

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: P331318-927

Luminaire Tested: **SA2XXDIP-C485D925U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331318-927
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-C485D925U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4498.0 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

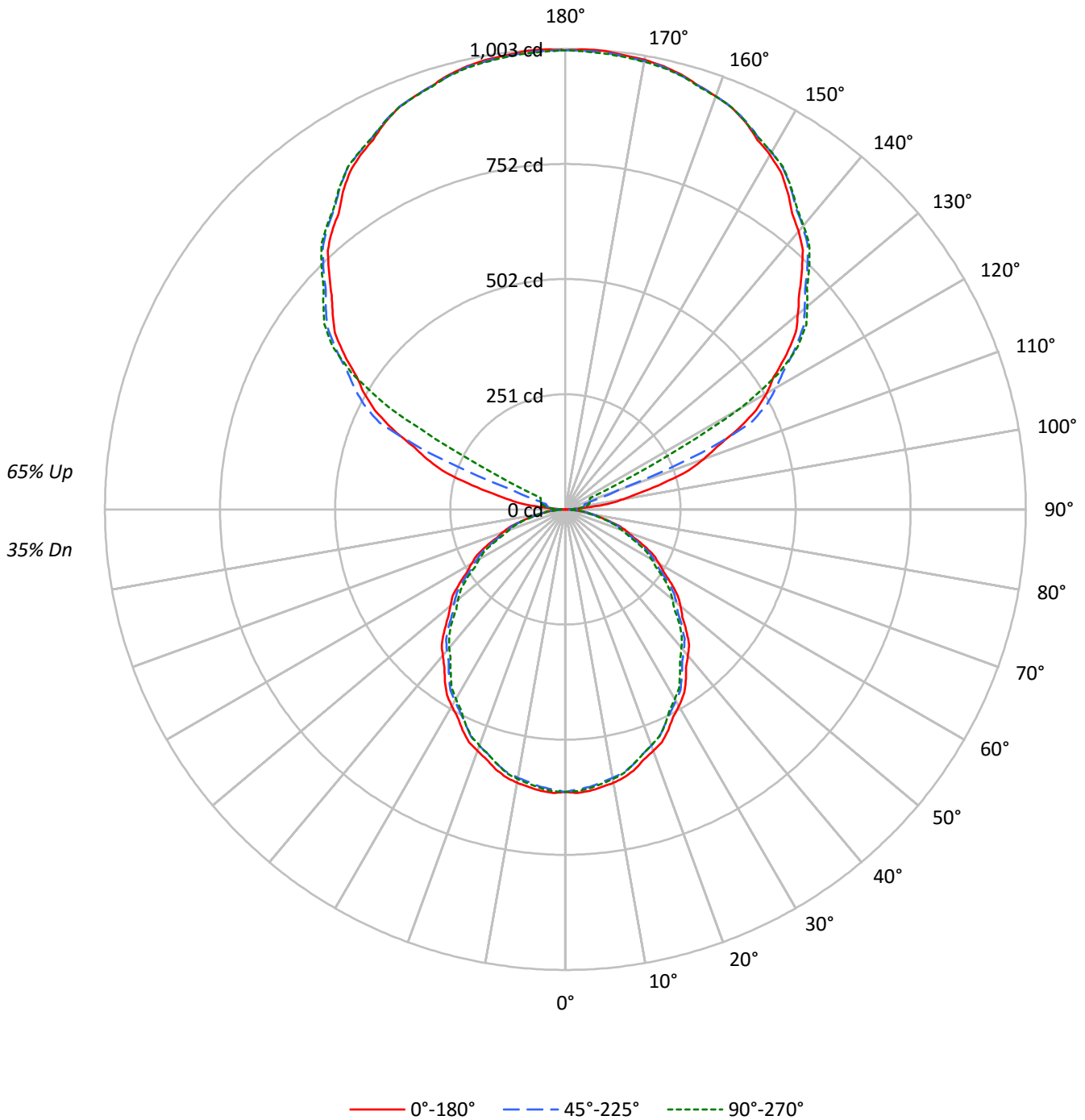
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	75	75	75	58	58	58	42	42	42	35				
1	94	90	86	83	85	82	78	75	66	63	61	51	49	48	37	36	36	29				
2	86	79	73	68	77	71	66	62	57	54	51	45	42	40	33	31	30	25				
3	78	69	62	56	70	63	57	52	51	46	43	39	36	34	29	27	25	21				
4	72	61	53	48	64	55	49	44	45	40	36	35	32	29	26	24	22	18				
5	66	54	46	41	59	49	43	37	40	35	31	31	28	25	23	21	19	16				
6	60	49	41	35	54	44	37	32	36	31	27	28	25	22	21	19	17	14				
7	56	44	36	31	50	40	33	28	33	28	24	26	22	19	19	17	15	12				
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	15	13	11				
9	48	36	29	24	43	33	27	22	27	22	19	22	18	15	16	14	12	10				
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	13	11	9				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9935	9935	9935
5°	9972	9828	9887
10°	9914	9729	9778
15°	9790	9603	9593
20°	9617	9414	9402
25°	9444	9180	9180
30°	9221	8968	8889
35°	9014	8712	8584
40°	8753	8456	8292
45°	8499	8200	7996
50°	8219	7935	7654
55°	7927	7626	7344
60°	7601	7259	6991
65°	7255	6896	6575
70°	6812	6453	6146
75°	6201	5939	5795
80°	5504	5337	5058
85°	4483	4279	3835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	1.3
10°-20°	162.8	3.6
20°-30°	239.3	5.3
30°-40°	278.0	6.2
40°-50°	277.7	6.2
50°-60°	242.1	5.4
60°-70°	179.0	4.0
70°-80°	101.4	2.3
80°-90°	29.7	0.7
90°-100°	33.4	0.7
100°-110°	122.3	2.7
110°-120°	326.9	7.3
120°-130°	539.7	12.0
130°-140°	574.0	12.8
140°-150°	533.5	11.9
150°-160°	428.9	9.5
160°-170°	276.4	6.1
170°-180°	95.1	2.1
0°-30°	459.9	10.2
0°-40°	737.9	16.4
0°-60°	1257.7	28.0
0°-90°	1567.9	34.9
90°-120°	482.6	10.7
90°-150°	2129.7	47.3
90°-180°	2930.0	65.1
0°-180°	4498.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	615	613	606	611	610	58
15°	586	582	574	577	574	165
25°	530	525	515	516	515	244
35°	457	451	442	438	436	285
45°	372	368	359	353	350	287
55°	282	278	271	264	261	252
65°	190	186	180	175	172	188
75°	99	98	95	92	93	106
85°	24	24	23	21	21	28
90°	1	9	14	18	20	3
95°	47	25	28	32	31	58
105°	220	229	44	52	55	235
115°	416	429	446	127	59	409
125°	588	598	611	616	619	524
135°	728	739	746	753	752	562
145°	844	844	856	860	857	528
155°	930	924	932	936	930	428
165°	980	976	978	982	978	277
175°	1002	997	998	1003	996	95
180°	1000	1000	1000	1000	1000	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	618.1	617.6	617.1	616.6	616.0	615.2	614.0	612.9	611.7	610.5	611.6
5°	615.3	614.7	614.3	613.7	613.2	612.2	610.8	609.3	607.8	606.4	607.4
7.5°	609.8	609.0	608.2	607.4	606.6	605.5	604.0	602.5	601.0	599.5	600.6
10°	604.7	603.7	602.8	601.9	600.9	599.7	598.1	596.6	595.0	593.4	594.5
12.5°	597.5	596.8	595.9	595.1	594.3	593.1	591.5	589.9	588.4	586.8	587.5
15°	585.7	584.9	584.2	583.4	582.6	581.3	579.6	577.9	576.2	574.5	575.0
17.5°	570.5	569.8	569.0	568.2	567.4	566.2	564.4	562.7	560.9	559.2	559.8
20°	559.7	558.9	558.1	557.3	556.5	555.2	553.3	551.5	549.7	547.9	548.3
22.5°	548.8	547.7	546.6	545.5	544.4	543.0	541.2	539.5	537.7	536.0	536.1
25°	530.1	529.0	528.0	527.0	525.9	524.3	522.0	519.8	517.5	515.3	515.6
27.5°	508.8	507.9	506.9	506.0	505.0	503.7	501.9	500.1	498.4	496.6	496.2
30°	494.6	493.5	492.5	491.5	490.4	488.9	486.9	485.0	483.0	481.0	480.6
32.5°	479.4	478.6	477.8	476.9	476.1	474.6	472.5	470.5	468.4	466.4	465.6
35°	457.3	456.0	454.7	453.4	452.1	450.4	448.3	446.2	444.0	442.0	441.2
37.5°	432.4	431.2	430.1	428.9	427.7	426.1	424.0	421.9	419.8	417.7	416.7
40°	415.3	414.2	413.2	412.2	411.1	409.6	407.4	405.4	403.2	401.2	400.0
42.5°	398.8	397.7	396.6	395.6	394.6	393.0	390.9	388.8	386.7	384.5	383.3
45°	372.2	371.2	370.3	369.4	368.4	367.0	365.0	363.1	361.1	359.1	357.7
47.5°	345.6	344.8	343.9	343.0	342.1	340.7	338.7	336.6	334.5	332.5	331.0
50°	327.2	326.5	325.8	325.2	324.6	323.3	321.5	319.6	317.7	315.9	314.1
52.5°	309.2	308.3	307.4	306.6	305.7	304.4	302.7	301.0	299.2	297.5	296.0
55°	281.6	280.8	280.0	279.2	278.5	277.3	275.7	274.1	272.5	270.9	269.4
57.5°	253.9	253.3	252.6	252.1	251.4	250.3	248.5	246.8	245.0	243.3	241.7
60°	235.4	235.0	234.4	233.9	233.4	232.2	230.4	228.5	226.6	224.8	223.4
62.5°	217.5	216.7	215.8	214.9	214.1	213.0	211.6	210.2	208.7	207.3	206.0
65°	189.9	189.1	188.3	187.5	186.8	185.7	184.4	183.1	181.7	180.5	179.3
67.5°	161.8	161.2	160.6	159.9	159.3	158.4	157.2	156.1	154.9	153.7	152.8
70°	144.3	143.9	143.3	142.8	142.3	141.4	140.2	139.0	137.8	136.7	135.8
72.5°	126.4	125.9	125.3	124.8	124.3	123.7	122.9	122.1	121.4	120.6	119.6
75°	99.4	99.1	98.9	98.6	98.3	97.9	97.2	96.6	95.9	95.2	94.4
77.5°	75.3	74.8	74.4	73.9	73.4	73.1	72.9	72.6	72.3	72.1	71.7
80°	59.2	59.0	58.9	58.8	58.6	58.5	58.1	57.9	57.7	57.4	57.0
82.5°	44.0	44.0	44.0	44.0	43.9	43.8	43.6	43.5	43.3	43.2	42.7
85°	24.2	24.2	24.0	23.8	23.8	23.6	23.4	23.4	23.2	23.1	22.7
87.5°	8.6	8.8	9.0	9.1	9.3	9.3	9.3	9.4	9.5	9.5	9.3
90°	0.7	2.5	4.3	6.0	7.8	9.3	10.6	11.9	13.2	14.5	15.3
92.5°	14.6	14.4	14.3	14.1	13.9	14.2	14.9	15.5	16.2	16.8	17.2
95°	47.1	41.7	36.4	31.1	25.8	23.7	24.9	26.0	27.1	28.2	29.0
97.5°	93.3	78.3	63.5	48.5	33.5	27.3	29.9	32.6	35.2	37.8	38.4
100°	128.1	106.0	84.0	61.9	39.9	30.3	33.0	35.8	38.5	41.3	42.5
102.5°	166.3	161.6	156.9	152.3	147.6	133.9	111.0	88.1	65.3	42.4	44.0
105°	219.9	224.7	229.6	234.4	239.2	219.7	175.8	131.9	88.0	44.1	45.9
107.5°	281.1	285.0	288.9	292.8	296.8	272.4	219.7	167.1	114.4	61.8	60.0
110°	320.5	323.9	327.3	330.7	334.0	312.4	266.0	219.5	173.1	126.6	110.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	357.5	360.5	363.5	366.5	369.5	365.3	353.8	342.3	330.8	319.3	260.7
115°	416.0	418.7	421.4	424.2	426.9	430.3	434.4	438.4	442.4	446.4	371.9
117.5°	468.3	471.3	474.4	477.4	480.5	483.4	486.2	488.9	491.7	494.4	476.4
120°	506.4	508.8	511.3	513.7	516.1	518.7	521.7	524.5	527.4	530.3	532.3
122.5°	538.8	541.4	543.9	546.4	549.0	551.8	555.0	558.2	561.3	564.5	565.6
125°	588.2	590.3	592.4	594.5	596.6	599.1	602.2	605.2	608.3	611.3	612.5
127.5°	632.9	635.3	637.5	639.8	642.1	644.4	646.7	649.0	651.3	653.6	655.2
130°	661.3	663.8	666.4	669.0	671.5	673.8	675.5	677.2	679.1	680.8	682.5
132.5°	690.2	692.4	694.6	696.8	698.9	700.9	702.7	704.5	706.2	708.0	709.6
135°	727.9	730.4	733.0	735.5	738.2	740.1	741.6	743.1	744.5	745.9	747.5
137.5°	765.9	767.7	769.5	771.3	773.1	774.8	776.4	778.1	779.7	781.4	782.9
140°	790.8	792.1	793.4	794.6	795.9	797.5	799.2	801.0	802.8	804.5	806.0
142.5°	811.6	812.8	814.0	815.1	816.3	817.8	819.8	821.9	823.9	825.9	827.3
145°	844.3	844.1	844.0	843.8	843.7	844.9	847.7	850.4	853.2	855.9	857.0
147.5°	872.8	872.2	871.6	871.0	870.4	871.4	874.1	876.9	879.6	882.3	883.0
150°	891.4	890.3	889.1	888.0	886.8	887.6	890.2	892.7	895.3	897.9	898.8
152.5°	907.0	905.7	904.4	903.2	902.0	902.5	905.0	907.4	909.9	912.4	913.3
155°	929.7	928.3	926.8	925.3	923.9	924.2	926.1	928.0	929.9	931.8	932.8
157.5°	947.5	946.3	945.1	943.8	942.6	942.7	944.0	945.4	946.7	948.1	949.2
160°	957.9	957.0	956.0	955.0	954.0	954.0	955.0	956.0	957.0	957.9	958.9
162.5°	967.2	966.2	965.3	964.2	963.3	963.2	964.1	964.9	965.7	966.6	967.7
165°	979.6	978.7	977.7	976.7	975.7	975.5	976.0	976.4	977.0	977.5	978.6
167.5°	988.9	987.9	987.0	986.0	985.0	984.8	985.2	985.6	986.1	986.6	987.7
170°	994.1	993.1	992.1	991.2	990.2	989.9	990.2	990.5	990.9	991.2	992.3
172.5°	997.5	996.6	995.6	994.7	993.7	993.4	993.7	994.0	994.3	994.7	995.8
175°	1002.0	1000.9	999.8	998.6	997.5	997.1	997.4	997.8	998.1	998.4	999.6
177.5°	1002.7	1001.9	1001.0	1000.1	999.2	998.8	998.9	999.0	999.2	999.3	1000.2
180°	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	612.7	613.7	614.7	615.2	615.0	614.7	614.6	614.3
5°	608.6	609.6	610.6	611.0	610.8	610.5	610.2	610.0
7.5°	601.7	602.7	603.8	604.1	603.9	603.6	603.2	603.0
10°	595.5	596.6	597.6	597.9	597.5	597.1	596.8	596.4
12.5°	588.3	589.0	589.7	589.9	589.6	589.4	589.1	588.7
15°	575.5	576.1	576.6	576.5	575.8	575.2	574.6	573.9
17.5°	560.4	561.0	561.7	561.6	560.9	560.4	559.8	559.1
20°	548.7	549.1	549.5	549.4	548.8	548.3	547.8	547.2
22.5°	536.1	536.2	536.3	536.2	535.9	535.6	535.3	535.0
25°	515.9	516.1	516.3	516.3	516.1	515.9	515.6	515.3
27.5°	495.8	495.4	495.0	494.6	493.9	493.3	492.7	492.0
30°	480.2	479.8	479.4	479.0	478.4	477.9	477.4	476.8
32.5°	464.9	464.2	463.5	462.9	462.3	461.8	461.3	460.7
35°	440.4	439.6	438.8	438.1	437.4	436.7	436.1	435.5
37.5°	415.7	414.8	413.8	413.0	412.3	411.7	411.1	410.5
40°	398.8	397.6	396.4	395.5	395.0	394.5	394.0	393.4
42.5°	382.0	380.7	379.4	378.4	377.6	376.9	376.2	375.4
45°	356.2	354.8	353.3	352.4	351.8	351.3	350.8	350.2
47.5°	329.5	327.9	326.4	325.3	324.5	323.8	323.0	322.2
50°	312.3	310.4	308.6	307.3	306.7	306.0	305.3	304.7
52.5°	294.5	292.9	291.4	290.2	289.3	288.4	287.6	286.7
55°	267.8	266.3	264.7	263.6	262.8	262.2	261.6	260.9
57.5°	240.2	238.6	237.1	236.1	235.5	235.0	234.6	234.0
60°	221.9	220.5	219.0	218.1	217.7	217.3	216.9	216.5
62.5°	204.6	203.3	201.9	201.1	200.5	200.0	199.6	199.0
65°	178.1	176.9	175.7	174.8	174.1	173.5	172.9	172.1
67.5°	151.9	150.9	150.0	149.3	148.8	148.2	147.7	147.2
70°	134.8	133.9	133.0	132.3	131.7	131.2	130.7	130.2
72.5°	118.7	117.8	116.9	116.2	115.8	115.3	114.9	114.5
75°	93.6	92.9	92.1	91.8	92.1	92.4	92.6	92.9
77.5°	71.3	70.9	70.5	70.1	69.7	69.4	69.0	68.6
80°	56.6	56.2	55.8	55.5	55.2	55.0	54.7	54.4
82.5°	42.2	41.7	41.2	40.9	40.9	40.8	40.7	40.7
85°	22.3	21.9	21.5	21.2	21.1	21.0	20.8	20.7
87.5°	9.2	9.0	8.9	8.8	8.8	8.7	8.7	8.6
90°	16.1	16.9	17.7	18.2	18.5	18.9	19.3	19.6
92.5°	17.6	18.1	18.5	18.8	18.9	19.2	19.3	19.6
95°	29.8	30.7	31.4	31.8	31.6	31.4	31.3	31.1
97.5°	39.1	39.7	40.3	40.7	41.0	41.1	41.4	41.5
100°	43.8	45.1	46.4	47.2	47.5	47.8	48.2	48.5
102.5°	45.7	47.5	49.1	50.1	50.6	51.0	51.5	52.0
105°	47.7	49.4	51.2	52.4	53.1	53.7	54.3	55.0
107.5°	58.1	56.4	54.6	54.0	54.7	55.3	55.9	56.6
110°	94.4	78.3	62.3	54.6	55.2	55.8	56.5	57.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	202.1	143.4	84.8	55.7	56.2	56.7	57.2	57.8
115°	297.5	223.1	148.6	105.6	94.0	82.5	70.9	59.3
117.5°	458.4	440.5	422.4	394.3	356.3	318.3	280.3	242.2
120°	534.2	536.1	538.1	528.1	506.4	484.7	463.0	441.3
122.5°	566.8	567.9	569.1	567.6	563.4	559.1	554.9	550.7
125°	613.6	614.7	615.8	616.6	617.1	617.6	618.1	618.6
127.5°	656.9	658.5	660.2	661.0	661.2	661.2	661.3	661.4
130°	684.4	686.1	687.9	688.7	688.6	688.3	688.2	688.0
132.5°	711.1	712.6	714.1	714.7	714.5	714.4	714.2	714.1
135°	749.2	750.8	752.3	753.0	752.7	752.3	752.0	751.7
137.5°	784.5	786.1	787.7	788.2	787.7	787.1	786.6	786.0
140°	807.4	808.9	810.3	810.6	809.8	809.1	808.3	807.4
142.5°	828.5	829.9	831.2	831.5	830.7	829.9	829.1	828.2
145°	858.2	859.3	860.4	860.5	859.8	859.0	858.2	857.4
147.5°	883.9	884.7	885.6	885.7	884.9	884.3	883.6	883.0
150°	899.8	900.8	901.7	901.8	901.0	900.2	899.4	898.6
152.5°	914.3	915.2	916.2	916.2	915.0	914.0	913.0	911.9
155°	933.8	934.8	935.7	935.6	934.3	933.0	931.7	930.4
157.5°	950.2	951.3	952.4	952.4	951.1	949.8	948.6	947.4
160°	959.8	960.8	961.8	961.7	960.5	959.4	958.3	957.2
162.5°	968.8	969.9	971.0	970.8	969.5	968.0	966.7	965.3
165°	979.7	980.8	981.9	981.9	980.8	979.7	978.6	977.5
167.5°	988.8	989.9	991.1	990.9	989.4	988.0	986.6	985.1
170°	993.5	994.6	995.7	995.5	994.1	992.6	991.2	989.8
172.5°	996.9	998.1	999.2	999.0	997.5	996.1	994.7	993.2
175°	1000.7	1001.8	1002.9	1002.7	1001.1	999.5	997.8	996.2
177.5°	1001.1	1002.0	1002.9	1002.7	1001.6	1000.4	999.3	998.1
180°	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9

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