

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: P331272

Luminaire Tested: **SA2XXDIP-C290D925U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331272
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C290D925U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 290 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

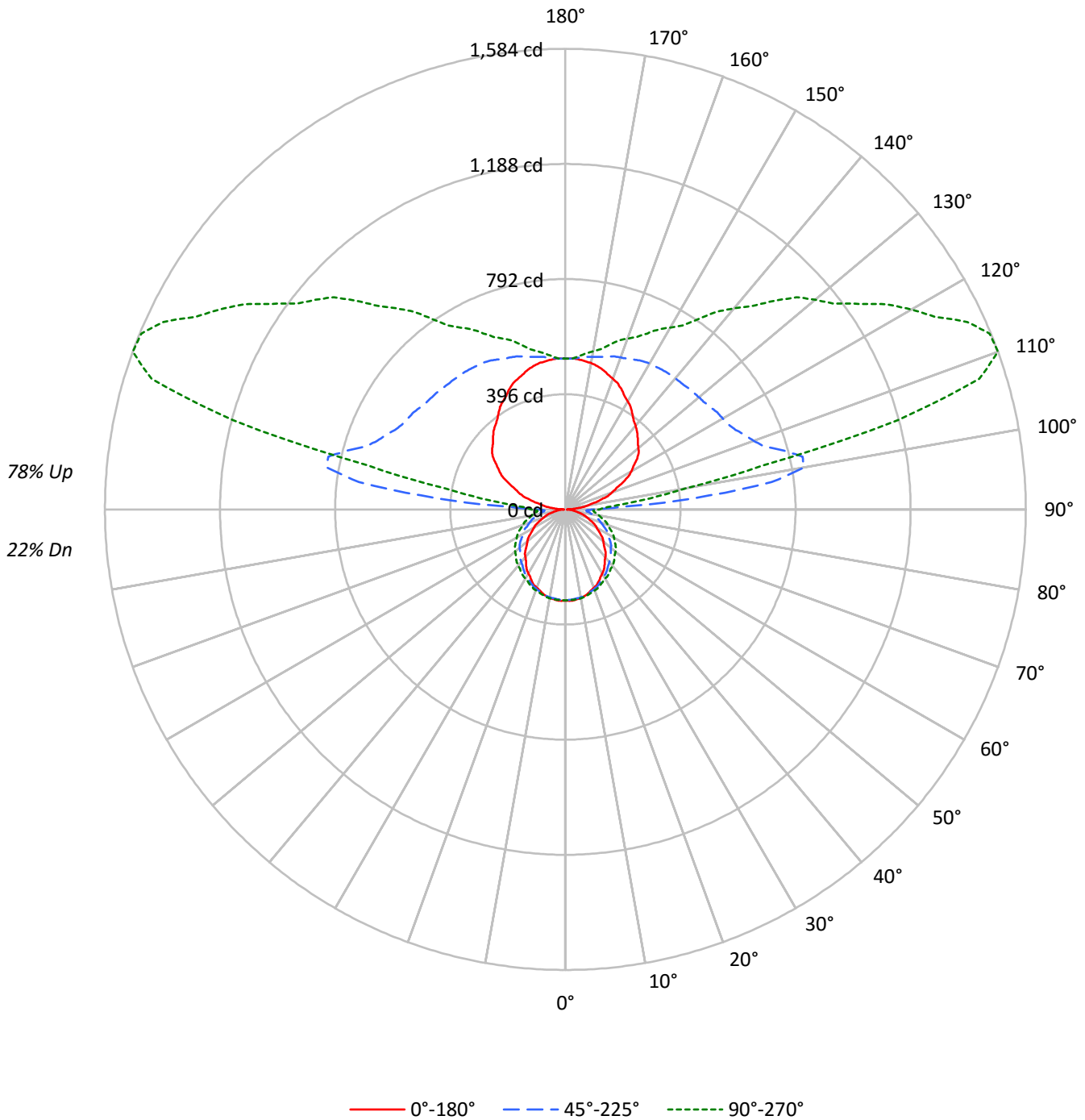
Lumens per Lamp: N/A
Luminaire Lumens: 4811.9 lumens
Efficiency: N/A
Efficacy: 129.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 37.3
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	101	101	101	101	89	89	89	89	68	68	68	48	48	48	31	31	31	22				
1	91	86	82	79	80	77	73	70	58	56	54	41	40	39	26	25	24	17				
2	82	75	69	64	73	67	61	57	51	47	44	36	34	32	22	21	20	14				
3	75	66	58	53	66	58	52	47	44	40	37	32	29	27	20	18	17	11				
4	68	58	50	44	60	51	45	40	39	35	31	28	25	22	17	16	14	10				
5	63	51	43	37	55	46	39	34	35	30	26	25	22	19	16	14	12	8				
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	7				
7	53	41	33	28	47	37	30	25	28	23	20	20	17	15	13	11	9	6				
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	12	10	8	6				
9	45	34	26	21	40	30	24	19	23	19	15	17	14	11	11	9	7	5				
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	7	5				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5062	5062	5062
5°	5086	4872	4853
10°	5054	4728	4675
15°	4983	4575	4487
20°	4896	4412	4306
25°	4810	4254	4140
30°	4687	4093	3976
35°	4563	3936	3860
40°	4433	3803	3743
45°	4308	3685	3644
50°	4176	3577	3546
55°	4035	3461	3447
60°	3865	3340	3342
65°	3686	3200	3215
70°	3487	3048	3081
75°	3236	2900	2956
80°	2836	2748	2829
85°	2454	2617	2731



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.7	0.6
10°-20°	85.2	1.8
20°-30°	129.1	2.7
30°-40°	157.2	3.3
40°-50°	169.1	3.5
50°-60°	164.2	3.4
60°-70°	143.4	3.0
70°-80°	110.4	2.3
80°-90°	78.8	1.6
90°-100°	258.6	5.4
100°-110°	741.4	15.4
110°-120°	772.7	16.1
120°-130°	629.6	13.1
130°-140°	500.3	10.4
140°-150°	374.7	7.8
150°-160°	262.6	5.5
160°-170°	154.6	3.2
170°-180°	50.3	1.0
0°-30°	243.9	5.1
0°-40°	401.1	8.3
0°-60°	734.5	15.3
0°-90°	1067.1	22.2
90°-120°	1772.7	36.8
90°-150°	3277.3	68.1
90°-180°	3745.0	77.8
0°-180°	4811.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	314	314	314	314	314	
5°	314	313	310	313	312	30
15°	300	301	301	305	304	84
25°	273	276	280	285	287	125
35°	235	243	251	261	264	147
45°	193	205	221	234	239	149
55°	148	164	188	203	210	132
65°	101	123	150	168	174	100
75°	56	82	110	129	136	59
85°	16	45	74	92	99	18
90°	6	44	94	110	116	5
95°	39	111	444	217	189	40
105°	124	200	779	1376	1185	132
115°	216	279	646	1317	1526	214
125°	300	356	610	1062	1232	267
135°	352	420	593	884	1013	272
145°	401	461	585	729	799	252
155°	456	492	568	642	668	210
165°	497	512	544	577	586	140
175°	518	518	523	530	528	49
180°	519	519	519	519	519	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5
2.5°	315.3	315.0	314.8	314.5	314.3	313.9	313.3	312.8	312.2	311.6	312.0
5°	314.4	314.1	313.8	313.5	313.1	312.7	312.1	311.5	310.9	310.3	310.9
7.5°	311.5	311.3	311.1	310.9	310.7	310.4	309.9	309.5	309.0	308.5	309.3
10°	309.4	309.2	309.0	308.8	308.6	308.3	308.0	307.7	307.4	307.1	307.9
12.5°	305.7	305.8	305.8	305.9	305.9	305.8	305.6	305.4	305.1	304.9	305.7
15°	299.8	300.0	300.2	300.4	300.6	300.7	300.7	300.7	300.7	300.7	301.6
17.5°	292.2	292.6	293.0	293.5	293.9	294.3	294.6	294.9	295.2	295.6	296.5
20°	287.1	287.6	288.1	288.6	289.1	289.6	290.0	290.4	290.8	291.2	292.3
22.5°	281.7	282.2	282.8	283.4	284.0	284.6	285.1	285.7	286.3	286.8	287.9
25°	272.6	273.3	274.0	274.7	275.4	276.2	277.1	278.0	278.9	279.8	281.0
27.5°	261.7	262.8	264.0	265.1	266.3	267.4	268.4	269.5	270.6	271.7	273.2
30°	254.4	255.7	257.0	258.3	259.6	261.0	262.3	263.6	264.9	266.2	267.8
32.5°	246.4	247.9	249.3	250.8	252.3	253.8	255.4	256.9	258.5	260.0	261.9
35°	234.9	236.6	238.3	240.0	241.7	243.5	245.5	247.4	249.3	251.2	253.4
37.5°	222.3	224.3	226.3	228.3	230.2	232.5	235.0	237.4	239.9	242.4	244.9
40°	214.0	216.2	218.4	220.6	222.8	225.3	228.0	230.8	233.5	236.2	238.8
42.5°	206.0	208.2	210.4	212.6	214.9	217.5	220.7	223.8	226.9	230.0	232.9
45°	192.6	195.3	198.1	200.8	203.5	206.6	210.2	213.7	217.2	220.8	223.9
47.5°	179.4	182.4	185.4	188.3	191.3	194.9	199.0	203.1	207.3	211.4	214.7
50°	170.4	173.5	176.6	179.7	182.9	186.7	191.3	195.8	200.3	204.9	208.3
52.5°	161.6	164.9	168.2	171.5	174.8	178.8	183.6	188.4	193.2	198.0	201.5
55°	147.6	151.3	154.9	158.5	162.2	166.6	171.9	177.1	182.4	187.6	191.3
57.5°	133.8	137.9	142.0	146.1	150.2	154.9	160.3	165.6	171.0	176.4	180.3
60°	124.0	128.4	132.7	137.0	141.4	146.4	152.2	157.9	163.7	169.4	173.3
62.5°	115.3	119.8	124.3	128.8	133.3	138.4	144.2	149.9	155.7	161.5	165.5
65°	100.8	105.8	110.7	115.7	120.6	126.1	132.0	138.0	144.0	149.9	154.1
67.5°	87.6	92.8	97.9	103.1	108.3	113.9	120.0	126.1	132.2	138.3	142.5
70°	78.1	83.4	88.6	93.9	99.1	104.9	111.1	117.4	123.7	129.9	134.3
72.5°	69.4	74.8	80.2	85.6	91.1	96.9	103.3	109.6	116.0	122.3	126.6
75°	55.9	61.5	67.2	72.8	78.5	84.5	91.0	97.5	103.9	110.4	114.7
77.5°	42.8	48.7	54.6	60.5	66.5	72.7	79.3	85.8	92.4	98.9	103.3
80°	34.1	40.2	46.4	52.5	58.7	65.1	71.6	78.2	84.7	91.3	95.5
82.5°	26.8	32.9	39.0	45.0	51.1	57.5	64.1	70.8	77.4	84.0	88.3
85°	16.4	22.6	28.9	35.1	41.4	47.7	54.2	60.7	67.1	73.6	77.8
87.5°	9.1	15.7	22.5	28.9	35.4	42.2	49.7	57.5	65.2	71.8	75.8
90°	5.5	14.4	24.2	32.1	39.9	49.1	60.5	74.0	86.4	93.9	96.9
92.5°	16.4	27.2	39.8	49.7	61.9	77.1	105.9	143.9	178.4	186.4	170.2
95°	38.6	47.3	62.0	75.8	96.5	125.8	177.8	270.7	392.5	443.5	398.4
97.5°	60.1	69.7	84.5	102.3	124.9	157.0	220.5	347.3	545.5	716.2	752.7
100°	80.0	86.8	99.5	119.2	142.9	175.5	234.1	361.5	582.7	833.9	981.3
102.5°	98.0	103.6	116.0	135.4	159.6	192.0	246.4	360.1	565.1	835.3	1064.9
105°	124.0	131.0	140.9	158.8	183.6	215.7	267.8	361.9	531.8	778.6	1047.6
107.5°	152.7	158.2	167.3	183.5	207.6	239.4	289.9	372.4	513.6	718.2	956.1
110°	171.5	177.5	185.5	200.5	223.5	255.9	304.8	381.6	508.3	688.9	898.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	189.0	194.7	203.2	217.1	238.9	271.9	318.9	391.5	506.8	668.8	857.8
115°	216.4	222.5	229.6	242.7	263.8	293.5	341.0	406.4	507.8	646.0	806.8
117.5°	244.3	249.0	255.7	267.0	286.9	317.3	361.2	422.5	511.6	632.9	773.0
120°	261.8	266.2	272.6	282.0	302.4	332.6	375.5	433.4	514.3	625.2	754.7
122.5°	278.6	282.0	288.1	298.1	318.2	348.9	389.2	442.9	518.0	619.8	738.9
125°	300.3	303.3	309.3	321.3	341.2	370.8	410.0	458.1	523.2	610.3	715.8
127.5°	317.9	321.8	330.1	343.1	362.2	392.2	429.7	472.6	529.1	603.6	694.3
130°	328.3	332.2	342.0	355.9	375.8	404.7	441.8	481.8	533.8	599.8	680.1
132.5°	337.8	342.5	353.2	367.9	388.5	417.3	452.2	491.0	538.5	596.8	668.3
135°	351.8	355.8	367.7	382.7	405.7	434.1	467.0	503.0	543.9	592.8	651.8
137.5°	365.3	370.1	382.1	398.0	420.7	446.9	478.9	511.9	548.6	590.0	639.6
140°	375.7	379.6	391.5	407.3	429.2	455.2	485.3	516.5	550.6	587.7	632.3
142.5°	386.1	389.2	400.3	416.1	437.2	461.5	490.7	520.9	552.4	587.0	625.6
145°	401.2	405.2	415.2	430.2	450.1	472.1	499.0	527.0	554.9	584.8	617.4
147.5°	418.0	421.0	430.5	444.3	460.9	480.5	505.8	530.4	555.7	581.3	609.3
150°	429.2	432.1	440.1	453.1	468.1	486.0	509.0	531.9	554.9	578.9	602.8
152.5°	440.3	441.7	449.7	461.1	475.3	491.6	512.2	532.7	553.3	574.9	597.2
155°	456.1	457.1	463.1	474.1	485.0	500.0	517.0	533.9	550.9	567.9	586.8
157.5°	469.3	470.3	475.1	484.6	493.4	506.0	520.4	533.9	546.3	560.7	577.1
160°	478.1	479.1	483.0	491.0	499.0	510.0	522.0	533.9	543.9	555.9	569.9
162.5°	486.8	486.2	490.2	496.6	503.8	512.4	522.8	533.1	541.5	551.9	563.5
165°	497.0	496.0	498.0	504.0	509.0	515.0	524.0	531.0	536.9	543.9	552.9
167.5°	505.4	504.2	506.0	509.8	513.4	517.2	523.8	529.6	532.3	536.9	542.5
170°	511.0	509.0	510.0	513.0	515.0	518.0	523.0	528.0	530.0	532.9	536.9
172.5°	514.2	513.0	512.4	515.4	516.6	518.8	522.2	525.6	526.8	528.2	531.4
175°	518.0	517.0	516.0	518.0	518.0	519.0	521.0	523.0	522.0	523.0	524.0
177.5°	519.8	518.2	517.4	519.0	519.0	519.0	519.8	521.4	519.8	519.0	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	313.5	313.5	313.5	313.5	313.5	313.5	313.5	313.5
2.5°	312.4	312.8	313.2	313.4	313.2	313.0	312.9	312.7
5°	311.5	312.1	312.7	312.9	312.8	312.7	312.6	312.5
7.5°	310.0	310.7	311.5	311.8	311.7	311.6	311.5	311.4
10°	308.7	309.5	310.3	310.7	310.6	310.5	310.4	310.3
12.5°	306.5	307.3	308.1	308.5	308.4	308.3	308.2	308.1
15°	302.5	303.5	304.4	304.8	304.7	304.6	304.5	304.4
17.5°	297.5	298.4	299.3	299.8	299.8	299.8	299.8	299.8
20°	293.4	294.5	295.6	296.2	296.2	296.2	296.2	296.2
22.5°	289.1	290.2	291.3	291.9	292.1	292.2	292.4	292.6
25°	282.3	283.5	284.7	285.4	285.7	286.0	286.3	286.6
27.5°	274.7	276.3	277.8	278.7	278.9	279.1	279.3	279.6
30°	269.4	271.1	272.7	273.6	273.9	274.2	274.5	274.8
32.5°	263.7	265.6	267.5	268.7	269.2	269.8	270.3	270.8
35°	255.7	257.9	260.1	261.6	262.3	263.0	263.7	264.4
37.5°	247.3	249.8	252.3	253.9	254.6	255.4	256.1	256.8
40°	241.5	244.1	246.7	248.5	249.4	250.3	251.2	252.1
42.5°	235.8	238.6	241.5	243.4	244.3	245.2	246.1	247.0
45°	227.0	230.2	233.3	235.4	236.4	237.4	238.4	239.4
47.5°	218.0	221.2	224.5	226.7	227.8	228.9	230.0	231.1
50°	211.7	215.2	218.6	220.9	222.0	223.1	224.2	225.3
52.5°	205.0	208.5	212.0	214.4	215.6	216.8	218.0	219.1
55°	194.9	198.5	202.2	204.6	205.9	207.3	208.6	209.9
57.5°	184.2	188.1	192.0	194.6	196.0	197.3	198.6	200.0
60°	177.1	181.0	184.8	187.4	188.8	190.2	191.7	193.1
62.5°	169.6	173.7	177.8	180.5	181.8	183.1	184.5	185.8
65°	158.2	162.3	166.5	169.2	170.5	171.8	173.1	174.4
67.5°	146.6	150.8	155.0	157.8	159.1	160.5	161.9	163.3
70°	138.6	142.9	147.3	150.1	151.3	152.5	153.7	154.9
72.5°	130.8	135.1	139.3	142.2	143.6	145.1	146.6	148.0
75°	119.1	123.4	127.8	130.6	131.9	133.2	134.5	135.8
77.5°	107.6	111.9	116.2	119.1	120.5	121.9	123.3	124.7
80°	99.8	104.0	108.3	111.1	112.5	113.9	115.3	116.7
82.5°	92.5	96.8	101.0	103.8	105.1	106.5	107.8	109.1
85°	82.1	86.3	90.6	93.4	94.8	96.2	97.6	99.0
87.5°	79.7	83.4	87.9	90.8	92.1	93.4	94.7	96.0
90°	100.0	102.0	108.1	111.7	112.9	114.1	115.3	116.5
92.5°	151.6	143.2	138.8	135.2	135.6	133.6	135.6	135.2
95°	321.4	264.4	226.3	206.8	195.1	188.3	186.5	188.7
97.5°	666.0	558.8	454.5	384.9	338.4	315.0	301.7	294.5
100°	964.1	844.1	711.1	592.7	511.0	469.2	441.4	424.5
102.5°	1158.6	1134.3	1038.0	912.4	823.5	751.3	716.3	693.1
105°	1258.7	1375.0	1391.6	1360.9	1300.2	1239.4	1197.6	1184.7
107.5°	1179.7	1352.9	1460.1	1510.7	1519.6	1517.3	1509.8	1492.4
110°	1112.5	1294.4	1425.4	1509.4	1553.4	1573.5	1583.6	1583.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1050.9	1225.6	1365.3	1461.3	1522.1	1555.0	1573.0	1579.5
115°	974.5	1131.2	1264.9	1369.8	1441.8	1488.8	1515.9	1526.0
117.5°	916.0	1053.9	1175.4	1273.9	1347.1	1396.7	1425.0	1433.7
120°	886.3	1012.9	1121.5	1214.3	1285.3	1333.3	1363.3	1374.4
122.5°	862.4	978.5	1081.5	1165.4	1229.0	1276.0	1302.7	1312.1
125°	827.3	932.8	1023.4	1100.0	1158.8	1197.7	1223.5	1232.4
127.5°	792.6	888.2	973.5	1044.3	1095.7	1132.1	1154.5	1161.8
130°	770.3	858.6	939.9	1007.4	1057.1	1091.8	1112.6	1121.4
132.5°	748.8	830.6	905.4	968.9	1017.8	1052.5	1071.7	1079.7
135°	718.8	786.8	854.8	912.2	955.9	989.6	1008.4	1013.2
137.5°	694.3	751.3	805.4	855.4	895.2	924.2	940.7	947.4
140°	678.8	728.3	775.9	820.9	853.4	880.0	895.5	902.1
142.5°	666.3	708.3	749.1	786.7	817.6	841.7	855.6	857.3
145°	648.9	682.5	714.0	743.5	768.0	785.4	795.9	799.4
147.5°	635.7	661.7	686.0	707.3	727.3	741.1	748.1	750.2
150°	626.8	648.7	669.7	687.6	702.6	714.6	720.6	721.6
152.5°	618.0	638.3	656.1	671.7	683.4	693.8	698.2	698.4
155°	605.8	621.8	636.7	647.7	658.7	665.7	669.7	667.7
157.5°	591.6	605.0	617.6	626.2	633.9	639.7	641.5	641.5
160°	582.8	593.8	604.8	611.8	618.8	623.8	624.8	624.8
162.5°	574.1	583.4	592.8	598.2	605.2	608.6	609.6	608.8
165°	560.9	567.9	574.9	578.9	582.8	586.8	586.8	585.8
167.5°	548.3	553.7	558.5	562.1	563.9	566.1	565.9	564.7
170°	541.9	544.9	548.9	550.9	551.9	554.9	553.9	551.9
172.5°	534.7	536.9	540.1	541.3	542.3	543.7	542.7	541.5
175°	527.0	528.0	529.0	530.0	530.0	531.0	530.0	528.0
177.5°	521.4	521.4	522.2	522.2	522.2	522.2	521.4	519.8
180°	519.0	519.0	519.0	519.0	519.0	519.0	519.0	519.0

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