

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: P332099-927

Luminaire Tested: **S123DIW-S340D755U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332099-927
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-S340D755U927-4F0-1E-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: 3214.8 lumens
Efficiency: N/A
Efficacy: 105.7 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

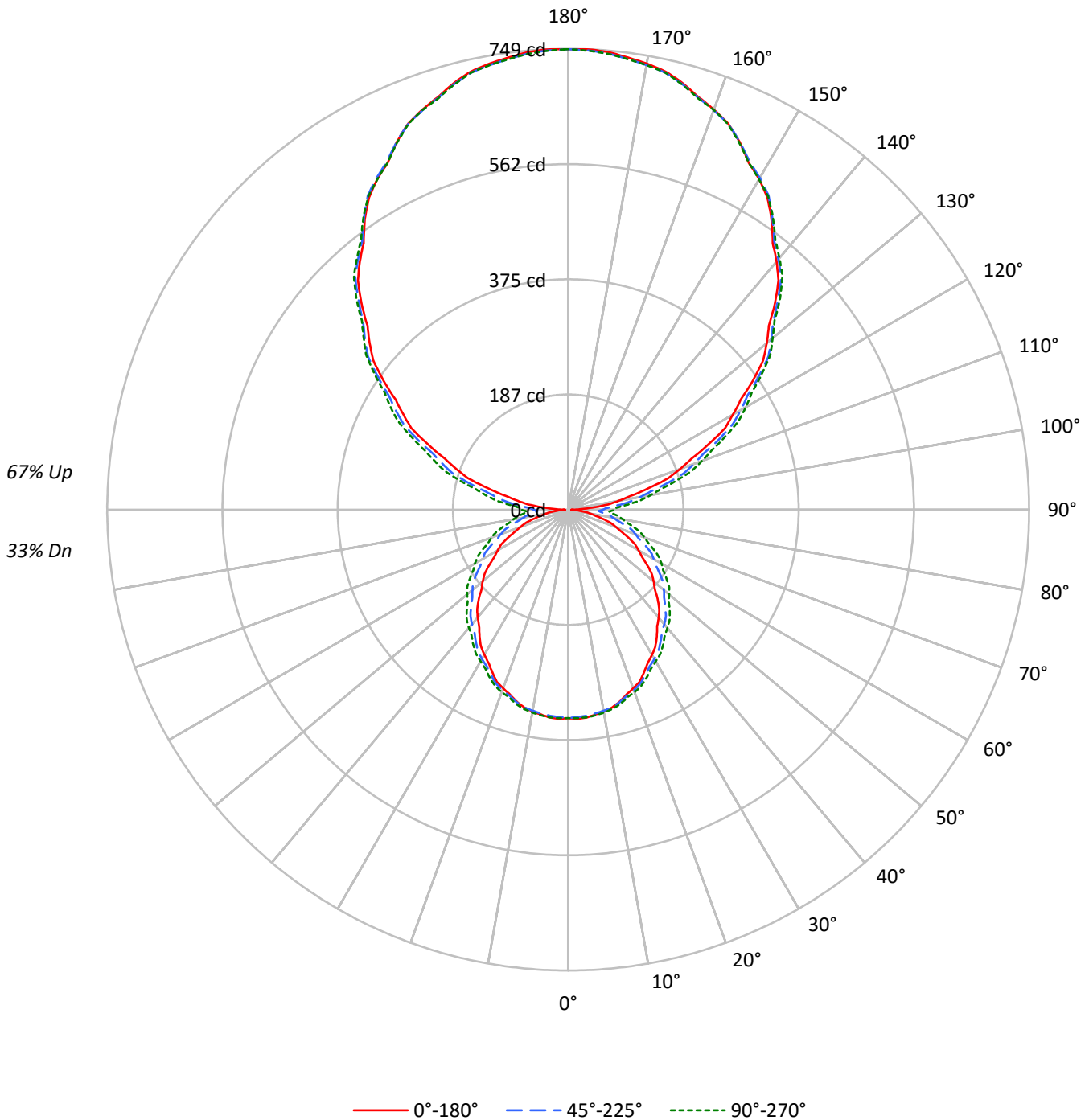
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	93	89	85	81	84	80	76	73	63	61	59	48	47	45	34	33	32	26
2	85	77	71	65	76	69	64	60	55	51	48	42	39	37	30	28	27	21
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	26	24	22	18
4	70	59	52	45	63	54	47	42	43	38	34	33	29	26	23	21	19	15
5	64	53	45	39	57	48	41	35	38	33	29	29	26	23	21	18	17	13
6	59	47	39	33	53	43	36	31	34	29	25	26	23	20	19	16	14	11
7	54	42	34	29	49	38	32	27	31	26	22	24	20	17	17	15	13	10
8	50	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	14	12	10	8
10	44	32	25	20	39	29	23	18	23	19	15	18	15	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3647	3647	3647
5°	3658	3556	3557
10°	3626	3473	3456
15°	3579	3380	3345
20°	3513	3274	3224
25°	3430	3152	3096
30°	3345	3043	2966
35°	3251	2926	2863
40°	3161	2820	2752
45°	3061	2718	2664
50°	2962	2618	2566
55°	2852	2516	2478
60°	2745	2411	2388
65°	2636	2300	2280
70°	2471	2174	2170
75°	2265	2031	2059
80°	2023	1890	1932
85°	1805	1794	1856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	1.0
10°-20°	91.6	2.8
20°-30°	137.0	4.3
30°-40°	163.6	5.1
40°-50°	171.1	5.3
50°-60°	160.6	5.0
60°-70°	134.1	4.2
70°-80°	96.0	3.0
80°-90°	59.4	1.8
90°-100°	84.7	2.6
100°-110°	172.3	5.4
110°-120°	265.9	8.3
120°-130°	336.6	10.5
130°-140°	371.5	11.6
140°-150°	361.7	11.3
150°-160°	303.7	9.4
160°-170°	202.2	6.3
170°-180°	70.8	2.2
0°-30°	260.6	8.1
0°-40°	424.2	13.2
0°-60°	755.9	23.5
0°-90°	1045.4	32.5
90°-120°	522.9	16.3
90°-150°	1592.7	49.5
90°-180°	2169.0	67.5
0°-180°	3214.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	339	338	336	339	339	32
15°	323	324	324	327	327	91
25°	292	295	296	301	301	134
35°	251	257	262	267	269	157
45°	205	214	223	230	233	158
55°	156	169	182	192	195	140
65°	108	123	139	149	154	107
75°	59	76	94	106	111	63
85°	18	37	56	68	72	19
90°	5	30	56	70	76	5
95°	39	58	80	93	98	42
105°	135	146	166	176	181	145
115°	252	258	270	279	282	249
125°	367	369	378	383	384	327
135°	475	478	482	486	487	366
145°	576	577	579	581	580	360
155°	659	659	660	662	658	303
165°	718	716	716	719	716	202
175°	747	745	744	748	744	71
180°	748	748	748	748	748	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	340.3	340.2	339.9	339.8	339.5	339.2	338.7	338.1	337.6	337.1	337.6
5°	339.2	339.1	338.9	338.7	338.6	338.3	337.7	337.2	336.8	336.3	336.9
7.5°	335.9	336.0	336.0	336.0	336.0	335.8	335.3	334.9	334.4	333.9	334.7
10°	333.0	333.1	333.3	333.4	333.6	333.5	333.0	332.6	332.2	331.8	332.6
12.5°	329.4	329.6	329.9	330.1	330.3	330.3	330.0	329.7	329.5	329.2	329.9
15°	323.0	323.2	323.4	323.7	323.9	324.1	323.9	323.8	323.8	323.7	324.6
17.5°	314.9	315.4	315.8	316.3	316.8	317.0	317.0	317.0	317.0	317.0	317.7
20°	309.0	309.4	309.9	310.5	310.9	311.2	311.4	311.6	311.7	311.9	312.7
22.5°	302.8	303.2	303.7	304.2	304.8	305.1	305.3	305.5	305.8	306.0	307.0
25°	291.6	292.4	293.3	294.1	294.9	295.4	295.6	295.9	296.1	296.4	297.5
27.5°	280.4	281.3	282.3	283.2	284.2	284.9	285.3	285.9	286.5	286.9	287.9
30°	272.4	273.5	274.6	275.6	276.7	277.5	278.2	278.8	279.5	280.2	281.1
32.5°	263.6	264.7	265.9	267.1	268.3	269.3	270.2	271.1	272.0	272.7	273.9
35°	251.0	252.3	253.7	254.9	256.3	257.5	258.5	259.6	260.6	261.7	262.9
37.5°	237.7	239.2	240.7	242.2	243.6	245.0	246.3	247.6	249.0	250.3	251.7
40°	228.9	230.4	231.8	233.3	234.7	236.3	238.0	239.6	241.2	242.9	244.3
42.5°	219.1	220.9	222.7	224.5	226.3	228.1	229.8	231.5	233.2	234.9	236.5
45°	205.3	207.2	209.1	211.1	213.1	215.1	217.1	219.2	221.3	223.3	224.9
47.5°	190.7	192.9	195.1	197.4	199.6	201.9	204.2	206.6	208.9	211.3	213.0
50°	181.3	183.5	185.8	188.1	190.4	192.8	195.4	198.0	200.5	203.0	204.9
52.5°	171.2	173.6	176.0	178.5	180.9	183.5	186.3	189.2	191.9	194.7	196.7
55°	156.5	159.2	161.9	164.6	167.3	170.2	173.1	176.1	179.0	182.0	184.2
57.5°	142.2	145.0	147.8	150.7	153.4	156.5	159.7	163.0	166.2	169.4	171.7
60°	132.1	135.1	138.1	141.0	143.9	147.1	150.5	153.8	157.2	160.6	162.9
62.5°	122.7	125.7	128.7	131.7	134.8	138.1	141.6	145.2	148.8	152.3	154.6
65°	108.1	111.4	114.5	117.7	121.0	124.4	127.9	131.6	135.1	138.8	141.2
67.5°	93.4	96.8	100.2	103.5	106.9	110.5	114.2	117.9	121.5	125.2	127.9
70°	83.0	86.6	90.1	93.6	97.1	100.9	104.8	108.8	112.7	116.6	119.3
72.5°	73.6	77.2	80.6	84.2	87.7	91.5	95.5	99.7	103.7	107.8	110.5
75°	58.7	62.6	66.4	70.3	74.1	78.1	82.2	86.3	90.4	94.5	97.2
77.5°	45.7	49.6	53.5	57.4	61.2	65.3	69.4	73.5	77.6	81.8	84.7
80°	36.5	40.6	44.6	48.6	52.6	56.8	61.0	65.3	69.6	73.8	76.6
82.5°	28.6	32.6	36.8	40.8	44.9	49.1	53.5	57.8	62.1	66.5	69.2
85°	18.1	22.2	26.3	30.4	34.5	38.7	43.1	47.4	51.7	56.1	58.9
87.5°	9.9	14.3	18.6	23.0	27.3	31.8	36.3	40.8	45.3	49.8	52.8
90°	5.4	10.7	16.0	21.4	26.7	32.3	38.2	44.0	49.9	55.8	59.1
92.5°	18.7	23.2	27.7	32.2	36.8	41.6	46.7	51.7	56.9	61.9	65.0
95°	38.7	42.9	47.0	51.1	55.2	59.8	64.9	69.9	75.0	80.1	83.1
97.5°	65.3	68.8	72.4	76.0	79.5	83.6	88.2	92.8	97.4	102.0	105.0
100°	83.3	86.7	90.1	93.5	97.0	100.8	105.3	109.7	114.2	118.5	121.3
102.5°	104.2	107.0	109.8	112.6	115.5	119.2	123.7	128.3	132.9	137.4	140.2
105°	135.2	137.4	139.7	142.0	144.2	147.7	152.3	157.0	161.8	166.4	168.7
107.5°	171.0	172.9	174.7	176.5	178.3	181.2	185.0	188.8	192.7	196.5	199.1
110°	193.3	195.0	196.8	198.5	200.3	202.9	206.4	210.0	213.5	217.1	219.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	216.8	218.2	219.6	220.9	222.3	224.6	227.8	231.0	234.2	237.4	240.1
115°	251.8	253.1	254.5	255.9	257.2	259.3	262.0	264.7	267.4	270.1	272.1
117.5°	287.2	288.0	288.9	289.8	290.7	292.3	294.8	297.1	299.6	302.1	304.0
120°	309.0	310.2	311.4	312.6	313.8	315.4	317.4	319.5	321.5	323.6	325.3
122.5°	332.1	332.8	333.6	334.4	335.2	336.7	339.0	341.2	343.4	345.6	347.1
125°	366.9	367.3	367.7	368.0	368.4	369.6	371.8	373.9	376.0	378.1	379.3
127.5°	399.3	400.1	400.8	401.6	402.3	403.5	405.2	406.9	408.6	410.3	411.1
130°	421.0	421.9	422.9	423.8	424.8	425.9	427.1	428.4	429.6	430.9	431.9
132.5°	442.3	443.3	444.3	445.4	446.4	447.4	448.5	449.5	450.5	451.5	452.4
135°	475.2	475.9	476.7	477.4	478.1	478.8	479.6	480.3	481.1	481.9	482.8
137.5°	505.7	506.4	506.9	507.5	508.1	508.8	509.7	510.5	511.4	512.2	512.9
140°	526.6	527.3	527.9	528.5	529.3	529.7	530.1	530.5	530.8	531.2	532.3
142.5°	545.9	546.5	547.1	547.6	548.3	548.7	549.0	549.3	549.5	549.9	550.8
145°	576.0	576.2	576.4	576.6	576.7	577.0	577.4	577.8	578.2	578.6	579.1
147.5°	602.0	602.5	602.9	603.4	603.9	604.3	604.7	605.0	605.4	605.8	605.9
150°	620.4	620.6	620.8	621.2	621.4	621.6	621.9	622.2	622.4	622.7	622.7
152.5°	635.4	635.7	636.1	636.5	636.8	637.1	637.2	637.4	637.5	637.7	637.9
155°	659.2	659.2	659.2	659.2	659.2	659.2	659.3	659.5	659.6	659.7	660.3
157.5°	679.4	679.2	679.1	678.9	678.7	678.7	678.8	678.9	679.1	679.1	679.7
160°	692.1	691.8	691.6	691.3	691.0	690.9	690.9	690.9	690.9	690.9	691.6
162.5°	703.4	703.0	702.6	702.3	701.9	701.8	701.9	702.0	702.1	702.2	702.8
165°	718.0	717.6	717.2	716.8	716.4	716.1	716.1	716.1	716.1	716.1	716.9
167.5°	729.6	729.0	728.6	728.0	727.5	727.3	727.4	727.5	727.6	727.7	728.5
170°	736.2	735.6	735.1	734.6	734.0	733.8	733.8	733.8	733.8	733.8	734.7
172.5°	741.3	740.8	740.3	739.7	739.3	738.9	738.9	738.9	738.9	738.9	739.8
175°	746.7	746.2	745.7	745.2	744.7	744.4	744.4	744.4	744.4	744.4	745.2
177.5°	749.0	748.5	748.1	747.7	747.3	747.1	747.1	747.1	747.1	747.1	747.7
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	338.8	338.8	338.8	338.8	338.8	338.8	338.8	338.8
2.5°	338.1	338.7	339.2	339.4	339.4	339.3	339.2	339.1
5°	337.5	338.3	338.9	339.2	339.1	339.0	338.9	338.8
7.5°	335.6	336.4	337.2	337.5	337.5	337.3	337.2	337.2
10°	333.5	334.3	335.1	335.4	335.3	335.1	334.9	334.8
12.5°	330.7	331.4	332.2	332.5	332.3	332.2	332.0	331.8
15°	325.3	326.1	327.0	327.3	327.3	327.2	327.1	327.0
17.5°	318.4	319.2	319.9	320.2	320.0	320.0	319.9	319.7
20°	313.4	314.1	314.9	315.3	315.4	315.4	315.5	315.6
22.5°	307.8	308.8	309.7	310.2	310.1	310.1	310.1	310.0
25°	298.5	299.6	300.6	301.2	301.2	301.2	301.2	301.2
27.5°	288.8	289.7	290.7	291.1	291.2	291.3	291.3	291.4
30°	282.1	283.1	284.1	284.6	284.6	284.6	284.6	284.6
32.5°	274.9	275.9	276.9	277.6	277.8	278.0	278.2	278.4
35°	264.2	265.4	266.6	267.4	267.8	268.1	268.4	268.7
37.5°	253.0	254.4	255.9	256.7	256.9	257.2	257.5	257.7
40°	245.7	247.1	248.4	249.3	249.6	250.0	250.3	250.6
42.5°	238.0	239.5	241.0	242.0	242.5	242.9	243.4	243.8
45°	226.4	228.0	229.6	230.7	231.3	232.0	232.7	233.3
47.5°	214.8	216.6	218.3	219.4	219.9	220.5	220.9	221.5
50°	206.8	208.7	210.6	211.8	212.4	212.9	213.5	214.1
52.5°	198.7	200.6	202.6	203.9	204.6	205.3	206.0	206.7
55°	186.4	188.6	190.8	192.3	192.9	193.6	194.2	194.9
57.5°	173.9	176.1	178.3	179.8	180.6	181.4	182.2	182.9
60°	165.2	167.5	169.8	171.3	172.2	173.2	174.0	175.0
62.5°	156.9	159.1	161.4	163.0	163.9	164.7	165.6	166.4
65°	143.7	146.2	148.6	150.3	151.1	151.9	152.7	153.5
67.5°	130.6	133.2	135.9	137.7	138.3	139.0	139.7	140.4
70°	121.9	124.5	127.1	128.9	129.7	130.5	131.3	132.1
72.5°	113.1	115.8	118.5	120.3	121.1	121.9	122.8	123.6
75°	99.9	102.6	105.4	107.2	108.1	109.2	110.1	111.1
77.5°	87.5	90.4	93.2	95.0	95.8	96.6	97.3	98.1
80°	79.4	82.2	85.0	86.7	87.6	88.4	89.3	90.1
82.5°	72.0	74.8	77.6	79.4	80.2	81.0	81.8	82.7
85°	61.7	64.5	67.3	69.1	69.9	70.7	71.5	72.3
87.5°	55.6	58.5	61.4	63.3	64.2	65.0	65.9	66.8
90°	62.4	65.8	69.1	71.3	72.3	73.4	74.5	75.6
92.5°	68.2	71.4	74.5	76.4	76.9	77.6	78.2	78.7
95°	86.2	89.3	92.3	94.3	95.1	95.9	96.7	97.5
97.5°	108.1	111.1	114.2	116.1	116.8	117.6	118.4	119.1
100°	124.1	126.8	129.6	131.6	132.6	133.7	134.8	135.9
102.5°	142.9	145.6	148.3	150.0	150.8	151.5	152.3	153.1
105°	171.0	173.3	175.6	177.3	178.3	179.3	180.3	181.3
107.5°	201.7	204.3	206.9	208.5	209.1	209.6	210.2	210.7
110°	222.4	225.1	227.7	229.3	229.6	230.0	230.4	230.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	242.8	245.5	248.2	249.9	250.6	251.2	251.9	252.5
115°	274.3	276.3	278.5	279.7	280.3	280.8	281.3	281.9
117.5°	305.9	307.8	309.7	310.9	311.1	311.4	311.6	312.0
120°	327.1	328.9	330.7	331.7	332.0	332.3	332.6	333.0
122.5°	348.6	350.1	351.6	352.4	352.6	352.8	353.1	353.2
125°	380.6	381.8	382.9	383.6	383.6	383.7	383.7	383.7
127.5°	412.0	413.0	413.8	414.2	414.2	414.2	414.2	414.1
130°	432.9	434.0	435.1	435.3	434.9	434.5	434.0	433.6
132.5°	453.3	454.1	455.0	455.3	455.2	455.0	454.9	454.7
135°	483.8	484.7	485.7	486.2	486.4	486.6	486.7	486.9
137.5°	513.7	514.4	515.2	515.6	515.5	515.4	515.2	515.2
140°	533.5	534.6	535.7	536.0	535.4	535.0	534.4	533.9
142.5°	551.8	552.7	553.7	554.1	553.7	553.4	553.2	552.9
145°	579.6	580.2	580.7	580.8	580.7	580.4	580.3	580.0
147.5°	606.2	606.3	606.6	606.4	605.9	605.4	604.9	604.4
150°	622.7	622.7	622.7	622.3	621.8	621.2	620.5	619.9
152.5°	638.2	638.3	638.6	638.3	637.7	637.1	636.4	635.7
155°	660.8	661.3	661.8	661.6	660.7	659.8	658.9	658.0
157.5°	680.2	680.8	681.4	681.2	680.5	679.8	679.1	678.3
160°	692.2	692.8	693.5	693.6	693.1	692.5	692.0	691.5
162.5°	703.5	704.2	704.8	704.7	703.9	703.1	702.2	701.3
165°	717.7	718.5	719.3	719.2	718.4	717.4	716.5	715.6
167.5°	729.3	730.2	730.9	730.9	730.2	729.3	728.5	727.7
170°	735.6	736.6	737.4	737.4	736.6	735.6	734.7	733.8
172.5°	740.6	741.4	742.2	742.2	741.2	740.4	739.4	738.6
175°	746.0	746.7	747.5	747.5	746.6	745.6	744.7	743.8
177.5°	748.4	749.0	749.6	749.6	748.8	748.1	747.3	746.6
180°	748.5	748.5	748.5	748.5	748.5	748.5	748.5	748.5

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