

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: P332099-830

Luminaire Tested: **S123DIW-S340D755U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332099-830
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-S340D755U830-4F0-1E-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: 3824.9 lumens
Efficiency: N/A
Efficacy: 125.8 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

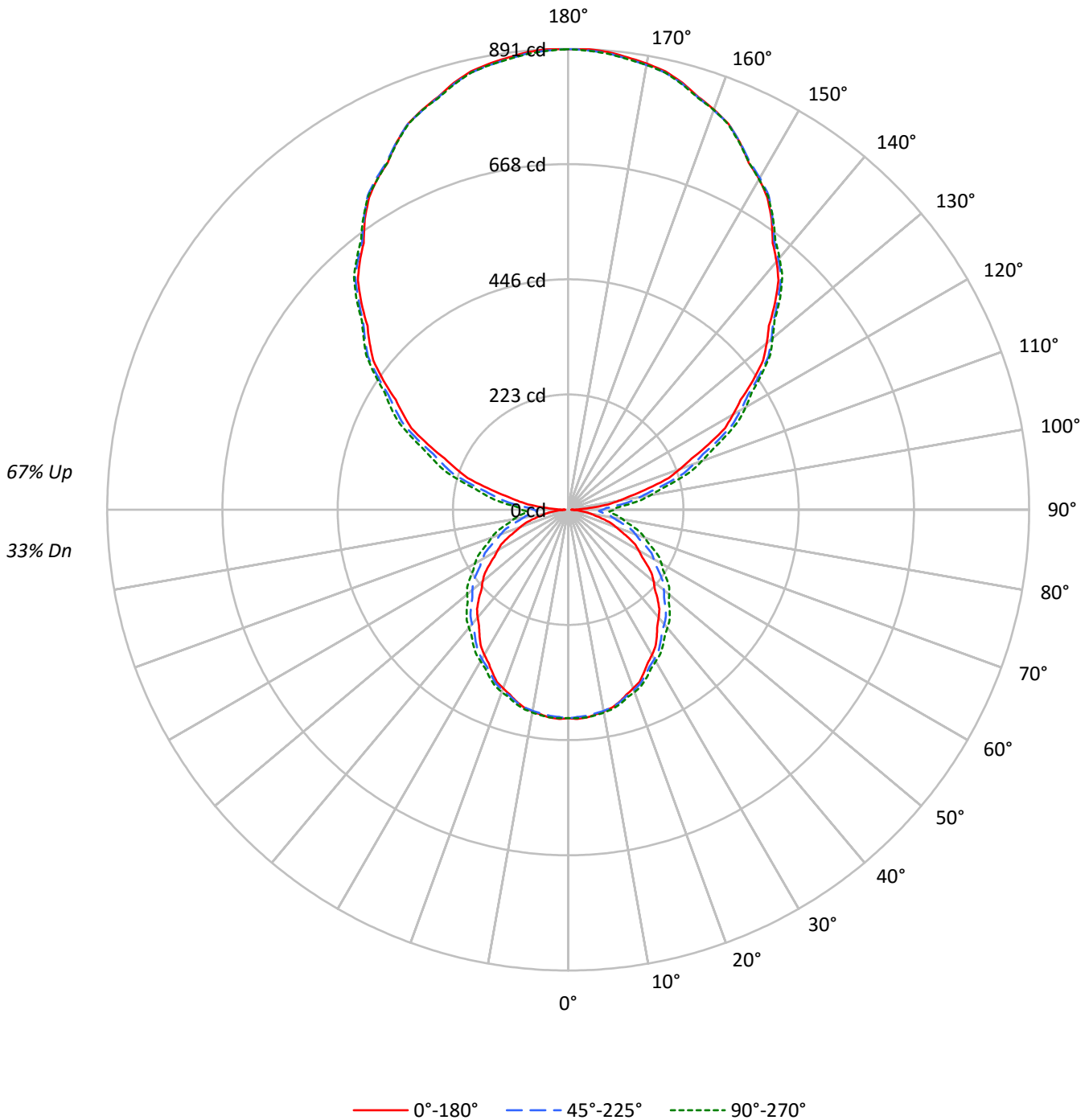
Input Watts (W): 30.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40
1	93	89	85	81	84	80	76	73	63	61	59	48	47	45	34	33	32
2	85	77	71	65	76	69	64	60	55	51	48	42	39	37	30	28	27
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	26	24	22
4	70	59	52	45	63	54	47	42	43	38	34	33	29	26	23	21	19
5	64	53	45	39	57	48	41	35	38	33	29	29	26	23	21	18	17
6	59	47	39	33	53	43	36	31	34	29	25	26	23	20	19	16	14
7	54	42	34	29	49	38	32	27	31	26	22	24	20	17	17	15	13
8	50	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	11
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	14	12	10
10	44	32	25	20	39	29	23	18	23	19	15	18	15	12	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4339	4339	4339
5°	4353	4230	4232
10°	4315	4133	4112
15°	4259	4022	3980
20°	4179	3896	3836
25°	4080	3751	3684
30°	3980	3620	3529
35°	3867	3481	3406
40°	3760	3356	3274
45°	3641	3235	3169
50°	3525	3116	3054
55°	3393	2993	2948
60°	3266	2869	2842
65°	3138	2736	2714
70°	2941	2586	2582
75°	2693	2416	2450
80°	2412	2249	2299
85°	2145	2133	2211



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.2	1.0
10°-20°	108.9	2.8
20°-30°	163.0	4.3
30°-40°	194.6	5.1
40°-50°	203.6	5.3
50°-60°	191.1	5.0
60°-70°	159.6	4.2
70°-80°	114.2	3.0
80°-90°	70.7	1.8
90°-100°	100.7	2.6
100°-110°	205.0	5.4
110°-120°	316.3	8.3
120°-130°	400.5	10.5
130°-140°	442.0	11.6
140°-150°	430.4	11.3
150°-160°	361.3	9.4
160°-170°	240.5	6.3
170°-180°	84.2	2.2
0°-30°	310.1	8.1
0°-40°	504.7	13.2
0°-60°	899.4	23.5
0°-90°	1243.9	32.5
90°-120°	622.1	16.3
90°-150°	1895.0	49.5
90°-180°	2581.0	67.5
0°-180°	3824.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	403	403	403	403	403	
5°	404	403	400	403	403	38
15°	384	386	385	389	389	108
25°	347	351	353	358	358	160
35°	299	306	311	318	320	187
45°	244	255	266	274	278	188
55°	186	201	216	228	232	167
65°	129	146	165	178	183	127
75°	70	91	112	126	132	75
85°	22	44	67	81	86	23
90°	6	35	66	84	90	6
95°	46	68	95	111	116	50
105°	161	174	198	210	216	172
115°	300	307	321	332	335	296
125°	436	439	450	456	457	389
135°	565	569	573	578	579	436
145°	685	686	688	691	690	428
155°	784	784	785	787	783	361
165°	854	852	852	856	851	241
175°	888	886	886	889	885	84
180°	891	891	891	891	891	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1
2.5°	404.9	404.7	404.4	404.3	404.0	403.6	402.9	402.3	401.7	401.1	401.7
5°	403.6	403.4	403.2	403.0	402.8	402.5	401.8	401.2	400.7	400.1	400.9
7.5°	399.6	399.7	399.7	399.7	399.8	399.5	399.0	398.4	397.8	397.3	398.2
10°	396.2	396.3	396.5	396.7	396.9	396.8	396.2	395.8	395.3	394.8	395.8
12.5°	391.9	392.2	392.5	392.8	393.0	392.9	392.7	392.3	392.0	391.6	392.6
15°	384.3	384.6	384.8	385.1	385.4	385.6	385.4	385.3	385.2	385.1	386.2
17.5°	374.7	375.2	375.8	376.4	376.9	377.2	377.2	377.1	377.1	377.1	378.0
20°	367.6	368.2	368.7	369.4	369.9	370.3	370.5	370.7	370.9	371.1	372.0
22.5°	360.2	360.8	361.4	361.9	362.6	363.0	363.3	363.5	363.8	364.1	365.2
25°	346.9	347.9	348.9	349.9	350.8	351.5	351.8	352.0	352.3	352.7	353.9
27.5°	333.6	334.7	335.8	337.0	338.1	338.9	339.5	340.2	340.8	341.4	342.5
30°	324.1	325.4	326.7	327.9	329.2	330.2	331.0	331.8	332.5	333.4	334.5
32.5°	313.6	315.0	316.4	317.8	319.2	320.5	321.5	322.5	323.6	324.5	325.8
35°	298.6	300.2	301.8	303.3	304.9	306.3	307.6	308.9	310.1	311.4	312.8
37.5°	282.9	284.6	286.3	288.1	289.8	291.5	293.0	294.6	296.2	297.7	299.4
40°	272.3	274.1	275.8	277.6	279.3	281.2	283.1	285.1	287.0	289.0	290.7
42.5°	260.7	262.9	264.9	267.1	269.3	271.4	273.4	275.4	277.5	279.5	281.3
45°	244.2	246.6	248.8	251.2	253.5	255.9	258.4	260.8	263.3	265.7	267.6
47.5°	226.9	229.5	232.1	234.9	237.5	240.3	243.0	245.8	248.5	251.4	253.4
50°	215.7	218.4	221.1	223.9	226.6	229.4	232.4	235.5	238.6	241.6	243.8
52.5°	203.7	206.6	209.4	212.4	215.3	218.4	221.7	225.1	228.4	231.7	234.0
55°	186.2	189.5	192.7	195.9	199.1	202.5	205.9	209.5	213.0	216.5	219.1
57.5°	169.2	172.5	175.9	179.3	182.6	186.2	190.0	193.9	197.7	201.6	204.2
60°	157.2	160.7	164.3	167.8	171.3	175.0	179.1	183.0	187.0	191.1	193.8
62.5°	146.0	149.6	153.2	156.7	160.3	164.3	168.5	172.8	177.0	181.3	183.9
65°	128.7	132.5	136.3	140.1	143.9	148.0	152.2	156.6	160.8	165.1	168.1
67.5°	111.1	115.2	119.2	123.2	127.2	131.5	135.8	140.3	144.6	149.0	152.1
70°	98.8	103.0	107.2	111.4	115.6	120.1	124.7	129.4	134.1	138.7	141.9
72.5°	87.6	91.8	96.0	100.2	104.3	108.9	113.7	118.6	123.4	128.3	131.5
75°	69.8	74.5	79.0	83.6	88.2	92.9	97.8	102.6	107.5	112.4	115.6
77.5°	54.4	59.0	63.6	68.2	72.9	77.7	82.6	87.5	92.4	97.4	100.8
80°	43.5	48.3	53.1	57.9	62.6	67.6	72.6	77.7	82.8	87.8	91.1
82.5°	34.0	38.8	43.7	48.5	53.4	58.4	63.6	68.7	73.9	79.1	82.4
85°	21.5	26.4	31.3	36.2	41.0	46.1	51.3	56.4	61.5	66.7	70.0
87.5°	11.8	17.0	22.1	27.3	32.5	37.8	43.2	48.5	53.9	59.3	62.8
90°	6.4	12.7	19.0	25.4	31.8	38.5	45.4	52.4	59.4	66.4	70.3
92.5°	22.2	27.6	33.0	38.4	43.7	49.5	55.5	61.5	67.7	73.7	77.4
95°	46.1	51.0	55.9	60.8	65.7	71.2	77.2	83.2	89.3	95.3	98.9
97.5°	77.7	81.9	86.1	90.4	94.6	99.4	104.9	110.4	115.8	121.3	125.0
100°	99.1	103.1	107.2	111.2	115.4	120.0	125.3	130.5	135.8	141.0	144.3
102.5°	123.9	127.3	130.6	134.0	137.4	141.9	147.2	152.7	158.2	163.5	166.8
105°	160.9	163.5	166.3	168.9	171.5	175.7	181.3	186.8	192.5	198.0	200.8
107.5°	203.5	205.7	207.8	210.0	212.2	215.6	220.1	224.6	229.2	233.8	236.9
110°	230.0	232.1	234.1	236.2	238.3	241.4	245.6	249.9	254.0	258.3	261.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	258.0	259.6	261.3	262.9	264.5	267.2	271.1	274.8	278.6	282.5	285.7
115°	299.5	301.1	302.8	304.4	306.0	308.5	311.7	314.9	318.1	321.3	323.8
117.5°	341.7	342.7	343.7	344.8	345.8	347.8	350.7	353.5	356.5	359.4	361.7
120°	367.7	369.1	370.5	371.9	373.3	375.2	377.7	380.1	382.6	385.0	387.1
122.5°	395.1	396.0	396.9	397.8	398.8	400.6	403.3	406.0	408.6	411.2	413.0
125°	436.5	437.0	437.4	437.9	438.4	439.8	442.3	444.9	447.4	449.9	451.3
127.5°	475.0	476.0	476.8	477.8	478.7	480.1	482.1	484.1	486.2	488.1	489.2
130°	500.9	502.0	503.1	504.3	505.4	506.7	508.2	509.7	511.1	512.6	513.9
132.5°	526.2	527.4	528.7	529.9	531.1	532.3	533.6	534.8	536.0	537.2	538.3
135°	565.4	566.3	567.1	568.0	568.8	569.7	570.6	571.5	572.4	573.3	574.5
137.5°	601.7	602.5	603.1	603.8	604.5	605.4	606.4	607.4	608.4	609.4	610.3
140°	626.6	627.4	628.1	628.9	629.7	630.3	630.7	631.2	631.6	632.1	633.4
142.5°	649.5	650.3	650.9	651.6	652.3	652.8	653.2	653.6	653.8	654.2	655.3
145°	685.3	685.5	685.8	686.0	686.2	686.5	687.0	687.5	688.0	688.4	689.0
147.5°	716.2	716.8	717.4	717.9	718.5	719.0	719.4	719.8	720.3	720.8	721.0
150°	738.1	738.4	738.7	739.0	739.3	739.6	739.9	740.3	740.6	740.8	740.8
152.5°	756.0	756.4	756.9	757.3	757.7	758.0	758.2	758.4	758.6	758.7	759.0
155°	784.3	784.3	784.3	784.3	784.3	784.3	784.5	784.7	784.8	784.9	785.6
157.5°	808.3	808.1	807.9	807.8	807.6	807.6	807.7	807.8	807.9	808.0	808.7
160°	823.4	823.1	822.8	822.5	822.2	822.0	822.0	822.0	822.0	822.0	822.8
162.5°	836.9	836.4	835.9	835.6	835.1	835.0	835.1	835.2	835.4	835.5	836.2
165°	854.2	853.8	853.3	852.8	852.3	852.1	852.1	852.1	852.1	852.1	853.0
167.5°	868.1	867.4	866.9	866.2	865.5	865.3	865.4	865.5	865.7	865.8	866.8
170°	875.9	875.2	874.7	874.0	873.4	873.1	873.1	873.1	873.1	873.1	874.2
172.5°	882.0	881.5	880.8	880.1	879.6	879.2	879.2	879.2	879.2	879.2	880.2
175°	888.4	887.9	887.2	886.6	886.0	885.7	885.7	885.7	885.7	885.7	886.6
177.5°	891.2	890.6	890.1	889.7	889.2	888.9	888.9	888.9	888.9	888.9	889.7
180°	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	403.1	403.1	403.1	403.1	403.1	403.1	403.1	403.1
2.5°	402.3	402.9	403.6	403.8	403.8	403.7	403.6	403.5
5°	401.6	402.5	403.2	403.6	403.5	403.3	403.2	403.1
7.5°	399.3	400.2	401.1	401.6	401.5	401.3	401.2	401.1
10°	396.8	397.8	398.7	399.1	398.9	398.7	398.5	398.3
12.5°	393.4	394.4	395.2	395.6	395.4	395.2	395.0	394.8
15°	387.1	388.0	389.1	389.5	389.4	389.3	389.2	389.1
17.5°	378.8	379.8	380.6	381.0	380.8	380.7	380.6	380.4
20°	372.9	373.7	374.7	375.1	375.2	375.3	375.4	375.5
22.5°	366.3	367.4	368.5	369.1	369.0	368.9	368.9	368.8
25°	355.2	356.5	357.7	358.4	358.4	358.4	358.4	358.4
27.5°	343.6	344.7	345.8	346.4	346.5	346.6	346.6	346.7
30°	335.6	336.9	338.0	338.6	338.6	338.6	338.6	338.6
32.5°	327.1	328.3	329.5	330.3	330.5	330.7	331.0	331.2
35°	314.3	315.8	317.3	318.2	318.6	319.0	319.3	319.7
37.5°	301.0	302.7	304.4	305.4	305.7	306.0	306.3	306.6
40°	292.3	294.0	295.6	296.6	297.0	297.5	297.8	298.2
42.5°	283.1	284.9	286.7	287.9	288.5	289.0	289.5	290.1
45°	269.4	271.3	273.1	274.5	275.2	276.0	276.8	277.6
47.5°	255.5	257.7	259.8	261.1	261.6	262.3	262.9	263.5
50°	246.0	248.3	250.5	252.0	252.7	253.4	254.0	254.8
52.5°	236.4	238.7	241.0	242.6	243.5	244.3	245.1	245.9
55°	221.8	224.4	227.1	228.8	229.5	230.4	231.1	231.9
57.5°	206.9	209.5	212.2	214.0	214.9	215.8	216.8	217.6
60°	196.5	199.3	202.0	203.9	204.9	206.0	207.1	208.2
62.5°	186.6	189.4	192.1	194.0	195.0	196.0	197.0	198.0
65°	171.0	173.9	176.8	178.8	179.7	180.8	181.7	182.7
67.5°	155.3	158.5	161.7	163.8	164.6	165.4	166.3	167.0
70°	145.1	148.2	151.3	153.4	154.3	155.2	156.3	157.2
72.5°	134.6	137.8	141.0	143.2	144.1	145.1	146.1	147.0
75°	118.9	122.1	125.4	127.5	128.7	129.9	131.0	132.2
77.5°	104.2	107.5	110.9	113.0	114.0	114.9	115.7	116.7
80°	94.4	97.8	101.1	103.2	104.2	105.2	106.2	107.2
82.5°	85.7	89.0	92.4	94.4	95.5	96.4	97.4	98.4
85°	73.4	76.7	80.0	82.2	83.1	84.2	85.1	86.1
87.5°	66.2	69.7	73.0	75.3	76.3	77.4	78.4	79.5
90°	74.3	78.2	82.2	84.8	86.1	87.4	88.7	89.9
92.5°	81.2	84.9	88.6	90.9	91.5	92.3	93.0	93.7
95°	102.5	106.2	109.8	112.2	113.1	114.1	115.1	116.0
97.5°	128.6	132.2	135.8	138.1	139.0	139.9	140.8	141.8
100°	147.6	150.9	154.2	156.6	157.8	159.1	160.4	161.6
102.5°	170.0	173.2	176.4	178.5	179.5	180.3	181.3	182.2
105°	203.5	206.2	209.0	210.9	212.2	213.3	214.5	215.7
107.5°	240.0	243.1	246.2	248.1	248.7	249.4	250.1	250.7
110°	264.6	267.8	270.9	272.8	273.1	273.6	274.1	274.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	288.9	292.1	295.3	297.3	298.1	298.9	299.7	300.5
115°	326.3	328.8	331.3	332.8	333.5	334.1	334.7	335.4
117.5°	363.9	366.3	368.5	369.9	370.1	370.5	370.8	371.2
120°	389.2	391.3	393.4	394.6	395.0	395.4	395.8	396.2
122.5°	414.8	416.5	418.3	419.3	419.5	419.8	420.1	420.3
125°	452.8	454.2	455.6	456.4	456.4	456.5	456.6	456.6
127.5°	490.2	491.3	492.4	492.9	492.9	492.8	492.8	492.7
130°	515.1	516.3	517.6	517.9	517.5	517.0	516.4	515.9
132.5°	539.3	540.3	541.3	541.8	541.6	541.4	541.2	541.0
135°	575.6	576.7	577.9	578.5	578.7	578.9	579.1	579.3
137.5°	611.2	612.1	613.0	613.4	613.3	613.2	613.0	612.9
140°	634.7	636.0	637.3	637.7	637.1	636.5	635.8	635.3
142.5°	656.5	657.6	658.8	659.2	658.8	658.5	658.2	657.8
145°	689.7	690.3	690.9	691.1	690.9	690.6	690.4	690.1
147.5°	721.2	721.4	721.7	721.5	720.9	720.3	719.7	719.2
150°	740.8	740.8	740.8	740.5	739.8	739.0	738.3	737.5
152.5°	759.3	759.5	759.8	759.5	758.7	758.0	757.2	756.4
155°	786.2	786.8	787.4	787.2	786.1	785.0	783.9	782.9
157.5°	809.4	810.0	810.7	810.5	809.6	808.8	807.9	807.0
160°	823.6	824.3	825.1	825.2	824.6	824.0	823.3	822.7
162.5°	837.0	837.8	838.6	838.5	837.4	836.5	835.5	834.4
165°	853.9	854.9	855.8	855.7	854.7	853.6	852.5	851.4
167.5°	867.7	868.7	869.7	869.7	868.7	867.7	866.8	865.8
170°	875.2	876.4	877.4	877.4	876.4	875.2	874.2	873.1
172.5°	881.2	882.1	883.1	883.1	881.9	880.9	879.8	878.7
175°	887.6	888.4	889.4	889.4	888.3	887.1	886.1	885.0
177.5°	890.4	891.2	891.9	891.8	891.0	890.0	889.2	888.3
180°	890.6	890.6	890.6	890.6	890.6	890.6	890.6	890.6

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