

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: P332784-927

Luminaire Tested: **S124DIW-S795D770U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332784-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D770U927-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4676.5 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

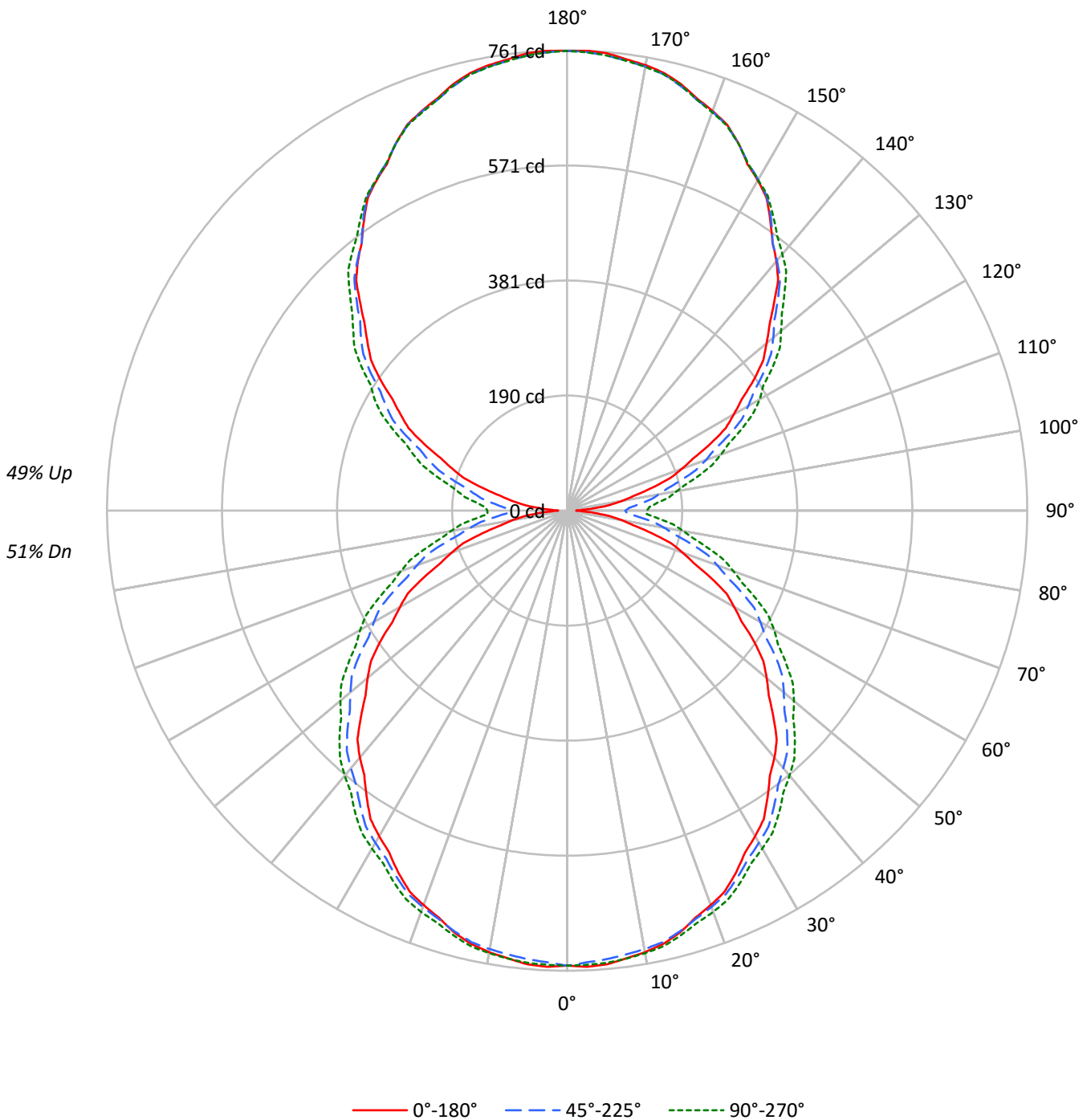
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	97	92	88	84	89	85	81	78	72	69	67	60	58	56	49	47	46	41
2	88	80	73	68	81	74	68	63	62	58	54	52	49	46	42	40	38	33
3	80	70	62	56	73	65	58	52	55	49	45	45	42	38	37	34	32	28
4	73	62	53	47	67	57	50	44	48	43	38	40	36	33	33	30	27	23
5	67	55	46	40	61	51	43	38	43	37	33	36	32	28	29	26	23	20
6	61	49	41	35	56	45	38	32	39	33	28	32	28	24	27	23	20	17
7	57	44	36	30	52	41	34	28	35	29	25	29	25	21	24	21	18	15
8	53	40	32	27	48	37	30	25	32	26	22	27	22	19	22	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	18	23	18	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6075	6075	6075
5°	6093	5937	5954
10°	6056	5839	5835
15°	6002	5727	5695
20°	5920	5603	5561
25°	5828	5464	5411
30°	5728	5326	5258
35°	5615	5184	5124
40°	5525	5049	4984
45°	5391	4925	4864
50°	5277	4781	4738
55°	5160	4647	4588
60°	4976	4475	4453
65°	4776	4290	4285
70°	4532	4078	4091
75°	4196	3847	3915
80°	3817	3624	3742
85°	3344	3427	3643



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.3	1.5
10°-20°	204.2	4.4
20°-30°	308.7	6.6
30°-40°	373.5	8.0
40°-50°	394.9	8.4
50°-60°	371.6	7.9
60°-70°	308.3	6.6
70°-80°	216.6	4.6
80°-90°	124.7	2.7
90°-100°	122.8	2.6
100°-110°	202.4	4.3
110°-120°	288.2	6.2
120°-130°	352.8	7.5
130°-140°	382.1	8.2
140°-150°	368.6	7.9
150°-160°	308.6	6.6
160°-170°	205.3	4.4
170°-180°	71.9	1.5
0°-30°	584.1	12.5
0°-40°	957.6	20.5
0°-60°	1724.1	36.9
0°-90°	2373.7	50.8
90°-120°	613.4	13.1
90°-150°	1717.0	36.7
90°-180°	2303.0	49.2
0°-180°	4676.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	753	751	745	751	751	71
15°	722	723	720	728	727	203
25°	661	666	668	677	678	304
35°	578	588	597	608	611	362
45°	482	498	514	528	532	372
55°	378	396	420	437	442	336
65°	261	288	317	337	345	259
75°	145	176	212	234	243	154
85°	45	80	118	142	152	48
90°	15	55	96	123	132	11
95°	46	80	118	142	150	48
105°	145	163	196	218	227	154
115°	261	270	295	312	318	258
125°	377	377	396	411	415	336
135°	483	487	493	504	508	374
145°	586	587	588	592	594	367
155°	670	670	670	672	670	308
165°	730	728	727	730	728	206
175°	759	756	756	759	756	72
180°	760	760	760	760	760	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	755.2	754.7	754.2	753.8	753.4	752.6	751.3	750.1	748.9	747.7	748.8
5°	753.3	752.7	752.2	751.6	751.1	750.1	748.8	747.5	746.2	744.9	746.4
7.5°	746.9	746.6	746.2	745.9	745.5	744.8	743.8	742.7	741.6	740.5	742.2
10°	741.5	741.3	741.2	740.9	740.8	740.2	739.3	738.3	737.4	736.4	738.2
12.5°	734.1	734.0	734.0	734.0	734.0	733.6	733.0	732.3	731.7	731.0	732.6
15°	722.2	722.3	722.5	722.7	722.9	722.7	722.2	721.6	721.0	720.4	722.2
17.5°	705.8	706.3	706.9	707.5	708.1	708.2	708.1	708.1	707.9	707.8	709.6
20°	694.3	694.9	695.5	696.0	696.6	697.0	697.1	697.3	697.5	697.7	699.6
22.5°	681.5	682.2	682.9	683.7	684.4	684.9	685.2	685.6	685.9	686.3	688.1
25°	660.6	661.7	662.9	664.0	665.1	666.0	666.5	667.1	667.7	668.2	670.3
27.5°	637.4	639.0	640.6	642.3	644.0	645.2	646.1	646.9	647.8	648.6	650.5
30°	621.9	623.4	624.9	626.4	627.9	629.2	630.6	631.8	633.2	634.5	636.5
32.5°	605.0	606.8	608.6	610.4	612.2	613.8	615.3	616.7	618.2	619.6	622.0
35°	578.1	580.3	582.6	584.8	587.0	589.1	591.0	592.9	594.7	596.6	599.2
37.5°	550.9	553.5	556.1	558.6	561.3	563.7	566.0	568.3	570.7	573.0	575.7
40°	533.4	535.8	538.2	540.7	543.1	545.7	548.3	550.9	553.5	556.1	559.0
42.5°	513.2	515.9	518.6	521.3	524.1	527.0	530.0	533.1	536.2	539.2	542.4
45°	482.0	485.5	489.1	492.7	496.2	499.8	503.4	506.9	510.4	514.0	517.2
47.5°	452.2	455.8	459.5	463.2	466.8	470.7	474.8	479.0	483.1	487.2	490.5
50°	430.6	434.7	438.8	442.9	447.0	451.1	455.3	459.4	463.5	467.6	471.4
52.5°	409.0	413.1	417.2	421.4	425.5	429.9	434.6	439.3	444.1	448.8	452.5
55°	377.5	381.4	385.4	389.3	393.2	398.0	403.6	409.2	414.9	420.5	424.2
57.5°	342.3	347.1	352.0	356.9	361.7	366.9	372.6	378.1	383.7	389.3	393.7
60°	319.3	324.2	329.1	334.0	338.8	344.4	350.5	356.7	362.9	369.1	373.4
62.5°	297.1	302.5	307.8	313.1	318.4	324.2	330.3	336.5	342.7	348.9	353.2
65°	261.2	267.2	273.2	279.2	285.2	291.4	297.7	304.1	310.5	316.8	321.5
67.5°	226.6	233.1	239.4	245.7	252.2	258.7	265.5	272.4	279.2	286.0	290.7
70°	203.0	209.5	215.8	222.2	228.5	235.3	242.4	249.5	256.6	263.7	268.8
72.5°	180.1	186.6	193.2	199.7	206.2	213.3	220.9	228.4	236.0	243.5	248.4
75°	145.0	151.9	158.8	165.7	172.6	180.1	187.9	195.7	203.7	211.5	216.7
77.5°	112.1	119.4	126.7	134.1	141.4	149.2	157.5	165.7	174.0	182.2	187.5
80°	91.8	99.3	106.8	114.3	121.8	129.7	137.9	146.2	154.4	162.6	168.3
82.5°	71.6	79.4	87.2	95.0	102.7	110.8	119.1	127.3	135.5	143.8	149.5
85°	44.7	52.5	60.4	68.3	76.1	84.3	92.7	101.1	109.6	118.0	123.6
87.5°	25.3	33.2	41.1	49.1	57.0	65.2	73.6	82.0	90.4	98.8	104.4
90°	15.2	24.2	33.1	42.1	50.9	60.0	69.1	78.2	87.2	96.3	102.6
92.5°	25.4	33.7	42.1	50.5	58.9	67.5	76.3	85.1	93.9	102.7	108.4
95°	46.3	53.6	60.9	68.3	75.7	83.7	92.2	100.8	109.4	118.0	123.4
97.5°	71.5	77.8	84.1	90.3	96.6	104.1	112.7	121.4	130.1	138.8	144.1
100°	91.6	97.0	102.3	107.7	113.1	120.1	128.6	137.0	145.5	154.0	159.3
102.5°	113.2	117.7	122.2	126.7	131.1	137.4	145.7	153.9	162.2	170.4	175.6
105°	144.6	148.5	152.3	156.2	160.1	165.7	173.2	180.6	188.1	195.5	200.6
107.5°	179.1	182.4	185.5	188.8	192.0	196.9	203.6	210.2	216.8	223.5	228.5
110°	201.9	204.9	207.7	210.6	213.5	218.1	224.6	231.0	237.4	243.8	247.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	225.7	228.1	230.4	232.8	235.2	239.4	245.4	251.4	257.5	263.5	267.6
115°	261.4	263.1	264.7	266.5	268.2	271.9	277.6	283.3	289.1	294.8	298.7
117.5°	295.8	296.9	298.0	299.1	300.2	303.5	309.0	314.3	319.7	325.1	328.6
120°	318.1	319.2	320.4	321.5	322.5	325.6	330.6	335.6	340.7	345.7	348.8
122.5°	342.1	342.5	342.8	343.1	343.5	346.1	351.0	356.0	360.9	365.9	369.2
125°	376.7	376.5	376.4	376.1	376.0	378.2	382.7	387.2	391.8	396.3	399.7
127.5°	408.7	408.8	409.1	409.2	409.5	411.3	414.6	418.0	421.4	424.8	427.9
130°	430.6	430.8	430.9	431.2	431.3	433.0	435.9	438.9	442.0	445.0	448.1
132.5°	453.6	453.7	453.8	453.9	454.0	455.2	457.5	459.8	462.1	464.4	467.3
135°	483.2	484.0	484.8	485.5	486.3	487.4	488.7	490.0	491.3	492.7	495.4
137.5°	516.3	516.6	516.7	516.9	517.1	517.6	518.5	519.3	520.1	521.0	523.4
140°	538.4	538.5	538.6	538.7	538.8	538.9	539.1	539.3	539.5	539.6	541.9
142.5°	558.0	558.3	558.5	558.7	559.0	559.0	558.7	558.5	558.3	558.1	560.2
145°	585.8	586.2	586.5	586.8	587.2	587.4	587.6	587.7	587.8	588.0	588.9
147.5°	613.6	614.0	614.5	614.9	615.4	615.5	615.4	615.3	615.2	615.1	615.1
150°	630.5	630.9	631.2	631.5	631.8	632.1	632.1	632.1	632.1	632.1	632.1
152.5°	645.9	646.1	646.4	646.7	647.0	647.1	647.2	647.4	647.5	647.5	647.8
155°	670.3	670.3	670.3	670.3	670.3	670.2	670.0	669.9	669.8	669.7	670.2
157.5°	690.9	690.7	690.5	690.2	690.0	689.9	689.8	689.8	689.8	689.8	690.1
160°	703.2	703.1	702.9	702.8	702.7	702.5	702.4	702.3	702.1	702.0	702.4
162.5°	714.5	714.2	713.8	713.4	713.1	712.9	712.7	712.6	712.5	712.3	713.0
165°	729.7	729.3	728.9	728.5	728.1	727.8	727.5	727.2	727.0	726.7	727.5
167.5°	741.2	740.8	740.2	739.7	739.1	738.8	738.9	738.9	738.9	738.9	739.7
170°	747.9	747.2	746.6	745.9	745.3	745.0	745.1	745.3	745.4	745.5	746.3
172.5°	752.6	752.0	751.5	750.9	750.4	750.1	750.1	750.2	750.2	750.2	751.1
175°	759.1	758.4	757.7	757.1	756.5	756.1	755.9	755.7	755.7	755.5	756.5
177.5°	761.1	760.7	760.1	759.6	759.1	758.8	758.8	758.8	758.8	758.8	759.5
180°	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	749.8	750.9	751.9	752.4	752.3	752.1	751.9	751.8
5°	747.9	749.4	750.8	751.5	751.3	751.1	751.0	750.8
7.5°	743.9	745.5	747.3	748.0	747.8	747.6	747.4	747.3
10°	739.8	741.5	743.2	743.9	743.8	743.5	743.4	743.2
12.5°	734.1	735.7	737.2	737.9	737.9	737.8	737.8	737.8
15°	723.8	725.5	727.1	727.9	727.8	727.5	727.4	727.1
17.5°	711.2	713.0	714.7	715.5	715.3	715.2	715.0	714.9
20°	701.4	703.3	705.2	706.2	706.2	706.2	706.2	706.2
22.5°	690.0	691.8	693.7	694.8	695.1	695.4	695.7	696.0
25°	672.3	674.4	676.4	677.6	677.7	677.9	678.1	678.3
27.5°	652.4	654.3	656.3	657.4	657.6	657.8	658.1	658.2
30°	638.6	640.6	642.7	644.0	644.4	644.7	645.1	645.5
32.5°	624.4	626.8	629.1	630.5	630.8	631.2	631.6	632.0
35°	601.8	604.4	607.0	608.6	609.2	609.7	610.4	610.9
37.5°	578.3	581.0	583.6	585.3	585.8	586.5	587.0	587.6
40°	561.7	564.6	567.4	569.1	569.9	570.6	571.4	572.1
42.5°	545.5	548.6	551.7	553.6	554.1	554.8	555.4	556.0
45°	520.4	523.6	526.7	528.8	529.7	530.7	531.6	532.5
47.5°	493.8	497.1	500.4	502.6	503.7	504.9	506.0	507.1
50°	475.2	478.9	482.6	485.1	486.2	487.4	488.5	489.6
52.5°	456.3	460.0	463.7	466.2	467.3	468.4	469.5	470.7
55°	427.9	431.7	435.5	437.9	439.0	440.1	441.2	442.4
57.5°	398.2	402.7	407.1	409.9	410.9	411.9	413.0	414.1
60°	377.7	382.0	386.3	389.2	390.7	392.2	393.7	395.2
62.5°	357.4	361.8	366.1	369.0	370.5	372.0	373.4	374.9
65°	326.2	330.9	335.6	338.7	340.2	341.7	343.1	344.6
67.5°	295.5	300.2	305.0	308.1	309.6	311.0	312.5	313.9
70°	273.9	278.9	284.0	287.2	288.4	289.8	291.0	292.4
72.5°	253.3	258.3	263.2	266.3	267.8	269.3	270.7	272.2
75°	222.0	227.2	232.5	235.9	237.7	239.3	241.0	242.6
77.5°	192.8	198.1	203.4	207.0	208.8	210.6	212.4	214.2
80°	173.9	179.5	185.1	188.6	190.1	191.6	193.1	194.6
82.5°	155.3	161.1	166.8	170.6	172.1	173.8	175.5	177.1
85°	129.2	134.8	140.5	144.2	146.1	147.9	149.8	151.7
87.5°	110.0	115.6	121.1	124.8	126.5	128.2	129.9	131.6
90°	108.8	115.0	121.2	125.2	127.0	128.7	130.5	132.2
92.5°	114.2	119.9	125.6	129.4	131.0	132.7	134.4	136.0
95°	128.9	134.4	139.8	143.4	145.0	146.7	148.4	150.1
97.5°	149.5	154.9	160.3	163.7	165.3	167.0	168.6	170.2
100°	164.6	169.9	175.2	178.6	179.9	181.2	182.5	183.8
102.5°	180.9	186.2	191.5	194.9	196.5	198.0	199.6	201.1
105°	205.7	210.8	215.9	219.4	221.2	223.1	225.0	226.9
107.5°	233.4	238.4	243.4	246.5	247.8	249.1	250.5	251.8
110°	251.9	256.0	260.0	263.0	264.8	266.7	268.6	270.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	271.7	275.8	279.9	282.7	284.3	285.9	287.5	289.1
115°	302.8	306.7	310.7	313.3	314.5	315.7	316.9	318.1
117.5°	332.0	335.5	338.9	341.3	342.5	343.7	345.0	346.2
120°	351.9	355.0	358.1	360.5	362.3	364.0	365.8	367.6
122.5°	372.5	375.8	379.1	381.2	382.1	382.9	383.8	384.7
125°	403.0	406.2	409.6	411.6	412.5	413.4	414.2	415.1
127.5°	431.0	434.1	437.3	439.3	440.4	441.5	442.5	443.6
130°	451.1	454.3	457.4	459.2	459.9	460.4	461.1	461.7
132.5°	470.3	473.2	476.2	478.2	479.0	480.0	480.9	481.8
135°	498.1	500.8	503.6	505.3	506.0	506.8	507.5	508.3
137.5°	525.8	528.1	530.5	532.3	533.3	534.3	535.3	536.3
140°	544.2	546.6	548.9	550.4	551.2	552.1	552.9	553.7
142.5°	562.3	564.4	566.5	567.9	568.7	569.4	570.2	571.0
145°	589.9	590.9	591.9	592.6	592.9	593.3	593.7	594.1
147.5°	615.2	615.2	615.3	615.5	616.0	616.5	617.0	617.4
150°	632.1	632.1	632.1	632.0	631.8	631.7	631.6	631.4
152.5°	648.2	648.5	648.8	648.8	648.5	648.2	647.8	647.5
155°	670.7	671.2	671.8	671.8	671.2	670.7	670.2	669.7
157.5°	690.5	690.9	691.3	691.3	690.9	690.5	690.0	689.5
160°	702.8	703.2	703.6	703.5	702.8	702.1	701.5	700.8
162.5°	713.8	714.5	715.2	715.2	714.5	713.9	713.3	712.6
165°	728.3	729.0	729.8	730.0	729.4	728.9	728.4	727.9
167.5°	740.5	741.2	742.0	742.0	741.2	740.5	739.7	738.8
170°	747.1	747.9	748.7	748.6	747.7	746.8	745.8	745.0
172.5°	752.0	752.9	753.8	753.8	752.8	751.9	751.0	750.1
175°	757.3	758.3	759.1	759.1	758.3	757.3	756.5	755.5
177.5°	760.3	761.0	761.8	761.7	760.8	760.0	759.1	758.4
180°	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2

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