

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: P331923-935

Luminaire Tested: **S123DIP-S560D585U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331923-935
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-S560D585U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3768.6 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

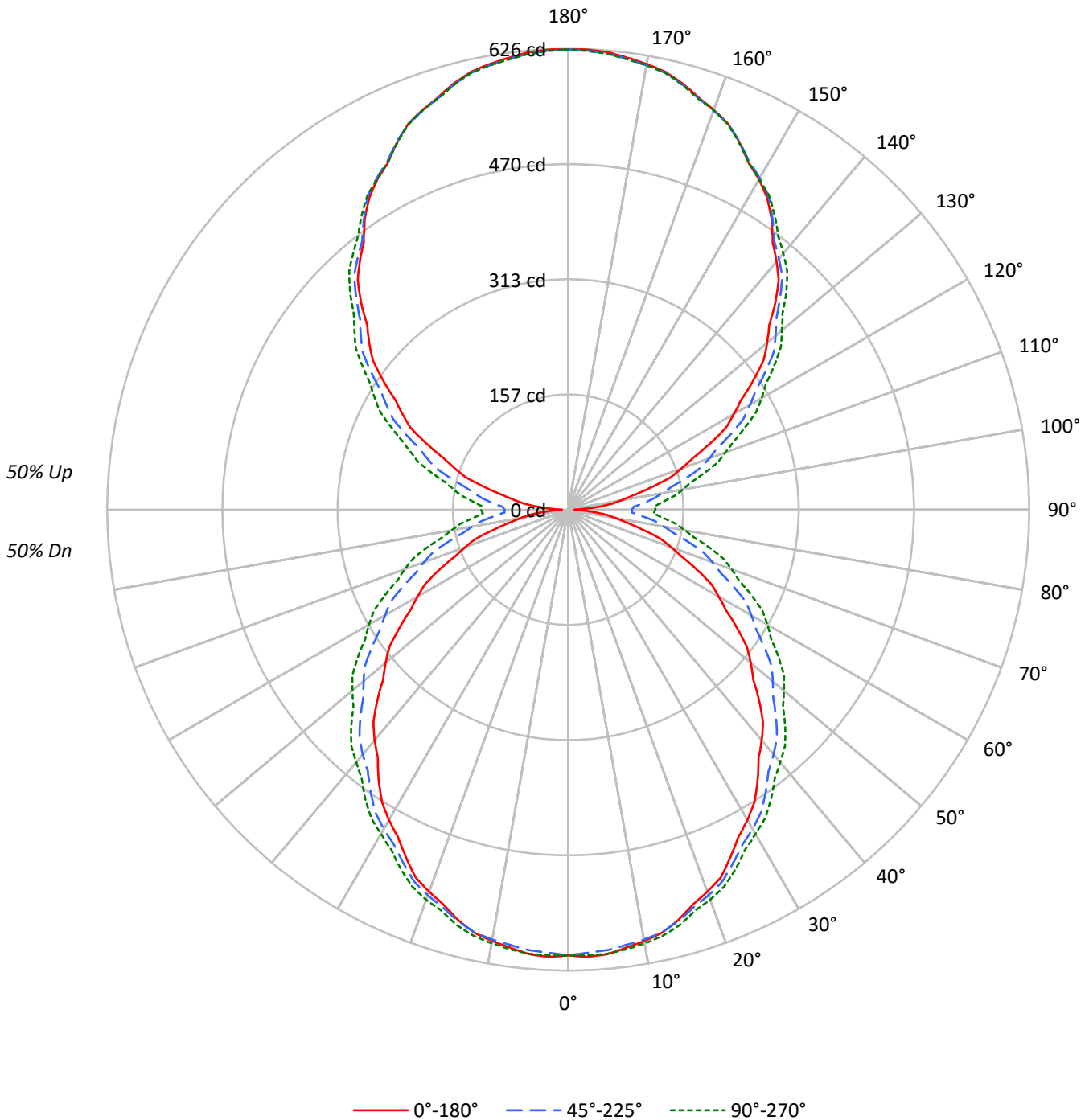
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	97	92	88	84	89	85	81	78	71	69	66	59	57	55	48	46	45	40
2	88	80	73	68	80	73	68	63	62	58	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	67	57	49	44	48	42	38	40	36	32	32	29	26	23
5	67	55	46	40	61	50	43	37	43	37	32	36	31	28	29	26	23	20
6	61	49	40	34	56	45	38	32	38	33	28	32	28	24	26	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	20	18	15
8	52	40	32	27	48	37	30	25	32	26	22	27	22	19	22	18	16	13
9	49	36	29	24	45	34	27	22	29	23	20	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	15	13	11

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	1.5
10°-20°	163.6	4.3
20°-30°	244.7	6.5
30°-40°	292.2	7.8
40°-50°	305.8	8.1
50°-60°	286.9	7.6
60°-70°	239.6	6.4
70°-80°	171.5	4.5
80°-90°	104.1	2.8
90°-100°	104.9	2.8
100°-110°	169.1	4.5
110°-120°	238.8	6.3
120°-130°	290.7	7.7
130°-140°	314.6	8.3
140°-150°	303.0	8.0
150°-160°	253.7	6.7
160°-170°	168.9	4.5
170°-180°	59.1	1.6
0°-30°	465.7	12.4
0°-40°	758.0	20.1
0°-60°	1350.7	35.8
0°-90°	1865.9	49.5
90°-120°	512.8	13.6
90°-150°	1421.1	37.7
90°-180°	1903.0	50.5
0°-180°	3768.6	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	46	86	110	118	8
95°	36	66	102	123	131	38
105°	116	133	165	183	191	124
115°	212	222	244	260	265	210
125°	308	310	327	338	342	274
135°	398	400	407	416	419	306
145°	482	482	483	488	489	300
155°	550	551	551	553	550	253
165°	600	598	598	601	598	169
175°	624	622	622	624	621	59
180°	625	625	625	625	625	



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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	25.1	32.7	40.2	47.7	55.4	63.1	70.9	78.6	86.4	91.4
90°	9.0	17.3	25.6	33.9	42.2	50.7	59.7	68.5	77.4	86.3	91.7
92.5°	19.9	27.1	34.4	41.6	48.8	56.5	64.7	72.8	81.0	89.2	94.4
95°	36.2	42.7	49.2	55.7	62.2	69.4	77.5	85.5	93.6	101.6	106.6
97.5°	57.9	63.6	69.4	75.1	80.8	87.5	95.0	102.5	109.9	117.4	122.3
100°	72.8	78.1	83.4	88.8	94.1	100.4	107.7	115.0	122.3	129.6	134.1
102.5°	89.9	94.5	99.1	103.8	108.3	114.3	121.7	129.0	136.4	143.7	148.2
105°	115.8	119.5	123.2	127.0	130.7	136.2	143.5	150.8	158.1	165.4	169.4
107.5°	145.3	148.4	151.4	154.6	157.7	162.5	168.8	175.2	181.6	188.0	192.3
110°	163.6	166.4	169.3	172.1	175.0	179.4	185.5	191.7	197.7	203.8	208.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	183.2	185.5	187.8	190.1	192.4	196.4	202.1	207.8	213.4	219.1	223.3
115°	212.0	214.1	216.2	218.3	220.3	223.9	229.0	234.0	239.1	244.2	247.8
117.5°	241.5	242.9	244.2	245.5	246.8	249.8	254.4	259.1	263.7	268.5	271.9
120°	259.5	260.9	262.3	263.6	265.0	267.9	272.2	276.5	280.8	285.1	288.3
122.5°	278.7	279.6	280.4	281.3	282.1	284.7	289.1	293.4	297.7	302.0	305.1
125°	307.5	307.8	308.1	308.4	308.8	310.9	315.0	319.0	323.0	327.1	329.7
127.5°	334.6	335.1	335.6	336.2	336.7	338.7	342.0	345.3	348.5	351.8	354.0
130°	352.7	353.4	354.0	354.8	355.5	357.2	359.8	362.4	365.0	367.6	370.0
132.5°	370.1	371.0	371.9	372.7	373.6	375.1	377.1	379.3	381.3	383.4	385.6
135°	397.6	398.1	398.6	399.2	399.7	400.7	402.2	403.7	405.2	406.7	408.9
137.5°	423.0	423.4	423.9	424.3	424.7	425.6	426.8	427.9	429.1	430.3	432.2
140°	440.2	440.7	441.3	441.9	442.4	442.9	443.5	444.0	444.5	445.1	447.2
142.5°	456.3	456.8	457.2	457.6	458.1	458.4	458.7	458.9	459.3	459.5	461.4
145°	481.5	481.6	481.6	481.6	481.7	481.9	482.2	482.6	482.9	483.3	484.3
147.5°	502.8	503.2	503.6	503.9	504.4	504.7	505.1	505.3	505.7	505.9	506.3
150°	518.1	518.3	518.6	518.8	519.0	519.2	519.4	519.6	519.9	520.0	520.0
152.5°	530.7	531.0	531.3	531.6	531.9	532.1	532.3	532.4	532.5	532.6	532.8
155°	550.5	550.5	550.5	550.5	550.5	550.6	550.7	550.8	551.0	551.0	551.5
157.5°	567.4	567.3	567.1	567.1	566.9	566.9	567.0	567.1	567.1	567.2	567.7
160°	578.0	577.8	577.6	577.4	577.1	577.0	577.0	577.0	577.0	577.0	577.6
162.5°	587.5	587.1	586.9	586.5	586.3	586.2	586.3	586.3	586.4	586.5	587.0
165°	599.6	599.3	599.0	598.7	598.3	598.1	598.1	598.1	598.1	598.1	598.8
167.5°	609.3	608.9	608.5	608.0	607.6	607.4	607.5	607.6	607.7	607.8	608.5
170°	614.8	614.4	614.0	613.5	613.1	612.9	612.9	612.9	612.9	612.9	613.6
172.5°	619.1	618.7	618.3	617.9	617.4	617.3	617.3	617.3	617.3	617.3	617.9
175°	623.7	623.3	622.8	622.4	622.0	621.7	621.7	621.7	621.7	621.7	622.4
177.5°	625.6	625.3	624.9	624.5	624.1	624.0	624.0	624.0	624.0	624.0	624.5
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



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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°	96.5	101.6	106.7	109.9	111.5	113.0	114.5	116.0
90°	97.1	102.5	108.0	111.6	113.2	114.9	116.6	118.3
92.5°	99.6	104.8	110.0	113.2	114.4	115.7	116.9	118.1
95°	111.6	116.6	121.6	124.8	126.2	127.7	129.2	130.6
97.5°	127.2	132.0	136.9	140.0	141.5	142.9	144.3	145.8
100°	138.7	143.3	147.9	151.0	152.7	154.4	156.1	157.7
102.5°	152.7	157.0	161.5	164.5	165.9	167.3	168.8	170.1
105°	173.6	177.7	181.8	184.6	186.1	187.7	189.2	190.7
107.5°	196.5	200.8	205.1	207.8	209.0	210.1	211.3	212.4
110°	212.2	216.5	220.8	223.3	224.3	225.3	226.3	227.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	227.5	231.7	235.9	238.7	240.0	241.2	242.5	243.7
115°	251.4	255.0	258.6	261.1	262.1	263.1	264.2	265.3
117.5°	275.3	278.8	282.3	284.5	285.2	286.1	287.0	287.8
120°	291.5	294.8	298.1	300.1	300.9	301.8	302.6	303.3
122.5°	308.0	311.0	313.9	315.8	316.5	317.2	318.0	318.7
125°	332.3	335.0	337.6	339.2	339.8	340.4	341.0	341.6
127.5°	356.4	358.7	360.9	362.3	362.8	363.3	363.9	364.3
130°	372.3	374.6	377.0	378.2	378.3	378.5	378.6	378.7
132.5°	387.7	389.9	392.0	393.3	393.7	394.1	394.5	394.9
135°	411.1	413.3	415.5	416.9	417.4	417.9	418.4	418.9
137.5°	434.0	435.9	437.7	438.9	439.2	439.5	439.8	440.1
140°	449.3	451.4	453.5	454.5	454.5	454.4	454.4	454.3
142.5°	463.2	465.1	466.9	468.0	468.0	468.2	468.4	468.5
145°	485.3	486.5	487.5	488.1	488.3	488.4	488.5	488.7
147.5°	506.6	507.0	507.4	507.5	507.3	507.2	507.0	507.0
150°	520.0	520.0	520.0	519.9	519.5	519.2	518.8	518.5
152.5°	533.0	533.2	533.4	533.2	532.7	532.2	531.7	531.2
155°	551.9	552.3	552.8	552.6	551.8	551.0	550.4	549.6
157.5°	568.2	568.6	569.0	568.9	568.3	567.7	567.1	566.5
160°	578.2	578.7	579.2	579.3	578.9	578.4	578.0	577.6
162.5°	587.5	588.1	588.7	588.6	587.9	587.2	586.5	585.8
165°	599.5	600.1	600.8	600.7	599.9	599.2	598.5	597.7
167.5°	609.2	609.8	610.5	610.5	609.8	609.2	608.5	607.8
170°	614.4	615.2	616.0	616.0	615.2	614.4	613.6	612.9
172.5°	618.5	619.2	619.9	619.9	619.1	618.4	617.6	616.8
175°	623.0	623.7	624.4	624.3	623.5	622.8	622.0	621.2
177.5°	625.1	625.6	626.1	626.0	625.4	624.8	624.2	623.6
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2

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