

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: P332159-935

Luminaire Tested: **S123DIW-S775D755U935-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332159-935
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: S123DIW-S775D755U935-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 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: 5037.5 lumens
Efficiency: N/A
Efficacy: 111.9 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

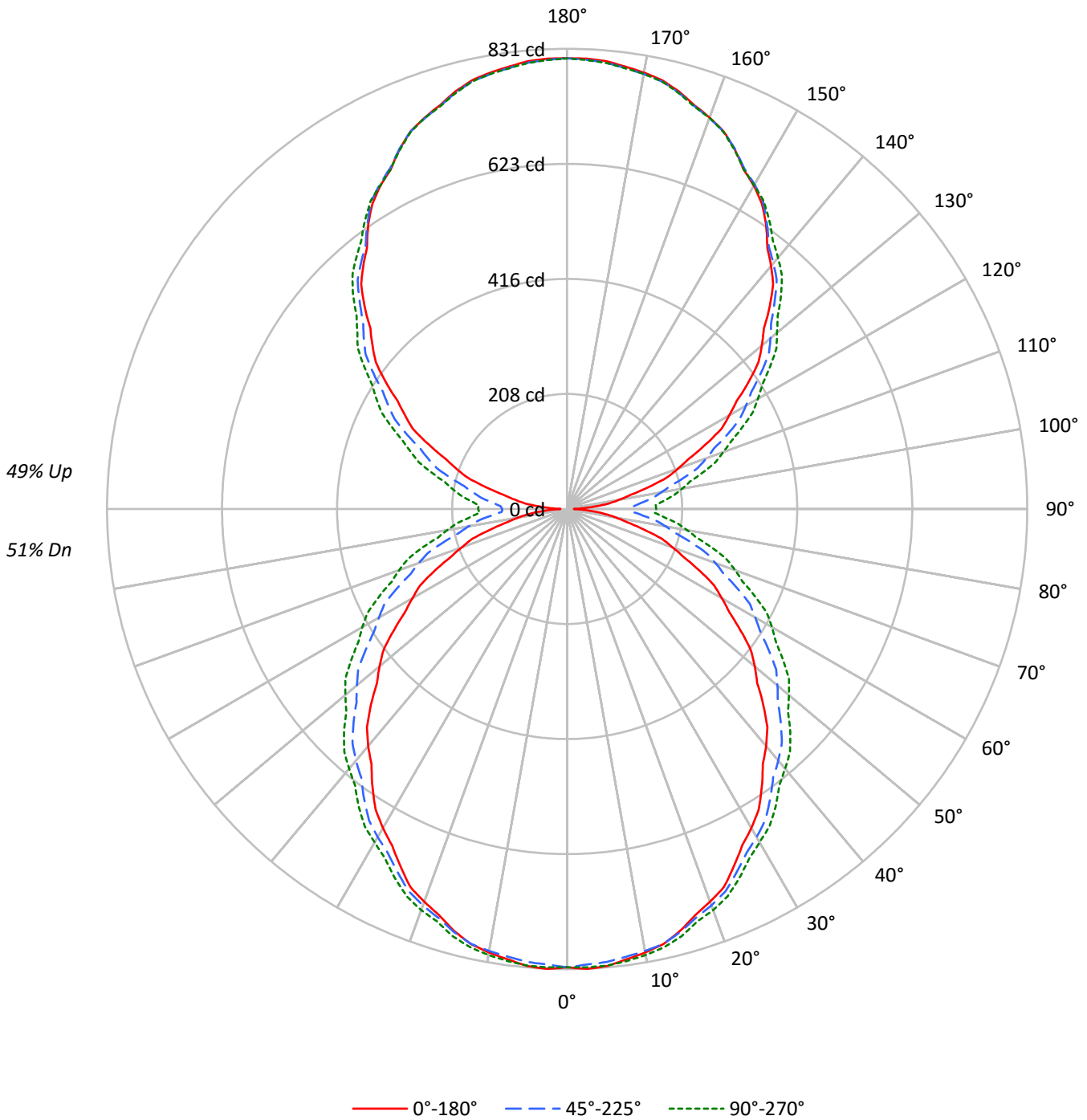
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	66	60	58	56	48	47	46	40
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	27
4	73	62	53	47	67	57	50	44	48	43	38	40	36	32	33	30	27	23
5	67	55	46	40	61	51	43	38	43	37	33	36	31	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	21	17	15	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°	8908	8908	8908
5°	8936	8684	8689
10°	8856	8484	8441
15°	8741	8257	8171
20°	8579	7997	7875
25°	8377	7698	7561
30°	8171	7430	7245
35°	7939	7146	6992
40°	7720	6888	6722
45°	7475	6640	6505
50°	7232	6394	6267
55°	6967	6143	6052
60°	6707	5889	5832
65°	6441	5617	5571
70°	6040	5312	5303
75°	5534	4961	5030
80°	4951	4618	4718
85°	4409	4384	4537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	1.6
10°-20°	223.7	4.4
20°-30°	334.5	6.6
30°-40°	399.5	7.9
40°-50°	418.0	8.3
50°-60°	392.2	7.8
60°-70°	327.6	6.5
70°-80°	234.4	4.7
80°-90°	142.2	2.8
90°-100°	140.7	2.8
100°-110°	223.1	4.4
110°-120°	312.8	6.2
120°-130°	379.5	7.5
130°-140°	409.9	8.1
140°-150°	394.4	7.8
150°-160°	330.1	6.6
160°-170°	219.7	4.4
170°-180°	76.9	1.5
0°-30°	636.6	12.6
0°-40°	1036.1	20.6
0°-60°	1846.2	36.6
0°-90°	2550.3	50.6
90°-120°	676.6	13.4
90°-150°	1860.4	36.9
90°-180°	2487.0	49.4
0°-180°	5037.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	828	826	821	828	828	79
15°	789	791	791	799	799	222
25°	712	721	724	735	736	328
35°	613	627	639	652	656	383
45°	501	523	545	562	570	386
55°	382	412	444	468	476	342
65°	264	300	339	365	375	261
75°	143	186	231	260	271	153
85°	44	89	137	166	177	46
90°	12	63	117	149	161	10
95°	48	88	137	166	176	50
105°	151	175	218	243	253	161
115°	276	290	320	341	349	273
125°	400	403	427	443	447	357
135°	518	521	530	543	547	399
145°	626	627	629	635	636	391
155°	716	716	717	719	715	330
165°	780	778	778	782	778	220
175°	812	809	809	812	808	77
180°	814	814	814	814	814	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	831.2	830.7	830.3	829.7	829.3	828.4	827.2	825.9	824.6	823.3	824.6
5°	828.5	828.1	827.7	827.3	826.9	826.1	824.9	823.7	822.5	821.3	822.9
7.5°	820.4	820.4	820.5	820.6	820.7	820.2	819.0	817.9	816.7	815.5	817.5
10°	813.2	813.6	814.0	814.4	814.8	814.5	813.5	812.5	811.5	810.5	812.5
12.5°	804.5	805.1	805.6	806.2	806.8	806.8	806.1	805.4	804.7	804.0	805.8
15°	788.8	789.5	790.1	790.7	791.3	791.4	791.3	791.1	790.8	790.7	792.6
17.5°	769.0	770.3	771.5	772.6	773.8	774.4	774.3	774.2	774.1	774.0	775.8
20°	754.6	755.8	757.0	758.2	759.4	760.2	760.6	761.0	761.4	761.8	763.6
22.5°	739.4	740.6	741.8	743.0	744.2	745.1	745.7	746.2	746.8	747.3	749.7
25°	712.2	714.2	716.2	718.2	720.2	721.5	722.1	722.7	723.3	723.9	726.5
27.5°	684.8	687.1	689.4	691.6	694.0	695.7	697.0	698.3	699.6	700.9	703.1
30°	665.3	668.0	670.5	673.1	675.7	677.9	679.4	681.1	682.7	684.2	686.6
32.5°	643.7	646.6	649.5	652.5	655.4	657.9	660.0	662.1	664.2	666.2	668.8
35°	613.0	616.2	619.5	622.7	625.9	628.8	631.4	634.0	636.6	639.2	642.2
37.5°	580.6	584.2	587.8	591.4	595.0	598.4	601.7	604.9	608.0	611.2	614.7
40°	559.0	562.6	566.2	569.8	573.3	577.2	581.2	585.2	589.2	593.2	596.6
42.5°	535.1	539.6	544.0	548.4	552.8	557.1	561.2	565.4	569.6	573.8	577.5
45°	501.3	506.1	510.8	515.7	520.5	525.4	530.4	535.4	540.4	545.4	549.2
47.5°	465.7	471.2	476.6	482.1	487.5	493.1	498.9	504.5	510.3	516.0	520.3
50°	442.6	448.2	453.8	459.5	465.1	471.0	477.3	483.5	489.7	495.8	500.4
52.5°	418.1	424.0	430.0	435.9	441.9	448.2	455.1	461.9	468.8	475.6	480.4
55°	382.3	388.8	395.5	402.1	408.7	415.6	422.8	430.1	437.2	444.4	449.9
57.5°	347.2	354.1	361.0	367.9	374.9	382.2	390.1	398.0	405.9	413.8	419.2
60°	322.8	329.9	337.2	344.4	351.6	359.3	367.6	375.7	383.9	392.2	397.8
62.5°	299.6	307.0	314.4	321.8	329.2	337.2	345.9	354.6	363.3	372.0	377.5
65°	264.2	272.0	279.7	287.6	295.4	303.7	312.5	321.3	330.2	339.0	345.0
67.5°	228.1	236.3	244.7	253.0	261.2	269.9	278.9	287.8	296.8	305.8	312.4
70°	202.9	211.5	220.1	228.7	237.3	246.4	256.1	265.6	275.3	284.9	291.3
72.5°	179.8	188.4	197.0	205.6	214.2	223.5	233.4	243.4	253.3	263.2	269.8
75°	143.4	152.7	162.2	171.6	181.0	190.7	200.7	210.8	220.8	230.8	237.4
77.5°	111.6	121.1	130.6	140.1	149.6	159.4	169.5	179.6	189.7	199.8	206.7
80°	89.3	99.1	108.9	118.7	128.5	138.6	149.0	159.5	169.9	180.3	187.1
82.5°	69.7	79.7	89.7	99.7	109.7	119.9	130.5	141.1	151.7	162.3	169.1
85°	44.2	54.2	64.2	74.2	84.2	94.5	105.2	115.8	126.4	137.1	143.9
87.5°	24.1	34.4	44.6	54.9	65.2	75.6	86.2	96.8	107.4	118.0	124.8
90°	12.4	23.6	34.9	46.1	57.3	69.0	81.0	93.1	105.1	117.2	124.6
92.5°	26.4	36.2	46.1	56.0	65.8	76.2	87.3	98.4	109.5	120.6	127.8
95°	47.6	56.4	65.3	74.0	82.8	92.7	103.7	114.6	125.6	136.6	143.4
97.5°	75.8	83.6	91.4	99.2	106.9	116.0	126.1	136.4	146.5	156.8	163.4
100°	95.1	102.3	109.5	116.8	124.1	132.7	142.6	152.5	162.5	172.4	178.6
102.5°	117.4	123.6	129.8	136.1	142.4	150.6	160.6	170.6	180.6	190.5	196.7
105°	151.0	156.1	161.2	166.3	171.3	178.8	188.7	198.6	208.5	218.4	224.0
107.5°	189.2	193.6	197.8	202.1	206.3	212.8	221.4	230.1	238.8	247.5	253.4
110°	213.1	217.0	220.8	224.8	228.7	234.8	243.1	251.3	259.7	267.9	273.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	238.7	241.8	245.0	248.1	251.2	256.7	264.4	272.2	279.9	287.7	293.3
115°	276.1	279.0	281.8	284.6	287.4	292.3	299.2	306.2	313.1	320.0	324.9
117.5°	314.5	316.3	318.1	319.9	321.6	325.7	332.1	338.5	344.9	351.3	356.0
120°	337.9	339.7	341.6	343.4	345.3	349.1	355.0	360.9	366.9	372.7	377.2
122.5°	362.9	364.0	365.2	366.4	367.5	371.0	376.9	382.9	388.7	394.7	398.7
125°	400.2	400.6	401.1	401.5	401.9	404.9	410.4	415.9	421.5	427.0	430.6
127.5°	435.5	436.2	436.9	437.6	438.3	440.9	445.4	449.9	454.4	458.9	462.1
130°	459.0	459.9	460.9	461.8	462.7	465.0	468.6	472.2	475.7	479.3	482.6
132.5°	481.8	482.9	484.0	485.1	486.2	488.2	491.0	494.0	496.9	499.7	502.7
135°	517.5	518.1	518.8	519.5	520.1	521.5	523.6	525.6	527.7	529.8	532.8
137.5°	550.6	551.1	551.6	552.2	552.8	553.9	555.5	557.1	558.7	560.3	562.8
140°	572.9	573.6	574.3	575.0	575.8	576.4	577.2	577.9	578.7	579.4	582.3
142.5°	593.8	594.3	595.0	595.5	596.1	596.5	596.8	597.3	597.6	598.0	600.5
145°	626.5	626.6	626.7	626.8	626.9	627.2	627.6	628.0	628.4	628.9	630.3
147.5°	654.3	654.8	655.3	655.8	656.3	656.8	657.2	657.5	658.0	658.4	658.8
150°	674.2	674.5	674.8	675.1	675.4	675.6	675.9	676.2	676.5	676.7	676.7
152.5°	690.6	691.0	691.4	691.8	692.2	692.4	692.6	692.8	692.9	693.1	693.4
155°	716.4	716.4	716.4	716.4	716.4	716.4	716.6	716.8	716.9	717.0	717.6
157.5°	738.4	738.2	738.0	737.9	737.7	737.7	737.8	737.9	738.0	738.1	738.7
160°	752.2	751.9	751.7	751.3	751.1	750.9	750.9	750.9	750.9	750.9	751.7
162.5°	764.5	764.1	763.6	763.3	762.8	762.8	762.8	762.9	763.1	763.2	763.9
165°	780.3	779.9	779.5	779.0	778.6	778.3	778.3	778.3	778.3	778.3	779.2
167.5°	793.0	792.4	791.9	791.3	790.7	790.5	790.6	790.7	790.8	790.9	791.8
170°	800.1	799.5	799.0	798.4	797.8	797.5	797.5	797.5	797.5	797.5	798.6
172.5°	805.7	805.2	804.6	804.0	803.5	803.1	803.1	803.1	803.1	803.1	804.1
175°	811.6	811.1	810.5	809.9	809.3	809.1	809.1	809.1	809.1	809.1	809.9
177.5°	814.1	813.6	813.1	812.7	812.3	812.0	812.0	812.0	812.0	812.0	812.7
180°	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	827.6	827.6	827.6	827.6	827.6	827.6	827.6	827.6
2.5°	825.9	827.2	828.4	829.0	828.8	828.6	828.5	828.4
5°	824.5	826.1	827.7	828.4	828.2	828.0	827.9	827.6
7.5°	819.5	821.6	823.5	824.4	824.1	824.0	823.7	823.5
10°	814.5	816.5	818.5	819.3	818.9	818.5	818.1	817.7
12.5°	807.7	809.5	811.3	812.1	811.7	811.3	810.9	810.5
15°	794.6	796.7	798.7	799.5	799.4	799.2	798.9	798.7
17.5°	777.7	779.5	781.3	782.0	781.8	781.4	781.2	780.9
20°	765.4	767.2	769.0	770.0	770.3	770.4	770.6	770.9
22.5°	751.9	754.2	756.5	757.6	757.5	757.3	757.2	757.1
25°	729.2	731.8	734.3	735.6	735.6	735.6	735.6	735.6
27.5°	705.3	707.6	709.8	711.0	711.2	711.4	711.5	711.7
30°	689.1	691.5	693.9	695.1	695.1	695.1	695.1	695.1
32.5°	671.3	673.9	676.5	678.0	678.5	679.0	679.4	679.9
35°	645.2	648.2	651.2	653.2	653.9	654.7	655.5	656.3
37.5°	618.0	621.5	624.8	626.9	627.5	628.2	628.8	629.5
40°	600.0	603.4	606.8	608.9	609.8	610.5	611.3	612.2
42.5°	581.2	584.9	588.7	591.1	592.2	593.3	594.4	595.6
45°	553.0	556.8	560.7	563.4	565.0	566.5	568.2	569.8
47.5°	524.6	528.9	533.2	536.0	537.2	538.5	539.7	540.9
50°	505.1	509.6	514.3	517.3	518.7	520.0	521.5	522.9
52.5°	485.2	490.0	494.7	498.0	499.7	501.4	503.2	504.9
55°	455.3	460.7	466.1	469.6	471.2	472.8	474.4	476.0
57.5°	424.7	430.2	435.6	439.3	441.2	443.1	444.9	446.8
60°	403.4	409.0	414.6	418.5	420.7	422.9	425.2	427.3
62.5°	383.2	388.8	394.4	398.2	400.3	402.3	404.4	406.4
65°	351.0	357.0	363.0	367.0	369.0	371.0	373.1	375.1
67.5°	318.9	325.5	332.1	336.2	337.9	339.6	341.3	342.9
70°	297.7	304.1	310.6	314.7	316.8	318.7	320.7	322.8
72.5°	276.4	282.9	289.6	293.9	295.8	297.8	299.8	301.9
75°	244.0	250.6	257.3	261.7	264.2	266.6	269.0	271.4
77.5°	213.7	220.7	227.6	232.0	233.9	235.7	237.6	239.4
80°	193.9	200.7	207.6	212.0	214.0	215.9	218.0	220.0
82.5°	175.9	182.7	189.5	193.9	196.0	197.9	199.9	201.9
85°	150.7	157.5	164.3	168.7	170.7	172.7	174.7	176.7
87.5°	131.7	138.7	145.6	150.2	152.1	154.2	156.3	158.3
90°	132.0	139.3	146.7	151.5	153.9	156.1	158.4	160.7
92.5°	134.8	142.0	149.0	153.4	155.2	156.8	158.5	160.1
95°	150.1	156.9	163.7	168.1	170.0	172.0	174.1	176.1
97.5°	170.0	176.7	183.2	187.5	189.5	191.4	193.4	195.4
100°	184.9	191.1	197.3	201.6	203.9	206.1	208.4	210.8
102.5°	202.7	208.8	214.8	218.9	220.8	222.7	224.7	226.6
105°	229.6	235.2	240.9	244.7	246.8	248.9	251.0	253.0
107.5°	259.2	265.0	270.8	274.6	276.1	277.8	279.3	280.9
110°	279.5	285.2	291.0	294.6	295.9	297.2	298.6	299.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	299.1	304.9	310.6	314.3	316.0	317.7	319.4	321.2
115°	329.9	334.8	339.8	343.0	344.5	345.9	347.4	348.9
117.5°	360.8	365.5	370.2	373.2	374.4	375.6	376.7	377.9
120°	381.7	386.2	390.6	393.4	394.5	395.6	396.7	397.9
122.5°	402.9	406.9	411.0	413.5	414.6	415.5	416.6	417.6
125°	434.3	437.9	441.5	443.8	444.6	445.5	446.3	447.1
127.5°	465.3	468.4	471.6	473.6	474.2	474.9	475.6	476.4
130°	485.8	489.0	492.3	494.0	494.2	494.4	494.6	494.8
132.5°	505.7	508.7	511.6	513.4	514.0	514.5	515.1	515.7
135°	535.8	538.9	541.9	543.8	544.5	545.2	546.0	546.6
137.5°	565.4	568.0	570.6	572.1	572.6	573.0	573.5	573.9
140°	585.1	588.0	590.8	592.3	592.3	592.3	592.3	592.4
142.5°	603.0	605.6	608.1	609.6	609.8	610.0	610.3	610.5
145°	631.8	633.3	634.7	635.5	635.8	636.0	636.2	636.5
147.5°	659.4	659.8	660.3	660.5	660.3	660.2	660.0	660.0
150°	676.7	676.7	676.7	676.6	676.1	675.6	675.2	674.8
152.5°	693.6	693.8	694.1	693.8	693.2	692.5	691.8	691.2
155°	718.2	718.8	719.3	719.1	718.1	717.1	716.1	715.1
157.5°	739.3	739.9	740.5	740.4	739.6	738.8	738.0	737.2
160°	752.3	753.0	753.7	753.8	753.3	752.7	752.1	751.6
162.5°	764.6	765.3	766.0	765.9	765.0	764.1	763.2	762.2
165°	780.1	780.9	781.8	781.7	780.8	779.7	778.8	777.7
167.5°	792.6	793.6	794.4	794.4	793.6	792.6	791.8	790.9
170°	799.5	800.6	801.5	801.5	800.6	799.5	798.6	797.5
172.5°	804.9	805.8	806.7	806.7	805.6	804.7	803.7	802.7
175°	810.8	811.6	812.4	812.4	811.4	810.4	809.4	808.4
177.5°	813.4	814.1	814.8	814.7	813.9	813.0	812.3	811.5
180°	813.6	813.6	813.6	813.6	813.6	813.6	813.6	813.6

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