

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: P331257-927

Luminaire Tested: **S122DIP-S290D530U927-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331257-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIP-S290D530U927-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2589.0 lumens
Efficiency: N/A
Efficacy: 101.1 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

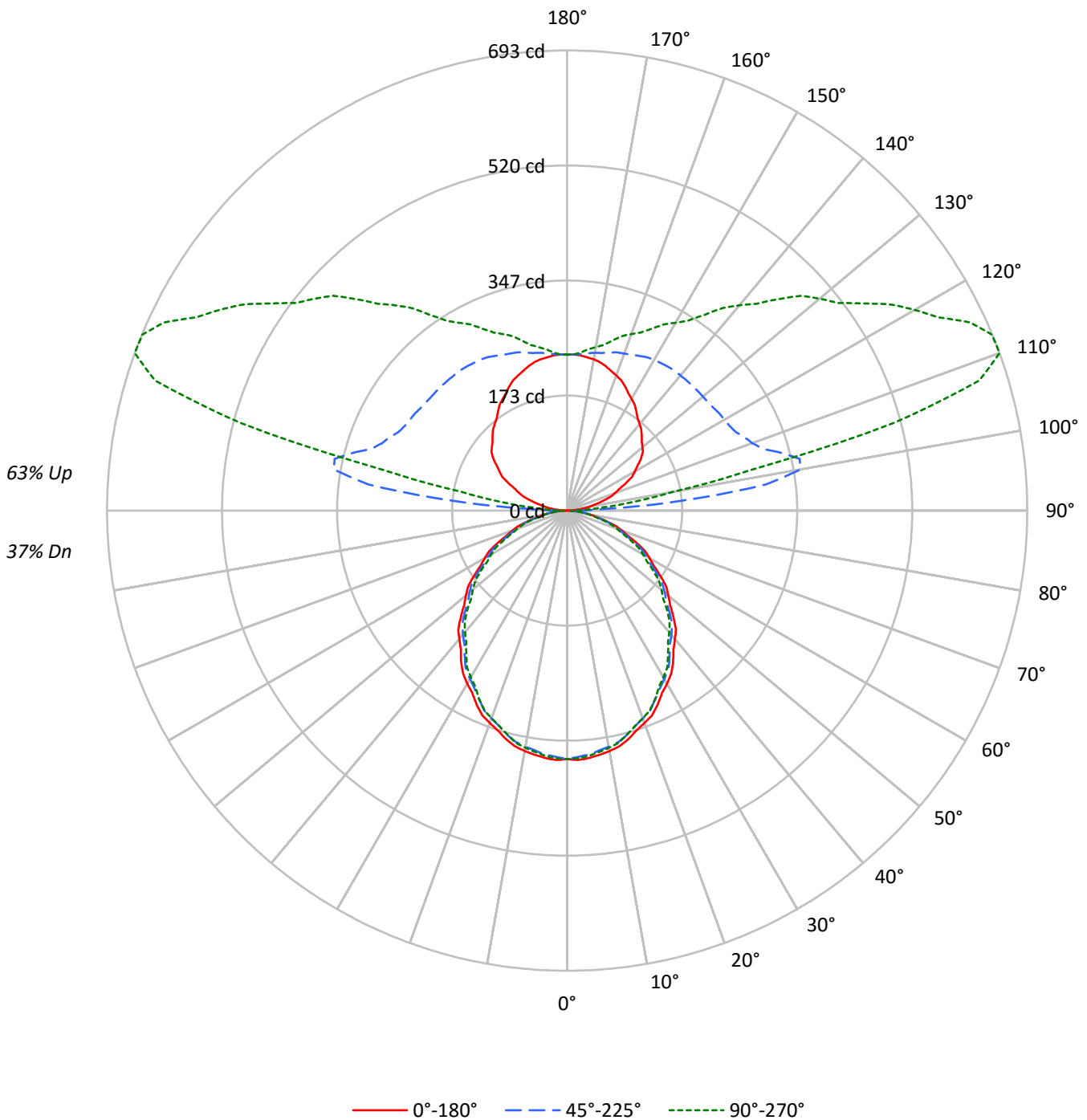
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76		59	59	59		44	44	44	37
1	95	91	87	83	86	82	79	76	67	64	62		52	51	49		39	38	37	31
2	86	79	73	68	78	72	67	62	58	55	52		46	43	41		34	33	31	26
3	79	69	62	57	71	63	57	52	51	47	43		40	37	35		30	28	27	22
4	72	61	54	48	65	56	49	44	46	41	37		36	33	30		27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32		32	29	26		24	22	20	16
6	61	49	41	35	55	45	38	33	37	31	28		29	25	22		22	20	18	14
7	56	44	36	31	51	40	33	29	33	28	24		26	23	20		20	18	16	13
8	52	40	32	27	47	37	30	25	30	25	21		24	20	18		19	16	14	11
9	48	36	29	24	44	33	27	22	28	23	19		22	18	16		17	14	13	10
10	45	33	26	22	41	31	24	20	25	20	17		20	17	14		16	13	11	9

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	1.4
10°-20°	99.0	3.8
20°-30°	145.6	5.6
30°-40°	169.1	6.5
40°-50°	168.9	6.5
50°-60°	147.3	5.7
60°-70°	108.9	4.2
70°-80°	61.7	2.4
80°-90°	18.7	0.7
90°-100°	93.9	3.6
100°-110°	318.8	12.3
110°-120°	338.6	13.1
120°-130°	278.8	10.8
130°-140°	223.9	8.6
140°-150°	169.2	6.5
150°-160°	118.9	4.6
160°-170°	70.0	2.7
170°-180°	22.8	0.9
0°-30°	279.8	10.8
0°-40°	448.8	17.3
0°-60°	765.0	29.5
0°-90°	954.3	36.9
90°-120°	751.3	29.0
90°-150°	1423.1	55.0
90°-180°	1635.0	63.2
0°-180°	2589.0	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°	0	6	15	15	15	2
95°	16	39	177	67	52	17
105°	55	83	335	598	509	59
115°	97	123	280	578	670	96
125°	136	160	269	468	544	120
135°	159	190	266	394	450	123
145°	182	209	265	329	360	114
155°	206	223	257	291	302	95
165°	225	232	246	261	265	63
175°	234	235	237	240	239	22
180°	235	235	235	235	235	



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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	5.4	5.6	5.7	5.8	5.9	6.3	6.7	7.1	7.1	6.8
90°	0.5	1.8	3.6	4.5	5.4	6.8	9.0	12.2	14.9	15.4	14.9
92.5°	5.5	7.9	11.2	13.2	16.2	20.5	30.7	45.1	57.9	58.7	49.6
95°	15.8	17.6	22.1	26.2	33.4	44.3	65.0	104.3	156.8	177.1	155.0
97.5°	25.7	28.2	33.0	39.1	47.5	59.7	85.9	140.6	227.7	302.3	317.1
100°	34.8	36.1	40.2	47.5	56.5	69.2	93.1	148.2	245.7	356.9	421.9
102.5°	43.1	44.1	48.2	55.4	64.8	77.4	99.6	148.5	238.9	358.7	461.0
105°	55.1	57.0	60.0	66.9	76.8	89.4	110.7	150.9	225.5	334.8	455.0
107.5°	68.1	69.6	72.6	78.9	88.7	101.5	122.1	157.1	218.7	309.1	415.3
110°	76.8	78.6	81.4	87.2	96.6	109.8	129.7	162.2	217.3	296.8	390.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	84.8	86.6	89.6	95.1	104.3	117.7	136.9	167.6	217.7	288.8	373.0
115°	97.1	99.4	102.1	107.5	116.5	128.7	148.2	175.7	219.6	280.1	351.5
117.5°	110.0	111.8	114.5	119.3	127.9	140.6	158.6	184.4	222.8	275.8	337.9
120°	117.9	119.7	122.4	126.5	135.5	148.2	165.8	190.2	225.0	273.3	330.7
122.5°	125.5	127.0	129.7	134.1	143.1	156.1	172.7	195.3	227.5	271.9	324.6
125°	135.5	136.9	139.6	145.0	154.1	166.7	183.0	203.3	231.3	269.3	315.8
127.5°	143.5	145.3	149.1	155.0	163.7	176.7	192.6	210.8	235.2	267.8	307.7
130°	148.2	150.0	154.5	160.8	169.8	182.5	198.4	215.5	238.1	267.0	302.2
132.5°	152.5	154.7	159.5	166.3	175.6	188.3	203.4	220.2	241.0	266.6	297.9
135°	159.0	160.8	166.3	173.0	183.4	196.1	210.6	226.3	244.4	266.1	291.8
137.5°	165.2	167.3	172.8	180.0	190.3	202.0	216.3	231.0	247.5	266.0	287.6
140°	169.8	171.7	177.1	184.3	194.2	206.0	219.6	233.5	248.9	265.6	285.1
142.5°	174.6	176.0	181.1	188.3	197.9	208.9	222.1	235.8	250.0	265.6	282.6
145°	181.6	183.4	187.9	194.7	203.7	213.7	225.9	238.5	251.2	264.7	279.2
147.5°	189.2	190.5	194.9	201.1	208.7	217.5	228.9	240.1	251.5	263.1	275.8
150°	194.2	195.6	199.2	205.1	211.9	220.0	230.4	240.8	251.2	262.1	272.9
152.5°	199.3	199.9	203.6	208.7	215.2	222.5	231.9	241.1	250.5	260.2	270.4
155°	206.4	206.9	209.6	214.6	219.6	226.3	234.0	241.7	249.4	257.1	265.6
157.5°	212.4	212.9	215.1	219.4	223.4	229.0	235.5	241.7	247.3	253.8	261.2
160°	216.4	216.8	218.6	222.3	225.9	230.8	236.3	241.7	246.2	251.7	257.9
162.5°	220.4	220.1	221.9	224.8	228.1	232.0	236.6	241.3	245.1	249.9	255.1
165°	225.0	224.5	225.5	228.1	230.4	233.1	237.2	240.3	243.0	246.2	250.3
167.5°	228.8	228.2	229.0	230.8	232.4	234.1	237.1	239.7	241.0	243.0	245.6
170°	231.3	230.4	230.8	232.2	233.1	234.5	236.7	239.0	239.9	241.2	243.0
172.5°	232.7	232.2	232.0	233.3	233.9	234.8	236.4	237.9	238.4	239.1	240.5
175°	234.5	234.0	233.5	234.5	234.5	234.9	235.8	236.7	236.3	236.7	237.2
177.5°	235.3	234.6	234.2	234.9	234.9	234.9	235.3	236.0	235.3	234.9	235.3
180°	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9



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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°	6.6	6.2	6.2	6.1	6.0	6.0	5.9	5.9
90°	14.4	13.5	14.4	14.9	14.9	14.9	14.9	14.9
92.5°	39.4	33.8	30.0	27.2	26.9	25.4	25.7	25.0
95°	118.4	90.8	71.9	61.9	56.0	52.4	51.0	51.5
97.5°	276.2	226.0	177.1	144.5	122.9	111.8	105.2	101.4
100°	412.5	356.5	294.5	239.9	202.4	183.0	169.8	161.8
102.5°	501.8	489.1	443.9	385.9	345.2	312.0	295.6	284.6
105°	548.9	599.9	605.9	590.9	562.9	534.9	515.5	509.1
107.5°	514.9	591.8	638.8	660.7	664.2	662.7	658.8	650.4
110°	485.7	566.5	624.3	661.4	680.8	689.4	693.5	693.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	458.9	536.5	598.3	640.8	667.8	682.1	689.8	692.3
115°	426.0	495.6	554.8	601.3	633.3	654.2	665.9	669.9
117.5°	401.2	462.3	516.0	559.7	592.4	614.3	626.7	630.1
120°	389.0	445.0	492.9	534.0	565.6	586.8	599.9	604.4
122.5°	379.2	430.6	475.9	513.0	541.4	562.3	573.9	577.7
125°	365.0	411.5	451.3	485.2	511.4	528.5	539.9	543.5
127.5°	351.0	393.2	430.6	461.9	484.7	500.8	510.6	513.5
130°	342.0	380.9	416.5	446.3	468.5	483.9	492.9	496.5
132.5°	333.4	369.3	402.1	430.1	451.9	467.2	475.5	478.8
135°	321.2	351.0	380.9	406.2	425.6	440.5	448.6	450.4
137.5°	311.6	336.5	360.1	382.2	399.9	412.7	419.9	422.6
140°	305.4	327.1	347.8	367.7	382.2	394.0	400.7	403.5
142.5°	300.3	318.8	336.7	353.3	367.0	377.7	383.7	384.3
145°	293.2	308.1	322.1	335.3	346.0	353.7	358.2	359.6
147.5°	287.7	299.4	310.4	320.0	328.9	335.0	338.1	338.9
150°	283.7	293.7	303.2	311.2	318.1	323.4	326.1	326.6
152.5°	279.7	289.0	297.0	304.0	309.3	314.1	316.1	316.2
155°	274.3	281.5	288.2	293.2	298.2	301.3	303.2	302.2
157.5°	267.8	273.9	279.6	283.4	286.9	289.6	290.4	290.4
160°	263.8	268.8	273.8	276.9	280.1	282.3	282.8	282.8
162.5°	259.8	264.1	268.4	270.8	273.9	275.5	275.9	275.6
165°	253.9	257.1	260.2	262.1	263.8	265.6	265.6	265.2
167.5°	248.2	250.6	252.8	254.4	255.2	256.3	256.2	255.6
170°	245.3	246.7	248.5	249.4	249.9	251.2	250.7	249.9
172.5°	242.1	243.0	244.5	245.0	245.5	246.1	245.7	245.1
175°	238.5	239.0	239.5	239.9	239.9	240.3	239.9	239.0
177.5°	236.0	236.0	236.4	236.4	236.4	236.4	236.0	235.3
180°	234.9	234.9	234.9	234.9	234.9	234.9	234.9	234.9

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