

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: P332784-940

Luminaire Tested: **S124DIW-S795D770U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332784-940
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-S795D770U940-4F0-1E-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: 5264.0 lumens
Efficiency: N/A
Efficacy: 117.0 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

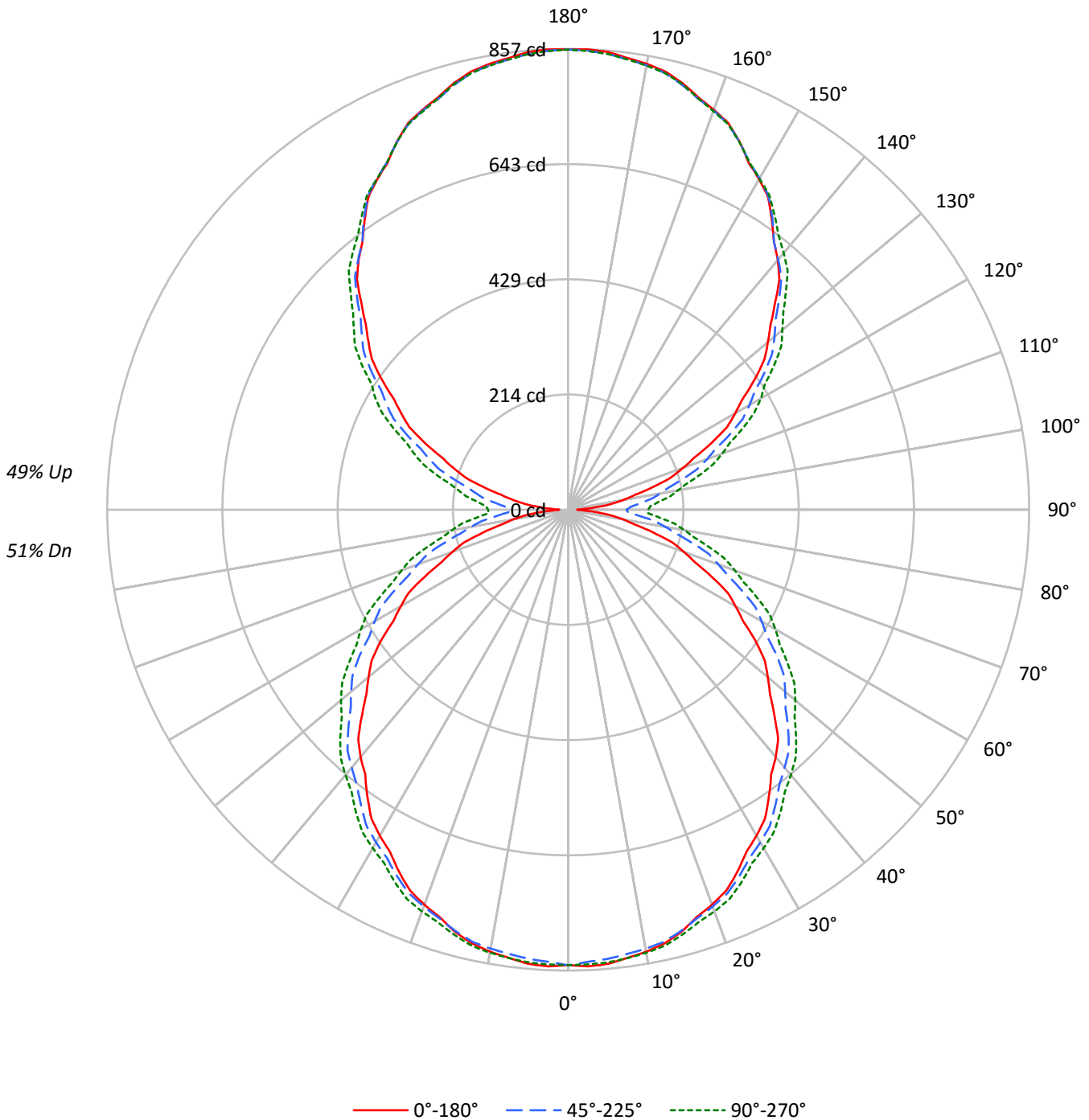
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	6838	6838	6838
5°	6859	6683	6702
10°	6817	6573	6568
15°	6756	6446	6411
20°	6664	6307	6259
25°	6560	6151	6092
30°	6448	5995	5919
35°	6321	5835	5768
40°	6219	5684	5610
45°	6067	5543	5475
50°	5939	5383	5333
55°	5808	5231	5164
60°	5601	5036	5013
65°	5376	4829	4824
70°	5101	4592	4605
75°	4723	4331	4407
80°	4295	4081	4213
85°	3763	3857	4101



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	1.5
10°-20°	229.8	4.4
20°-30°	347.5	6.6
30°-40°	420.4	8.0
40°-50°	444.5	8.4
50°-60°	418.3	7.9
60°-70°	347.1	6.6
70°-80°	243.8	4.6
80°-90°	140.4	2.7
90°-100°	138.3	2.6
100°-110°	227.8	4.3
110°-120°	324.4	6.2
120°-130°	397.1	7.5
130°-140°	430.2	8.2
140°-150°	415.0	7.9
150°-160°	347.3	6.6
160°-170°	231.1	4.4
170°-180°	80.9	1.5
0°-30°	657.5	12.5
0°-40°	1077.9	20.5
0°-60°	1940.7	36.9
0°-90°	2671.9	50.8
90°-120°	690.5	13.1
90°-150°	1932.7	36.7
90°-180°	2592.0	49.2
0°-180°	5264.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	847	847	847	847	847	
5°	848	845	838	846	845	80
15°	813	814	811	819	818	229
25°	744	749	752	762	764	342
35°	651	662	672	684	688	407
45°	542	561	578	594	599	419
55°	425	445	473	492	498	378
65°	294	324	357	379	388	291
75°	163	198	238	264	273	174
85°	50	90	133	160	171	54
90°	17	62	108	139	149	12
95°	52	90	133	159	169	54
105°	163	183	220	245	255	173
115°	294	304	332	351	358	290
125°	424	424	446	462	467	378
135°	544	548	555	568	572	421
145°	659	661	662	667	669	413
155°	754	754	754	756	754	347
165°	821	819	818	822	819	231
175°	854	851	850	854	850	81
180°	856	856	856	856	856	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	850.1	849.5	849.0	848.6	848.0	847.1	845.7	844.4	843.0	841.7	842.8
5°	847.9	847.3	846.7	846.1	845.4	844.4	842.8	841.4	839.9	838.5	840.2
7.5°	840.7	840.3	840.0	839.6	839.2	838.4	837.2	836.0	834.7	833.6	835.4
10°	834.6	834.5	834.3	834.0	833.8	833.2	832.1	831.1	830.0	828.9	830.9
12.5°	826.3	826.3	826.3	826.2	826.2	825.8	825.1	824.3	823.6	822.9	824.7
15°	812.9	813.1	813.2	813.5	813.7	813.5	812.9	812.3	811.5	810.9	812.9
17.5°	794.4	795.0	795.7	796.4	797.0	797.2	797.1	797.0	796.8	796.7	798.7
20°	781.6	782.2	782.8	783.5	784.1	784.5	784.7	784.9	785.2	785.3	787.5
22.5°	767.1	767.9	768.7	769.5	770.3	771.0	771.3	771.7	772.0	772.5	774.5
25°	743.6	744.8	746.2	747.4	748.7	749.7	750.3	750.9	751.5	752.2	754.5
27.5°	717.5	719.3	721.1	723.0	724.9	726.3	727.3	728.2	729.2	730.1	732.3
30°	700.0	701.7	703.4	705.1	706.8	708.3	709.8	711.2	712.7	714.2	716.5
32.5°	681.0	683.1	685.1	687.1	689.1	690.9	692.6	694.2	695.9	697.5	700.2
35°	650.7	653.2	655.8	658.3	660.8	663.1	665.2	667.4	669.4	671.5	674.5
37.5°	620.1	623.0	626.0	628.8	631.8	634.5	637.1	639.7	642.4	645.0	648.0
40°	600.4	603.2	605.8	608.6	611.4	614.2	617.2	620.1	623.0	626.0	629.2
42.5°	577.7	580.7	583.8	586.8	590.0	593.2	596.6	600.1	603.6	607.0	610.6
45°	542.5	546.5	550.5	554.6	558.6	562.6	566.6	570.6	574.5	578.5	582.2
47.5°	509.0	513.1	517.2	521.4	525.5	529.9	534.5	539.1	543.8	548.4	552.1
50°	484.6	489.3	493.9	498.6	503.2	507.8	512.5	517.1	521.7	526.4	530.7
52.5°	460.4	465.0	469.7	474.3	478.9	483.9	489.2	494.5	499.9	505.2	509.3
55°	424.9	429.4	433.8	438.2	442.6	448.0	454.3	460.7	467.0	473.3	477.5
57.5°	385.3	390.7	396.3	401.7	407.2	413.0	419.4	425.6	431.9	438.2	443.2
60°	359.4	365.0	370.4	375.9	381.4	387.6	394.6	401.5	408.5	415.4	420.3
62.5°	334.4	340.5	346.4	352.4	358.4	364.9	371.8	378.8	385.8	392.7	397.5
65°	294.0	300.8	307.6	314.2	321.0	328.0	335.1	342.3	349.5	356.6	361.9
67.5°	255.1	262.3	269.5	276.6	283.8	291.2	298.9	306.6	314.2	321.9	327.3
70°	228.5	235.8	242.9	250.1	257.3	264.8	272.9	280.9	288.8	296.9	302.6
72.5°	202.8	210.1	217.5	224.8	232.1	240.0	248.6	257.1	265.6	274.1	279.6
75°	163.2	170.9	178.7	186.5	194.3	202.7	211.5	220.3	229.3	238.1	244.0
77.5°	126.2	134.4	142.7	151.0	159.2	168.0	177.3	186.5	195.8	205.1	211.1
80°	103.3	111.8	120.2	128.7	137.1	146.0	155.2	164.5	173.8	183.1	189.4
82.5°	80.6	89.3	98.2	106.9	115.7	124.8	134.0	143.3	152.6	161.8	168.3
85°	50.3	59.1	67.9	76.9	85.7	94.9	104.3	113.8	123.3	132.8	139.1
87.5°	28.4	37.4	46.3	55.3	64.2	73.4	82.8	92.3	101.7	111.2	117.5
90°	17.1	27.2	37.3	47.3	57.3	67.5	77.8	88.0	98.2	108.4	115.5
92.5°	28.6	38.0	47.4	56.9	66.3	76.0	85.9	95.8	105.7	115.6	122.0
95°	52.1	60.3	68.6	76.9	85.2	94.2	103.8	113.5	123.1	132.8	138.9
97.5°	80.5	87.6	94.6	101.7	108.7	117.2	126.9	136.7	146.4	156.2	162.2
100°	103.1	109.1	115.2	121.3	127.3	135.2	144.7	154.3	163.8	173.3	179.3
102.5°	127.4	132.5	137.5	142.6	147.6	154.7	164.0	173.3	182.5	191.8	197.7
105°	162.7	167.1	171.5	175.8	180.2	186.5	194.9	203.3	211.7	220.1	225.8
107.5°	201.6	205.3	208.8	212.5	216.2	221.7	229.2	236.6	244.1	251.6	257.2
110°	227.3	230.6	233.8	237.0	240.3	245.5	252.8	260.0	267.2	274.5	279.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.0	256.7	259.4	262.1	264.7	269.5	276.3	283.0	289.8	296.6	301.2
115°	294.3	296.1	298.0	300.0	301.8	306.0	312.5	318.9	325.4	331.8	336.3
117.5°	333.0	334.2	335.5	336.7	338.0	341.6	347.8	353.8	359.9	366.0	369.9
120°	358.1	359.4	360.6	361.9	363.0	366.5	372.1	377.8	383.5	389.1	392.6
122.5°	385.1	385.5	385.8	386.2	386.6	389.6	395.1	400.7	406.3	411.9	415.5
125°	424.0	423.8	423.7	423.4	423.2	425.7	430.8	435.9	441.0	446.1	449.9
127.5°	460.0	460.2	460.5	460.7	460.9	463.0	466.7	470.6	474.4	478.2	481.7
130°	484.6	484.9	485.1	485.4	485.5	487.4	490.7	494.1	497.5	500.9	504.4
132.5°	510.6	510.7	510.9	511.0	511.0	512.4	515.0	517.5	520.1	522.7	526.0
135°	543.9	544.8	545.7	546.5	547.4	548.7	550.1	551.6	553.0	554.6	557.6
137.5°	581.2	581.5	581.7	581.8	582.0	582.6	583.6	584.5	585.5	586.5	589.2
140°	606.1	606.2	606.3	606.4	606.5	606.6	606.8	607.1	607.3	607.4	610.0
142.5°	628.1	628.4	628.7	628.9	629.2	629.2	628.9	628.7	628.4	628.2	630.5
145°	659.4	659.9	660.2	660.6	660.9	661.2	661.4	661.6	661.6	661.8	662.9
147.5°	690.7	691.2	691.7	692.1	692.7	692.9	692.8	692.6	692.5	692.4	692.4
150°	709.7	710.2	710.5	710.9	711.2	711.5	711.5	711.5	711.5	711.5	711.5
152.5°	727.0	727.3	727.6	727.9	728.3	728.4	728.5	728.7	728.8	728.9	729.2
155°	754.5	754.5	754.5	754.5	754.5	754.4	754.2	754.1	753.9	753.9	754.4
157.5°	777.8	777.5	777.2	776.9	776.7	776.6	776.5	776.5	776.5	776.4	776.9
160°	791.6	791.4	791.2	791.1	790.9	790.8	790.7	790.5	790.3	790.2	790.7
162.5°	804.2	803.9	803.4	803.1	802.7	802.5	802.3	802.2	802.0	801.8	802.6
165°	821.4	820.9	820.5	820.0	819.6	819.2	818.9	818.6	818.3	818.0	818.9
167.5°	834.4	833.8	833.2	832.6	832.0	831.6	831.7	831.7	831.7	831.8	832.7
170°	841.9	841.1	840.3	839.6	838.9	838.6	838.7	838.9	839.0	839.2	840.1
172.5°	847.1	846.5	845.9	845.3	844.6	844.4	844.4	844.5	844.5	844.5	845.5
175°	854.4	853.6	852.9	852.2	851.5	851.0	850.9	850.7	850.6	850.4	851.5
177.5°	856.8	856.2	855.6	855.1	854.4	854.2	854.2	854.2	854.2	854.2	855.0
180°	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	847.0	847.0	847.0	847.0	847.0	847.0	847.0	847.0
2.5°	844.0	845.3	846.4	846.9	846.8	846.6	846.4	846.2
5°	841.9	843.6	845.2	846.0	845.7	845.5	845.3	845.1
7.5°	837.3	839.2	841.2	842.0	841.8	841.5	841.3	841.2
10°	832.8	834.6	836.6	837.4	837.2	837.0	836.8	836.6
12.5°	826.3	828.1	829.8	830.6	830.6	830.5	830.5	830.5
15°	814.8	816.6	818.5	819.4	819.2	818.9	818.8	818.5
17.5°	800.6	802.5	804.5	805.4	805.2	805.0	804.9	804.7
20°	789.5	791.7	793.8	794.9	794.9	794.9	794.9	794.9
22.5°	776.7	778.7	780.9	782.1	782.5	782.7	783.1	783.5
25°	756.8	759.1	761.4	762.7	762.9	763.1	763.3	763.6
27.5°	734.4	736.6	738.8	739.9	740.2	740.5	740.7	740.9
30°	718.8	721.1	723.4	724.9	725.3	725.7	726.1	726.6
32.5°	702.8	705.5	708.1	709.7	710.1	710.5	711.0	711.4
35°	677.4	680.4	683.3	685.1	685.7	686.3	687.1	687.7
37.5°	650.9	654.0	656.9	658.8	659.4	660.1	660.8	661.5
40°	632.3	635.5	638.6	640.6	641.5	642.3	643.2	644.0
42.5°	614.0	617.5	621.0	623.1	623.8	624.5	625.2	625.8
45°	585.8	589.3	592.9	595.2	596.3	597.4	598.4	599.4
47.5°	555.8	559.5	563.3	565.7	567.0	568.3	569.5	570.8
50°	534.8	539.0	543.2	546.0	547.2	548.6	549.8	551.1
52.5°	513.6	517.8	522.0	524.8	526.0	527.3	528.5	529.9
55°	481.7	486.0	490.2	492.9	494.2	495.4	496.7	497.9
57.5°	448.3	453.3	458.3	461.4	462.5	463.7	464.9	466.1
60°	425.2	430.0	434.8	438.1	439.8	441.5	443.2	444.9
62.5°	402.3	407.2	412.1	415.4	417.1	418.7	420.4	422.0
65°	367.2	372.5	377.7	381.2	382.9	384.6	386.2	387.9
67.5°	332.6	338.0	343.3	346.8	348.5	350.1	351.8	353.4
70°	308.3	314.0	319.7	323.2	324.7	326.2	327.6	329.1
72.5°	285.2	290.7	296.2	299.8	301.4	303.1	304.7	306.4
75°	249.9	255.7	261.7	265.6	267.5	269.4	271.3	273.1
77.5°	217.0	223.0	229.0	233.0	235.1	237.0	239.1	241.1
80°	195.7	202.1	208.4	212.3	214.0	215.7	217.4	219.1
82.5°	174.8	181.3	187.8	192.0	193.8	195.6	197.5	199.4
85°	145.4	151.8	158.1	162.3	164.4	166.5	168.6	170.8
87.5°	123.8	130.1	136.3	140.4	142.4	144.3	146.2	148.1
90°	122.4	129.5	136.4	140.9	142.9	144.9	146.9	148.8
92.5°	128.5	135.0	141.4	145.6	147.5	149.4	151.2	153.1
95°	145.1	151.2	157.4	161.4	163.3	165.1	167.0	169.0
97.5°	168.3	174.3	180.4	184.3	186.1	188.0	189.8	191.5
100°	185.3	191.3	197.2	201.0	202.5	203.9	205.5	206.9
102.5°	203.7	209.6	215.5	219.4	221.1	222.9	224.6	226.4
105°	231.6	237.3	243.0	246.9	249.0	251.1	253.2	255.4
107.5°	262.7	268.3	273.9	277.5	278.9	280.4	282.0	283.4
110°	283.6	288.1	292.7	296.0	298.1	300.2	302.4	304.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	305.9	310.5	315.0	318.3	320.0	321.8	323.6	325.4
115°	340.8	345.3	349.7	352.7	354.0	355.3	356.7	358.0
117.5°	373.7	377.6	381.5	384.1	385.5	386.9	388.3	389.7
120°	396.1	399.6	403.1	405.8	407.8	409.7	411.8	413.8
122.5°	419.3	423.0	426.7	429.1	430.1	431.1	432.0	433.0
125°	453.6	457.3	461.0	463.3	464.3	465.3	466.3	467.3
127.5°	485.2	488.7	492.2	494.5	495.7	497.0	498.1	499.4
130°	507.8	511.4	514.9	516.9	517.6	518.3	519.0	519.7
132.5°	529.4	532.7	536.0	538.2	539.2	540.3	541.3	542.3
135°	560.7	563.7	566.9	568.8	569.6	570.4	571.2	572.1
137.5°	591.8	594.5	597.2	599.1	600.3	601.5	602.5	603.7
140°	612.6	615.3	617.9	619.6	620.5	621.4	622.3	623.2
142.5°	632.9	635.3	637.7	639.3	640.2	641.0	641.9	642.7
145°	664.1	665.1	666.3	667.1	667.4	667.9	668.2	668.7
147.5°	692.5	692.5	692.6	692.9	693.4	693.9	694.5	695.0
150°	711.5	711.5	711.5	711.4	711.2	711.1	711.0	710.8
152.5°	729.6	730.0	730.3	730.3	730.0	729.6	729.2	728.8
155°	755.0	755.5	756.2	756.2	755.5	755.0	754.4	753.9
157.5°	777.3	777.8	778.2	778.2	777.7	777.2	776.7	776.1
160°	791.1	791.6	792.0	791.8	791.1	790.3	789.6	788.9
162.5°	803.4	804.2	805.0	805.0	804.3	803.6	802.9	802.1
165°	819.7	820.6	821.5	821.7	821.1	820.5	819.9	819.3
167.5°	833.6	834.4	835.3	835.3	834.4	833.5	832.6	831.6
170°	841.0	841.9	842.8	842.7	841.6	840.6	839.5	838.6
172.5°	846.5	847.5	848.5	848.5	847.4	846.4	845.3	844.4
175°	852.5	853.5	854.5	854.5	853.5	852.5	851.5	850.4
177.5°	855.8	856.6	857.5	857.4	856.4	855.5	854.5	853.6
180°	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7

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