

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: P331317

Luminaire Tested: **SA2XXDIP-C485D925U835-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

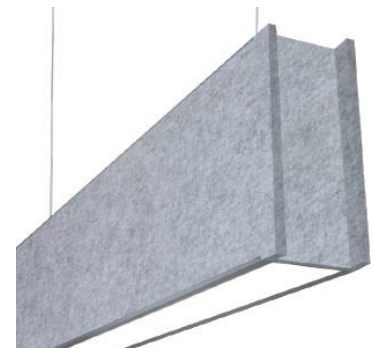
Test Information

Test Method: LM-79-08
Report Number: P331317
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-C485D925U835-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 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: 5582.0 lumens
Efficiency: N/A
Efficacy: 125.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

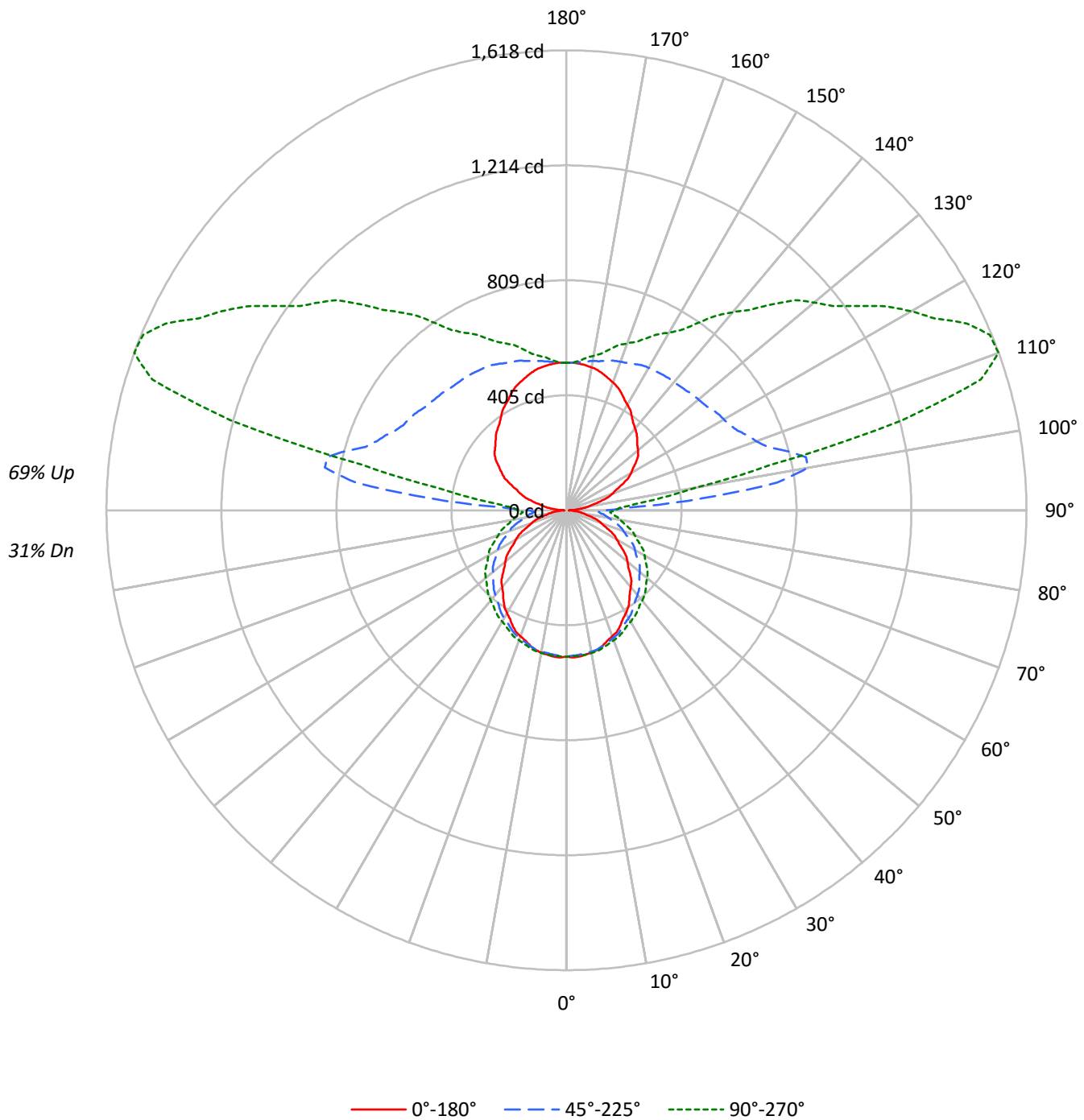
Input Watts (W): 44.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39
1	93	88	84	80	83	79	76	72	62	60	58	47	45	44	33	32	31
2	84	76	70	65	75	69	63	59	54	50	47	41	38	36	28	27	25
3	76	67	59	53	68	60	54	48	47	43	39	36	33	30	25	23	21
4	70	59	51	45	62	53	46	41	42	37	33	32	28	25	22	20	18
5	64	52	44	38	57	47	40	35	37	32	28	28	25	22	20	17	15
6	58	46	38	33	52	42	35	30	33	28	24	25	22	19	18	15	13
7	54	42	34	28	48	38	31	26	30	25	21	23	19	16	16	14	12
8	50	38	30	25	45	34	27	23	27	22	19	21	17	15	15	12	11
9	46	34	27	22	42	31	25	20	25	20	16	19	16	13	14	11	9
10	43	31	24	19	39	28	22	18	23	18	15	18	14	12	13	10	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8320	8320	8320
5°	8361	8009	7978
10°	8308	7773	7685
15°	8193	7522	7376
20°	8049	7253	7078
25°	7906	6994	6809
30°	7704	6728	6536
35°	7501	6472	6346
40°	7287	6254	6154
45°	7084	6058	5992
50°	6865	5879	5830
55°	6634	5689	5666
60°	6355	5493	5493
65°	6063	5262	5287
70°	5738	5012	5065
75°	5319	4768	4860
80°	4657	4519	4652
85°	4025	4303	4491

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	0.9
10°-20°	140.0	2.5
20°-30°	212.2	3.8
30°-40°	258.4	4.6
40°-50°	278.0	5.0
50°-60°	270.0	4.8
60°-70°	235.8	4.2
70°-80°	181.5	3.3
80°-90°	126.5	2.3
90°-100°	291.4	5.2
100°-110°	765.4	13.7
110°-120°	788.6	14.1
120°-130°	638.4	11.4
130°-140°	504.0	9.0
140°-150°	375.4	6.7
150°-160°	262.6	4.7
160°-170°	154.6	2.8
170°-180°	50.3	0.9
0°-30°	401.0	7.2
0°-40°	659.5	11.8
0°-60°	1207.5	21.6
0°-90°	1751.3	31.4
90°-120°	1845.4	33.1
90°-150°	3363.2	60.3
90°-180°	3831.0	68.6
0°-180°	5582.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	517	514	510	514	514	49
15°	493	494	494	501	500	139
25°	448	453	460	469	471	206
35°	386	399	413	429	435	241
45°	317	337	363	385	394	244
55°	243	270	308	334	345	217
65°	166	203	246	276	287	165
75°	92	134	182	212	223	97
85°	27	73	121	151	163	29
90°	8	64	132	160	170	7
95°	41	127	477	261	237	42
105°	126	210	804	1411	1223	134
115°	218	284	664	1343	1556	215
125°	301	357	620	1079	1253	267
135°	352	420	596	893	1025	272
145°	401	461	585	730	803	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°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	518.3	517.9	517.5	517.1	516.7	516.0	515.1	514.2	513.3	512.3	513.0
5°	516.8	516.3	515.8	515.3	514.8	514.1	513.1	512.1	511.1	510.1	511.1
7.5°	512.2	511.8	511.5	511.2	510.9	510.3	509.5	508.8	508.0	507.2	508.4
10°	508.6	508.3	507.9	507.6	507.3	506.9	506.4	505.9	505.4	504.9	506.2
12.5°	502.6	502.7	502.8	502.8	502.9	502.7	502.4	502.0	501.6	501.3	502.6
15°	492.9	493.2	493.6	493.9	494.2	494.4	494.4	494.4	494.4	494.4	495.9
17.5°	480.4	481.1	481.8	482.5	483.2	483.8	484.3	484.8	485.4	485.9	487.4
20°	472.0	472.8	473.7	474.5	475.3	476.1	476.7	477.4	478.1	478.7	480.5
22.5°	463.0	464.0	465.0	465.9	466.9	467.8	468.8	469.7	470.6	471.6	473.4
25°	448.1	449.3	450.4	451.6	452.7	454.1	455.6	457.1	458.6	460.0	462.0
27.5°	430.2	432.1	434.0	435.9	437.7	439.6	441.3	443.1	444.8	446.6	449.1
30°	418.2	420.4	422.5	424.7	426.9	429.0	431.2	433.3	435.5	437.6	440.3
32.5°	405.1	407.5	409.9	412.4	414.8	417.3	419.8	422.4	424.9	427.5	430.5
35°	386.1	388.9	391.8	394.6	397.4	400.4	403.5	406.7	409.8	413.0	416.6
37.5°	365.5	368.8	372.0	375.3	378.5	382.2	386.3	390.3	394.4	398.5	402.6
40°	351.8	355.4	359.1	362.7	366.4	370.4	374.9	379.4	383.9	388.4	392.7
42.5°	338.6	342.3	345.9	349.6	353.2	357.6	362.8	367.9	373.1	378.2	382.9
45°	316.7	321.1	325.6	330.1	334.6	339.7	345.5	351.3	357.2	363.0	368.1
47.5°	295.0	299.9	304.8	309.6	314.5	320.4	327.2	334.0	340.8	347.6	353.0
50°	280.1	285.2	290.4	295.5	300.6	306.9	314.4	321.9	329.4	336.8	342.5
52.5°	265.7	271.1	276.5	282.0	287.4	294.0	301.9	309.7	317.6	325.5	331.2
55°	242.7	248.7	254.7	260.6	266.6	273.9	282.6	291.2	299.8	308.4	314.4
57.5°	220.0	226.8	233.5	240.2	247.0	254.7	263.5	272.3	281.1	289.9	296.4
60°	203.9	211.0	218.2	225.3	232.4	240.7	250.2	259.6	269.1	278.6	284.9
62.5°	189.5	196.9	204.4	211.8	219.2	227.6	237.0	246.5	256.0	265.4	272.1
65°	165.8	173.9	182.1	190.2	198.3	207.3	217.1	226.9	236.7	246.5	253.3
67.5°	144.0	152.5	161.0	169.5	178.0	187.2	197.3	207.3	217.3	227.3	234.2
70°	128.5	137.1	145.7	154.3	163.0	172.4	182.7	193.0	203.3	213.6	220.7
72.5°	114.1	123.0	131.9	140.8	149.7	159.4	169.8	180.2	190.6	201.0	208.1
75°	91.9	101.2	110.4	119.7	129.0	139.0	149.6	160.2	170.9	181.5	188.6
77.5°	70.4	80.1	89.8	99.5	109.3	119.5	130.3	141.1	151.9	162.7	169.8
80°	56.0	66.1	76.3	86.4	96.5	107.0	117.8	128.5	139.3	150.1	157.1
82.5°	44.1	54.1	64.0	74.0	84.0	94.5	105.4	116.3	127.2	138.2	145.1
85°	26.9	37.2	47.5	57.8	68.0	78.5	89.1	99.7	110.4	121.0	128.0
87.5°	14.8	25.3	36.0	46.3	56.6	67.5	79.1	91.1	102.9	113.7	120.3
90°	8.5	21.1	34.7	46.3	57.9	71.1	86.7	104.3	120.9	132.5	138.2
92.5°	19.0	33.4	49.5	62.9	78.6	97.6	130.4	172.4	210.9	222.9	209.3
95°	40.9	52.7	70.5	87.3	111.0	143.9	199.7	296.5	422.2	477.1	434.5
97.5°	62.1	74.4	92.0	112.5	137.8	173.2	240.4	370.9	572.9	747.3	786.2
100°	82.1	91.2	106.3	128.4	154.5	190.2	252.4	383.4	608.3	863.1	1013.0
102.5°	99.8	107.6	122.2	143.8	170.2	205.4	263.4	380.6	589.2	862.9	1094.9
105°	125.5	134.3	146.1	165.9	192.7	227.3	282.9	380.3	553.6	803.8	1075.1
107.5°	154.1	161.1	171.8	189.4	215.0	249.2	303.0	388.7	533.1	741.0	981.1
110°	172.7	180.0	189.3	205.6	229.8	264.5	316.6	396.5	526.4	710.2	922.1

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	190.2	197.0	206.6	221.5	244.5	279.5	329.5	405.1	523.5	688.5	879.6
115°	217.6	224.4	232.2	246.0	267.8	299.4	349.8	418.1	522.4	663.6	826.3
117.5°	245.2	250.3	257.5	269.3	289.7	321.7	368.3	432.3	524.0	648.1	790.1
120°	262.7	267.4	274.0	283.7	304.3	335.9	381.5	442.0	525.5	638.9	770.3
122.5°	279.5	283.0	289.2	299.3	319.5	351.5	394.2	450.4	527.9	632.1	753.0
125°	300.9	303.9	309.9	321.9	341.8	372.4	413.7	463.9	531.1	620.2	727.5
127.5°	318.5	322.3	330.5	343.5	362.5	393.3	432.5	477.1	535.3	611.4	703.8
130°	328.8	332.7	342.5	356.3	376.1	405.7	444.1	485.5	538.9	606.3	688.1
132.5°	338.4	343.1	353.7	368.3	388.9	418.1	454.1	493.9	542.5	601.9	674.8
135°	352.1	356.0	368.0	383.0	405.9	434.7	468.3	504.9	546.5	596.1	656.4
137.5°	365.6	370.4	382.3	398.3	421.0	447.3	479.5	512.8	549.9	591.5	642.3
140°	376.0	379.8	391.6	407.4	429.2	455.3	485.5	516.8	551.1	588.3	633.9
142.5°	386.4	389.4	400.4	416.2	437.2	461.5	490.7	520.9	552.5	587.1	626.6
145°	401.2	405.2	415.2	430.2	450.1	472.1	499.0	527.0	554.9	584.8	617.8
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°	515.3	515.3	515.3	515.3	515.3	515.3	515.3	515.3
2.5°	513.7	514.3	515.0	515.2	514.9	514.7	514.4	514.1
5°	512.1	513.1	514.1	514.5	514.3	514.2	514.0	513.8
7.5°	509.6	510.8	512.0	512.5	512.4	512.2	512.0	511.9
10°	507.5	508.8	510.2	510.8	510.6	510.4	510.3	510.1
12.5°	503.9	505.3	506.6	507.2	507.0	506.8	506.7	506.5
15°	497.4	498.9	500.4	501.0	500.9	500.7	500.5	500.4
17.5°	489.0	490.6	492.1	492.9	492.9	492.9	492.9	492.9
20°	482.4	484.2	486.0	486.9	486.9	486.9	486.9	486.9
22.5°	475.2	477.0	478.9	479.9	480.2	480.4	480.7	481.0
25°	464.0	466.0	468.0	469.3	469.8	470.3	470.8	471.3
27.5°	451.7	454.2	456.7	458.1	458.5	458.9	459.2	459.6
30°	443.0	445.6	448.3	449.8	450.3	450.8	451.3	451.8
32.5°	433.6	436.6	439.7	441.7	442.6	443.5	444.4	445.3
35°	420.3	424.0	427.6	430.0	431.2	432.3	433.5	434.7
37.5°	406.6	410.7	414.7	417.3	418.6	419.8	421.0	422.3
40°	397.0	401.3	405.6	408.5	410.0	411.5	413.0	414.5
42.5°	387.6	392.3	397.0	400.2	401.6	403.1	404.6	406.1
45°	373.3	378.4	383.5	386.9	388.6	390.3	391.9	393.6
47.5°	358.3	363.7	369.1	372.7	374.5	376.3	378.2	380.0
50°	348.1	353.7	359.4	363.1	365.0	366.8	368.6	370.4
52.5°	337.0	342.8	348.6	352.4	354.4	356.4	358.3	360.3
55°	320.4	326.4	332.3	336.4	338.6	340.7	342.9	345.0
57.5°	302.8	309.2	315.7	320.0	322.2	324.4	326.6	328.8
60°	291.2	297.5	303.8	308.1	310.4	312.8	315.1	317.4
62.5°	278.8	285.5	292.2	296.7	298.9	301.1	303.3	305.5
65°	260.1	266.9	273.7	278.2	280.3	282.5	284.6	286.8
67.5°	241.1	247.9	254.8	259.4	261.6	263.9	266.2	268.4
70°	227.9	235.0	242.1	246.7	248.7	250.7	252.7	254.7
72.5°	215.1	222.1	229.1	233.8	236.1	238.5	240.9	243.3
75°	195.8	202.9	210.0	214.7	216.8	219.0	221.1	223.3
77.5°	176.9	184.0	191.1	195.8	198.1	200.4	202.8	205.1
80°	164.1	171.0	178.0	182.6	185.0	187.3	189.6	191.9
82.5°	152.1	159.1	166.0	170.6	172.8	175.0	177.2	179.4
85°	134.9	141.9	148.9	153.5	155.8	158.2	160.5	162.8
87.5°	126.9	133.2	140.4	145.1	147.2	149.3	151.4	153.6
90°	143.8	148.4	157.1	162.4	164.4	166.4	168.4	170.4
92.5°	193.2	187.4	185.5	183.6	184.8	183.5	186.3	186.7
95°	360.0	305.4	269.8	252.0	241.0	235.0	234.0	237.0
97.5°	701.9	597.1	495.3	427.2	381.5	358.9	346.3	339.9
100°	998.2	880.5	750.0	633.2	552.2	511.1	484.0	467.8
102.5°	1190.9	1169.0	1075.0	951.0	862.8	791.3	757.0	734.5
105°	1288.4	1407.0	1425.8	1396.7	1336.6	1276.6	1235.5	1223.4
107.5°	1206.8	1382.2	1491.6	1543.6	1553.2	1551.7	1544.9	1528.2
110°	1138.0	1322.0	1455.0	1540.4	1585.2	1606.0	1616.8	1617.6

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	1074.8	1251.5	1393.4	1490.8	1552.3	1585.8	1604.6	1611.8
115°	995.9	1154.6	1290.3	1396.5	1469.2	1516.9	1544.7	1555.5
117.5°	935.0	1074.8	1198.3	1298.0	1371.9	1422.1	1451.2	1460.5
120°	903.7	1032.1	1142.5	1236.6	1308.3	1357.0	1387.8	1399.6
122.5°	878.3	996.2	1100.9	1186.0	1250.2	1297.9	1325.2	1335.1
125°	840.8	948.0	1040.3	1118.2	1177.6	1217.0	1243.4	1252.9
127.5°	803.7	900.8	987.8	1059.7	1111.6	1148.6	1171.6	1179.5
130°	779.9	869.7	952.5	1021.1	1071.3	1106.6	1127.8	1137.2
132.5°	756.9	840.2	916.5	981.0	1030.4	1065.7	1085.3	1093.9
135°	724.8	794.1	863.5	921.8	966.0	1000.3	1019.6	1024.9
137.5°	698.2	756.4	811.7	862.5	902.8	932.2	949.1	956.3
140°	681.5	732.0	780.6	826.3	859.3	886.2	902.2	909.2
142.5°	668.0	710.9	752.5	790.7	822.0	846.4	860.6	862.7
145°	649.7	683.6	715.6	745.4	770.2	788.0	798.8	802.6
147.5°	635.8	661.9	686.2	707.6	727.8	741.7	748.9	751.1
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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