

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: P332244-935

Luminaire Tested: **S123RDIP-S340D365U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332244-935
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: S123RDIP-S340D365U935-4F0-1E-UDD-F1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2191.8 lumens
Efficiency: N/A
Efficacy: 108.0 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: General Diffuse

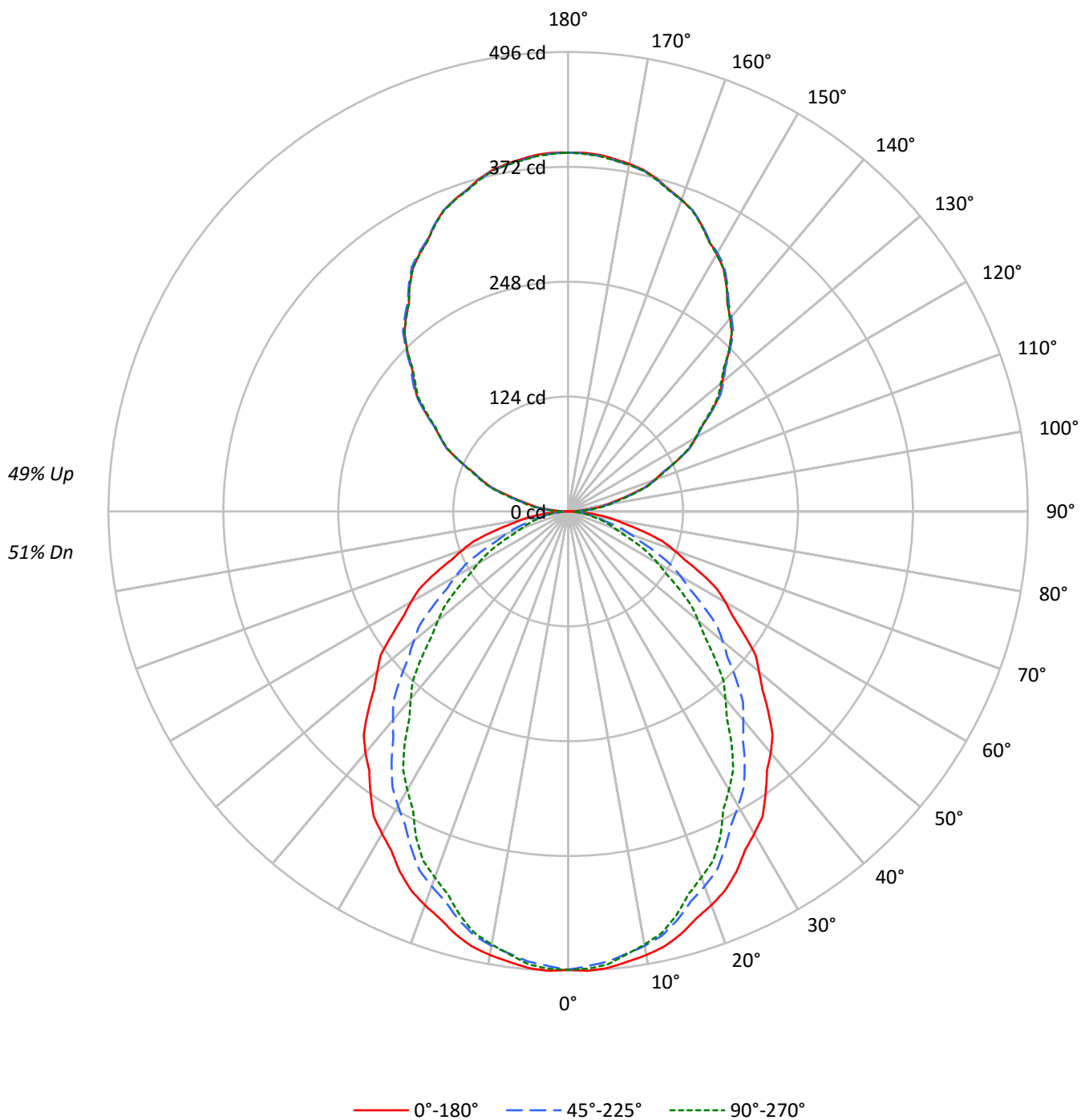
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot



TEST NUMBER: P332244-935

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57
1	98	94	90	87	91	87	84	81	74	72	70	62	60	59	51	50	49
2	90	83	77	72	83	77	71	67	65	61	58	55	52	50	45	43	42
3	82	73	66	60	76	68	61	56	58	53	49	49	45	42	40	38	36
4	75	65	57	51	69	60	53	48	52	46	42	44	40	37	36	33	31
5	69	58	50	44	64	54	47	41	46	41	37	39	35	32	33	30	27
6	64	52	44	38	59	48	41	36	42	36	32	36	31	28	30	27	24
7	59	47	39	34	55	44	37	32	38	32	28	33	28	25	27	24	22
8	55	43	35	30	51	40	33	28	35	29	25	30	25	22	25	22	19
9	51	39	32	27	47	37	30	25	32	27	23	27	23	20	23	20	18
10	48	36	29	24	44	34	27	23	29	24	21	25	21	18	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5324	5324	5324
5°	5344	5271	5302
10°	5314	5205	5187
15°	5258	5084	5029
20°	5179	4931	4816
25°	5099	4760	4608
30°	4992	4561	4313
35°	4882	4365	4043
40°	4780	4131	3710
45°	4647	3902	3408
50°	4501	3641	3069
55°	4352	3342	2755
60°	4215	3023	2409
65°	4037	2677	2063
70°	3811	2247	1668
75°	3489	1768	1568
80°	3106	1568	1438
85°	2631	1383	1284

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	2.1
10°-20°	129.2	5.9
20°-30°	186.1	8.5
30°-40°	209.6	9.6
40°-50°	200.5	9.1
50°-60°	164.2	7.5
60°-70°	110.8	5.1
70°-80°	55.7	2.5
80°-90°	15.9	0.7
90°-100°	25.2	1.2
100°-110°	75.5	3.4
110°-120°	128.5	5.9
120°-130°	169.0	7.7
130°-140°	189.9	8.7
140°-150°	186.7	8.5
150°-160°	157.2	7.2
160°-170°	104.6	4.8
170°-180°	36.6	1.7
0°-30°	361.8	16.5
0°-40°	571.4	26.1
0°-60°	936.2	42.7
0°-90°	1118.6	51.0
90°-120°	229.2	10.5
90°-150°	774.8	35.3
90°-180°	1073.0	49.0
0°-180°	2191.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	495	495	495	495	495	
5°	495	492	488	491	491	47
15°	472	467	456	454	451	133
25°	429	419	401	393	388	197
35°	372	356	332	315	308	232
45°	305	286	256	234	224	235
55°	232	211	178	156	147	208
65°	158	136	105	86	81	157
75°	84	64	42	39	38	89
85°	21	13	11	10	10	24
90°	0	3	7	8	9	2
95°	18	20	23	24	24	20
105°	68	69	72	72	72	73
115°	129	130	130	130	130	128
125°	189	190	190	188	187	169
135°	246	247	247	246	245	189
145°	298	298	299	299	298	186
155°	341	341	341	342	340	157
165°	372	371	371	372	370	105
175°	386	385	385	387	385	37
180°	387	387	387	387	387	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6
2.5°	496.3	495.9	495.7	495.4	495.2	494.6	493.7	492.8	492.0	491.1	491.9
5°	494.6	494.2	493.8	493.4	492.8	492.1	491.0	490.0	488.9	487.8	488.6
7.5°	490.1	489.6	489.1	488.6	488.2	487.2	485.9	484.5	483.0	481.6	482.1
10°	486.2	485.6	485.0	484.4	483.7	482.6	481.0	479.4	477.8	476.2	476.3
12.5°	480.8	480.1	479.4	478.7	478.0	476.6	474.7	472.8	470.8	468.8	468.7
15°	471.8	470.8	469.8	468.8	467.9	466.1	463.6	461.2	458.7	456.2	455.7
17.5°	460.5	459.3	458.2	457.0	455.9	453.7	450.6	447.4	444.3	441.1	440.1
20°	452.1	450.7	449.3	447.9	446.4	444.0	440.7	437.2	433.9	430.5	429.3
22.5°	442.8	441.2	439.5	437.9	436.3	433.7	430.1	426.5	422.8	419.2	417.8
25°	429.3	427.1	424.8	422.6	420.3	417.2	413.1	409.0	404.8	400.8	398.9
27.5°	412.8	410.4	407.9	405.4	402.9	399.5	394.9	390.3	385.7	381.2	378.6
30°	401.6	398.9	396.2	393.6	390.9	387.0	382.0	377.0	372.0	367.0	364.0
32.5°	390.4	387.3	384.3	381.3	378.2	374.1	368.8	363.5	358.3	352.9	349.7
35°	371.5	368.2	365.1	361.9	358.7	354.3	348.8	343.2	337.7	332.2	328.4
37.5°	352.4	348.8	345.3	341.7	338.1	333.4	327.5	321.6	315.7	309.8	305.5
40°	340.2	336.3	332.3	328.5	324.5	319.3	313.1	306.7	300.4	294.0	289.5
42.5°	326.4	322.4	318.6	314.6	310.7	305.5	298.9	292.4	285.9	279.3	274.2
45°	305.3	301.3	297.3	293.3	289.2	283.8	277.0	270.1	263.2	256.3	251.2
47.5°	284.2	279.8	275.3	271.0	266.6	261.0	254.1	247.2	240.4	233.5	228.0
50°	268.8	264.6	260.5	256.2	252.0	246.3	239.1	231.9	224.6	217.4	211.9
52.5°	255.0	250.5	245.9	241.3	236.8	230.9	223.8	216.6	209.5	202.3	196.7
55°	231.9	227.5	223.2	218.8	214.4	208.4	200.9	193.3	185.7	178.1	173.0
57.5°	210.5	205.8	201.0	196.2	191.5	185.3	177.7	170.0	162.5	154.9	150.0
60°	195.8	190.9	186.0	181.1	176.2	170.0	162.6	155.2	147.8	140.4	135.6
62.5°	181.0	176.1	171.2	166.3	161.4	155.2	147.8	140.4	133.0	125.6	121.1
65°	158.5	153.6	148.7	143.8	138.9	132.9	126.0	119.0	112.1	105.1	100.7
67.5°	136.0	131.0	126.0	121.1	116.1	110.3	103.6	96.9	90.2	83.6	80.3
70°	121.1	116.3	111.5	106.7	101.9	96.3	90.1	83.9	77.7	71.4	68.3
72.5°	106.4	101.7	96.9	92.1	87.4	82.2	76.5	70.9	65.2	59.5	57.0
75°	83.9	79.6	75.3	71.0	66.7	62.2	57.3	52.3	47.4	42.5	41.7
77.5°	63.3	59.4	55.5	51.7	47.9	44.3	41.2	38.0	34.9	31.7	31.3
80°	50.1	46.5	42.9	39.2	35.6	32.8	30.9	29.0	27.1	25.3	25.0
82.5°	37.6	34.4	31.3	28.2	25.0	23.0	22.1	21.3	20.4	19.5	19.2
85°	21.3	19.3	17.3	15.4	13.4	12.3	12.1	11.8	11.5	11.2	11.0
87.5°	7.7	7.1	6.5	5.9	5.2	4.9	5.1	5.3	5.4	5.6	5.6
90°	0.3	0.9	1.6	2.3	3.0	3.8	4.6	5.5	6.5	7.3	7.6
92.5°	7.4	7.8	8.3	8.8	9.2	9.6	10.2	10.7	11.2	11.7	11.9
95°	18.0	18.4	18.9	19.4	19.8	20.3	20.9	21.4	22.0	22.6	22.8
97.5°	31.9	32.2	32.6	33.0	33.3	33.7	34.1	34.4	34.9	35.2	35.6
100°	41.4	41.8	42.2	42.6	43.0	43.4	43.7	44.1	44.4	44.7	44.9
102.5°	52.3	52.6	52.8	53.0	53.3	53.6	54.1	54.6	55.0	55.4	55.6
105°	68.4	68.6	68.7	68.9	69.0	69.4	70.0	70.6	71.2	71.8	71.8
107.5°	87.2	87.3	87.4	87.5	87.6	87.6	87.9	88.2	88.4	88.7	88.9
110°	98.9	99.0	99.2	99.3	99.4	99.5	99.7	99.9	100.0	100.1	100.4

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	111.1	111.2	111.2	111.3	111.4	111.4	111.5	111.5	111.5	111.6	111.8
115°	129.3	129.5	129.8	129.9	130.1	130.2	130.0	129.9	129.8	129.6	129.7
117.5°	147.7	147.8	148.0	148.1	148.3	148.2	148.0	147.8	147.7	147.5	147.5
120°	159.1	159.5	160.0	160.3	160.7	160.7	160.5	160.1	159.8	159.5	159.4
122.5°	171.1	171.3	171.7	171.9	172.3	172.3	172.1	171.9	171.8	171.6	171.4
125°	189.2	189.4	189.7	189.9	190.1	190.1	189.9	189.9	189.7	189.6	189.2
127.5°	206.0	206.5	206.9	207.3	207.8	207.9	207.8	207.6	207.5	207.3	207.0
130°	217.2	217.7	218.3	218.9	219.4	219.6	219.4	219.2	219.0	218.8	218.5
132.5°	228.4	229.0	229.5	230.1	230.6	230.8	230.7	230.5	230.3	230.2	229.9
135°	245.6	246.0	246.3	246.8	247.2	247.4	247.3	247.2	247.1	247.1	246.8
137.5°	261.4	261.7	262.0	262.3	262.7	262.9	263.1	263.3	263.5	263.6	263.4
140°	272.3	272.7	273.0	273.4	273.7	273.9	274.0	274.0	274.1	274.1	274.1
142.5°	282.3	282.7	283.0	283.4	283.6	283.9	284.0	284.1	284.2	284.4	284.3
145°	297.9	298.0	298.2	298.3	298.4	298.6	298.8	299.0	299.2	299.4	299.4
147.5°	311.5	311.8	312.0	312.3	312.5	312.7	312.9	313.1	313.2	313.5	313.5
150°	321.0	321.2	321.2	321.4	321.6	321.7	321.8	321.9	322.1	322.2	322.2
152.5°	328.8	329.0	329.2	329.3	329.6	329.7	329.8	329.8	329.9	330.0	330.1
155°	341.1	341.1	341.1	341.1	341.1	341.1	341.2	341.2	341.3	341.4	341.6
157.5°	351.5	351.5	351.4	351.3	351.2	351.2	351.3	351.3	351.4	351.5	351.7
160°	358.1	358.0	357.8	357.7	357.6	357.5	357.5	357.5	357.5	357.5	357.8
162.5°	363.9	363.8	363.6	363.4	363.2	363.2	363.2	363.3	363.3	363.3	363.7
165°	371.5	371.3	371.1	370.9	370.7	370.6	370.6	370.6	370.6	370.6	371.0
167.5°	377.5	377.3	377.0	376.7	376.4	376.3	376.4	376.4	376.5	376.6	376.9
170°	380.9	380.6	380.4	380.1	379.9	379.7	379.7	379.7	379.7	379.7	380.2
172.5°	383.7	383.3	383.1	382.8	382.5	382.4	382.4	382.4	382.4	382.4	382.8
175°	386.4	386.2	385.9	385.6	385.4	385.2	385.2	385.2	385.2	385.2	385.6
177.5°	387.5	387.4	387.1	386.9	386.7	386.6	386.6	386.6	386.6	386.6	386.9
180°	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	494.6	494.6	494.6	494.6	494.6	494.6	494.6	494.6
2.5°	492.7	493.4	494.3	494.6	494.5	494.3	494.1	494.0
5°	489.5	490.3	491.0	491.4	491.2	491.0	490.9	490.7
7.5°	482.6	483.0	483.5	483.5	483.2	482.9	482.6	482.3
10°	476.4	476.5	476.6	476.4	476.0	475.5	475.0	474.6
12.5°	468.7	468.6	468.6	468.3	467.8	467.3	466.7	466.2
15°	455.2	454.8	454.3	453.8	453.2	452.5	451.9	451.3
17.5°	439.2	438.2	437.3	436.4	435.4	434.5	433.6	432.7
20°	428.2	427.0	425.9	424.7	423.6	422.6	421.5	420.4
22.5°	416.4	414.9	413.5	412.2	411.2	410.3	409.2	408.3
25°	397.0	395.2	393.3	391.8	390.9	389.9	388.9	388.0
27.5°	376.0	373.4	370.8	368.8	367.2	365.8	364.3	362.7
30°	361.0	358.0	355.0	352.8	351.3	349.9	348.4	347.0
32.5°	346.3	343.0	339.7	337.3	335.8	334.3	332.8	331.3
35°	324.5	320.6	316.8	314.1	312.5	310.9	309.3	307.7
37.5°	301.1	296.7	292.4	289.2	287.2	285.2	283.3	281.3
40°	284.8	280.2	275.5	272.2	270.1	268.1	266.0	264.0
42.5°	269.1	264.2	259.1	255.6	253.7	251.9	250.1	248.2
45°	246.2	241.1	236.0	232.4	230.3	228.2	226.0	223.9
47.5°	222.4	216.9	211.4	207.7	205.8	203.9	201.9	200.0
50°	206.4	200.9	195.4	191.6	189.5	187.4	185.4	183.3
52.5°	190.9	185.1	179.4	175.6	173.7	171.9	170.1	168.2
55°	167.8	162.6	157.5	153.9	152.2	150.4	148.6	146.8
57.5°	145.1	140.2	135.3	132.1	130.6	129.1	127.6	126.1
60°	130.8	126.0	121.1	118.0	116.5	114.9	113.5	111.9
62.5°	116.6	112.1	107.5	104.4	102.9	101.3	99.7	98.2
65°	96.3	92.0	87.6	85.0	83.9	83.0	82.1	81.0
67.5°	77.1	73.8	70.5	68.4	67.3	66.3	65.3	64.2
70°	65.2	62.1	58.9	56.9	55.9	54.9	53.9	53.0
72.5°	54.4	51.9	49.3	47.9	47.4	47.0	46.7	46.2
75°	40.7	39.9	38.9	38.4	38.2	38.1	37.9	37.7
77.5°	30.7	30.2	29.8	29.4	29.3	29.1	28.9	28.8
80°	24.7	24.5	24.2	24.0	23.8	23.6	23.4	23.2
82.5°	18.9	18.7	18.4	18.3	18.3	18.2	18.2	18.2
85°	10.8	10.7	10.5	10.4	10.4	10.4	10.4	10.4
87.5°	5.6	5.6	5.6	5.5	5.5	5.4	5.4	5.3
90°	7.8	8.1	8.4	8.6	8.7	8.9	9.0	9.1
92.5°	12.1	12.3	12.6	12.7	12.6	12.5	12.4	12.3
95°	23.1	23.3	23.6	23.8	23.8	23.8	23.8	23.8
97.5°	35.8	36.2	36.5	36.6	36.6	36.6	36.5	36.5
100°	45.1	45.4	45.5	45.7	45.8	46.0	46.1	46.2
102.5°	55.9	56.1	56.2	56.3	56.3	56.3	56.2	56.2
105°	71.8	71.8	71.8	71.9	72.0	72.2	72.3	72.4
107.5°	89.1	89.3	89.5	89.6	89.5	89.5	89.4	89.3
110°	100.7	100.9	101.2	101.3	101.1	101.0	100.8	100.7

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	112.2	112.5	112.9	113.0	113.0	113.0	112.9	112.9
115°	129.8	129.8	129.9	129.9	129.8	129.8	129.7	129.6
117.5°	147.5	147.5	147.5	147.3	147.1	147.0	146.8	146.6
120°	159.3	159.2	159.2	159.0	158.9	158.8	158.7	158.5
122.5°	171.3	171.1	170.9	170.7	170.6	170.3	170.1	170.0
125°	189.0	188.7	188.5	188.2	188.0	187.7	187.4	187.1
127.5°	206.6	206.2	205.8	205.4	205.2	204.8	204.6	204.2
130°	218.3	217.9	217.7	217.3	216.9	216.4	215.9	215.4
132.5°	229.5	229.2	228.9	228.6	228.2	227.8	227.5	227.1
135°	246.5	246.2	246.0	245.8	245.6	245.5	245.4	245.2
137.5°	263.1	262.9	262.5	262.3	262.0	261.7	261.5	261.2
140°	274.0	274.0	273.9	273.6	273.1	272.7	272.2	271.7
142.5°	284.2	284.1	284.1	283.9	283.5	283.2	282.8	282.4
145°	299.3	299.2	299.1	298.9	298.7	298.4	298.2	297.9
147.5°	313.5	313.5	313.5	313.2	312.9	312.5	312.0	311.6
150°	322.2	322.2	322.2	322.0	321.6	321.2	320.8	320.4
152.5°	330.2	330.4	330.5	330.3	329.9	329.6	329.2	328.9
155°	341.9	342.2	342.5	342.3	341.9	341.4	341.0	340.4
157.5°	352.0	352.3	352.6	352.5	352.1	351.8	351.4	351.0
160°	358.2	358.5	358.9	358.9	358.6	358.3	358.1	357.8
162.5°	364.0	364.4	364.7	364.6	364.2	363.8	363.3	362.9
165°	371.4	371.8	372.2	372.2	371.7	371.3	370.7	370.3
167.5°	377.4	377.8	378.2	378.2	377.8	377.4	376.9	376.6
170°	380.6	381.2	381.6	381.6	381.2	380.6	380.2	379.7
172.5°	383.2	383.7	384.1	384.1	383.6	383.1	382.6	382.2
175°	386.0	386.4	386.8	386.8	386.3	385.8	385.4	384.9
177.5°	387.3	387.5	387.9	387.9	387.5	387.1	386.8	386.3
180°	387.4	387.4	387.4	387.4	387.4	387.4	387.4	387.4

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