15	13	12	10	8
9	47	35	28	23	41	32	26	21	25	20	17	18	15	13	12	11	9	7
10	44	32	25	21	39	29	23	19	23	18	15	17	14	12	11	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6421	6421	6421
5°	6446	6340	6374
10°	6396	6237	6184
15°	6322	6051	5877
20°	6220	5787	5498
25°	6116	5489	5129
30°	5972	5179	4657
35°	5830	4845	4242
40°	5689	4498	3762
45°	5523	4108	3329
50°	5350	3715	2901
55°	5177	3291	2494
60°	4973	2848	2070
65°	4741	2392	1883
70°	4471	1969	1733
75°	4130	1797	1616
80°	3645	1609	1469
85°	2853	1260	1260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.2	1.0
10°-20°	102.2	2.7
20°-30°	143.5	3.8
30°-40°	156.5	4.2
40°-50°	143.9	3.8
50°-60°	113.0	3.0
60°-70°	73.7	2.0
70°-80°	38.0	1.0
80°-90°	12.3	0.3
90°-100°	33.4	0.9
100°-110°	122.3	3.3
110°-120°	326.9	8.7
120°-130°	539.7	14.4
130°-140°	574.0	15.3
140°-150°	533.5	14.2
150°-160°	428.9	11.4
160°-170°	276.4	7.4
170°-180°	95.1	2.5
0°-30°	282.9	7.5
0°-40°	439.4	11.7
0°-60°	696.4	18.6
0°-90°	820.3	21.9
90°-120°	482.6	12.9
90°-150°	2129.7	56.8
90°-180°	2930.0	78.1
0°-180°	3750.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	398	398	398	398	398	
5°	398	396	391	394	393	38
15°	378	374	362	355	352	106
25°	343	331	308	294	288	158
35°	296	277	246	224	215	185
45°	242	217	180	155	146	187
55°	184	155	117	96	89	164
65°	124	95	63	51	49	123
75°	66	42	29	26	26	70
85°	15	8	7	7	7	18
90°	1	9	14	18	20	3
95°	47	25	28	32	31	58
105°	220	229	44	52	55	235
115°	416	429	446	127	59	409
125°	588	598	611	616	619	524
135°	728	739	746	753	752	562
145°	844	844	856	860	857	528
155°	930	924	932	936	930	428
165°	980	976	978	982	978	277
175°	1002	997	998	1003	996	95
180°	1000	1000	1000	1000	1000	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7
2.5°	399.1	398.8	398.5	398.2	397.8	397.3	396.6	395.9	395.2	394.5	395.1
5°	397.7	397.3	396.9	396.5	396.1	395.3	394.3	393.2	392.2	391.2	391.9
7.5°	393.6	393.1	392.5	392.1	391.6	390.7	389.5	388.2	387.1	385.9	386.0
10°	390.1	389.5	389.0	388.4	387.9	386.7	385.2	383.6	382.0	380.4	380.2
12.5°	385.8	385.1	384.4	383.7	383.0	381.7	379.6	377.6	375.5	373.4	373.0
15°	378.2	377.3	376.4	375.6	374.7	372.9	370.2	367.5	364.7	362.0	360.5
17.5°	368.9	367.6	366.2	364.9	363.5	361.2	357.7	354.2	350.7	347.2	345.4
20°	362.0	360.4	358.9	357.2	355.6	352.8	348.8	344.8	340.9	336.8	334.9
22.5°	354.6	352.8	350.9	349.2	347.4	344.2	339.7	335.2	330.7	326.2	323.6
25°	343.3	340.7	338.2	335.6	333.1	329.2	323.8	318.6	313.3	308.1	304.8
27.5°	329.8	327.0	324.2	321.5	318.6	314.3	308.3	302.4	296.4	290.5	286.7
30°	320.3	317.3	314.2	311.2	308.2	303.4	297.0	290.7	284.2	277.8	273.8
32.5°	311.1	307.5	304.0	300.4	296.8	291.8	285.3	278.8	272.3	265.7	261.1
35°	295.8	291.8	287.6	283.6	279.5	273.9	266.9	259.8	252.9	245.8	240.7
37.5°	280.6	276.1	271.6	267.1	262.6	256.7	249.1	241.6	234.2	226.6	221.1
40°	269.9	265.1	260.3	255.5	250.7	244.5	236.7	228.9	221.2	213.4	207.7
42.5°	259.0	253.9	248.8	243.8	238.8	232.2	224.2	216.2	208.2	200.2	194.3
45°	241.9	236.5	231.1	225.8	220.4	213.5	205.1	196.7	188.3	179.9	174.3
47.5°	225.1	219.4	213.8	208.1	202.4	195.3	186.6	177.9	169.2	160.6	155.0
50°	213.0	207.4	201.7	196.0	190.4	183.1	174.3	165.5	156.7	147.9	142.4
52.5°	201.2	195.3	189.4	183.5	177.5	170.2	161.6	153.0	144.4	135.8	130.5
55°	183.9	177.7	171.4	165.2	158.9	151.5	142.8	134.2	125.6	116.9	112.2
57.5°	166.1	159.7	153.3	146.9	140.5	133.2	124.8	116.6	108.3	100.0	95.5
60°	154.0	147.7	141.2	134.8	128.4	121.1	112.9	104.6	96.4	88.2	84.1
62.5°	142.2	135.9	129.4	123.0	116.6	109.5	101.6	93.8	86.0	78.1	74.2
65°	124.1	117.6	111.2	104.7	98.2	91.4	84.2	77.0	69.8	62.6	59.9
67.5°	106.7	100.3	93.9	87.5	81.0	74.5	68.0	61.6	55.1	48.6	47.4
70°	94.7	88.4	82.1	76.0	69.7	63.8	58.3	52.8	47.3	41.7	41.0
72.5°	83.1	77.2	71.1	65.2	59.2	54.0	49.6	45.2	40.7	36.3	35.6
75°	66.2	60.6	55.1	49.4	43.8	39.7	36.9	34.2	31.5	28.8	28.2
77.5°	49.6	44.7	39.8	34.9	29.9	26.9	25.5	24.2	22.9	21.6	21.3
80°	39.2	35.2	31.1	27.0	22.9	20.4	19.6	18.9	18.1	17.3	17.0
82.5°	29.7	26.5	23.4	20.2	17.0	15.1	14.6	14.0	13.5	13.0	12.8
85°	15.4	13.8	12.1	10.5	8.8	7.8	7.5	7.3	7.1	6.8	6.8
87.5°	4.8	4.6	4.4	4.3	4.1	4.2	4.4	4.7	4.9	5.2	5.3
90°	0.7	2.5	4.3	6.0	7.8	9.3	10.6	11.9	13.2	14.5	15.3
92.5°	14.6	14.4	14.3	14.1	13.9	14.2	14.9	15.5	16.2	16.8	17.2
95°	47.1	41.7	36.4	31.1	25.8	23.7	24.9	26.0	27.1	28.2	29.0
97.5°	93.3	78.3	63.5	48.5	33.5	27.3	29.9	32.6	35.2	37.8	38.4
100°	128.1	106.0	84.0	61.9	39.9	30.3	33.0	35.8	38.5	41.3	42.5
102.5°	166.3	161.6	156.9	152.3	147.6	133.9	111.0	88.1	65.3	42.4	44.0
105°	219.9	224.7	229.6	234.4	239.2	219.7	175.8	131.9	88.0	44.1	45.9
107.5°	281.1	285.0	288.9	292.8	296.8	272.4	219.7	167.1	114.4	61.8	60.0
110°	320.5	323.9	327.3	330.7	334.0	312.4	266.0	219.5	173.1	126.6	110.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	357.5	360.5	363.5	366.5	369.5	365.3	353.8	342.3	330.8	319.3	260.7
115°	416.0	418.7	421.4	424.2	426.9	430.3	434.4	438.4	442.4	446.4	371.9
117.5°	468.3	471.3	474.4	477.4	480.5	483.4	486.2	488.9	491.7	494.4	476.4
120°	506.4	508.8	511.3	513.7	516.1	518.7	521.7	524.5	527.4	530.3	532.3
122.5°	538.8	541.4	543.9	546.4	549.0	551.8	555.0	558.2	561.3	564.5	565.6
125°	588.2	590.3	592.4	594.5	596.6	599.1	602.2	605.2	608.3	611.3	612.5
127.5°	632.9	635.3	637.5	639.8	642.1	644.4	646.7	649.0	651.3	653.6	655.2
130°	661.3	663.8	666.4	669.0	671.5	673.8	675.5	677.2	679.1	680.8	682.5
132.5°	690.2	692.4	694.6	696.8	698.9	700.9	702.7	704.5	706.2	708.0	709.6
135°	727.9	730.4	733.0	735.5	738.2	740.1	741.6	743.1	744.5	745.9	747.5
137.5°	765.9	767.7	769.5	771.3	773.1	774.8	776.4	778.1	779.7	781.4	782.9
140°	790.8	792.1	793.4	794.6	795.9	797.5	799.2	801.0	802.8	804.5	806.0
142.5°	811.6	812.8	814.0	815.1	816.3	817.8	819.8	821.9	823.9	825.9	827.3
145°	844.3	844.1	844.0	843.8	843.7	844.9	847.7	850.4	853.2	855.9	857.0
147.5°	872.8	872.2	871.6	871.0	870.4	871.4	874.1	876.9	879.6	882.3	883.0
150°	891.4	890.3	889.1	888.0	886.8	887.6	890.2	892.7	895.3	897.9	898.8
152.5°	907.0	905.7	904.4	903.2	902.0	902.5	905.0	907.4	909.9	912.4	913.3
155°	929.7	928.3	926.8	925.3	923.9	924.2	926.1	928.0	929.9	931.8	932.8
157.5°	947.5	946.3	945.1	943.8	942.6	942.7	944.0	945.4	946.7	948.1	949.2
160°	957.9	957.0	956.0	955.0	954.0	954.0	955.0	956.0	957.0	957.9	958.9
162.5°	967.2	966.2	965.3	964.2	963.3	963.2	964.1	964.9	965.7	966.6	967.7
165°	979.6	978.7	977.7	976.7	975.7	975.5	976.0	976.4	977.0	977.5	978.6
167.5°	988.9	987.9	987.0	986.0	985.0	984.8	985.2	985.6	986.1	986.6	987.7
170°	994.1	993.1	992.1	991.2	990.2	989.9	990.2	990.5	990.9	991.2	992.3
172.5°	997.5	996.6	995.6	994.7	993.7	993.4	993.7	994.0	994.3	994.7	995.8
175°	1002.0	1000.9	999.8	998.6	997.5	997.1	997.4	997.8	998.1	998.4	999.6
177.5°	1002.7	1001.9	1001.0	1000.1	999.2	998.8	998.9	999.0	999.2	999.3	1000.2
180°	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	397.7	397.7	397.7	397.7	397.7	397.7	397.7	397.7
2.5°	395.8	396.4	397.0	397.3	397.2	397.0	396.9	396.8
5°	392.6	393.3	394.0	394.3	394.0	393.8	393.6	393.3
7.5°	386.3	386.5	386.7	386.6	386.2	385.7	385.3	384.9
10°	379.9	379.7	379.5	379.1	378.6	378.1	377.6	377.2
12.5°	372.6	372.2	371.8	371.1	370.3	369.6	368.8	368.0
15°	359.0	357.4	355.9	354.8	354.0	353.2	352.4	351.6
17.5°	343.6	341.7	340.0	338.4	337.0	335.6	334.2	332.9
20°	332.9	330.8	328.8	326.9	325.2	323.4	321.7	320.0
22.5°	321.1	318.5	315.9	313.9	312.6	311.3	310.0	308.7
25°	301.5	298.2	294.9	292.7	291.5	290.3	289.1	287.9
27.5°	282.8	279.0	275.2	272.4	270.5	268.5	266.6	264.7
30°	269.7	265.6	261.5	258.4	256.2	254.1	251.9	249.8
32.5°	256.4	251.8	247.1	243.8	241.8	239.7	237.7	235.7
35°	235.8	230.7	225.6	222.2	220.5	218.7	217.0	215.2
37.5°	215.6	210.0	204.5	200.7	198.7	196.6	194.6	192.6
40°	202.1	196.4	190.7	186.8	184.7	182.7	180.5	178.5
42.5°	188.4	182.5	176.7	172.8	170.7	168.7	166.7	164.7
45°	168.6	162.9	157.2	153.4	151.5	149.6	147.7	145.8
47.5°	149.2	143.6	138.0	134.3	132.5	130.8	129.0	127.3
50°	136.9	131.3	125.8	122.2	120.6	118.9	117.2	115.5
52.5°	125.2	119.9	114.5	111.1	109.6	108.0	106.4	104.9
55°	107.3	102.6	97.8	94.6	93.1	91.6	90.1	88.6
57.5°	91.2	86.7	82.4	79.5	78.3	77.0	75.7	74.4
60°	80.0	76.0	71.9	69.2	67.9	66.6	65.4	64.1
62.5°	70.3	66.5	62.6	60.2	59.4	58.7	57.9	57.1
65°	57.2	54.4	51.7	50.2	50.0	49.7	49.5	49.3
67.5°	46.2	44.9	43.6	42.9	42.6	42.4	42.1	41.9
70°	40.2	39.4	38.6	38.0	37.6	37.3	37.0	36.7
72.5°	34.9	34.2	33.6	33.2	33.0	32.8	32.6	32.4
75°	27.6	27.1	26.5	26.2	26.1	26.1	26.0	25.9
77.5°	20.9	20.6	20.3	20.1	20.0	19.8	19.7	19.6
80°	16.6	16.3	16.0	15.8	15.8	15.8	15.8	15.8
82.5°	12.6	12.4	12.2	12.1	12.1	12.1	12.1	12.1
85°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
87.5°	5.4	5.5	5.5	5.7	5.7	5.8	5.9	5.9
90°	16.1	16.9	17.7	18.2	18.5	18.9	19.3	19.6
92.5°	17.6	18.1	18.5	18.8	18.9	19.2	19.3	19.6
95°	29.8	30.7	31.4	31.8	31.6	31.4	31.3	31.1
97.5°	39.1	39.7	40.3	40.7	41.0	41.1	41.4	41.5
100°	43.8	45.1	46.4	47.2	47.5	47.8	48.2	48.5
102.5°	45.7	47.5	49.1	50.1	50.6	51.0	51.5	52.0
105°	47.7	49.4	51.2	52.4	53.1	53.7	54.3	55.0
107.5°	58.1	56.4	54.6	54.0	54.7	55.3	55.9	56.6
110°	94.4	78.3	62.3	54.6	55.2	55.8	56.5	57.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	202.1	143.4	84.8	55.7	56.2	56.7	57.2	57.8
115°	297.5	223.1	148.6	105.6	94.0	82.5	70.9	59.3
117.5°	458.4	440.5	422.4	394.3	356.3	318.3	280.3	242.2
120°	534.2	536.1	538.1	528.1	506.4	484.7	463.0	441.3
122.5°	566.8	567.9	569.1	567.6	563.4	559.1	554.9	550.7
125°	613.6	614.7	615.8	616.6	617.1	617.6	618.1	618.6
127.5°	656.9	658.5	660.2	661.0	661.2	661.2	661.3	661.4
130°	684.4	686.1	687.9	688.7	688.6	688.3	688.2	688.0
132.5°	711.1	712.6	714.1	714.7	714.5	714.4	714.2	714.1
135°	749.2	750.8	752.3	753.0	752.7	752.3	752.0	751.7
137.5°	784.5	786.1	787.7	788.2	787.7	787.1	786.6	786.0
140°	807.4	808.9	810.3	810.6	809.8	809.1	808.3	807.4
142.5°	828.5	829.9	831.2	831.5	830.7	829.9	829.1	828.2
145°	858.2	859.3	860.4	860.5	859.8	859.0	858.2	857.4
147.5°	883.9	884.7	885.6	885.7	884.9	884.3	883.6	883.0
150°	899.8	900.8	901.7	901.8	901.0	900.2	899.4	898.6
152.5°	914.3	915.2	916.2	916.2	915.0	914.0	913.0	911.9
155°	933.8	934.8	935.7	935.6	934.3	933.0	931.7	930.4
157.5°	950.2	951.3	952.4	952.4	951.1	949.8	948.6	947.4
160°	959.8	960.8	961.8	961.7	960.5	959.4	958.3	957.2
162.5°	968.8	969.9	971.0	970.8	969.5	968.0	966.7	965.3
165°	979.7	980.8	981.9	981.9	980.8	979.7	978.6	977.5
167.5°	988.8	989.9	991.1	990.9	989.4	988.0	986.6	985.1
170°	993.5	994.6	995.7	995.5	994.1	992.6	991.2	989.8
172.5°	996.9	998.1	999.2	999.0	997.5	996.1	994.7	993.2
175°	1000.7	1001.8	1002.9	1002.7	1001.1	999.5	997.8	996.2
177.5°	1001.1	1002.0	1002.9	1002.7	1001.6	1000.4	999.3	998.1
180°	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9

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