

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: P331273-927

Luminaire Tested: **SA2XXDIP-C290D925U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331273-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C290D925U927-4F0-1E-UDD-F  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3884.8 lumens  
Efficiency: N/A  
Efficacy: 104.1 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

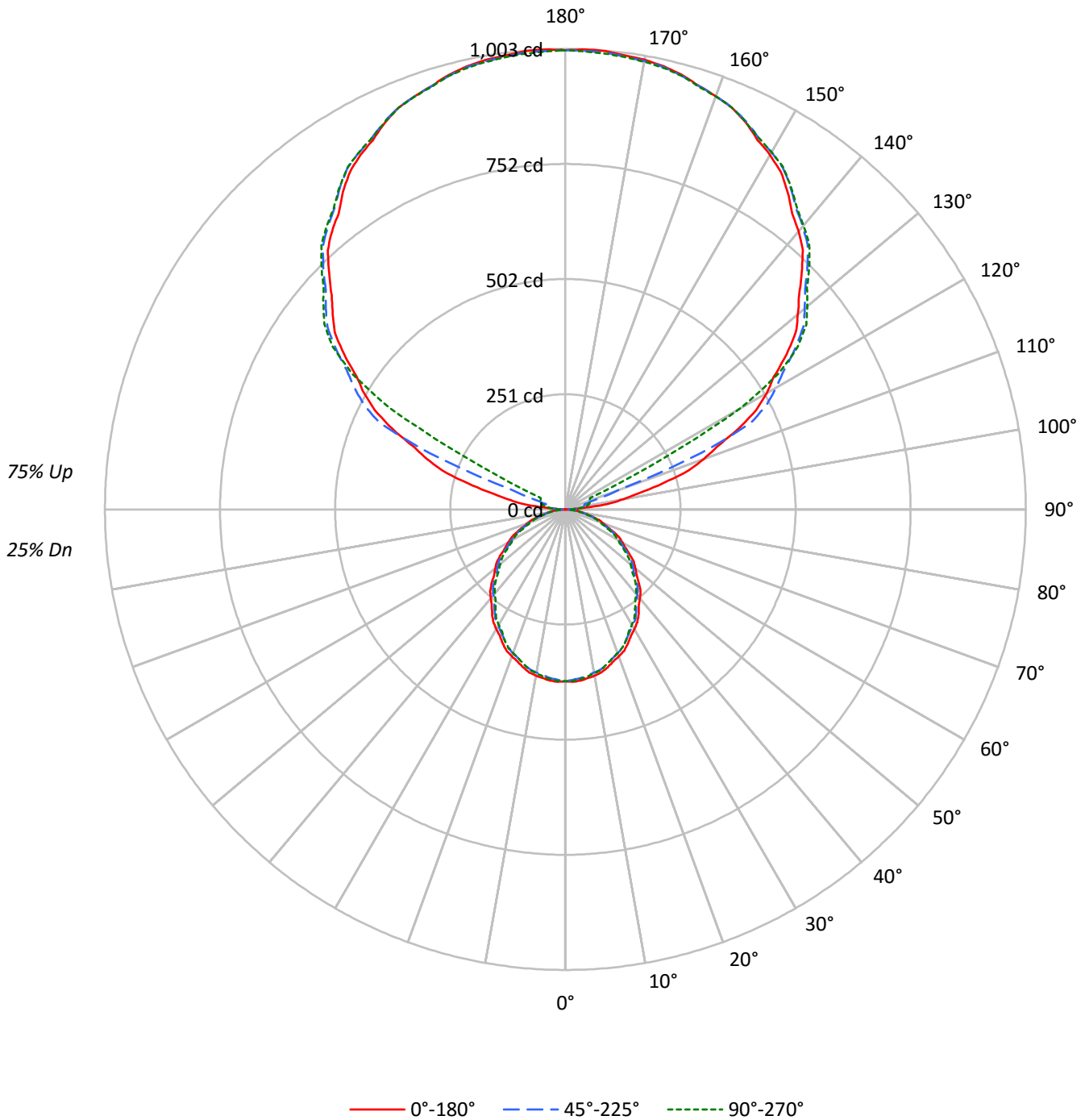
Input Watts (W): 37.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	101	101	101	101	90	90	90	90	69	69	69	50	50	50	33	33	33	25				
1	92	88	84	81	82	78	75	72	60	58	57	44	43	42	29	28	28	21				
2	84	77	71	66	74	68	64	59	53	50	47	39	37	35	25	24	23	17				
3	76	67	60	55	68	60	54	50	47	43	39	34	32	29	22	21	20	15				
4	70	59	52	46	62	53	47	42	41	37	33	30	27	25	20	18	17	13				
5	64	53	45	39	57	47	41	36	37	32	29	27	24	22	18	16	15	11				
6	59	47	39	34	52	42	36	31	33	28	25	24	21	19	16	14	13	10				
7	54	42	35	30	48	38	32	27	30	25	22	22	19	17	15	13	11	9				
8	50	38	31	26	45	34	28	24	27	22	19	20	17	15	14	12	10	8				
9	47	35	28	23	41	31	25	21	25	20	17	18	15	13	13	11	9	7				
10	43	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	8	6				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6042	6042	6042
5°	6065	5977	6015
10°	6030	5917	5946
15°	5954	5840	5835
20°	5849	5727	5720
25°	5744	5585	5585
30°	5610	5455	5407
35°	5483	5298	5219
40°	5324	5143	5044
45°	5167	4987	4864
50°	4999	4828	4657
55°	4822	4642	4467
60°	4624	4414	4253
65°	4413	4195	4000
70°	4145	3923	3734
75°	3768	3612	3525
80°	3347	3245	3078
85°	2723	2594	2334



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.2	0.9
10°-20°	99.0	2.5
20°-30°	145.6	3.7
30°-40°	169.1	4.4
40°-50°	168.9	4.3
50°-60°	147.3	3.8
60°-70°	108.9	2.8
70°-80°	61.7	1.6
80°-90°	19.1	0.5
90°-100°	33.4	0.9
100°-110°	122.3	3.1
110°-120°	326.9	8.4
120°-130°	539.7	13.9
130°-140°	574.0	14.8
140°-150°	533.5	13.7
150°-160°	428.9	11.0
160°-170°	276.4	7.1
170°-180°	95.1	2.4
0°-30°	279.8	7.2
0°-40°	448.8	11.6
0°-60°	765.0	19.7
0°-90°	954.6	24.6
90°-120°	482.6	12.4
90°-150°	2129.7	54.8
90°-180°	2930.0	75.4
0°-180°	3884.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	374	374	374	374	374	
5°	374	373	369	372	371	35
15°	356	354	349	351	349	100
25°	322	319	314	314	314	148
35°	278	274	269	267	265	174
45°	226	224	218	215	213	175
55°	171	169	165	161	159	153
65°	116	113	110	107	105	114
75°	60	60	58	56	56	65
85°	15	14	14	13	13	17
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°	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2
2.5°	376.0	375.7	375.3	375.0	374.7	374.2	373.5	372.8	372.1	371.4	372.0
5°	374.2	373.9	373.6	373.3	373.0	372.4	371.5	370.7	369.7	368.8	369.5
7.5°	371.0	370.4	369.9	369.5	369.0	368.3	367.4	366.5	365.6	364.7	365.4
10°	367.8	367.3	366.7	366.1	365.5	364.8	363.8	362.9	361.9	360.9	361.6
12.5°	363.5	363.0	362.5	361.9	361.5	360.8	359.8	358.9	357.9	357.0	357.4
15°	356.2	355.8	355.3	354.8	354.3	353.6	352.5	351.5	350.5	349.4	349.7
17.5°	347.1	346.6	346.1	345.6	345.2	344.4	343.3	342.2	341.2	340.2	340.5
20°	340.4	339.9	339.5	339.0	338.5	337.7	336.6	335.5	334.4	333.3	333.5
22.5°	333.8	333.1	332.5	331.8	331.1	330.3	329.2	328.1	327.1	326.1	326.1
25°	322.4	321.8	321.2	320.5	319.9	318.9	317.5	316.2	314.8	313.5	313.6
27.5°	309.5	309.0	308.3	307.8	307.2	306.3	305.3	304.2	303.2	302.1	301.8
30°	300.9	300.2	299.6	299.0	298.3	297.4	296.2	295.0	293.7	292.6	292.3
32.5°	291.6	291.1	290.7	290.1	289.6	288.7	287.4	286.2	284.9	283.7	283.2
35°	278.2	277.3	276.6	275.8	275.0	273.9	272.7	271.4	270.1	268.8	268.3
37.5°	263.0	262.3	261.6	260.9	260.2	259.2	257.9	256.7	255.3	254.1	253.5
40°	252.6	252.0	251.4	250.7	250.1	249.1	247.8	246.5	245.3	244.0	243.3
42.5°	242.6	241.9	241.3	240.7	240.0	239.0	237.7	236.5	235.2	233.9	233.1
45°	226.3	225.8	225.2	224.7	224.1	223.2	222.0	220.9	219.7	218.4	217.5
47.5°	210.2	209.7	209.2	208.7	208.1	207.2	206.0	204.8	203.5	202.2	201.3
50°	199.0	198.6	198.2	197.8	197.4	196.6	195.5	194.4	193.3	192.2	191.1
52.5°	188.1	187.5	187.0	186.5	185.9	185.1	184.1	183.1	182.0	180.9	180.0
55°	171.3	170.8	170.3	169.8	169.4	168.7	167.7	166.8	165.8	164.9	163.8
57.5°	154.5	154.1	153.7	153.3	152.9	152.2	151.1	150.1	149.0	148.0	147.0
60°	143.2	142.9	142.6	142.3	142.0	141.2	140.1	139.0	137.8	136.7	135.9
62.5°	132.3	131.7	131.3	130.8	130.2	129.5	128.7	127.9	127.0	126.1	125.2
65°	115.5	115.0	114.5	114.1	113.6	113.0	112.2	111.4	110.6	109.8	109.0
67.5°	98.5	98.1	97.7	97.3	97.0	96.4	95.6	94.9	94.2	93.5	92.9
70°	87.8	87.5	87.1	86.8	86.5	86.0	85.3	84.6	83.8	83.1	82.5
72.5°	76.8	76.5	76.2	75.9	75.6	75.2	74.7	74.3	73.8	73.4	72.8
75°	60.4	60.3	60.1	60.0	59.8	59.6	59.2	58.7	58.3	57.9	57.4
77.5°	45.8	45.5	45.2	45.0	44.7	44.4	44.3	44.1	44.0	43.8	43.6
80°	36.0	35.9	35.8	35.7	35.6	35.6	35.4	35.3	35.1	34.9	34.7
82.5°	26.8	26.8	26.8	26.7	26.7	26.6	26.5	26.5	26.4	26.3	26.0
85°	14.7	14.7	14.6	14.5	14.4	14.3	14.3	14.2	14.1	14.0	13.8
87.5°	5.3	5.5	5.8	6.0	6.3	6.4	6.6	6.7	6.8	6.9	6.9
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°	374.2	374.2	374.2	374.2	374.2	374.2	374.2	374.2
2.5°	372.6	373.3	373.9	374.2	374.1	373.9	373.8	373.7
5°	370.2	370.8	371.5	371.7	371.5	371.4	371.2	371.1
7.5°	366.0	366.6	367.3	367.5	367.3	367.1	366.9	366.8
10°	362.3	362.9	363.5	363.7	363.5	363.2	363.0	362.7
12.5°	357.8	358.2	358.7	358.9	358.7	358.5	358.3	358.1
15°	350.1	350.4	350.7	350.7	350.3	349.9	349.5	349.1
17.5°	340.9	341.3	341.6	341.6	341.2	340.9	340.5	340.1
20°	333.7	334.0	334.2	334.1	333.8	333.5	333.2	332.9
22.5°	326.1	326.2	326.2	326.1	326.0	325.7	325.6	325.4
25°	313.8	313.9	314.1	314.1	313.9	313.8	313.6	313.5
27.5°	301.6	301.3	301.1	300.8	300.4	300.0	299.7	299.3
30°	292.1	291.8	291.6	291.4	291.0	290.7	290.4	290.0
32.5°	282.8	282.3	281.9	281.5	281.2	280.9	280.6	280.3
35°	267.8	267.4	266.9	266.5	266.1	265.7	265.3	264.8
37.5°	252.9	252.3	251.7	251.2	250.8	250.4	250.1	249.7
40°	242.6	241.9	241.1	240.6	240.3	240.0	239.6	239.3
42.5°	232.3	231.6	230.8	230.1	229.7	229.3	228.9	228.4
45°	216.7	215.8	214.9	214.3	214.0	213.7	213.3	213.0
47.5°	200.4	199.5	198.5	197.8	197.4	196.9	196.5	196.0
50°	190.0	188.8	187.7	187.0	186.6	186.2	185.8	185.4
52.5°	179.1	178.2	177.2	176.5	175.9	175.5	174.9	174.4
55°	162.9	161.9	161.0	160.3	159.9	159.5	159.1	158.7
57.5°	146.1	145.1	144.2	143.5	143.3	143.0	142.7	142.4
60°	135.0	134.1	133.2	132.7	132.5	132.2	132.0	131.7
62.5°	124.5	123.7	122.9	122.3	122.0	121.7	121.4	121.0
65°	108.3	107.6	106.9	106.3	105.9	105.5	105.1	104.7
67.5°	92.4	91.8	91.3	90.8	90.5	90.2	89.8	89.5
70°	82.0	81.4	80.9	80.5	80.2	79.8	79.5	79.1
72.5°	72.2	71.7	71.1	70.7	70.4	70.2	69.9	69.6
75°	57.0	56.5	56.0	55.8	56.0	56.2	56.3	56.5
77.5°	43.3	43.1	42.9	42.6	42.4	42.2	42.0	41.7
80°	34.5	34.2	34.0	33.7	33.6	33.4	33.3	33.1
82.5°	25.7	25.3	25.0	24.9	24.9	24.8	24.8	24.8
85°	13.5	13.3	13.1	12.9	12.8	12.8	12.7	12.6
87.5°	6.9	6.8	6.8	6.8	6.8	6.8	6.8	6.8
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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