

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: P331931-935

Luminaire Tested: **S123DIP-S560D805U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331931-935
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: S123DIP-S560D805U935-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4800.1 lumens
Efficiency: N/A
Efficacy: 125.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

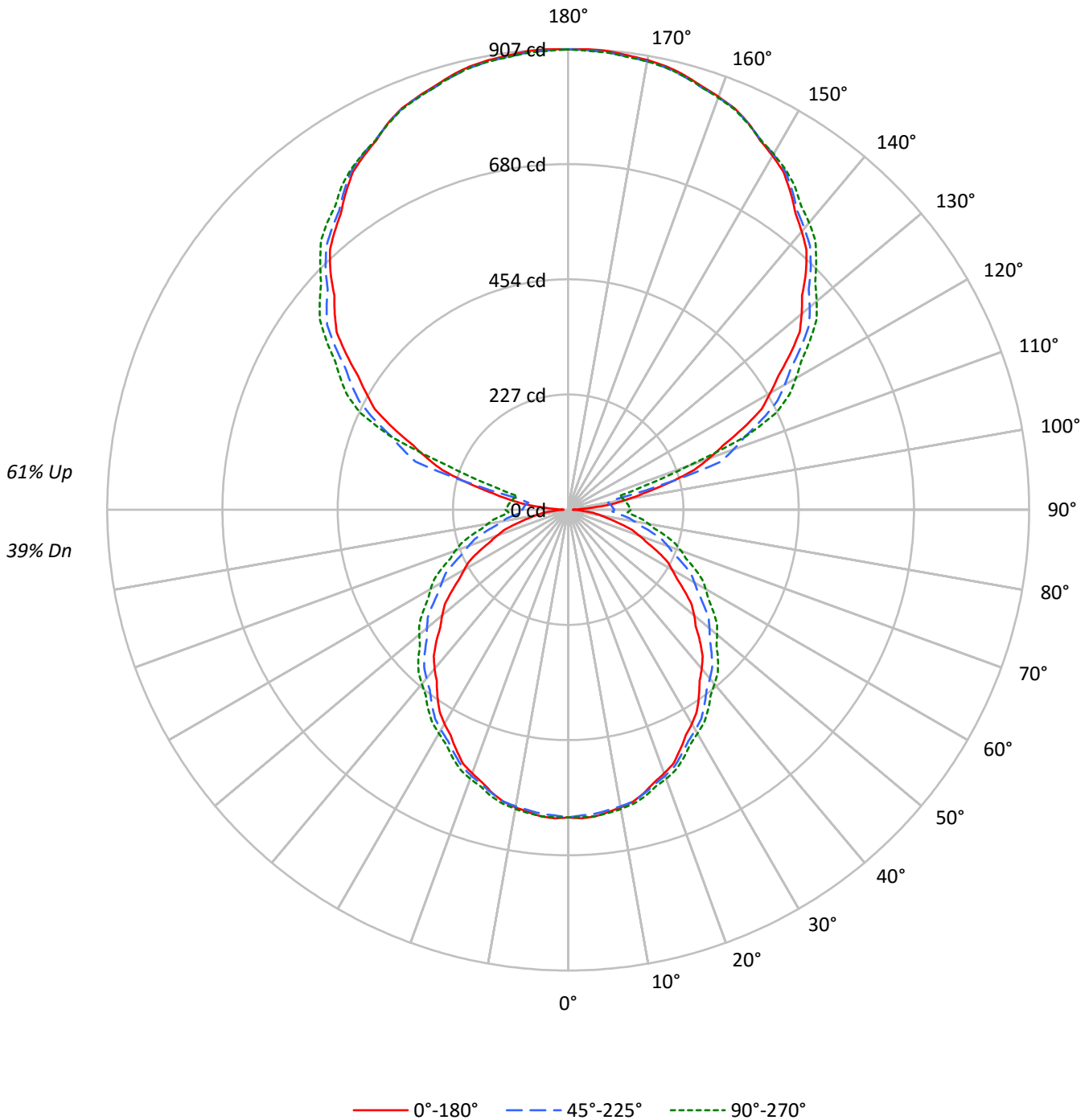
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P331931-935

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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	104	104	104	104	95	95	95	95	77	77	77		61	61	61		46	46	46	39
1	94	90	86	82	86	82	78	75	66	64	62		52	51	49		39	38	37	31
2	86	78	72	66	77	71	65	61	58	54	50		45	43	40		34	32	31	25
3	78	68	61	55	70	62	56	50	51	46	42		40	36	34		30	28	26	21
4	71	60	52	46	64	55	48	42	45	39	35		35	32	29		27	24	22	18
5	65	53	45	39	59	49	42	36	40	34	30		32	28	25		24	21	19	15
6	60	48	40	34	54	44	36	31	36	30	26		28	24	21		22	19	17	13
7	55	43	35	29	50	39	32	27	32	27	23		26	22	19		20	17	15	12
8	51	39	31	26	46	36	29	24	29	24	20		24	20	17		18	15	13	11
9	48	35	28	23	43	32	26	21	27	22	18		22	18	15		17	14	12	9
10	44	32	25	20	40	30	23	19	25	20	16		20	16	13		15	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6518	6518	6518
5°	6537	6352	6357
10°	6480	6207	6175
15°	6395	6040	5978
20°	6277	5850	5760
25°	6129	5632	5532
30°	5977	5436	5300
35°	5809	5228	5116
40°	5647	5038	4917
45°	5468	4857	4759
50°	5291	4678	4584
55°	5097	4494	4428
60°	4906	4308	4266
65°	4710	4109	4076
70°	4418	3885	3878
75°	4048	3629	3679
80°	3620	3378	3451
85°	3222	3204	3317



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.4	1.2
10°-20°	163.6	3.4
20°-30°	244.7	5.1
30°-40°	292.2	6.1
40°-50°	305.8	6.4
50°-60°	286.9	6.0
60°-70°	239.6	5.0
70°-80°	171.5	3.6
80°-90°	104.8	2.2
90°-100°	97.1	2.0
100°-110°	204.1	4.3
110°-120°	408.6	8.5
120°-130°	498.2	10.4
130°-140°	521.2	10.9
140°-150°	481.5	10.0
150°-160°	387.0	8.1
160°-170°	249.8	5.2
170°-180°	86.1	1.8
0°-30°	465.7	9.7
0°-40°	758.0	15.8
0°-60°	1350.7	28.1
0°-90°	1866.5	38.9
90°-120°	709.8	14.8
90°-150°	2210.7	46.1
90°-180°	2934.0	61.1
0°-180°	4800.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	606	606	606	606	606	
5°	606	605	601	606	606	57
15°	577	579	578	585	584	162
25°	521	527	530	538	538	240
35°	448	459	468	477	480	280
45°	367	383	399	411	417	283
55°	280	302	325	342	348	250
65°	193	219	248	267	274	191
75°	105	136	169	190	198	112
85°	32	65	100	122	129	34
90°	9	48	91	115	124	8
95°	48	49	86	110	118	56
105°	206	226	197	102	104	218
115°	380	393	421	443	452	375
125°	532	539	560	574	581	476
135°	662	665	675	688	690	509
145°	763	766	768	774	777	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°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	608.1	607.8	607.4	607.0	606.7	606.1	605.1	604.2	603.2	602.3	603.2
5°	606.1	605.8	605.5	605.3	604.9	604.3	603.5	602.6	601.8	600.8	602.0
7.5°	600.2	600.2	600.3	600.4	600.5	600.0	599.2	598.3	597.4	596.6	598.1
10°	595.0	595.2	595.5	595.8	596.1	595.9	595.1	594.4	593.7	593.0	594.4
12.5°	588.6	589.0	589.4	589.8	590.2	590.2	589.7	589.2	588.7	588.1	589.5
15°	577.1	577.6	578.0	578.4	578.9	579.0	578.9	578.7	578.6	578.4	579.9
17.5°	562.6	563.4	564.4	565.2	566.1	566.5	566.5	566.4	566.4	566.3	567.6
20°	552.1	552.9	553.8	554.7	555.5	556.1	556.5	556.7	557.0	557.3	558.6
22.5°	541.0	541.8	542.7	543.6	544.5	545.1	545.5	546.0	546.4	546.7	548.5
25°	521.1	522.5	524.0	525.5	526.9	527.9	528.3	528.7	529.2	529.6	531.5
27.5°	501.0	502.7	504.4	506.0	507.6	508.9	509.9	510.8	511.8	512.7	514.4
30°	486.7	488.6	490.5	492.5	494.4	495.9	497.1	498.3	499.4	500.6	502.4
32.5°	470.9	473.0	475.2	477.3	479.5	481.3	482.8	484.3	485.9	487.4	489.3
35°	448.5	450.8	453.1	455.6	457.9	460.0	461.9	463.8	465.7	467.6	469.8
37.5°	424.7	427.4	430.0	432.7	435.3	437.8	440.1	442.5	444.8	447.2	449.7
40°	408.9	411.6	414.2	416.8	419.5	422.2	425.2	428.1	431.0	433.9	436.4
42.5°	391.5	394.8	398.0	401.1	404.4	407.5	410.6	413.6	416.7	419.7	422.5
45°	366.7	370.2	373.8	377.3	380.7	384.4	388.1	391.7	395.4	399.0	401.8
47.5°	340.7	344.7	348.7	352.7	356.6	360.8	365.0	369.1	373.3	377.5	380.6
50°	323.8	328.0	332.0	336.1	340.3	344.6	349.1	353.7	358.2	362.7	366.1
52.5°	305.9	310.2	314.6	318.9	323.2	328.0	332.9	337.9	342.9	348.0	351.5
55°	279.7	284.5	289.3	294.1	299.0	304.0	309.4	314.6	319.9	325.1	329.1
57.5°	254.1	259.1	264.2	269.1	274.2	279.7	285.4	291.2	297.0	302.7	306.7
60°	236.1	241.4	246.7	251.9	257.2	262.9	268.9	274.9	280.9	286.9	291.0
62.5°	219.2	224.6	230.1	235.4	240.8	246.7	253.0	259.4	265.8	272.2	276.2
65°	193.2	199.0	204.7	210.4	216.1	222.2	228.7	235.1	241.5	248.0	252.4
67.5°	166.9	173.0	179.0	185.0	191.1	197.4	204.1	210.6	217.1	223.7	228.5
70°	148.4	154.7	161.0	167.3	173.6	180.3	187.3	194.3	201.4	208.4	213.1
72.5°	131.5	137.8	144.1	150.4	156.7	163.5	170.7	178.1	185.3	192.6	197.4
75°	104.9	111.8	118.6	125.5	132.4	139.6	146.9	154.2	161.5	168.8	173.7
77.5°	81.6	88.6	95.6	102.5	109.4	116.6	124.0	131.4	138.8	146.2	151.3
80°	65.3	72.5	79.6	86.9	94.0	101.4	109.0	116.7	124.3	131.9	136.9
82.5°	51.1	58.4	65.6	72.9	80.2	87.7	95.5	103.2	111.0	118.7	123.7
85°	32.3	39.6	47.0	54.3	61.6	69.1	77.0	84.7	92.5	100.2	105.2
87.5°	17.7	25.3	32.9	40.5	48.0	55.8	63.6	71.5	79.4	87.2	92.4
90°	9.2	17.9	26.6	35.3	44.0	53.0	62.4	71.8	81.3	90.7	96.3
92.5°	20.6	26.6	32.7	38.7	44.8	52.3	61.0	69.9	78.7	87.6	93.3
95°	48.3	47.9	47.4	47.1	46.7	50.9	59.7	68.5	77.3	86.2	91.8
97.5°	89.0	91.4	93.8	96.2	98.6	97.9	93.9	90.1	86.1	82.2	87.8
100°	119.7	127.3	135.1	142.8	150.4	145.9	129.4	112.8	96.2	79.6	85.1
102.5°	154.7	161.1	167.5	173.8	180.2	173.9	155.1	136.2	117.4	98.5	98.9
105°	205.9	211.0	216.2	221.4	226.5	225.5	218.3	211.2	204.1	196.9	174.5
107.5°	259.2	263.5	267.8	272.1	276.4	282.7	290.8	298.9	306.9	315.0	299.5
110°	294.7	298.6	302.4	306.3	310.0	315.7	323.3	330.8	338.3	345.8	344.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	329.2	332.4	335.7	339.0	342.2	347.4	354.7	362.0	369.3	376.5	380.3
115°	379.6	382.2	384.9	387.5	390.2	394.9	401.5	408.1	414.7	421.3	426.4
117.5°	428.9	431.0	433.3	435.4	437.6	441.5	447.2	452.8	458.5	464.1	468.8
120°	459.0	461.1	463.2	465.3	467.4	471.1	476.3	481.6	486.9	492.1	496.7
122.5°	490.3	491.7	493.3	494.7	496.2	499.6	504.7	509.9	515.1	520.2	524.3
125°	532.4	533.6	534.8	536.0	537.2	540.2	545.1	549.9	554.7	559.6	563.0
127.5°	573.9	574.9	575.9	577.0	578.1	580.7	585.0	589.2	593.4	597.6	601.1
130°	599.7	600.8	601.8	602.9	603.9	606.2	609.8	613.3	616.8	620.4	623.7
132.5°	624.0	625.1	626.3	627.5	628.6	630.6	633.4	636.3	639.1	641.9	645.1
135°	661.7	662.4	663.1	663.9	664.7	666.2	668.3	670.5	672.8	675.0	678.0
137.5°	693.8	694.8	695.9	696.9	697.9	699.0	700.3	701.5	702.7	704.0	707.1
140°	714.8	715.7	716.6	717.6	718.4	719.4	720.2	721.1	722.0	722.9	725.7
142.5°	734.8	735.6	736.3	737.1	737.9	738.6	739.1	739.6	740.2	740.7	743.1
145°	762.7	763.5	764.4	765.3	766.2	766.8	767.2	767.4	767.8	768.0	769.5
147.5°	788.2	788.9	789.6	790.3	791.0	791.5	791.8	792.0	792.4	792.6	793.3
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°	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
2.5°	604.2	605.1	606.1	606.5	606.3	606.2	606.1	606.0
5°	603.2	604.3	605.5	606.1	605.9	605.7	605.6	605.5
7.5°	599.5	601.0	602.5	603.1	603.0	602.8	602.6	602.4
10°	595.9	597.4	598.8	599.3	599.1	598.8	598.5	598.2
12.5°	590.9	592.2	593.6	594.1	593.8	593.5	593.2	593.0
15°	581.3	582.8	584.3	585.0	584.8	584.6	584.5	584.4
17.5°	568.9	570.2	571.5	572.1	571.9	571.7	571.5	571.3
20°	560.0	561.3	562.6	563.4	563.4	563.6	563.8	563.9
22.5°	550.1	551.8	553.5	554.2	554.1	554.1	554.0	553.9
25°	533.4	535.4	537.3	538.2	538.2	538.2	538.2	538.2
27.5°	516.0	517.6	519.3	520.2	520.3	520.4	520.6	520.6
30°	504.1	505.8	507.6	508.5	508.5	508.5	508.5	508.5
32.5°	491.1	493.0	494.9	496.0	496.4	496.7	497.1	497.4
35°	472.0	474.2	476.4	477.8	478.4	479.0	479.6	480.2
37.5°	452.1	454.6	457.1	458.7	459.1	459.5	460.0	460.5
40°	438.9	441.4	443.9	445.5	446.1	446.7	447.2	447.8
42.5°	425.2	427.9	430.7	432.4	433.3	434.0	434.9	435.7
45°	404.6	407.3	410.2	412.2	413.3	414.5	415.7	416.8
47.5°	383.8	386.9	390.0	392.1	393.0	393.9	394.9	395.7
50°	369.5	372.9	376.3	378.4	379.4	380.5	381.5	382.5
52.5°	355.0	358.4	362.0	364.3	365.6	366.8	368.1	369.4
55°	333.0	337.0	341.0	343.5	344.7	345.9	347.1	348.3
57.5°	310.7	314.7	318.7	321.3	322.7	324.1	325.5	326.8
60°	295.2	299.2	303.3	306.2	307.8	309.4	311.0	312.6
62.5°	280.3	284.5	288.5	291.4	292.8	294.3	295.8	297.3
65°	256.8	261.1	265.6	268.5	270.0	271.5	272.9	274.4
67.5°	233.3	238.2	243.0	246.0	247.2	248.4	249.7	250.9
70°	217.8	222.5	227.2	230.2	231.7	233.2	234.6	236.1
72.5°	202.2	207.0	211.8	215.0	216.5	217.9	219.4	220.8
75°	178.5	183.4	188.2	191.5	193.2	195.0	196.7	198.5
77.5°	156.4	161.4	166.5	169.8	171.2	172.5	173.8	175.2
80°	141.9	146.9	151.9	155.1	156.5	158.0	159.5	160.9
82.5°	128.7	133.6	138.6	141.9	143.4	144.8	146.3	147.7
85°	110.2	115.2	120.2	123.4	124.8	126.3	127.8	129.2
87.5°	97.5	102.5	107.7	111.0	112.5	114.0	115.5	117.1
90°	101.9	107.5	113.0	116.7	118.5	120.2	122.0	123.7
92.5°	99.2	105.0	110.8	114.5	116.1	117.5	119.1	120.6
95°	97.4	103.0	108.5	112.0	113.5	114.9	116.4	118.0
97.5°	93.3	98.9	104.4	108.1	109.7	111.3	112.9	114.5
100°	90.5	95.9	101.3	104.9	106.5	108.1	109.8	111.4
102.5°	99.4	99.8	100.2	101.3	103.0	104.8	106.5	108.2
105°	152.1	129.8	107.4	97.0	98.7	100.2	101.9	103.5
107.5°	284.0	268.5	253.0	236.0	217.3	198.7	180.0	161.4
110°	343.5	342.4	341.3	330.6	310.4	290.2	269.9	249.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	384.1	387.9	391.7	391.9	388.7	385.5	382.3	379.0
115°	431.4	436.4	441.3	444.8	446.5	448.3	450.1	451.9
117.5°	473.5	478.1	482.8	485.8	487.1	488.4	489.6	490.9
120°	501.3	505.8	510.4	513.2	514.3	515.3	516.3	517.3
122.5°	528.4	532.5	536.6	539.2	540.4	541.5	542.6	543.8
125°	566.4	569.7	573.1	575.5	576.8	578.1	579.5	580.7
127.5°	604.4	607.8	611.1	613.2	613.9	614.6	615.3	616.0
130°	627.1	630.5	633.9	635.8	636.5	637.0	637.6	638.2
132.5°	648.4	651.7	655.0	656.9	657.5	658.1	658.7	659.2
135°	681.1	684.2	687.3	689.0	689.3	689.6	689.8	690.2
137.5°	710.1	713.1	716.1	717.9	718.3	718.8	719.2	719.6
140°	728.5	731.2	734.1	735.7	736.2	736.6	737.0	737.4
142.5°	745.5	748.0	750.4	751.8	752.2	752.5	752.8	753.1
145°	770.9	772.5	774.0	775.0	775.5	776.1	776.7	777.3
147.5°	794.0	794.6	795.3	795.6	795.4	795.2	795.0	794.9
150°	808.3	808.7	808.9	809.0	808.8	808.7	808.6	808.4
152.5°	821.7	822.3	822.9	822.8	822.2	821.6	820.9	820.3
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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