

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: P331387-830

Luminaire Tested: **SA2XXDIP-C865D530U830-4F0-1E-UDD-D**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331387-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C865D530U830-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

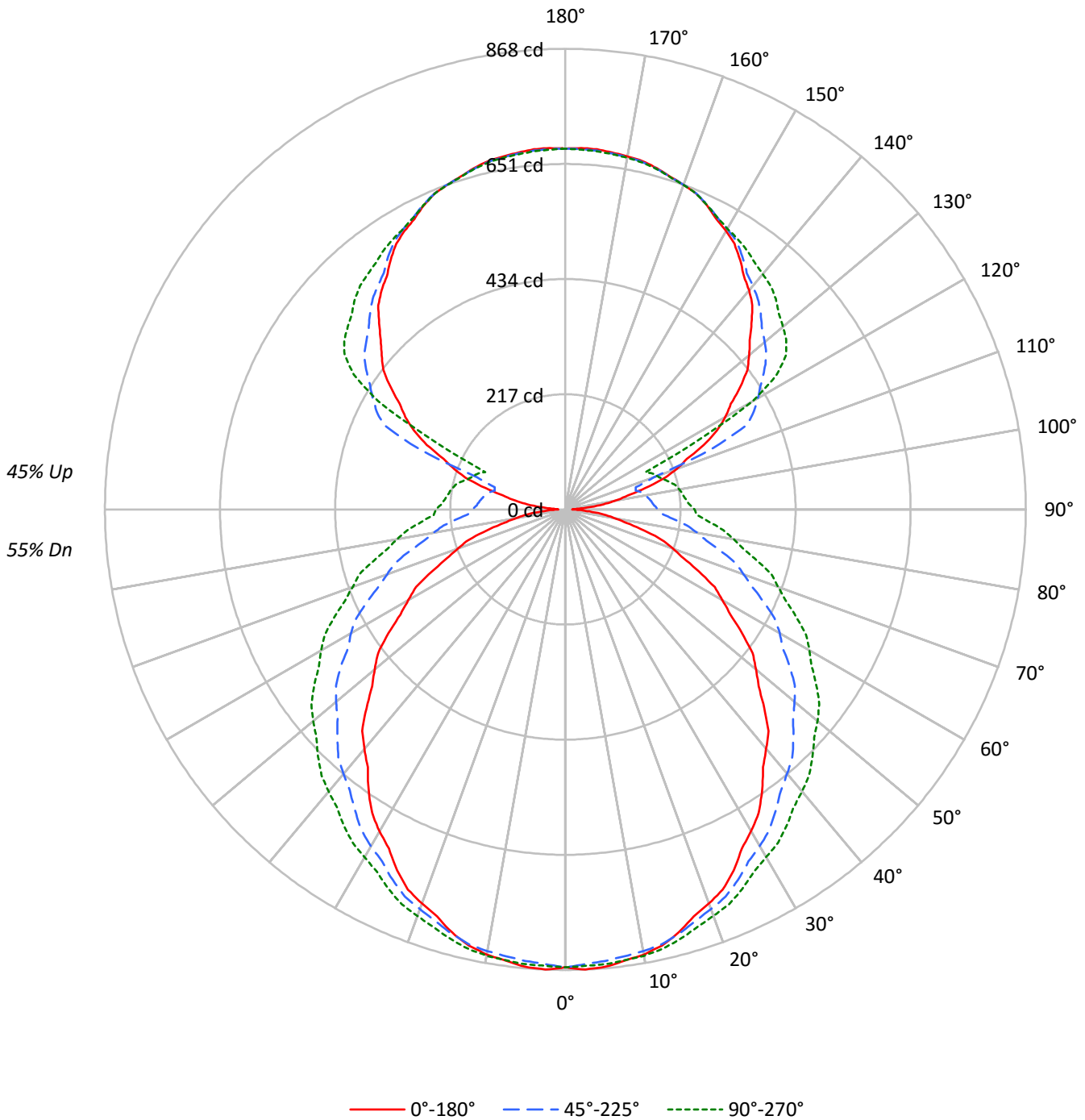
Lumens per Lamp: N/A
Luminaire Lumens: 5286.2 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 48.8
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	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	97	92	88	84	90	86	82	78	73	70	67	62	60	58	51	50	48	43
2	88	80	73	67	81	74	68	63	63	59	55	53	50	47	44	42	39	35
3	80	69	61	55	74	65	57	52	55	50	45	47	42	39	39	35	33	29
4	73	61	53	46	67	57	49	43	49	43	38	41	37	33	34	31	28	24
5	67	54	46	39	61	51	43	37	43	37	32	37	32	28	31	27	24	21
6	61	49	40	34	57	45	38	32	39	33	28	33	28	24	28	24	21	18
7	57	44	35	29	52	41	33	28	35	29	25	30	25	22	25	21	18	16
8	53	40	32	26	49	37	30	25	32	26	22	27	23	19	23	19	16	14
9	49	36	28	23	45	34	27	22	29	24	19	25	20	17	21	18	15	13
10	46	33	26	21	42	31	24	20	27	21	17	23	19	15	20	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13934	13934	13934
5°	14000	13412	13361
10°	13914	13017	12870
15°	13722	12596	12353
20°	13478	12147	11855
25°	13241	11713	11401
30°	12903	11268	10947
35°	12562	10837	10627
40°	12203	10472	10307
45°	11862	10143	10033
50°	11495	9847	9765
55°	11112	9528	9489
60°	10644	9199	9199
65°	10156	8809	8853
70°	9605	8393	8482
75°	8902	7984	8141
80°	7800	7568	7791
85°	6748	7205	7523



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	1.5
10°-20°	234.5	4.4
20°-30°	355.3	6.7
30°-40°	432.8	8.2
40°-50°	465.6	8.8
50°-60°	452.2	8.6
60°-70°	394.8	7.5
70°-80°	304.0	5.7
80°-90°	205.7	3.9
90°-100°	163.2	3.1
100°-110°	185.8	3.5
110°-120°	290.1	5.5
120°-130°	404.8	7.7
130°-140°	406.1	7.7
140°-150°	365.4	6.9
150°-160°	291.6	5.5
160°-170°	187.9	3.6
170°-180°	64.7	1.2
0°-30°	671.6	12.7
0°-40°	1104.4	20.9
0°-60°	2022.2	38.3
0°-90°	2926.6	55.4
90°-120°	639.0	12.1
90°-150°	1815.3	34.3
90°-180°	2360.0	44.6
0°-180°	5286.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	863	863	863	863	863	
5°	865	862	854	861	860	82
15°	826	828	828	839	838	232
25°	750	759	770	785	789	345
35°	647	668	692	718	728	404
45°	530	565	608	645	659	409
55°	406	453	516	560	578	363
65°	278	340	413	462	480	276
75°	154	224	304	356	374	163
85°	45	123	203	253	273	48
90°	13	91	175	225	243	10
95°	42	86	163	211	228	47
105°	156	200	138	185	202	167
115°	288	312	378	198	167	283
125°	402	411	458	494	508	359
135°	496	504	521	551	561	383
145°	574	574	582	592	597	359
155°	632	628	634	636	632	291
165°	666	663	664	668	664	188
175°	681	678	679	682	677	65
180°	680	680	680	680	680	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	868.0	867.3	866.7	866.0	865.3	864.2	862.6	861.1	859.5	858.0	859.1
5°	865.4	864.7	863.8	863.0	862.1	860.9	859.2	857.5	855.9	854.2	855.9
7.5°	857.7	857.1	856.6	856.1	855.5	854.6	853.3	852.1	850.7	849.5	851.5
10°	851.8	851.2	850.6	850.1	849.5	848.9	848.0	847.2	846.3	845.5	847.7
12.5°	841.7	841.9	842.0	842.1	842.2	841.9	841.3	840.7	840.1	839.4	841.7
15°	825.5	826.0	826.6	827.2	827.6	827.9	827.9	827.9	827.9	827.9	830.5
17.5°	804.5	805.6	806.8	807.9	809.1	810.1	811.1	811.9	812.8	813.7	816.3
20°	790.4	791.8	793.2	794.7	796.0	797.3	798.3	799.5	800.6	801.7	804.7
22.5°	775.4	777.0	778.6	780.2	781.8	783.4	785.0	786.6	788.2	789.7	792.8
25°	750.5	752.3	754.3	756.3	758.2	760.4	762.9	765.4	767.9	770.4	773.7
27.5°	720.4	723.6	726.7	729.9	733.1	736.1	739.0	742.1	745.0	747.9	752.1
30°	700.4	704.0	707.7	711.2	714.8	718.5	722.1	725.7	729.3	732.9	737.4
32.5°	678.3	682.4	686.5	690.6	694.7	698.8	703.0	707.4	711.6	715.9	721.0
35°	646.6	651.3	656.1	660.8	665.5	670.5	675.8	681.1	686.4	691.6	697.8
37.5°	612.1	617.6	623.0	628.4	633.9	640.0	646.9	653.7	660.5	667.4	674.2
40°	589.1	595.2	601.3	607.5	613.5	620.4	627.8	635.4	642.9	650.4	657.6
42.5°	567.0	573.2	579.3	585.4	591.5	598.9	607.5	616.1	624.7	633.4	641.2
45°	530.3	537.8	545.3	552.8	560.3	568.9	578.6	588.4	598.1	607.8	616.4
47.5°	494.0	502.2	510.4	518.6	526.7	536.5	547.9	559.3	570.7	582.1	591.1
50°	469.0	477.6	486.3	494.8	503.5	514.1	526.5	539.0	551.6	564.1	573.5
52.5°	445.0	454.0	463.2	472.2	481.3	492.4	505.6	518.7	531.9	545.1	554.7
55°	406.5	416.5	426.5	436.5	446.5	458.7	473.2	487.7	502.1	516.5	526.5
57.5°	368.4	379.8	391.1	402.3	413.6	426.6	441.3	456.1	470.8	485.5	496.3
60°	341.5	353.4	365.3	377.3	389.3	403.1	419.0	434.8	450.6	466.6	477.1
62.5°	317.4	329.8	342.2	354.6	367.0	381.2	397.0	412.8	428.7	444.5	455.7
65°	277.7	291.2	304.9	318.5	332.2	347.1	363.5	379.9	396.3	412.7	424.1
67.5°	241.1	255.3	269.6	283.8	298.0	313.6	330.4	347.1	363.9	380.7	392.2
70°	215.1	229.6	244.0	258.4	273.0	288.8	306.0	323.2	340.4	357.7	369.7
72.5°	191.1	206.0	220.9	235.8	250.7	266.8	284.4	301.8	319.2	336.7	348.5
75°	153.8	169.4	184.9	200.6	216.1	232.8	250.5	268.3	286.2	303.9	315.8
77.5°	117.8	134.1	150.4	166.6	182.9	200.1	218.2	236.3	254.3	272.4	284.3
80°	93.8	110.7	127.7	144.7	161.6	179.1	197.2	215.3	233.3	251.4	263.1
82.5°	73.8	90.5	107.3	123.9	140.7	158.3	176.5	194.8	213.1	231.4	243.1
85°	45.1	62.3	79.5	96.7	114.0	131.5	149.2	167.0	184.8	202.6	214.3
87.5°	24.6	41.4	58.2	75.0	91.8	109.2	127.1	145.2	163.1	181.1	192.6
90°	13.0	30.3	47.6	64.9	82.3	100.3	118.9	137.6	156.3	174.9	186.6
92.5°	21.4	36.4	51.3	66.2	81.1	97.3	114.8	132.4	150.0	167.5	178.7
95°	41.9	51.5	60.9	70.3	79.8	93.2	110.7	128.1	145.5	163.1	174.1
97.5°	72.2	73.7	75.1	76.5	78.0	87.7	105.4	123.2	141.0	158.7	169.5
100°	95.9	91.1	86.4	81.7	77.0	83.4	100.9	118.3	135.7	153.1	164.3
102.5°	120.8	127.1	133.3	139.5	145.7	148.5	148.2	147.7	147.3	146.8	158.1
105°	155.8	167.1	178.4	189.8	201.1	199.2	183.7	168.3	153.0	137.6	148.5
107.5°	197.2	206.2	215.4	224.4	233.6	227.1	205.2	183.2	161.3	139.3	147.4
110°	222.9	230.7	238.7	246.5	254.3	249.3	231.3	213.3	195.4	177.4	175.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	248.1	254.8	261.5	268.2	274.9	280.8	286.0	291.2	296.2	301.4	270.4
115°	287.9	292.8	297.7	302.6	307.5	317.5	332.8	348.1	363.3	378.5	336.3
117.5°	322.1	326.2	330.3	334.3	338.4	347.1	360.6	374.1	387.5	401.0	396.9
120°	348.1	350.8	353.5	356.3	359.1	367.0	380.0	393.1	406.2	419.3	428.4
122.5°	370.1	372.3	374.5	376.6	378.8	386.2	398.8	411.3	424.0	436.6	444.9
125°	402.4	403.8	405.2	406.7	408.1	414.2	425.3	436.2	447.2	458.2	466.5
127.5°	432.8	434.1	435.4	436.7	438.0	443.0	451.8	460.4	469.2	477.9	485.9
130°	452.0	453.6	455.1	456.5	458.0	462.2	469.3	476.3	483.3	490.4	498.2
132.5°	471.7	473.0	474.2	475.4	476.5	480.0	485.8	491.4	497.2	502.8	510.4
135°	496.1	497.9	499.5	501.3	503.0	505.9	509.6	513.4	517.2	520.8	527.8
137.5°	522.0	523.1	524.3	525.5	526.6	528.4	530.7	533.1	535.4	537.7	543.9
140°	538.9	539.5	540.1	540.6	541.3	542.4	544.2	545.9	547.7	549.5	554.9
142.5°	553.1	553.6	554.0	554.6	555.1	556.1	557.6	559.0	560.5	562.0	566.5
145°	574.0	573.9	573.8	573.7	573.6	574.5	576.4	578.2	580.0	581.9	584.4
147.5°	593.4	593.0	592.6	592.2	591.7	592.5	594.3	596.2	597.9	599.8	600.6
150°	606.0	605.2	604.5	603.7	602.9	603.4	605.2	606.9	608.7	610.4	611.1
152.5°	616.6	615.8	614.9	614.1	613.2	613.6	615.3	617.0	618.6	620.3	620.9
155°	632.1	631.1	630.1	629.1	628.1	628.3	629.6	630.9	632.3	633.6	634.2
157.5°	644.1	643.4	642.5	641.7	640.8	640.9	641.8	642.7	643.7	644.6	645.3
160°	651.3	650.6	650.0	649.3	648.7	648.7	649.3	650.0	650.6	651.3	652.0
162.5°	657.5	656.9	656.2	655.5	655.0	654.9	655.4	656.0	656.6	657.1	657.9
165°	666.0	665.3	664.7	664.0	663.4	663.3	663.5	663.8	664.2	664.5	665.3
167.5°	672.3	671.7	671.0	670.3	669.7	669.5	669.8	670.1	670.4	670.7	671.5
170°	675.8	675.2	674.6	673.9	673.3	673.0	673.3	673.4	673.6	673.9	674.7
172.5°	678.3	677.6	676.9	676.3	675.6	675.3	675.6	675.8	676.0	676.3	677.0
175°	681.3	680.5	679.8	679.0	678.2	678.0	678.2	678.3	678.5	678.8	679.6
177.5°	681.7	681.2	680.5	680.0	679.3	679.0	679.1	679.2	679.3	679.4	680.0
180°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	863.0	863.0	863.0	863.0	863.0	863.0	863.0	863.0
2.5°	860.2	861.3	862.4	862.8	862.3	861.9	861.4	861.0
5°	857.5	859.2	860.9	861.6	861.3	861.0	860.7	860.4
7.5°	853.5	855.5	857.5	858.4	858.1	857.8	857.5	857.2
10°	849.9	852.2	854.4	855.4	855.1	854.8	854.5	854.2
12.5°	844.0	846.1	848.4	849.3	849.0	848.8	848.5	848.2
15°	832.9	835.5	838.0	839.1	838.8	838.5	838.2	838.0
17.5°	819.0	821.5	824.2	825.5	825.5	825.5	825.5	825.5
20°	807.9	810.9	813.9	815.5	815.5	815.5	815.5	815.5
22.5°	795.8	798.9	801.9	803.7	804.1	804.6	805.0	805.5
25°	777.1	780.4	783.8	785.9	786.6	787.5	788.3	789.2
27.5°	756.4	760.6	764.8	767.2	767.9	768.5	769.1	769.7
30°	741.8	746.2	750.7	753.4	754.1	755.0	755.8	756.7
32.5°	726.1	731.2	736.3	739.7	741.1	742.6	744.1	745.6
35°	703.9	710.0	716.1	720.1	722.1	724.1	725.9	727.9
37.5°	680.9	687.7	694.5	698.9	701.0	703.0	705.1	707.2
40°	664.8	672.0	679.3	684.1	686.6	689.1	691.6	694.2
42.5°	649.1	657.0	665.0	670.1	672.6	675.1	677.6	680.1
45°	625.1	633.7	642.3	648.0	650.8	653.6	656.4	659.1
47.5°	600.1	609.1	618.1	624.2	627.2	630.3	633.3	636.4
50°	583.0	592.4	601.9	608.1	611.1	614.3	617.3	620.4
52.5°	564.4	574.1	583.7	590.2	593.5	596.8	600.0	603.3
55°	536.6	546.6	556.6	563.4	566.9	570.6	574.2	577.8
57.5°	507.1	517.8	528.7	535.9	539.5	543.2	546.9	550.5
60°	487.7	498.2	508.8	515.9	519.9	523.8	527.6	531.6
62.5°	466.9	478.2	489.4	496.9	500.5	504.2	507.8	511.5
65°	435.5	447.0	458.4	465.8	469.4	473.1	476.6	480.2
67.5°	403.7	415.2	426.8	434.4	438.2	442.0	445.7	449.5
70°	381.6	393.5	405.5	413.1	416.5	419.8	423.2	426.5
72.5°	360.1	371.8	383.6	391.4	395.5	399.4	403.5	407.5
75°	327.8	339.8	351.8	359.5	363.2	366.7	370.3	374.0
77.5°	296.2	308.1	320.0	327.9	331.8	335.6	339.6	343.5
80°	274.8	286.4	298.1	305.9	309.7	313.7	317.5	321.4
82.5°	254.8	266.4	278.1	285.8	289.5	293.0	296.7	300.4
85°	225.9	237.6	249.3	257.1	261.0	264.9	268.7	272.7
87.5°	204.0	215.4	226.9	234.4	238.0	241.6	245.2	248.8
90°	198.2	209.9	221.6	229.2	232.7	236.3	239.9	243.4
92.5°	189.8	201.0	212.3	219.5	223.0	226.5	230.0	233.4
95°	185.2	196.3	207.5	214.6	217.8	221.0	224.3	227.5
97.5°	180.2	191.0	201.6	208.7	212.1	215.6	219.0	222.3
100°	175.4	186.6	197.7	205.0	208.2	211.5	214.8	218.1
102.5°	169.3	180.5	191.7	199.0	202.4	205.7	209.1	212.4
105°	159.4	170.3	181.3	188.5	192.0	195.5	199.0	202.5
107.5°	155.5	163.6	171.7	177.6	181.1	184.5	188.0	191.5
110°	173.3	171.3	169.3	169.9	173.4	176.9	180.4	184.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	239.4	208.5	177.5	163.7	167.1	170.5	173.9	177.3
115°	294.0	251.8	209.4	185.9	181.1	176.3	171.4	166.6
117.5°	392.9	388.9	384.8	371.4	348.4	325.3	302.3	279.3
120°	437.5	446.6	455.7	454.4	442.7	431.0	419.3	407.6
122.5°	453.3	461.6	470.0	474.0	473.7	473.4	473.3	473.0
125°	474.7	483.0	491.3	496.8	499.6	502.5	505.3	508.1
127.5°	493.9	501.9	509.9	515.2	517.6	520.2	522.7	525.2
130°	506.1	514.0	521.9	526.9	529.0	531.1	533.2	535.4
132.5°	517.8	525.3	532.7	537.5	539.7	541.8	543.9	546.0
135°	534.7	541.7	548.7	553.1	555.1	557.0	559.1	561.1
137.5°	550.1	556.3	562.5	566.4	567.9	569.4	570.9	572.4
140°	560.3	565.8	571.2	574.5	575.6	576.7	577.9	579.0
142.5°	570.9	575.4	579.9	582.5	583.4	584.3	585.2	586.2
145°	586.7	589.2	591.6	593.2	594.1	594.9	595.8	596.6
147.5°	601.3	602.2	602.9	603.5	603.7	603.9	604.1	604.3
150°	611.7	612.4	613.0	613.1	612.6	612.0	611.4	611.0
152.5°	621.6	622.3	622.9	622.8	622.2	621.4	620.7	620.0
155°	634.9	635.6	636.2	636.0	635.2	634.3	633.5	632.5
157.5°	646.0	646.8	647.5	647.5	646.6	645.7	644.9	644.0
160°	652.5	653.2	653.8	653.8	653.1	652.3	651.5	650.7
162.5°	658.6	659.4	660.2	660.1	659.1	658.2	657.2	656.3
165°	666.1	666.8	667.6	667.6	666.8	666.1	665.3	664.5
167.5°	672.2	673.1	673.8	673.7	672.7	671.8	670.7	669.8
170°	675.4	676.2	676.9	676.8	675.8	674.9	673.9	672.9
172.5°	677.8	678.5	679.3	679.2	678.3	677.2	676.3	675.2
175°	680.3	681.1	681.8	681.7	680.6	679.5	678.4	677.3
177.5°	680.6	681.3	681.8	681.7	681.0	680.1	679.4	678.6
180°	679.8	679.8	679.8	679.8	679.8	679.8	679.8	679.8

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