

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: P332285-935

Luminaire Tested: **S123RDIP-S560D805U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332285-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S560D805U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4602.6 lumens
Efficiency: N/A
Efficacy: 119.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.23
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

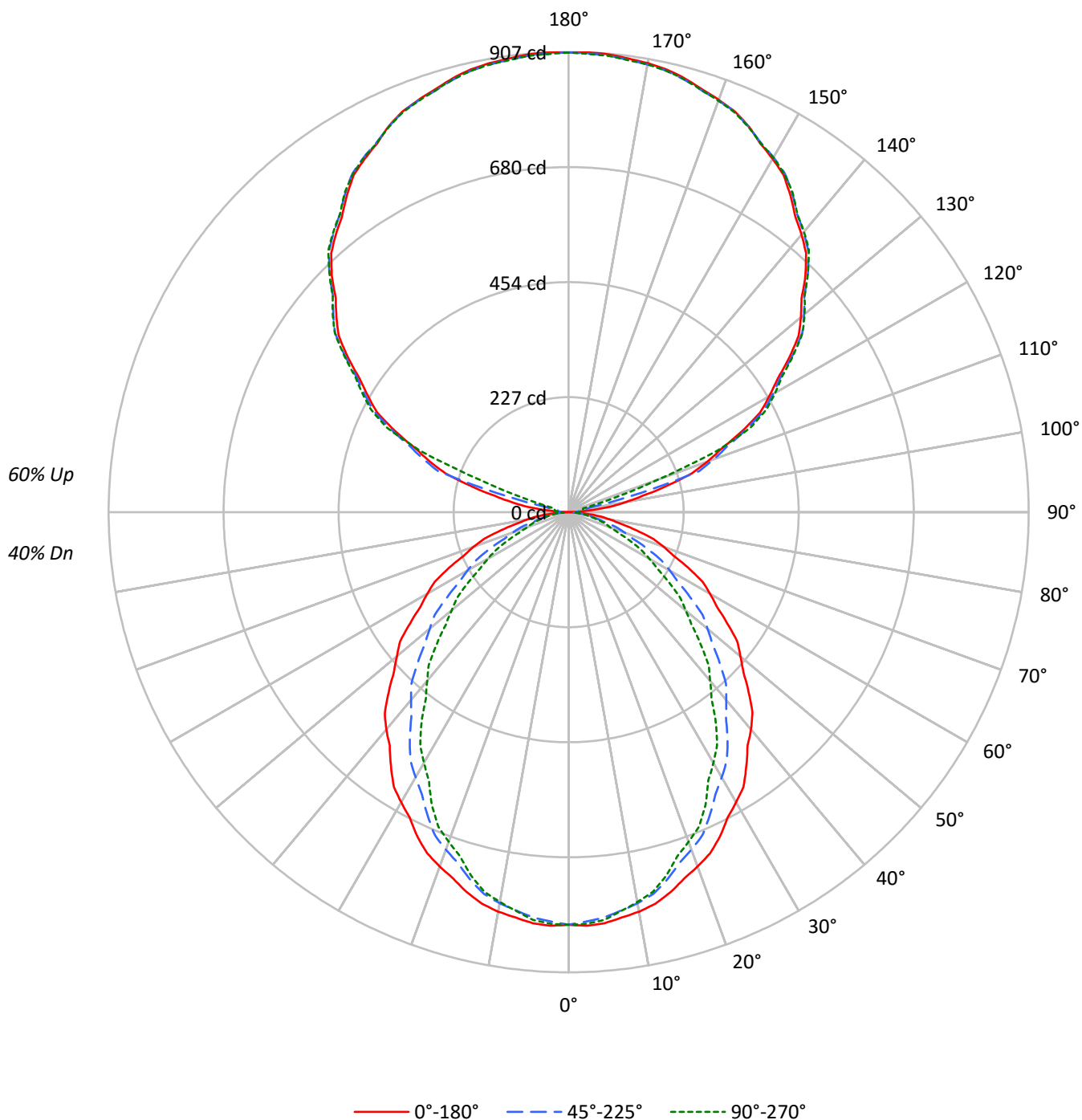
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47
1	96	92	88	85	87	84	80	78	68	66	64	55	53	52	42	41	40
2	87	80	74	69	79	73	68	64	60	57	54	48	46	44	37	36	34
3	80	71	64	58	72	65	59	54	53	49	45	43	40	37	33	31	29
4	73	63	55	49	66	57	51	46	48	43	39	38	35	32	30	27	25
5	67	56	48	42	61	51	44	39	43	37	34	34	31	28	27	24	22
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	22	20
7	57	45	38	32	52	42	35	30	35	30	26	28	25	22	22	20	18
8	53	41	34	28	48	38	31	27	32	27	23	26	22	19	21	18	16
9	49	38	30	25	45	35	28	24	29	24	21	24	20	17	19	16	14
10	46	34	27	23	42	32	25	21	27	22	18	22	18	16	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8753	8753	8753
5°	8787	8666	8715
10°	8737	8557	8528
15°	8643	8357	8269
20°	8514	8107	7918
25°	8381	7826	7574
30°	8206	7501	7091
35°	8025	7176	6646
40°	7859	6794	6097
45°	7640	6416	5602
50°	7400	5987	5047
55°	7156	5495	4530
60°	6928	4969	3961
65°	6635	4401	3393
70°	6266	3695	2738
75°	5731	2907	2578
80°	5114	2579	2368
85°	4323	2272	2112

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.4	1.7
10°-20°	212.5	4.6
20°-30°	305.9	6.6
30°-40°	344.6	7.5
40°-50°	329.7	7.2
50°-60°	270.0	5.9
60°-70°	182.2	4.0
70°-80°	91.6	2.0
80°-90°	26.8	0.6
90°-100°	32.9	0.7
100°-110°	157.0	3.4
110°-120°	377.1	8.2
120°-130°	480.2	10.4
130°-140°	513.1	11.1
140°-150°	479.8	10.4
150°-160°	387.0	8.4
160°-170°	249.8	5.4
170°-180°	86.1	1.9
0°-30°	594.8	12.9
0°-40°	939.4	20.4
0°-60°	1539.1	33.4
0°-90°	1839.7	40.0
90°-120°	567.0	12.3
90°-150°	2040.1	44.3
90°-180°	2763.0	60.0
0°-180°	4602.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	813	813	813	813	813	
5°	813	810	802	808	807	77
15°	776	768	750	747	742	218
25°	706	688	659	645	638	324
35°	611	586	546	519	506	382
45°	502	471	422	385	368	387
55°	381	348	293	256	241	342
65°	260	223	173	142	133	258
75°	138	106	70	64	62	147
85°	35	21	18	17	17	39
90°	1	8	16	19	20	4
95°	41	15	21	25	26	51
105°	201	204	147	35	30	213
115°	376	380	386	393	396	371
125°	530	536	538	540	541	474
135°	660	664	667	669	667	508
145°	762	766	768	769	769	477
155°	839	838	839	842	838	387
165°	885	883	882	887	883	250
175°	906	903	903	907	903	86
180°	906	906	906	906	906	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2
2.5°	815.9	815.4	814.9	814.4	814.0	813.0	811.7	810.2	808.8	807.4	808.7
5°	813.2	812.5	811.8	811.1	810.3	809.1	807.3	805.6	803.7	802.0	803.3
7.5°	805.7	804.9	804.1	803.3	802.5	801.0	798.7	796.4	794.1	791.9	792.6
10°	799.4	798.3	797.3	796.3	795.3	793.4	790.8	788.2	785.5	782.9	783.0
12.5°	790.4	789.3	788.1	787.0	785.8	783.7	780.4	777.2	774.0	770.8	770.7
15°	775.6	774.0	772.4	770.8	769.2	766.3	762.2	758.1	754.0	749.9	749.2
17.5°	757.0	755.2	753.3	751.4	749.5	746.0	740.7	735.6	730.3	725.1	723.6
20°	743.3	741.0	738.7	736.2	733.9	730.0	724.4	718.8	713.3	707.7	705.8
22.5°	728.0	725.3	722.6	719.9	717.2	712.9	707.0	701.0	695.2	689.2	686.8
25°	705.7	702.1	698.4	694.7	691.0	685.9	679.1	672.4	665.6	658.9	655.8
27.5°	678.6	674.6	670.5	666.5	662.5	656.7	649.2	641.7	634.2	626.7	622.4
30°	660.2	655.8	651.4	647.0	642.7	636.3	628.1	619.9	611.7	603.5	598.5
32.5°	641.7	636.8	631.8	626.8	621.8	615.0	606.3	597.6	588.9	580.2	574.8
35°	610.7	605.5	600.2	595.0	589.6	582.5	573.3	564.3	555.2	546.1	539.8
37.5°	579.4	573.5	567.7	561.7	555.9	548.1	538.4	528.7	519.0	509.3	502.1
40°	559.3	552.8	546.4	539.9	533.5	525.0	514.7	504.3	493.9	483.5	475.8
42.5°	536.6	530.1	523.7	517.3	510.8	502.2	491.5	480.7	469.9	459.2	450.8
45°	501.9	495.3	488.7	482.2	475.5	466.6	455.3	444.0	432.7	421.5	413.1
47.5°	467.2	459.9	452.7	445.5	438.2	429.0	417.7	406.4	395.1	383.8	374.8
50°	441.9	435.0	428.1	421.2	414.3	404.9	393.0	381.3	369.4	357.5	348.4
52.5°	419.2	411.7	404.2	396.7	389.3	379.7	367.9	356.2	344.4	332.7	323.2
55°	381.3	374.0	366.9	359.6	352.5	342.7	330.2	317.8	305.3	292.8	284.3
57.5°	346.1	338.3	330.5	322.6	314.8	304.6	292.1	279.7	267.1	254.6	246.6
60°	321.8	313.8	305.7	297.6	289.6	279.5	267.3	255.2	243.0	230.8	222.9
62.5°	297.6	289.6	281.5	273.4	265.4	255.2	243.1	230.9	218.7	206.6	199.1
65°	260.5	252.4	244.4	236.3	228.3	218.5	207.1	195.7	184.3	172.8	165.7
67.5°	223.4	215.3	207.2	199.0	190.9	181.3	170.3	159.4	148.4	137.4	132.1
70°	199.1	191.2	183.4	175.5	167.6	158.4	148.2	137.9	127.7	117.4	112.3
72.5°	174.9	167.1	159.3	151.5	143.7	135.2	125.9	116.5	107.2	97.9	93.7
75°	137.8	130.8	123.8	116.8	109.7	102.1	94.1	86.0	78.0	69.9	68.4
77.5°	104.1	97.7	91.4	85.0	78.6	72.8	67.7	62.5	57.3	52.1	51.3
80°	82.5	76.5	70.4	64.4	58.4	53.9	50.8	47.7	44.6	41.6	41.1
82.5°	61.9	56.7	51.5	46.3	41.1	37.8	36.3	35.0	33.5	32.0	31.6
85°	35.0	31.8	28.5	25.3	22.0	20.2	19.8	19.4	18.9	18.4	18.2
87.5°	12.8	11.8	10.8	9.8	8.9	8.5	9.0	9.3	9.7	10.1	10.1
90°	0.7	2.2	3.7	5.2	6.6	8.4	10.3	12.2	14.2	16.2	16.8
92.5°	12.5	12.1	11.7	11.3	10.8	11.4	12.8	14.3	15.8	17.2	18.2
95°	41.1	35.0	28.8	22.6	16.5	14.3	15.9	17.6	19.2	20.8	22.0
97.5°	82.5	79.8	77.1	74.3	71.5	64.7	54.0	43.2	32.5	21.7	22.9
100°	113.7	116.8	119.8	122.7	125.7	115.5	92.2	68.9	45.5	22.2	23.4
102.5°	149.3	151.4	153.6	155.8	157.9	146.3	120.8	95.2	69.7	44.3	40.6
105°	200.6	202.2	203.9	205.5	207.2	201.3	187.8	174.4	160.8	147.4	121.0
107.5°	254.7	256.1	257.4	258.6	259.9	261.7	263.8	266.0	268.0	270.2	250.8
110°	290.8	292.0	293.2	294.4	295.6	297.0	298.7	300.3	302.0	303.6	298.7

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	325.3	326.3	327.4	328.5	329.6	330.9	332.6	334.2	335.9	337.5	337.6
115°	376.3	377.2	378.1	379.0	379.9	381.0	382.4	383.7	385.0	386.4	387.9
117.5°	425.7	426.8	427.9	429.0	430.1	431.0	431.7	432.4	433.1	433.8	435.0
120°	456.4	457.7	459.1	460.4	461.8	462.7	463.1	463.6	464.0	464.4	465.6
122.5°	487.6	488.7	489.8	490.9	492.1	492.8	493.4	494.0	494.6	495.2	496.0
125°	530.5	531.6	532.8	534.0	535.2	536.1	536.7	537.3	537.9	538.5	538.8
127.5°	571.9	573.1	574.3	575.5	576.7	577.6	578.3	579.1	579.8	580.5	581.0
130°	597.7	598.9	600.1	601.3	602.5	603.4	604.0	604.6	605.2	605.8	606.4
132.5°	622.5	623.7	624.9	626.1	627.3	628.1	628.6	629.0	629.6	630.1	630.7
135°	660.3	661.2	662.1	663.1	663.9	664.7	665.3	665.9	666.5	667.1	667.5
137.5°	692.7	693.8	694.9	696.0	697.2	697.9	698.3	698.6	698.9	699.2	700.0
140°	714.2	715.1	716.0	716.9	717.8	718.4	718.9	719.4	719.8	720.2	720.8
142.5°	734.1	735.0	735.9	736.8	737.7	738.4	738.8	739.3	739.7	740.2	740.6
145°	762.0	763.0	764.1	765.1	766.2	766.8	767.2	767.4	767.8	768.0	768.4
147.5°	788.2	788.9	789.6	790.3	791.0	791.5	791.8	792.0	792.4	792.6	793.0
150°	804.3	804.9	805.3	805.7	806.2	806.6	806.8	807.2	807.4	807.8	808.0
152.5°	818.9	819.2	819.3	819.6	819.8	819.9	820.1	820.3	820.5	820.7	821.2
155°	839.4	839.1	838.8	838.5	838.2	838.1	838.3	838.4	838.5	838.7	839.5
157.5°	855.2	855.2	855.2	855.1	855.1	855.1	854.9	854.8	854.6	854.5	855.4
160°	865.0	864.8	864.7	864.5	864.4	864.2	864.1	863.9	863.8	863.6	864.5
162.5°	874.1	873.7	873.3	873.0	872.5	872.3	872.1	872.0	871.8	871.7	872.7
165°	885.2	884.7	884.2	883.8	883.4	883.0	883.0	882.8	882.6	882.4	883.6
167.5°	893.8	893.2	892.6	892.0	891.4	891.0	891.0	891.0	891.0	891.0	892.3
170°	898.6	898.0	897.4	896.8	896.2	896.0	896.0	896.0	896.0	896.0	897.2
172.5°	901.8	901.1	900.4	899.7	899.0	898.7	898.8	898.9	899.1	899.1	900.3
175°	906.0	905.3	904.6	903.8	903.0	902.8	902.8	903.0	903.2	903.4	904.4
177.5°	907.1	906.5	905.9	905.3	904.7	904.5	904.6	904.7	904.8	904.9	905.9
180°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	813.2	813.2	813.2	813.2	813.2	813.2	813.2	813.2
2.5°	810.0	811.3	812.6	813.1	812.9	812.6	812.4	812.2
5°	804.6	806.0	807.3	807.8	807.5	807.2	806.9	806.6
7.5°	793.3	794.0	794.8	794.9	794.4	793.9	793.4	792.9
10°	783.2	783.3	783.4	783.2	782.5	781.7	781.0	780.2
12.5°	770.6	770.5	770.4	769.9	769.0	768.2	767.4	766.5
15°	748.5	747.7	747.0	746.1	745.0	744.1	743.0	742.0
17.5°	722.0	720.5	718.8	717.4	715.8	714.3	712.7	711.3
20°	703.9	702.0	700.1	698.3	696.5	694.7	692.9	691.2
22.5°	684.5	682.1	679.8	677.7	676.1	674.4	672.8	671.1
25°	652.7	649.6	646.6	644.2	642.7	641.0	639.4	637.7
27.5°	618.1	613.9	609.6	606.2	603.7	601.3	598.8	596.3
30°	593.5	588.5	583.6	579.9	577.6	575.2	572.8	570.5
32.5°	569.4	563.9	558.4	554.5	552.1	549.6	547.1	544.7
35°	533.5	527.2	520.9	516.4	513.8	511.2	508.5	505.8
37.5°	495.0	487.8	480.7	475.5	472.3	469.0	465.7	462.4
40°	468.2	460.5	453.0	447.5	444.1	440.7	437.4	433.9
42.5°	442.6	434.2	425.9	420.2	417.2	414.1	411.1	408.1
45°	404.8	396.4	388.1	382.1	378.6	375.1	371.5	368.0
47.5°	365.7	356.6	347.5	341.4	338.3	335.1	332.0	328.8
50°	339.3	330.2	321.2	314.9	311.5	308.2	304.8	301.4
52.5°	313.8	304.4	294.9	288.7	285.7	282.7	279.7	276.6
55°	275.9	267.3	258.8	253.1	250.2	247.3	244.4	241.4
57.5°	238.5	230.5	222.5	217.2	214.7	212.2	209.7	207.2
60°	215.0	207.1	199.1	194.0	191.5	189.0	186.5	184.0
62.5°	191.7	184.3	176.8	171.8	169.2	166.5	163.9	161.4
65°	158.4	151.3	144.0	139.7	138.1	136.5	134.8	133.2
67.5°	126.7	121.3	116.0	112.4	110.7	109.0	107.3	105.6
70°	107.1	102.0	96.9	93.5	91.9	90.3	88.7	87.0
72.5°	89.5	85.3	81.1	78.7	78.0	77.3	76.6	75.9
75°	67.0	65.5	64.1	63.2	62.9	62.6	62.3	62.0
77.5°	50.5	49.8	48.9	48.4	48.1	47.8	47.5	47.2
80°	40.6	40.2	39.8	39.4	39.2	38.8	38.6	38.2
82.5°	31.2	30.7	30.3	30.0	30.0	30.0	29.9	29.8
85°	17.9	17.6	17.3	17.1	17.1	17.1	17.1	17.1
87.5°	10.1	10.1	10.1	10.1	10.0	10.0	9.9	9.8
90°	17.4	17.9	18.5	19.0	19.3	19.6	19.9	20.2
92.5°	19.1	20.1	21.1	21.6	21.8	22.0	22.1	22.4
95°	23.0	24.0	25.1	25.6	25.6	25.6	25.6	25.6
97.5°	24.1	25.2	26.4	27.1	27.3	27.5	27.6	27.7
100°	24.6	25.8	27.0	27.6	27.8	28.0	28.2	28.2
102.5°	36.9	33.1	29.4	27.7	28.0	28.2	28.5	28.8
105°	94.5	68.0	41.5	28.4	28.8	29.0	29.4	29.6
107.5°	231.4	212.0	192.5	172.8	152.9	132.9	113.0	93.0
110°	293.7	288.8	283.9	270.7	249.3	227.9	206.5	185.1

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	337.7	337.8	337.9	335.6	331.1	326.6	322.1	317.6
115°	389.3	390.9	392.4	393.4	394.0	394.6	395.2	395.8
117.5°	436.2	437.4	438.5	439.2	439.4	439.5	439.5	439.7
120°	466.8	468.0	469.2	469.8	469.8	469.8	469.8	469.8
122.5°	496.8	497.7	498.5	498.9	499.1	499.2	499.4	499.5
125°	539.1	539.4	539.7	540.0	540.3	540.6	540.9	541.2
127.5°	581.4	581.9	582.4	582.5	582.2	581.9	581.6	581.3
130°	607.0	607.6	608.2	608.4	608.0	607.8	607.4	607.2
132.5°	631.2	631.8	632.4	632.5	632.1	631.7	631.3	630.9
135°	668.0	668.4	668.8	668.8	668.4	668.0	667.5	667.1
137.5°	700.7	701.4	702.1	702.3	702.1	701.7	701.5	701.1
140°	721.4	722.0	722.6	722.8	722.5	722.2	721.9	721.6
142.5°	741.1	741.6	742.1	742.1	741.7	741.2	740.9	740.5
145°	768.6	769.0	769.2	769.4	769.4	769.4	769.4	769.4
147.5°	793.2	793.6	793.8	793.7	793.0	792.3	791.6	790.9
150°	808.3	808.7	808.9	808.9	808.4	808.0	807.5	807.1
152.5°	821.7	822.3	822.9	822.8	822.1	821.4	820.7	820.0
155°	840.2	840.9	841.7	841.6	840.8	839.8	839.0	838.0
157.5°	856.3	857.1	858.1	857.9	856.8	855.6	854.5	853.3
160°	865.4	866.3	867.2	867.1	866.1	865.0	864.0	863.0
162.5°	873.7	874.8	875.7	875.8	874.9	873.9	873.1	872.1
165°	884.8	886.1	887.3	887.3	886.3	885.2	884.2	883.1
167.5°	893.5	894.7	895.9	895.9	894.7	893.5	892.3	891.0
170°	898.3	899.5	900.7	900.7	899.5	898.3	897.2	896.0
172.5°	901.6	902.8	904.0	903.9	902.6	901.3	899.9	898.6
175°	905.4	906.5	907.5	907.4	906.3	905.1	903.9	902.7
177.5°	906.9	907.8	908.8	908.7	907.5	906.3	905.1	903.9
180°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0

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