

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: P332099-930

Luminaire Tested: **S123DIW-S340D755U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332099-930
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-S340D755U930-4F0-1E-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: 3308.6 lumens
Efficiency: N/A
Efficacy: 108.8 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

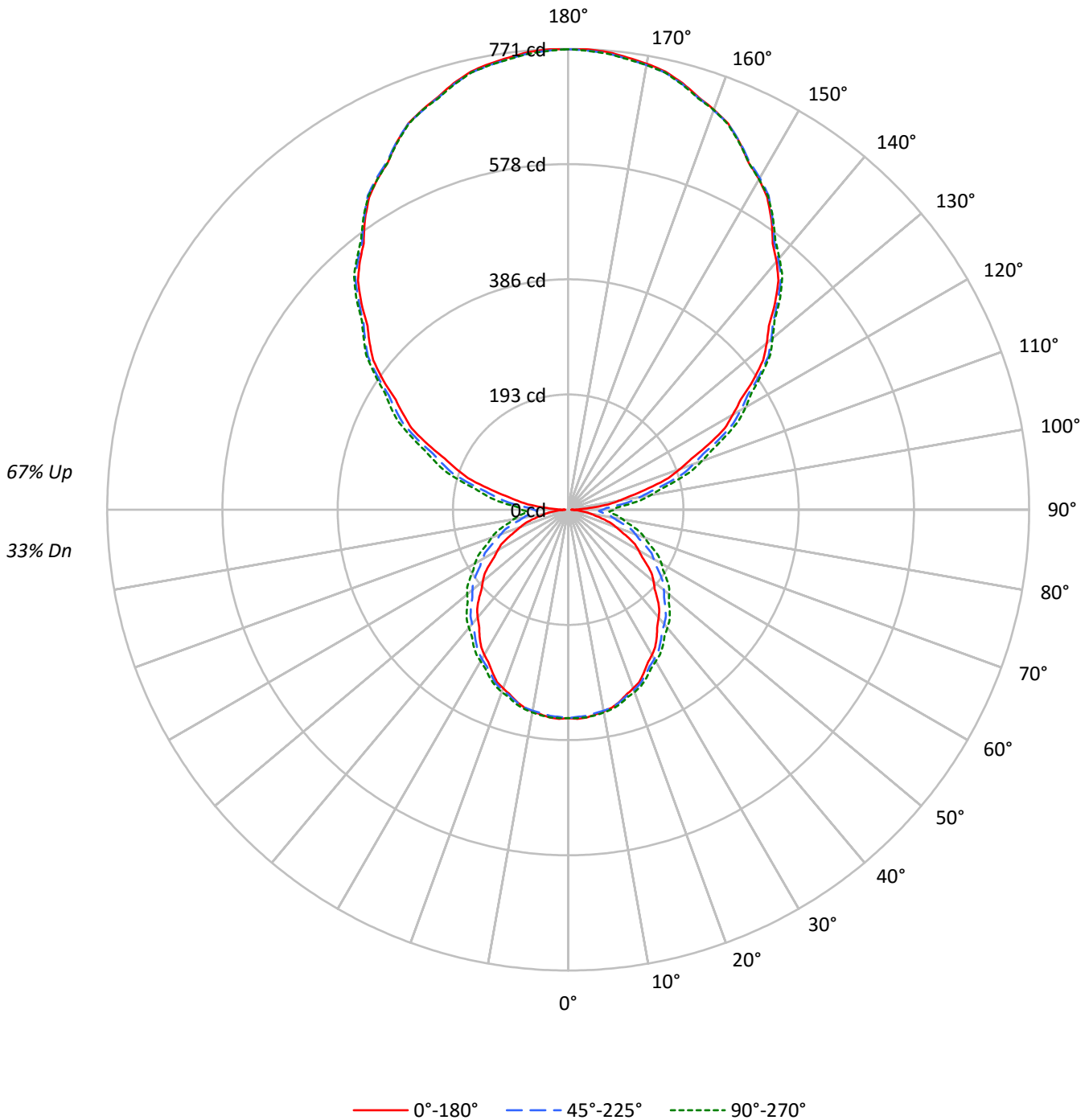
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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°	3753	3753	3753
5°	3765	3659	3661
10°	3732	3575	3556
15°	3684	3479	3443
20°	3615	3370	3318
25°	3530	3245	3186
30°	3444	3132	3053
35°	3345	3012	2946
40°	3252	2903	2833
45°	3149	2798	2741
50°	3047	2695	2641
55°	2936	2589	2550
60°	2826	2482	2458
65°	2714	2366	2347
70°	2542	2237	2234
75°	2331	2092	2120
80°	2084	1946	1988
85°	1855	1845	1910



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.1	1.0
10°-20°	94.2	2.8
20°-30°	141.0	4.3
30°-40°	168.3	5.1
40°-50°	176.1	5.3
50°-60°	165.3	5.0
60°-70°	138.0	4.2
70°-80°	98.8	3.0
80°-90°	61.2	1.8
90°-100°	87.1	2.6
100°-110°	177.4	5.4
110°-120°	273.6	8.3
120°-130°	346.4	10.5
130°-140°	382.4	11.6
140°-150°	372.3	11.3
150°-160°	312.6	9.4
160°-170°	208.1	6.3
170°-180°	72.9	2.2
0°-30°	268.3	8.1
0°-40°	436.6	13.2
0°-60°	778.0	23.5
0°-90°	1075.9	32.5
90°-120°	538.1	16.3
90°-150°	1639.1	49.5
90°-180°	2233.0	67.5
0°-180°	3308.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	349	349	349	349	349	
5°	349	348	346	349	349	33
15°	332	333	333	337	337	94
25°	300	304	305	310	310	138
35°	258	264	269	275	276	162
45°	211	220	230	237	240	163
55°	161	174	187	197	201	144
65°	111	126	143	154	158	110
75°	60	78	97	109	114	64
85°	19	38	58	70	74	20
90°	6	30	58	72	78	6
95°	40	59	82	96	100	43
105°	139	150	171	182	186	149
115°	259	266	278	287	290	256
125°	378	380	389	394	395	337
135°	489	492	496	500	501	377
145°	593	594	596	598	597	370
155°	678	678	679	681	677	312
165°	739	737	737	740	736	208
175°	768	766	766	769	766	73
180°	770	770	770	770	770	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	350.3	350.1	349.8	349.7	349.4	349.1	348.5	348.0	347.5	346.9	347.5
5°	349.1	348.9	348.8	348.6	348.5	348.1	347.6	347.1	346.6	346.1	346.7
7.5°	345.7	345.8	345.8	345.8	345.8	345.6	345.1	344.6	344.1	343.6	344.5
10°	342.7	342.8	343.0	343.2	343.3	343.2	342.8	342.3	341.9	341.5	342.3
12.5°	339.0	339.2	339.5	339.7	340.0	339.9	339.7	339.3	339.1	338.8	339.6
15°	332.4	332.6	332.9	333.1	333.4	333.5	333.4	333.3	333.2	333.1	334.0
17.5°	324.1	324.6	325.1	325.5	326.0	326.3	326.3	326.2	326.2	326.2	326.9
20°	318.0	318.5	318.9	319.5	320.0	320.3	320.5	320.7	320.8	321.0	321.8
22.5°	311.6	312.1	312.6	313.1	313.6	314.0	314.2	314.5	314.7	315.0	315.9
25°	300.1	300.9	301.8	302.6	303.5	304.0	304.3	304.5	304.8	305.1	306.1
27.5°	288.5	289.5	290.5	291.5	292.4	293.2	293.7	294.2	294.8	295.3	296.3
30°	280.4	281.4	282.6	283.6	284.8	285.6	286.3	287.0	287.6	288.4	289.3
32.5°	271.3	272.5	273.7	274.9	276.1	277.2	278.1	279.0	279.9	280.7	281.8
35°	258.3	259.7	261.1	262.4	263.7	265.0	266.0	267.2	268.2	269.4	270.6
37.5°	244.7	246.1	247.7	249.2	250.7	252.2	253.5	254.9	256.2	257.6	259.0
40°	235.5	237.1	238.6	240.1	241.6	243.2	244.9	246.6	248.3	250.0	251.4
42.5°	225.5	227.4	229.2	231.1	232.9	234.7	236.5	238.2	240.0	241.7	243.4
45°	211.2	213.3	215.2	217.3	219.3	221.4	223.5	225.6	227.7	229.8	231.5
47.5°	196.2	198.5	200.8	203.2	205.5	207.8	210.2	212.6	215.0	217.4	219.2
50°	186.5	188.9	191.3	193.6	196.0	198.4	201.1	203.7	206.4	209.0	210.9
52.5°	176.2	178.7	181.2	183.7	186.2	188.9	191.8	194.7	197.5	200.4	202.4
55°	161.1	163.9	166.6	169.4	172.2	175.1	178.1	181.2	184.3	187.3	189.6
57.5°	146.3	149.2	152.1	155.1	157.9	161.1	164.4	167.7	171.0	174.4	176.7
60°	136.0	139.0	142.1	145.1	148.1	151.4	154.9	158.3	161.8	165.3	167.6
62.5°	126.3	129.4	132.5	135.6	138.7	142.1	145.8	149.4	153.1	156.8	159.1
65°	111.3	114.6	117.9	121.2	124.5	128.0	131.7	135.4	139.1	142.8	145.4
67.5°	96.1	99.6	103.1	106.6	110.1	113.7	117.5	121.3	125.1	128.9	131.6
70°	85.4	89.1	92.7	96.4	100.0	103.9	107.9	111.9	116.0	120.0	122.8
72.5°	75.7	79.4	83.0	86.7	90.3	94.2	98.3	102.6	106.7	111.0	113.7
75°	60.4	64.4	68.3	72.3	76.3	80.4	84.6	88.8	93.0	97.3	100.0
77.5°	47.0	51.0	55.0	59.0	63.0	67.2	71.4	75.7	79.9	84.2	87.2
80°	37.6	41.7	45.9	50.1	54.1	58.5	62.8	67.2	71.6	76.0	78.8
82.5°	29.4	33.6	37.8	42.0	46.2	50.5	55.0	59.4	63.9	68.4	71.3
85°	18.6	22.8	27.1	31.3	35.5	39.9	44.4	48.8	53.2	57.7	60.6
87.5°	10.2	14.7	19.2	23.6	28.1	32.7	37.3	42.0	46.6	51.3	54.3
90°	5.5	11.0	16.5	22.0	27.5	33.3	39.3	45.3	51.4	57.5	60.8
92.5°	19.2	23.9	28.5	33.2	37.8	42.8	48.0	53.2	58.5	63.8	66.9
95°	39.9	44.1	48.3	52.6	56.8	61.6	66.8	72.0	77.2	82.4	85.5
97.5°	67.2	70.8	74.5	78.2	81.9	86.0	90.7	95.5	100.2	104.9	108.1
100°	85.7	89.2	92.7	96.2	99.8	103.8	108.4	112.9	117.5	122.0	124.8
102.5°	107.2	110.1	113.0	115.9	118.9	122.7	127.3	132.1	136.8	141.5	144.3
105°	139.2	141.5	143.8	146.1	148.4	152.0	156.8	161.6	166.5	171.3	173.7
107.5°	176.0	177.9	179.8	181.6	183.5	186.5	190.4	194.3	198.3	202.2	204.9
110°	198.9	200.7	202.5	204.3	206.1	208.8	212.5	216.1	219.7	223.4	226.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	223.1	224.5	226.0	227.4	228.8	231.1	234.5	237.7	241.0	244.3	247.1
115°	259.1	260.5	262.0	263.3	264.7	266.8	269.6	272.4	275.2	277.9	280.1
117.5°	295.5	296.4	297.3	298.2	299.1	300.8	303.4	305.8	308.3	310.9	312.8
120°	318.0	319.3	320.5	321.7	322.9	324.6	326.7	328.8	330.9	333.0	334.8
122.5°	341.8	342.5	343.3	344.1	345.0	346.5	348.9	351.1	353.4	355.7	357.3
125°	377.6	378.0	378.4	378.8	379.2	380.4	382.6	384.8	387.0	389.1	390.4
127.5°	410.9	411.7	412.5	413.3	414.1	415.3	417.0	418.7	420.5	422.2	423.1
130°	433.3	434.2	435.2	436.2	437.2	438.3	439.6	440.9	442.1	443.4	444.5
132.5°	455.2	456.2	457.3	458.4	459.4	460.5	461.5	462.6	463.7	464.7	465.6
135°	489.1	489.8	490.6	491.3	492.0	492.8	493.6	494.3	495.1	495.9	496.9
137.5°	520.5	521.1	521.7	522.3	522.9	523.7	524.6	525.4	526.3	527.2	527.9
140°	542.0	542.7	543.3	544.0	544.7	545.2	545.6	546.0	546.3	546.7	547.9
142.5°	561.8	562.5	563.0	563.6	564.3	564.7	565.0	565.3	565.6	565.9	566.9
145°	592.8	593.0	593.2	593.4	593.5	593.9	594.3	594.7	595.1	595.5	596.0
147.5°	619.5	620.0	620.5	621.0	621.5	621.9	622.3	622.6	623.1	623.5	623.6
150°	638.5	638.7	639.0	639.3	639.5	639.8	640.0	640.3	640.6	640.8	640.8
152.5°	654.0	654.3	654.7	655.1	655.4	655.7	655.8	656.0	656.2	656.3	656.6
155°	678.4	678.4	678.4	678.4	678.4	678.4	678.6	678.7	678.8	679.0	679.6
157.5°	699.2	699.0	698.9	698.7	698.5	698.5	698.6	698.7	698.9	699.0	699.5
160°	712.2	712.0	711.8	711.4	711.2	711.0	711.0	711.0	711.0	711.0	711.8
162.5°	723.9	723.5	723.1	722.8	722.4	722.3	722.4	722.4	722.6	722.7	723.3
165°	738.9	738.5	738.1	737.7	737.3	737.0	737.0	737.0	737.0	737.0	737.8
167.5°	750.9	750.3	749.8	749.3	748.7	748.5	748.6	748.7	748.9	748.9	749.7
170°	757.7	757.1	756.6	756.0	755.5	755.2	755.2	755.2	755.2	755.2	756.2
172.5°	763.0	762.5	761.9	761.3	760.8	760.5	760.5	760.5	760.5	760.5	761.4
175°	768.5	768.0	767.4	767.0	766.4	766.1	766.1	766.1	766.1	766.1	767.0
177.5°	770.9	770.4	770.0	769.6	769.2	768.9	768.9	768.9	768.9	768.9	769.6
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	348.0	348.5	349.1	349.3	349.3	349.2	349.1	349.0
5°	347.4	348.1	348.8	349.1	349.0	348.9	348.8	348.7
7.5°	345.4	346.2	347.0	347.4	347.3	347.2	347.1	347.0
10°	343.2	344.1	344.9	345.2	345.0	344.9	344.7	344.5
12.5°	340.3	341.1	341.9	342.2	342.0	341.9	341.7	341.5
15°	334.8	335.7	336.6	336.9	336.8	336.7	336.6	336.6
17.5°	327.7	328.5	329.2	329.5	329.4	329.3	329.2	329.1
20°	322.5	323.3	324.1	324.5	324.6	324.7	324.7	324.8
22.5°	316.8	317.8	318.8	319.3	319.2	319.1	319.1	319.0
25°	307.2	308.3	309.4	310.0	310.0	310.0	310.0	310.0
27.5°	297.2	298.2	299.1	299.6	299.7	299.8	299.8	299.9
30°	290.3	291.4	292.4	292.9	292.9	292.9	292.9	292.9
32.5°	282.9	284.0	285.0	285.7	285.9	286.1	286.3	286.5
35°	271.9	273.1	274.4	275.2	275.6	275.9	276.2	276.5
37.5°	260.4	261.9	263.3	264.2	264.4	264.7	265.0	265.2
40°	252.8	254.3	255.7	256.6	256.9	257.3	257.6	258.0
42.5°	244.9	246.5	248.0	249.1	249.6	250.0	250.5	250.9
45°	233.0	234.6	236.3	237.4	238.1	238.7	239.5	240.1
47.5°	221.0	222.9	224.7	225.8	226.3	226.9	227.4	228.0
50°	212.8	214.7	216.7	218.0	218.6	219.2	219.7	220.4
52.5°	204.5	206.4	208.5	209.9	210.6	211.3	212.0	212.7
55°	191.8	194.1	196.4	197.9	198.5	199.3	199.9	200.6
57.5°	179.0	181.2	183.5	185.1	185.9	186.7	187.5	188.3
60°	170.0	172.4	174.7	176.3	177.2	178.2	179.1	180.1
62.5°	161.4	163.8	166.2	167.8	168.7	169.5	170.4	171.3
65°	147.9	150.4	153.0	154.7	155.5	156.4	157.2	158.0
67.5°	134.4	137.1	139.9	141.7	142.4	143.1	143.8	144.5
70°	125.5	128.2	130.9	132.6	133.5	134.3	135.2	136.0
72.5°	116.4	119.2	122.0	123.8	124.7	125.5	126.4	127.2
75°	102.8	105.6	108.4	110.3	111.3	112.3	113.3	114.4
77.5°	90.1	93.0	96.0	97.8	98.6	99.4	100.1	100.9
80°	81.7	84.6	87.5	89.3	90.2	91.0	91.9	92.7
82.5°	74.1	77.0	79.9	81.7	82.6	83.4	84.2	85.1
85°	63.5	66.4	69.2	71.1	71.9	72.8	73.6	74.4
87.5°	57.2	60.3	63.2	65.1	66.0	66.9	67.8	68.7
90°	64.2	67.7	71.1	73.4	74.4	75.6	76.7	77.8
92.5°	70.2	73.5	76.6	78.6	79.2	79.8	80.5	81.0
95°	88.7	91.9	95.0	97.0	97.8	98.7	99.5	100.4
97.5°	111.2	114.4	117.5	119.4	120.3	121.0	121.8	122.6
100°	127.7	130.5	133.4	135.4	136.5	137.6	138.8	139.8
102.5°	147.1	149.9	152.6	154.4	155.2	156.0	156.8	157.6
105°	176.0	178.4	180.8	182.5	183.5	184.5	185.6	186.5
107.5°	207.6	210.3	213.0	214.6	215.2	215.7	216.3	216.9
110°	228.9	231.6	234.3	235.9	236.3	236.7	237.1	237.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	249.9	252.7	255.4	257.1	257.9	258.5	259.3	259.9
115°	282.3	284.4	286.6	287.9	288.5	289.0	289.5	290.1
117.5°	314.8	316.8	318.8	319.9	320.2	320.5	320.7	321.1
120°	336.6	338.5	340.3	341.4	341.7	342.0	342.3	342.7
122.5°	358.8	360.3	361.8	362.7	362.9	363.1	363.4	363.5
125°	391.7	392.9	394.1	394.8	394.8	394.8	394.9	394.9
127.5°	424.0	425.0	425.9	426.3	426.3	426.2	426.2	426.2
130°	445.6	446.6	447.8	448.0	447.6	447.2	446.7	446.3
132.5°	466.5	467.3	468.2	468.6	468.5	468.3	468.1	468.0
135°	497.9	498.9	499.9	500.4	500.6	500.8	500.9	501.1
137.5°	528.7	529.5	530.3	530.6	530.5	530.4	530.3	530.2
140°	549.0	550.2	551.3	551.6	551.1	550.6	550.0	549.5
142.5°	567.9	568.8	569.9	570.2	569.9	569.6	569.3	569.0
145°	596.6	597.1	597.6	597.8	597.6	597.4	597.2	597.0
147.5°	623.9	624.0	624.3	624.1	623.5	623.1	622.6	622.1
150°	640.8	640.8	640.8	640.5	639.9	639.3	638.6	638.0
152.5°	656.8	657.0	657.2	657.0	656.3	655.7	655.0	654.3
155°	680.0	680.6	681.1	680.9	680.0	679.1	678.1	677.2
157.5°	700.1	700.7	701.2	701.1	700.3	699.6	698.9	698.1
160°	712.4	713.1	713.7	713.8	713.3	712.7	712.2	711.7
162.5°	724.0	724.7	725.4	725.3	724.4	723.6	722.7	721.8
165°	738.7	739.5	740.3	740.2	739.3	738.3	737.4	736.5
167.5°	750.6	751.5	752.3	752.3	751.5	750.6	749.7	748.9
170°	757.1	758.1	759.0	759.0	758.1	757.1	756.2	755.2
172.5°	762.2	763.0	763.9	763.9	762.9	762.0	761.0	760.1
175°	767.8	768.5	769.3	769.3	768.3	767.4	766.5	765.5
177.5°	770.2	770.9	771.5	771.4	770.7	769.9	769.2	768.4
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4

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