

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: P332257-930

Luminaire Tested: **S123RDIP-S340D805U930-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332257-930
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-S340D805U930-4F0-1E-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: 3429.6 lumens
Efficiency: N/A
Efficacy: 109.9 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

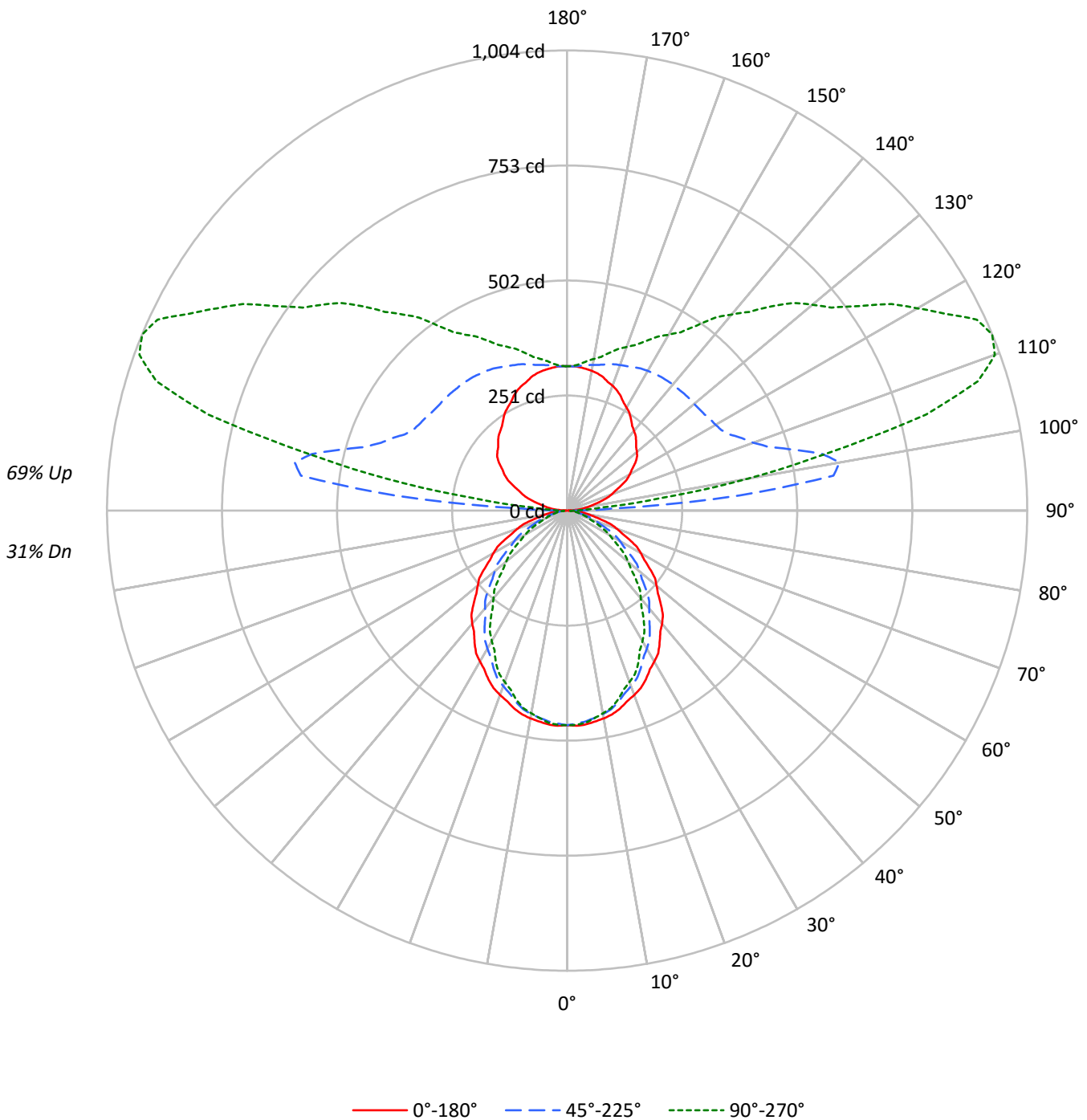
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5042	5042	5042
5°	5061	4991	5020
10°	5032	4928	4912
15°	4979	4813	4763
20°	4904	4669	4560
25°	4828	4507	4363
30°	4727	4320	4084
35°	4623	4133	3829
40°	4526	3912	3513
45°	4401	3694	3227
50°	4262	3448	2907
55°	4121	3166	2609
60°	3991	2863	2282
65°	3823	2534	1954
70°	3610	2127	1577
75°	3302	1676	1485
80°	2944	1488	1364
85°	2482	1309	1223



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	1.3
10°-20°	122.4	3.6
20°-30°	176.2	5.1
30°-40°	198.5	5.8
40°-50°	189.9	5.5
50°-60°	155.5	4.5
60°-70°	104.9	3.1
70°-80°	52.8	1.5
80°-90°	16.4	0.5
90°-100°	175.2	5.1
100°-110°	496.2	14.5
110°-120°	488.1	14.2
120°-130°	389.3	11.4
130°-140°	307.0	9.0
140°-150°	229.1	6.7
150°-160°	159.7	4.7
160°-170°	93.8	2.7
170°-180°	30.5	0.9
0°-30°	342.6	10.0
0°-40°	541.1	15.8
0°-60°	886.5	25.8
0°-90°	1060.6	30.9
90°-120°	1159.6	33.8
90°-150°	2085.0	60.8
90°-180°	2369.0	69.1
0°-180°	3429.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	468	466	462	465	465	44
15°	447	442	432	430	427	126
25°	406	396	380	372	367	187
35°	352	338	314	299	291	220
45°	289	271	243	222	212	223
55°	220	200	169	147	139	197
65°	150	129	100	82	77	148
75°	79	61	40	37	36	85
85°	20	12	11	10	10	23
90°	1	8	16	18	18	2
95°	22	70	378	110	74	23
105°	74	109	512	896	811	79
115°	131	163	392	860	986	129
125°	182	214	366	663	778	161
135°	213	254	361	546	630	164
145°	243	278	356	448	493	152
155°	276	298	345	392	408	127
165°	302	310	330	350	356	85
175°	314	315	317	321	321	30
180°	315	315	315	315	315	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4
2.5°	469.9	469.6	469.4	469.1	468.9	468.3	467.5	466.7	465.9	465.0	465.8
5°	468.4	468.0	467.6	467.2	466.7	466.0	465.0	464.0	462.9	461.9	462.7
7.5°	464.1	463.6	463.2	462.7	462.3	461.4	460.1	458.8	457.4	456.1	456.5
10°	460.4	459.8	459.3	458.7	458.0	457.0	455.5	454.0	452.4	450.9	451.0
12.5°	455.3	454.6	454.0	453.3	452.7	451.3	449.5	447.7	445.8	443.9	443.8
15°	446.8	445.8	444.9	443.9	443.0	441.4	439.0	436.7	434.3	431.9	431.5
17.5°	436.0	435.0	433.9	432.8	431.7	429.7	426.6	423.6	420.7	417.7	416.8
20°	428.1	426.8	425.4	424.1	422.7	420.4	417.3	414.0	410.8	407.6	406.5
22.5°	419.3	417.8	416.2	414.7	413.1	410.7	407.2	403.8	400.4	397.0	395.6
25°	406.5	404.4	402.3	400.1	398.0	395.0	391.2	387.3	383.4	379.5	377.7
27.5°	390.9	388.6	386.2	383.9	381.6	378.3	374.0	369.6	365.3	360.9	358.5
30°	380.3	377.7	375.2	372.7	370.1	366.5	361.7	357.0	352.3	347.6	344.7
32.5°	369.7	366.7	363.9	361.0	358.2	354.2	349.2	344.2	339.2	334.2	331.1
35°	351.8	348.7	345.7	342.7	339.7	335.5	330.3	325.0	319.8	314.5	311.0
37.5°	333.7	330.3	326.9	323.6	320.2	315.7	310.1	304.5	299.0	293.3	289.3
40°	322.1	318.5	314.7	311.0	307.3	302.4	296.4	290.4	284.5	278.4	274.1
42.5°	309.1	305.3	301.7	297.9	294.2	289.3	283.1	276.9	270.7	264.5	259.7
45°	289.1	285.3	281.5	277.7	273.9	268.7	262.3	255.8	249.2	242.7	237.9
47.5°	269.1	265.0	260.7	256.6	252.4	247.1	240.6	234.1	227.6	221.1	215.9
50°	254.5	250.5	246.6	242.6	238.6	233.3	226.4	219.6	212.7	205.9	200.6
52.5°	241.5	237.2	232.8	228.5	224.2	218.7	211.9	205.1	198.4	191.6	186.2
55°	219.6	215.4	211.3	207.2	203.0	197.4	190.2	183.0	175.9	168.7	163.8
57.5°	199.3	194.9	190.4	185.8	181.3	175.5	168.3	161.0	153.8	146.7	142.0
60°	185.4	180.8	176.1	171.5	166.8	161.0	154.0	147.0	140.0	133.0	128.4
62.5°	171.4	166.7	162.1	157.5	152.9	147.0	140.0	133.0	126.0	119.0	114.7
65°	150.1	145.4	140.8	136.2	131.5	125.9	119.3	112.7	106.2	99.5	95.4
67.5°	128.7	124.0	119.3	114.6	109.9	104.4	98.1	91.8	85.4	79.2	76.1
70°	114.7	110.1	105.6	101.0	96.5	91.2	85.4	79.4	73.5	67.6	64.7
72.5°	100.8	96.3	91.8	87.2	82.8	77.9	72.5	67.1	61.7	56.3	54.0
75°	79.4	75.3	71.3	67.3	63.2	58.9	54.2	49.6	44.9	40.3	39.5
77.5°	59.9	56.3	52.6	48.9	45.3	42.0	39.0	36.0	33.0	30.0	29.6
80°	47.5	44.0	40.6	37.1	33.7	31.1	29.3	27.5	25.7	24.0	23.6
82.5°	35.6	32.6	29.7	26.7	23.6	21.8	21.0	20.1	19.3	18.4	18.2
85°	20.1	18.3	16.4	14.6	12.7	11.7	11.4	11.2	10.9	10.6	10.4
87.5°	7.6	7.1	6.6	6.2	5.7	5.6	6.0	6.4	6.8	7.2	6.9
90°	1.3	2.5	3.8	5.7	7.0	8.3	10.2	12.1	14.0	15.9	15.3
92.5°	7.9	11.7	17.1	22.1	27.4	36.9	53.6	81.0	107.9	98.0	73.9
95°	21.7	23.6	30.6	41.4	58.0	82.8	137.1	232.0	336.6	378.0	306.6
97.5°	36.9	37.6	43.1	52.5	68.8	95.7	147.5	254.6	428.8	585.8	626.7
100°	47.2	47.8	52.3	61.2	76.5	101.3	145.9	240.3	408.0	603.6	729.2
102.5°	57.9	59.0	62.9	71.4	85.2	107.9	148.0	228.0	377.3	570.5	734.3
105°	73.9	75.8	79.7	87.3	99.5	119.2	153.6	219.2	339.7	512.5	695.5
107.5°	91.0	92.9	96.6	104.1	115.5	133.9	164.0	218.7	315.8	461.2	627.4
110°	103.3	105.2	108.4	115.4	126.2	144.1	172.8	221.2	306.6	432.2	584.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	114.5	116.4	119.6	126.6	137.5	154.7	181.4	226.2	301.5	412.8	547.3
115°	130.7	133.2	137.1	143.4	154.3	171.5	195.7	234.6	299.6	392.0	502.3
117.5°	146.8	149.8	153.0	158.8	171.0	186.9	210.8	245.6	300.8	379.8	475.2
120°	158.1	160.0	163.1	169.6	181.6	197.6	220.5	253.7	302.8	374.1	460.9
122.5°	167.8	169.7	172.8	179.8	191.4	208.3	230.7	261.3	306.3	370.6	449.1
125°	181.6	183.0	186.8	193.8	205.9	223.1	245.4	273.5	311.7	365.9	434.1
127.5°	192.2	194.1	198.9	206.0	219.4	236.6	258.1	283.4	317.8	363.6	420.9
130°	198.9	200.8	206.5	214.2	227.6	244.8	265.8	290.0	321.9	362.1	413.7
132.5°	204.0	206.4	212.6	221.8	235.2	251.9	272.4	296.1	325.0	361.5	407.1
135°	212.9	215.5	222.5	232.0	245.4	262.6	282.3	304.0	329.5	360.8	398.4
137.5°	221.3	224.0	230.9	241.1	254.3	270.3	289.3	309.9	332.6	359.4	390.9
140°	226.9	230.1	236.5	246.7	259.4	275.3	293.8	313.0	334.7	358.9	386.3
142.5°	233.0	235.7	242.6	251.8	264.6	279.4	297.4	316.0	336.1	357.8	382.2
145°	242.9	244.8	250.5	260.1	270.9	285.6	302.1	319.4	337.2	356.3	376.7
147.5°	252.8	254.0	259.6	267.8	278.3	290.8	306.0	321.4	337.2	353.9	371.4
150°	259.4	260.1	265.1	273.5	282.3	293.8	308.5	321.9	337.2	351.9	367.8
152.5°	266.0	266.2	271.3	278.6	286.4	297.4	310.1	322.9	335.7	349.3	363.7
155°	276.0	276.0	279.8	286.2	293.2	302.1	313.0	323.2	334.0	344.9	357.6
157.5°	283.9	284.4	287.5	293.1	299.1	306.0	314.6	323.8	331.8	340.9	350.7
160°	290.0	290.0	292.6	297.7	302.1	308.5	316.2	323.8	330.8	337.9	346.1
162.5°	294.6	294.6	296.7	300.8	304.7	310.1	316.7	323.3	328.8	334.8	341.5
165°	301.5	300.8	302.1	305.3	307.9	312.3	317.4	321.9	325.7	330.2	335.3
167.5°	306.7	306.0	306.6	309.0	310.8	313.6	317.3	320.9	322.7	325.6	329.3
170°	309.8	308.5	309.2	311.0	312.3	313.6	316.8	319.4	320.7	322.5	325.7
172.5°	311.9	311.0	311.2	312.6	313.3	314.1	316.8	318.9	319.1	320.0	322.1
175°	314.2	313.6	313.0	314.2	314.2	314.9	316.2	317.4	316.8	316.8	318.0
177.5°	315.4	314.9	314.4	314.9	314.9	314.9	315.4	316.4	315.4	314.9	315.4
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	468.4	468.4	468.4	468.4	468.4	468.4	468.4	468.4
2.5°	466.5	467.2	468.1	468.3	468.2	468.1	467.9	467.8
5°	463.5	464.2	465.0	465.3	465.1	465.0	464.8	464.6
7.5°	457.0	457.4	457.8	457.9	457.5	457.3	457.0	456.7
10°	451.1	451.2	451.3	451.1	450.7	450.3	449.8	449.4
12.5°	443.8	443.8	443.8	443.4	443.0	442.5	442.0	441.5
15°	431.0	430.6	430.2	429.7	429.2	428.5	428.0	427.4
17.5°	415.9	415.0	414.1	413.2	412.3	411.4	410.6	409.7
20°	405.4	404.3	403.2	402.2	401.1	400.1	399.2	398.1
22.5°	394.3	392.9	391.5	390.4	389.4	388.5	387.5	386.6
25°	375.9	374.2	372.4	371.0	370.1	369.2	368.3	367.4
27.5°	356.0	353.6	351.1	349.2	347.7	346.3	345.0	343.5
30°	341.9	339.0	336.1	334.0	332.6	331.3	330.0	328.6
32.5°	327.9	324.8	321.6	319.4	318.0	316.6	315.1	313.7
35°	307.3	303.6	300.0	297.4	296.0	294.4	292.9	291.4
37.5°	285.1	281.0	276.9	273.9	272.0	270.1	268.2	266.4
40°	269.7	265.3	260.9	257.7	255.8	253.9	251.9	250.0
42.5°	254.9	250.1	245.3	242.1	240.3	238.6	236.8	235.1
45°	233.1	228.3	223.5	220.0	218.1	216.1	214.0	212.0
47.5°	210.6	205.4	200.2	196.7	194.9	193.1	191.2	189.4
50°	195.4	190.2	185.0	181.4	179.4	177.5	175.5	173.6
52.5°	180.8	175.3	169.9	166.3	164.5	162.8	161.1	159.3
55°	158.9	154.0	149.1	145.8	144.1	142.4	140.7	139.0
57.5°	137.4	132.7	128.2	125.1	123.7	122.2	120.8	119.4
60°	123.8	119.3	114.7	111.7	110.3	108.8	107.5	106.0
62.5°	110.4	106.2	101.8	98.9	97.4	96.0	94.4	92.9
65°	91.2	87.2	83.0	80.5	79.5	78.6	77.7	76.7
67.5°	73.0	69.9	66.8	64.7	63.8	62.8	61.8	60.8
70°	61.7	58.8	55.8	53.9	52.9	52.0	51.0	50.1
72.5°	51.5	49.2	46.7	45.3	44.9	44.5	44.2	43.8
75°	38.6	37.7	36.9	36.4	36.2	36.0	35.9	35.7
77.5°	29.1	28.6	28.2	27.9	27.7	27.6	27.4	27.2
80°	23.4	23.2	22.9	22.7	22.5	22.3	22.2	22.0
82.5°	17.9	17.7	17.4	17.3	17.3	17.2	17.2	17.2
85°	10.3	10.1	9.9	9.9	9.9	9.9	9.9	9.9
87.5°	7.0	7.1	7.1	7.3	7.1	7.2	7.3	7.0
90°	15.9	16.6	17.2	18.5	17.9	18.5	19.2	18.5
92.5°	53.6	42.6	37.6	34.3	33.2	31.2	31.9	30.7
95°	229.5	155.6	121.7	98.8	86.7	81.0	76.5	73.9
97.5°	572.0	458.2	375.9	299.7	252.7	224.0	206.8	201.3
100°	751.5	699.9	625.3	534.8	470.4	423.9	399.0	399.7
102.5°	811.1	809.5	766.1	708.7	658.6	621.7	601.0	586.3
105°	828.7	892.3	904.5	887.9	858.6	834.4	814.0	810.8
107.5°	778.4	881.9	937.8	960.4	961.0	952.8	945.9	940.0
110°	730.5	847.7	928.1	972.7	990.5	995.6	994.3	993.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	683.1	802.9	892.9	950.2	982.9	998.7	1003.6	1003.8
115°	620.2	731.1	824.8	894.3	942.1	970.1	982.9	986.1
117.5°	574.7	670.4	754.6	825.1	874.9	907.0	925.4	929.8
120°	550.7	636.7	713.3	777.6	828.0	863.7	879.0	882.8
122.5°	531.9	609.8	680.6	740.5	785.1	817.3	834.1	838.9
125°	506.7	576.3	637.4	688.4	729.2	757.2	773.1	777.6
127.5°	484.9	546.7	602.0	648.4	684.7	708.7	723.1	727.2
130°	471.1	528.4	580.1	623.4	657.2	680.1	693.5	698.6
132.5°	458.3	511.1	559.1	600.5	632.2	655.2	667.0	670.6
135°	441.1	486.3	527.7	564.1	595.3	614.5	625.9	630.4
137.5°	425.4	462.5	498.2	529.7	556.0	575.4	585.1	588.0
140°	416.2	448.7	479.3	506.7	531.0	548.8	559.1	558.4
142.5°	407.6	435.5	462.0	485.8	506.5	522.3	531.5	530.8
145°	397.1	418.2	438.5	457.1	473.0	486.3	491.5	492.7
147.5°	388.6	405.3	421.8	434.9	446.9	456.0	460.9	461.4
150°	382.5	397.1	410.5	422.6	432.2	439.2	443.0	443.0
152.5°	376.8	389.5	401.3	411.4	418.9	425.4	427.7	427.7
155°	368.4	378.6	388.2	395.8	401.5	406.7	408.0	408.5
157.5°	359.5	368.0	375.4	381.4	386.4	390.2	391.3	391.1
160°	354.4	361.4	367.8	372.3	376.7	380.5	380.5	379.9
162.5°	348.3	354.2	360.1	364.1	367.0	370.3	370.3	369.7
165°	340.4	344.2	348.7	351.9	354.4	356.9	356.3	356.3
167.5°	333.5	336.4	339.0	341.3	342.4	344.2	343.6	343.6
170°	328.9	330.8	333.4	334.7	335.3	336.6	335.9	335.9
172.5°	324.8	326.2	328.2	329.1	329.1	330.4	329.3	328.8
175°	319.4	320.0	321.2	321.2	321.2	321.9	321.2	320.7
177.5°	315.9	316.4	316.9	316.9	316.4	316.9	315.9	315.9
180°	314.9	314.9	314.9	314.9	314.9	314.9	314.9	314.9

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