

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: P332257-927

Luminaire Tested: **S123RDIP-S340D805U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332257-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S340D805U927-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3332.4 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

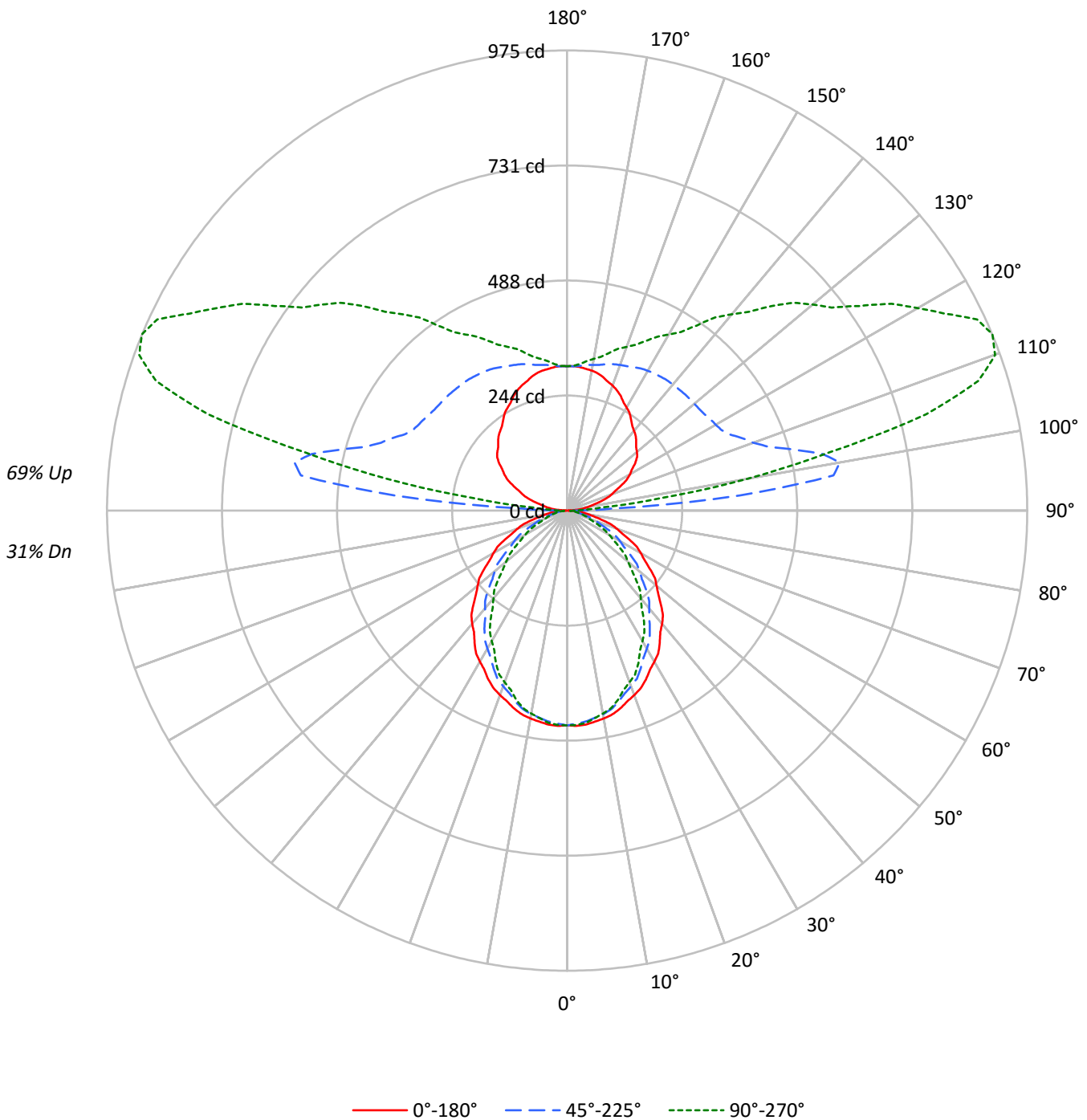
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	92	92	92	73	73	73	55	55	55	39	39	39	31
1	94	90	86	83	84	81	78	75	64	62	60	49	47	46	34	34	33	26
2	85	78	73	68	77	71	66	62	56	53	50	43	41	39	30	29	28	22
3	78	69	62	56	70	62	56	52	50	46	42	38	35	33	27	25	24	19
4	71	61	54	48	64	55	49	44	44	40	36	34	31	28	24	22	21	17
5	65	54	47	41	59	49	43	38	40	35	31	30	27	25	22	20	18	15
6	60	49	41	35	54	44	37	33	36	31	27	28	24	21	20	18	16	13
7	56	44	36	31	50	40	33	29	32	27	24	25	22	19	18	16	14	11
8	52	40	32	27	46	36	30	25	29	24	21	23	19	17	17	15	13	10
9	48	36	29	24	43	33	27	22	27	22	19	21	18	15	16	13	12	9
10	45	33	26	22	40	30	24	20	25	20	17	19	16	14	14	12	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4899	4899	4899
5°	4917	4850	4878
10°	4889	4790	4773
15°	4837	4677	4628
20°	4765	4537	4431
25°	4691	4380	4240
30°	4593	4197	3967
35°	4491	4016	3720
40°	4398	3801	3413
45°	4276	3589	3136
50°	4141	3349	2825
55°	4003	3076	2535
60°	3877	2781	2217
65°	3713	2463	1897
70°	3509	2068	1533
75°	3211	1626	1443
80°	2858	1444	1327
85°	2421	1272	1186



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.7	1.3
10°-20°	118.9	3.6
20°-30°	171.2	5.1
30°-40°	192.9	5.8
40°-50°	184.5	5.5
50°-60°	151.1	4.5
60°-70°	101.9	3.1
70°-80°	51.3	1.5
80°-90°	15.9	0.5
90°-100°	170.3	5.1
100°-110°	482.1	14.5
110°-120°	474.3	14.2
120°-130°	378.3	11.4
130°-140°	298.3	9.0
140°-150°	222.6	6.7
150°-160°	155.2	4.7
160°-170°	91.2	2.7
170°-180°	29.7	0.9
0°-30°	332.9	10.0
0°-40°	525.7	15.8
0°-60°	861.4	25.8
0°-90°	1030.5	30.9
90°-120°	1126.7	33.8
90°-150°	2025.9	60.8
90°-180°	2302.0	69.1
0°-180°	3332.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	455	455	455	455	455	
5°	455	453	449	452	452	43
15°	434	430	420	418	415	122
25°	395	385	369	361	357	182
35°	342	328	306	290	283	214
45°	281	264	236	215	206	217
55°	213	195	164	143	135	191
65°	146	125	97	79	74	144
75°	77	59	39	36	35	82
85°	20	12	10	10	10	22
90°	1	7	15	17	18	2
95°	21	68	367	107	72	23
105°	72	106	498	871	788	76
115°	127	158	381	835	958	126
125°	176	208	356	644	756	157
135°	207	247	350	530	612	160
145°	236	270	346	435	479	148
155°	268	289	335	381	397	123
165°	293	301	321	340	346	83
175°	305	306	308	312	312	29
180°	306	306	306	306	306	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1
2.5°	456.6	456.3	456.1	455.8	455.6	455.0	454.2	453.4	452.7	451.9	452.6
5°	455.1	454.7	454.3	453.9	453.4	452.8	451.8	450.8	449.8	448.9	449.6
7.5°	450.9	450.4	450.0	449.6	449.2	448.3	447.0	445.8	444.4	443.1	443.5
10°	447.3	446.8	446.2	445.7	445.0	444.0	442.6	441.1	439.6	438.2	438.2
12.5°	442.4	441.7	441.1	440.5	439.8	438.6	436.7	435.0	433.2	431.3	431.3
15°	434.1	433.2	432.3	431.3	430.5	428.9	426.6	424.3	422.0	419.7	419.3
17.5°	423.7	422.6	421.6	420.5	419.5	417.5	414.5	411.6	408.8	405.8	405.0
20°	416.0	414.7	413.4	412.1	410.7	408.5	405.4	402.3	399.2	396.1	395.0
22.5°	407.4	405.9	404.4	402.9	401.4	399.0	395.7	392.4	389.0	385.7	384.4
25°	395.0	392.9	390.9	388.8	386.7	383.8	380.1	376.3	372.5	368.8	367.0
27.5°	379.9	377.6	375.3	373.0	370.7	367.6	363.4	359.1	354.9	350.7	348.3
30°	369.5	367.0	364.6	362.1	359.7	356.1	351.5	346.9	342.3	337.7	334.9
32.5°	359.2	356.3	353.6	350.8	348.0	344.2	339.3	334.5	329.6	324.7	321.7
35°	341.8	338.8	335.9	333.0	330.0	326.0	320.9	315.8	310.7	305.6	302.1
37.5°	324.2	320.9	317.7	314.4	311.1	306.7	301.3	295.9	290.5	285.0	281.1
40°	313.0	309.4	305.8	302.2	298.6	293.8	288.0	282.2	276.4	270.5	266.3
42.5°	300.3	296.7	293.1	289.5	285.9	281.1	275.0	269.0	263.0	257.0	252.3
45°	280.9	277.2	273.5	269.8	266.1	261.1	254.8	248.5	242.2	235.8	231.2
47.5°	261.5	257.5	253.3	249.3	245.3	240.1	233.8	227.4	221.2	214.8	209.8
50°	247.3	243.4	239.6	235.8	231.9	226.6	220.0	213.3	206.7	200.0	195.0
52.5°	234.6	230.4	226.2	222.0	217.9	212.5	205.9	199.3	192.7	186.2	180.9
55°	213.3	209.3	205.3	201.3	197.3	191.8	184.8	177.8	170.9	163.9	159.1
57.5°	193.7	189.3	185.0	180.5	176.2	170.5	163.5	156.5	149.5	142.5	138.0
60°	180.1	175.6	171.1	166.6	162.1	156.5	149.6	142.8	136.0	129.2	124.8
62.5°	166.5	162.0	157.5	153.0	148.5	142.8	136.0	129.2	122.4	115.6	111.5
65°	145.8	141.3	136.8	132.3	127.8	122.3	115.9	109.5	103.1	96.7	92.7
67.5°	125.1	120.5	115.9	111.4	106.8	101.5	95.3	89.2	83.0	76.9	73.9
70°	111.5	107.0	102.6	98.2	93.8	88.6	82.9	77.2	71.5	65.7	62.8
72.5°	97.9	93.6	89.2	84.8	80.4	75.7	70.4	65.2	60.0	54.7	52.4
75°	77.2	73.2	69.2	65.4	61.4	57.2	52.7	48.2	43.6	39.1	38.3
77.5°	58.2	54.7	51.1	47.5	44.0	40.8	37.9	34.9	32.1	29.2	28.8
80°	46.1	42.8	39.5	36.0	32.7	30.2	28.4	26.7	25.0	23.3	23.0
82.5°	34.6	31.7	28.8	25.9	23.0	21.2	20.4	19.6	18.8	17.9	17.7
85°	19.6	17.7	15.9	14.2	12.4	11.3	11.1	10.9	10.6	10.3	10.1
87.5°	7.4	6.9	6.4	6.0	5.5	5.5	5.8	6.2	6.6	7.0	6.7
90°	1.3	2.5	3.7	5.5	6.8	8.1	9.9	11.8	13.6	15.4	14.9
92.5°	7.7	11.4	16.6	21.5	26.6	35.8	52.0	78.7	104.8	95.2	71.9
95°	21.1	22.9	29.7	40.2	56.3	80.5	133.2	225.5	327.0	367.3	297.9
97.5°	35.9	36.5	41.9	51.0	66.9	93.0	143.3	247.4	416.7	569.2	609.0
100°	45.9	46.4	50.8	59.5	74.3	98.5	141.8	233.5	396.4	586.5	708.5
102.5°	56.2	57.4	61.2	69.4	82.8	104.9	143.8	221.6	366.6	554.3	713.5
105°	71.9	73.7	77.4	84.8	96.6	115.8	149.2	213.0	330.1	498.0	675.7
107.5°	88.4	90.3	93.9	101.2	112.3	130.1	159.4	212.5	306.8	448.1	609.6
110°	100.4	102.2	105.3	112.1	122.6	140.0	167.9	214.9	297.9	419.9	567.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	111.2	113.1	116.2	123.0	133.6	150.4	176.3	219.8	292.9	401.1	531.8
115°	127.0	129.4	133.2	139.3	149.9	166.6	190.1	227.9	291.1	380.9	488.1
117.5°	142.7	145.5	148.6	154.3	166.1	181.6	204.9	238.6	292.2	369.0	461.7
120°	153.6	155.4	158.5	164.8	176.5	192.0	214.3	246.5	294.2	363.5	447.8
122.5°	163.0	164.9	167.9	174.7	185.9	202.4	224.2	253.9	297.6	360.1	436.4
125°	176.5	177.8	181.5	188.3	200.0	216.7	238.4	265.7	302.9	355.5	421.8
127.5°	186.8	188.6	193.2	200.2	213.2	229.9	250.8	275.4	308.8	353.3	408.9
130°	193.2	195.1	200.7	208.1	221.1	237.8	258.3	281.8	312.8	351.8	402.0
132.5°	198.2	200.6	206.6	215.6	228.5	244.8	264.7	287.7	315.8	351.3	395.5
135°	206.8	209.4	216.2	225.5	238.4	255.2	274.3	295.4	320.2	350.5	387.1
137.5°	215.0	217.6	224.3	234.2	247.1	262.6	281.1	301.1	323.2	349.2	379.8
140°	220.5	223.6	229.8	239.7	252.1	267.5	285.5	304.1	325.2	348.7	375.3
142.5°	226.4	229.0	235.8	244.6	257.1	271.5	289.0	307.0	326.6	347.7	371.4
145°	236.0	237.8	243.4	252.7	263.2	277.5	293.6	310.3	327.6	346.2	366.1
147.5°	245.7	246.8	252.2	260.2	270.4	282.6	297.3	312.3	327.6	343.9	360.8
150°	252.1	252.7	257.6	265.7	274.3	285.5	299.8	312.8	327.6	341.9	357.4
152.5°	258.5	258.6	263.6	270.7	278.3	289.0	301.3	313.8	326.1	339.4	353.4
155°	268.2	268.2	271.9	278.1	284.9	293.6	304.1	314.0	324.6	335.1	347.5
157.5°	275.8	276.3	279.3	284.8	290.6	297.3	305.7	314.7	322.4	331.2	340.8
160°	281.8	281.8	284.3	289.2	293.6	299.8	307.2	314.7	321.5	328.3	336.3
162.5°	286.3	286.3	288.3	292.2	296.0	301.3	307.7	314.1	319.5	325.3	331.8
165°	292.9	292.3	293.6	296.7	299.1	303.5	308.4	312.8	316.5	320.8	325.7
167.5°	298.0	297.3	297.9	300.2	302.0	304.8	308.3	311.8	313.5	316.4	320.0
170°	301.0	299.8	300.4	302.2	303.5	304.8	307.8	310.3	311.6	313.4	316.5
172.5°	303.0	302.2	302.4	303.7	304.4	305.2	307.8	309.8	310.1	310.9	313.0
175°	305.3	304.8	304.1	305.3	305.3	305.9	307.2	308.4	307.8	307.8	309.0
177.5°	306.4	305.9	305.5	305.9	305.9	305.9	306.4	307.4	306.4	305.9	306.4
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	455.1	455.1	455.1	455.1	455.1	455.1	455.1	455.1
2.5°	453.3	454.0	454.8	455.0	455.0	454.8	454.6	454.6
5°	450.4	451.1	451.8	452.1	451.9	451.8	451.6	451.5
7.5°	444.0	444.4	444.8	444.9	444.6	444.3	444.0	443.8
10°	438.3	438.4	438.5	438.3	437.9	437.5	437.0	436.7
12.5°	431.3	431.2	431.2	430.9	430.4	429.9	429.4	429.0
15°	418.8	418.4	418.0	417.6	417.0	416.4	415.8	415.3
17.5°	404.1	403.2	402.3	401.5	400.6	399.7	398.9	398.1
20°	394.0	392.8	391.8	390.8	389.8	388.8	387.9	386.8
22.5°	383.1	381.8	380.4	379.3	378.3	377.5	376.5	375.7
25°	365.3	363.6	361.9	360.5	359.7	358.8	357.8	357.0
27.5°	345.9	343.6	341.2	339.3	337.9	336.5	335.2	333.7
30°	332.2	329.4	326.6	324.6	323.2	321.9	320.6	319.2
32.5°	318.6	315.6	312.5	310.3	309.0	307.6	306.2	304.8
35°	298.6	295.0	291.5	289.0	287.6	286.1	284.6	283.1
37.5°	277.0	273.0	269.0	266.1	264.3	262.4	260.6	258.8
40°	262.1	257.8	253.5	250.4	248.5	246.7	244.8	242.9
42.5°	247.6	243.0	238.4	235.2	233.5	231.8	230.1	228.4
45°	226.5	221.8	217.1	213.8	211.9	209.9	207.9	206.0
47.5°	204.6	199.6	194.5	191.1	189.3	187.6	185.8	184.0
50°	189.9	184.8	179.7	176.3	174.4	172.5	170.6	168.7
52.5°	175.6	170.3	165.1	161.6	159.9	158.2	156.5	154.8
55°	154.4	149.6	144.9	141.6	140.1	138.4	136.7	135.1
57.5°	133.5	129.0	124.5	121.5	120.2	118.7	117.4	116.0
60°	120.3	115.9	111.5	108.5	107.2	105.8	104.4	103.0
62.5°	107.3	103.1	98.9	96.1	94.7	93.2	91.7	90.3
65°	88.6	84.7	80.6	78.2	77.2	76.4	75.5	74.5
67.5°	70.9	67.9	64.9	62.9	61.9	61.0	60.0	59.1
70°	60.0	57.1	54.2	52.4	51.4	50.5	49.6	48.7
72.5°	50.1	47.8	45.4	44.0	43.6	43.3	42.9	42.5
75°	37.5	36.7	35.8	35.3	35.2	35.0	34.9	34.7
77.5°	28.3	27.8	27.4	27.1	26.9	26.8	26.6	26.5
80°	22.7	22.5	22.3	22.1	21.9	21.7	21.5	21.4
82.5°	17.4	17.2	17.0	16.8	16.8	16.7	16.7	16.7
85°	10.0	9.8	9.7	9.6	9.6	9.6	9.6	9.6
87.5°	6.8	6.9	6.9	7.1	6.9	7.0	7.1	6.8
90°	15.4	16.1	16.7	18.0	17.3	18.0	18.6	18.0
92.5°	52.1	41.4	36.5	33.4	32.2	30.3	31.0	29.9
95°	223.0	151.1	118.3	96.0	84.2	78.7	74.3	71.9
97.5°	555.8	445.2	365.3	291.2	245.5	217.6	200.9	195.6
100°	730.2	680.0	607.6	519.6	457.1	411.9	387.7	388.3
102.5°	788.1	786.6	744.3	688.6	639.9	604.1	583.9	569.7
105°	805.2	867.0	878.8	862.8	834.2	810.7	790.9	787.8
107.5°	756.4	856.9	911.2	933.2	933.7	925.8	919.1	913.4
110°	709.8	823.7	901.7	945.2	962.4	967.4	966.1	965.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	663.7	780.1	867.6	923.3	955.1	970.4	975.1	975.3
115°	602.6	710.3	801.5	868.9	915.4	942.6	955.1	958.1
117.5°	558.4	651.4	733.2	801.7	850.1	881.3	899.1	903.4
120°	535.1	618.7	693.1	755.6	804.5	839.2	854.1	857.8
122.5°	516.8	592.5	661.3	719.5	762.9	794.1	810.5	815.2
125°	492.3	559.9	619.3	668.9	708.5	735.8	751.2	755.6
127.5°	471.1	531.2	584.9	630.0	665.3	688.6	702.6	706.5
130°	457.7	513.4	563.6	605.7	638.6	660.8	673.8	678.8
132.5°	445.3	496.6	543.3	583.4	614.3	636.6	648.1	651.6
135°	428.6	472.5	512.8	548.1	578.5	597.1	608.2	612.5
137.5°	413.4	449.4	484.1	514.7	540.2	559.0	568.5	571.3
140°	404.4	436.0	465.7	492.3	515.9	533.2	543.2	542.6
142.5°	396.0	423.1	448.9	472.1	492.1	507.5	516.4	515.8
145°	385.9	406.3	426.1	444.1	459.5	472.5	477.5	478.7
147.5°	377.6	393.8	409.8	422.6	434.3	443.1	447.8	448.3
150°	371.6	385.9	398.9	410.6	419.9	426.7	430.5	430.5
152.5°	366.1	378.4	389.9	399.7	407.0	413.4	415.6	415.6
155°	358.0	367.9	377.2	384.6	390.1	395.1	396.4	397.0
157.5°	349.3	357.6	364.8	370.6	375.4	379.1	380.2	380.0
160°	344.4	351.2	357.4	361.7	366.1	369.7	369.7	369.2
162.5°	338.4	344.2	349.9	353.8	356.6	359.8	359.8	359.3
165°	330.7	334.5	338.8	341.9	344.4	346.8	346.2	346.2
167.5°	324.0	326.9	329.4	331.6	332.7	334.5	333.8	333.8
170°	319.6	321.5	323.9	325.2	325.7	327.0	326.4	326.4
172.5°	315.6	317.0	318.9	319.7	319.8	321.1	320.0	319.5
175°	310.3	310.9	312.1	312.1	312.1	312.8	312.1	311.6
177.5°	307.0	307.4	307.9	307.9	307.4	307.9	307.0	307.0
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9

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