

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: P331534-940

Luminaire Tested: **S122DIW-S675D710U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331534-940
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-S675D710U940-4F0-1E-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: 4591.9 lumens
Efficiency: N/A
Efficacy: 102.0 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

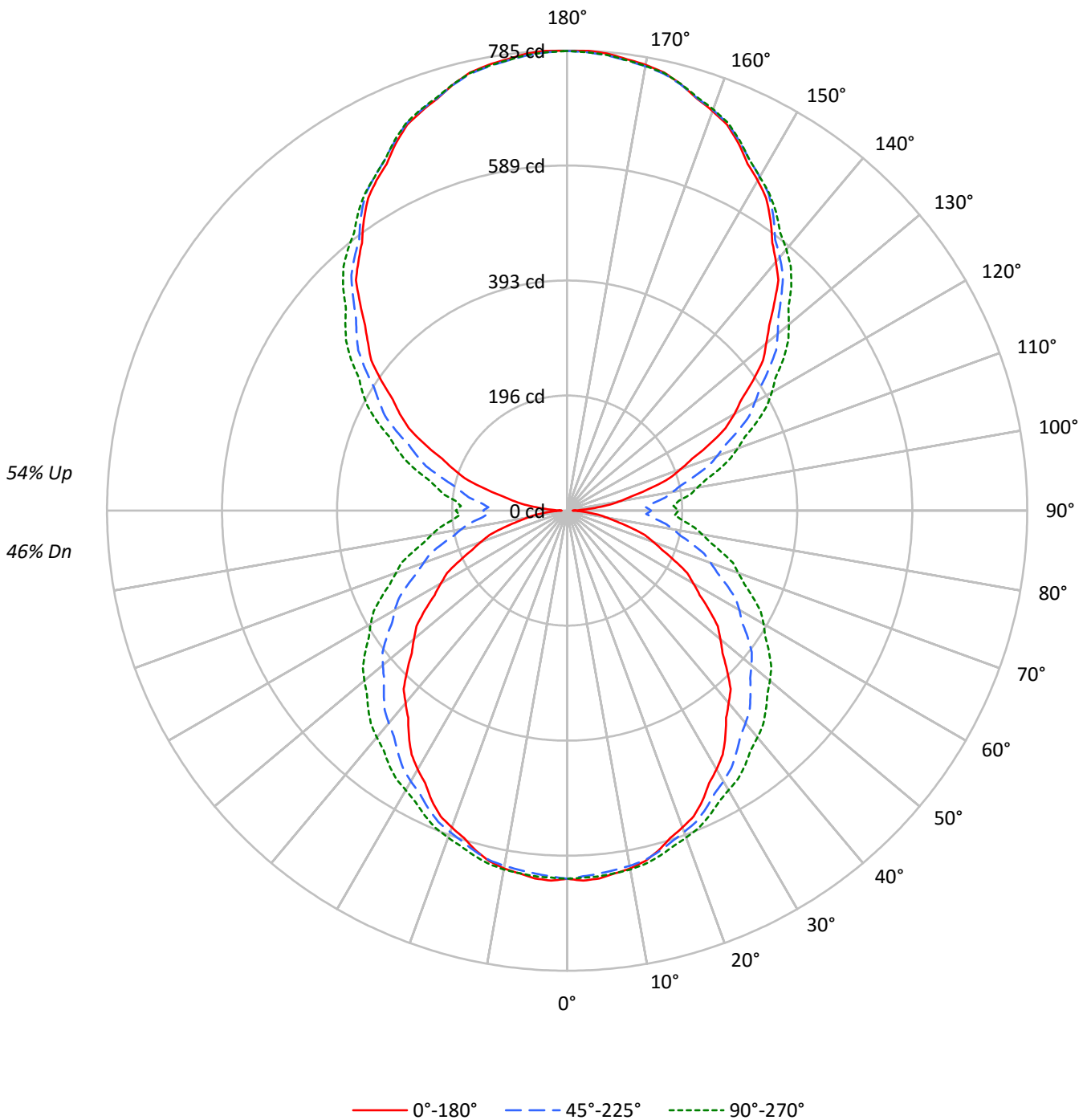
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.3
10°-20°	170.7	3.7
20°-30°	258.6	5.6
30°-40°	315.0	6.9
40°-50°	338.9	7.4
50°-60°	329.1	7.2
60°-70°	287.4	6.3
70°-80°	221.2	4.8
80°-90°	151.6	3.3
90°-100°	152.0	3.3
100°-110°	229.0	5.0
110°-120°	313.1	6.8
120°-130°	374.4	8.2
130°-140°	400.9	8.7
140°-150°	383.7	8.4
150°-160°	320.2	7.0
160°-170°	212.4	4.6
170°-180°	74.2	1.6
0°-30°	488.8	10.6
0°-40°	803.8	17.5
0°-60°	1471.8	32.1
0°-90°	2132.0	46.4
90°-120°	694.1	15.1
90°-150°	1853.1	40.4
90°-180°	2460.0	53.6
0°-180°	4591.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	71	143	177	190	8
95°	42	91	147	180	191	45
105°	147	176	224	256	267	155
115°	268	284	322	348	357	265
125°	387	394	420	442	450	346
135°	499	507	517	535	541	386
145°	605	609	613	619	621	378
155°	691	693	695	698	697	318
165°	752	752	752	756	753	212
175°	783	781	779	784	780	74
180°	784	784	784	784	784	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	18.0	30.4	42.8	55.2	67.6	80.6	94.2	107.8	121.4	135.0	143.2
90°	9.8	23.3	36.7	50.3	63.8	78.6	94.8	110.9	127.2	143.3	151.1
92.5°	20.2	32.4	44.6	56.8	69.0	81.8	95.0	108.2	121.5	134.6	142.7
95°	41.7	52.7	63.7	74.6	85.6	97.3	109.8	122.2	134.6	147.0	154.7
97.5°	69.2	79.0	88.7	98.4	108.3	119.2	131.4	143.7	155.9	168.1	175.6
100°	90.4	99.1	107.7	116.4	125.0	135.3	147.0	158.8	170.6	182.4	189.8
102.5°	111.9	119.7	127.4	135.3	143.0	152.7	164.3	175.8	187.3	198.9	206.4
105°	146.8	153.1	159.4	165.8	172.0	180.6	191.5	202.2	213.0	223.8	231.2
107.5°	182.9	188.2	193.6	198.9	204.3	212.0	222.0	232.1	242.2	252.3	259.1
110°	205.5	210.4	215.3	220.3	225.2	232.6	242.5	252.4	262.3	272.2	278.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	230.9	235.1	239.4	243.7	248.0	254.8	264.1	273.4	282.7	292.0	298.1
115°	268.3	271.4	274.6	277.7	280.7	286.7	295.5	304.3	313.2	321.9	327.9
117.5°	304.7	307.4	310.0	312.6	315.2	320.4	328.0	335.6	343.1	350.7	356.4
120°	329.6	331.6	333.6	335.6	337.5	342.0	348.9	355.8	362.7	369.7	375.3
122.5°	352.4	354.1	355.9	357.6	359.3	363.6	370.3	377.1	383.9	390.7	395.8
125°	386.9	388.3	389.6	390.9	392.3	395.9	401.9	408.0	414.0	420.0	425.1
127.5°	421.5	422.9	424.5	425.9	427.4	430.4	435.2	439.8	444.5	449.2	453.7
130°	443.2	444.9	446.6	448.3	450.0	452.8	456.8	460.7	464.7	468.7	473.2
132.5°	467.5	468.9	470.2	471.6	473.0	475.3	478.7	482.0	485.3	488.7	492.7
135°	499.2	500.8	502.4	504.0	505.6	507.6	509.9	512.2	514.5	516.8	520.9
137.5°	533.4	534.8	536.0	537.3	538.6	539.8	541.1	542.4	543.7	544.9	548.6
140°	554.1	555.2	556.3	557.4	558.6	559.7	560.8	562.0	563.1	564.3	567.5
142.5°	575.2	576.4	577.5	578.6	579.7	580.6	581.2	581.8	582.4	582.9	585.6
145°	604.8	605.8	606.8	607.9	608.9	609.8	610.7	611.6	612.5	613.4	614.7
147.5°	632.0	633.1	634.4	635.6	636.9	637.8	638.4	638.9	639.5	640.2	640.6
150°	650.4	651.3	652.2	653.1	654.0	654.7	655.3	655.9	656.5	657.1	657.5
152.5°	666.8	667.7	668.6	669.5	670.4	671.2	671.9	672.6	673.3	674.0	674.6
155°	691.4	691.9	692.3	692.8	693.2	693.7	694.1	694.6	695.0	695.4	696.2
157.5°	712.5	712.8	713.1	713.4	713.7	714.0	714.3	714.5	714.8	715.1	716.0
160°	725.2	725.5	725.8	726.1	726.4	726.7	726.7	726.9	727.0	727.2	728.1
162.5°	736.8	736.9	737.0	737.0	737.1	737.2	737.4	737.5	737.6	737.8	738.8
165°	752.3	752.2	752.1	751.9	751.8	751.7	751.7	751.7	751.7	751.7	752.7
167.5°	765.4	764.9	764.5	764.0	763.6	763.3	763.3	763.2	763.2	763.2	764.2
170°	772.2	771.8	771.3	770.9	770.4	770.2	770.0	769.8	769.7	769.5	770.6
172.5°	776.9	776.5	776.1	775.6	775.2	774.9	774.7	774.6	774.5	774.3	775.3
175°	782.7	782.4	781.9	781.5	781.0	780.7	780.3	780.1	779.8	779.4	780.5
177.5°	785.2	784.8	784.4	784.1	783.7	783.5	783.2	783.0	782.7	782.5	783.2
180°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	151.4	159.5	167.7	173.2	175.8	178.4	181.0	183.6
90°	158.9	166.7	174.5	179.7	182.3	184.9	187.4	190.0
92.5°	150.6	158.6	166.6	171.8	174.2	176.7	179.2	181.6
95°	162.4	170.1	177.8	182.7	184.9	187.0	189.1	191.2
97.5°	183.1	190.5	198.0	203.0	205.3	207.6	210.0	212.3
100°	197.3	204.8	212.3	217.0	219.2	221.2	223.3	225.3
102.5°	213.8	221.2	228.7	233.4	235.6	237.6	239.7	241.7
105°	238.6	246.0	253.3	258.2	260.4	262.6	264.8	267.1
107.5°	266.1	273.0	279.9	284.2	285.7	287.2	288.8	290.3
110°	285.2	291.7	298.1	302.3	304.1	305.9	307.6	309.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	304.3	310.4	316.5	320.5	322.4	324.3	326.2	328.1
115°	333.8	339.7	345.6	349.5	351.2	353.0	354.8	356.6
117.5°	362.0	367.7	373.3	376.9	378.5	380.1	381.7	383.4
120°	381.0	386.6	392.4	396.0	397.8	399.6	401.4	403.1
122.5°	401.0	406.2	411.3	414.6	416.3	417.9	419.4	421.0
125°	430.1	435.1	440.1	443.4	445.1	446.8	448.4	450.1
127.5°	458.2	462.7	467.2	470.0	471.4	472.7	473.9	475.3
130°	477.8	482.3	486.9	489.7	490.7	491.8	492.8	493.8
132.5°	496.8	500.8	504.8	507.4	508.5	509.7	510.9	512.0
135°	525.0	529.1	533.2	535.9	537.1	538.2	539.5	540.6
137.5°	552.1	555.7	559.4	561.5	562.3	563.1	563.9	564.7
140°	570.7	574.0	577.2	579.2	579.8	580.4	581.0	581.7
142.5°	588.4	591.0	593.8	595.3	595.8	596.3	596.7	597.2
145°	616.1	617.5	618.8	619.7	620.2	620.5	621.0	621.4
147.5°	641.1	641.6	642.0	642.3	642.2	642.1	642.0	641.9
150°	657.9	658.4	658.8	658.8	658.4	657.9	657.5	657.1
152.5°	675.1	675.6	676.3	676.3	675.6	675.1	674.6	674.0
155°	696.9	697.7	698.4	698.6	698.1	697.7	697.2	696.8
157.5°	717.0	718.0	719.0	719.2	718.5	717.7	717.0	716.3
160°	729.0	729.9	730.8	730.8	730.3	729.7	729.2	728.5
162.5°	739.8	740.8	741.8	741.9	741.2	740.6	739.9	739.1
165°	753.8	754.7	755.8	756.0	755.2	754.5	753.8	753.0
167.5°	765.3	766.2	767.3	767.4	766.7	765.9	765.2	764.4
170°	771.6	772.7	773.6	773.7	772.8	772.0	771.1	770.2
172.5°	776.4	777.4	778.5	778.5	777.7	776.8	775.9	775.0
175°	781.5	782.6	783.6	783.6	782.7	781.9	781.0	780.2
177.5°	783.9	784.6	785.3	785.3	784.6	783.9	783.2	782.5
180°	784.1	784.1	784.1	784.1	784.1	784.1	784.1	784.1

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