

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: P331528-840

Luminaire Tested: **S122DIW-S675D435U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331528-840
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-S675D435U840-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4232.0 lumens
Efficiency: N/A
Efficacy: 112.3 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

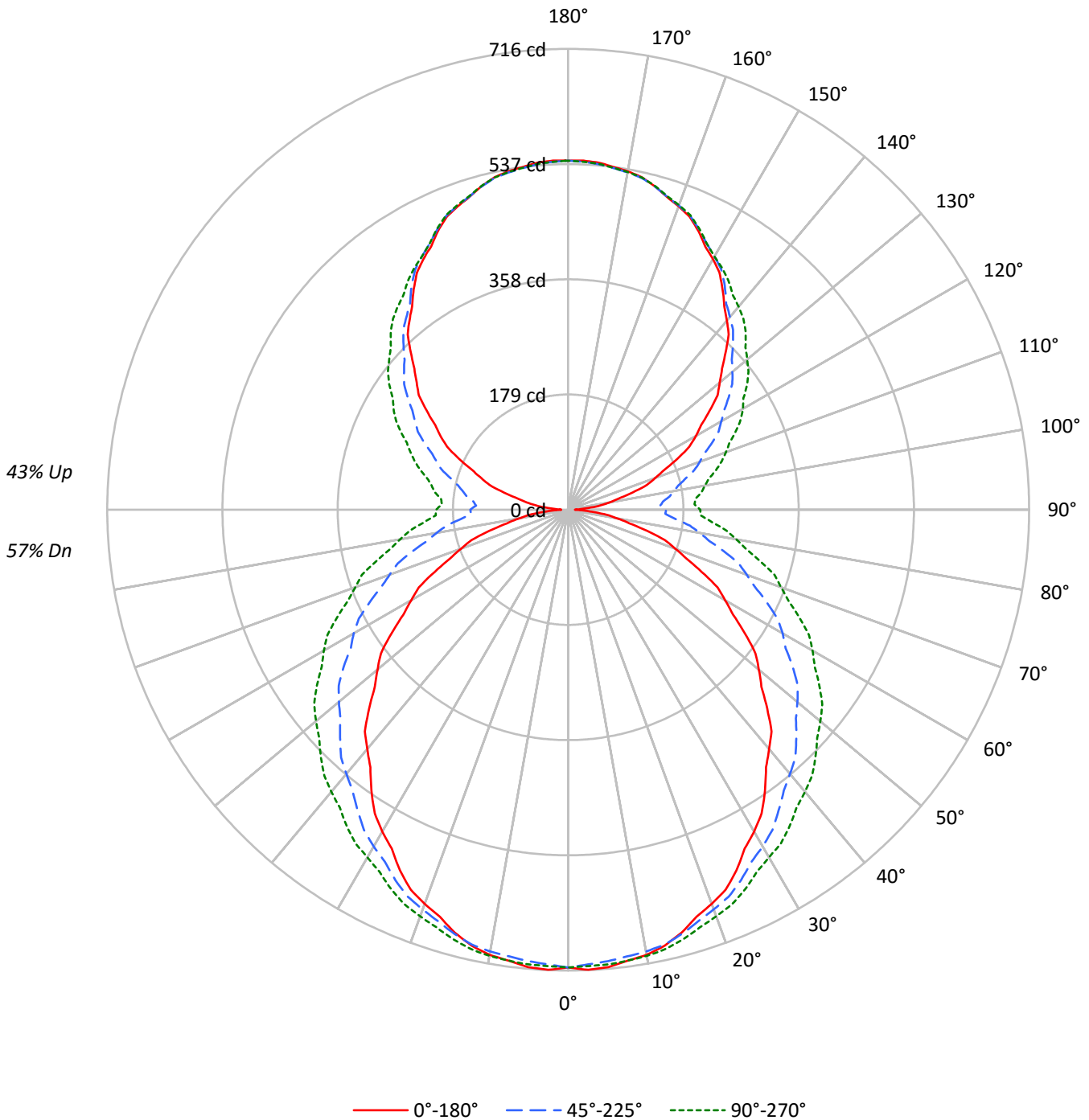
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	63	63	63	57
1	98	93	88	84	91	86	82	78	74	71	68	63	61	58	53	51	49	44
2	88	80	73	67	82	74	68	63	64	59	55	54	51	48	45	43	40	36
3	80	70	62	55	74	65	58	52	56	50	46	47	43	39	40	36	34	30
4	73	61	53	46	67	57	49	44	49	43	38	42	37	33	35	31	28	25
5	67	54	46	39	62	51	43	37	44	38	33	37	32	29	31	28	25	21
6	62	49	40	34	57	45	38	32	39	33	28	34	29	25	28	24	21	19
7	57	44	35	30	53	41	33	28	36	29	25	31	26	22	26	22	19	16
8	53	40	32	26	49	37	30	25	32	26	22	28	23	19	24	20	17	14
9	49	36	28	23	45	34	27	22	30	24	20	26	21	17	22	18	15	13
10	46	33	26	21	43	31	24	20	27	22	18	24	19	16	20	16	14	12

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	1.6
10°-20°	193.3	4.6
20°-30°	292.9	6.9
30°-40°	356.7	8.4
40°-50°	383.8	9.1
50°-60°	372.7	8.8
60°-70°	325.4	7.7
70°-80°	250.5	5.9
80°-90°	170.3	4.0
90°-100°	150.2	3.5
100°-110°	191.3	4.5
110°-120°	238.3	5.6
120°-130°	271.0	6.4
130°-140°	282.3	6.7
140°-150°	266.2	6.3
150°-160°	221.4	5.2
160°-170°	146.8	3.5
170°-180°	51.3	1.2
0°-30°	553.6	13.1
0°-40°	910.3	21.5
0°-60°	1666.8	39.4
0°-90°	2413.1	57.0
90°-120°	579.7	13.7
90°-150°	1399.3	33.1
90°-180°	1819.0	43.0
0°-180°	4232.0	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	77	152	191	205	8
95°	32	86	148	185	198	34
105°	104	136	189	225	238	110
115°	187	203	247	276	287	185
125°	268	274	304	330	339	240
135°	346	351	362	382	390	267
145°	418	421	424	431	434	261
155°	478	480	481	483	482	220
165°	520	520	520	523	521	147
175°	541	540	539	542	540	51
180°	542	542	542	542	542	



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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°	20.3	34.2	48.1	62.0	75.8	90.4	105.5	120.6	135.7	150.9	160.2
90°	10.8	25.2	39.8	54.3	68.8	84.5	101.4	118.3	135.2	152.1	161.1
92.5°	17.7	30.9	44.1	57.5	70.7	84.6	99.3	113.9	128.6	143.2	152.2
95°	32.0	43.8	55.6	67.4	79.2	92.0	106.0	120.0	133.9	147.8	156.5
97.5°	50.7	61.2	71.6	82.1	92.6	104.6	118.2	131.8	145.3	159.0	167.4
100°	65.3	74.6	83.9	93.2	102.5	113.7	126.8	140.0	153.1	166.2	174.7
102.5°	79.9	88.3	96.6	105.0	113.4	124.1	136.9	149.8	162.6	175.5	183.8
105°	103.5	110.5	117.4	124.4	131.3	140.9	153.0	165.1	177.2	189.3	197.5
107.5°	128.4	134.1	139.9	145.7	151.5	160.1	171.5	182.9	194.3	205.7	213.5
110°	143.7	148.9	154.0	159.3	164.4	172.7	183.9	195.1	206.3	217.5	224.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	161.3	165.7	170.2	174.6	179.0	186.6	197.2	207.8	218.4	228.9	236.1
115°	187.1	190.3	193.4	196.5	199.7	206.3	216.4	226.5	236.6	246.7	253.5
117.5°	211.9	214.4	216.8	219.3	221.8	227.4	236.4	245.4	254.4	263.3	269.8
120°	229.1	230.9	232.6	234.3	236.0	241.1	249.4	257.8	266.1	274.5	280.8
122.5°	244.9	246.2	247.5	248.8	250.2	254.9	263.0	271.0	279.0	287.1	293.1
125°	268.3	269.2	270.1	271.0	272.0	276.0	283.0	290.0	297.0	304.1	309.9
127.5°	292.3	293.2	294.1	295.0	296.0	299.2	304.8	310.2	315.8	321.3	326.7
130°	307.2	308.3	309.4	310.5	311.6	314.5	319.0	323.7	328.3	332.9	338.2
132.5°	324.1	324.9	325.8	326.6	327.5	329.7	333.6	337.3	341.0	344.8	349.6
135°	345.6	346.7	347.8	348.9	350.0	351.8	354.4	356.8	359.3	361.8	366.5
137.5°	369.2	370.1	371.0	371.8	372.7	373.8	375.1	376.4	377.6	378.9	383.0
140°	383.5	384.3	384.9	385.6	386.3	387.1	388.1	389.0	390.0	390.9	394.7
142.5°	398.2	398.9	399.5	400.2	400.9	401.4	401.9	402.3	402.7	403.2	406.3
145°	418.2	418.9	419.6	420.3	421.0	421.7	422.3	422.9	423.5	424.1	425.6
147.5°	437.0	437.8	438.7	439.5	440.4	441.0	441.4	441.8	442.2	442.6	443.0
150°	449.8	450.4	451.0	451.6	452.2	452.7	453.1	453.5	453.9	454.3	454.6
152.5°	461.1	461.7	462.3	462.9	463.5	464.1	464.5	465.0	465.5	466.1	466.5
155°	478.1	478.4	478.7	479.1	479.4	479.7	480.0	480.3	480.6	480.9	481.4
157.5°	492.7	492.9	493.1	493.3	493.5	493.6	493.8	494.0	494.2	494.4	495.1
160°	501.5	501.7	501.9	502.1	502.3	502.4	502.5	502.6	502.7	502.8	503.4
162.5°	509.5	509.6	509.6	509.6	509.7	509.8	509.9	510.0	510.1	510.2	510.8
165°	520.2	520.1	520.0	519.9	519.8	519.8	519.8	519.8	519.8	519.8	520.5
167.5°	529.2	528.9	528.6	528.3	528.0	527.8	527.8	527.8	527.8	527.8	528.5
170°	533.9	533.6	533.3	533.0	532.7	532.5	532.4	532.3	532.2	532.1	532.8
172.5°	537.2	536.9	536.6	536.3	536.0	535.8	535.7	535.6	535.5	535.4	536.1
175°	541.3	541.0	540.7	540.4	540.1	539.8	539.6	539.4	539.2	539.0	539.7
177.5°	542.9	542.7	542.4	542.2	541.9	541.7	541.6	541.4	541.2	541.1	541.6
180°	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2



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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°	169.5	178.7	188.0	194.2	197.1	200.1	203.1	206.0
90°	170.1	178.9	187.9	193.8	196.7	199.5	202.4	205.2
92.5°	161.3	170.3	179.3	185.2	187.9	190.8	193.5	196.2
95°	165.2	174.0	182.7	188.2	190.9	193.4	195.9	198.4
97.5°	175.9	184.3	192.8	198.4	201.1	203.8	206.4	209.1
100°	183.2	191.7	200.2	205.6	208.0	210.5	212.9	215.3
102.5°	192.2	200.6	208.9	214.4	216.8	219.2	221.6	224.0
105°	205.7	214.0	222.2	227.5	230.0	232.6	235.1	237.6
107.5°	221.3	229.0	236.8	241.7	243.8	245.8	247.8	249.9
110°	232.2	239.5	246.9	251.7	253.9	256.1	258.3	260.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	243.2	250.2	257.3	262.1	264.3	266.6	268.9	271.2
115°	260.2	267.0	273.8	278.3	280.4	282.7	284.9	287.1
117.5°	276.4	283.0	289.4	293.8	295.8	297.8	299.8	301.8
120°	287.3	293.7	300.1	304.5	306.7	308.9	311.1	313.3
122.5°	299.0	305.1	311.0	315.0	316.9	318.8	320.8	322.8
125°	315.9	321.7	327.6	331.5	333.5	335.5	337.4	339.3
127.5°	331.9	337.3	342.6	346.1	347.8	349.5	351.2	352.8
130°	343.5	348.8	354.1	357.4	358.8	360.3	361.7	363.1
132.5°	354.5	359.4	364.3	367.4	368.9	370.4	371.9	373.4
135°	371.2	376.0	380.6	383.7	385.3	386.8	388.4	389.9
137.5°	387.2	391.3	395.5	398.1	399.2	400.4	401.5	402.6
140°	398.3	401.9	405.7	408.0	408.9	409.9	410.8	411.8
142.5°	409.2	412.2	415.3	417.2	418.0	418.8	419.5	420.3
145°	427.1	428.6	430.0	431.1	431.9	432.6	433.3	434.1
147.5°	443.4	443.8	444.2	444.5	444.6	444.8	445.0	445.1
150°	454.9	455.2	455.6	455.6	455.2	454.9	454.6	454.3
152.5°	466.8	467.2	467.6	467.6	467.2	466.8	466.5	466.1
155°	481.9	482.4	482.9	483.0	482.7	482.4	482.1	481.8
157.5°	495.7	496.4	497.2	497.3	496.8	496.2	495.8	495.3
160°	504.0	504.6	505.2	505.3	504.9	504.5	504.1	503.7
162.5°	511.5	512.2	512.9	513.0	512.5	512.0	511.5	511.1
165°	521.2	521.9	522.6	522.7	522.2	521.7	521.2	520.7
167.5°	529.2	529.9	530.6	530.7	530.1	529.6	529.1	528.6
170°	533.5	534.2	534.9	535.0	534.4	533.8	533.2	532.6
172.5°	536.8	537.6	538.3	538.3	537.7	537.0	536.4	535.8
175°	540.4	541.1	541.8	541.9	541.3	540.7	540.1	539.5
177.5°	542.1	542.5	543.0	543.0	542.5	542.1	541.6	541.1
180°	542.2	542.2	542.2	542.2	542.2	542.2	542.2	542.2

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