

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: P331932-935

Luminaire Tested: **S123DIP-S560D805U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331932-935
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-S560D805U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 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: 4411.4 lumens
Efficiency: N/A
Efficacy: 114.9 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: General Diffuse

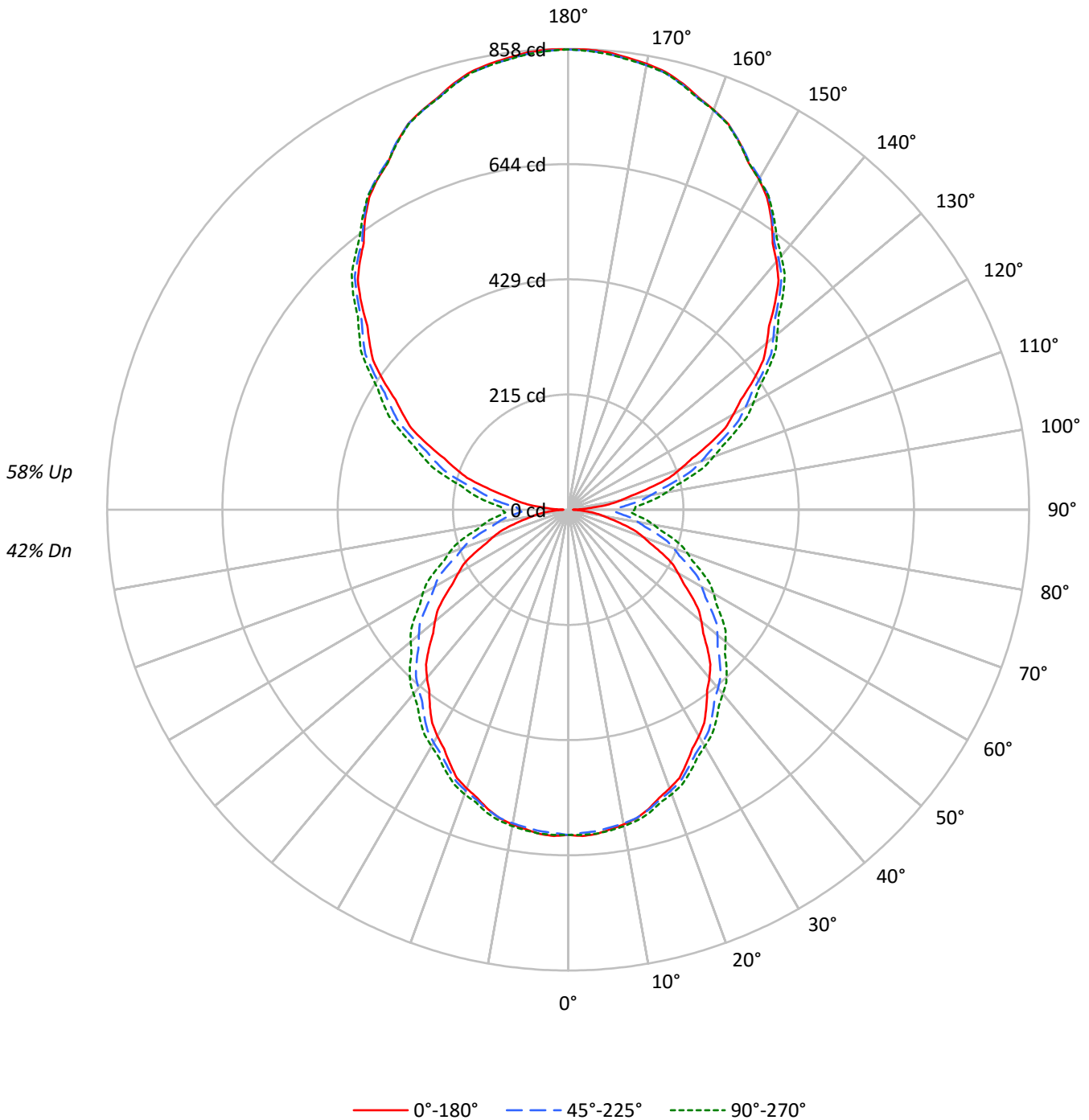
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	95	90	86	83	87	83	79	76	68	65	63	54	53	51	42	41	40	34
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	33	28
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	61	52	46	65	55	48	43	46	40	36	37	33	30	28	26	23	19
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	25	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	25	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	11
9	48	36	28	23	44	33	26	22	28	22	19	22	18	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6518	6518	6518
5°	6537	6352	6357
10°	6480	6207	6175
15°	6395	6040	5978
20°	6277	5850	5760
25°	6129	5632	5532
30°	5977	5436	5300
35°	5809	5228	5116
40°	5647	5038	4917
45°	5468	4857	4759
50°	5291	4678	4584
55°	5097	4494	4428
60°	4906	4308	4266
65°	4710	4109	4076
70°	4418	3885	3878
75°	4048	3629	3679
80°	3620	3378	3451
85°	3222	3204	3317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.4	1.3
10°-20°	163.6	3.7
20°-30°	244.7	5.5
30°-40°	292.2	6.6
40°-50°	305.8	6.9
50°-60°	286.9	6.5
60°-70°	239.6	5.4
70°-80°	171.5	3.9
80°-90°	104.8	2.4
90°-100°	120.0	2.7
100°-110°	214.2	4.9
110°-120°	315.7	7.2
120°-130°	391.8	8.9
130°-140°	428.2	9.7
140°-150°	414.7	9.4
150°-160°	347.7	7.9
160°-170°	231.4	5.2
170°-180°	81.0	1.8
0°-30°	465.7	10.6
0°-40°	758.0	17.2
0°-60°	1350.7	30.6
0°-90°	1866.5	42.3
90°-120°	649.9	14.7
90°-150°	1884.7	42.7
90°-180°	2545.0	57.7
0°-180°	4411.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	606	605	601	606	606	57
15°	577	579	578	585	584	162
25°	521	527	530	538	538	240
35°	448	459	468	477	480	280
45°	367	383	399	411	417	283
55°	280	302	325	342	348	250
65°	193	219	248	267	274	191
75°	105	136	169	190	198	112
85°	32	65	100	122	129	34
90°	9	48	91	115	124	8
95°	47	78	115	137	145	50
105°	157	175	208	226	234	168
115°	289	300	322	338	343	286
125°	421	424	440	451	454	375
135°	545	548	554	563	566	420
145°	660	660	662	667	667	412
155°	755	755	755	758	753	347
165°	822	820	820	824	819	232
175°	855	852	852	856	852	81
180°	857	857	857	857	857	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	608.1	607.8	607.4	607.0	606.7	606.1	605.1	604.2	603.2	602.3	603.2
5°	606.1	605.8	605.5	605.3	604.9	604.3	603.5	602.6	601.8	600.8	602.0
7.5°	600.2	600.2	600.3	600.4	600.5	600.0	599.2	598.3	597.4	596.6	598.1
10°	595.0	595.2	595.5	595.8	596.1	595.9	595.1	594.4	593.7	593.0	594.4
12.5°	588.6	589.0	589.4	589.8	590.2	590.2	589.7	589.2	588.7	588.1	589.5
15°	577.1	577.6	578.0	578.4	578.9	579.0	578.9	578.7	578.6	578.4	579.9
17.5°	562.6	563.4	564.4	565.2	566.1	566.5	566.5	566.4	566.4	566.3	567.6
20°	552.1	552.9	553.8	554.7	555.5	556.1	556.5	556.7	557.0	557.3	558.6
22.5°	541.0	541.8	542.7	543.6	544.5	545.1	545.5	546.0	546.4	546.7	548.5
25°	521.1	522.5	524.0	525.5	526.9	527.9	528.3	528.7	529.2	529.6	531.5
27.5°	501.0	502.7	504.4	506.0	507.6	508.9	509.9	510.8	511.8	512.7	514.4
30°	486.7	488.6	490.5	492.5	494.4	495.9	497.1	498.3	499.4	500.6	502.4
32.5°	470.9	473.0	475.2	477.3	479.5	481.3	482.8	484.3	485.9	487.4	489.3
35°	448.5	450.8	453.1	455.6	457.9	460.0	461.9	463.8	465.7	467.6	469.8
37.5°	424.7	427.4	430.0	432.7	435.3	437.8	440.1	442.5	444.8	447.2	449.7
40°	408.9	411.6	414.2	416.8	419.5	422.2	425.2	428.1	431.0	433.9	436.4
42.5°	391.5	394.8	398.0	401.1	404.4	407.5	410.6	413.6	416.7	419.7	422.5
45°	366.7	370.2	373.8	377.3	380.7	384.4	388.1	391.7	395.4	399.0	401.8
47.5°	340.7	344.7	348.7	352.7	356.6	360.8	365.0	369.1	373.3	377.5	380.6
50°	323.8	328.0	332.0	336.1	340.3	344.6	349.1	353.7	358.2	362.7	366.1
52.5°	305.9	310.2	314.6	318.9	323.2	328.0	332.9	337.9	342.9	348.0	351.5
55°	279.7	284.5	289.3	294.1	299.0	304.0	309.4	314.6	319.9	325.1	329.1
57.5°	254.1	259.1	264.2	269.1	274.2	279.7	285.4	291.2	297.0	302.7	306.7
60°	236.1	241.4	246.7	251.9	257.2	262.9	268.9	274.9	280.9	286.9	291.0
62.5°	219.2	224.6	230.1	235.4	240.8	246.7	253.0	259.4	265.8	272.2	276.2
65°	193.2	199.0	204.7	210.4	216.1	222.2	228.7	235.1	241.5	248.0	252.4
67.5°	166.9	173.0	179.0	185.0	191.1	197.4	204.1	210.6	217.1	223.7	228.5
70°	148.4	154.7	161.0	167.3	173.6	180.3	187.3	194.3	201.4	208.4	213.1
72.5°	131.5	137.8	144.1	150.4	156.7	163.5	170.7	178.1	185.3	192.6	197.4
75°	104.9	111.8	118.6	125.5	132.4	139.6	146.9	154.2	161.5	168.8	173.7
77.5°	81.6	88.6	95.6	102.5	109.4	116.6	124.0	131.4	138.8	146.2	151.3
80°	65.3	72.5	79.6	86.9	94.0	101.4	109.0	116.7	124.3	131.9	136.9
82.5°	51.1	58.4	65.6	72.9	80.2	87.7	95.5	103.2	111.0	118.7	123.7
85°	32.3	39.6	47.0	54.3	61.6	69.1	77.0	84.7	92.5	100.2	105.2
87.5°	17.7	25.3	32.9	40.5	48.0	55.8	63.6	71.5	79.4	87.2	92.4
90°	9.2	17.9	26.6	35.3	44.0	53.0	62.4	71.8	81.3	90.7	96.3
92.5°	24.4	31.9	39.3	46.8	54.3	62.3	70.8	79.2	87.6	96.2	101.5
95°	47.0	53.7	60.5	67.2	74.0	81.6	90.0	98.3	106.8	115.1	120.3
97.5°	77.0	82.9	88.9	94.8	100.7	107.6	115.3	123.0	130.8	138.5	143.5
100°	97.5	103.1	108.7	114.3	119.9	126.4	133.9	141.4	148.9	156.4	161.0
102.5°	121.2	126.0	130.7	135.4	140.3	146.5	154.0	161.6	169.3	176.8	181.4
105°	156.7	160.6	164.4	168.2	172.0	177.7	185.4	193.0	200.7	208.4	212.4
107.5°	197.4	200.6	203.7	206.9	210.1	214.9	221.4	228.0	234.5	241.0	245.4
110°	222.7	225.7	228.6	231.5	234.5	239.0	245.2	251.3	257.5	263.7	268.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	249.7	252.0	254.3	256.8	259.1	263.0	268.8	274.5	280.2	285.9	290.2
115°	289.4	291.6	293.8	296.0	298.3	301.8	306.8	311.8	316.8	321.8	325.4
117.5°	329.9	331.3	332.7	334.1	335.4	338.5	343.0	347.6	352.1	356.7	360.2
120°	354.7	356.4	358.0	359.6	361.2	364.1	368.2	372.3	376.3	380.5	383.7
122.5°	381.1	382.1	383.1	384.2	385.2	387.9	392.1	396.3	400.5	404.8	407.6
125°	420.7	421.1	421.5	422.1	422.5	424.6	428.6	432.6	436.5	440.5	443.0
127.5°	457.9	458.7	459.4	460.3	461.1	463.1	466.3	469.5	472.7	475.9	477.9
130°	482.6	483.7	484.7	485.8	486.8	488.6	491.0	493.5	496.0	498.5	500.7
132.5°	506.9	508.0	509.2	510.4	511.5	513.2	515.1	517.1	519.2	521.2	523.1
135°	544.6	545.4	546.0	546.8	547.6	548.7	550.2	551.6	553.0	554.5	556.6
137.5°	579.5	580.1	580.7	581.3	581.9	582.9	584.2	585.5	586.9	588.1	589.8
140°	603.1	603.9	604.7	605.4	606.1	606.8	607.4	608.0	608.6	609.2	611.2
142.5°	625.3	625.9	626.5	627.2	627.8	628.3	628.6	629.0	629.3	629.6	631.5
145°	659.7	659.9	660.0	660.1	660.3	660.6	661.1	661.5	661.9	662.4	663.4
147.5°	689.2	689.7	690.3	690.8	691.4	691.8	692.2	692.7	693.1	693.5	693.9
150°	710.2	710.5	710.8	711.1	711.4	711.7	712.0	712.3	712.6	712.9	712.9
152.5°	727.5	727.8	728.2	728.7	729.1	729.4	729.6	729.8	730.0	730.1	730.4
155°	754.6	754.6	754.6	754.6	754.6	754.7	754.8	755.0	755.2	755.3	755.9
157.5°	777.7	777.6	777.4	777.2	777.1	777.1	777.1	777.3	777.4	777.5	778.2
160°	792.3	792.0	791.7	791.4	791.1	791.0	791.0	791.0	791.0	791.0	791.7
162.5°	805.2	804.9	804.4	804.0	803.6	803.4	803.6	803.7	803.7	803.9	804.6
165°	821.9	821.5	821.0	820.6	820.1	819.9	819.9	819.9	819.9	819.9	820.8
167.5°	835.3	834.7	834.1	833.4	832.8	832.7	832.8	832.8	833.0	833.1	834.1
170°	842.8	842.2	841.6	841.0	840.4	840.1	840.1	840.1	840.1	840.1	841.2
172.5°	848.7	848.2	847.6	847.0	846.4	846.0	846.0	846.0	846.0	846.0	847.0
175°	854.9	854.3	853.8	853.2	852.6	852.2	852.2	852.2	852.2	852.2	853.2
177.5°	857.5	857.0	856.5	856.0	855.6	855.3	855.3	855.3	855.3	855.3	856.0
180°	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	604.2	605.1	606.1	606.5	606.3	606.2	606.1	606.0
5°	603.2	604.3	605.5	606.1	605.9	605.7	605.6	605.5
7.5°	599.5	601.0	602.5	603.1	603.0	602.8	602.6	602.4
10°	595.9	597.4	598.8	599.3	599.1	598.8	598.5	598.2
12.5°	590.9	592.2	593.6	594.1	593.8	593.5	593.2	593.0
15°	581.3	582.8	584.3	585.0	584.8	584.6	584.5	584.4
17.5°	568.9	570.2	571.5	572.1	571.9	571.7	571.5	571.3
20°	560.0	561.3	562.6	563.4	563.4	563.6	563.8	563.9
22.5°	550.1	551.8	553.5	554.2	554.1	554.1	554.0	553.9
25°	533.4	535.4	537.3	538.2	538.2	538.2	538.2	538.2
27.5°	516.0	517.6	519.3	520.2	520.3	520.4	520.6	520.6
30°	504.1	505.8	507.6	508.5	508.5	508.5	508.5	508.5
32.5°	491.1	493.0	494.9	496.0	496.4	496.7	497.1	497.4
35°	472.0	474.2	476.4	477.8	478.4	479.0	479.6	480.2
37.5°	452.1	454.6	457.1	458.7	459.1	459.5	460.0	460.5
40°	438.9	441.4	443.9	445.5	446.1	446.7	447.2	447.8
42.5°	425.2	427.9	430.7	432.4	433.3	434.0	434.9	435.7
45°	404.6	407.3	410.2	412.2	413.3	414.5	415.7	416.8
47.5°	383.8	386.9	390.0	392.1	393.0	393.9	394.9	395.7
50°	369.5	372.9	376.3	378.4	379.4	380.5	381.5	382.5
52.5°	355.0	358.4	362.0	364.3	365.6	366.8	368.1	369.4
55°	333.0	337.0	341.0	343.5	344.7	345.9	347.1	348.3
57.5°	310.7	314.7	318.7	321.3	322.7	324.1	325.5	326.8
60°	295.2	299.2	303.3	306.2	307.8	309.4	311.0	312.6
62.5°	280.3	284.5	288.5	291.4	292.8	294.3	295.8	297.3
65°	256.8	261.1	265.6	268.5	270.0	271.5	272.9	274.4
67.5°	233.3	238.2	243.0	246.0	247.2	248.4	249.7	250.9
70°	217.8	222.5	227.2	230.2	231.7	233.2	234.6	236.1
72.5°	202.2	207.0	211.8	215.0	216.5	217.9	219.4	220.8
75°	178.5	183.4	188.2	191.5	193.2	195.0	196.7	198.5
77.5°	156.4	161.4	166.5	169.8	171.2	172.5	173.8	175.2
80°	141.9	146.9	151.9	155.1	156.5	158.0	159.5	160.9
82.5°	128.7	133.6	138.6	141.9	143.4	144.8	146.3	147.7
85°	110.2	115.2	120.2	123.4	124.8	126.3	127.8	129.2
87.5°	97.5	102.5	107.7	111.0	112.5	114.0	115.5	117.1
90°	101.9	107.5	113.0	116.7	118.5	120.2	122.0	123.7
92.5°	106.9	112.2	117.5	120.8	122.0	123.1	124.3	125.4
95°	125.4	130.5	135.7	139.0	140.4	141.9	143.4	144.8
97.5°	148.6	153.7	158.7	162.0	163.3	164.8	166.2	167.6
100°	165.7	170.4	175.1	178.4	180.1	181.9	183.7	185.5
102.5°	186.1	190.6	195.2	198.2	199.6	201.0	202.4	203.8
105°	216.5	220.7	224.7	227.6	229.2	230.8	232.5	234.1
107.5°	249.9	254.3	258.6	261.4	262.5	263.6	264.8	265.9
110°	272.5	276.9	281.3	284.0	284.8	285.7	286.5	287.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	294.6	299.0	303.5	306.3	307.5	308.8	310.0	311.3
115°	329.1	332.7	336.4	338.7	339.8	340.8	341.8	342.9
117.5°	363.6	367.0	370.5	372.6	373.3	374.1	374.8	375.5
120°	386.8	390.1	393.3	395.3	396.1	396.7	397.4	398.2
122.5°	410.4	413.3	416.2	417.9	418.5	419.1	419.7	420.3
125°	445.5	447.9	450.4	451.9	452.3	452.7	453.1	453.6
127.5°	480.0	482.1	484.1	485.3	485.6	485.9	486.2	486.6
130°	502.9	505.1	507.3	508.2	508.1	507.9	507.7	507.6
132.5°	525.1	527.0	529.0	530.0	530.2	530.5	530.6	530.8
135°	558.6	560.7	562.7	564.0	564.4	564.8	565.2	565.7
137.5°	591.5	593.1	594.9	595.8	596.0	596.2	596.2	596.4
140°	613.3	615.3	617.3	618.2	617.9	617.6	617.3	617.0
142.5°	633.3	635.1	637.0	637.8	637.7	637.7	637.6	637.5
145°	664.4	665.5	666.5	667.0	667.0	666.9	666.9	666.9
147.5°	694.2	694.6	694.9	694.9	694.5	694.1	693.8	693.4
150°	712.9	712.9	712.9	712.6	712.0	711.4	710.8	710.2
152.5°	730.6	730.8	731.1	730.8	730.1	729.4	728.7	728.0
155°	756.5	757.1	757.7	757.4	756.4	755.4	754.3	753.3
157.5°	778.8	779.4	780.0	779.9	779.1	778.3	777.4	776.5
160°	792.5	793.2	793.9	794.0	793.4	792.8	792.2	791.6
162.5°	805.4	806.2	806.9	806.8	805.8	804.9	803.9	803.0
165°	821.7	822.6	823.5	823.5	822.4	821.3	820.3	819.2
167.5°	835.0	835.9	836.8	836.8	835.9	835.0	834.1	833.1
170°	842.2	843.3	844.3	844.3	843.3	842.2	841.2	840.1
172.5°	847.9	848.9	849.7	849.7	848.6	847.6	846.5	845.5
175°	854.0	854.9	855.8	855.7	854.7	853.7	852.6	851.5
177.5°	856.8	857.5	858.2	858.2	857.3	856.4	855.7	854.8
180°	857.0	857.0	857.0	857.0	857.0	857.0	857.0	857.0

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