

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: P331564-930

Luminaire Tested: **S122DIW-S865D710U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331564-930
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-S865D710U930-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 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: 4855.4 lumens
Efficiency: N/A
Efficacy: 90.6 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

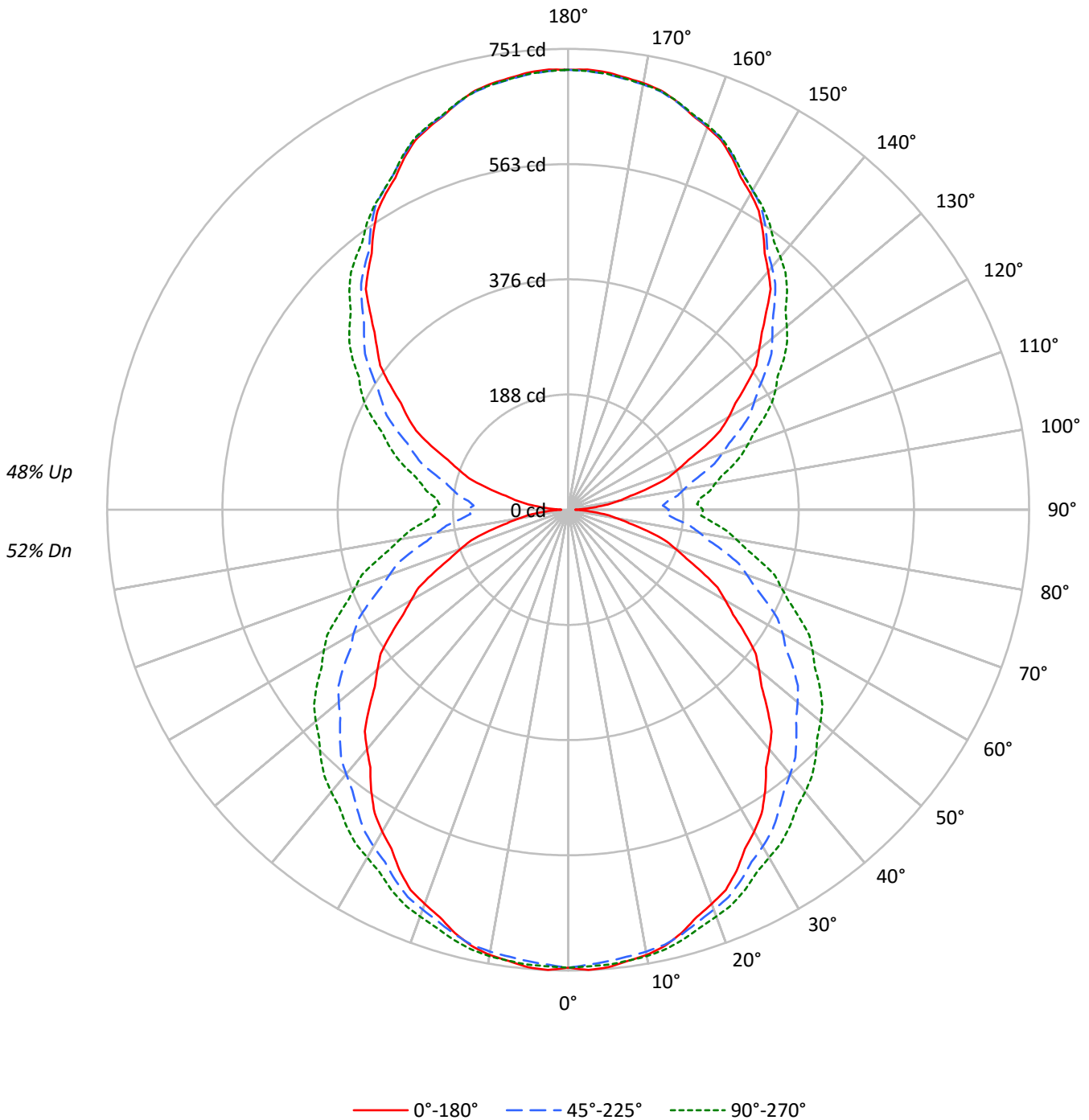
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	58	58	58	52
1	97	92	87	83	89	85	81	77	72	69	66	60	58	56	49	47	46	41
2	87	79	72	67	80	73	67	62	62	57	54	52	48	45	42	40	37	33
3	79	69	61	55	73	64	57	51	54	49	44	45	41	38	37	34	31	27
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	33	29	26	23
5	66	54	45	39	61	50	42	37	43	37	32	36	31	27	29	26	23	20
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17
7	56	43	35	29	52	40	33	28	35	29	24	29	24	21	24	20	18	15
8	52	39	31	26	48	37	29	24	31	26	21	27	22	18	22	18	16	13
9	49	36	28	23	45	33	26	22	29	23	19	24	20	17	20	17	14	12
10	45	33	25	20	42	31	24	19	26	21	17	23	18	15	19	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12053	12053	12053
5°	12111	11602	11558
10°	12036	11258	11133
15°	11869	10896	10685
20°	11659	10507	10254
25°	11452	10132	9863
30°	11160	9747	9469
35°	10866	9375	9193
40°	10556	9059	8916
45°	10260	8774	8678
50°	9944	8519	8446
55°	9611	8242	8208
60°	9207	7957	7957
65°	8784	7620	7658
70°	8310	7260	7336
75°	7704	6907	7041
80°	6744	6545	6739
85°	5835	6234	6508



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	1.5
10°-20°	202.8	4.2
20°-30°	307.4	6.3
30°-40°	374.4	7.7
40°-50°	402.8	8.3
50°-60°	391.1	8.1
60°-70°	341.5	7.0
70°-80°	262.9	5.4
80°-90°	179.3	3.7
90°-100°	167.0	3.4
100°-110°	229.9	4.7
110°-120°	299.8	6.2
120°-130°	349.9	7.2
130°-140°	369.7	7.6
140°-150°	351.4	7.2
150°-160°	292.8	6.0
160°-170°	194.2	4.0
170°-180°	67.9	1.4
0°-30°	580.9	12.0
0°-40°	955.3	19.7
0°-60°	1749.2	36.0
0°-90°	2533.0	52.2
90°-120°	696.7	14.3
90°-150°	1767.6	36.4
90°-180°	2322.0	47.8
0°-180°	4855.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	749	745	739	745	744	71
15°	714	716	716	725	725	201
25°	649	657	666	679	683	298
35°	559	578	598	621	630	349
45°	459	488	526	558	570	354
55°	352	392	447	484	500	314
65°	240	294	357	400	415	239
75°	133	194	263	308	324	141
85°	39	106	175	219	236	42
90°	11	82	164	204	220	9
95°	40	98	163	203	216	43
105°	136	170	226	264	277	144
115°	246	264	309	340	351	243
125°	354	361	392	419	429	317
135°	457	464	475	497	504	353
145°	553	557	561	568	571	346
155°	632	634	636	639	637	291
165°	688	687	687	691	688	194
175°	716	714	713	716	713	68
180°	717	717	717	717	717	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	750.8	750.2	749.7	749.1	748.5	747.5	746.2	744.9	743.5	742.2	743.1
5°	748.6	748.0	747.2	746.5	745.8	744.7	743.2	741.8	740.4	738.9	740.4
7.5°	741.9	741.4	740.9	740.5	740.0	739.2	738.1	737.0	735.9	734.8	736.5
10°	736.8	736.3	735.8	735.3	734.8	734.3	733.5	732.8	732.1	731.3	733.3
12.5°	728.1	728.2	728.3	728.4	728.5	728.2	727.7	727.2	726.7	726.1	728.1
15°	714.0	714.5	715.0	715.5	715.9	716.2	716.2	716.2	716.2	716.2	718.4
17.5°	695.9	696.8	697.9	698.9	699.9	700.7	701.6	702.3	703.1	703.8	706.1
20°	683.7	684.9	686.2	687.4	688.5	689.7	690.6	691.5	692.5	693.5	696.1
22.5°	670.7	672.1	673.5	674.9	676.3	677.7	679.1	680.4	681.8	683.1	685.7
25°	649.1	650.8	652.5	654.2	655.8	657.8	659.9	662.1	664.2	666.4	669.3
27.5°	623.1	625.9	628.6	631.4	634.1	636.7	639.3	641.9	644.4	646.9	650.6
30°	605.8	608.9	612.1	615.2	618.3	621.5	624.6	627.7	630.9	634.0	637.8
32.5°	586.8	590.3	593.8	597.4	600.9	604.5	608.1	611.9	615.6	619.2	623.7
35°	559.3	563.4	567.5	571.6	575.7	580.0	584.6	589.1	593.7	598.3	603.6
37.5°	529.5	534.2	538.9	543.6	548.3	553.6	559.5	565.5	571.4	577.3	583.2
40°	509.6	514.9	520.2	525.5	530.7	536.6	543.1	549.6	556.1	562.6	568.8
42.5°	490.5	495.8	501.1	506.4	511.7	518.0	525.5	533.0	540.4	547.9	554.6
45°	458.7	465.2	471.7	478.2	484.7	492.1	500.5	509.0	517.4	525.8	533.2
47.5°	427.3	434.4	441.5	448.6	455.6	464.1	473.9	483.8	493.7	503.5	511.3
50°	405.7	413.1	420.6	428.0	435.5	444.7	455.4	466.3	477.1	488.0	496.1
52.5°	384.9	392.7	400.6	408.5	416.3	425.9	437.3	448.7	460.1	471.5	479.8
55°	351.6	360.3	368.9	377.6	386.2	396.8	409.3	421.8	434.3	446.8	455.4
57.5°	318.7	328.5	338.3	348.0	357.8	369.0	381.7	394.5	407.2	420.0	429.3
60°	295.4	305.7	316.0	326.4	336.7	348.7	362.4	376.1	389.8	403.6	412.7
62.5°	274.6	285.3	296.0	306.7	317.5	329.7	343.4	357.1	370.8	384.5	394.2
65°	240.2	251.9	263.7	275.5	287.3	300.3	314.5	328.6	342.8	357.0	366.9
67.5°	208.6	220.9	233.2	245.5	257.8	271.3	285.8	300.3	314.8	329.3	339.2
70°	186.1	198.6	211.1	223.6	236.1	249.8	264.7	279.6	294.5	309.4	319.8
72.5°	165.3	178.2	191.1	204.0	216.9	230.8	246.0	261.1	276.1	291.2	301.4
75°	133.1	146.5	160.0	173.5	186.9	201.4	216.7	232.1	247.5	262.9	273.2
77.5°	101.9	116.0	130.1	144.1	158.2	173.1	188.7	204.4	220.0	235.6	245.9
80°	81.1	95.8	110.5	125.1	139.8	154.9	170.6	186.2	201.8	217.4	227.6
82.5°	63.8	78.3	92.8	107.2	121.7	136.9	152.7	168.5	184.3	200.2	210.3
85°	39.0	53.9	68.7	83.6	98.6	113.7	129.1	144.5	159.9	175.3	185.4
87.5°	21.4	36.0	50.6	65.3	79.9	95.2	111.2	127.2	143.2	159.1	168.9
90°	11.4	27.0	42.6	58.1	73.6	90.6	108.9	127.3	145.6	164.0	173.3
92.5°	20.7	34.9	49.1	63.2	77.4	92.2	107.7	123.3	138.8	154.3	163.7
95°	40.1	52.7	65.4	78.0	90.7	104.4	119.0	133.7	148.5	163.1	172.3
97.5°	65.1	76.3	87.5	98.7	110.0	122.8	137.1	151.5	165.8	180.2	189.1
100°	84.4	94.4	104.4	114.3	124.3	136.2	150.1	164.0	177.8	191.7	200.6
102.5°	103.9	112.8	121.8	130.9	139.8	151.1	164.7	178.3	191.8	205.5	214.3
105°	135.5	142.8	150.3	157.6	165.0	175.0	187.8	200.6	213.4	226.2	234.8
107.5°	168.4	174.6	180.8	186.9	193.1	202.2	214.2	226.1	238.1	250.1	258.2
110°	188.8	194.4	200.1	205.7	211.3	220.0	231.8	243.5	255.4	267.1	274.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	212.1	217.0	221.8	226.7	231.5	239.5	250.5	261.6	272.7	283.8	291.2
115°	246.3	249.8	253.2	256.7	260.2	267.1	277.7	288.2	298.8	309.3	316.4
117.5°	279.4	282.2	284.9	287.8	290.6	296.6	305.9	315.1	324.3	333.6	340.4
120°	302.1	304.2	306.2	308.2	310.2	315.5	324.1	332.6	341.2	349.7	356.4
122.5°	322.9	324.6	326.3	327.9	329.6	334.6	342.9	351.1	359.5	367.8	374.0
125°	354.2	355.5	356.7	357.9	359.1	363.4	370.6	378.0	385.2	392.5	398.6
127.5°	385.9	387.1	388.4	389.7	391.0	394.5	400.2	405.9	411.6	417.4	422.9
130°	405.7	407.2	408.7	410.2	411.7	414.9	419.6	424.4	429.2	434.0	439.5
132.5°	428.0	429.2	430.3	431.5	432.7	435.3	439.2	443.2	447.1	451.0	456.1
135°	456.6	458.1	459.6	461.1	462.5	464.6	467.3	469.9	472.6	475.3	480.2
137.5°	488.0	489.2	490.3	491.5	492.6	493.9	495.3	496.8	498.1	499.5	503.9
140°	506.9	507.8	508.8	509.7	510.7	511.8	513.0	514.1	515.3	516.4	520.2
142.5°	526.2	527.2	528.2	529.1	530.1	530.8	531.4	532.0	532.6	533.0	536.2
145°	552.9	553.9	554.8	555.8	556.8	557.6	558.4	559.2	560.0	560.8	562.4
147.5°	577.8	578.9	580.0	581.1	582.3	583.1	583.7	584.2	584.7	585.3	585.8
150°	594.7	595.5	596.3	597.1	597.9	598.6	599.2	599.7	600.2	600.8	601.2
152.5°	609.7	610.5	611.3	612.1	612.9	613.7	614.3	615.0	615.6	616.3	616.8
155°	632.2	632.6	633.0	633.4	633.8	634.2	634.6	635.0	635.4	635.9	636.5
157.5°	651.4	651.8	652.0	652.2	652.6	652.8	653.1	653.3	653.5	653.8	654.7
160°	663.1	663.3	663.6	663.9	664.1	664.4	664.5	664.6	664.7	664.9	665.7
162.5°	673.7	673.8	673.8	673.8	673.9	674.0	674.2	674.3	674.4	674.6	675.5
165°	687.9	687.7	687.6	687.5	687.4	687.3	687.3	687.3	687.3	687.3	688.2
167.5°	699.8	699.4	699.0	698.5	698.1	697.9	697.9	697.8	697.8	697.8	698.7
170°	706.0	705.6	705.2	704.8	704.4	704.2	704.0	703.8	703.8	703.6	704.6
172.5°	710.4	710.0	709.6	709.1	708.7	708.5	708.3	708.3	708.1	707.9	708.9
175°	715.7	715.3	714.9	714.5	714.1	713.8	713.5	713.2	713.0	712.7	713.6
177.5°	717.9	717.5	717.2	716.9	716.6	716.3	716.1	715.9	715.7	715.4	716.1
180°	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	746.5	746.5	746.5	746.5	746.5	746.5	746.5	746.5
2.5°	744.0	745.0	746.0	746.3	745.9	745.5	745.1	744.8
5°	741.8	743.2	744.7	745.3	745.0	744.8	744.5	744.3
7.5°	738.3	740.0	741.8	742.5	742.2	742.0	741.8	741.5
10°	735.2	737.1	739.1	739.9	739.6	739.4	739.2	738.9
12.5°	730.0	731.9	733.9	734.7	734.4	734.2	733.9	733.7
15°	720.5	722.7	724.9	725.8	725.5	725.3	725.0	724.9
17.5°	708.4	710.6	712.9	714.0	714.0	714.0	714.0	714.0
20°	698.8	701.4	704.0	705.4	705.4	705.4	705.4	705.4
22.5°	688.4	691.0	693.7	695.2	695.5	695.9	696.3	696.8
25°	672.2	675.1	678.0	679.8	680.4	681.2	681.9	682.7
27.5°	654.3	657.9	661.5	663.7	664.2	664.7	665.3	665.8
30°	641.6	645.5	649.4	651.7	652.3	653.1	653.8	654.5
32.5°	628.1	632.5	636.9	639.8	641.1	642.4	643.7	645.0
35°	608.9	614.2	619.5	622.9	624.6	626.3	627.9	629.7
37.5°	589.0	594.8	600.7	604.5	606.3	608.1	609.9	611.7
40°	575.0	581.3	587.6	591.7	593.9	596.1	598.3	600.5
42.5°	561.5	568.3	575.2	579.7	581.8	584.0	586.1	588.3
45°	540.7	548.1	555.6	560.5	563.0	565.3	567.8	570.1
47.5°	519.1	526.8	534.7	539.9	542.5	545.2	547.8	550.5
50°	504.3	512.4	520.7	526.0	528.6	531.3	533.9	536.6
52.5°	488.2	496.6	504.9	510.5	513.4	516.2	519.0	521.9
55°	464.1	472.8	481.4	487.3	490.4	493.6	496.7	499.8
57.5°	438.6	447.9	457.3	463.6	466.7	469.9	473.0	476.2
60°	421.8	431.0	440.1	446.3	449.7	453.1	456.4	459.8
62.5°	403.9	413.6	423.3	429.8	432.9	436.1	439.3	442.5
65°	376.7	386.6	396.5	402.9	406.0	409.2	412.3	415.4
67.5°	349.2	359.1	369.2	375.8	379.0	382.3	385.6	388.8
70°	330.1	340.4	350.7	357.3	360.3	363.1	366.1	368.9
72.5°	311.5	321.6	331.8	338.6	342.1	345.5	349.0	352.5
75°	283.6	293.9	304.3	311.0	314.1	317.2	320.3	323.5
77.5°	256.2	266.5	276.8	283.6	287.0	290.3	293.8	297.1
80°	237.7	247.8	257.9	264.6	267.9	271.3	274.7	278.0
82.5°	220.4	230.4	240.5	247.2	250.4	253.5	256.7	259.8
85°	195.4	205.5	215.6	222.4	225.8	229.1	232.4	235.9
87.5°	178.6	188.4	198.2	204.6	207.7	210.8	213.9	217.0
90°	182.7	192.0	201.4	207.6	210.6	213.6	216.6	219.6
92.5°	173.3	182.7	192.2	198.4	201.3	204.2	207.1	210.0
95°	181.4	190.5	199.7	205.5	208.1	210.8	213.4	216.1
97.5°	198.0	206.9	215.8	221.7	224.5	227.2	230.1	232.8
100°	209.5	218.3	227.2	232.9	235.5	238.0	240.5	243.0
102.5°	223.1	231.9	240.7	246.4	248.9	251.4	253.9	256.4
105°	243.5	252.2	260.9	266.5	269.2	271.8	274.4	277.1
107.5°	266.4	274.6	282.8	287.9	289.9	292.0	294.0	296.0
110°	282.5	290.2	297.9	302.9	305.1	307.4	309.6	311.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	298.6	305.9	313.3	318.1	320.5	322.9	325.2	327.6
115°	323.5	330.5	337.6	342.3	344.5	346.7	349.0	351.2
117.5°	347.2	354.0	360.8	365.2	367.3	369.3	371.4	373.4
120°	363.2	369.9	376.7	381.2	383.4	385.6	387.8	390.1
122.5°	380.2	386.4	392.6	396.7	398.7	400.6	402.6	404.6
125°	404.7	410.7	416.9	420.9	423.0	425.0	427.1	429.0
127.5°	428.4	433.8	439.3	442.9	444.6	446.3	447.9	449.6
130°	445.0	450.5	456.0	459.4	460.8	462.2	463.6	465.0
132.5°	461.1	466.0	471.0	474.3	475.7	477.2	478.7	480.2
135°	485.2	490.1	495.0	498.2	499.7	501.2	502.8	504.3
137.5°	508.2	512.5	516.8	519.5	520.7	521.7	522.8	523.9
140°	524.1	528.0	531.8	534.2	535.1	536.0	536.9	537.8
142.5°	539.4	542.7	545.8	547.7	548.5	549.2	549.9	550.6
145°	563.9	565.6	567.1	568.3	568.9	569.6	570.2	571.0
147.5°	586.3	586.8	587.3	587.5	587.6	587.7	587.7	587.7
150°	601.5	601.9	602.3	602.3	601.9	601.5	601.2	600.8
152.5°	617.3	617.8	618.3	618.3	617.8	617.3	616.8	616.3
155°	637.2	637.9	638.5	638.7	638.3	637.9	637.5	637.1
157.5°	655.6	656.5	657.4	657.5	656.9	656.2	655.6	654.9
160°	666.5	667.3	668.1	668.2	667.7	667.2	666.7	666.1
162.5°	676.4	677.4	678.2	678.3	677.7	677.1	676.5	675.8
165°	689.2	690.1	691.0	691.2	690.5	689.8	689.2	688.5
167.5°	699.7	700.6	701.6	701.6	701.0	700.3	699.6	698.9
170°	705.5	706.5	707.4	707.4	706.6	705.8	705.0	704.2
172.5°	709.9	710.8	711.8	711.8	711.0	710.2	709.4	708.6
175°	714.5	715.5	716.5	716.5	715.7	714.9	714.1	713.3
177.5°	716.7	717.4	718.0	718.0	717.4	716.7	716.1	715.4
180°	716.9	716.9	716.9	716.9	716.9	716.9	716.9	716.9

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