

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: P332754-830

Luminaire Tested: **S124DIW-S575D770U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332754-830
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-S575D770U830-4F0-1E-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: 4744.9 lumens
Efficiency: N/A
Efficacy: 126.2 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

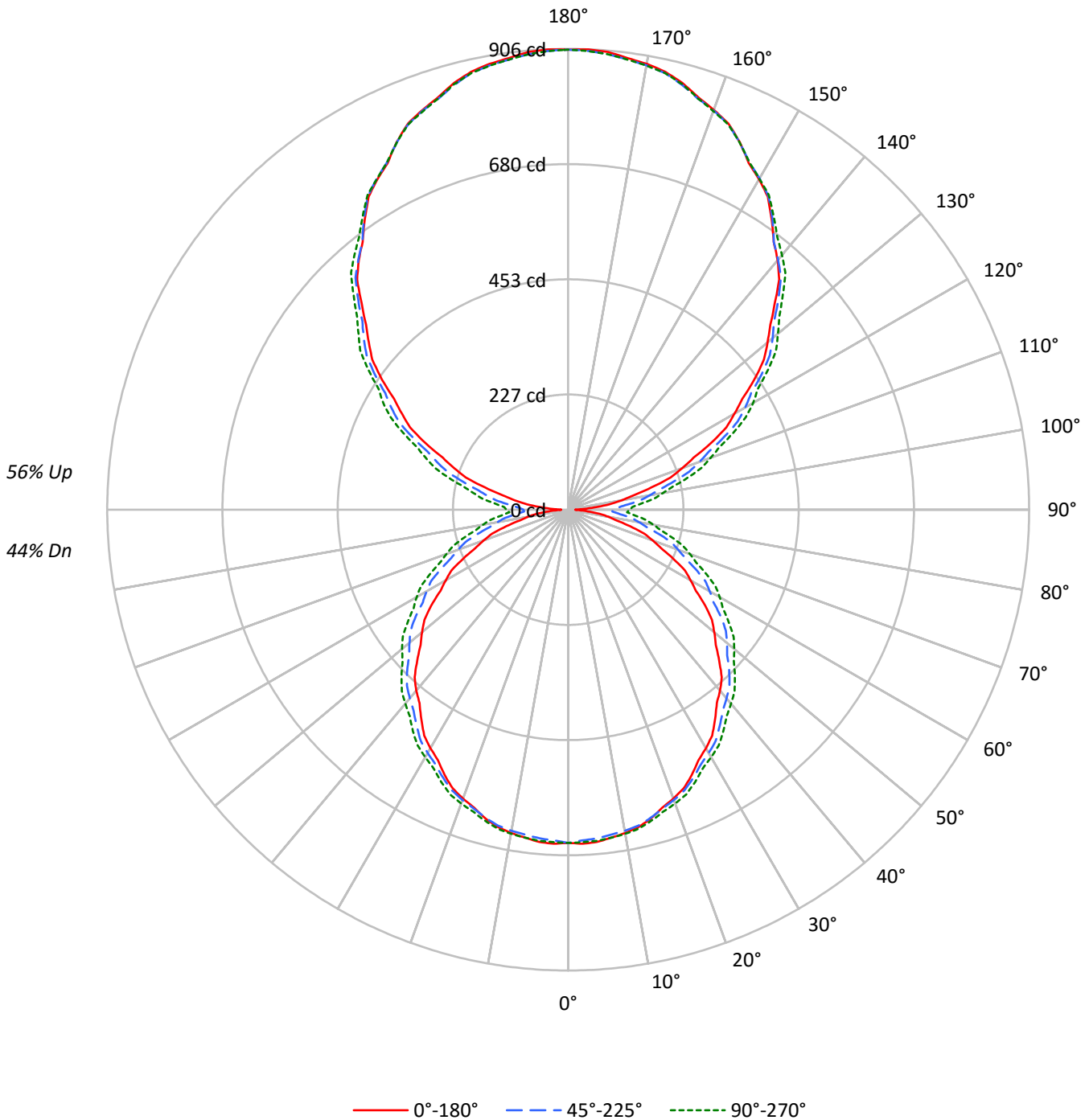
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.0	1.3
10°-20°	177.7	3.7
20°-30°	268.7	5.7
30°-40°	325.1	6.9
40°-50°	343.7	7.2
50°-60°	323.5	6.8
60°-70°	268.4	5.7
70°-80°	188.5	4.0
80°-90°	109.3	2.3
90°-100°	122.9	2.6
100°-110°	223.6	4.7
110°-120°	331.4	7.0
120°-130°	413.3	8.7
130°-140°	451.9	9.5
140°-150°	438.1	9.2
150°-160°	367.1	7.7
160°-170°	244.3	5.1
170°-180°	85.5	1.8
0°-30°	508.4	10.7
0°-40°	833.5	17.6
0°-60°	1500.7	31.6
0°-90°	2066.9	43.6
90°-120°	677.9	14.3
90°-150°	1981.1	41.8
90°-180°	2678.0	56.4
0°-180°	4744.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	14	51	88	112	121	10
95°	52	82	117	138	145	54
105°	170	186	215	235	243	180
115°	309	317	338	353	358	305
125°	447	447	464	476	480	399
135°	574	579	584	594	596	444
145°	697	699	700	703	704	436
155°	798	797	797	799	797	367
165°	868	866	865	868	866	245
175°	903	900	899	903	899	86
180°	904	904	904	904	904	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	22.1	29.1	36.1	43.1	50.1	57.3	64.7	72.1	79.5	86.8	91.7
90°	13.9	22.1	30.3	38.5	46.8	55.0	63.2	71.5	79.7	88.0	93.7
92.5°	26.1	33.9	41.8	49.6	57.4	65.3	73.1	81.1	88.9	96.8	102.0
95°	51.5	58.2	65.0	71.8	78.6	85.9	93.7	101.4	109.2	117.0	121.9
97.5°	82.0	87.8	93.5	99.2	105.0	111.8	119.7	127.5	135.4	143.4	148.2
100°	106.0	110.8	115.7	120.6	125.5	131.8	139.5	147.2	155.0	162.8	167.5
102.5°	131.8	135.7	139.7	143.6	147.6	153.4	160.8	168.3	175.9	183.3	188.0
105°	169.6	173.1	176.4	179.8	183.2	188.3	194.9	201.6	208.2	214.9	219.4
107.5°	210.8	213.6	216.4	219.3	222.2	226.5	232.2	238.1	243.8	249.7	254.1
110°	238.1	240.7	243.3	245.9	248.5	252.6	258.1	263.6	269.2	274.8	278.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	266.6	268.7	270.8	272.9	274.9	278.6	283.7	288.9	294.1	299.3	302.8
115°	309.4	310.9	312.4	313.8	315.3	318.5	323.4	328.3	333.2	338.1	341.5
117.5°	350.3	351.4	352.4	353.4	354.4	357.2	361.8	366.5	371.2	375.8	378.6
120°	377.2	378.3	379.5	380.6	381.6	384.4	388.6	392.9	397.1	401.4	403.9
122.5°	405.8	406.1	406.4	406.8	407.2	409.4	413.7	417.9	422.2	426.4	429.1
125°	447.1	447.0	446.9	446.7	446.5	448.4	452.3	456.2	460.1	464.0	466.8
127.5°	485.2	485.5	485.8	486.1	486.4	488.0	490.9	493.8	496.6	499.5	502.2
130°	511.4	511.8	512.1	512.4	512.6	514.2	516.7	519.3	522.0	524.5	527.2
132.5°	538.9	539.0	539.2	539.4	539.6	540.6	542.6	544.6	546.6	548.6	551.0
135°	574.4	575.3	576.3	577.2	578.2	579.2	580.3	581.5	582.6	583.7	586.0
137.5°	613.9	614.2	614.3	614.6	614.9	615.5	616.2	617.1	617.8	618.7	620.7
140°	640.2	640.3	640.5	640.6	640.7	640.9	641.0	641.2	641.4	641.6	643.5
142.5°	663.6	663.9	664.2	664.5	664.8	664.8	664.6	664.3	664.1	663.9	665.7
145°	696.8	697.2	697.7	698.1	698.6	698.9	699.1	699.3	699.4	699.6	700.4
147.5°	729.8	730.4	730.9	731.5	732.2	732.4	732.3	732.1	732.0	731.9	731.9
150°	750.0	750.4	750.8	751.3	751.8	752.1	752.1	752.1	752.1	752.1	752.1
152.5°	768.4	768.7	769.0	769.4	769.8	770.0	770.1	770.2	770.3	770.4	770.8
155°	797.5	797.5	797.5	797.5	797.5	797.4	797.2	797.1	796.9	796.8	797.4
157.5°	822.1	821.8	821.5	821.2	821.0	820.9	820.8	820.8	820.8	820.7	821.1
160°	836.7	836.5	836.3	836.2	836.0	835.8	835.8	835.6	835.4	835.3	835.8
162.5°	850.1	849.7	849.2	848.9	848.5	848.2	848.0	847.9	847.7	847.5	848.4
165°	868.2	867.7	867.2	866.8	866.3	865.9	865.5	865.3	865.0	864.6	865.5
167.5°	881.9	881.4	880.7	880.1	879.4	879.0	879.1	879.1	879.1	879.2	880.1
170°	889.9	889.0	888.3	887.5	886.7	886.4	886.6	886.7	886.8	887.0	888.0
172.5°	895.4	894.8	894.1	893.4	892.8	892.5	892.5	892.6	892.6	892.6	893.7
175°	903.1	902.3	901.5	900.8	900.0	899.6	899.4	899.2	899.1	898.9	900.0
177.5°	905.6	905.0	904.4	903.8	903.1	902.9	902.9	902.9	902.9	902.9	903.7
180°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	96.7	101.6	106.5	109.7	111.2	112.7	114.1	115.6
90°	99.3	105.0	110.7	114.2	115.9	117.5	119.1	120.7
92.5°	107.1	112.3	117.4	120.7	122.2	123.8	125.2	126.7
95°	126.7	131.6	136.5	139.6	141.1	142.5	144.0	145.4
97.5°	153.0	157.9	162.7	165.8	167.2	168.6	170.0	171.4
100°	172.2	176.9	181.6	184.5	185.7	186.8	187.9	189.1
102.5°	192.7	197.5	202.2	205.2	206.6	208.0	209.4	210.8
105°	223.9	228.6	233.1	236.2	238.0	239.8	241.6	243.3
107.5°	258.5	263.0	267.5	270.2	271.4	272.6	273.7	274.8
110°	281.6	285.0	288.5	291.2	292.8	294.6	296.4	298.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	306.3	309.9	313.5	315.9	317.4	318.8	320.2	321.5
115°	345.0	348.4	351.8	354.0	355.0	356.0	356.9	358.0
117.5°	381.5	384.4	387.2	389.2	390.1	391.2	392.1	393.1
120°	406.3	408.9	411.3	413.4	415.0	416.6	418.2	419.8
122.5°	431.9	434.6	437.3	439.0	439.7	440.3	440.9	441.5
125°	469.6	472.4	475.2	476.9	477.6	478.2	478.9	479.6
127.5°	504.7	507.4	510.0	511.7	512.6	513.5	514.3	515.2
130°	529.8	532.4	535.1	536.6	536.9	537.2	537.6	538.0
132.5°	553.6	556.0	558.5	560.1	560.8	561.6	562.3	563.0
135°	588.3	590.6	593.0	594.3	594.8	595.3	595.9	596.3
137.5°	622.6	624.6	626.6	628.0	629.0	629.8	630.7	631.7
140°	645.5	647.4	649.4	650.7	651.4	652.1	652.7	653.4
142.5°	667.5	669.4	671.2	672.4	673.1	673.7	674.4	675.0
145°	701.2	702.0	702.9	703.3	703.5	703.7	703.9	704.1
147.5°	731.9	731.9	731.9	732.1	732.4	732.8	733.2	733.6
150°	752.1	752.1	752.1	752.0	751.8	751.6	751.5	751.3
152.5°	771.2	771.6	771.9	771.9	771.6	771.2	770.7	770.3
155°	798.1	798.6	799.3	799.3	798.6	798.1	797.4	796.8
157.5°	821.6	822.1	822.6	822.6	822.0	821.5	821.0	820.4
160°	836.2	836.7	837.2	837.0	836.2	835.4	834.6	833.9
162.5°	849.2	850.1	850.9	850.9	850.2	849.4	848.7	847.8
165°	866.5	867.4	868.4	868.6	867.9	867.2	866.7	866.0
167.5°	881.1	881.9	882.9	882.9	881.9	881.0	880.1	879.0
170°	888.9	889.9	890.8	890.7	889.6	888.5	887.4	886.4
172.5°	894.8	895.8	896.8	896.8	895.7	894.7	893.5	892.5
175°	901.1	902.2	903.2	903.2	902.2	901.1	900.0	898.9
177.5°	904.6	905.4	906.3	906.3	905.2	904.3	903.2	902.3
180°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5

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