

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: P332285-940

Luminaire Tested: **S123RDIP-S560D805U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332285-940
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-S560D805U940-4F0-1E-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: 4766.8 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

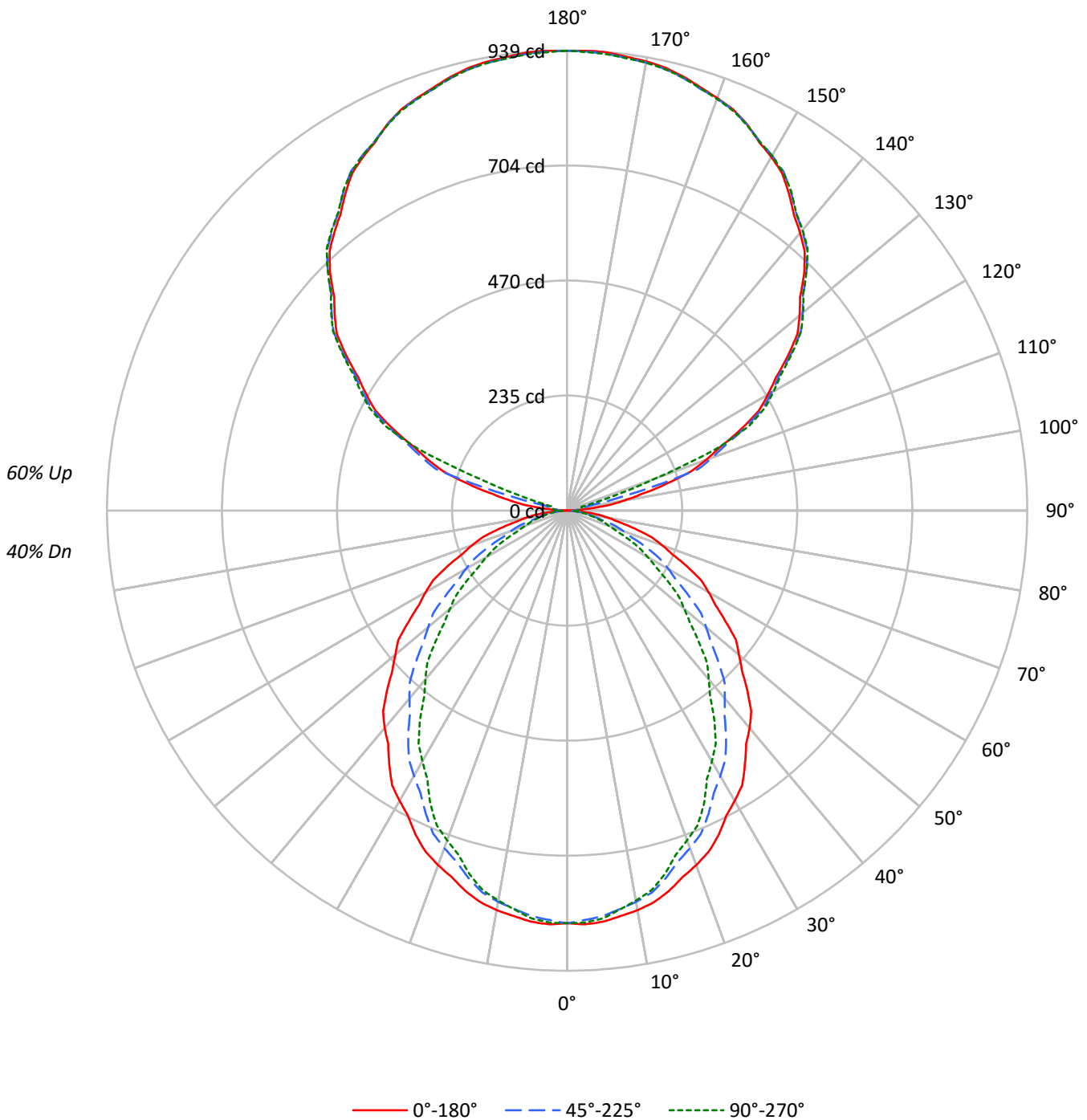
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	96	92	88	85	87	84	80	78	68	66	64	55	53	52	42	41	40	34
2	87	80	74	69	79	73	68	64	60	57	54	48	46	44	37	36	34	29
3	80	71	64	58	72	65	59	54	53	49	45	43	40	37	33	31	29	25
4	73	63	55	49	66	57	51	46	48	43	39	38	35	32	30	27	25	22
5	67	56	48	42	61	51	44	39	43	37	34	34	31	28	27	24	22	19
6	62	50	42	37	56	46	39	34	38	33	29	31	27	24	24	22	20	17
7	57	45	38	32	52	42	35	30	35	30	26	28	25	22	22	20	18	15
8	53	41	34	28	48	38	31	27	32	27	23	26	22	19	21	18	16	13
9	49	38	30	25	45	35	28	24	29	24	21	24	20	17	19	16	14	12
10	46	34	27	23	42	32	25	21	27	22	18	22	18	16	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9065	9065	9065
5°	9100	8975	9027
10°	9049	8862	8833
15°	8952	8655	8564
20°	8818	8395	8200
25°	8679	8105	7845
30°	8499	7768	7343
35°	8311	7432	6884
40°	8140	7035	6315
45°	7913	6645	5801
50°	7663	6199	5228
55°	7409	5692	4692
60°	7175	5147	4103
65°	6872	4559	3512
70°	6493	3827	2839
75°	5939	3011	2670
80°	5294	2672	2455
85°	4471	2359	2186



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	1.7
10°-20°	220.1	4.6
20°-30°	316.9	6.6
30°-40°	356.9	7.5
40°-50°	341.4	7.2
50°-60°	279.6	5.9
60°-70°	188.7	4.0
70°-80°	94.9	2.0
80°-90°	27.7	0.6
90°-100°	34.1	0.7
100°-110°	162.6	3.4
110°-120°	390.6	8.2
120°-130°	497.3	10.4
130°-140°	531.4	11.1
140°-150°	496.9	10.4
150°-160°	400.8	8.4
160°-170°	258.7	5.4
170°-180°	89.2	1.9
0°-30°	616.0	12.9
0°-40°	972.9	20.4
0°-60°	1594.0	33.4
0°-90°	1905.3	40.0
90°-120°	587.3	12.3
90°-150°	2112.9	44.3
90°-180°	2862.0	60.0
0°-180°	4766.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	842	842	842	842	842	
5°	842	839	831	836	835	80
15°	803	795	777	773	768	226
25°	731	713	682	668	660	336
35°	632	607	566	537	524	396
45°	520	488	436	399	381	401
55°	395	360	303	265	250	354
65°	270	231	179	147	138	267
75°	143	110	72	66	64	152
85°	36	22	19	18	18	41
90°	1	8	17	19	21	4
95°	42	16	22	26	26	53
105°	208	212	153	36	31	220
115°	390	394	400	407	410	385
125°	549	555	558	559	560	490
135°	684	688	691	693	691	526
145°	789	794	795	797	797	494
155°	869	868	869	872	868	400
165°	917	915	914	919	915	259
175°	938	935	936	940	935	89
180°	938	938	938	938	938	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2
2.5°	845.0	844.5	844.0	843.5	843.0	842.0	840.6	839.1	837.7	836.2	837.6
5°	842.2	841.5	840.7	840.0	839.2	837.9	836.1	834.3	832.4	830.6	832.0
7.5°	834.5	833.7	832.8	832.0	831.2	829.6	827.2	824.8	822.4	820.1	820.8
10°	827.9	826.8	825.7	824.7	823.7	821.7	819.0	816.3	813.5	810.8	810.9
12.5°	818.6	817.4	816.2	815.0	813.9	811.6	808.2	804.9	801.6	798.3	798.2
15°	803.3	801.6	800.0	798.3	796.7	793.6	789.4	785.2	780.9	776.7	775.9
17.5°	784.0	782.1	780.2	778.2	776.2	772.6	767.1	761.8	756.3	751.0	749.4
20°	769.8	767.4	765.0	762.5	760.1	756.0	750.2	744.5	738.7	732.9	730.9
22.5°	753.9	751.2	748.4	745.6	742.8	738.3	732.2	726.0	720.0	713.8	711.3
25°	730.8	727.1	723.3	719.5	715.7	710.3	703.3	696.3	689.4	682.4	679.2
27.5°	702.8	698.7	694.5	690.3	686.1	680.1	672.3	664.6	656.8	649.1	644.6
30°	683.8	679.2	674.7	670.1	665.6	659.0	650.5	642.0	633.5	625.0	619.8
32.5°	664.6	659.5	654.3	649.2	644.0	636.9	627.9	618.9	609.9	600.9	595.3
35°	632.5	627.1	621.6	616.2	610.6	603.2	593.8	584.4	575.0	565.6	559.0
37.5°	600.0	594.0	587.9	581.8	575.7	567.7	557.6	547.6	537.5	527.4	520.0
40°	579.3	572.6	565.9	559.2	552.5	543.8	533.1	522.3	511.5	500.7	492.8
42.5°	555.7	549.0	542.4	535.7	529.1	520.1	509.0	497.8	486.7	475.5	466.9
45°	519.8	513.0	506.1	499.4	492.5	483.2	471.5	459.9	448.2	436.5	427.8
47.5°	483.8	476.4	468.9	461.4	453.9	444.3	432.6	420.9	409.2	397.5	388.2
50°	457.6	450.5	443.4	436.2	429.1	419.4	407.1	394.8	382.5	370.2	360.8
52.5°	434.2	426.4	418.7	410.9	403.2	393.2	381.0	368.9	356.7	344.6	334.7
55°	394.8	387.4	380.0	372.5	365.1	354.9	342.0	329.1	316.2	303.3	294.4
57.5°	358.5	350.4	342.2	334.1	326.0	315.5	302.6	289.6	276.6	263.7	255.4
60°	333.3	325.0	316.6	308.3	300.0	289.4	276.9	264.3	251.6	239.1	230.9
62.5°	308.2	299.9	291.5	283.1	274.8	264.3	251.7	239.2	226.5	213.9	206.3
65°	269.8	261.4	253.2	244.8	236.4	226.3	214.5	202.7	190.8	179.0	171.6
67.5°	231.4	223.0	214.5	206.1	197.7	187.8	176.4	165.1	153.7	142.3	136.8
70°	206.3	198.0	189.9	181.7	173.5	164.1	153.5	142.9	132.2	121.6	116.3
72.5°	181.1	173.1	165.0	156.9	148.8	140.0	130.4	120.6	111.0	101.4	97.0
75°	142.8	135.5	128.2	120.9	113.6	105.8	97.5	89.1	80.8	72.4	70.9
77.5°	107.8	101.2	94.6	88.0	81.4	75.4	70.1	64.7	59.3	53.9	53.1
80°	85.4	79.2	72.9	66.7	60.5	55.8	52.6	49.4	46.2	43.1	42.5
82.5°	64.1	58.7	53.3	48.0	42.5	39.1	37.6	36.2	34.7	33.2	32.7
85°	36.2	32.9	29.5	26.2	22.8	21.0	20.5	20.1	19.6	19.1	18.8
87.5°	13.3	12.2	11.2	10.2	9.2	8.8	9.3	9.6	10.1	10.4	10.4
90°	0.7	2.2	3.8	5.4	6.9	8.6	10.7	12.7	14.7	16.8	17.4
92.5°	12.9	12.6	12.1	11.7	11.2	11.8	13.3	14.8	16.3	17.8	18.8
95°	42.5	36.2	29.8	23.5	17.1	14.8	16.5	18.2	19.9	21.6	22.7
97.5°	85.4	82.7	79.8	77.0	74.1	67.1	55.9	44.8	33.6	22.5	23.7
100°	117.8	120.9	124.0	127.1	130.2	119.7	95.5	71.3	47.2	23.0	24.3
102.5°	154.6	156.9	159.1	161.3	163.5	151.5	125.1	98.6	72.2	45.8	42.0
105°	207.8	209.5	211.2	212.9	214.5	208.5	194.5	180.6	166.6	152.7	125.3
107.5°	263.8	265.2	266.5	267.9	269.2	271.0	273.2	275.4	277.6	279.8	259.8
110°	301.1	302.4	303.6	304.9	306.1	307.6	309.3	311.0	312.7	314.4	309.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	336.9	338.0	339.1	340.2	341.3	342.7	344.5	346.2	347.9	349.6	349.6
115°	389.7	390.7	391.6	392.5	393.4	394.6	396.0	397.3	398.8	400.2	401.7
117.5°	440.9	442.0	443.2	444.3	445.4	446.4	447.1	447.8	448.5	449.2	450.5
120°	472.7	474.0	475.5	476.8	478.2	479.2	479.7	480.1	480.5	481.0	482.2
122.5°	505.0	506.1	507.3	508.5	509.6	510.4	511.0	511.7	512.2	512.8	513.7
125°	549.4	550.5	551.8	553.0	554.3	555.3	555.9	556.4	557.1	557.7	558.0
127.5°	592.3	593.5	594.8	596.0	597.3	598.2	599.0	599.8	600.5	601.2	601.7
130°	619.0	620.3	621.5	622.8	624.0	624.9	625.5	626.2	626.8	627.4	628.0
132.5°	644.7	646.0	647.2	648.5	649.7	650.5	651.0	651.5	652.0	652.6	653.2
135°	683.9	684.8	685.7	686.7	687.6	688.4	689.0	689.6	690.3	690.9	691.3
137.5°	717.4	718.5	719.7	720.9	722.0	722.8	723.2	723.5	723.8	724.2	725.0
140°	739.7	740.6	741.5	742.4	743.4	744.0	744.6	745.0	745.5	745.9	746.5
142.5°	760.3	761.3	762.1	763.1	764.0	764.7	765.2	765.6	766.1	766.6	767.0
145°	789.2	790.2	791.3	792.4	793.5	794.2	794.5	794.8	795.1	795.4	795.8
147.5°	816.4	817.1	817.8	818.5	819.2	819.7	820.0	820.3	820.6	820.9	821.3
150°	833.0	833.6	834.0	834.5	834.9	835.4	835.6	836.0	836.2	836.6	836.9
152.5°	848.1	848.4	848.6	848.8	849.0	849.2	849.4	849.5	849.8	850.0	850.5
155°	869.3	869.1	868.7	868.4	868.1	868.0	868.2	868.3	868.4	868.6	869.4
157.5°	885.7	885.7	885.7	885.6	885.6	885.6	885.4	885.3	885.1	884.9	885.9
160°	895.8	895.6	895.5	895.4	895.2	895.0	894.9	894.7	894.6	894.4	895.4
162.5°	905.3	904.9	904.5	904.1	903.7	903.4	903.2	903.1	902.9	902.8	903.8
165°	916.8	916.2	915.8	915.3	914.9	914.5	914.4	914.3	914.1	913.9	915.2
167.5°	925.7	925.1	924.4	923.8	923.2	922.8	922.8	922.8	922.8	922.8	924.1
170°	930.7	930.1	929.4	928.8	928.2	927.9	927.9	927.9	927.9	927.9	929.2
172.5°	934.0	933.3	932.6	931.7	931.0	930.8	930.9	930.9	931.1	931.2	932.5
175°	938.3	937.5	936.8	936.0	935.2	935.0	935.0	935.2	935.4	935.6	936.7
177.5°	939.4	938.9	938.3	937.6	937.0	936.7	936.8	937.0	937.1	937.2	938.3
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	842.2	842.2	842.2	842.2	842.2	842.2	842.2	842.2
2.5°	838.9	840.3	841.6	842.1	841.9	841.6	841.4	841.2
5°	833.3	834.7	836.1	836.6	836.3	836.0	835.7	835.4
7.5°	821.6	822.3	823.1	823.2	822.7	822.2	821.7	821.2
10°	811.1	811.3	811.4	811.1	810.4	809.6	808.9	808.1
12.5°	798.1	798.0	797.9	797.4	796.5	795.6	794.8	793.9
15°	775.2	774.4	773.6	772.7	771.6	770.6	769.5	768.5
17.5°	747.8	746.2	744.5	743.0	741.4	739.8	738.2	736.6
20°	729.0	727.0	725.1	723.2	721.3	719.5	717.6	715.9
22.5°	708.9	706.4	704.0	701.9	700.2	698.5	696.8	695.1
25°	676.0	672.8	669.7	667.2	665.6	663.9	662.2	660.5
27.5°	640.2	635.8	631.3	627.9	625.3	622.8	620.2	617.6
30°	614.7	609.5	604.4	600.6	598.2	595.8	593.3	590.8
32.5°	589.7	584.0	578.4	574.3	571.8	569.2	566.6	564.1
35°	552.5	546.0	539.5	534.8	532.1	529.4	526.6	523.9
37.5°	512.6	505.2	497.8	492.5	489.1	485.7	482.3	478.9
40°	484.9	477.0	469.1	463.4	459.9	456.5	453.0	449.4
42.5°	458.3	449.7	441.0	435.2	432.0	428.9	425.8	422.7
45°	419.2	410.5	401.9	395.7	392.1	388.4	384.8	381.1
47.5°	378.7	369.3	359.9	353.6	350.4	347.1	343.8	340.5
50°	351.4	342.0	332.6	326.1	322.6	319.1	315.7	312.2
52.5°	325.0	315.2	305.4	299.0	295.9	292.7	289.6	286.5
55°	285.7	276.9	268.0	262.2	259.1	256.1	253.1	250.0
57.5°	247.0	238.7	230.4	225.0	222.4	219.8	217.2	214.6
60°	222.7	214.5	206.3	200.9	198.3	195.7	193.1	190.6
62.5°	198.5	190.8	183.1	177.9	175.2	172.5	169.8	167.1
65°	164.1	156.7	149.2	144.6	143.0	141.3	139.6	137.9
67.5°	131.3	125.6	120.1	116.5	114.7	112.9	111.1	109.3
70°	110.9	105.7	100.3	96.8	95.1	93.5	91.8	90.2
72.5°	92.6	88.4	84.0	81.5	80.8	80.1	79.4	78.6
75°	69.4	67.9	66.3	65.5	65.1	64.8	64.5	64.2
77.5°	52.3	51.5	50.6	50.1	49.8	49.5	49.2	48.9
80°	42.1	41.6	41.2	40.8	40.6	40.2	39.9	39.6
82.5°	32.3	31.8	31.4	31.1	31.0	31.0	30.9	30.9
85°	18.5	18.2	17.9	17.7	17.7	17.7	17.7	17.7
87.5°	10.4	10.4	10.4	10.4	10.3	10.3	10.3	10.2
90°	18.0	18.5	19.2	19.7	20.0	20.3	20.6	21.0
92.5°	19.8	20.8	21.8	22.4	22.6	22.7	22.9	23.2
95°	23.8	24.9	25.9	26.5	26.5	26.5	26.5	26.5
97.5°	25.0	26.1	27.4	28.1	28.3	28.4	28.5	28.7
100°	25.5	26.8	28.0	28.6	28.8	29.0	29.2	29.2
102.5°	38.2	34.3	30.5	28.7	29.0	29.2	29.5	29.9
105°	97.8	70.4	43.0	29.4	29.8	30.1	30.4	30.7
107.5°	239.6	219.5	199.4	179.0	158.4	137.7	117.0	96.3
110°	304.2	299.1	294.0	280.4	258.2	236.0	213.8	191.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	349.7	349.8	349.9	347.6	343.0	338.2	333.6	329.0
115°	403.2	404.8	406.4	407.4	408.0	408.7	409.3	409.9
117.5°	451.7	453.0	454.1	454.9	455.0	455.1	455.2	455.4
120°	483.5	484.7	486.0	486.6	486.6	486.6	486.6	486.6
122.5°	514.5	515.4	516.3	516.7	516.9	517.0	517.2	517.3
125°	558.3	558.7	558.9	559.3	559.5	559.9	560.2	560.5
127.5°	602.2	602.7	603.2	603.2	603.0	602.7	602.4	602.1
130°	628.7	629.3	629.9	630.1	629.7	629.5	629.1	628.8
132.5°	653.7	654.3	655.0	655.1	654.7	654.2	653.8	653.4
135°	691.8	692.2	692.7	692.7	692.2	691.8	691.3	690.9
137.5°	725.7	726.4	727.2	727.4	727.1	726.7	726.5	726.1
140°	747.2	747.8	748.4	748.6	748.2	748.0	747.6	747.3
142.5°	767.6	768.0	768.6	768.6	768.1	767.7	767.3	766.9
145°	796.0	796.4	796.7	796.8	796.8	796.8	796.8	796.8
147.5°	821.5	821.9	822.2	822.0	821.3	820.6	819.8	819.1
150°	837.1	837.5	837.8	837.8	837.2	836.8	836.3	835.9
152.5°	851.0	851.6	852.2	852.1	851.4	850.7	850.0	849.3
155°	870.2	870.9	871.7	871.6	870.8	869.8	868.9	867.9
157.5°	886.8	887.7	888.7	888.5	887.3	886.1	884.9	883.7
160°	896.3	897.2	898.1	898.0	897.0	895.9	894.8	893.8
162.5°	904.9	906.0	907.0	907.0	906.1	905.1	904.2	903.2
165°	916.4	917.7	918.9	919.0	917.9	916.8	915.7	914.6
167.5°	925.3	926.6	927.8	927.8	926.6	925.3	924.1	922.8
170°	930.3	931.6	932.8	932.8	931.6	930.3	929.2	927.9
172.5°	933.7	935.0	936.2	936.1	934.8	933.4	932.0	930.7
175°	937.7	938.8	939.9	939.8	938.6	937.4	936.1	934.9
177.5°	939.2	940.2	941.2	941.1	939.9	938.6	937.4	936.1
180°	938.3	938.3	938.3	938.3	938.3	938.3	938.3	938.3

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