

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: P331879-940

Luminaire Tested: **S123DIP-S340D585U940-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331879-940
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-S340D585U940-4F0-1E-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: 3174.0 lumens
Efficiency: N/A
Efficacy: 124.0 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

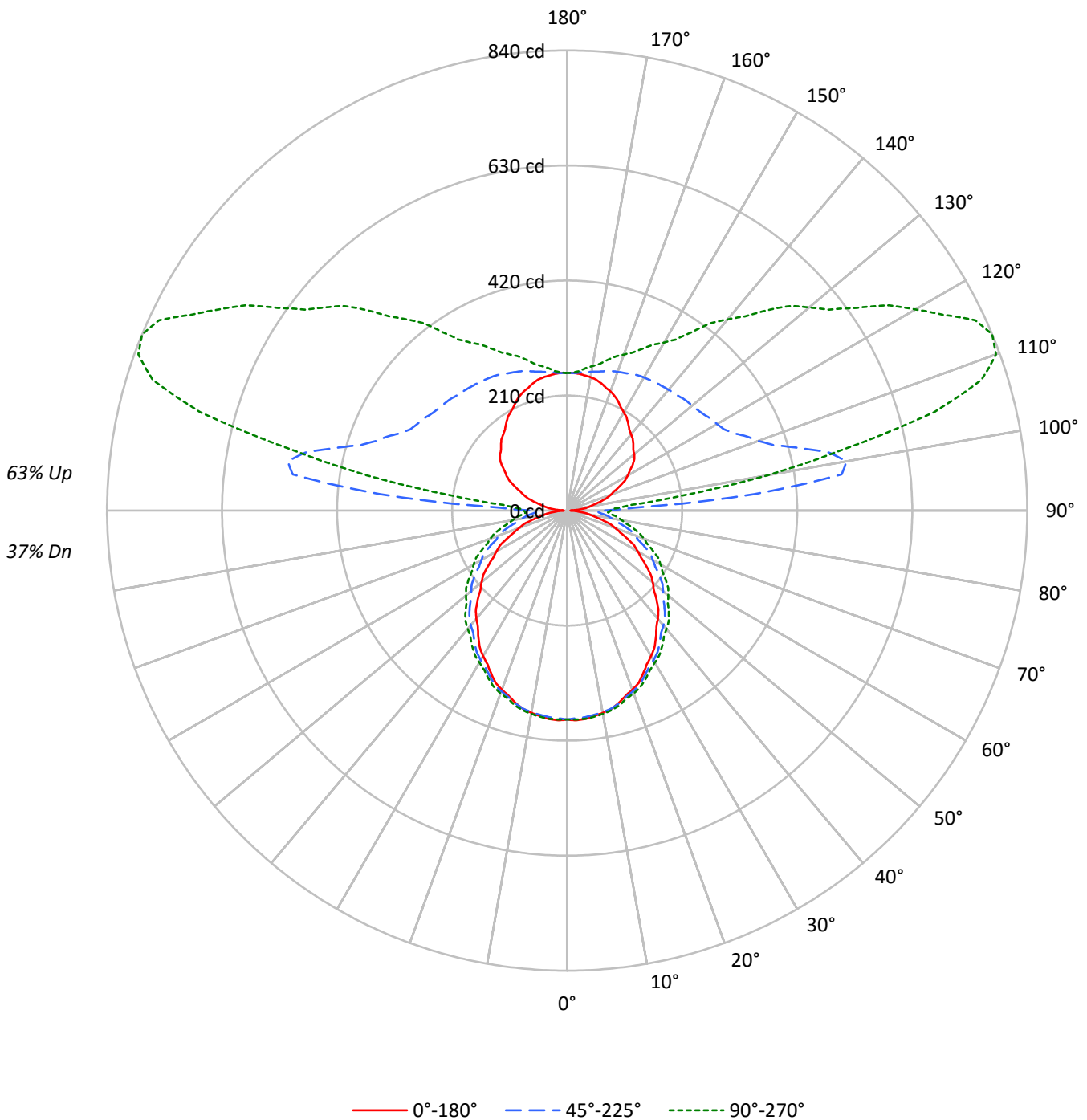
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	4105	4105	4105
5°	4118	4002	4004
10°	4082	3910	3890
15°	4029	3805	3766
20°	3954	3686	3630
25°	3860	3549	3485
30°	3767	3425	3339
35°	3659	3294	3223
40°	3557	3175	3098
45°	3445	3060	2998
50°	3333	2947	2888
55°	3211	2831	2789
60°	3090	2713	2689
65°	2967	2588	2567
70°	2783	2448	2443
75°	2551	2287	2318
80°	2278	2128	2175
85°	2025	2018	2090



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	1.1
10°-20°	103.1	3.2
20°-30°	154.2	4.9
30°-40°	184.1	5.8
40°-50°	192.6	6.1
50°-60°	180.7	5.7
60°-70°	151.0	4.8
70°-80°	108.0	3.4
80°-90°	66.4	2.1
90°-100°	180.2	5.7
100°-110°	425.6	13.4
110°-120°	409.3	12.9
120°-130°	322.0	10.1
130°-140°	250.0	7.9
140°-150°	183.9	5.8
150°-160°	127.4	4.0
160°-170°	74.9	2.4
170°-180°	24.4	0.8
0°-30°	293.4	9.2
0°-40°	477.5	15.0
0°-60°	850.9	26.8
0°-90°	1176.2	37.1
90°-120°	1015.2	32.0
90°-150°	1771.1	55.8
90°-180°	1998.0	62.9
0°-180°	3174.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	381	381	381	381	381	
5°	382	381	378	382	381	36
15°	364	365	364	368	368	102
25°	328	332	334	339	339	151
35°	282	289	295	301	302	177
45°	231	241	251	259	263	178
55°	176	190	205	216	219	158
65°	122	138	156	168	173	120
75°	66	86	106	120	125	71
85°	20	41	63	77	81	21
90°	6	32	60	75	80	5
95°	22	77	343	142	117	22
105°	62	101	440	757	694	66
115°	106	138	335	717	822	105
125°	146	173	305	551	645	130
135°	171	203	293	448	518	132
145°	194	222	284	360	398	122
155°	220	238	275	313	326	101
165°	241	247	264	279	284	68
175°	251	251	253	256	256	24
180°	251	251	251	251	251	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4
2.5°	383.1	382.9	382.6	382.5	382.2	381.8	381.2	380.6	380.0	379.4	380.0
5°	381.8	381.7	381.5	381.3	381.1	380.8	380.1	379.6	379.1	378.5	379.2
7.5°	378.1	378.2	378.2	378.2	378.3	378.0	377.5	376.9	376.4	375.9	376.7
10°	374.8	375.0	375.1	375.3	375.5	375.4	374.9	374.4	374.0	373.5	374.4
12.5°	370.8	371.0	371.3	371.6	371.8	371.8	371.5	371.1	370.9	370.5	371.4
15°	363.6	363.8	364.1	364.4	364.6	364.8	364.6	364.5	364.4	364.4	365.3
17.5°	354.5	355.0	355.5	356.1	356.6	356.9	356.9	356.8	356.8	356.8	357.6
20°	347.8	348.3	348.8	349.5	350.0	350.4	350.5	350.7	350.9	351.1	352.0
22.5°	340.8	341.3	341.9	342.4	343.0	343.4	343.7	343.9	344.2	344.5	345.5
25°	328.2	329.1	330.1	331.0	331.9	332.5	332.8	333.1	333.3	333.7	334.8
27.5°	315.6	316.6	317.7	318.8	319.9	320.7	321.2	321.8	322.4	323.0	324.0
30°	306.7	307.8	309.1	310.2	311.5	312.4	313.2	313.9	314.6	315.4	316.5
32.5°	296.7	298.0	299.3	300.7	302.0	303.2	304.2	305.1	306.1	307.0	308.3
35°	282.5	284.0	285.5	287.0	288.5	289.8	291.0	292.2	293.4	294.6	296.0
37.5°	267.6	269.2	270.9	272.6	274.2	275.8	277.2	278.7	280.3	281.7	283.3
40°	257.6	259.3	260.9	262.6	264.2	266.0	267.9	269.7	271.5	273.4	275.0
42.5°	246.6	248.7	250.7	252.7	254.8	256.7	258.7	260.6	262.5	264.4	266.2
45°	231.0	233.3	235.4	237.6	239.9	242.1	244.4	246.7	249.1	251.4	253.2
47.5°	214.6	217.1	219.6	222.2	224.7	227.3	229.9	232.6	235.1	237.8	239.8
50°	204.0	206.6	209.2	211.8	214.4	217.0	219.9	222.8	225.7	228.5	230.7
52.5°	192.7	195.5	198.1	200.9	203.7	206.6	209.7	212.9	216.1	219.2	221.4
55°	176.2	179.2	182.3	185.3	188.3	191.5	194.8	198.2	201.5	204.8	207.3
57.5°	160.1	163.2	166.4	169.6	172.7	176.2	179.8	183.4	187.1	190.7	193.2
60°	148.7	152.0	155.4	158.7	162.0	165.6	169.4	173.2	176.9	180.7	183.3
62.5°	138.1	141.5	144.9	148.3	151.7	155.4	159.4	163.5	167.5	171.5	174.0
65°	121.7	125.4	128.9	132.5	136.2	140.0	144.0	148.1	152.1	156.2	159.0
67.5°	105.1	109.0	112.8	116.5	120.4	124.4	128.5	132.7	136.8	141.0	143.9
70°	93.5	97.5	101.4	105.4	109.3	113.6	118.0	122.4	126.9	131.3	134.3
72.5°	82.8	86.9	90.8	94.8	98.7	103.0	107.5	112.2	116.7	121.4	124.4
75°	66.1	70.4	74.7	79.1	83.5	87.9	92.6	97.1	101.7	106.4	109.4
77.5°	51.5	55.8	60.2	64.6	68.9	73.5	78.1	82.8	87.4	92.1	95.3
80°	41.1	45.7	50.2	54.8	59.2	63.9	68.7	73.5	78.3	83.1	86.2
82.5°	32.2	36.7	41.4	45.9	50.6	55.3	60.2	65.0	69.9	74.8	77.9
85°	20.3	25.0	29.6	34.2	38.8	43.6	48.5	53.3	58.2	63.1	66.3
87.5°	11.2	16.1	20.9	25.8	30.6	35.4	40.4	45.5	50.5	55.5	58.5
90°	6.4	11.9	17.5	23.5	29.1	34.7	40.9	47.2	53.4	59.7	62.3
92.5°	11.4	18.5	26.8	34.9	43.2	55.1	73.1	99.6	125.7	122.5	106.4
95°	21.8	27.0	36.2	48.4	65.3	89.2	136.9	217.2	305.1	342.8	288.6
97.5°	33.5	37.4	44.9	55.7	72.0	97.3	142.9	232.6	376.0	505.5	541.0
100°	41.4	44.9	51.4	61.4	76.6	100.0	139.9	219.4	357.4	517.8	620.6
102.5°	49.6	53.1	58.9	68.3	82.0	103.6	139.7	207.8	331.1	489.4	622.7
105°	62.3	66.1	71.3	79.6	91.5	110.4	141.8	198.2	298.3	440.1	588.6
107.5°	75.4	78.8	83.7	91.6	102.5	120.0	147.8	195.2	276.4	396.3	531.3
110°	84.9	88.1	92.3	99.5	109.9	126.8	153.4	195.7	267.5	371.4	495.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	93.8	96.8	100.7	107.6	117.6	133.9	158.7	198.0	261.6	354.0	463.6
115°	106.4	109.5	113.6	119.8	129.6	145.5	168.2	202.5	257.7	334.8	425.0
117.5°	119.2	122.2	125.5	130.8	141.2	155.8	178.0	208.7	255.9	322.2	400.5
120°	127.8	129.7	132.8	138.3	148.5	162.9	184.3	213.7	256.0	316.0	387.3
122.5°	135.5	137.3	140.1	145.8	155.3	170.4	191.2	218.6	257.3	311.5	376.2
125°	146.2	147.2	150.3	155.9	165.5	180.6	201.1	226.1	259.3	305.2	361.6
127.5°	154.6	156.0	159.7	165.3	175.9	190.7	210.2	232.5	262.2	301.0	348.4
130°	160.0	161.4	165.9	171.8	182.4	197.1	215.7	236.8	264.1	298.0	341.0
132.5°	163.6	165.6	170.6	177.9	188.5	202.6	220.4	240.9	265.3	296.0	333.9
135°	170.7	172.6	178.2	185.7	196.3	210.4	227.3	245.6	266.9	292.8	324.5
137.5°	177.4	179.4	184.9	192.9	203.4	216.3	232.1	249.1	267.8	289.7	316.3
140°	181.5	184.0	189.1	197.2	207.4	220.3	235.3	250.8	268.4	288.0	311.3
142.5°	186.4	188.4	193.9	201.1	211.2	223.1	237.5	252.4	268.5	285.9	306.6
145°	194.2	195.6	200.1	207.7	216.2	227.8	241.1	254.9	269.0	284.3	301.3
147.5°	201.7	202.6	207.1	213.7	222.0	232.0	244.2	256.5	269.0	282.4	296.5
150°	207.0	207.5	211.6	218.2	225.3	234.4	246.2	256.8	269.0	280.7	293.5
152.5°	212.3	212.4	216.5	222.3	228.5	237.3	247.4	257.7	267.9	278.7	290.3
155°	220.3	220.3	223.3	228.4	234.0	241.1	249.8	257.9	266.5	275.2	285.3
157.5°	226.5	226.9	229.3	233.9	238.6	244.2	251.0	258.4	264.7	272.0	279.8
160°	231.4	231.4	233.4	237.6	241.1	246.2	252.3	258.4	263.9	269.6	276.2
162.5°	235.1	235.1	236.7	240.0	243.1	247.4	252.7	258.0	262.3	267.2	272.5
165°	240.6	240.0	241.1	243.6	245.7	249.2	253.2	256.8	259.9	263.5	267.5
167.5°	244.8	244.2	244.6	246.6	248.0	250.2	253.2	256.0	257.4	259.8	262.8
170°	247.2	246.2	246.6	248.2	249.2	250.2	252.8	254.9	255.8	257.3	259.9
172.5°	248.8	248.2	248.3	249.4	250.0	250.7	252.8	254.4	254.6	255.3	257.1
175°	250.7	250.2	249.8	250.7	250.7	251.3	252.3	253.2	252.8	252.8	253.8
177.5°	251.6	251.3	250.8	251.3	251.3	251.3	251.6	252.4	251.6	251.3	251.6
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	381.4	381.4	381.4	381.4	381.4	381.4	381.4	381.4
2.5°	380.6	381.2	381.8	382.0	382.0	381.9	381.8	381.7
5°	380.0	380.8	381.5	381.8	381.7	381.6	381.5	381.4
7.5°	377.7	378.6	379.5	380.0	379.9	379.7	379.6	379.5
10°	375.4	376.3	377.2	377.6	377.4	377.2	377.0	376.8
12.5°	372.2	373.1	373.9	374.3	374.1	373.9	373.7	373.5
15°	366.2	367.1	368.1	368.5	368.4	368.3	368.2	368.1
17.5°	358.4	359.3	360.1	360.4	360.3	360.2	360.1	359.9
20°	352.8	353.6	354.5	354.9	355.0	355.1	355.2	355.3
22.5°	346.5	347.6	348.7	349.2	349.1	349.0	349.0	348.9
25°	336.0	337.2	338.4	339.0	339.0	339.0	339.0	339.0
27.5°	325.0	326.1	327.2	327.7	327.8	327.9	327.9	328.0
30°	317.5	318.7	319.8	320.3	320.3	320.3	320.3	320.3
32.5°	309.4	310.6	311.7	312.5	312.7	312.9	313.2	313.3
35°	297.4	298.7	300.1	301.0	301.4	301.8	302.1	302.5
37.5°	284.8	286.4	288.0	288.9	289.2	289.5	289.8	290.1
40°	276.5	278.1	279.6	280.6	281.0	281.4	281.8	282.1
42.5°	267.9	269.6	271.3	272.4	273.0	273.4	273.9	274.5
45°	254.9	256.6	258.4	259.7	260.4	261.1	261.9	262.6
47.5°	241.7	243.8	245.8	247.0	247.5	248.2	248.7	249.3
50°	232.7	234.9	237.0	238.4	239.1	239.7	240.3	241.0
52.5°	223.6	225.8	228.0	229.5	230.3	231.1	231.8	232.6
55°	209.8	212.3	214.8	216.4	217.1	217.9	218.6	219.4
57.5°	195.7	198.2	200.7	202.4	203.3	204.2	205.1	205.9
60°	185.9	188.5	191.1	192.9	193.9	194.9	195.9	197.0
62.5°	176.6	179.1	181.7	183.5	184.5	185.4	186.4	187.3
65°	161.8	164.5	167.3	169.2	170.0	171.0	171.9	172.8
67.5°	147.0	150.0	153.0	155.0	155.7	156.5	157.3	158.0
70°	137.2	140.2	143.1	145.1	146.0	146.9	147.8	148.7
72.5°	127.3	130.4	133.4	135.5	136.3	137.2	138.2	139.1
75°	112.4	115.5	118.6	120.6	121.7	122.9	123.9	125.1
77.5°	98.5	101.7	105.0	106.9	107.8	108.7	109.5	110.4
80°	89.3	92.6	95.7	97.6	98.6	99.5	100.5	101.4
82.5°	81.1	84.2	87.4	89.3	90.3	91.2	92.1	93.1
85°	69.5	72.6	75.7	77.8	78.6	79.6	80.5	81.4
87.5°	61.8	65.0	68.2	70.4	71.3	72.3	73.4	74.2
90°	66.0	69.6	73.2	76.3	76.7	78.1	79.5	80.0
92.5°	93.3	87.5	86.6	85.9	85.8	85.2	86.5	86.4
95°	230.0	173.8	149.7	133.3	124.6	120.9	118.2	117.2
97.5°	500.1	412.0	349.1	290.2	253.5	231.6	218.7	215.3
100°	641.1	602.6	545.8	475.4	424.9	388.7	369.8	371.2
102.5°	686.6	687.9	655.9	611.8	572.7	544.3	528.6	517.8
105°	697.5	751.0	763.2	751.7	729.2	710.6	695.2	693.5
107.5°	654.3	739.4	786.4	806.2	807.4	801.6	797.0	793.2
110°	614.3	710.2	776.8	813.9	828.8	833.7	833.4	833.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	574.3	672.3	746.4	793.7	820.6	834.0	838.7	839.7
115°	521.3	612.1	689.0	745.9	784.8	808.0	818.9	822.2
117.5°	482.1	560.6	630.0	687.7	728.2	754.6	769.9	774.1
120°	461.1	531.9	595.0	647.8	688.7	717.8	730.7	734.3
122.5°	444.3	508.5	567.0	616.2	652.5	678.8	692.9	697.3
125°	421.5	478.9	529.7	571.7	604.8	627.9	641.2	645.4
127.5°	401.3	452.5	498.5	536.7	566.3	586.0	598.2	602.1
130°	388.5	436.0	479.0	514.7	542.2	561.1	572.3	576.9
132.5°	376.6	420.4	460.4	494.5	520.4	539.4	549.5	552.9
135°	360.3	398.1	432.7	462.8	488.2	503.9	513.5	517.5
137.5°	345.4	376.4	406.4	432.5	453.9	469.8	478.0	480.8
140°	336.5	363.9	389.7	412.5	432.3	446.9	455.6	455.5
142.5°	328.0	351.5	373.9	393.8	410.7	423.8	431.6	431.6
145°	318.3	335.9	352.8	368.2	381.3	392.4	396.7	398.1
147.5°	310.5	324.0	337.4	348.1	358.1	365.7	369.9	370.6
150°	305.1	316.8	327.5	337.3	345.1	350.9	354.1	354.3
152.5°	300.7	310.8	320.2	328.2	334.3	339.6	341.4	341.4
155°	294.0	302.1	309.8	315.8	320.4	324.5	325.5	326.0
157.5°	286.9	293.6	299.6	304.3	308.4	311.4	312.2	312.1
160°	282.8	288.4	293.5	297.0	300.6	303.6	303.6	303.1
162.5°	277.9	282.7	287.4	290.5	292.8	295.5	295.5	295.0
165°	271.6	274.6	278.2	280.7	282.8	284.8	284.3	284.3
167.5°	266.1	268.4	270.5	272.3	273.2	274.6	274.1	274.1
170°	262.4	263.9	266.0	267.0	267.5	268.6	268.0	268.0
172.5°	259.2	260.3	261.9	262.5	262.6	263.7	262.8	262.3
175°	254.9	255.3	256.4	256.4	256.4	256.8	256.4	255.8
177.5°	252.1	252.4	252.9	252.9	252.4	252.9	252.1	252.1
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3

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