

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: P332747-940

Luminaire Tested: **S124DIW-S575D470U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332747-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S575D470U940-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3785.2 lumens
Efficiency: N/A
Efficacy: 125.3 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

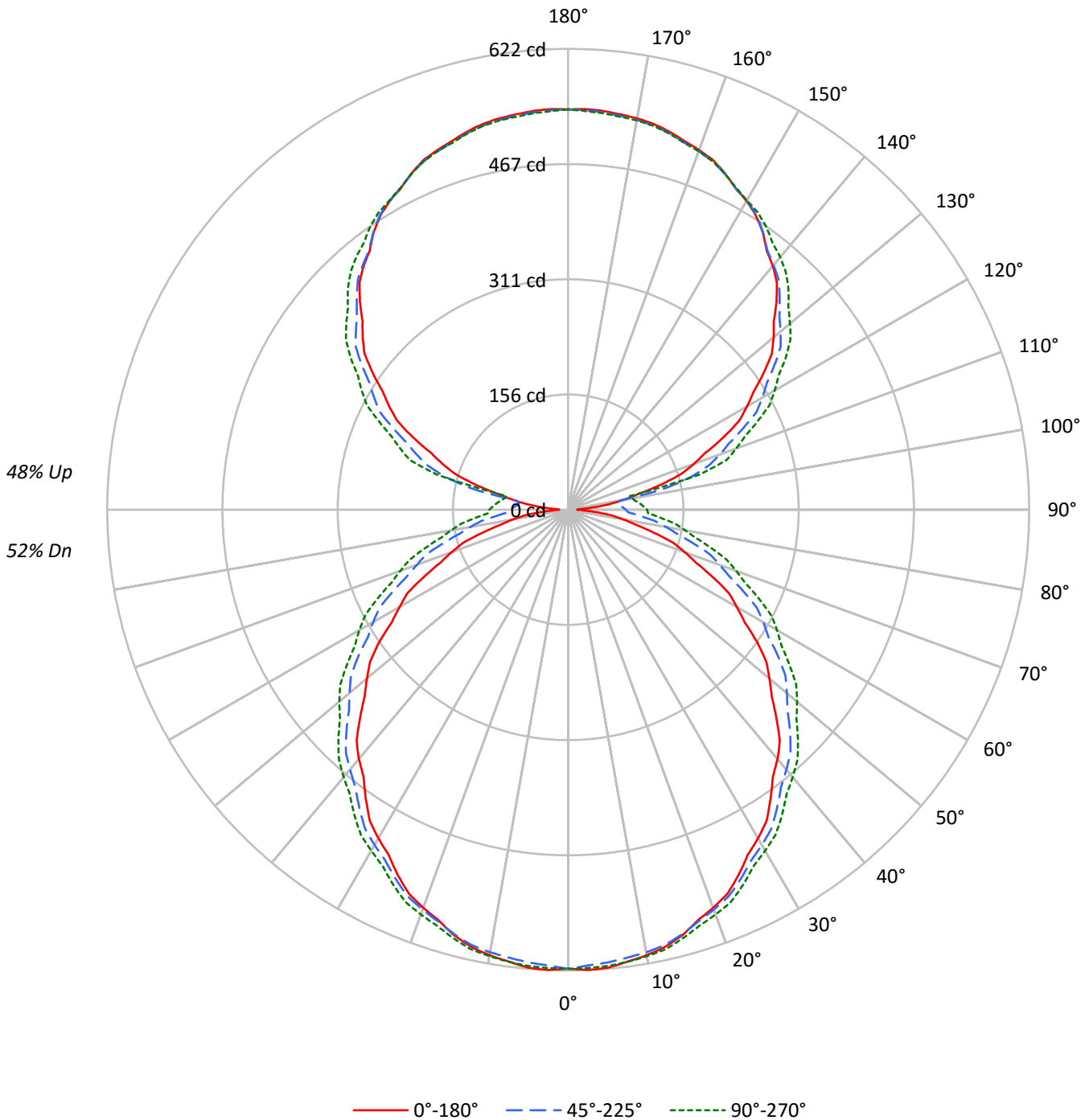
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332747-940

CATALOG NUMBER: S124DIW-S575D470U940-4F0-1E-UDD-D

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	99	99	99	99	84	84	84	70	70	70	58	58	58	52
1	97	92	88	84	89	85	82	78	72	70	67	60	58	56	49	48	47	41
2	88	80	73	68	81	74	68	63	63	58	55	52	49	46	43	40	38	34
3	80	70	62	56	73	65	58	52	55	50	45	46	42	39	37	35	32	28
4	73	62	53	47	67	57	50	44	49	43	38	41	36	33	33	30	27	24
5	67	55	46	40	61	51	43	38	43	37	33	36	32	28	30	26	24	20
6	62	49	41	35	57	46	38	33	39	33	29	33	28	25	27	23	21	18
7	57	44	36	30	52	41	34	28	35	29	25	30	25	22	25	21	18	16
8	53	40	32	27	49	37	30	25	32	26	22	27	23	19	23	19	16	14
9	49	36	29	24	45	34	27	22	29	24	20	25	20	17	21	17	15	12
10	46	33	26	21	42	31	25	20	27	22	18	23	19	15	19	16	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5002	5002	5002
5°	5018	4889	4903
10°	4987	4809	4805
15°	4943	4717	4690
20°	4875	4614	4579
25°	4799	4500	4456
30°	4717	4386	4330
35°	4624	4269	4220
40°	4550	4158	4105
45°	4439	4056	4005
50°	4344	3938	3901
55°	4249	3827	3778
60°	4098	3685	3667
65°	3933	3533	3529
70°	3733	3359	3369
75°	3453	3169	3224
80°	3143	2984	3082
85°	2746	2820	2999



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	1.6
10°-20°	168.1	4.4
20°-30°	254.2	6.7
30°-40°	307.6	8.1
40°-50°	325.2	8.6
50°-60°	306.0	8.1
60°-70°	253.9	6.7
70°-80°	178.3	4.7
80°-90°	102.4	2.7
90°-100°	78.3	2.1
100°-110°	162.1	4.3
110°-120°	255.1	6.7
120°-130°	302.9	8.0
130°-140°	313.4	8.3
140°-150°	287.7	7.6
150°-160°	230.9	6.1
160°-170°	148.9	3.9
170°-180°	51.3	1.4
0°-30°	481.0	12.7
0°-40°	788.6	20.8
0°-60°	1419.8	37.5
0°-90°	1954.4	51.6
90°-120°	495.6	13.1
90°-150°	1399.7	37.0
90°-180°	1831.0	48.4
0°-180°	3785.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	620	620	620	620	620	
5°	620	618	613	619	618	59
15°	595	595	593	599	599	167
25°	544	548	550	558	559	250
35°	476	484	491	501	503	298
45°	397	410	423	435	438	307
55°	311	326	346	360	364	277
65°	215	237	261	278	284	213
75°	119	145	174	193	200	127
85°	37	66	97	117	125	39
90°	12	45	78	99	106	8
95°	31	42	69	90	97	36
105°	128	145	172	191	184	134
115°	231	240	261	276	282	228
125°	322	324	340	353	358	288
135°	397	397	404	415	420	306
145°	457	458	458	462	466	286
155°	501	501	500	501	500	231
165°	528	526	526	529	526	149
175°	540	538	538	541	537	51
180°	540	540	540	540	540	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	621.9	621.5	621.2	620.7	620.4	619.7	618.8	617.8	616.7	615.7	616.6
5°	620.4	619.9	619.4	618.9	618.5	617.7	616.6	615.5	614.5	613.4	614.7
7.5°	615.1	614.7	614.5	614.2	613.9	613.4	612.5	611.6	610.6	609.8	611.2
10°	610.6	610.5	610.3	610.2	610.0	609.6	608.8	608.0	607.3	606.5	607.9
12.5°	604.5	604.5	604.5	604.4	604.4	604.1	603.6	603.1	602.5	602.0	603.2
15°	594.7	594.9	594.9	595.1	595.3	595.1	594.7	594.2	593.7	593.3	594.7
17.5°	581.2	581.7	582.1	582.6	583.1	583.3	583.2	583.1	583.0	582.9	584.2
20°	571.8	572.2	572.7	573.2	573.6	573.9	574.1	574.3	574.4	574.5	576.0
22.5°	561.2	561.8	562.4	562.9	563.6	564.0	564.3	564.5	564.8	565.1	566.7
25°	544.0	544.9	545.9	546.8	547.7	548.4	548.8	549.3	549.8	550.3	552.0
27.5°	524.9	526.2	527.5	529.0	530.3	531.3	532.0	532.7	533.4	534.1	535.7
30°	512.1	513.4	514.5	515.8	517.0	518.2	519.2	520.3	521.4	522.5	524.2
32.5°	498.2	499.7	501.1	502.7	504.2	505.5	506.7	507.9	509.1	510.3	512.2
35°	476.0	477.9	479.7	481.5	483.4	485.1	486.6	488.2	489.7	491.2	493.5
37.5°	453.7	455.8	457.9	460.0	462.2	464.2	466.1	468.1	469.9	471.8	474.0
40°	439.3	441.2	443.3	445.2	447.3	449.3	451.5	453.6	455.8	458.0	460.3
42.5°	422.6	424.8	427.0	429.4	431.6	434.0	436.5	439.0	441.6	444.1	446.7
45°	396.9	399.8	402.8	405.7	408.6	411.5	414.5	417.4	420.4	423.3	425.9
47.5°	372.4	375.3	378.4	381.4	384.4	387.6	391.0	394.4	397.8	401.2	403.9
50°	354.5	357.9	361.3	364.8	368.2	371.6	375.0	378.4	381.7	385.1	388.2
52.5°	336.8	340.2	343.6	347.0	350.4	354.0	357.9	361.8	365.7	369.5	372.6
55°	310.9	314.1	317.4	320.6	323.8	327.7	332.3	337.0	341.6	346.3	349.4
57.5°	281.9	285.9	289.9	293.9	297.9	302.2	306.7	311.4	316.0	320.6	324.2
60°	263.0	267.0	271.0	275.0	279.0	283.6	288.6	293.7	298.8	303.9	307.5
62.5°	244.7	249.1	253.4	257.8	262.2	266.9	272.0	277.1	282.2	287.3	290.8
65°	215.1	220.1	225.0	229.9	234.9	240.0	245.1	250.4	255.7	260.9	264.7
67.5°	186.6	191.9	197.2	202.4	207.6	213.0	218.6	224.3	229.9	235.5	239.4
70°	167.2	172.5	177.7	183.0	188.2	193.8	199.6	205.5	211.3	217.2	221.3
72.5°	148.4	153.7	159.1	164.4	169.8	175.6	181.8	188.1	194.3	200.5	204.6
75°	119.3	125.0	130.7	136.4	142.1	148.3	154.7	161.2	167.7	174.2	178.5
77.5°	92.3	98.4	104.4	110.4	116.5	122.9	129.7	136.4	143.2	150.0	154.4
80°	75.6	81.8	88.0	94.2	100.3	106.7	113.6	120.4	127.2	133.9	138.6
82.5°	58.9	65.4	71.8	78.2	84.6	91.2	98.0	104.8	111.6	118.4	123.1
85°	36.7	43.2	49.8	56.2	62.7	69.4	76.3	83.3	90.2	97.1	101.7
87.5°	20.8	27.3	33.8	40.2	46.7	53.4	60.4	67.2	74.1	81.1	85.6
90°	12.3	19.4	26.7	33.8	40.9	48.2	55.6	62.9	70.3	77.6	82.6
92.5°	15.6	21.2	26.8	32.5	38.1	44.5	51.9	59.2	66.6	73.9	78.8
95°	31.2	33.3	35.3	37.4	39.4	43.6	50.0	56.4	62.9	69.3	73.9
97.5°	55.4	61.7	67.9	74.3	80.5	81.8	78.0	74.3	70.5	66.7	70.8
100°	73.9	79.5	85.2	90.8	96.4	96.0	89.6	83.3	76.9	70.5	73.1
102.5°	95.2	100.0	104.7	109.3	114.0	118.5	122.8	127.1	131.3	135.6	123.2
105°	127.9	131.5	135.1	138.8	142.4	147.3	153.5	159.6	165.8	171.9	176.6
107.5°	159.3	162.1	165.0	167.7	170.6	175.0	180.9	187.0	193.0	198.9	203.1
110°	180.1	182.5	185.0	187.4	189.8	194.0	199.9	205.9	211.9	217.8	221.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	200.3	202.7	205.1	207.5	209.8	213.7	219.2	224.5	230.0	235.3	238.7
115°	231.3	232.9	234.6	236.2	237.9	241.1	246.0	250.8	255.7	260.6	264.1
117.5°	259.8	261.0	262.3	263.4	264.6	267.6	272.4	277.1	282.0	286.8	289.9
120°	278.7	279.5	280.4	281.2	282.0	284.5	288.9	293.4	297.7	302.1	305.3
122.5°	296.8	297.1	297.4	297.7	298.0	300.3	304.7	309.1	313.4	317.7	320.9
125°	322.0	322.3	322.4	322.6	322.9	324.8	328.5	332.2	335.8	339.5	342.7
127.5°	346.4	346.4	346.3	346.3	346.3	347.9	351.2	354.6	358.0	361.3	364.1
130°	361.8	361.7	361.6	361.6	361.5	362.8	365.6	368.3	371.0	373.8	376.7
132.5°	376.3	376.3	376.3	376.3	376.3	377.5	379.8	382.1	384.4	386.7	389.5
135°	397.4	397.3	397.3	397.2	397.1	397.7	399.2	400.6	402.1	403.5	406.2
137.5°	416.8	416.6	416.5	416.4	416.3	416.7	417.6	418.5	419.5	420.4	422.8
140°	429.4	429.4	429.4	429.4	429.4	429.6	430.0	430.3	430.6	431.0	433.3
142.5°	440.1	440.4	440.7	441.0	441.3	441.4	441.5	441.5	441.5	441.5	443.4
145°	457.4	457.4	457.6	457.7	457.8	457.9	457.9	457.9	457.9	457.9	458.9
147.5°	471.2	471.5	471.9	472.3	472.6	472.7	472.6	472.5	472.4	472.3	472.5
150°	481.2	481.4	481.6	481.8	482.1	482.1	482.0	481.9	481.8	481.7	481.7
152.5°	489.0	489.3	489.5	489.8	490.1	490.1	490.0	489.8	489.6	489.5	489.6
155°	500.7	500.8	500.9	501.0	501.1	501.0	500.7	500.4	500.2	499.9	500.2
157.5°	510.7	510.6	510.5	510.5	510.4	510.2	510.0	509.6	509.3	509.1	509.5
160°	516.5	516.2	515.9	515.7	515.4	515.2	515.1	515.1	515.0	514.9	515.4
162.5°	521.7	521.3	520.9	520.6	520.3	520.0	520.0	519.9	519.8	519.7	520.2
165°	528.2	527.7	527.3	526.8	526.4	526.2	526.2	526.2	526.2	526.2	526.9
167.5°	533.3	532.9	532.4	532.0	531.5	531.2	531.2	531.1	531.1	531.0	531.8
170°	536.3	535.7	535.2	534.7	534.1	533.9	534.0	534.0	534.1	534.2	534.9
172.5°	538.2	537.7	537.2	536.6	536.1	535.8	535.9	536.0	536.1	536.2	536.9
175°	540.3	539.8	539.2	538.7	538.1	538.0	538.1	538.1	538.2	538.3	539.1
177.5°	541.3	540.8	540.3	539.8	539.3	539.1	539.2	539.4	539.5	539.7	540.2
180°	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	617.5	618.3	619.2	619.6	619.5	619.3	619.2	619.1
5°	615.9	617.1	618.3	618.8	618.8	618.6	618.4	618.2
7.5°	612.6	613.9	615.4	616.0	615.8	615.6	615.5	615.4
10°	609.2	610.6	612.0	612.6	612.5	612.3	612.2	612.0
12.5°	604.6	605.8	607.1	607.7	607.7	607.6	607.6	607.6
15°	596.0	597.4	598.8	599.4	599.3	599.1	599.0	598.8
17.5°	585.7	587.1	588.5	589.2	589.1	589.0	588.8	588.7
20°	577.7	579.2	580.7	581.5	581.5	581.5	581.5	581.5
22.5°	568.2	569.7	571.2	572.2	572.4	572.7	572.9	573.2
25°	553.7	555.4	557.1	557.9	558.1	558.3	558.4	558.6
27.5°	537.3	538.9	540.5	541.4	541.5	541.7	541.9	542.1
30°	525.9	527.6	529.3	530.3	530.6	530.9	531.2	531.5
32.5°	514.2	516.1	518.1	519.2	519.5	519.8	520.1	520.4
35°	495.6	497.8	499.9	501.2	501.7	502.1	502.6	503.1
37.5°	476.3	478.4	480.6	482.0	482.4	483.0	483.4	483.9
40°	462.6	464.9	467.3	468.7	469.3	469.9	470.6	471.2
42.5°	449.2	451.7	454.3	455.8	456.4	456.8	457.4	457.8
45°	428.6	431.1	433.7	435.4	436.2	437.0	437.7	438.5
47.5°	406.6	409.4	412.1	413.8	414.8	415.7	416.7	417.6
50°	391.3	394.4	397.4	399.5	400.4	401.3	402.3	403.1
52.5°	375.8	378.8	381.9	383.9	384.9	385.8	386.6	387.6
55°	352.4	355.5	358.6	360.6	361.5	362.5	363.4	364.3
57.5°	327.9	331.6	335.3	337.5	338.4	339.2	340.1	341.0
60°	311.0	314.6	318.1	320.5	321.7	323.0	324.2	325.5
62.5°	294.4	297.9	301.5	303.8	305.1	306.3	307.6	308.8
65°	268.6	272.5	276.3	278.8	280.1	281.3	282.6	283.8
67.5°	243.3	247.3	251.2	253.7	254.9	256.1	257.3	258.5
70°	225.5	229.7	233.8	236.5	237.6	238.6	239.7	240.8
72.5°	208.6	212.7	216.7	219.3	220.5	221.7	222.9	224.1
75°	182.8	187.1	191.5	194.3	195.6	197.1	198.5	199.8
77.5°	158.8	163.2	167.6	170.5	171.9	173.4	174.9	176.4
80°	143.2	147.8	152.4	155.3	156.6	157.8	159.1	160.3
82.5°	127.9	132.6	137.4	140.4	141.8	143.1	144.5	145.9
85°	106.4	111.0	115.7	118.8	120.3	121.8	123.3	124.9
87.5°	90.2	94.8	99.3	102.4	103.7	105.1	106.5	107.9
90°	87.6	92.6	97.6	100.9	102.3	103.7	105.0	106.5
92.5°	83.7	88.6	93.5	96.6	97.8	99.1	100.4	101.7
95°	78.6	83.4	88.1	91.1	92.6	94.1	95.6	97.1
97.5°	74.9	79.0	83.1	85.9	87.3	88.7	90.2	91.5
100°	75.8	78.5	81.1	82.9	84.2	85.3	86.5	87.7
102.5°	110.8	98.4	85.9	80.3	81.5	82.8	84.0	85.2
105°	181.2	185.8	190.6	191.9	189.8	187.9	185.8	183.9
107.5°	207.3	211.5	215.7	218.6	220.0	221.4	222.9	224.4
110°	225.2	229.0	232.6	235.3	236.7	238.3	239.8	241.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	242.1	245.5	248.9	251.4	253.0	254.6	256.1	257.7
115°	267.7	271.3	274.8	277.1	278.2	279.3	280.4	281.5
117.5°	293.1	296.3	299.4	301.7	302.8	304.1	305.2	306.4
120°	308.6	311.9	315.1	317.3	318.3	319.4	320.5	321.6
122.5°	324.1	327.3	330.6	332.6	333.5	334.5	335.4	336.3
125°	345.9	349.1	352.3	354.4	355.4	356.4	357.5	358.5
127.5°	366.8	369.5	372.2	374.1	375.1	376.0	377.0	378.0
130°	379.5	382.4	385.2	387.1	388.1	389.0	389.9	390.8
132.5°	392.3	394.9	397.7	399.5	400.4	401.2	402.1	403.0
135°	408.8	411.4	414.1	416.0	417.1	418.2	419.3	420.4
137.5°	425.3	427.7	430.2	431.8	432.5	433.2	433.9	434.6
140°	435.5	437.8	440.1	441.7	442.5	443.4	444.3	445.1
142.5°	445.4	447.4	449.3	450.7	451.3	452.0	452.6	453.3
145°	459.9	460.9	461.9	462.8	463.6	464.4	465.2	466.0
147.5°	472.7	473.0	473.1	473.5	474.1	474.7	475.3	475.8
150°	481.7	481.7	481.7	481.8	481.9	482.0	482.1	482.1
152.5°	489.7	489.9	490.1	490.1	490.1	490.0	489.9	489.9
155°	500.6	501.0	501.3	501.4	501.1	500.9	500.6	500.3
157.5°	510.0	510.4	510.9	510.9	510.4	510.0	509.5	509.1
160°	515.9	516.5	517.0	517.0	516.5	515.9	515.4	514.9
162.5°	520.8	521.3	521.8	521.8	521.2	520.6	520.0	519.4
165°	527.6	528.3	529.1	529.0	528.2	527.4	526.6	525.8
167.5°	532.6	533.4	534.2	534.1	533.2	532.4	531.5	530.6
170°	535.7	536.4	537.2	537.1	536.1	535.2	534.3	533.4
172.5°	537.6	538.3	539.0	539.0	538.0	537.0	536.0	535.0
175°	539.9	540.7	541.5	541.4	540.3	539.2	538.1	537.1
177.5°	540.8	541.4	542.0	541.8	541.0	540.1	539.2	538.4
180°	540.3	540.3	540.3	540.3	540.3	540.3	540.3	540.3

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