

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: P331878

Luminaire Tested: **S123DIP-S340D585U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331878
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-S340D585U835-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP 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: 3451.4 lumens
Efficiency: N/A
Efficacy: 134.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

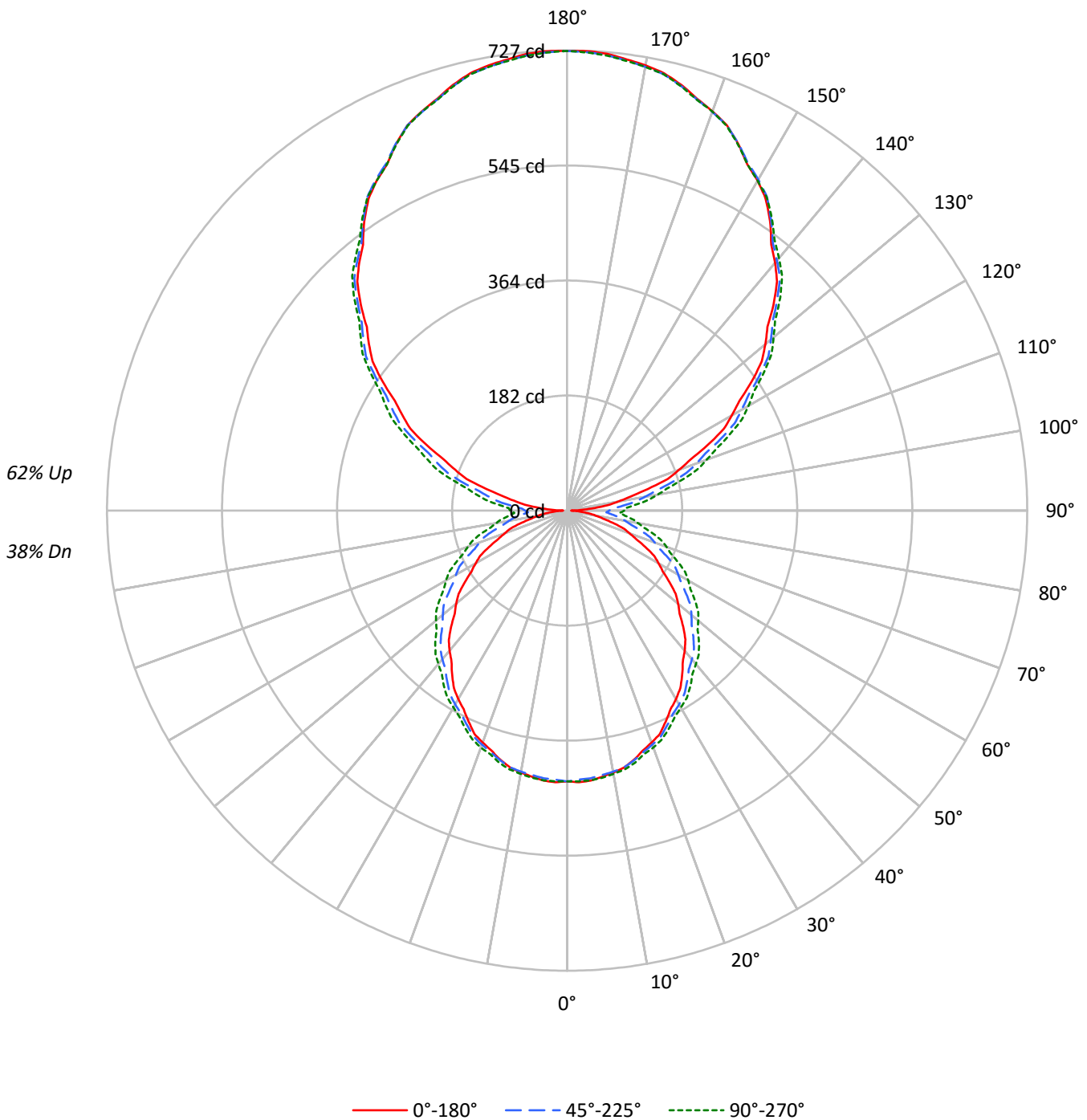
Input Watts (W): 25.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38
1	94	90	86	82	85	81	78	75	66	64	61	52	50	49	39	38	37	30
2	86	78	72	66	77	71	65	61	57	53	50	45	42	40	34	32	30	25
3	78	68	61	55	70	62	55	50	50	46	42	40	36	33	30	27	25	21
4	71	60	52	46	64	55	48	42	44	39	35	35	31	28	26	24	22	18
5	65	53	45	39	59	49	41	36	40	34	30	31	27	24	24	21	19	15
6	60	48	40	34	54	44	36	31	36	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	27	23	26	22	19	19	17	14	12
8	51	39	31	26	46	36	29	24	29	24	20	23	19	16	18	15	13	10
9	48	35	28	23	43	32	26	21	27	22	18	21	18	15	16	14	12	9
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	15	12	10	8

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4604	4604	4604
5°	4618	4488	4490
10°	4577	4385	4363
15°	4518	4267	4223
20°	4434	4133	4070
25°	4330	3980	3908
30°	4224	3841	3744
35°	4103	3694	3614
40°	3990	3560	3474
45°	3864	3432	3362
50°	3739	3305	3239
55°	3601	3175	3128
60°	3466	3044	3015
65°	3328	2903	2878
70°	3120	2744	2740
75°	2859	2565	2600
80°	2556	2387	2438
85°	2274	2264	2344



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.5	1.2
10°-20°	115.6	3.3
20°-30°	172.9	5.0
30°-40°	206.5	6.0
40°-50°	216.0	6.3
50°-60°	202.7	5.9
60°-70°	169.3	4.9
70°-80°	121.1	3.5
80°-90°	74.4	2.2
90°-100°	92.6	2.7
100°-110°	174.9	5.1
110°-120°	263.0	7.6
120°-130°	329.5	9.5
130°-140°	361.7	10.5
140°-150°	351.2	10.2
150°-160°	294.6	8.5
160°-170°	196.1	5.7
170°-180°	68.7	2.0
0°-30°	329.0	9.5
0°-40°	535.5	15.5
0°-60°	954.2	27.6
0°-90°	1319.0	38.2
90°-120°	530.6	15.4
90°-150°	1572.9	45.6
90°-180°	2132.0	61.8
0°-180°	3451.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	428	428	428	428	428	
5°	428	427	424	428	428	41
15°	408	409	409	413	413	115
25°	368	373	374	380	380	170
35°	317	324	330	337	339	198
45°	259	270	282	290	294	200
55°	198	213	230	242	246	177
65°	136	155	175	189	194	135
75°	74	96	119	134	140	79
85°	23	46	71	86	91	24
90°	7	35	66	84	90	6
95°	39	61	88	104	110	42
105°	132	145	170	182	188	141
115°	245	252	268	279	283	242
125°	356	358	370	377	379	318
135°	461	464	469	475	476	355
145°	559	560	561	564	564	349
155°	639	639	640	642	638	294
165°	696	695	695	698	694	196
175°	724	722	722	725	722	69
180°	726	726	726	726	726	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	429.6	429.4	429.1	428.9	428.6	428.2	427.5	426.8	426.2	425.5	426.2
5°	428.2	428.0	427.8	427.6	427.4	427.0	426.3	425.7	425.1	424.5	425.3
7.5°	424.0	424.1	424.1	424.1	424.2	423.9	423.3	422.7	422.1	421.5	422.5
10°	420.3	420.5	420.7	420.9	421.1	421.0	420.4	419.9	419.4	418.9	419.9
12.5°	415.8	416.1	416.4	416.7	417.0	416.9	416.6	416.2	415.9	415.5	416.5
15°	407.7	408.0	408.3	408.6	408.9	409.1	408.9	408.8	408.7	408.6	409.7
17.5°	397.5	398.1	398.7	399.3	399.9	400.2	400.2	400.1	400.1	400.1	401.0
20°	390.0	390.6	391.2	391.9	392.5	392.9	393.1	393.3	393.5	393.7	394.7
22.5°	382.2	382.8	383.4	384.0	384.7	385.1	385.4	385.7	386.0	386.3	387.5
25°	368.1	369.1	370.2	371.2	372.2	372.9	373.2	373.5	373.8	374.2	375.5
27.5°	353.9	355.1	356.3	357.5	358.7	359.6	360.2	360.9	361.6	362.2	363.4
30°	343.9	345.2	346.6	347.9	349.3	350.3	351.2	352.0	352.8	353.7	354.9
32.5°	332.7	334.2	335.7	337.2	338.7	340.0	341.1	342.2	343.3	344.3	345.7
35°	316.8	318.5	320.2	321.8	323.5	325.0	326.3	327.7	329.0	330.4	331.9
37.5°	300.1	301.9	303.8	305.7	307.5	309.3	310.9	312.6	314.3	315.9	317.7
40°	288.9	290.8	292.6	294.5	296.3	298.3	300.4	302.5	304.5	306.6	308.4
42.5°	276.6	278.9	281.1	283.4	285.7	287.9	290.1	292.2	294.4	296.5	298.5
45°	259.1	261.6	264.0	266.5	269.0	271.5	274.1	276.7	279.3	281.9	283.9
47.5°	240.7	243.5	246.3	249.2	252.0	254.9	257.8	260.8	263.7	266.7	268.9
50°	228.8	231.7	234.6	237.5	240.4	243.4	246.6	249.9	253.1	256.3	258.7
52.5°	216.1	219.2	222.2	225.3	228.4	231.7	235.2	238.8	242.3	245.8	248.3
55°	197.6	201.0	204.4	207.8	211.2	214.8	218.5	222.3	226.0	229.7	232.5
57.5°	179.5	183.0	186.6	190.2	193.7	197.6	201.6	205.7	209.8	213.9	216.7
60°	166.8	170.5	174.3	178.0	181.7	185.7	190.0	194.2	198.4	202.7	205.6
62.5°	154.9	158.7	162.5	166.3	170.1	174.3	178.8	183.3	187.8	192.3	195.1
65°	136.5	140.6	144.6	148.6	152.7	157.0	161.5	166.1	170.6	175.2	178.3
67.5°	117.9	122.2	126.5	130.7	135.0	139.5	144.1	148.8	153.4	158.1	161.4
70°	104.8	109.3	113.7	118.2	122.6	127.4	132.3	137.3	142.3	147.2	150.6
72.5°	92.9	97.4	101.8	106.3	110.7	115.5	120.6	125.8	130.9	136.1	139.5
75°	74.1	79.0	83.8	88.7	93.6	98.6	103.8	108.9	114.1	119.3	122.7
77.5°	57.7	62.6	67.5	72.4	77.3	82.4	87.6	92.8	98.0	103.3	106.9
80°	46.1	51.2	56.3	61.4	66.4	71.7	77.0	82.4	87.8	93.2	96.7
82.5°	36.1	41.2	46.4	51.5	56.7	62.0	67.5	72.9	78.4	83.9	87.4
85°	22.8	28.0	33.2	38.4	43.5	48.9	54.4	59.8	65.3	70.8	74.3
87.5°	12.5	17.9	23.3	28.7	34.1	39.7	45.3	50.9	56.5	62.1	65.7
90°	6.6	13.0	19.3	25.7	32.0	38.6	45.6	52.5	59.4	66.3	70.4
92.5°	19.5	24.9	30.4	35.8	41.2	47.0	53.2	59.3	65.4	71.6	75.4
95°	38.8	43.7	48.6	53.6	58.5	64.0	70.1	76.2	82.3	88.3	92.1
97.5°	64.3	68.6	73.0	77.3	81.6	86.5	92.1	97.7	103.2	108.8	112.5
100°	81.8	85.8	89.9	94.0	98.1	102.8	108.2	113.6	119.0	124.4	127.8
102.5°	101.9	105.4	108.8	112.2	115.7	120.2	125.7	131.2	136.7	142.2	145.5
105°	132.1	134.8	137.5	140.3	143.0	147.2	152.8	158.4	164.0	169.6	172.5
107.5°	166.6	168.9	171.2	173.4	175.7	179.2	183.9	188.5	193.2	197.9	201.1
110°	188.2	190.3	192.4	194.5	196.6	199.9	204.3	208.7	213.1	217.5	220.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	211.0	212.7	214.4	216.0	217.7	220.6	224.6	228.6	232.7	236.7	239.9
115°	244.7	246.4	248.0	249.6	251.2	253.8	257.3	260.7	264.2	267.7	270.3
117.5°	279.1	280.1	281.1	282.2	283.2	285.3	288.4	291.6	294.8	298.0	300.4
120°	300.2	301.5	302.7	304.0	305.3	307.3	310.1	312.9	315.7	318.5	320.7
122.5°	322.5	323.4	324.2	325.0	325.8	327.7	330.6	333.6	336.5	339.4	341.4
125°	356.2	356.6	356.9	357.3	357.7	359.3	362.0	364.8	367.5	370.3	371.9
127.5°	387.7	388.4	389.1	389.8	390.5	392.0	394.2	396.4	398.6	400.8	402.1
130°	408.7	409.6	410.5	411.4	412.3	413.6	415.3	417.0	418.7	420.4	421.8
132.5°	429.3	430.3	431.3	432.3	433.2	434.4	435.8	437.2	438.6	439.9	441.2
135°	461.2	461.9	462.6	463.2	463.9	464.7	465.7	466.7	467.7	468.7	470.1
137.5°	490.8	491.4	491.9	492.5	493.0	493.8	494.7	495.7	496.7	497.7	498.8
140°	511.0	511.6	512.2	512.9	513.5	514.0	514.5	514.9	515.3	515.8	517.2
142.5°	529.7	530.2	530.8	531.3	531.9	532.3	532.6	532.9	533.2	533.5	534.7
145°	558.9	559.0	559.2	559.3	559.5	559.7	560.1	560.5	560.9	561.3	562.0
147.5°	584.0	584.4	584.9	585.3	585.8	586.2	586.6	586.9	587.3	587.6	587.9
150°	601.8	602.0	602.3	602.5	602.8	603.0	603.3	603.5	603.8	604.0	604.0
152.5°	616.4	616.7	617.1	617.4	617.8	618.0	618.2	618.3	618.5	618.6	618.8
155°	639.4	639.4	639.4	639.4	639.4	639.5	639.6	639.7	639.9	640.0	640.5
157.5°	659.0	658.9	658.7	658.6	658.4	658.4	658.5	658.6	658.7	658.8	659.3
160°	671.3	671.1	670.8	670.6	670.3	670.2	670.2	670.2	670.2	670.2	670.8
162.5°	682.3	681.9	681.6	681.2	680.9	680.8	680.9	681.0	681.1	681.2	681.8
165°	696.4	696.1	695.7	695.3	694.9	694.7	694.7	694.7	694.7	694.7	695.5
167.5°	707.7	707.2	706.7	706.2	705.7	705.5	705.6	705.7	705.8	705.9	706.7
170°	714.1	713.6	713.1	712.6	712.1	711.8	711.8	711.8	711.8	711.8	712.7
172.5°	719.1	718.6	718.1	717.6	717.1	716.9	716.9	716.9	716.9	716.9	717.7
175°	724.4	723.9	723.4	722.9	722.4	722.1	722.1	722.1	722.1	722.1	722.9
177.5°	726.6	726.2	725.8	725.3	724.9	724.7	724.7	724.7	724.7	724.7	725.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	427.7	427.7	427.7	427.7	427.7	427.7	427.7	427.7
2.5°	426.8	427.5	428.2	428.4	428.4	428.3	428.2	428.1
5°	426.1	427.0	427.8	428.2	428.1	427.9	427.8	427.7
7.5°	423.6	424.6	425.6	426.1	426.0	425.8	425.7	425.6
10°	421.0	422.0	423.0	423.4	423.2	423.0	422.8	422.6
12.5°	417.4	418.4	419.3	419.7	419.5	419.3	419.1	418.9
15°	410.7	411.7	412.8	413.2	413.1	413.0	412.9	412.8
17.5°	401.9	402.9	403.8	404.2	404.0	403.9	403.8	403.6
20°	395.6	396.5	397.5	398.0	398.1	398.2	398.3	398.4
22.5°	388.6	389.8	391.0	391.6	391.5	391.4	391.4	391.3
25°	376.8	378.2	379.5	380.2	380.2	380.2	380.2	380.2
27.5°	364.5	365.7	366.9	367.5	367.6	367.7	367.7	367.8
30°	356.1	357.4	358.6	359.2	359.2	359.2	359.2	359.2
32.5°	347.0	348.3	349.6	350.4	350.7	350.9	351.2	351.4
35°	333.5	335.0	336.6	337.6	338.0	338.4	338.8	339.2
37.5°	319.4	321.2	323.0	324.0	324.3	324.7	325.0	325.3
40°	310.1	311.9	313.6	314.7	315.1	315.6	316.0	316.4
42.5°	300.4	302.3	304.2	305.5	306.1	306.6	307.2	307.8
45°	285.8	287.8	289.8	291.2	292.0	292.8	293.7	294.5
47.5°	271.1	273.4	275.6	277.0	277.6	278.3	278.9	279.6
50°	261.0	263.4	265.8	267.4	268.1	268.8	269.5	270.3
52.5°	250.8	253.2	255.7	257.4	258.3	259.2	260.0	260.9
55°	235.3	238.1	240.9	242.7	243.5	244.4	245.2	246.0
57.5°	219.5	222.3	225.1	227.0	228.0	229.0	230.0	230.9
60°	208.5	211.4	214.3	216.3	217.4	218.6	219.7	220.9
62.5°	198.0	200.9	203.8	205.8	206.9	207.9	209.0	210.1
65°	181.4	184.5	187.6	189.7	190.7	191.8	192.8	193.8
67.5°	164.8	168.2	171.6	173.8	174.6	175.5	176.4	177.2
70°	153.9	157.2	160.5	162.7	163.7	164.7	165.8	166.8
72.5°	142.8	146.2	149.6	151.9	152.9	153.9	155.0	156.0
75°	126.1	129.5	133.0	135.3	136.5	137.8	139.0	140.3
77.5°	110.5	114.1	117.7	119.9	120.9	121.9	122.8	123.8
80°	100.2	103.8	107.3	109.5	110.6	111.6	112.7	113.7
82.5°	90.9	94.4	98.0	100.2	101.3	102.3	103.3	104.4
85°	77.9	81.4	84.9	87.2	88.2	89.3	90.3	91.3
87.5°	69.3	73.0	76.6	78.9	80.0	81.1	82.2	83.3
90°	74.4	78.4	82.5	85.1	86.4	87.7	89.0	90.3
92.5°	79.3	83.1	86.9	89.3	90.1	90.9	91.7	92.5
95°	95.8	99.5	103.2	105.6	106.6	107.7	108.7	109.7
97.5°	116.2	119.8	123.5	125.8	126.8	127.8	128.8	129.8
100°	131.2	134.5	137.9	140.3	141.5	142.8	144.1	145.4
102.5°	148.8	152.1	155.4	157.6	158.6	159.5	160.5	161.5
105°	175.4	178.3	181.2	183.2	184.4	185.6	186.8	187.9
107.5°	204.3	207.4	210.6	212.6	213.3	214.1	214.9	215.6
110°	223.9	227.1	230.3	232.2	232.7	233.3	233.9	234.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	243.1	246.3	249.6	251.6	252.5	253.3	254.2	255.0
115°	272.9	275.5	278.1	279.8	280.5	281.2	281.9	282.6
117.5°	302.8	305.3	307.7	309.2	309.6	310.1	310.5	311.0
120°	323.0	325.2	327.5	328.8	329.3	329.8	330.3	330.7
122.5°	343.3	345.3	347.3	348.5	348.8	349.2	349.6	349.9
125°	373.6	375.3	376.9	377.9	378.1	378.3	378.5	378.7
127.5°	403.5	404.8	406.1	406.9	407.0	407.1	407.2	407.4
130°	423.3	424.7	426.2	426.8	426.5	426.3	426.0	425.7
132.5°	442.5	443.8	445.0	445.7	445.7	445.7	445.8	445.8
135°	471.5	472.8	474.2	475.0	475.3	475.5	475.8	476.0
137.5°	499.9	501.0	502.1	502.6	502.7	502.7	502.7	502.8
140°	518.6	520.1	521.5	522.0	521.7	521.3	520.9	520.5
142.5°	536.0	537.2	538.5	539.0	538.9	538.7	538.5	538.4
145°	562.7	563.4	564.1	564.4	564.3	564.2	564.1	564.0
147.5°	588.1	588.4	588.6	588.5	588.2	587.8	587.4	587.0
150°	604.0	604.0	604.0	603.8	603.2	602.7	602.1	601.6
152.5°	619.1	619.3	619.5	619.2	618.6	618.0	617.4	616.8
155°	641.0	641.5	642.0	641.8	640.9	640.0	639.2	638.3
157.5°	659.9	660.4	660.9	660.8	660.1	659.4	658.7	658.0
160°	671.5	672.1	672.7	672.8	672.3	671.8	671.3	670.8
162.5°	682.4	683.1	683.7	683.6	682.8	682.0	681.2	680.4
165°	696.3	697.0	697.8	697.7	696.8	695.9	695.1	694.2
167.5°	707.5	708.3	709.1	709.1	708.3	707.5	706.7	705.9
170°	713.6	714.5	715.4	715.4	714.5	713.6	712.7	711.8
172.5°	718.4	719.2	720.0	720.0	719.1	718.2	717.3	716.4
175°	723.6	724.4	725.2	725.1	724.2	723.3	722.4	721.5
177.5°	726.0	726.6	727.2	727.1	726.4	725.7	725.0	724.3
180°	726.1	726.1	726.1	726.1	726.1	726.1	726.1	726.1

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