

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: P332494

Luminaire Tested: **S124DIP-S350D365U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332494
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S350D365U835-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2709.9 lumens
Efficiency: N/A
Efficacy: 133.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: General Diffuse

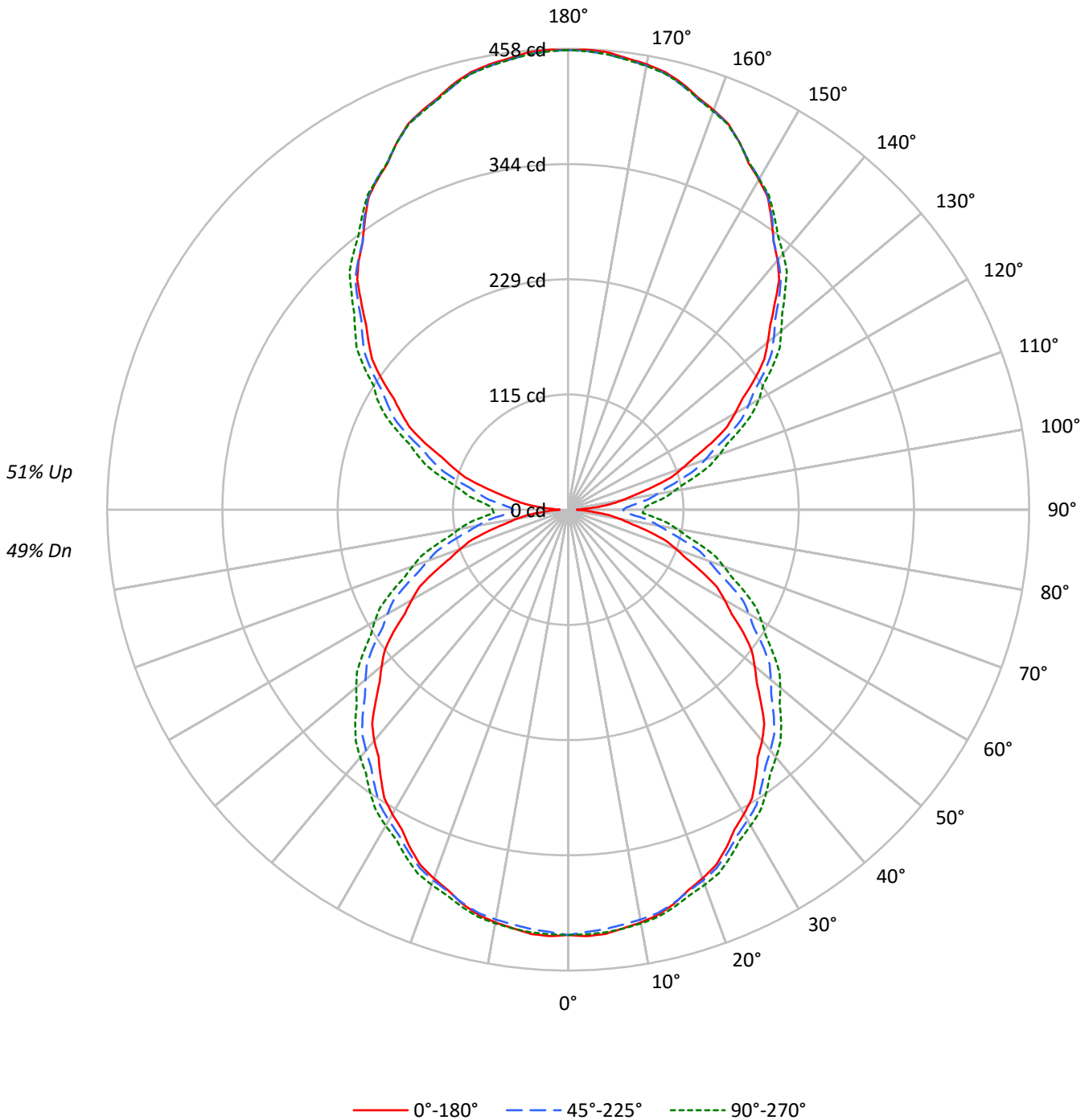
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	55	55	55	49
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39
2	88	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	23
5	67	55	46	40	61	50	43	37	43	37	32	35	31	28	29	25	23	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	23	20	17
7	57	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	18	15
8	52	40	32	26	48	37	30	25	32	26	22	26	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	17	14	12
10	46	33	26	21	42	31	24	20	27	21	17	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3412	3412	3412
5°	3423	3335	3344
10°	3402	3281	3278
15°	3371	3217	3200
20°	3325	3147	3124
25°	3274	3070	3039
30°	3217	2992	2954
35°	3154	2912	2878
40°	3103	2836	2800
45°	3027	2766	2732
50°	2964	2686	2661
55°	2899	2610	2577
60°	2796	2513	2501
65°	2682	2410	2407
70°	2547	2292	2298
75°	2356	2161	2199
80°	2145	2037	2102
85°	1878	1926	2046



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.0	1.5
10°-20°	114.7	4.2
20°-30°	173.4	6.4
30°-40°	209.8	7.7
40°-50°	221.8	8.2
50°-60°	208.8	7.7
60°-70°	173.2	6.4
70°-80°	121.7	4.5
80°-90°	70.1	2.6
90°-100°	71.0	2.6
100°-110°	119.5	4.4
110°-120°	171.8	6.3
120°-130°	211.2	7.8
130°-140°	229.3	8.5
140°-150°	221.5	8.2
150°-160°	185.5	6.8
160°-170°	123.4	4.6
170°-180°	43.2	1.6
0°-30°	328.1	12.1
0°-40°	537.9	19.9
0°-60°	968.5	35.7
0°-90°	1333.5	49.2
90°-120°	362.3	13.4
90°-150°	1024.4	37.8
90°-180°	1376.0	50.8
0°-180°	2709.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	423	423	423	423	423	
5°	423	422	418	422	422	40
15°	406	406	405	409	408	114
25°	371	374	375	380	381	171
35°	325	330	335	341	343	203
45°	271	280	289	296	299	209
55°	212	222	236	245	248	189
65°	147	162	178	189	194	145
75°	81	99	119	132	136	87
85°	25	45	66	80	85	27
90°	9	31	55	70	75	6
95°	27	46	68	81	86	28
105°	87	97	115	128	133	92
115°	157	162	176	185	189	155
125°	226	226	237	245	248	202
135°	290	292	296	302	304	225
145°	352	353	353	356	357	220
155°	403	403	402	404	402	185
165°	438	438	437	439	438	124
175°	456	454	454	456	454	43
180°	457	457	457	457	457	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	424.2	423.9	423.7	423.4	423.2	422.7	422.1	421.4	420.7	420.0	420.6
5°	423.2	422.8	422.5	422.2	421.9	421.4	420.6	419.9	419.2	418.4	419.3
7.5°	419.6	419.4	419.2	419.0	418.8	418.4	417.8	417.2	416.6	416.0	416.9
10°	416.5	416.4	416.3	416.2	416.1	415.8	415.3	414.7	414.2	413.7	414.6
12.5°	412.4	412.3	412.3	412.3	412.3	412.1	411.7	411.4	411.0	410.7	411.5
15°	405.6	405.8	405.9	406.0	406.1	406.0	405.6	405.3	405.0	404.7	405.6
17.5°	396.5	396.8	397.1	397.4	397.7	397.9	397.8	397.7	397.7	397.6	398.6
20°	390.0	390.3	390.7	391.0	391.3	391.5	391.6	391.7	391.8	391.9	393.0
22.5°	382.8	383.2	383.6	384.0	384.4	384.7	384.9	385.1	385.3	385.5	386.5
25°	371.1	371.7	372.4	373.0	373.6	374.1	374.4	374.7	375.0	375.4	376.5
27.5°	358.0	359.0	359.9	360.8	361.7	362.4	362.9	363.4	363.9	364.4	365.4
30°	349.3	350.2	351.0	351.8	352.7	353.5	354.2	354.9	355.7	356.4	357.6
32.5°	339.9	340.9	341.9	342.9	343.9	344.8	345.6	346.4	347.3	348.1	349.4
35°	324.7	326.0	327.2	328.5	329.8	330.9	332.0	333.0	334.1	335.1	336.6
37.5°	309.5	310.9	312.4	313.8	315.3	316.6	318.0	319.3	320.6	321.9	323.4
40°	299.6	301.0	302.4	303.7	305.1	306.5	308.0	309.5	310.9	312.4	314.0
42.5°	288.3	289.8	291.3	292.9	294.4	296.0	297.8	299.5	301.2	302.9	304.7
45°	270.7	272.7	274.7	276.7	278.7	280.7	282.7	284.7	286.7	288.7	290.5
47.5°	254.0	256.1	258.1	260.2	262.2	264.4	266.7	269.1	271.4	273.7	275.5
50°	241.9	244.2	246.5	248.8	251.1	253.4	255.8	258.1	260.4	262.7	264.8
52.5°	229.8	232.1	234.4	236.7	239.0	241.5	244.1	246.8	249.4	252.1	254.2
55°	212.1	214.3	216.5	218.7	220.9	223.6	226.7	229.9	233.0	236.2	238.3
57.5°	192.3	195.0	197.7	200.5	203.2	206.1	209.3	212.4	215.5	218.7	221.2
60°	179.4	182.1	184.9	187.6	190.3	193.4	196.9	200.4	203.8	207.3	209.7
62.5°	166.9	169.9	172.9	175.9	178.8	182.1	185.5	189.0	192.5	196.0	198.4
65°	146.7	150.1	153.5	156.8	160.2	163.7	167.2	170.8	174.4	178.0	180.6
67.5°	127.3	130.9	134.5	138.1	141.6	145.3	149.2	153.0	156.8	160.6	163.3
70°	114.1	117.6	121.2	124.8	128.4	132.2	136.2	140.2	144.2	148.2	151.0
72.5°	101.2	104.9	108.5	112.2	115.8	119.8	124.0	128.3	132.5	136.8	139.5
75°	81.4	85.3	89.2	93.1	97.0	101.1	105.6	110.0	114.4	118.8	121.8
77.5°	63.0	67.1	71.2	75.3	79.4	83.8	88.4	93.1	97.7	102.3	105.3
80°	51.6	55.8	60.0	64.2	68.4	72.8	77.5	82.1	86.7	91.4	94.5
82.5°	40.2	44.6	49.0	53.4	57.7	62.2	66.9	71.5	76.1	80.8	84.0
85°	25.1	29.5	33.9	38.3	42.8	47.3	52.1	56.8	61.5	66.3	69.4
87.5°	14.2	18.7	23.2	27.6	32.1	36.7	41.4	46.1	50.9	55.6	58.8
90°	8.6	13.7	18.8	23.8	28.9	34.0	39.2	44.3	49.5	54.6	58.2
92.5°	14.8	19.5	24.3	29.1	33.9	38.7	43.7	48.7	53.6	58.6	61.8
95°	27.4	31.5	35.7	39.9	44.1	48.6	53.4	58.3	63.2	68.0	71.1
97.5°	42.6	46.2	49.7	53.3	56.8	61.1	66.0	70.9	75.8	80.7	83.8
100°	54.7	57.7	60.8	63.8	66.9	70.8	75.6	80.4	85.2	90.0	93.0
102.5°	67.7	70.2	72.7	75.3	77.8	81.4	86.0	90.7	95.4	100.0	103.0
105°	86.6	88.8	91.0	93.1	95.3	98.5	102.7	106.9	111.1	115.3	118.2
107.5°	107.3	109.2	111.0	112.8	114.6	117.4	121.1	124.9	128.6	132.3	135.1
110°	121.1	122.7	124.4	126.0	127.6	130.2	133.8	137.4	141.0	144.7	146.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	135.4	136.8	138.1	139.4	140.8	143.1	146.5	149.9	153.2	156.6	158.9
115°	156.9	157.9	158.8	159.7	160.7	162.8	166.0	169.2	172.4	175.6	177.8
117.5°	177.6	178.2	178.9	179.5	180.1	181.9	185.0	188.0	191.0	194.0	196.0
120°	191.1	191.7	192.3	193.0	193.6	195.3	198.1	200.9	203.7	206.6	208.3
122.5°	205.5	205.7	205.9	206.0	206.2	207.7	210.5	213.3	216.0	218.8	220.6
125°	226.3	226.2	226.1	226.0	225.9	227.1	229.6	232.2	234.7	237.3	239.1
127.5°	245.5	245.6	245.7	245.9	246.0	247.0	248.9	250.8	252.7	254.6	256.3
130°	258.7	258.8	258.9	259.1	259.2	260.1	261.8	263.5	265.1	266.8	268.6
132.5°	272.5	272.6	272.7	272.7	272.8	273.5	274.8	276.0	277.3	278.6	280.3
135°	290.4	290.8	291.3	291.8	292.2	292.8	293.6	294.3	295.1	295.8	297.3
137.5°	310.3	310.4	310.5	310.6	310.7	311.0	311.5	312.0	312.5	313.0	314.3
140°	323.6	323.6	323.7	323.7	323.8	323.9	324.0	324.1	324.2	324.3	325.6
142.5°	335.3	335.5	335.6	335.8	335.9	335.9	335.8	335.6	335.5	335.4	336.6
145°	352.1	352.3	352.5	352.7	352.9	353.1	353.1	353.2	353.3	353.4	353.9
147.5°	368.8	369.0	369.3	369.6	369.8	369.9	369.9	369.8	369.8	369.7	369.7
150°	378.9	379.1	379.3	379.6	379.8	379.9	379.9	379.9	379.9	379.9	379.9
152.5°	388.2	388.3	388.5	388.7	388.8	388.9	389.0	389.1	389.1	389.2	389.4
155°	402.8	402.8	402.8	402.8	402.8	402.8	402.7	402.6	402.6	402.5	402.8
157.5°	415.3	415.1	415.0	414.9	414.7	414.6	414.6	414.6	414.6	414.6	414.8
160°	422.6	422.5	422.5	422.4	422.3	422.2	422.2	422.1	422.0	421.9	422.2
162.5°	429.4	429.2	429.0	428.8	428.6	428.5	428.4	428.3	428.2	428.1	428.6
165°	438.5	438.3	438.1	437.8	437.6	437.4	437.2	437.1	436.9	436.8	437.2
167.5°	445.5	445.2	444.9	444.5	444.2	444.0	444.1	444.1	444.1	444.1	444.6
170°	449.5	449.1	448.7	448.3	447.9	447.8	447.8	447.9	448.0	448.1	448.5
172.5°	452.3	452.0	451.6	451.3	451.0	450.8	450.8	450.9	450.9	450.9	451.4
175°	456.2	455.8	455.4	455.0	454.6	454.4	454.3	454.2	454.2	454.1	454.6
177.5°	457.5	457.2	456.8	456.5	456.2	456.1	456.1	456.1	456.1	456.1	456.5
180°	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	422.7	422.7	422.7	422.7	422.7	422.7	422.7	422.7
2.5°	421.2	421.8	422.4	422.6	422.6	422.5	422.4	422.3
5°	420.1	420.9	421.8	422.2	422.1	421.9	421.8	421.7
7.5°	417.9	418.8	419.8	420.2	420.1	420.0	419.9	419.8
10°	415.6	416.5	417.5	417.9	417.8	417.7	417.6	417.5
12.5°	412.4	413.3	414.1	414.5	414.5	414.5	414.5	414.4
15°	406.6	407.5	408.5	408.9	408.8	408.7	408.6	408.5
17.5°	399.5	400.5	401.5	401.9	401.8	401.7	401.7	401.6
20°	394.0	395.1	396.1	396.7	396.7	396.7	396.7	396.7
22.5°	387.6	388.6	389.7	390.3	390.5	390.6	390.8	391.0
25°	377.7	378.8	380.0	380.6	380.7	380.8	380.9	381.0
27.5°	366.5	367.6	368.7	369.3	369.4	369.5	369.6	369.8
30°	358.7	359.9	361.0	361.7	361.9	362.2	362.4	362.6
32.5°	350.7	352.1	353.4	354.2	354.4	354.6	354.8	355.0
35°	338.1	339.5	341.0	341.9	342.2	342.5	342.9	343.2
37.5°	324.9	326.3	327.8	328.8	329.1	329.4	329.8	330.1
40°	315.6	317.1	318.7	319.7	320.1	320.6	321.0	321.4
42.5°	306.4	308.2	309.9	311.0	311.3	311.6	312.0	312.3
45°	292.3	294.1	295.9	297.0	297.6	298.1	298.6	299.1
47.5°	277.4	279.2	281.1	282.3	283.0	283.6	284.2	284.9
50°	266.9	269.0	271.1	272.5	273.1	273.7	274.4	275.0
52.5°	256.3	258.4	260.5	261.9	262.5	263.1	263.8	264.4
55°	240.4	242.5	244.6	246.0	246.6	247.2	247.9	248.5
57.5°	223.7	226.2	228.7	230.2	230.8	231.4	232.0	232.6
60°	212.2	214.6	217.0	218.6	219.5	220.3	221.2	222.0
62.5°	200.8	203.2	205.6	207.3	208.1	208.9	209.8	210.6
65°	183.2	185.9	188.5	190.2	191.1	191.9	192.8	193.6
67.5°	166.0	168.7	171.3	173.1	173.9	174.7	175.5	176.4
70°	153.8	156.7	159.5	161.3	162.0	162.8	163.5	164.2
72.5°	142.3	145.1	147.8	149.6	150.4	151.2	152.1	152.9
75°	124.7	127.6	130.6	132.5	133.5	134.4	135.4	136.3
77.5°	108.3	111.3	114.3	116.3	117.3	118.3	119.3	120.3
80°	97.7	100.8	104.0	106.0	106.8	107.7	108.5	109.3
82.5°	87.2	90.5	93.7	95.8	96.7	97.6	98.6	99.5
85°	72.6	75.7	78.9	81.0	82.0	83.1	84.1	85.2
87.5°	61.9	65.0	68.2	70.2	71.2	72.2	73.1	74.1
90°	61.7	65.2	68.7	71.0	72.0	73.0	74.0	75.0
92.5°	65.1	68.3	71.6	73.7	74.6	75.5	76.5	77.4
95°	74.2	77.3	80.3	82.3	83.3	84.2	85.2	86.1
97.5°	86.8	89.8	92.9	94.8	95.8	96.7	97.6	98.5
100°	96.0	99.0	102.0	103.9	104.6	105.4	106.1	106.8
102.5°	106.0	108.9	111.9	113.9	114.7	115.6	116.5	117.4
105°	121.1	123.9	126.8	128.8	129.8	130.9	132.0	133.1
107.5°	137.9	140.7	143.5	145.3	146.1	146.8	147.5	148.3
110°	149.2	151.4	153.7	155.4	156.4	157.5	158.6	159.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	161.2	163.5	165.8	167.4	168.3	169.2	170.1	171.0
115°	180.1	182.3	184.5	186.0	186.7	187.3	188.0	188.6
117.5°	197.9	199.8	201.7	203.0	203.7	204.4	205.1	205.8
120°	210.0	211.7	213.4	214.8	215.8	216.8	217.8	218.8
122.5°	222.5	224.3	226.2	227.3	227.8	228.3	228.7	229.2
125°	241.0	242.8	244.7	245.8	246.3	246.8	247.2	247.7
127.5°	258.1	259.8	261.5	262.7	263.3	263.9	264.5	265.1
130°	270.3	272.0	273.8	274.8	275.1	275.4	275.8	276.1
132.5°	281.9	283.6	285.2	286.3	286.8	287.3	287.8	288.3
135°	298.8	300.4	301.9	302.9	303.2	303.6	304.0	304.4
137.5°	315.6	317.0	318.3	319.3	319.8	320.4	321.0	321.5
140°	326.9	328.1	329.4	330.3	330.7	331.2	331.6	332.1
142.5°	337.8	338.9	340.1	340.9	341.4	341.8	342.2	342.6
145°	354.5	355.0	355.6	355.9	356.1	356.3	356.5	356.7
147.5°	369.7	369.8	369.8	369.9	370.2	370.4	370.7	370.9
150°	379.9	379.9	379.9	379.8	379.8	379.7	379.6	379.5
152.5°	389.6	389.8	390.0	389.9	389.7	389.5	389.3	389.1
155°	403.1	403.4	403.7	403.7	403.4	403.1	402.8	402.5
157.5°	415.0	415.3	415.5	415.5	415.2	415.0	414.7	414.4
160°	422.4	422.6	422.9	422.8	422.4	422.0	421.6	421.2
162.5°	429.0	429.4	429.8	429.8	429.5	429.1	428.7	428.3
165°	437.7	438.2	438.6	438.7	438.4	438.1	437.8	437.5
167.5°	445.1	445.5	446.0	446.0	445.5	445.0	444.5	444.0
170°	449.0	449.5	450.0	449.9	449.4	448.8	448.3	447.7
172.5°	452.0	452.5	453.0	453.0	452.5	451.9	451.4	450.8
175°	455.2	455.7	456.3	456.3	455.7	455.2	454.6	454.1
177.5°	456.9	457.4	457.8	457.8	457.3	456.8	456.3	455.8
180°	456.9	456.9	456.9	456.9	456.9	456.9	456.9	456.9

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