

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: P331254-830

Luminaire Tested: **SA2XXDIP-C290D530U830-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331254-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C290D530U830-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

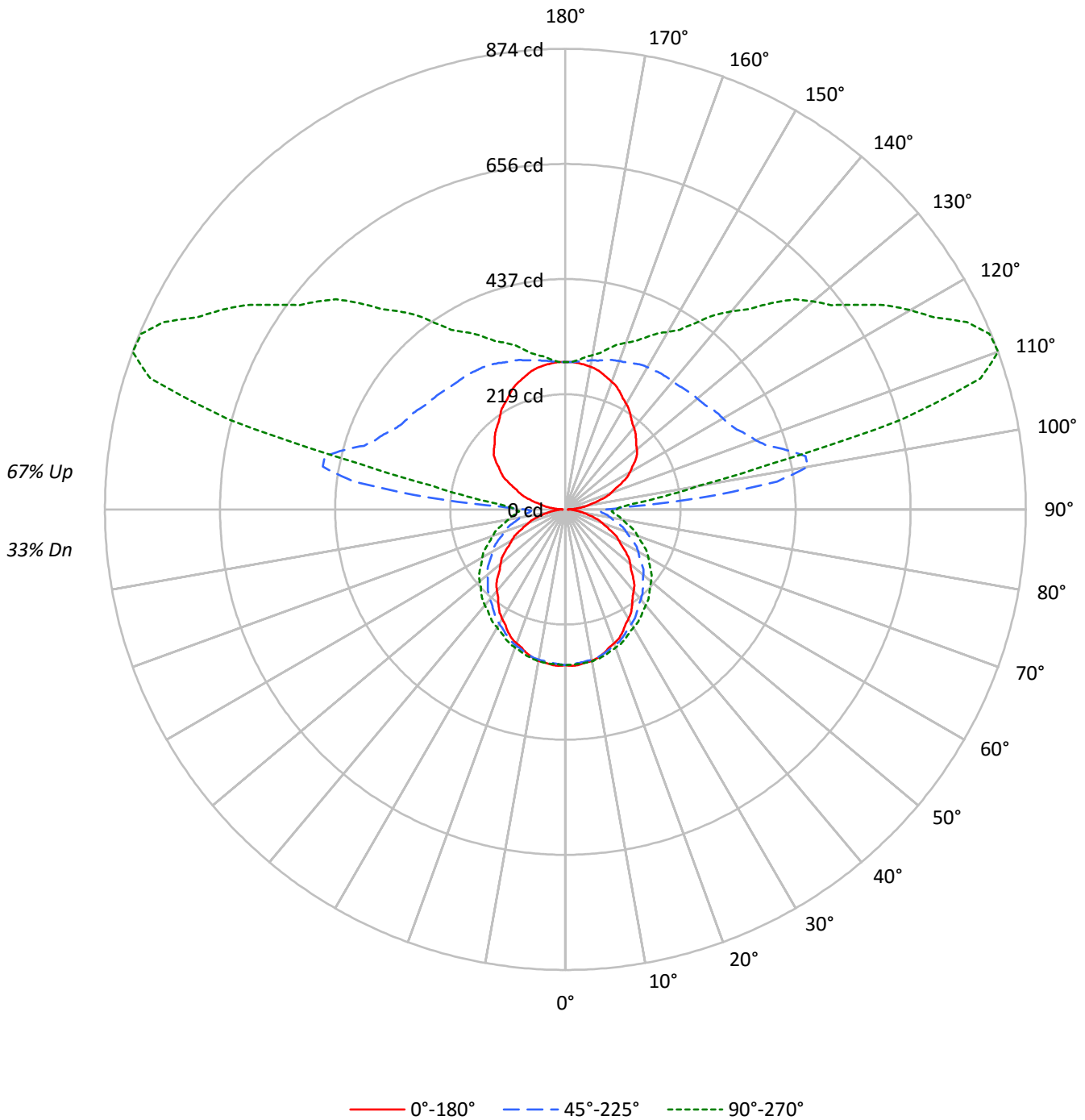
Lumens per Lamp: N/A
Luminaire Lumens: 3074.7 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 25.6
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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	93	88	84	80	83	79	76	73	63	61	58	48	46	45	34	33	32	25
2	84	76	70	65	75	69	63	59	55	51	47	41	39	37	29	28	26	21
3	76	67	59	53	68	60	54	49	48	43	39	36	33	30	26	24	22	17
4	70	59	51	45	62	53	46	41	42	37	33	32	29	26	23	20	18	14
5	64	52	44	38	57	47	40	35	38	32	28	29	25	22	20	18	16	12
6	59	47	38	33	52	42	35	30	34	28	24	26	22	19	18	16	14	11
7	54	42	34	28	48	38	31	26	30	25	21	23	20	17	17	14	12	9
8	50	38	30	25	45	34	28	23	28	22	19	21	17	15	15	13	11	8
9	47	34	27	22	42	31	25	20	25	20	17	19	16	13	14	12	10	7
10	43	31	24	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4771	4771	4771
5°	4794	4593	4573
10°	4763	4457	4407
15°	4698	4312	4229
20°	4614	4159	4059
25°	4533	4009	3902
30°	4418	3857	3747
35°	4301	3711	3638
40°	4178	3584	3528
45°	4060	3473	3434
50°	3936	3371	3343
55°	3802	3261	3248
60°	3643	3149	3150
65°	3474	3016	3031
70°	3286	2872	2904
75°	3050	2735	2786
80°	2669	2592	2667
85°	2319	2468	2574



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.0	0.9
10°-20°	80.3	2.6
20°-30°	121.6	4.0
30°-40°	148.2	4.8
40°-50°	159.4	5.2
50°-60°	154.8	5.0
60°-70°	135.2	4.4
70°-80°	104.1	3.4
80°-90°	72.3	2.4
90°-100°	159.9	5.2
100°-110°	414.4	13.5
110°-120°	426.1	13.9
120°-130°	344.6	11.2
130°-140°	271.8	8.8
140°-150°	202.2	6.6
150°-160°	141.4	4.6
160°-170°	83.3	2.7
170°-180°	27.1	0.9
0°-30°	229.9	7.5
0°-40°	378.1	12.3
0°-60°	692.3	22.5
0°-90°	1003.9	32.6
90°-120°	1000.4	32.5
90°-150°	1819.0	59.2
90°-180°	2071.0	67.4
0°-180°	3074.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	296	296	296	296	296	
5°	296	295	292	295	294	28
15°	283	283	283	287	287	80
25°	257	260	264	269	270	118
35°	221	229	237	246	249	138
45°	182	193	208	221	226	140
55°	139	155	177	192	198	124
65°	95	116	141	158	164	94
75°	53	77	104	122	128	56
85°	16	42	69	87	93	17
90°	5	36	75	90	96	4
95°	22	70	260	144	132	23
105°	68	114	435	763	662	72
115°	117	153	359	726	840	116
125°	162	192	335	583	677	144
135°	190	226	321	482	553	147
145°	216	248	315	394	432	136
155°	246	265	306	346	360	113
165°	268	276	293	311	316	75
175°	279	279	282	285	284	26
180°	280	280	280	280	280	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5
2.5°	297.2	296.9	296.7	296.4	296.2	295.9	295.3	294.8	294.3	293.7	294.1
5°	296.3	296.1	295.8	295.5	295.1	294.7	294.2	293.6	293.0	292.5	293.0
7.5°	293.6	293.4	293.2	293.0	292.8	292.6	292.1	291.7	291.2	290.8	291.5
10°	291.6	291.4	291.2	291.1	290.9	290.6	290.3	290.0	289.7	289.5	290.2
12.5°	288.1	288.2	288.2	288.3	288.3	288.2	288.0	287.9	287.6	287.4	288.1
15°	282.6	282.8	283.0	283.1	283.3	283.4	283.4	283.4	283.4	283.4	284.3
17.5°	275.4	275.8	276.2	276.6	277.0	277.4	277.7	278.0	278.2	278.6	279.5
20°	270.6	271.1	271.5	272.0	272.5	273.0	273.3	273.7	274.1	274.5	275.5
22.5°	265.5	266.0	266.6	267.1	267.7	268.2	268.7	269.3	269.8	270.3	271.4
25°	256.9	257.6	258.3	258.9	259.6	260.3	261.2	262.0	262.9	263.7	264.9
27.5°	246.7	247.7	248.8	249.9	251.0	252.0	253.0	254.0	255.1	256.1	257.5
30°	239.8	241.0	242.2	243.5	244.7	246.0	247.2	248.5	249.7	250.9	252.4
32.5°	232.2	233.7	235.0	236.4	237.8	239.2	240.7	242.1	243.6	245.1	246.9
35°	221.4	223.0	224.6	226.2	227.8	229.5	231.4	233.2	235.0	236.8	238.8
37.5°	209.5	211.4	213.3	215.2	217.0	219.1	221.5	223.8	226.1	228.5	230.8
40°	201.7	203.8	205.9	207.9	210.0	212.4	214.9	217.5	220.1	222.6	225.1
42.5°	194.2	196.2	198.3	200.4	202.6	205.0	208.0	210.9	213.9	216.8	219.5
45°	181.5	184.1	186.7	189.3	191.8	194.7	198.1	201.4	204.7	208.1	211.0
47.5°	169.1	171.9	174.7	177.5	180.3	183.7	187.6	191.4	195.4	199.3	202.4
50°	160.6	163.5	166.5	169.4	172.4	176.0	180.3	184.5	188.8	193.1	196.3
52.5°	152.3	155.4	158.5	161.6	164.8	168.5	173.1	177.6	182.1	186.6	189.9
55°	139.1	142.6	146.0	149.4	152.9	157.0	162.0	166.9	171.9	176.8	180.3
57.5°	126.1	130.0	133.8	137.7	141.6	146.0	151.1	156.1	161.2	166.3	169.9
60°	116.9	121.0	125.1	129.1	133.3	138.0	143.5	148.8	154.3	159.7	163.3
62.5°	108.7	112.9	117.2	121.4	125.6	130.4	135.9	141.3	146.8	152.2	156.0
65°	95.0	99.7	104.3	109.1	113.7	118.9	124.4	130.1	135.7	141.3	145.2
67.5°	82.6	87.5	92.3	97.2	102.1	107.4	113.1	118.9	124.6	130.4	134.3
70°	73.6	78.6	83.5	88.5	93.4	98.9	104.7	110.7	116.6	122.4	126.6
72.5°	65.4	70.5	75.6	80.7	85.9	91.3	97.4	103.3	109.3	115.3	119.3
75°	52.7	58.0	63.3	68.6	74.0	79.6	85.8	91.9	97.9	104.1	108.1
77.5°	40.3	45.9	51.5	57.0	62.7	68.5	74.7	80.9	87.1	93.2	97.4
80°	32.1	37.9	43.7	49.5	55.3	61.4	67.5	73.7	79.8	86.1	90.0
82.5°	25.3	31.0	36.8	42.4	48.2	54.2	60.4	66.7	73.0	79.2	83.2
85°	15.5	21.3	27.2	33.1	39.0	45.0	51.1	57.2	63.2	69.4	73.3
87.5°	8.5	14.5	20.5	26.5	32.3	38.5	45.2	52.0	58.8	64.9	68.7
90°	4.8	12.0	19.6	26.2	32.8	40.2	49.0	58.8	68.1	74.8	78.0
92.5°	10.5	18.6	27.5	35.1	43.8	54.4	72.4	95.4	116.5	123.3	116.2
95°	22.2	28.8	38.7	48.0	61.1	79.1	109.5	162.0	230.1	260.0	237.2
97.5°	33.6	40.5	50.2	61.5	75.3	94.7	131.2	201.9	310.9	405.3	426.4
100°	44.4	49.5	57.9	70.0	84.3	103.8	137.5	208.5	329.9	467.5	548.4
102.5°	53.9	58.3	66.4	78.2	92.6	111.9	143.4	206.8	319.5	467.2	592.4
105°	67.7	72.7	79.2	90.0	104.5	123.5	153.6	206.4	300.1	435.2	581.5
107.5°	83.1	87.0	92.9	102.5	116.5	135.1	164.4	210.8	288.8	401.1	530.6
110°	93.1	97.2	102.3	111.1	124.3	143.3	171.5	214.9	285.1	384.4	498.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	102.5	106.3	111.6	119.7	132.1	151.2	178.4	219.4	283.4	372.6	475.7
115°	117.3	121.0	125.3	132.8	144.6	161.7	189.2	226.2	282.7	358.9	446.8
117.5°	132.1	135.0	138.8	145.2	156.3	173.6	199.0	233.7	283.3	350.3	427.1
120°	141.6	144.1	147.7	153.0	164.1	181.3	205.9	238.8	284.0	345.3	416.2
122.5°	150.6	152.5	155.9	161.3	172.2	189.5	212.7	243.3	285.2	341.6	406.8
125°	162.1	163.7	166.9	173.4	184.2	200.8	223.1	250.3	286.7	334.9	392.9
127.5°	171.5	173.6	178.0	185.0	195.3	212.0	233.2	257.4	288.9	330.0	379.8
130°	177.2	179.2	184.5	191.9	202.6	218.6	239.4	261.8	290.7	327.1	371.3
132.5°	182.3	184.8	190.5	198.4	209.4	225.3	244.8	266.3	292.6	324.6	364.0
135°	189.6	191.8	198.2	206.3	218.7	234.2	252.3	272.1	294.5	321.3	353.9
137.5°	197.0	199.5	205.9	214.5	226.8	240.9	258.4	276.3	296.2	318.7	346.2
140°	202.6	204.6	210.9	219.4	231.2	245.2	261.6	278.3	296.8	316.9	341.6
142.5°	208.1	209.7	215.7	224.1	235.4	248.5	264.3	280.6	297.6	316.2	337.5
145°	216.1	218.2	223.6	231.7	242.4	254.2	268.7	283.8	298.9	315.0	332.7
147.5°	225.1	226.7	231.9	239.3	248.3	258.7	272.4	285.7	299.3	313.0	328.2
150°	231.1	232.7	237.0	244.0	252.1	261.7	274.1	286.5	298.9	311.8	324.7
152.5°	237.1	237.9	242.2	248.4	256.0	264.8	275.9	286.9	298.0	309.6	321.7
155°	245.6	246.2	249.4	255.3	261.3	269.3	278.4	287.6	296.7	305.9	316.0
157.5°	252.7	253.3	255.9	261.0	265.8	272.5	280.2	287.6	294.3	302.0	310.8
160°	257.5	258.0	260.1	264.5	268.7	274.7	281.2	287.6	292.9	299.4	306.9
162.5°	262.2	261.8	264.0	267.5	271.4	276.0	281.5	287.1	291.6	297.3	303.5
165°	267.7	267.1	268.2	271.5	274.1	277.4	282.2	286.0	289.2	292.9	297.7
167.5°	272.2	271.5	272.5	274.6	276.5	278.5	282.1	285.2	286.7	289.2	292.2
170°	275.2	274.1	274.7	276.3	277.4	279.0	281.6	284.4	285.4	287.0	289.2
172.5°	276.9	276.3	276.0	277.6	278.2	279.4	281.3	283.0	283.7	284.5	286.2
175°	279.0	278.4	277.9	279.0	279.0	279.5	280.6	281.6	281.2	281.6	282.2
177.5°	279.9	279.1	278.6	279.5	279.5	279.5	279.9	280.8	279.9	279.5	279.9
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	295.5	295.5	295.5	295.5	295.5	295.5	295.5	295.5
2.5°	294.5	294.8	295.2	295.4	295.2	295.0	294.9	294.7
5°	293.6	294.2	294.7	294.9	294.8	294.7	294.6	294.5
7.5°	292.2	292.8	293.6	293.9	293.8	293.7	293.6	293.5
10°	291.0	291.7	292.5	292.8	292.8	292.7	292.6	292.5
12.5°	288.9	289.6	290.4	290.8	290.7	290.6	290.5	290.4
15°	285.1	286.1	286.9	287.3	287.2	287.1	287.0	286.9
17.5°	280.4	281.3	282.1	282.6	282.6	282.6	282.6	282.6
20°	276.5	277.6	278.6	279.2	279.2	279.2	279.2	279.2
22.5°	272.5	273.5	274.6	275.1	275.3	275.4	275.6	275.8
25°	266.1	267.2	268.3	269.0	269.3	269.6	269.8	270.1
27.5°	258.9	260.4	261.8	262.7	262.9	263.1	263.3	263.5
30°	253.9	255.5	257.0	257.9	258.2	258.4	258.7	259.0
32.5°	248.5	250.3	252.1	253.3	253.7	254.3	254.8	255.2
35°	241.0	243.1	245.2	246.6	247.2	247.9	248.5	249.2
37.5°	233.1	235.4	237.8	239.3	240.0	240.7	241.4	242.0
40°	227.6	230.1	232.5	234.2	235.1	235.9	236.8	237.6
42.5°	222.3	224.9	227.6	229.4	230.3	231.1	232.0	232.8
45°	214.0	217.0	219.9	221.9	222.8	223.8	224.7	225.6
47.5°	205.5	208.5	211.6	213.7	214.7	215.7	216.8	217.8
50°	199.5	202.8	206.0	208.2	209.2	210.3	211.3	212.4
52.5°	193.2	196.5	199.8	202.1	203.2	204.3	205.5	206.5
55°	183.7	187.1	190.6	192.8	194.1	195.4	196.6	197.8
57.5°	173.6	177.3	181.0	183.4	184.7	186.0	187.2	188.5
60°	166.9	170.6	174.2	176.6	178.0	179.3	180.7	182.0
62.5°	159.9	163.7	167.6	170.1	171.4	172.6	173.9	175.1
65°	149.1	153.0	156.9	159.5	160.7	161.9	163.2	164.4
67.5°	138.2	142.1	146.1	148.7	150.0	151.3	152.6	153.9
70°	130.6	134.7	138.8	141.5	142.6	143.7	144.9	146.0
72.5°	123.3	127.3	131.3	134.0	135.3	136.8	138.2	139.5
75°	112.3	116.3	120.5	123.1	124.3	125.5	126.8	128.0
77.5°	101.4	105.5	109.5	112.3	113.6	114.9	116.2	117.5
80°	94.1	98.0	102.1	104.7	106.0	107.4	108.7	110.0
82.5°	87.2	91.2	95.2	97.8	99.1	100.4	101.6	102.8
85°	77.4	81.3	85.4	88.0	89.4	90.7	92.0	93.3
87.5°	72.5	76.2	80.3	82.9	84.2	85.4	86.6	87.8
90°	81.3	84.1	89.0	92.0	93.1	94.3	95.4	96.5
92.5°	107.7	104.8	104.1	103.1	103.9	103.3	104.8	105.1
95°	197.3	168.1	149.2	139.7	133.8	130.7	130.3	132.0
97.5°	381.3	325.0	270.3	233.8	209.2	197.2	190.5	187.1
100°	540.6	477.5	407.4	344.6	301.0	279.0	264.5	255.8
102.5°	644.3	632.6	582.3	515.6	468.2	429.7	411.3	399.3
105°	696.5	760.6	771.0	755.4	723.1	690.9	668.8	662.3
107.5°	652.3	747.1	806.2	834.3	839.5	838.8	835.2	826.2
110°	615.2	714.4	786.3	832.5	856.6	867.8	873.7	874.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	581.0	676.4	752.9	805.5	838.7	856.9	867.0	871.0
115°	538.3	623.9	697.2	754.5	793.7	819.4	834.5	840.4
117.5°	505.2	580.7	647.4	701.3	741.1	768.2	783.9	788.9
120°	488.2	557.6	617.2	668.0	706.6	733.0	749.6	756.0
122.5°	474.5	538.1	594.7	640.6	675.2	701.0	715.7	721.1
125°	454.0	512.0	561.8	603.9	635.8	657.1	671.5	676.7
127.5°	433.9	486.3	533.3	572.0	600.1	620.1	632.5	636.8
130°	420.8	469.4	514.2	551.1	578.2	597.3	608.8	613.9
132.5°	408.4	453.4	494.6	529.4	556.1	575.1	585.8	590.4
135°	390.9	428.4	465.8	497.3	521.2	539.7	550.2	553.0
137.5°	376.4	407.8	437.7	465.1	486.9	502.8	511.9	515.9
140°	367.3	394.5	420.8	445.5	463.3	477.9	486.4	490.3
142.5°	360.0	383.1	405.6	426.2	443.1	456.3	463.9	465.1
145°	350.0	368.3	385.5	401.6	415.0	424.6	430.5	432.5
147.5°	342.4	356.5	369.6	381.2	392.0	399.5	403.4	404.6
150°	337.5	349.4	360.7	370.3	378.4	384.8	388.0	388.6
152.5°	332.8	343.8	353.4	361.7	368.1	373.7	376.1	376.2
155°	326.3	334.9	342.9	348.8	354.8	358.5	360.7	359.6
157.5°	318.7	325.8	332.6	337.2	341.4	344.6	345.5	345.5
160°	313.9	319.8	325.7	329.5	333.3	335.9	336.5	336.5
162.5°	309.2	314.2	319.3	322.2	325.9	327.8	328.3	327.9
165°	302.1	305.9	309.6	311.8	313.9	316.0	316.0	315.6
167.5°	295.3	298.2	300.8	302.7	303.7	304.9	304.8	304.2
170°	291.9	293.5	295.7	296.7	297.3	298.9	298.3	297.3
172.5°	288.0	289.2	290.9	291.5	292.1	292.8	292.3	291.6
175°	283.8	284.4	284.9	285.4	285.4	286.0	285.4	284.4
177.5°	280.8	280.8	281.3	281.3	281.3	281.3	280.8	279.9
180°	279.5	279.5	279.5	279.5	279.5	279.5	279.5	279.5

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