

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: P331881-930

Luminaire Tested: **S123DIP-S340D585U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331881-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D585U930-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2791.6 lumens
Efficiency: N/A
Efficacy: 109.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

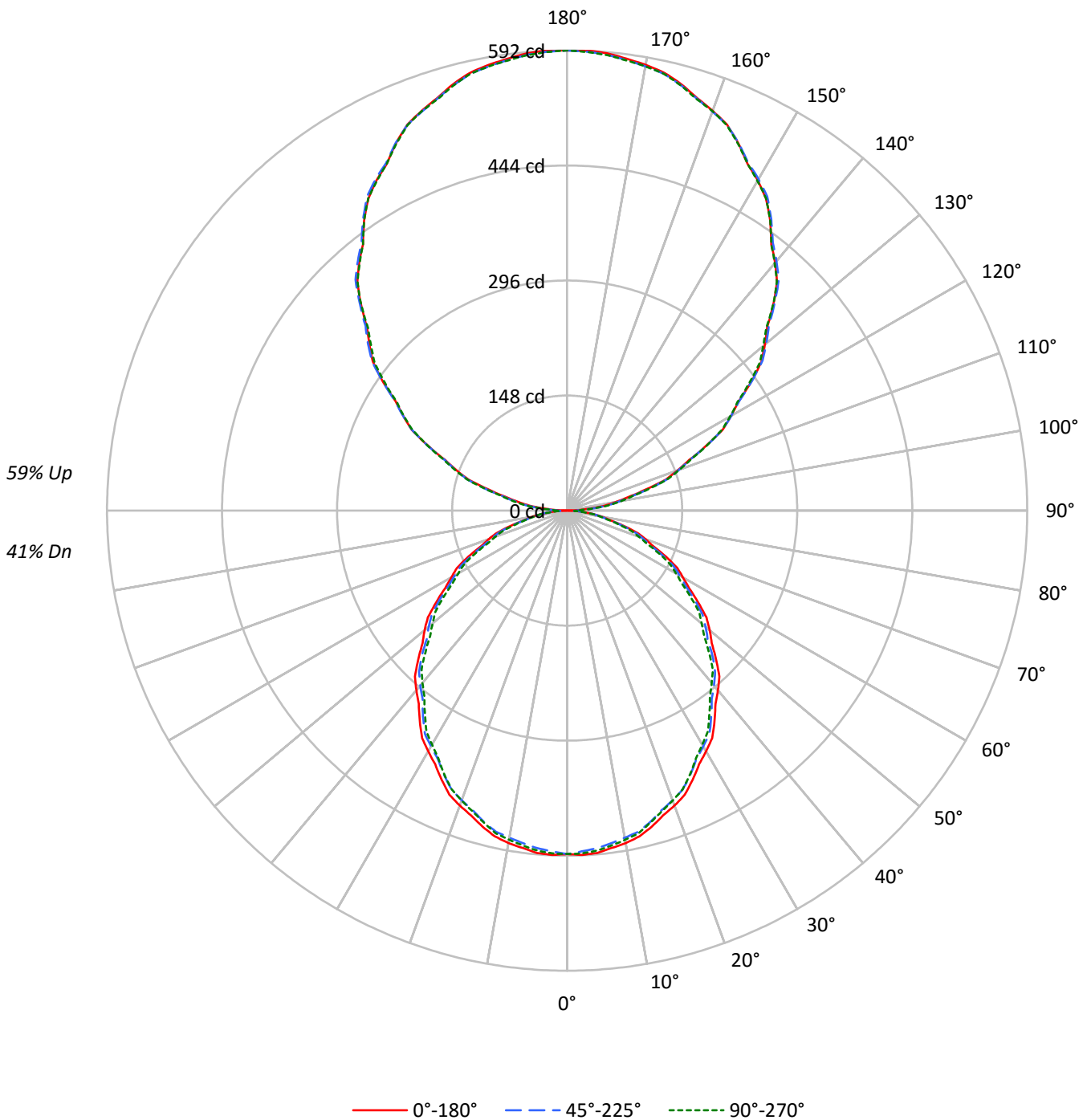
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	105	105	105	105	96	96	96	96	78	78	78	63	63	63	48	48	48	41
1	96	91	88	84	87	84	80	77	69	66	64	55	53	52	42	41	40	35
2	87	80	74	69	79	73	68	63	60	56	53	48	46	43	37	36	34	29
3	79	70	63	57	72	64	58	53	53	48	45	43	39	37	33	31	29	24
4	73	62	54	48	66	57	50	45	47	42	38	38	34	31	29	27	25	21
5	67	55	47	41	60	51	44	38	42	37	33	34	30	27	27	24	22	18
6	61	49	41	36	56	45	38	33	38	32	28	31	27	24	24	21	19	16
7	57	45	37	31	52	41	34	29	34	29	25	28	24	21	22	19	17	14
8	53	40	33	27	48	37	30	26	31	26	22	25	21	19	20	17	15	13
9	49	37	29	24	45	34	27	23	29	23	20	23	19	17	19	16	14	11
10	46	34	27	22	42	31	25	20	26	21	18	22	18	15	17	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4755	4755	4755
5°	4778	4712	4744
10°	4746	4671	4701
15°	4690	4619	4627
20°	4625	4543	4548
25°	4538	4454	4444
30°	4443	4354	4320
35°	4343	4248	4193
40°	4239	4131	4068
45°	4122	4025	3927
50°	4007	3893	3785
55°	3856	3757	3643
60°	3705	3597	3483
65°	3568	3423	3319
70°	3371	3229	3084
75°	3082	2969	2845
80°	2777	2665	2641
85°	2433	2347	2260



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.6	1.5
10°-20°	117.5	4.2
20°-30°	173.6	6.2
30°-40°	202.8	7.3
40°-50°	203.9	7.3
50°-60°	179.1	6.4
60°-70°	133.4	4.8
70°-80°	76.0	2.7
80°-90°	23.6	0.8
90°-100°	38.6	1.4
100°-110°	115.4	4.1
110°-120°	196.3	7.0
120°-130°	258.2	9.3
130°-140°	290.3	10.4
140°-150°	285.3	10.2
150°-160°	240.2	8.6
160°-170°	159.9	5.7
170°-180°	56.0	2.0
0°-30°	332.7	11.9
0°-40°	535.5	19.2
0°-60°	918.4	32.9
0°-90°	1151.4	41.2
90°-120°	350.3	12.5
90°-150°	1184.1	42.4
90°-180°	1640.0	58.7
0°-180°	2791.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	442	442	442	442	442	
5°	442	440	436	440	439	42
15°	421	419	414	417	415	119
25°	382	380	375	375	374	176
35°	330	328	323	321	319	207
45°	271	269	264	260	258	209
55°	206	205	200	196	194	184
65°	140	138	134	132	130	138
75°	74	73	71	70	68	79
85°	20	19	19	18	18	22
90°	0	5	11	13	14	3
95°	28	31	34	36	36	31
105°	105	106	110	110	111	112
115°	198	199	198	198	198	195
125°	289	291	290	288	286	258
135°	375	378	378	376	375	289
145°	455	456	458	457	455	284
155°	521	521	522	523	520	240
165°	568	566	566	569	566	160
175°	591	589	589	591	588	56
180°	592	592	592	592	592	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	443.4	443.0	442.8	442.5	442.2	441.7	441.0	440.3	439.5	438.8	439.4
5°	442.2	441.7	441.3	440.9	440.5	439.9	438.9	438.0	437.0	436.1	436.9
7.5°	437.9	437.4	437.0	436.6	436.2	435.5	434.6	433.6	432.6	431.6	432.4
10°	434.2	433.8	433.3	432.9	432.5	431.8	430.6	429.6	428.4	427.4	428.1
12.5°	429.3	429.0	428.6	428.3	428.0	427.2	426.2	425.2	424.1	423.1	423.7
15°	420.9	420.6	420.2	419.9	419.6	418.8	417.8	416.6	415.6	414.5	415.2
17.5°	411.1	410.7	410.3	409.8	409.4	408.6	407.5	406.4	405.3	404.2	404.6
20°	403.8	403.3	402.8	402.3	401.8	401.0	399.9	398.8	397.7	396.6	397.0
22.5°	395.6	395.1	394.6	394.1	393.6	392.8	391.7	390.6	389.5	388.4	388.7
25°	382.1	381.6	381.2	380.7	380.2	379.4	378.2	377.2	376.0	375.0	375.0
27.5°	367.8	367.3	366.8	366.3	365.8	365.0	363.9	362.6	361.5	360.3	360.4
30°	357.5	357.0	356.6	356.2	355.8	355.0	353.8	352.6	351.5	350.3	350.3
32.5°	347.2	346.6	346.0	345.4	345.0	344.1	343.2	342.3	341.4	340.6	340.1
35°	330.5	330.0	329.5	329.0	328.5	327.7	326.6	325.5	324.4	323.3	322.8
37.5°	313.5	312.8	312.2	311.5	311.0	310.1	308.9	307.8	306.7	305.6	305.0
40°	301.7	301.1	300.6	300.1	299.6	298.7	297.6	296.4	295.2	294.0	293.3
42.5°	289.8	289.2	288.6	288.0	287.5	286.6	285.4	284.2	283.1	281.8	281.2
45°	270.8	270.5	270.2	269.9	269.5	268.8	267.7	266.6	265.5	264.4	263.4
47.5°	252.1	251.6	251.1	250.6	250.1	249.4	248.3	247.3	246.3	245.2	244.3
50°	239.3	238.9	238.5	238.1	237.7	236.8	235.8	234.7	233.6	232.5	231.5
52.5°	225.9	225.7	225.3	225.1	224.8	224.0	222.9	221.8	220.6	219.4	218.7
55°	205.5	205.5	205.4	205.3	205.2	204.6	203.5	202.4	201.3	200.2	199.3
57.5°	186.1	185.8	185.5	185.2	184.9	184.3	183.4	182.5	181.7	180.8	180.0
60°	172.1	172.0	171.9	171.9	171.8	171.2	170.2	169.2	168.2	167.1	166.4
62.5°	159.6	159.4	159.2	159.0	158.7	158.2	157.1	156.1	155.1	154.1	153.4
65°	140.1	139.7	139.3	138.9	138.5	137.9	137.1	136.2	135.3	134.4	133.8
67.5°	119.6	119.2	118.9	118.5	118.1	117.6	117.0	116.3	115.7	115.0	114.5
70°	107.1	106.6	106.2	105.6	105.1	104.6	104.1	103.5	103.1	102.6	102.0
72.5°	94.1	93.7	93.4	92.9	92.5	92.1	91.6	91.0	90.4	89.8	89.3
75°	74.1	73.7	73.4	73.1	72.7	72.4	72.2	71.9	71.7	71.4	71.0
77.5°	56.3	56.2	56.0	55.8	55.6	55.4	55.1	54.8	54.5	54.1	53.9
80°	44.8	44.6	44.4	44.1	43.8	43.6	43.5	43.3	43.1	43.0	42.8
82.5°	33.6	33.5	33.5	33.4	33.3	33.3	33.3	33.3	33.3	33.2	33.0
85°	19.7	19.6	19.4	19.2	19.1	19.0	19.0	19.0	19.0	19.0	18.8
87.5°	8.0	8.0	8.0	8.0	8.0	8.2	8.3	8.5	8.7	8.9	9.0
90°	0.5	1.5	2.5	3.6	4.6	5.8	7.1	8.5	9.8	11.2	11.6
92.5°	11.3	12.0	12.6	13.4	14.1	14.8	15.6	16.3	17.1	17.9	18.2
95°	27.5	28.1	28.9	29.6	30.3	31.1	32.0	32.8	33.6	34.4	34.8
97.5°	48.8	49.2	49.8	50.4	50.9	51.4	52.0	52.7	53.2	53.9	54.3
100°	63.3	63.8	64.5	65.1	65.7	66.3	66.8	67.3	67.8	68.3	68.6
102.5°	80.0	80.4	80.7	81.1	81.4	82.0	82.7	83.4	84.1	84.7	85.0
105°	104.6	104.8	105.0	105.3	105.5	106.0	107.0	107.9	108.8	109.7	109.7
107.5°	133.3	133.4	133.5	133.6	133.8	134.0	134.4	134.8	135.2	135.5	135.8
110°	151.2	151.3	151.6	151.7	152.0	152.1	152.4	152.6	152.8	153.0	153.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	169.7	169.8	170.0	170.1	170.2	170.3	170.4	170.4	170.5	170.5	171.0
115°	197.6	198.0	198.3	198.6	198.9	198.9	198.7	198.5	198.3	198.1	198.2
117.5°	225.8	225.9	226.2	226.3	226.6	226.5	226.2	226.0	225.8	225.4	225.4
120°	243.2	243.9	244.4	245.1	245.7	245.7	245.2	244.8	244.2	243.7	243.6
122.5°	261.5	261.9	262.4	262.8	263.3	263.3	263.1	262.9	262.5	262.3	262.0
125°	289.3	289.6	289.8	290.2	290.5	290.6	290.3	290.2	289.9	289.8	289.3
127.5°	315.0	315.6	316.3	316.9	317.6	317.8	317.6	317.3	317.1	316.9	316.3
130°	332.1	332.9	333.7	334.5	335.3	335.6	335.3	335.0	334.7	334.4	333.9
132.5°	349.1	350.0	350.8	351.6	352.5	352.8	352.5	352.3	352.0	351.9	351.3
135°	375.3	375.9	376.5	377.2	377.7	378.1	377.9	377.8	377.7	377.6	377.2
137.5°	399.5	400.0	400.5	401.0	401.5	401.9	402.2	402.4	402.8	403.0	402.6
140°	416.2	416.7	417.3	417.8	418.2	418.6	418.7	418.8	418.9	419.0	418.9
142.5°	431.5	431.9	432.5	433.0	433.5	433.9	434.1	434.2	434.5	434.6	434.6
145°	455.3	455.5	455.7	455.9	456.1	456.3	456.6	457.0	457.3	457.6	457.5
147.5°	476.1	476.5	476.9	477.2	477.6	477.9	478.3	478.5	478.8	479.1	479.1
150°	490.6	490.8	491.1	491.2	491.5	491.6	491.9	492.0	492.3	492.4	492.4
152.5°	502.6	502.8	503.1	503.4	503.7	503.9	504.0	504.1	504.3	504.3	504.5
155°	521.3	521.3	521.3	521.3	521.3	521.4	521.5	521.5	521.7	521.8	522.2
157.5°	537.3	537.2	537.0	537.0	536.8	536.8	536.9	537.0	537.0	537.1	537.5
160°	547.3	547.1	546.9	546.7	546.5	546.4	546.4	546.4	546.4	546.4	546.9
162.5°	556.3	556.0	555.7	555.4	555.1	555.1	555.1	555.2	555.3	555.4	555.9
165°	567.8	567.5	567.2	566.9	566.6	566.4	566.4	566.4	566.4	566.4	567.0
167.5°	577.0	576.6	576.2	575.8	575.4	575.2	575.3	575.4	575.4	575.5	576.2
170°	582.2	581.8	581.4	581.0	580.6	580.3	580.3	580.3	580.3	580.3	581.1
172.5°	586.3	585.9	585.5	585.1	584.7	584.5	584.5	584.5	584.5	584.5	585.1
175°	590.6	590.2	589.8	589.4	589.0	588.7	588.7	588.7	588.7	588.7	589.4
177.5°	592.4	592.1	591.7	591.3	591.0	590.8	590.8	590.8	590.8	590.8	591.3
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	441.8	441.8	441.8	441.8	441.8	441.8	441.8	441.8
2.5°	440.1	440.8	441.5	441.8	441.7	441.6	441.6	441.5
5°	437.8	438.6	439.5	439.9	439.7	439.5	439.3	439.1
7.5°	433.2	433.9	434.6	435.0	434.9	434.8	434.7	434.6
10°	428.9	429.7	430.4	430.7	430.6	430.4	430.2	430.1
12.5°	424.2	424.8	425.3	425.6	425.5	425.3	425.3	425.2
15°	415.8	416.5	417.2	417.3	416.7	416.2	415.7	415.2
17.5°	405.1	405.6	406.1	406.3	406.0	405.9	405.7	405.5
20°	397.3	397.6	397.9	398.0	397.7	397.5	397.2	397.0
22.5°	388.9	389.2	389.5	389.5	389.1	388.8	388.5	388.2
25°	375.1	375.2	375.3	375.2	375.0	374.7	374.5	374.2
27.5°	360.4	360.5	360.5	360.4	360.1	359.8	359.5	359.1
30°	350.3	350.3	350.3	349.9	349.4	348.8	348.2	347.6
32.5°	339.6	339.1	338.7	338.3	337.9	337.6	337.3	337.0
35°	322.3	321.8	321.2	320.8	320.4	319.9	319.5	319.1
37.5°	304.4	303.8	303.1	302.7	302.5	302.1	301.9	301.7
40°	292.7	292.0	291.3	290.8	290.5	290.2	289.8	289.5
42.5°	280.5	279.8	279.2	278.7	278.3	278.0	277.7	277.3
45°	262.4	261.4	260.3	259.7	259.2	258.8	258.4	258.0
47.5°	243.3	242.3	241.2	240.6	240.2	239.9	239.5	239.1
50°	230.6	229.7	228.8	228.0	227.6	227.1	226.6	226.0
52.5°	217.8	217.0	216.2	215.6	215.1	214.6	214.1	213.6
55°	198.4	197.4	196.5	195.8	195.4	194.9	194.5	194.1
57.5°	179.2	178.3	177.5	176.8	176.3	175.9	175.4	174.9
60°	165.7	164.9	164.1	163.5	163.1	162.7	162.2	161.8
62.5°	152.5	151.8	151.1	150.5	150.3	149.9	149.7	149.4
65°	133.1	132.5	131.8	131.3	131.1	130.8	130.5	130.3
67.5°	113.8	113.2	112.7	112.2	111.9	111.5	111.1	110.8
70°	101.4	100.8	100.2	99.7	99.3	98.9	98.4	98.0
72.5°	88.8	88.2	87.7	87.3	87.2	86.9	86.7	86.4
75°	70.6	70.1	69.7	69.4	69.1	68.9	68.6	68.4
77.5°	53.6	53.3	53.0	52.9	52.9	52.9	52.9	52.9
80°	42.7	42.6	42.6	42.6	42.6	42.6	42.6	42.6
82.5°	32.9	32.8	32.6	32.4	32.4	32.4	32.3	32.2
85°	18.7	18.5	18.3	18.3	18.3	18.3	18.3	18.3
87.5°	9.0	9.0	9.0	9.0	9.0	9.0	9.1	9.2
90°	12.0	12.4	12.8	13.1	13.4	13.5	13.8	13.9
92.5°	18.5	18.8	19.2	19.3	19.2	19.0	18.9	18.8
95°	35.2	35.6	36.0	36.3	36.3	36.3	36.3	36.3
97.5°	54.8	55.3	55.8	55.9	55.9	55.8	55.8	55.8
100°	69.0	69.3	69.6	69.9	70.0	70.3	70.4	70.7
102.5°	85.4	85.7	85.9	86.1	86.1	86.0	86.0	85.9
105°	109.7	109.7	109.7	109.8	110.1	110.2	110.5	110.7
107.5°	136.2	136.5	136.8	137.0	136.8	136.7	136.6	136.5
110°	153.8	154.3	154.7	154.7	154.6	154.3	154.2	153.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	171.5	171.9	172.4	172.7	172.7	172.6	172.6	172.5
115°	198.3	198.4	198.5	198.5	198.4	198.3	198.2	198.1
117.5°	225.4	225.3	225.3	225.2	224.9	224.6	224.4	224.0
120°	243.4	243.4	243.3	243.1	242.9	242.7	242.5	242.3
122.5°	261.7	261.5	261.2	260.9	260.7	260.3	260.1	259.8
125°	288.9	288.5	288.0	287.6	287.2	286.8	286.4	286.0
127.5°	315.7	315.1	314.5	314.1	313.6	313.1	312.6	312.1
130°	333.5	333.1	332.7	332.2	331.4	330.7	330.0	329.2
132.5°	350.8	350.3	349.8	349.4	348.8	348.2	347.6	347.1
135°	376.7	376.3	375.9	375.6	375.4	375.2	375.0	374.8
137.5°	402.1	401.7	401.3	400.9	400.5	400.1	399.7	399.3
140°	418.8	418.7	418.6	418.2	417.4	416.7	416.0	415.3
142.5°	434.4	434.3	434.2	433.9	433.3	432.8	432.2	431.6
145°	457.4	457.3	457.2	456.9	456.5	456.1	455.7	455.3
147.5°	479.1	479.1	479.1	478.7	478.2	477.5	477.0	476.3
150°	492.4	492.4	492.4	492.2	491.5	490.9	490.3	489.7
152.5°	504.8	504.9	505.1	504.8	504.3	503.8	503.3	502.7
155°	522.6	523.0	523.4	523.3	522.5	521.8	521.1	520.4
157.5°	538.0	538.4	538.8	538.7	538.2	537.6	537.0	536.5
160°	547.5	548.0	548.5	548.5	548.1	547.7	547.3	546.9
162.5°	556.4	556.9	557.4	557.3	556.7	556.0	555.4	554.7
165°	567.7	568.3	568.9	568.8	568.1	567.4	566.7	566.0
167.5°	576.8	577.5	578.1	578.1	577.5	576.8	576.2	575.5
170°	581.8	582.5	583.3	583.3	582.5	581.8	581.1	580.3
172.5°	585.7	586.4	587.0	587.0	586.3	585.5	584.8	584.1
175°	590.0	590.6	591.3	591.2	590.4	589.7	589.0	588.2
177.5°	591.9	592.4	592.9	592.8	592.2	591.7	591.1	590.5
180°	592.0	592.0	592.0	592.0	592.0	592.0	592.0	592.0

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