

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: P331564-840

Luminaire Tested: **S122DIW-S865D710U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331564-840
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-S865D710U840-4F0-1E-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: 6014.1 lumens
Efficiency: N/A
Efficacy: 112.2 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

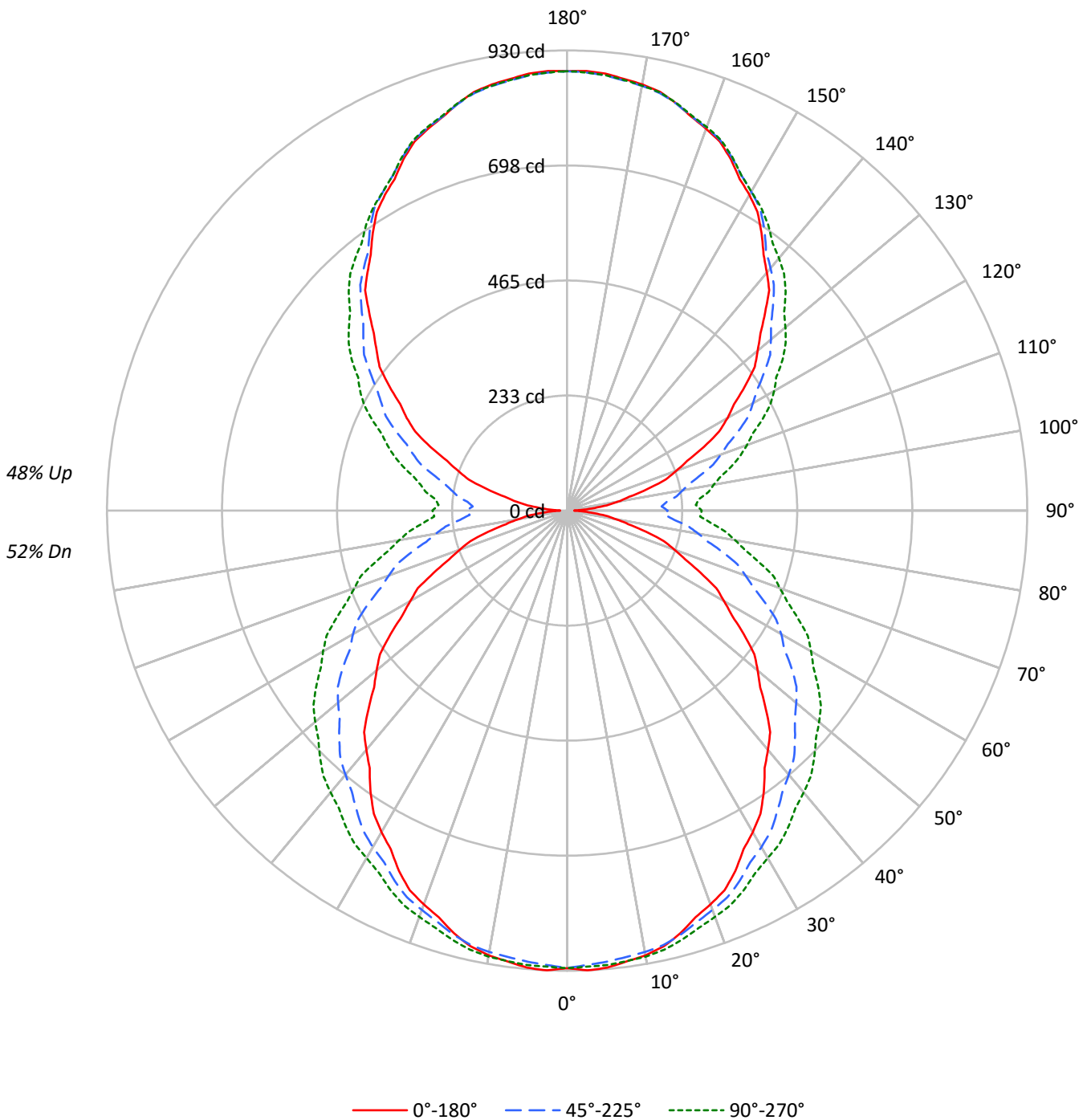
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	14928	14928	14928
5°	15002	14370	14315
10°	14907	13945	13789
15°	14701	13496	13236
20°	14442	13015	12701
25°	14187	12551	12216
30°	13824	12074	11729
35°	13459	11611	11386
40°	13075	11219	11044
45°	12709	10869	10750
50°	12316	10551	10462
55°	11908	10209	10166
60°	11404	9856	9857
65°	10880	9439	9485
70°	10292	8992	9089
75°	9539	8554	8722
80°	8357	8107	8349
85°	7227	7720	8061



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.6	1.5
10°-20°	251.2	4.2
20°-30°	380.7	6.3
30°-40°	463.7	7.7
40°-50°	498.9	8.3
50°-60°	484.5	8.1
60°-70°	423.0	7.0
70°-80°	325.7	5.4
80°-90°	222.1	3.7
90°-100°	206.8	3.4
100°-110°	284.7	4.7
110°-120°	371.3	6.2
120°-130°	433.4	7.2
130°-140°	457.9	7.6
140°-150°	435.3	7.2
150°-160°	362.6	6.0
160°-170°	240.5	4.0
170°-180°	84.1	1.4
0°-30°	719.6	12.0
0°-40°	1183.3	19.7
0°-60°	2166.6	36.0
0°-90°	3137.4	52.2
90°-120°	862.9	14.3
90°-150°	2189.4	36.4
90°-180°	2877.0	47.8
0°-180°	6014.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	925	925	925	925	925	
5°	927	923	915	923	922	88
15°	884	887	887	898	898	249
25°	804	814	826	841	846	369
35°	693	716	741	769	780	433
45°	568	605	651	691	706	438
55°	436	485	553	600	619	389
65°	298	364	442	495	514	295
75°	165	240	326	381	401	174
85°	48	132	217	271	292	52
90°	14	102	203	253	272	11
95°	50	121	202	251	268	53
105°	168	211	280	327	343	178
115°	305	326	383	421	435	301
125°	439	447	486	519	531	392
135°	566	574	589	615	625	437
145°	685	690	695	703	707	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°	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6
2.5°	930.0	929.3	928.6	927.9	927.2	925.9	924.2	922.6	920.9	919.3	920.5
5°	927.3	926.5	925.5	924.6	923.7	922.4	920.6	918.8	917.1	915.2	917.1
7.5°	919.0	918.4	917.8	917.3	916.7	915.6	914.2	912.9	911.5	910.2	912.3
10°	912.6	912.0	911.4	910.8	910.2	909.5	908.6	907.7	906.8	905.8	908.3
12.5°	901.8	902.0	902.1	902.2	902.3	902.0	901.4	900.7	900.1	899.4	901.8
15°	884.4	885.0	885.7	886.3	886.8	887.1	887.1	887.1	887.1	887.1	889.8
17.5°	861.9	863.1	864.4	865.7	866.9	868.0	869.0	869.9	870.9	871.8	874.6
20°	846.9	848.4	849.9	851.4	852.8	854.2	855.4	856.6	857.8	859.0	862.2
22.5°	830.8	832.5	834.2	836.0	837.7	839.4	841.1	842.7	844.4	846.1	849.4
25°	804.1	806.1	808.2	810.3	812.3	814.8	817.4	820.1	822.7	825.5	829.0
27.5°	771.8	775.3	778.6	782.0	785.5	788.7	791.8	795.1	798.2	801.3	805.9
30°	750.4	754.3	758.2	762.0	765.9	769.8	773.7	777.5	781.4	785.3	790.0
32.5°	726.8	731.1	735.5	739.9	744.3	748.7	753.3	757.9	762.4	767.0	772.5
35°	692.8	697.8	703.0	708.0	713.1	718.4	724.1	729.7	735.4	741.0	747.6
37.5°	655.8	661.7	667.5	673.3	679.1	685.7	693.1	700.4	707.7	715.1	722.4
40°	631.2	637.7	644.3	650.9	657.3	664.7	672.7	680.8	688.8	696.8	704.6
42.5°	607.5	614.1	620.7	627.2	633.8	641.7	650.9	660.1	669.3	678.6	687.0
45°	568.2	576.2	584.2	592.3	600.4	609.6	620.0	630.5	640.9	651.3	660.5
47.5°	529.3	538.1	546.8	555.6	564.3	574.8	587.0	599.3	611.5	623.7	633.3
50°	502.5	511.7	521.0	530.2	539.5	550.8	564.1	577.5	591.0	604.4	614.5
52.5°	476.8	486.5	496.2	505.9	515.6	527.6	541.7	555.7	569.9	584.0	594.3
55°	435.6	446.3	457.0	467.7	478.4	491.5	507.0	522.5	538.0	553.4	564.1
57.5°	394.8	406.9	419.0	431.0	443.1	457.1	472.8	488.7	504.4	520.2	531.8
60°	365.9	378.6	391.4	404.2	417.1	431.9	448.9	465.9	482.8	499.9	511.2
62.5°	340.1	353.4	366.7	379.9	393.2	408.4	425.4	442.3	459.3	476.3	488.3
65°	297.5	312.0	326.7	341.2	355.9	371.9	389.5	407.1	424.6	442.2	454.4
67.5°	258.3	273.6	288.8	304.1	319.3	336.0	354.0	371.9	389.9	407.9	420.2
70°	230.5	246.0	261.5	276.9	292.5	309.4	327.9	346.3	364.8	383.2	396.1
72.5°	204.8	220.8	236.7	252.7	268.6	285.9	304.7	323.4	342.0	360.7	373.3
75°	164.8	181.5	198.1	214.9	231.6	249.4	268.4	287.5	306.6	325.6	338.4
77.5°	126.2	143.7	161.2	178.5	196.0	214.4	233.8	253.2	272.5	291.9	304.6
80°	100.5	118.7	136.8	155.0	173.2	191.9	211.3	230.7	249.9	269.3	281.9
82.5°	79.1	96.9	114.9	132.8	150.8	169.6	189.1	208.7	228.3	247.9	260.4
85°	48.3	66.8	85.1	103.6	122.1	140.9	159.9	178.9	198.0	217.1	229.6
87.5°	26.5	44.5	62.7	80.9	99.0	118.0	137.7	157.5	177.3	197.1	209.2
90°	14.1	33.4	52.7	72.0	91.2	112.2	134.9	157.6	180.4	203.1	214.7
92.5°	25.7	43.2	60.8	78.3	95.8	114.2	133.4	152.7	171.9	191.1	202.8
95°	49.7	65.3	81.0	96.6	112.3	129.3	147.4	165.6	183.9	202.1	213.4
97.5°	80.6	94.5	108.4	122.3	136.2	152.1	169.9	187.6	205.4	223.2	234.2
100°	104.5	116.9	129.3	141.6	153.9	168.7	185.9	203.1	220.3	237.4	248.4
102.5°	128.7	139.8	150.9	162.1	173.2	187.1	204.0	220.9	237.6	254.5	265.4
105°	167.8	176.9	186.1	195.2	204.4	216.8	232.7	248.4	264.3	280.1	290.8
107.5°	208.6	216.2	223.9	231.6	239.1	250.4	265.3	280.0	294.9	309.7	319.8
110°	233.9	240.9	247.8	254.8	261.8	272.5	287.1	301.6	316.3	330.8	340.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	262.7	268.7	274.7	280.7	286.7	296.6	310.3	324.1	337.8	351.5	360.7
115°	305.1	309.4	313.7	317.9	322.2	330.8	344.0	357.0	370.1	383.1	391.9
117.5°	346.1	349.5	352.9	356.5	359.9	367.4	378.9	390.3	401.7	413.2	421.6
120°	374.3	376.8	379.3	381.7	384.3	390.8	401.4	412.0	422.6	433.1	441.5
122.5°	400.0	402.0	404.1	406.2	408.3	414.4	424.7	434.9	445.2	455.6	463.2
125°	438.8	440.3	441.8	443.3	444.8	450.1	459.1	468.2	477.2	486.1	493.7
127.5°	478.0	479.5	481.1	482.7	484.3	488.7	495.7	502.8	509.9	517.1	523.8
130°	502.5	504.4	506.2	508.1	510.0	513.9	519.8	525.7	531.6	537.6	544.4
132.5°	530.1	531.6	533.0	534.5	535.9	539.2	544.0	549.0	553.8	558.7	564.9
135°	565.6	567.4	569.3	571.1	572.9	575.5	578.9	582.1	585.4	588.8	594.8
137.5°	604.4	605.9	607.3	608.7	610.2	611.8	613.5	615.3	617.0	618.7	624.1
140°	627.8	629.0	630.3	631.4	632.6	633.9	635.4	636.8	638.2	639.6	644.4
142.5°	651.8	653.0	654.2	655.4	656.6	657.5	658.2	658.9	659.6	660.2	664.2
145°	684.9	686.1	687.2	688.4	689.6	690.6	691.7	692.7	693.7	694.7	696.6
147.5°	715.7	717.0	718.4	719.8	721.2	722.3	723.0	723.6	724.3	725.0	725.6
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°	924.6	924.6	924.6	924.6	924.6	924.6	924.6	924.6
2.5°	921.6	922.8	924.0	924.4	923.9	923.4	922.9	922.5
5°	918.8	920.6	922.4	923.1	922.8	922.5	922.2	921.9
7.5°	914.4	916.6	918.8	919.7	919.4	919.1	918.8	918.5
10°	910.6	913.0	915.4	916.5	916.1	915.8	915.5	915.2
12.5°	904.2	906.6	909.0	910.0	909.7	909.4	909.1	908.8
15°	892.4	895.1	897.9	899.0	898.7	898.4	898.1	897.9
17.5°	877.5	880.2	883.0	884.4	884.4	884.4	884.4	884.4
20°	865.6	868.8	872.0	873.7	873.7	873.7	873.7	873.7
22.5°	852.6	856.0	859.2	861.1	861.5	862.0	862.5	863.0
25°	832.6	836.2	839.8	842.0	842.8	843.7	844.7	845.6
27.5°	810.4	815.0	819.4	822.0	822.7	823.3	824.0	824.7
30°	794.8	799.5	804.4	807.2	808.0	808.9	809.8	810.7
32.5°	778.0	783.5	788.9	792.5	794.1	795.7	797.3	798.9
35°	754.2	760.7	767.3	771.5	773.7	775.8	777.8	779.9
37.5°	729.5	736.8	744.1	748.8	751.0	753.3	755.5	757.7
40°	712.3	720.0	727.8	733.0	735.7	738.3	741.0	743.8
42.5°	695.5	704.0	712.5	718.0	720.6	723.4	726.0	728.7
45°	669.7	678.9	688.2	694.3	697.3	700.2	703.3	706.2
47.5°	643.0	652.6	662.3	668.7	672.0	675.3	678.5	681.9
50°	624.6	634.7	644.9	651.6	654.8	658.1	661.4	664.7
52.5°	604.7	615.1	625.4	632.4	635.9	639.4	642.9	646.4
55°	574.9	585.6	596.3	603.6	607.4	611.4	615.2	619.0
57.5°	543.3	554.8	566.4	574.2	578.0	582.0	585.9	589.9
60°	522.5	533.8	545.1	552.8	557.0	561.2	565.3	569.6
62.5°	500.3	512.3	524.3	532.4	536.2	540.2	544.1	548.1
65°	466.7	478.9	491.1	499.1	502.9	506.9	510.7	514.5
67.5°	432.5	444.8	457.3	465.4	469.5	473.5	477.6	481.6
70°	408.9	421.6	434.4	442.6	446.3	449.8	453.4	457.0
72.5°	385.9	398.4	411.0	419.4	423.7	428.0	432.3	436.6
75°	351.2	364.1	376.9	385.2	389.1	392.9	396.8	400.7
77.5°	317.4	330.1	342.8	351.3	355.5	359.6	363.9	368.0
80°	294.4	306.9	319.4	327.7	331.8	336.1	340.2	344.4
82.5°	273.0	285.4	297.9	306.2	310.1	314.0	317.9	321.8
85°	242.1	254.6	267.1	275.5	279.6	283.8	287.9	292.2
87.5°	221.3	233.4	245.5	253.5	257.3	261.2	265.0	268.8
90°	226.3	237.8	249.4	257.1	260.8	264.6	268.3	272.1
92.5°	214.6	226.3	238.0	245.7	249.3	252.9	256.5	260.1
95°	224.7	236.0	247.3	254.6	257.8	261.1	264.3	267.6
97.5°	245.3	256.3	267.3	274.6	278.0	281.4	285.0	288.4
100°	259.4	270.4	281.4	288.5	291.6	294.8	297.9	300.9
102.5°	276.3	287.2	298.1	305.2	308.3	311.3	314.5	317.6
105°	301.6	312.4	323.2	330.1	333.5	336.7	339.9	343.3
107.5°	330.0	340.1	350.3	356.6	359.1	361.6	364.2	366.7
110°	349.9	359.5	369.0	375.2	377.9	380.7	383.4	386.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	369.8	378.9	388.1	394.0	397.0	399.9	402.8	405.8
115°	400.7	409.4	418.2	423.9	426.8	429.5	432.3	435.0
117.5°	430.1	438.5	446.9	452.3	454.9	457.5	460.0	462.5
120°	449.9	458.2	466.6	472.1	474.8	477.7	480.4	483.2
122.5°	470.9	478.6	486.4	491.4	493.8	496.2	498.7	501.1
125°	501.3	508.8	516.3	521.4	523.9	526.4	529.0	531.4
127.5°	530.6	537.3	544.1	548.6	550.7	552.8	554.8	556.9
130°	551.2	558.0	564.8	569.1	570.8	572.5	574.2	575.9
132.5°	571.1	577.2	583.4	587.4	589.3	591.1	593.0	594.8
135°	601.0	607.0	613.1	617.1	618.9	620.9	622.8	624.6
137.5°	629.4	634.8	640.2	643.5	644.9	646.2	647.5	648.9
140°	649.1	654.0	658.7	661.7	662.8	663.9	665.0	666.1
142.5°	668.1	672.2	676.1	678.4	679.3	680.2	681.2	682.0
145°	698.5	700.5	702.5	703.9	704.7	705.5	706.3	707.2
147.5°	726.2	726.8	727.4	727.7	727.8	727.9	727.9	728.0
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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