

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: P332099-940

Luminaire Tested: **S123DIW-S340D755U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332099-940
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: S123DIW-S340D755U940-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3618.6 lumens
Efficiency: N/A
Efficacy: 119.0 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

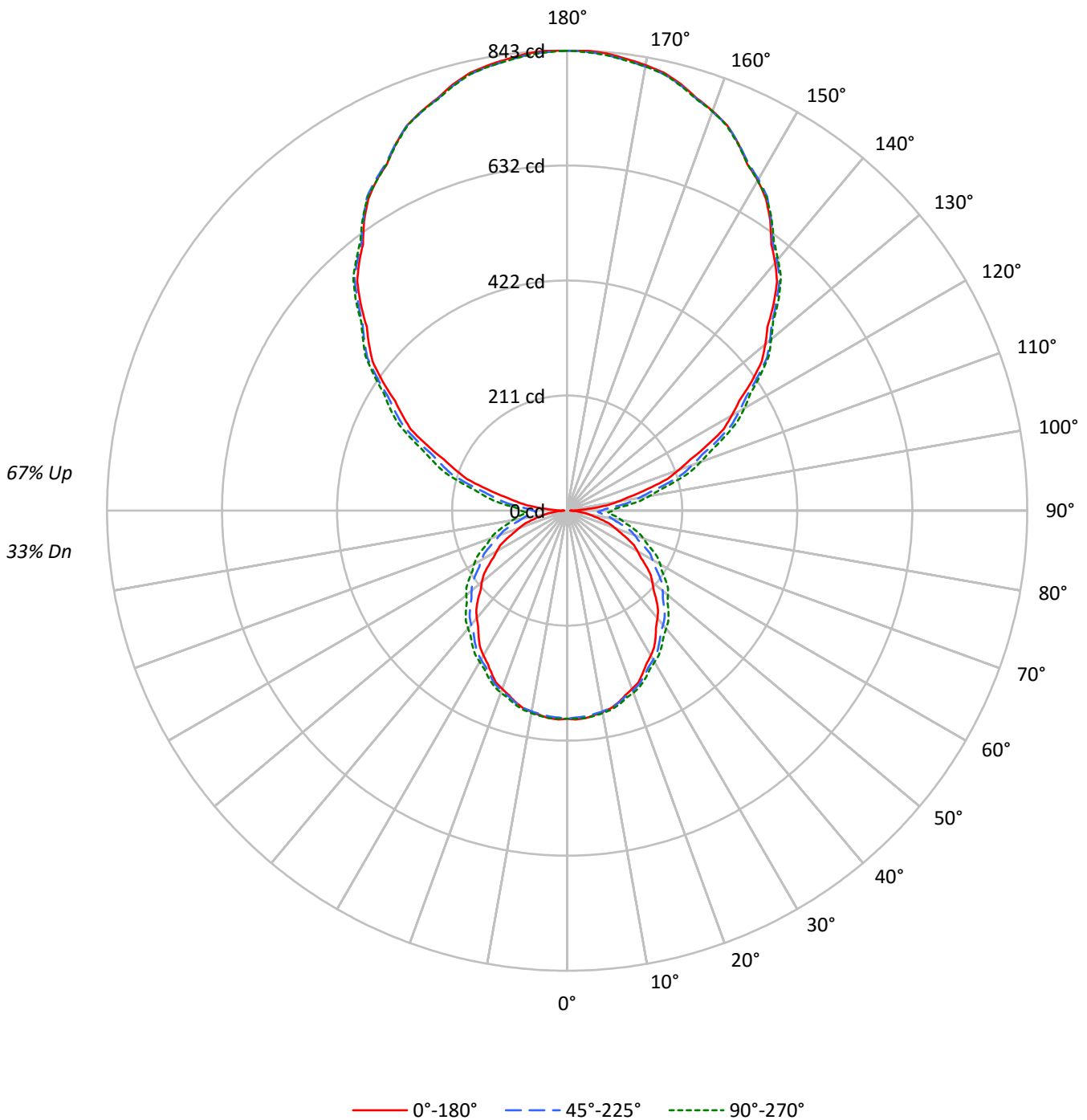
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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	50	30	10	0
RCR																					
0	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33			33
1	93	89	85	81	84	80	76	73	63	61	59	48	47	45	34	33	32	26			26
2	85	77	71	65	76	69	64	60	55	51	48	42	39	37	30	28	27	21			21
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	26	24	22	18			18
4	70	59	52	45	63	54	47	42	43	38	34	33	29	26	23	21	19	15			15
5	64	53	45	39	57	48	41	35	38	33	29	29	26	23	21	18	17	13			13
6	59	47	39	33	53	43	36	31	34	29	25	26	23	20	19	16	14	11			11
7	54	42	34	29	49	38	32	27	31	26	22	24	20	17	17	15	13	10			10
8	50	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9			9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	14	12	10	8			8
10	44	32	25	20	39	29	23	18	23	19	15	18	15	12	13	11	9	7			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	4.3
30°-40°	184.1	5.1
40°-50°	192.6	5.3
50°-60°	180.7	5.0
60°-70°	151.0	4.2
70°-80°	108.0	3.0
80°-90°	66.9	1.8
90°-100°	95.3	2.6
100°-110°	194.0	5.4
110°-120°	299.3	8.3
120°-130°	378.9	10.5
130°-140°	418.2	11.6
140°-150°	407.2	11.3
150°-160°	341.9	9.4
160°-170°	227.6	6.3
170°-180°	79.7	2.2
0°-30°	293.4	8.1
0°-40°	477.5	13.2
0°-60°	850.9	23.5
0°-90°	1176.8	32.5
90°-120°	588.5	16.3
90°-150°	1792.8	49.5
90°-180°	2442.0	67.5
0°-180°	3618.6	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	33	63	79	85	6
95°	44	65	90	105	110	47
105°	152	164	187	199	204	163
115°	283	291	304	314	317	280
125°	413	415	426	431	432	368
135°	535	539	542	547	548	412
145°	648	649	651	654	653	405
155°	742	742	743	745	741	341
165°	808	806	806	810	806	228
175°	840	838	838	841	837	80
180°	843	843	843	843	843	



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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°	11.1	16.1	21.0	25.9	30.8	35.8	40.8	45.9	51.0	56.1	59.4
90°	6.1	12.0	18.0	24.1	30.1	36.4	43.0	49.6	56.2	62.9	66.5
92.5°	21.0	26.1	31.2	36.3	41.4	46.8	52.5	58.2	64.0	69.7	73.2
95°	43.6	48.2	52.9	57.5	62.2	67.3	73.0	78.7	84.4	90.2	93.5
97.5°	73.5	77.5	81.5	85.5	89.5	94.1	99.2	104.4	109.6	114.8	118.2
100°	93.7	97.6	101.4	105.2	109.1	113.5	118.5	123.5	128.5	133.4	136.5
102.5°	117.3	120.5	123.6	126.8	130.0	134.2	139.3	144.5	149.6	154.7	157.8
105°	152.2	154.7	157.3	159.8	162.3	166.2	171.5	176.7	182.1	187.3	189.9
107.5°	192.5	194.6	196.6	198.7	200.7	203.9	208.2	212.5	216.9	221.1	224.1
110°	217.6	219.5	221.5	223.5	225.4	228.4	232.4	236.4	240.3	244.3	247.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	244.1	245.6	247.2	248.7	250.2	252.8	256.5	260.0	263.6	267.2	270.3
115°	283.4	284.9	286.5	288.0	289.5	291.9	294.9	297.9	301.0	304.0	306.3
117.5°	323.2	324.2	325.2	326.2	327.2	329.0	331.8	334.5	337.2	340.0	342.1
120°	347.9	349.2	350.5	351.9	353.2	355.0	357.3	359.6	361.9	364.3	366.2
122.5°	373.8	374.6	375.5	376.4	377.3	379.0	381.6	384.1	386.6	389.1	390.7
125°	413.0	413.4	413.8	414.3	414.7	416.1	418.5	420.9	423.3	425.6	427.0
127.5°	449.4	450.3	451.1	452.0	452.9	454.2	456.1	458.0	459.9	461.8	462.8
130°	473.9	474.9	476.0	477.1	478.1	479.4	480.8	482.2	483.6	485.0	486.2
132.5°	497.8	499.0	500.2	501.3	502.5	503.6	504.8	506.0	507.1	508.3	509.3
135°	534.9	535.7	536.5	537.3	538.1	539.0	539.8	540.6	541.5	542.4	543.5
137.5°	569.3	570.0	570.6	571.2	571.9	572.7	573.7	574.6	575.6	576.6	577.4
140°	592.8	593.5	594.2	594.9	595.8	596.3	596.7	597.2	597.5	598.0	599.2
142.5°	614.5	615.2	615.8	616.4	617.2	617.6	618.0	618.3	618.6	618.9	620.0
145°	648.4	648.5	648.8	649.0	649.2	649.5	650.0	650.4	650.9	651.3	651.8
147.5°	677.6	678.1	678.7	679.2	679.8	680.2	680.6	681.0	681.4	681.9	682.1
150°	698.3	698.6	698.8	699.2	699.5	699.7	700.0	700.3	700.6	700.9	700.9
152.5°	715.2	715.6	716.0	716.5	716.8	717.1	717.3	717.5	717.6	717.8	718.1
155°	742.0	742.0	742.0	742.0	742.0	742.0	742.2	742.3	742.4	742.6	743.2
157.5°	764.7	764.6	764.4	764.2	764.0	764.0	764.1	764.2	764.4	764.5	765.1
160°	779.0	778.7	778.5	778.1	777.8	777.7	777.7	777.7	777.7	777.7	778.5
162.5°	791.8	791.3	790.9	790.5	790.1	790.0	790.1	790.1	790.3	790.4	791.1
165°	808.2	807.7	807.3	806.8	806.4	806.1	806.1	806.1	806.1	806.1	807.0
167.5°	821.3	820.6	820.1	819.5	818.9	818.7	818.8	818.9	819.0	819.1	820.0
170°	828.7	828.0	827.5	826.9	826.3	826.0	826.0	826.0	826.0	826.0	827.1
172.5°	834.5	833.9	833.3	832.7	832.1	831.8	831.8	831.8	831.8	831.8	832.8
175°	840.5	840.0	839.4	838.8	838.2	837.9	837.9	837.9	837.9	837.9	838.8
177.5°	843.1	842.6	842.1	841.7	841.2	841.0	841.0	841.0	841.0	841.0	841.7
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6



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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°	62.6	65.9	69.1	71.2	72.2	73.2	74.2	75.2
90°	70.3	74.0	77.8	80.3	81.4	82.7	83.9	85.1
92.5°	76.8	80.3	83.8	86.0	86.6	87.3	88.0	88.6
95°	97.0	100.5	103.9	106.1	107.0	108.0	108.9	109.8
97.5°	121.6	125.1	128.5	130.6	131.5	132.3	133.2	134.1
100°	139.6	142.8	145.9	148.1	149.3	150.5	151.8	152.9
102.5°	160.9	163.9	166.9	168.9	169.8	170.6	171.5	172.4
105°	192.5	195.1	197.7	199.6	200.7	201.8	203.0	204.0
107.5°	227.0	230.0	232.9	234.7	235.3	235.9	236.6	237.2
110°	250.3	253.3	256.3	258.1	258.4	258.9	259.3	259.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	273.3	276.3	279.4	281.2	282.0	282.8	283.6	284.3
115°	308.7	311.0	313.4	314.9	315.5	316.1	316.6	317.3
117.5°	344.3	346.5	348.7	349.9	350.2	350.5	350.8	351.2
120°	368.2	370.2	372.2	373.4	373.7	374.1	374.4	374.8
122.5°	392.4	394.0	395.7	396.7	396.9	397.2	397.4	397.6
125°	428.4	429.7	431.1	431.8	431.8	431.9	431.9	431.9
127.5°	463.8	464.8	465.8	466.3	466.3	466.2	466.2	466.1
130°	487.3	488.5	489.7	490.0	489.5	489.1	488.6	488.1
132.5°	510.2	511.1	512.1	512.6	512.4	512.2	512.0	511.8
135°	544.6	545.6	546.7	547.3	547.5	547.7	547.9	548.0
137.5°	578.3	579.1	580.0	580.3	580.2	580.1	580.0	579.9
140°	600.5	601.7	603.0	603.3	602.7	602.2	601.5	601.0
142.5°	621.1	622.1	623.3	623.7	623.3	622.9	622.7	622.3
145°	652.5	653.1	653.6	653.8	653.6	653.4	653.2	652.9
147.5°	682.3	682.5	682.8	682.6	682.0	681.4	680.9	680.4
150°	700.9	700.9	700.9	700.5	699.9	699.2	698.5	697.8
152.5°	718.4	718.5	718.8	718.5	717.8	717.1	716.4	715.6
155°	743.8	744.4	744.9	744.8	743.7	742.7	741.6	740.7
157.5°	765.7	766.3	767.0	766.8	766.0	765.2	764.4	763.5
160°	779.2	779.9	780.6	780.7	780.2	779.5	778.9	778.4
162.5°	791.8	792.6	793.4	793.3	792.3	791.4	790.4	789.4
165°	807.9	808.8	809.7	809.6	808.6	807.5	806.6	805.5
167.5°	820.9	821.9	822.8	822.8	821.9	820.9	820.0	819.1
170°	828.0	829.1	830.1	830.1	829.1	828.0	827.1	826.0
172.5°	833.7	834.6	835.4	835.4	834.4	833.4	832.3	831.3
175°	839.7	840.5	841.4	841.4	840.3	839.3	838.3	837.2
177.5°	842.4	843.1	843.8	843.7	842.9	842.0	841.2	840.4
180°	842.6	842.6	842.6	842.6	842.6	842.6	842.6	842.6

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