

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: P331879-935

Luminaire Tested: **S123DIP-S340D585U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331879-935
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: S123DIP-S340D585U935-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3064.7 lumens
Efficiency: N/A
Efficacy: 119.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

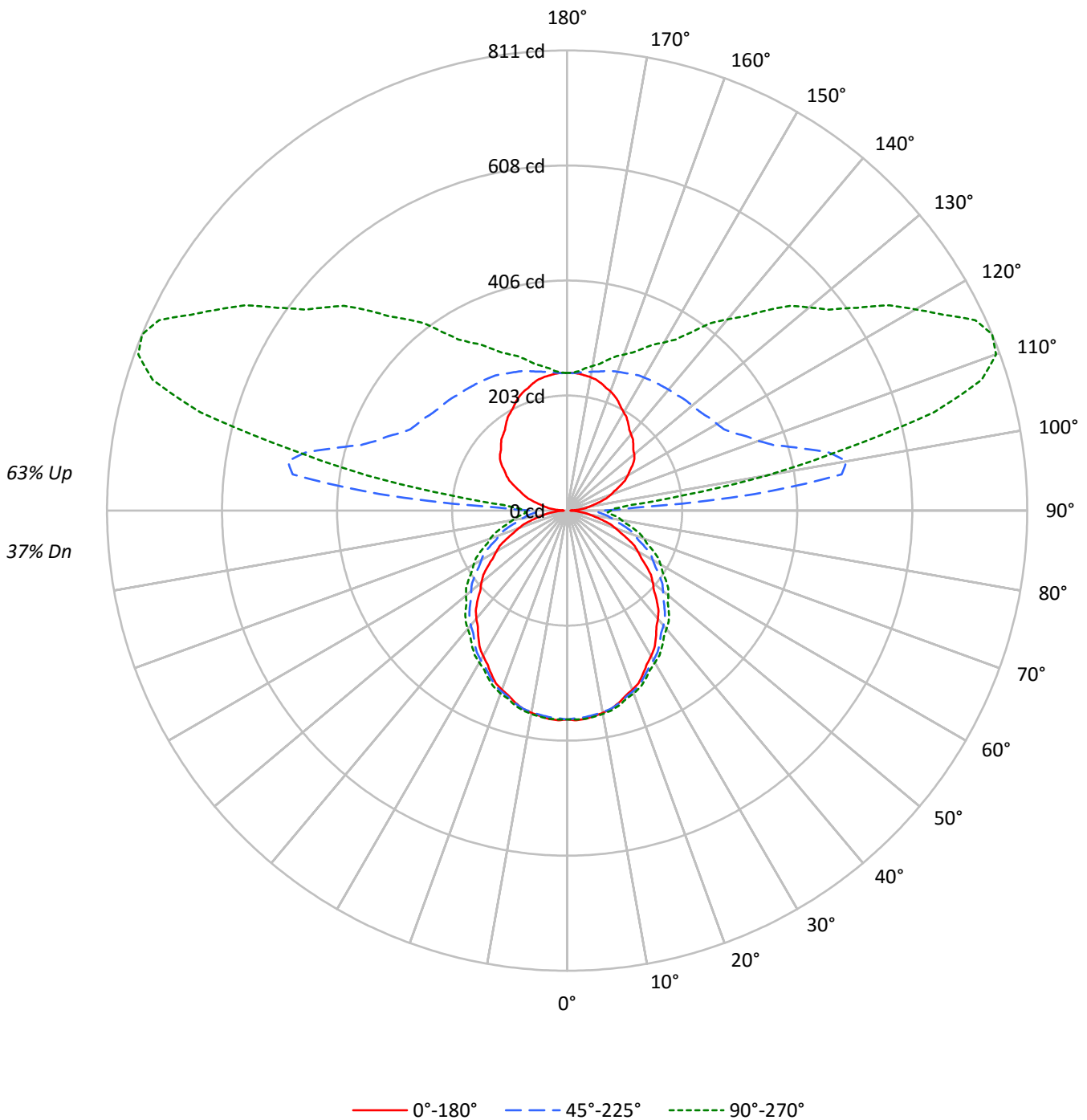
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	94	89	85	82	85	81	78	74	65	63	61	51	49	48	38	37	36	30
2	85	78	71	66	77	70	65	60	57	53	50	44	42	39	33	31	29	24
3	78	68	61	55	70	62	55	50	50	45	41	39	36	33	29	27	25	20
4	71	60	52	46	64	54	48	42	44	39	35	35	31	28	26	23	21	17
5	65	53	45	39	58	48	41	36	39	34	30	31	27	24	23	20	18	15
6	60	48	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	25	21	18	19	16	14	11
8	51	39	31	26	46	35	29	24	29	24	20	23	19	16	17	15	13	10
9	47	35	28	23	43	32	26	21	26	21	18	21	17	15	16	13	11	9
10	44	32	25	20	40	30	23	19	24	19	16	19	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3963	3963	3963
5°	3977	3865	3866
10°	3941	3776	3757
15°	3890	3674	3636
20°	3818	3559	3504
25°	3728	3427	3365
30°	3637	3307	3224
35°	3533	3181	3112
40°	3435	3065	2991
45°	3327	2955	2895
50°	3219	2846	2789
55°	3100	2734	2693
60°	2984	2620	2596
65°	2865	2499	2479
70°	2685	2362	2359
75°	2462	2208	2239
80°	2201	2054	2100
85°	1955	1950	2018



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	1.1
10°-20°	99.5	3.2
20°-30°	148.9	4.9
30°-40°	177.8	5.8
40°-50°	186.0	6.1
50°-60°	174.5	5.7
60°-70°	145.8	4.8
70°-80°	104.3	3.4
80°-90°	64.1	2.1
90°-100°	174.0	5.7
100°-110°	411.0	13.4
110°-120°	395.2	12.9
120°-130°	310.9	10.1
130°-140°	241.4	7.9
140°-150°	177.6	5.8
150°-160°	123.0	4.0
160°-170°	72.3	2.4
170°-180°	23.5	0.8
0°-30°	283.3	9.2
0°-40°	461.0	15.0
0°-60°	821.6	26.8
0°-90°	1135.7	37.1
90°-120°	980.2	32.0
90°-150°	1710.1	55.8
90°-180°	1929.0	62.9
0°-180°	3064.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	369	368	366	368	368	35
15°	351	352	352	356	355	99
25°	317	321	322	327	327	146
35°	273	279	284	290	292	171
45°	223	233	243	250	254	172
55°	170	183	198	208	212	152
65°	118	133	151	162	167	116
75°	64	83	103	116	121	68
85°	20	40	61	74	79	21
90°	6	31	58	72	77	5
95°	21	75	331	137	113	21
105°	60	97	425	731	670	64
115°	103	133	323	693	794	102
125°	141	167	295	532	623	125
135°	165	196	283	432	500	127
145°	188	214	274	348	384	117
155°	213	229	266	302	315	98
165°	232	239	254	270	274	65
175°	242	242	244	248	247	23
180°	243	243	243	243	243	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	369.9	369.7	369.5	369.3	369.0	368.7	368.1	367.5	367.0	366.4	367.0
5°	368.7	368.5	368.3	368.2	368.0	367.6	367.0	366.5	366.0	365.5	366.2
7.5°	365.1	365.2	365.2	365.2	365.2	365.0	364.5	363.9	363.4	362.9	363.8
10°	361.9	362.1	362.2	362.4	362.6	362.5	362.0	361.5	361.1	360.7	361.5
12.5°	358.0	358.3	358.5	358.8	359.0	359.0	358.7	358.3	358.1	357.7	358.6
15°	351.0	351.3	351.5	351.8	352.1	352.2	352.1	352.0	351.9	351.8	352.8
17.5°	342.2	342.8	343.3	343.8	344.3	344.6	344.6	344.5	344.5	344.5	345.3
20°	335.8	336.3	336.8	337.4	337.9	338.3	338.5	338.6	338.8	339.0	339.8
22.5°	329.1	329.6	330.1	330.6	331.2	331.6	331.8	332.1	332.3	332.6	333.6
25°	316.9	317.8	318.7	319.6	320.5	321.1	321.3	321.6	321.8	322.2	323.3
27.5°	304.7	305.7	306.8	307.8	308.8	309.6	310.1	310.7	311.3	311.9	312.9
30°	296.1	297.2	298.4	299.5	300.7	301.6	302.4	303.1	303.8	304.5	305.6
32.5°	286.5	287.7	289.0	290.3	291.6	292.7	293.7	294.6	295.6	296.4	297.6
35°	272.8	274.2	275.7	277.1	278.5	279.8	280.9	282.1	283.3	284.5	285.8
37.5°	258.4	259.9	261.6	263.2	264.8	266.3	267.7	269.1	270.6	272.0	273.5
40°	248.7	250.4	251.9	253.6	255.1	256.8	258.6	260.5	262.2	264.0	265.5
42.5°	238.2	240.1	242.0	244.0	246.0	247.9	249.8	251.6	253.5	255.3	257.0
45°	223.1	225.2	227.3	229.5	231.6	233.8	236.0	238.2	240.5	242.7	244.4
47.5°	207.2	209.7	212.1	214.6	217.0	219.5	222.0	224.5	227.0	229.6	231.5
50°	197.0	199.5	202.0	204.5	207.0	209.6	212.3	215.2	217.9	220.7	222.7
52.5°	186.1	188.7	191.3	194.0	196.7	199.5	202.5	205.6	208.6	211.6	213.8
55°	170.1	173.1	176.0	178.9	181.8	184.9	188.1	191.4	194.6	197.8	200.2
57.5°	154.5	157.6	160.7	163.8	166.8	170.1	173.6	177.1	180.6	184.2	186.6
60°	143.6	146.8	150.1	153.3	156.4	159.9	163.6	167.2	170.8	174.5	177.0
62.5°	133.4	136.6	139.9	143.2	146.5	150.1	153.9	157.8	161.7	165.6	168.0
65°	117.5	121.1	124.5	127.9	131.5	135.2	139.1	143.0	146.9	150.8	153.5
67.5°	101.5	105.2	108.9	112.5	116.2	120.1	124.1	128.1	132.1	136.1	139.0
70°	90.2	94.1	97.9	101.8	105.6	109.7	113.9	118.2	122.5	126.7	129.7
72.5°	80.0	83.9	87.6	91.5	95.3	99.4	103.8	108.3	112.7	117.2	120.1
75°	63.8	68.0	72.2	76.4	80.6	84.9	89.4	93.8	98.2	102.7	105.6
77.5°	49.7	53.9	58.1	62.3	66.6	70.9	75.4	79.9	84.4	88.9	92.0
80°	39.7	44.1	48.5	52.9	57.2	61.7	66.3	70.9	75.6	80.2	83.3
82.5°	31.1	35.5	40.0	44.3	48.8	53.4	58.1	62.8	67.5	72.2	75.3
85°	19.6	24.1	28.6	33.1	37.5	42.1	46.8	51.5	56.2	61.0	64.0
87.5°	10.8	15.5	20.1	24.9	29.5	34.2	39.0	43.9	48.7	53.6	56.5
90°	6.2	11.5	16.9	22.7	28.1	33.5	39.5	45.5	51.6	57.6	60.2
92.5°	11.0	17.9	25.9	33.7	41.8	53.2	70.6	96.2	121.4	118.3	102.7
95°	21.1	26.1	35.0	46.8	63.0	86.1	132.2	209.7	294.6	331.0	278.7
97.5°	32.4	36.1	43.4	53.8	69.5	93.9	137.9	224.6	363.1	488.1	522.4
100°	40.0	43.3	49.6	59.3	74.0	96.6	135.1	211.8	345.1	500.0	599.3
102.5°	47.9	51.3	56.9	66.0	79.2	100.0	134.9	200.6	319.7	472.5	601.2
105°	60.2	63.8	68.9	76.9	88.3	106.6	136.9	191.4	288.0	424.9	568.3
107.5°	72.8	76.1	80.8	88.4	99.0	115.9	142.8	188.5	266.9	382.6	513.0
110°	82.0	85.1	89.1	96.1	106.1	122.4	148.1	189.0	258.3	358.6	478.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	90.6	93.4	97.2	103.9	113.6	129.3	153.3	191.2	252.6	341.8	447.6
115°	102.7	105.7	109.7	115.7	125.1	140.5	162.4	195.5	248.8	323.3	410.4
117.5°	115.1	118.0	121.1	126.3	136.3	150.4	171.9	201.6	247.1	311.1	386.7
120°	123.4	125.3	128.2	133.5	143.4	157.3	178.0	206.4	247.2	305.1	373.9
122.5°	130.9	132.6	135.3	140.8	150.0	164.5	184.6	211.0	248.5	300.7	363.3
125°	141.2	142.2	145.1	150.5	159.8	174.4	194.2	218.3	250.4	294.7	349.1
127.5°	149.3	150.7	154.2	159.6	169.9	184.2	202.9	224.5	253.1	290.6	336.4
130°	154.5	155.8	160.1	165.9	176.2	190.3	208.3	228.7	255.0	287.7	329.2
132.5°	158.0	159.9	164.7	171.8	182.0	195.6	212.8	232.6	256.1	285.8	322.4
135°	164.8	166.7	172.0	179.3	189.5	203.2	219.5	237.1	257.7	282.8	313.3
137.5°	171.3	173.2	178.5	186.2	196.4	208.9	224.1	240.6	258.6	279.7	305.4
140°	175.2	177.7	182.6	190.5	200.3	212.7	227.2	242.2	259.2	278.1	300.6
142.5°	179.9	181.9	187.2	194.2	203.9	215.4	229.3	243.7	259.2	276.0	296.0
145°	187.5	188.9	193.2	200.5	208.8	220.0	232.8	246.1	259.8	274.5	290.9
147.5°	194.8	195.6	200.0	206.4	214.4	224.0	235.7	247.6	259.8	272.7	286.3
150°	199.8	200.4	204.3	210.7	217.6	226.4	237.7	248.0	259.8	271.0	283.4
152.5°	205.0	205.1	209.1	214.6	220.7	229.1	238.8	248.8	258.6	269.1	280.3
155°	212.7	212.7	215.6	220.5	225.9	232.8	241.2	249.0	257.4	265.7	275.5
157.5°	218.7	219.1	221.4	225.8	230.4	235.7	242.4	249.5	255.6	262.6	270.2
160°	223.4	223.4	225.4	229.4	232.8	237.7	243.6	249.5	254.9	260.3	266.7
162.5°	227.0	227.0	228.6	231.7	234.7	238.8	244.0	249.1	253.3	258.0	263.1
165°	232.3	231.8	232.8	235.2	237.2	240.6	244.5	248.0	251.0	254.4	258.3
167.5°	236.3	235.7	236.2	238.1	239.4	241.6	244.4	247.2	248.6	250.8	253.7
170°	238.7	237.7	238.2	239.6	240.6	241.6	244.1	246.1	247.0	248.5	251.0
172.5°	240.2	239.6	239.8	240.8	241.4	242.0	244.1	245.6	245.8	246.5	248.2
175°	242.1	241.6	241.2	242.1	242.1	242.6	243.6	244.5	244.1	244.1	245.0
177.5°	243.0	242.6	242.2	242.6	242.6	242.6	243.0	243.7	243.0	242.6	243.0
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	367.5	368.1	368.7	368.9	368.9	368.8	368.7	368.6
5°	366.9	367.6	368.3	368.7	368.6	368.4	368.3	368.2
7.5°	364.7	365.6	366.4	366.9	366.8	366.6	366.5	366.4
10°	362.5	363.3	364.2	364.5	364.4	364.2	364.0	363.9
12.5°	359.4	360.2	361.0	361.4	361.2	361.0	360.8	360.7
15°	353.6	354.5	355.4	355.8	355.7	355.6	355.5	355.4
17.5°	346.0	346.9	347.7	348.0	347.8	347.8	347.7	347.5
20°	340.6	341.4	342.2	342.7	342.8	342.9	342.9	343.0
22.5°	334.6	335.6	336.7	337.2	337.1	337.0	337.0	336.9
25°	324.4	325.6	326.7	327.4	327.4	327.4	327.4	327.4
27.5°	313.8	314.9	315.9	316.4	316.5	316.6	316.6	316.7
30°	306.6	307.7	308.8	309.3	309.3	309.3	309.3	309.3
32.5°	298.8	299.9	301.0	301.7	302.0	302.1	302.4	302.6
35°	287.1	288.4	289.8	290.7	291.0	291.4	291.7	292.1
37.5°	275.0	276.6	278.1	279.0	279.2	279.6	279.8	280.1
40°	267.0	268.5	270.0	271.0	271.3	271.7	272.1	272.4
42.5°	258.6	260.3	261.9	263.0	263.6	264.0	264.5	265.0
45°	246.1	247.8	249.5	250.7	251.4	252.1	252.9	253.6
47.5°	233.4	235.4	237.3	238.5	239.0	239.6	240.1	240.7
50°	224.7	226.8	228.9	230.2	230.8	231.4	232.0	232.7
52.5°	215.9	218.0	220.2	221.6	222.4	223.2	223.9	224.6
55°	202.6	205.0	207.4	209.0	209.7	210.4	211.1	211.8
57.5°	189.0	191.4	193.8	195.4	196.3	197.2	198.0	198.8
60°	179.5	182.0	184.5	186.2	187.2	188.2	189.2	190.2
62.5°	170.5	173.0	175.5	177.2	178.1	179.0	179.9	180.9
65°	156.2	158.9	161.5	163.3	164.2	165.1	166.0	166.9
67.5°	141.9	144.8	147.7	149.6	150.3	151.1	151.9	152.6
70°	132.5	135.3	138.2	140.1	140.9	141.8	142.8	143.6
72.5°	123.0	125.9	128.8	130.8	131.6	132.5	133.5	134.3
75°	108.6	111.5	114.5	116.5	117.5	118.6	119.7	120.8
77.5°	95.1	98.2	101.3	103.2	104.1	105.0	105.7	106.6
80°	86.3	89.4	92.4	94.3	95.2	96.1	97.0	97.9
82.5°	78.3	81.3	84.4	86.3	87.2	88.1	88.9	89.9
85°	67.1	70.1	73.1	75.1	75.9	76.9	77.7	78.6
87.5°	59.7	62.8	65.9	68.0	68.9	69.8	70.9	71.6
90°	63.7	67.2	70.7	73.7	74.0	75.4	76.8	77.2
92.5°	90.1	84.5	83.6	82.9	82.8	82.2	83.5	83.4
95°	222.1	167.8	144.6	128.7	120.3	116.8	114.2	113.1
97.5°	482.8	397.8	337.1	280.2	244.8	223.6	211.2	207.8
100°	619.1	581.9	527.0	459.0	410.3	375.3	357.1	358.4
102.5°	663.0	664.2	633.3	590.7	553.0	525.6	510.4	500.0
105°	673.5	725.1	736.9	725.8	704.0	686.1	671.2	669.6
107.5°	631.8	713.9	759.3	778.4	779.5	774.0	769.6	765.9
110°	593.1	685.8	750.0	785.8	800.3	804.9	804.7	804.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	554.5	649.1	720.7	766.4	792.3	805.3	809.8	810.8
115°	503.3	591.0	665.3	720.2	757.8	780.2	790.7	793.8
117.5°	465.5	541.3	608.3	664.0	703.1	728.6	743.4	747.4
120°	445.2	513.6	574.5	625.5	665.0	693.1	705.5	709.0
122.5°	429.0	490.9	547.5	595.0	630.0	655.4	669.0	673.3
125°	407.0	462.4	511.4	552.0	584.0	606.2	619.1	623.2
127.5°	387.4	437.0	481.3	518.2	546.8	565.8	577.6	581.3
130°	375.1	421.0	462.5	497.0	523.6	541.7	552.6	557.1
132.5°	363.6	405.9	444.5	477.4	502.5	520.8	530.5	533.9
135°	347.8	384.4	417.8	446.9	471.4	486.6	495.8	499.7
137.5°	333.5	363.4	392.4	417.6	438.2	453.6	461.5	464.3
140°	324.9	351.4	376.3	398.3	417.4	431.5	439.9	439.8
142.5°	316.7	339.4	361.0	380.2	396.6	409.2	416.7	416.7
145°	307.4	324.3	340.7	355.5	368.2	378.8	383.1	384.4
147.5°	299.8	312.9	325.8	336.1	345.8	353.1	357.1	357.8
150°	294.6	305.9	316.2	325.7	333.2	338.8	341.9	342.1
152.5°	290.3	300.1	309.2	316.9	322.8	327.9	329.7	329.7
155°	283.9	291.7	299.1	305.0	309.4	313.3	314.3	314.8
157.5°	277.0	283.5	289.3	293.9	297.7	300.7	301.4	301.4
160°	273.0	278.4	283.4	286.8	290.2	293.2	293.2	292.7
162.5°	268.4	272.9	277.5	280.5	282.8	285.3	285.3	284.8
165°	262.3	265.2	268.6	271.0	273.0	275.0	274.5	274.5
167.5°	256.9	259.2	261.1	262.9	263.8	265.2	264.7	264.7
170°	253.4	254.9	256.8	257.8	258.3	259.3	258.8	258.8
172.5°	250.3	251.3	252.9	253.5	253.6	254.6	253.7	253.3
175°	246.1	246.5	247.5	247.5	247.5	248.0	247.5	247.0
177.5°	243.4	243.7	244.2	244.2	243.7	244.2	243.4	243.4
180°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6

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