

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: P331887-940

Luminaire Tested: **S123DIP-S340D805U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331887-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D805U940-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3743.3 lumens
Efficiency: N/A
Efficacy: 120.0 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

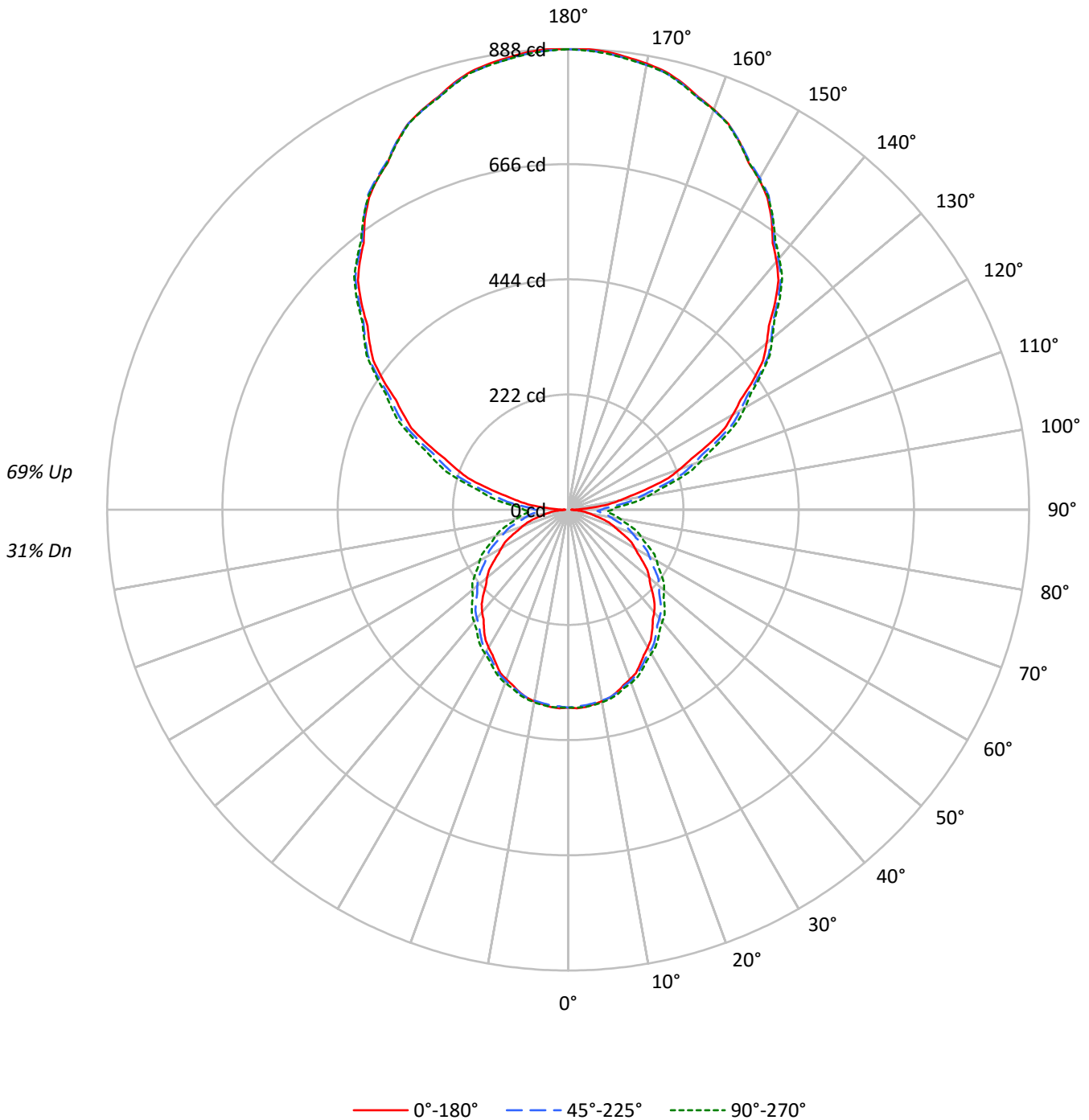
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	88	84	81	83	80	76	73	63	61	58	48	46	45	33	32	32	25
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	24	22	17
4	70	59	51	45	63	53	47	41	42	38	34	32	29	26	23	20	19	14
5	64	53	45	39	57	47	41	35	38	33	29	29	25	22	20	18	16	12
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11
7	54	42	34	29	49	38	31	27	31	25	22	23	20	17	17	14	12	10
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	9
9	47	35	27	22	42	32	25	21	25	20	17	20	16	13	14	12	10	8
10	44	32	25	20	39	29	23	18	23	18	15	18	15	12	13	11	9	7

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	1.0
10°-20°	103.1	2.8
20°-30°	154.2	4.1
30°-40°	184.1	4.9
40°-50°	192.6	5.1
50°-60°	180.7	4.8
60°-70°	151.0	4.0
70°-80°	108.0	2.9
80°-90°	67.0	1.8
90°-100°	98.2	2.6
100°-110°	202.8	5.4
110°-120°	314.2	8.4
120°-130°	398.5	10.6
130°-140°	440.2	11.8
140°-150°	428.8	11.5
150°-160°	360.1	9.6
160°-170°	239.7	6.4
170°-180°	83.9	2.2
0°-30°	293.4	7.8
0°-40°	477.5	12.8
0°-60°	850.9	22.7
0°-90°	1176.9	31.4
90°-120°	615.2	16.4
90°-150°	1882.7	50.3
90°-180°	2566.0	68.5
0°-180°	3743.3	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	34	64	80	86	6
95°	46	67	93	108	112	50
105°	160	172	196	207	212	171
115°	298	306	319	329	332	295
125°	435	438	448	453	454	388
135°	564	567	571	576	576	434
145°	683	684	686	688	688	426
155°	782	782	782	785	780	360
165°	851	849	849	853	848	240
175°	885	883	883	886	882	84
180°	888	888	888	888	888	



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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	21.0	25.9	30.9	35.8	40.9	46.0	51.2	56.3	59.6
90°	6.1	12.2	18.3	24.3	30.4	36.8	43.5	50.2	57.0	63.7	67.4
92.5°	21.9	27.1	32.2	37.4	42.4	48.0	53.7	59.5	65.3	71.1	74.6
95°	45.7	50.4	55.1	59.7	64.5	69.6	75.4	81.2	86.9	92.7	96.2
97.5°	77.1	81.2	85.2	89.3	93.4	98.0	103.3	108.4	113.7	118.9	122.3
100°	98.5	102.5	106.3	110.2	114.0	118.5	123.6	128.6	133.6	138.7	141.8
102.5°	123.3	126.5	129.7	133.0	136.2	140.4	145.6	150.8	156.0	161.2	164.3
105°	160.2	162.7	165.2	167.7	170.3	174.2	179.6	184.9	190.3	195.7	198.3
107.5°	202.6	204.7	206.8	208.8	210.9	214.1	218.5	222.7	227.1	231.4	234.3
110°	229.1	231.0	233.0	235.0	236.9	240.0	244.0	248.0	252.0	255.9	259.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	257.0	258.5	260.1	261.6	263.1	265.7	269.4	273.0	276.6	280.2	283.3
115°	298.4	300.0	301.5	303.1	304.7	306.9	310.0	313.0	316.0	319.1	321.4
117.5°	340.4	341.4	342.4	343.4	344.4	346.3	348.9	351.7	354.4	357.1	359.3
120°	366.3	367.7	369.1	370.4	371.8	373.7	375.9	378.3	380.5	382.8	384.8
122.5°	393.6	394.5	395.5	396.4	397.3	399.0	401.5	404.0	406.5	409.0	410.6
125°	434.9	435.3	435.8	436.3	436.8	438.2	440.5	442.9	445.2	447.6	449.0
127.5°	473.4	474.3	475.2	476.1	477.0	478.4	480.3	482.1	484.0	485.9	486.8
130°	499.0	500.2	501.3	502.5	503.6	504.9	506.2	507.7	509.0	510.4	511.6
132.5°	524.3	525.6	526.8	528.0	529.2	530.4	531.5	532.7	533.9	534.9	535.9
135°	563.5	564.3	565.2	566.0	566.8	567.7	568.6	569.4	570.2	571.1	572.1
137.5°	599.6	600.3	601.0	601.7	602.4	603.2	604.2	605.2	606.2	607.2	608.0
140°	624.4	625.2	626.0	626.7	627.5	628.1	628.6	628.9	629.4	629.8	631.1
142.5°	647.3	647.9	648.6	649.3	650.1	650.6	650.9	651.2	651.6	651.9	653.0
145°	683.0	683.1	683.4	683.6	683.9	684.1	684.7	685.1	685.5	686.0	686.6
147.5°	713.8	714.3	714.9	715.4	716.0	716.5	716.9	717.4	717.8	718.3	718.5
150°	735.5	735.8	736.1	736.5	736.7	737.1	737.4	737.7	738.0	738.3	738.3
152.5°	753.4	753.8	754.2	754.7	755.1	755.5	755.6	755.8	756.0	756.2	756.4
155°	781.5	781.5	781.5	781.5	781.5	781.6	781.8	781.9	782.1	782.2	782.8
157.5°	805.5	805.3	805.1	804.9	804.8	804.8	804.9	805.0	805.1	805.2	805.9
160°	820.6	820.3	819.9	819.7	819.3	819.2	819.2	819.2	819.2	819.2	819.9
162.5°	833.9	833.6	833.1	832.7	832.2	832.1	832.2	832.3	832.4	832.6	833.3
165°	851.2	850.8	850.3	849.9	849.4	849.2	849.2	849.2	849.2	849.2	850.1
167.5°	865.0	864.4	863.8	863.2	862.6	862.4	862.5	862.6	862.7	862.8	863.8
170°	872.9	872.3	871.6	871.0	870.4	870.0	870.0	870.0	870.0	870.0	871.2
172.5°	879.0	878.4	877.8	877.2	876.6	876.2	876.2	876.2	876.2	876.2	877.2
175°	885.4	884.8	884.2	883.6	883.0	882.6	882.6	882.6	882.6	882.6	883.6
177.5°	888.1	887.6	887.1	886.5	886.1	885.8	885.8	885.8	885.8	885.8	886.5
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



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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°	62.8	66.1	69.4	71.4	72.4	73.4	74.4	75.4
90°	71.2	75.0	78.7	81.2	82.5	83.6	84.9	86.1
92.5°	78.2	81.8	85.3	87.4	88.1	88.7	89.4	90.1
95°	99.7	103.2	106.6	108.9	109.8	110.7	111.6	112.5
97.5°	125.8	129.3	132.8	134.9	135.7	136.6	137.5	138.3
100°	144.9	148.0	151.2	153.4	154.6	155.9	157.1	158.3
102.5°	167.3	170.4	173.4	175.4	176.3	177.2	178.0	178.9
105°	200.9	203.5	206.1	207.9	209.0	210.2	211.3	212.5
107.5°	237.4	240.3	243.3	245.1	245.8	246.4	247.0	247.6
110°	262.0	265.0	268.0	269.7	270.2	270.6	271.1	271.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	286.3	289.4	292.5	294.4	295.2	295.9	296.6	297.4
115°	323.8	326.1	328.5	330.0	330.6	331.2	331.7	332.3
117.5°	361.4	363.6	365.8	367.0	367.3	367.6	367.8	368.1
120°	386.7	388.7	390.7	391.8	392.2	392.4	392.8	393.2
122.5°	412.3	413.9	415.6	416.5	416.7	417.0	417.1	417.3
125°	450.3	451.6	452.9	453.6	453.6	453.6	453.7	453.7
127.5°	487.8	488.7	489.7	490.2	490.1	490.0	489.9	489.8
130°	512.6	513.8	515.0	515.2	514.7	514.2	513.6	513.1
132.5°	536.8	537.8	538.7	539.0	538.9	538.7	538.4	538.2
135°	573.2	574.3	575.2	575.9	576.0	576.1	576.3	576.5
137.5°	608.8	609.6	610.4	610.7	610.6	610.5	610.4	610.2
140°	632.3	633.5	634.7	635.1	634.5	633.8	633.2	632.6
142.5°	654.1	655.1	656.2	656.6	656.2	655.9	655.5	655.1
145°	687.2	687.8	688.4	688.5	688.3	688.0	687.8	687.5
147.5°	718.7	718.9	719.1	718.9	718.4	717.7	717.1	716.6
150°	738.3	738.3	738.3	738.0	737.2	736.5	735.7	734.9
152.5°	756.6	756.9	757.2	756.9	756.1	755.4	754.6	753.9
155°	783.5	784.1	784.7	784.4	783.4	782.3	781.2	780.2
157.5°	806.6	807.2	807.8	807.7	806.9	806.0	805.1	804.2
160°	820.7	821.5	822.2	822.3	821.7	821.1	820.5	819.8
162.5°	834.1	834.9	835.7	835.5	834.6	833.6	832.6	831.6
165°	851.0	851.9	852.9	852.8	851.8	850.6	849.5	848.5
167.5°	864.8	865.7	866.7	866.7	865.7	864.8	863.8	862.8
170°	872.3	873.3	874.4	874.4	873.3	872.3	871.2	870.0
172.5°	878.2	879.1	880.0	880.0	878.9	877.8	876.7	875.7
175°	884.5	885.4	886.4	886.3	885.2	884.1	883.0	881.9
177.5°	887.3	888.1	888.8	888.8	887.9	887.0	886.2	885.3
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5

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