

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: P331534-840

Luminaire Tested: **S122DIW-S675D710U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331534-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D710U840-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5200.4 lumens
Efficiency: N/A
Efficacy: 115.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

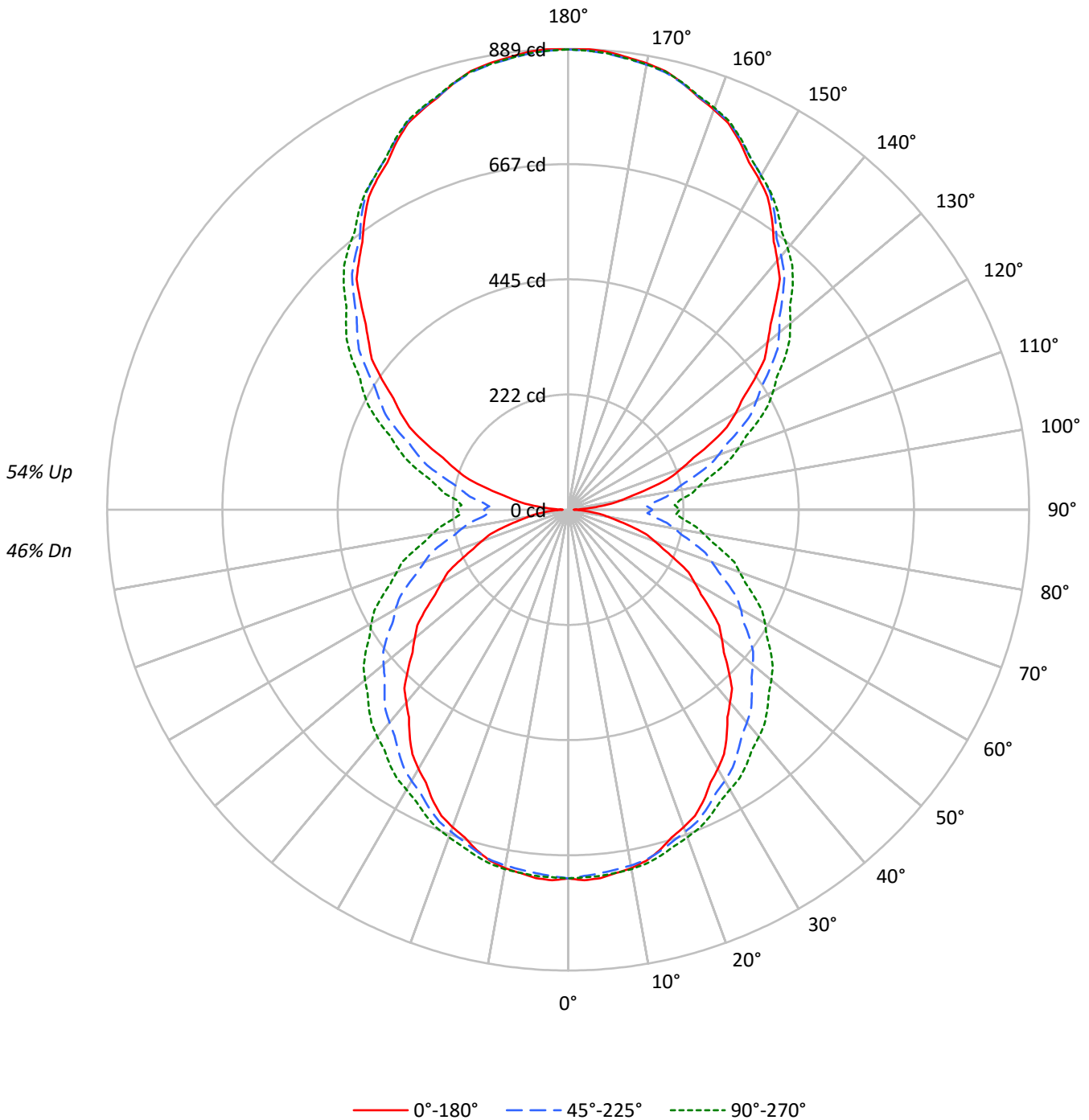
Input Watts (W): 45
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	106	106	106	106	98	98	98	98	81	81	81	66	66	66	53	53	53	46
1	96	91	86	82	87	83	79	76	69	66	64	56	54	52	44	43	42	36
2	86	78	72	66	79	72	66	61	60	55	52	49	45	43	38	36	34	29
3	79	68	61	54	72	63	56	50	52	47	43	43	39	36	33	31	28	24
4	72	60	52	46	65	55	48	42	46	41	36	38	33	30	30	27	24	20
5	66	53	45	39	60	49	42	36	41	35	31	34	29	26	27	23	21	17
6	60	48	39	33	55	44	37	31	37	31	27	30	26	22	24	21	18	15
7	56	43	35	29	51	40	32	27	33	28	23	27	23	20	22	19	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	17	20	17	14	12
9	48	35	28	23	44	33	26	21	28	22	18	23	19	16	18	15	13	11
10	45	32	25	20	41	30	23	19	25	20	16	21	17	14	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11485	11485	11485
5°	11541	11055	11013
10°	11469	10729	10608
15°	11310	10384	10181
20°	11112	10013	9772
25°	10913	9655	9399
30°	10635	9288	9023
35°	10355	8933	8760
40°	10057	8630	8496
45°	9777	8361	8270
50°	9476	8116	8048
55°	9160	7855	7822
60°	8770	7583	7583
65°	8367	7262	7299
70°	7917	6920	6990
75°	7339	6581	6708
80°	6436	6238	6424
85°	5566	5939	6199



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	1.3
10°-20°	193.3	3.7
20°-30°	292.9	5.6
30°-40°	356.7	6.9
40°-50°	383.8	7.4
50°-60°	372.7	7.2
60°-70°	325.4	6.3
70°-80°	250.5	4.8
80°-90°	171.7	3.3
90°-100°	172.1	3.3
100°-110°	259.4	5.0
110°-120°	354.6	6.8
120°-130°	424.0	8.2
130°-140°	454.0	8.7
140°-150°	434.6	8.4
150°-160°	362.6	7.0
160°-170°	240.5	4.6
170°-180°	84.1	1.6
0°-30°	553.6	10.6
0°-40°	910.3	17.5
0°-60°	1666.8	32.1
0°-90°	2414.5	46.4
90°-120°	786.1	15.1
90°-150°	2098.7	40.4
90°-180°	2786.0	53.6
0°-180°	5200.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	713	710	704	710	709	68
15°	680	682	682	691	691	192
25°	618	626	635	647	651	284
35°	533	551	570	592	600	333
45°	437	465	501	532	543	337
55°	335	373	426	462	476	299
65°	229	280	340	381	396	227
75°	127	185	250	293	308	134
85°	37	101	167	209	225	40
90°	11	81	162	201	215	9
95°	47	104	166	204	216	51
105°	166	200	254	290	302	176
115°	304	321	365	394	404	300
125°	438	446	476	500	510	392
135°	565	574	585	605	612	437
145°	685	690	695	701	704	428
155°	783	785	788	791	789	360
165°	852	851	851	856	853	240
175°	886	884	883	888	884	84
180°	888	888	888	888	888	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	715.5	714.9	714.4	713.8	713.3	712.4	711.0	709.7	708.5	707.2	708.1
5°	713.4	712.7	712.1	711.3	710.6	709.6	708.2	706.9	705.5	704.1	705.5
7.5°	707.0	706.5	706.1	705.6	705.2	704.4	703.4	702.3	701.3	700.2	701.9
10°	702.1	701.6	701.1	700.6	700.2	699.6	698.9	698.3	697.6	696.9	698.7
12.5°	693.8	693.9	694.0	694.1	694.2	694.0	693.5	693.0	692.5	692.0	693.8
15°	680.4	680.9	681.4	681.8	682.3	682.5	682.5	682.5	682.5	682.5	684.5
17.5°	663.1	664.1	665.0	666.0	666.9	667.8	668.5	669.2	669.9	670.8	672.9
20°	651.6	652.7	653.8	655.0	656.1	657.1	658.0	659.0	659.9	660.9	663.4
22.5°	639.1	640.5	641.9	643.2	644.5	645.8	647.1	648.3	649.6	651.0	653.5
25°	618.5	620.2	621.8	623.4	625.0	626.8	628.8	631.0	633.0	635.0	637.8
27.5°	593.8	596.4	599.1	601.7	604.3	606.8	609.3	611.7	614.1	616.5	620.0
30°	577.3	580.3	583.3	586.2	589.3	592.2	595.2	598.1	601.2	604.1	607.7
32.5°	559.2	562.5	565.8	569.2	572.6	576.0	579.6	583.0	586.5	590.1	594.3
35°	533.0	536.8	540.8	544.6	548.6	552.7	557.0	561.4	565.7	570.1	575.1
37.5°	504.5	509.1	513.5	518.0	522.5	527.6	533.2	538.9	544.4	550.1	555.7
40°	485.5	490.6	495.6	500.7	505.7	511.3	517.6	523.7	529.9	536.0	542.0
42.5°	467.5	472.4	477.5	482.5	487.6	493.6	500.8	507.9	514.9	522.1	528.6
45°	437.1	443.3	449.5	455.7	461.8	469.0	477.0	485.0	493.0	501.0	508.2
47.5°	407.2	413.9	420.7	427.4	434.1	442.2	451.6	461.0	470.4	479.8	487.3
50°	386.6	393.7	400.8	407.9	415.0	423.7	434.0	444.3	454.6	464.9	472.7
52.5°	366.8	374.3	381.7	389.2	396.7	405.9	416.7	427.6	438.4	449.3	457.3
55°	335.1	343.3	351.5	359.8	368.0	378.1	390.0	401.9	413.8	425.8	434.0
57.5°	303.7	313.1	322.3	331.6	340.9	351.6	363.8	375.9	388.1	400.2	409.1
60°	281.4	291.2	301.1	311.0	320.8	332.3	345.4	358.4	371.4	384.6	393.2
62.5°	261.7	271.9	282.1	292.3	302.6	314.2	327.2	340.2	353.4	366.4	375.7
65°	228.8	240.0	251.4	262.6	273.8	286.1	299.6	313.2	326.7	340.2	349.6
67.5°	198.7	210.5	222.3	234.0	245.7	258.4	272.3	286.1	299.9	313.8	323.3
70°	177.3	189.2	201.2	213.1	225.0	238.0	252.3	266.4	280.6	294.9	304.7
72.5°	157.5	169.8	182.1	194.4	206.6	219.9	234.4	248.7	263.2	277.5	287.2
75°	126.8	139.7	152.5	165.3	178.1	191.9	206.5	221.2	235.8	250.5	260.3
77.5°	97.1	110.6	124.0	137.3	150.8	165.0	179.9	194.8	209.6	224.5	234.4
80°	77.4	91.3	105.2	119.3	133.2	147.6	162.6	177.4	192.3	207.2	216.8
82.5°	60.8	74.6	88.4	102.2	116.0	130.4	145.5	160.6	175.6	190.8	200.4
85°	37.2	51.3	65.5	79.7	93.9	108.4	123.0	137.6	152.4	167.0	176.6
87.5°	20.4	34.4	48.5	62.5	76.5	91.3	106.6	122.1	137.4	152.9	162.2
90°	11.1	26.4	41.6	57.0	72.2	89.0	107.3	125.6	144.0	162.3	171.2
92.5°	22.8	36.7	50.5	64.3	78.2	92.6	107.6	122.5	137.5	152.5	161.6
95°	47.3	59.7	72.1	84.5	96.9	110.2	124.3	138.4	152.4	166.5	175.2
97.5°	78.4	89.5	100.5	111.5	122.6	135.0	148.9	162.7	176.5	190.4	198.8
100°	102.4	112.2	122.0	131.8	141.6	153.2	166.5	179.9	193.2	206.5	215.0
102.5°	126.7	135.5	144.3	153.2	162.0	172.9	186.0	199.1	212.2	225.3	233.8
105°	166.2	173.4	180.6	187.7	194.8	204.5	216.8	229.0	241.3	253.5	261.9
107.5°	207.1	213.2	219.2	225.3	231.4	240.0	251.5	262.9	274.3	285.7	293.5
110°	232.7	238.2	243.9	249.4	255.0	263.4	274.7	285.9	297.1	308.3	315.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	261.5	266.3	271.1	276.0	280.8	288.5	299.1	309.6	320.1	330.7	337.6
115°	303.9	307.4	310.9	314.5	317.9	324.7	334.7	344.7	354.7	364.6	371.3
117.5°	345.1	348.1	351.0	354.1	357.0	362.8	371.4	380.0	388.6	397.2	403.6
120°	373.2	375.6	377.8	380.0	382.2	387.3	395.2	402.9	410.8	418.7	425.1
122.5°	399.1	401.0	403.0	405.0	406.9	411.7	419.4	427.1	434.7	442.4	448.3
125°	438.2	439.7	441.2	442.7	444.2	448.4	455.1	462.0	468.9	475.6	481.4
127.5°	477.4	479.0	480.7	482.3	484.0	487.5	492.8	498.1	503.4	508.8	513.8
130°	501.9	503.8	505.7	507.7	509.7	512.8	517.4	521.8	526.2	530.8	535.9
132.5°	529.5	531.0	532.5	534.1	535.6	538.3	542.1	545.8	549.6	553.4	558.0
135°	565.3	567.1	569.0	570.8	572.6	574.8	577.4	580.1	582.7	585.3	590.0
137.5°	604.1	605.6	607.0	608.4	610.0	611.4	612.8	614.3	615.7	617.1	621.3
140°	627.5	628.7	630.1	631.3	632.6	633.9	635.1	636.4	637.7	639.0	642.7
142.5°	651.5	652.8	654.0	655.3	656.5	657.5	658.2	658.8	659.5	660.1	663.2
145°	684.9	686.1	687.2	688.4	689.6	690.6	691.7	692.7	693.7	694.7	696.2
147.5°	715.7	717.0	718.4	719.8	721.2	722.3	723.0	723.6	724.3	725.0	725.5
150°	736.6	737.6	738.6	739.6	740.6	741.4	742.1	742.8	743.5	744.2	744.7
152.5°	755.2	756.2	757.2	758.2	759.2	760.1	760.9	761.7	762.5	763.4	764.0
155°	783.0	783.6	784.1	784.6	785.1	785.6	786.1	786.6	787.1	787.6	788.4
157.5°	806.9	807.3	807.6	807.9	808.3	808.6	808.9	809.2	809.5	809.8	810.9
160°	821.3	821.6	821.9	822.3	822.6	822.9	823.0	823.2	823.3	823.5	824.6
162.5°	834.5	834.6	834.7	834.7	834.8	834.9	835.1	835.3	835.4	835.6	836.7
165°	852.0	851.8	851.7	851.5	851.4	851.3	851.3	851.3	851.3	851.3	852.4
167.5°	866.8	866.3	865.8	865.3	864.7	864.4	864.4	864.3	864.3	864.3	865.5
170°	874.5	874.0	873.5	873.0	872.5	872.2	872.0	871.8	871.7	871.5	872.7
172.5°	879.9	879.4	878.9	878.4	877.9	877.6	877.4	877.3	877.1	876.9	878.1
175°	886.5	886.1	885.6	885.0	884.5	884.1	883.7	883.4	883.1	882.7	883.9
177.5°	889.2	888.8	888.4	888.0	887.6	887.3	887.0	886.8	886.5	886.2	887.0
180°	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	711.3	711.3	711.3	711.3	711.3	711.3	711.3	711.3
2.5°	709.0	709.9	710.8	711.1	710.7	710.4	710.0	709.7
5°	706.9	708.2	709.6	710.2	709.9	709.7	709.5	709.2
7.5°	703.5	705.2	706.8	707.5	707.3	707.0	706.8	706.6
10°	700.5	702.4	704.3	705.0	704.8	704.6	704.4	704.1
12.5°	695.6	697.4	699.3	700.0	699.8	699.6	699.4	699.1
15°	686.6	688.6	690.7	691.7	691.5	691.2	690.9	690.7
17.5°	675.0	677.2	679.3	680.4	680.4	680.4	680.4	680.4
20°	665.9	668.4	670.9	672.2	672.2	672.2	672.2	672.2
22.5°	656.0	658.5	661.0	662.5	662.8	663.2	663.6	663.9
25°	640.6	643.3	646.0	647.7	648.4	649.1	649.8	650.6
27.5°	623.5	626.9	630.5	632.4	632.9	633.4	633.9	634.4
30°	611.5	615.1	618.7	621.0	621.7	622.4	623.0	623.7
32.5°	598.5	602.8	606.9	609.7	611.0	612.2	613.4	614.6
35°	580.2	585.2	590.3	593.6	595.2	596.8	598.3	600.0
37.5°	561.3	566.8	572.5	576.1	577.8	579.5	581.2	582.9
40°	548.0	553.9	559.9	563.9	565.9	568.0	570.1	572.2
42.5°	535.0	541.6	548.1	552.4	554.4	556.5	558.6	560.6
45°	515.2	522.3	529.5	534.1	536.4	538.8	541.0	543.3
47.5°	494.6	502.1	509.5	514.4	516.9	519.5	522.0	524.5
50°	480.5	488.3	496.1	501.3	503.8	506.3	508.8	511.3
52.5°	465.2	473.2	481.2	486.6	489.2	491.9	494.6	497.4
55°	442.2	450.5	458.8	464.3	467.4	470.3	473.3	476.3
57.5°	418.0	426.9	435.8	441.7	444.7	447.8	450.8	453.8
60°	401.9	410.6	419.4	425.4	428.5	431.7	434.9	438.2
62.5°	384.9	394.2	403.4	409.6	412.5	415.6	418.6	421.6
65°	359.0	368.4	377.8	384.0	387.0	389.9	392.9	395.9
67.5°	332.8	342.2	351.7	358.1	361.1	364.3	367.4	370.5
70°	314.6	324.4	334.3	340.5	343.3	346.1	348.8	351.5
72.5°	296.9	306.5	316.2	322.7	326.0	329.3	332.5	335.9
75°	270.2	280.0	289.9	296.3	299.3	302.3	305.3	308.2
77.5°	244.2	254.0	263.8	270.2	273.5	276.7	279.8	283.1
80°	226.4	236.1	245.7	252.2	255.3	258.5	261.8	265.0
82.5°	210.0	219.5	229.2	235.5	238.5	241.6	244.6	247.6
85°	186.2	195.9	205.5	211.9	215.1	218.3	221.6	224.7
87.5°	171.5	180.7	190.0	196.1	199.0	202.1	205.0	207.9
90°	180.0	188.8	197.6	203.5	206.4	209.3	212.3	215.2
92.5°	170.6	179.7	188.6	194.6	197.3	200.2	203.0	205.7
95°	183.9	192.7	201.4	206.9	209.3	211.8	214.2	216.5
97.5°	207.3	215.7	224.2	229.8	232.5	235.1	237.8	240.4
100°	223.5	232.0	240.4	245.8	248.2	250.5	252.9	255.2
102.5°	242.2	250.5	259.0	264.4	266.8	269.1	271.5	273.8
105°	270.2	278.6	286.9	292.4	294.9	297.4	299.9	302.5
107.5°	301.3	309.2	317.0	321.8	323.6	325.3	327.1	328.8
110°	323.0	330.3	337.6	342.3	344.4	346.4	348.4	350.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	344.6	351.5	358.4	362.9	365.2	367.3	369.4	371.6
115°	378.0	384.8	391.4	395.8	397.8	399.8	401.8	403.8
117.5°	410.0	416.4	422.7	426.9	428.7	430.5	432.3	434.2
120°	431.5	437.9	444.3	448.5	450.5	452.5	454.5	456.6
122.5°	454.1	460.0	465.7	469.6	471.4	473.2	474.9	476.8
125°	487.1	492.7	498.5	502.2	504.1	506.0	507.9	509.8
127.5°	518.9	524.0	529.1	532.3	533.8	535.3	536.7	538.3
130°	541.1	546.2	551.4	554.6	555.7	556.9	558.1	559.3
132.5°	562.6	567.1	571.7	574.6	575.9	577.2	578.6	579.9
135°	594.6	599.3	603.9	606.9	608.2	609.6	611.0	612.3
137.5°	625.3	629.3	633.5	635.9	636.8	637.7	638.6	639.5
140°	646.3	650.1	653.7	655.9	656.6	657.3	658.0	658.7
142.5°	666.3	669.3	672.5	674.2	674.8	675.3	675.8	676.3
145°	697.7	699.3	700.8	701.9	702.4	702.8	703.3	703.8
147.5°	726.0	726.6	727.1	727.4	727.3	727.2	727.1	727.0
150°	745.1	745.6	746.1	746.1	745.6	745.1	744.7	744.2
152.5°	764.6	765.2	765.9	765.9	765.2	764.6	764.0	763.4
155°	789.2	790.1	790.9	791.1	790.6	790.1	789.6	789.1
157.5°	812.0	813.1	814.3	814.5	813.6	812.8	812.0	811.2
160°	825.6	826.6	827.6	827.7	827.1	826.4	825.8	825.1
162.5°	837.8	839.0	840.1	840.2	839.4	838.7	837.9	837.1
165°	853.6	854.7	856.0	856.2	855.3	854.4	853.6	852.8
167.5°	866.7	867.8	869.0	869.1	868.3	867.4	866.6	865.7
170°	873.8	875.0	876.2	876.3	875.3	874.2	873.2	872.2
172.5°	879.3	880.4	881.6	881.6	880.7	879.7	878.7	877.7
175°	885.0	886.3	887.5	887.5	886.5	885.6	884.5	883.5
177.5°	887.8	888.6	889.4	889.4	888.6	887.8	887.0	886.2
180°	888.0	888.0	888.0	888.0	888.0	888.0	888.0	888.0

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