

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: P332754-927

Luminaire Tested: **S124DIW-S575D770U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332754-927  
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-S575D770U927-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

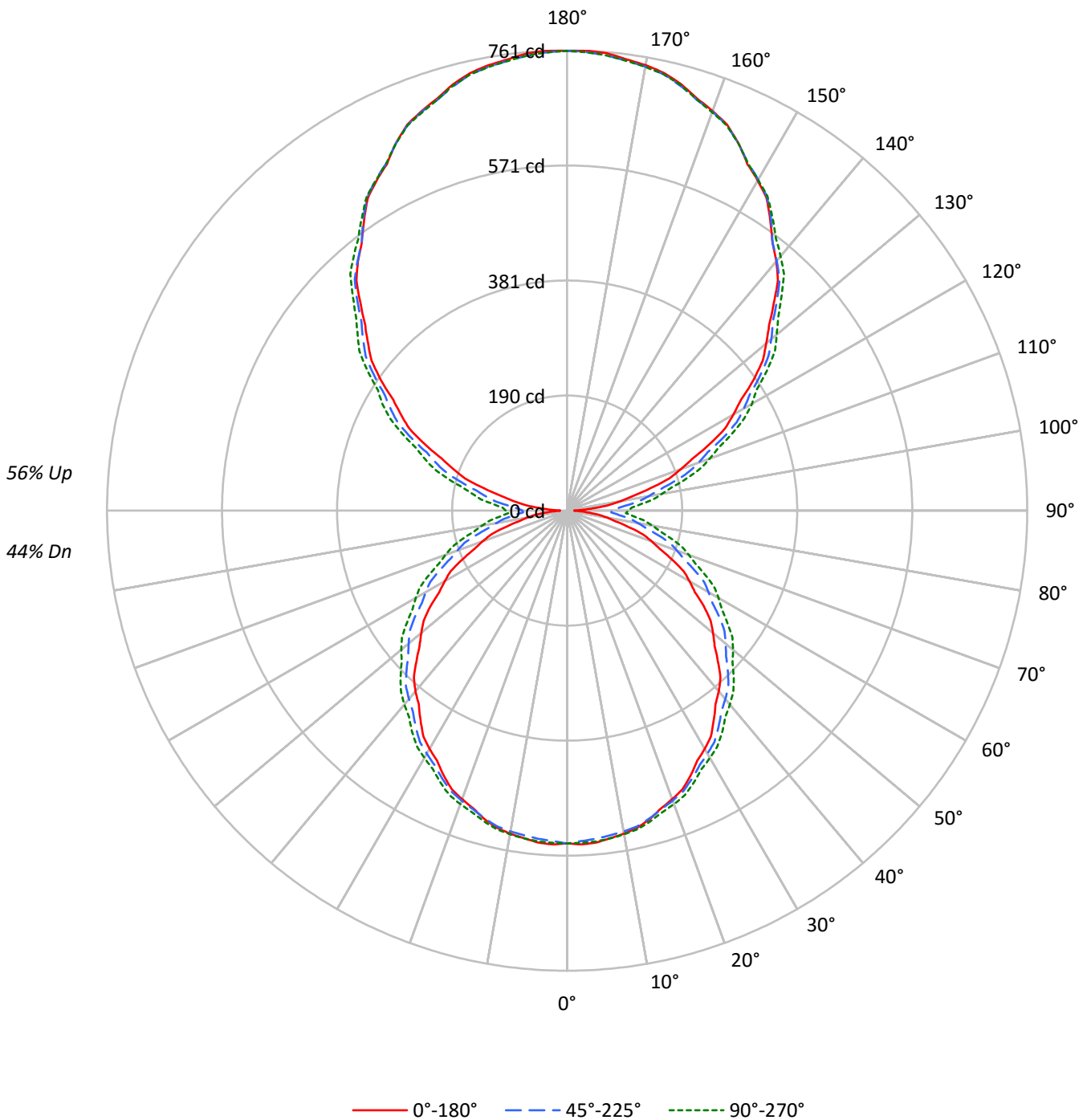
Lumens per Lamp: N/A  
Luminaire Lumens: 3987.9 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse  
  
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	95	91	87	83	87	83	79	76	69	66	64	55	53	52	43	42	41	35
2	87	79	72	67	79	72	66	62	60	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	17	14	12	10

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4444	4444	4444
5°	4458	4343	4355
10°	4431	4273	4269
15°	4391	4190	4167
20°	4331	4099	4068
25°	4264	3998	3958
30°	4191	3896	3847
35°	4108	3792	3748
40°	4041	3694	3646
45°	3943	3603	3558
50°	3860	3498	3465
55°	3775	3400	3356
60°	3640	3274	3257
65°	3494	3139	3136
70°	3315	2985	2993
75°	3068	2814	2864
80°	2794	2652	2738
85°	2439	2507	2665



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.1	1.3
10°-20°	149.4	3.7
20°-30°	225.8	5.7
30°-40°	273.2	6.9
40°-50°	288.9	7.2
50°-60°	271.9	6.8
60°-70°	225.6	5.7
70°-80°	158.4	4.0
80°-90°	91.8	2.3
90°-100°	103.3	2.6
100°-110°	187.9	4.7
110°-120°	278.5	7.0
120°-130°	347.3	8.7
130°-140°	379.8	9.5
140°-150°	368.2	9.2
150°-160°	308.6	7.7
160°-170°	205.3	5.1
170°-180°	71.9	1.8
0°-30°	427.3	10.7
0°-40°	700.6	17.6
0°-60°	1261.3	31.6
0°-90°	1737.1	43.6
90°-120°	569.8	14.3
90°-150°	1665.0	41.8
90°-180°	2251.0	56.4
0°-180°	3987.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	549	545	550	549	52
15°	528	529	527	532	532	149
25°	483	487	489	495	496	223
35°	423	430	436	445	447	265
45°	353	364	376	386	390	272
55°	276	289	308	319	324	246
65°	191	211	232	247	252	189
75°	106	129	155	171	178	113
85°	33	59	86	104	111	35
90°	12	43	74	94	102	9
95°	43	69	98	116	122	46
105°	142	156	181	197	204	152
115°	260	266	284	297	301	257
125°	376	376	390	400	403	335
135°	483	486	491	499	501	374
145°	586	587	588	591	592	366
155°	670	670	670	672	670	308
165°	730	728	727	730	728	206
175°	759	756	756	759	756	72
180°	760	760	760	760	760	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	552.5	552.2	551.8	551.4	551.1	550.6	549.7	548.8	547.9	547.0	547.8
5°	551.1	550.7	550.2	549.9	549.5	548.7	547.8	546.8	545.9	544.9	546.1
7.5°	546.4	546.1	545.9	545.7	545.4	544.9	544.2	543.4	542.5	541.7	543.0
10°	542.5	542.3	542.2	542.1	541.9	541.5	540.8	540.1	539.5	538.8	540.0
12.5°	537.0	537.0	537.0	536.9	536.9	536.7	536.2	535.8	535.3	534.8	535.9
15°	528.3	528.5	528.5	528.7	528.9	528.7	528.3	527.9	527.4	527.0	528.3
17.5°	516.3	516.7	517.1	517.5	518.0	518.2	518.1	518.0	517.9	517.8	519.0
20°	507.9	508.3	508.7	509.2	509.6	509.8	510.0	510.2	510.2	510.4	511.7
22.5°	498.6	499.1	499.6	500.1	500.7	501.1	501.3	501.5	501.8	502.0	503.4
25°	483.3	484.1	485.0	485.8	486.6	487.2	487.6	488.0	488.5	488.9	490.4
27.5°	466.3	467.5	468.7	469.9	471.1	472.0	472.6	473.2	473.9	474.5	475.9
30°	455.0	456.1	457.1	458.2	459.3	460.3	461.3	462.2	463.2	464.2	465.7
32.5°	442.6	443.9	445.2	446.6	447.9	449.1	450.1	451.2	452.3	453.4	455.0
35°	422.9	424.5	426.2	427.8	429.4	430.9	432.3	433.7	435.1	436.4	438.4
37.5°	403.1	404.9	406.8	408.7	410.6	412.4	414.1	415.8	417.5	419.1	421.1
40°	390.2	392.0	393.8	395.5	397.4	399.2	401.1	403.0	405.0	406.9	408.9
42.5°	375.4	377.4	379.4	381.4	383.4	385.6	387.8	390.0	392.3	394.5	396.8
45°	352.6	355.2	357.8	360.4	363.0	365.6	368.2	370.8	373.4	376.0	378.3
47.5°	330.8	333.4	336.1	338.8	341.5	344.4	347.4	350.4	353.4	356.4	358.9
50°	315.0	318.0	321.0	324.1	327.1	330.1	333.1	336.1	339.1	342.1	344.8
52.5°	299.2	302.2	305.2	308.2	311.2	314.5	318.0	321.4	324.9	328.3	331.1
55°	276.2	279.0	281.9	284.8	287.6	291.1	295.2	299.4	303.5	307.6	310.4
57.5°	250.4	254.0	257.5	261.1	264.7	268.5	272.5	276.6	280.7	284.8	288.0
60°	233.6	237.2	240.7	244.3	247.9	251.9	256.4	260.9	265.5	270.0	273.1
62.5°	217.4	221.3	225.1	229.0	232.9	237.1	241.6	246.1	250.7	255.2	258.3
65°	191.1	195.5	199.9	204.2	208.7	213.2	217.8	222.4	227.1	231.8	235.2
67.5°	165.8	170.5	175.2	179.8	184.4	189.3	194.2	199.2	204.2	209.2	212.7
70°	148.5	153.2	157.9	162.6	167.2	172.1	177.3	182.5	187.7	193.0	196.6
72.5°	131.8	136.6	141.3	146.1	150.8	156.0	161.5	167.1	172.6	178.2	181.7
75°	106.0	111.1	116.1	121.2	126.3	131.7	137.4	143.2	149.0	154.7	158.6
77.5°	82.0	87.4	92.8	98.1	103.5	109.2	115.2	121.2	127.2	133.2	137.1
80°	67.2	72.6	78.2	83.7	89.1	94.8	100.9	106.9	113.0	119.0	123.1
82.5°	52.4	58.1	63.8	69.5	75.2	81.0	87.1	93.1	99.1	105.2	109.4
85°	32.6	38.4	44.2	49.9	55.7	61.6	67.8	74.0	80.2	86.3	90.4
87.5°	18.6	24.5	30.3	36.2	42.1	48.2	54.3	60.6	66.8	73.0	77.1
90°	11.6	18.5	25.4	32.4	39.3	46.2	53.2	60.1	67.0	74.0	78.7
92.5°	21.9	28.5	35.1	41.7	48.2	54.9	61.5	68.1	74.7	81.4	85.7
95°	43.3	49.0	54.7	60.4	66.1	72.2	78.7	85.2	91.8	98.3	102.4
97.5°	68.9	73.8	78.6	83.4	88.2	94.0	100.6	107.2	113.8	120.5	124.5
100°	89.1	93.2	97.3	101.3	105.4	110.7	117.2	123.7	130.3	136.8	140.8
102.5°	110.7	114.1	117.4	120.7	124.1	128.9	135.1	141.5	147.8	154.1	158.0
105°	142.5	145.4	148.3	151.1	154.0	158.3	163.8	169.4	175.0	180.6	184.4
107.5°	177.1	179.5	181.9	184.3	186.7	190.4	195.2	200.1	204.9	209.8	213.6
110°	200.1	202.3	204.5	206.7	208.8	212.3	216.9	221.6	226.2	230.9	233.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	224.1	225.9	227.6	229.3	231.1	234.2	238.4	242.8	247.2	251.5	254.5
115°	260.1	261.3	262.5	263.7	265.0	267.7	271.8	275.9	280.0	284.2	287.0
117.5°	294.5	295.3	296.2	297.0	297.9	300.2	304.1	308.0	312.0	315.8	318.2
120°	317.0	318.0	318.9	319.9	320.8	323.1	326.6	330.2	333.7	337.4	339.5
122.5°	341.0	341.4	341.6	341.9	342.2	344.1	347.7	351.3	354.8	358.4	360.7
125°	375.8	375.7	375.6	375.4	375.3	376.8	380.2	383.4	386.7	390.0	392.4
127.5°	407.8	408.1	408.3	408.5	408.8	410.1	412.6	415.0	417.4	419.9	422.1
130°	429.8	430.2	430.4	430.6	430.9	432.1	434.3	436.5	438.7	440.8	443.1
132.5°	452.9	453.0	453.2	453.4	453.5	454.4	456.1	457.7	459.4	461.1	463.1
135°	482.8	483.5	484.3	485.1	485.9	486.8	487.7	488.7	489.6	490.6	492.5
137.5°	515.9	516.2	516.3	516.6	516.8	517.3	517.9	518.6	519.3	520.0	521.7
140°	538.1	538.1	538.3	538.4	538.5	538.7	538.8	538.9	539.1	539.2	540.8
142.5°	557.8	558.0	558.3	558.5	558.7	558.7	558.6	558.3	558.2	558.0	559.5
145°	585.7	586.0	586.4	586.8	587.2	587.4	587.6	587.7	587.8	588.0	588.7
147.5°	613.4	613.9	614.3	614.8	615.4	615.5	615.4	615.3	615.2	615.1	615.1
150°	630.3	630.7	631.1	631.4	631.8	632.1	632.1	632.1	632.1	632.1	632.1
152.5°	645.8	646.1	646.3	646.7	647.0	647.1	647.2	647.4	647.5	647.5	647.8
155°	670.3	670.3	670.3	670.3	670.3	670.2	670.0	669.9	669.8	669.7	670.2
157.5°	690.9	690.7	690.5	690.2	690.0	689.9	689.8	689.8	689.8	689.8	690.1
160°	703.2	703.1	702.9	702.8	702.7	702.5	702.4	702.3	702.1	702.0	702.4
162.5°	714.5	714.2	713.8	713.4	713.1	712.9	712.7	712.6	712.5	712.3	713.0
165°	729.7	729.3	728.9	728.5	728.1	727.8	727.5	727.2	727.0	726.7	727.5
167.5°	741.2	740.8	740.2	739.7	739.1	738.8	738.9	738.9	738.9	738.9	739.7
170°	747.9	747.2	746.6	745.9	745.3	745.0	745.1	745.3	745.4	745.5	746.3
172.5°	752.6	752.0	751.5	750.9	750.4	750.1	750.1	750.2	750.2	750.2	751.1
175°	759.1	758.4	757.7	757.1	756.5	756.1	755.9	755.7	755.7	755.5	756.5
177.5°	761.1	760.7	760.1	759.6	759.1	758.8	758.8	758.8	758.8	758.8	759.5
180°	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
2.5°	548.6	549.3	550.1	550.4	550.3	550.2	550.1	550.0
5°	547.2	548.2	549.3	549.8	549.7	549.5	549.4	549.2
7.5°	544.2	545.4	546.7	547.2	547.1	546.9	546.8	546.7
10°	541.2	542.5	543.7	544.2	544.2	544.0	543.8	543.7
12.5°	537.1	538.2	539.3	539.9	539.9	539.8	539.8	539.8
15°	529.5	530.8	532.0	532.5	532.4	532.3	532.1	532.0
17.5°	520.3	521.6	522.8	523.4	523.3	523.2	523.1	523.0
20°	513.2	514.5	515.9	516.6	516.6	516.6	516.6	516.6
22.5°	504.8	506.1	507.5	508.3	508.5	508.7	509.0	509.2
25°	491.9	493.4	494.9	495.7	495.8	496.0	496.1	496.2
27.5°	477.4	478.7	480.1	480.9	481.1	481.3	481.4	481.6
30°	467.2	468.7	470.2	471.1	471.3	471.7	471.9	472.2
32.5°	456.8	458.5	460.3	461.2	461.5	461.8	462.1	462.3
35°	440.3	442.2	444.1	445.3	445.7	446.1	446.5	446.9
37.5°	423.1	425.0	427.0	428.2	428.6	429.0	429.4	429.9
40°	411.0	413.0	415.1	416.4	416.9	417.5	418.0	418.6
42.5°	399.1	401.3	403.6	405.0	405.4	405.8	406.3	406.7
45°	380.7	383.0	385.3	386.8	387.5	388.2	388.9	389.6
47.5°	361.2	363.7	366.1	367.7	368.5	369.3	370.2	371.0
50°	347.6	350.4	353.1	354.9	355.7	356.5	357.4	358.1
52.5°	333.8	336.5	339.3	341.0	341.9	342.7	343.5	344.4
55°	313.1	315.8	318.5	320.4	321.2	322.0	322.8	323.6
57.5°	291.3	294.6	297.9	299.8	300.6	301.3	302.1	302.9
60°	276.3	279.5	282.6	284.7	285.8	286.9	288.0	289.1
62.5°	261.5	264.7	267.8	269.9	271.0	272.1	273.2	274.3
65°	238.6	242.1	245.5	247.7	248.8	249.9	251.0	252.2
67.5°	216.2	219.7	223.2	225.4	226.5	227.5	228.6	229.7
70°	200.3	204.1	207.7	210.1	211.0	212.0	212.9	213.9
72.5°	185.3	188.9	192.5	194.8	195.9	196.9	198.0	199.1
75°	162.4	166.2	170.1	172.6	173.8	175.1	176.3	177.5
77.5°	141.1	145.0	148.9	151.5	152.7	154.1	155.3	156.7
80°	127.2	131.3	135.4	138.0	139.1	140.2	141.3	142.4
82.5°	113.6	117.8	122.1	124.8	126.0	127.1	128.3	129.6
85°	94.5	98.6	102.7	105.5	106.9	108.2	109.6	111.0
87.5°	81.3	85.4	89.5	92.2	93.5	94.7	95.9	97.2
90°	83.5	88.2	93.0	96.0	97.4	98.8	100.1	101.5
92.5°	90.0	94.3	98.7	101.5	102.7	104.0	105.2	106.5
95°	106.5	110.6	114.7	117.3	118.6	119.8	121.0	122.2
97.5°	128.6	132.7	136.7	139.3	140.5	141.7	142.9	144.0
100°	144.7	148.7	152.7	155.1	156.1	157.0	158.0	158.9
102.5°	162.0	166.0	169.9	172.5	173.6	174.8	176.0	177.1
105°	188.2	192.1	195.9	198.5	200.0	201.5	203.0	204.5
107.5°	217.3	221.0	224.8	227.1	228.1	229.1	230.0	231.0
110°	236.7	239.6	242.5	244.7	246.1	247.6	249.1	250.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.5	260.5	263.5	265.5	266.7	267.9	269.1	270.2
115°	289.9	292.8	295.6	297.5	298.3	299.2	300.0	300.9
117.5°	320.7	323.1	325.4	327.1	327.9	328.8	329.5	330.4
120°	341.5	343.6	345.7	347.5	348.8	350.1	351.5	352.8
122.5°	363.0	365.3	367.6	369.0	369.6	370.0	370.6	371.1
125°	394.7	397.0	399.4	400.8	401.4	402.0	402.5	403.1
127.5°	424.2	426.4	428.6	430.1	430.9	431.6	432.3	433.0
130°	445.3	447.5	449.7	451.0	451.2	451.5	451.9	452.2
132.5°	465.2	467.3	469.4	470.7	471.3	472.0	472.6	473.2
135°	494.5	496.4	498.4	499.5	499.9	500.3	500.8	501.2
137.5°	523.3	525.0	526.6	527.8	528.6	529.3	530.1	530.9
140°	542.5	544.2	545.8	546.9	547.5	548.0	548.6	549.1
142.5°	561.0	562.6	564.1	565.1	565.7	566.3	566.8	567.4
145°	589.3	590.0	590.7	591.1	591.3	591.4	591.6	591.8
147.5°	615.1	615.1	615.1	615.3	615.6	615.9	616.2	616.6
150°	632.1	632.1	632.1	632.0	631.8	631.7	631.6	631.4
152.5°	648.2	648.5	648.8	648.8	648.5	648.2	647.8	647.5
155°	670.7	671.2	671.8	671.8	671.2	670.7	670.2	669.7
157.5°	690.5	690.9	691.3	691.3	690.9	690.5	690.0	689.5
160°	702.8	703.2	703.6	703.5	702.8	702.1	701.5	700.8
162.5°	713.8	714.5	715.2	715.2	714.5	713.9	713.3	712.6
165°	728.3	729.0	729.8	730.0	729.4	728.9	728.4	727.9
167.5°	740.5	741.2	742.0	742.0	741.2	740.5	739.7	738.8
170°	747.1	747.9	748.7	748.6	747.7	746.8	745.8	745.0
172.5°	752.0	752.9	753.8	753.8	752.8	751.9	751.0	750.1
175°	757.3	758.3	759.1	759.1	758.3	757.3	756.5	755.5
177.5°	760.3	761.0	761.8	761.7	760.8	760.0	759.1	758.4
180°	760.2	760.2	760.2	760.2	760.2	760.2	760.2	760.2

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