

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: P332748-840

Luminaire Tested: **S124DIW-S575D470U840-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332748-840
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: S124DIW-S575D470U840-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4035.5 lumens
Efficiency: N/A
Efficacy: 133.6 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

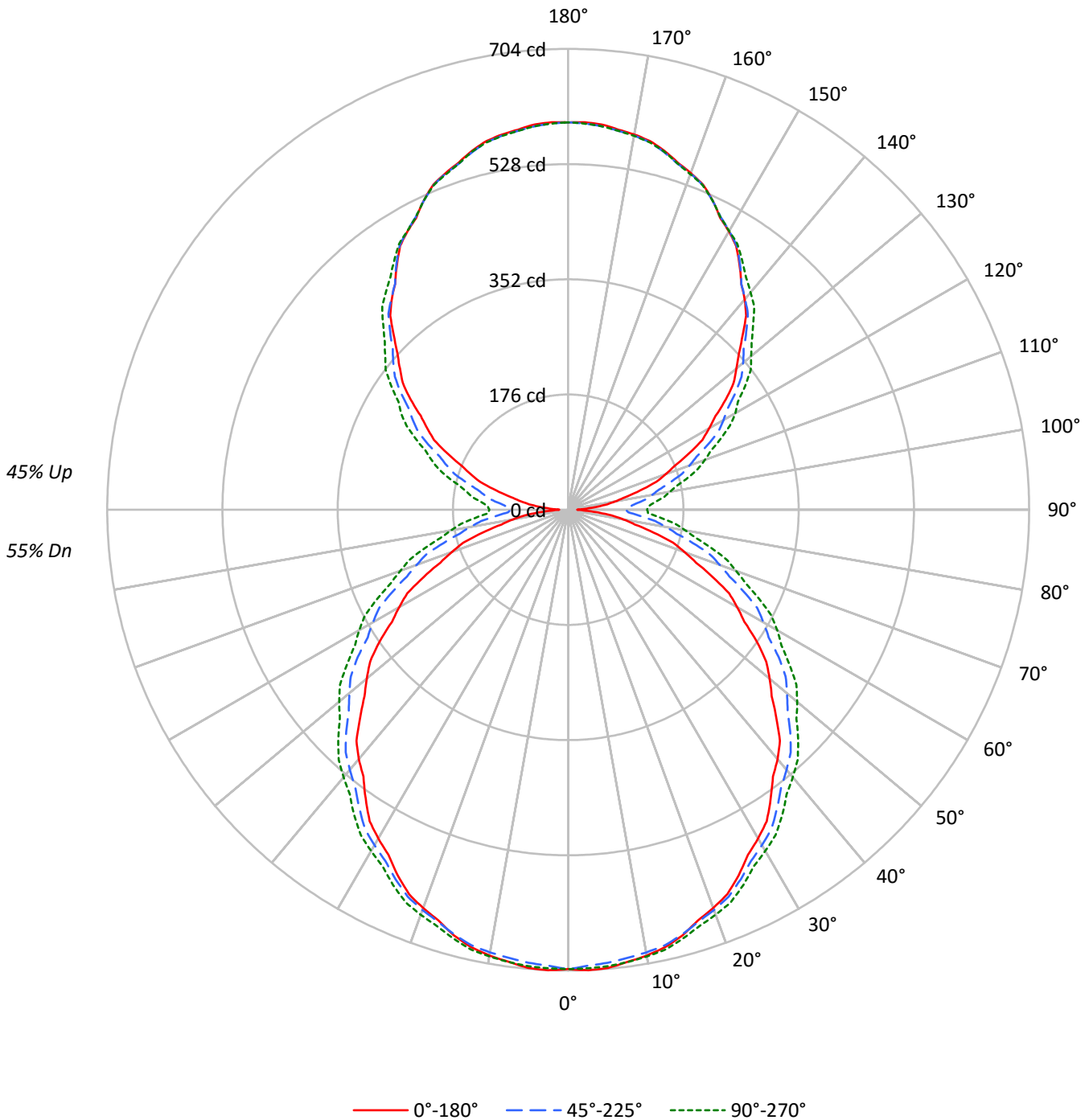
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	98	93	89	85	90	86	82	79	74	71	68	62	60	58	52	50	49	44
2	89	80	74	68	82	75	69	64	64	60	56	54	51	48	45	42	40	36
3	80	70	63	56	74	65	58	53	56	51	46	47	43	40	39	36	34	30
4	73	62	54	47	68	58	50	45	50	44	39	42	38	34	35	32	29	25
5	67	55	47	40	62	51	44	38	44	38	34	38	33	29	31	28	25	22
6	62	49	41	35	57	46	38	33	40	34	29	34	29	25	28	25	22	19
7	57	44	36	30	53	42	34	29	36	30	26	31	26	22	26	22	19	17
8	53	40	32	27	49	38	30	25	33	27	23	28	23	20	24	20	17	15
9	49	37	29	24	46	34	27	23	30	24	20	26	21	18	22	18	15	13
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.5	1.6
10°-20°	190.4	4.7
20°-30°	287.9	7.1
30°-40°	348.3	8.6
40°-50°	368.3	9.1
50°-60°	346.6	8.6
60°-70°	287.5	7.1
70°-80°	202.0	5.0
80°-90°	116.0	2.9
90°-100°	106.8	2.6
100°-110°	165.8	4.1
110°-120°	229.9	5.7
120°-130°	277.7	6.9
130°-140°	298.8	7.4
140°-150°	287.2	7.1
150°-160°	240.2	6.0
160°-170°	159.8	4.0
170°-180°	56.0	1.4
0°-30°	544.7	13.5
0°-40°	893.1	22.1
0°-60°	1607.9	39.8
0°-90°	2213.4	54.8
90°-120°	502.5	12.5
90°-150°	1366.3	33.9
90°-180°	1822.0	45.1
0°-180°	4035.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	14	50	88	112	121	10
95°	38	68	103	125	133	39
105°	114	131	161	181	190	121
115°	204	212	236	252	257	202
125°	294	294	312	326	330	262
135°	376	379	385	396	400	291
145°	456	457	458	462	464	285
155°	522	522	521	523	521	240
165°	568	566	566	568	566	160
175°	591	589	588	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°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	23.5	30.9	38.3	45.5	52.9	60.5	68.4	76.1	83.9	91.8	96.9
90°	13.9	22.0	30.2	38.3	46.4	54.5	62.9	71.2	79.6	87.9	93.5
92.5°	21.7	29.3	36.9	44.4	52.0	59.8	67.9	75.9	84.0	92.1	97.5
95°	37.7	44.3	51.0	57.7	64.4	71.7	79.6	87.4	95.2	103.1	108.2
97.5°	57.3	62.9	68.6	74.3	80.0	86.8	94.7	102.6	110.6	118.5	123.4
100°	72.7	77.7	82.6	87.6	92.5	98.9	106.5	114.3	122.0	129.8	134.6
102.5°	89.6	93.7	97.9	102.0	106.1	112.0	119.5	126.9	134.5	142.0	146.8
105°	113.7	117.2	120.9	124.5	128.1	133.3	140.2	147.0	153.9	160.8	165.4
107.5°	140.6	143.5	146.5	149.5	152.5	157.0	163.2	169.5	175.6	181.8	186.3
110°	158.2	160.9	163.5	166.1	168.8	173.1	179.2	185.1	191.2	197.2	201.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	176.6	178.8	181.1	183.2	185.4	189.3	195.0	200.7	206.3	212.0	215.8
115°	204.2	205.8	207.4	208.9	210.6	214.0	219.3	224.8	230.1	235.5	239.2
117.5°	231.0	232.0	233.1	234.1	235.1	238.1	243.2	248.2	253.3	258.3	261.7
120°	248.3	249.2	250.1	251.1	252.1	254.9	259.6	264.4	269.1	273.9	276.9
122.5°	267.0	267.2	267.5	267.8	268.0	270.4	275.1	279.7	284.4	289.0	292.3
125°	293.8	293.6	293.4	293.2	293.1	295.1	299.3	303.6	307.9	312.1	315.3
127.5°	318.5	318.7	318.8	318.9	319.1	320.7	324.0	327.1	330.3	333.5	336.5
130°	335.5	335.7	335.8	335.9	336.0	337.5	340.3	343.1	345.9	348.7	351.6
132.5°	353.5	353.5	353.6	353.6	353.7	354.8	356.9	359.0	361.2	363.3	366.2
135°	376.4	377.0	377.6	378.2	378.8	379.7	380.9	382.1	383.3	384.6	387.2
137.5°	402.1	402.2	402.4	402.5	402.6	403.0	403.8	404.6	405.3	406.1	408.4
140°	419.4	419.4	419.4	419.5	419.5	419.6	419.8	419.9	420.1	420.3	422.4
142.5°	434.4	434.6	434.8	434.9	435.2	435.2	434.9	434.7	434.5	434.4	436.4
145°	456.2	456.4	456.6	456.8	457.1	457.2	457.3	457.4	457.5	457.6	458.6
147.5°	477.7	478.1	478.4	478.7	479.0	479.1	479.0	478.9	478.9	478.8	478.8
150°	490.9	491.1	491.4	491.6	491.8	491.9	491.9	491.9	491.9	491.9	491.9
152.5°	502.7	502.9	503.1	503.3	503.5	503.7	503.7	503.8	503.9	504.0	504.2
155°	521.7	521.7	521.7	521.7	521.7	521.6	521.5	521.4	521.3	521.2	521.6
157.5°	537.8	537.6	537.5	537.2	537.0	536.9	536.9	536.9	536.8	536.8	537.1
160°	547.3	547.2	547.1	547.0	546.9	546.8	546.7	546.6	546.5	546.4	546.7
162.5°	556.1	555.8	555.5	555.3	555.0	554.8	554.7	554.6	554.5	554.4	555.0
165°	567.8	567.5	567.2	566.9	566.6	566.4	566.2	566.0	565.8	565.6	566.2
167.5°	576.9	576.5	576.1	575.7	575.2	575.0	575.0	575.1	575.1	575.1	575.7
170°	582.1	581.6	581.1	580.6	580.1	579.9	580.0	580.1	580.2	580.3	580.9
172.5°	585.7	585.3	584.9	584.5	584.0	583.8	583.8	583.9	583.9	583.9	584.6
175°	590.8	590.3	589.8	589.3	588.8	588.4	588.3	588.2	588.1	588.0	588.8
177.5°	592.4	592.0	591.6	591.2	590.8	590.6	590.6	590.6	590.6	590.6	591.2
180°	591.7	591.7	591.7	591.7	591.7	591.7	591.7	591.7	591.7	591.7	591.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	102.1	107.3	112.5	115.9	117.4	119.1	120.6	122.2
90°	99.2	104.9	110.6	114.2	115.8	117.4	119.0	120.6
92.5°	102.7	108.1	113.3	116.7	118.3	119.8	121.3	122.8
95°	113.2	118.3	123.2	126.5	128.1	129.7	131.3	132.8
97.5°	128.4	133.3	138.3	141.5	143.0	144.5	146.0	147.5
100°	139.6	144.5	149.5	152.5	153.7	154.9	156.1	157.3
102.5°	151.7	156.5	161.4	164.6	166.0	167.4	168.8	170.4
105°	170.2	174.8	179.5	182.7	184.3	186.0	187.7	189.5
107.5°	190.9	195.5	200.1	203.0	204.2	205.5	206.7	207.9
110°	204.8	208.6	212.5	215.2	216.9	218.6	220.3	222.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	219.6	223.5	227.3	229.9	231.5	232.9	234.3	235.8
115°	243.0	246.7	250.5	253.0	254.1	255.2	256.3	257.4
117.5°	265.0	268.2	271.6	273.8	275.0	276.1	277.3	278.5
120°	279.8	282.9	285.8	288.1	289.7	291.3	293.0	294.6
122.5°	295.4	298.5	301.6	303.7	304.6	305.5	306.3	307.2
125°	318.3	321.4	324.6	326.6	327.4	328.2	329.1	329.9
127.5°	339.4	342.3	345.3	347.2	348.3	349.3	350.3	351.3
130°	354.6	357.5	360.4	362.2	362.8	363.5	364.2	364.8
132.5°	368.9	371.7	374.6	376.4	377.3	378.2	379.0	379.9
135°	389.8	392.3	395.0	396.7	397.4	398.1	398.9	399.6
137.5°	410.6	412.9	415.2	416.8	417.8	418.7	419.6	420.5
140°	424.6	426.8	429.0	430.4	431.2	432.0	432.7	433.5
142.5°	438.4	440.3	442.3	443.6	444.3	445.0	445.8	446.5
145°	459.5	460.5	461.4	462.1	462.4	462.8	463.2	463.6
147.5°	478.9	478.9	479.0	479.3	479.7	480.2	480.6	481.1
150°	491.9	491.9	491.9	491.9	491.8	491.7	491.6	491.5
152.5°	504.5	504.7	505.0	504.9	504.7	504.4	504.2	503.9
155°	522.0	522.4	522.8	522.8	522.4	522.0	521.6	521.2
157.5°	537.5	537.8	538.1	538.1	537.8	537.3	537.0	536.6
160°	547.0	547.3	547.6	547.5	547.0	546.5	545.9	545.4
162.5°	555.5	556.1	556.6	556.6	556.1	555.6	555.1	554.6
165°	566.8	567.4	568.0	568.2	567.7	567.3	566.9	566.5
167.5°	576.3	576.9	577.5	577.5	576.9	576.3	575.6	575.0
170°	581.5	582.1	582.7	582.6	581.9	581.2	580.5	579.8
172.5°	585.3	586.0	586.6	586.6	585.9	585.2	584.5	583.8
175°	589.5	590.2	590.9	590.9	590.2	589.5	588.8	588.0
177.5°	591.8	592.3	592.9	592.8	592.2	591.6	590.9	590.3
180°	591.7	591.7	591.7	591.7	591.7	591.7	591.7	591.7

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