

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: P332558-930

Luminaire Tested: **S124DIP-S575D810U930-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332558-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIP-S575D810U930-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4293.1 lumens
Efficiency: N/A
Efficacy: 111.8 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

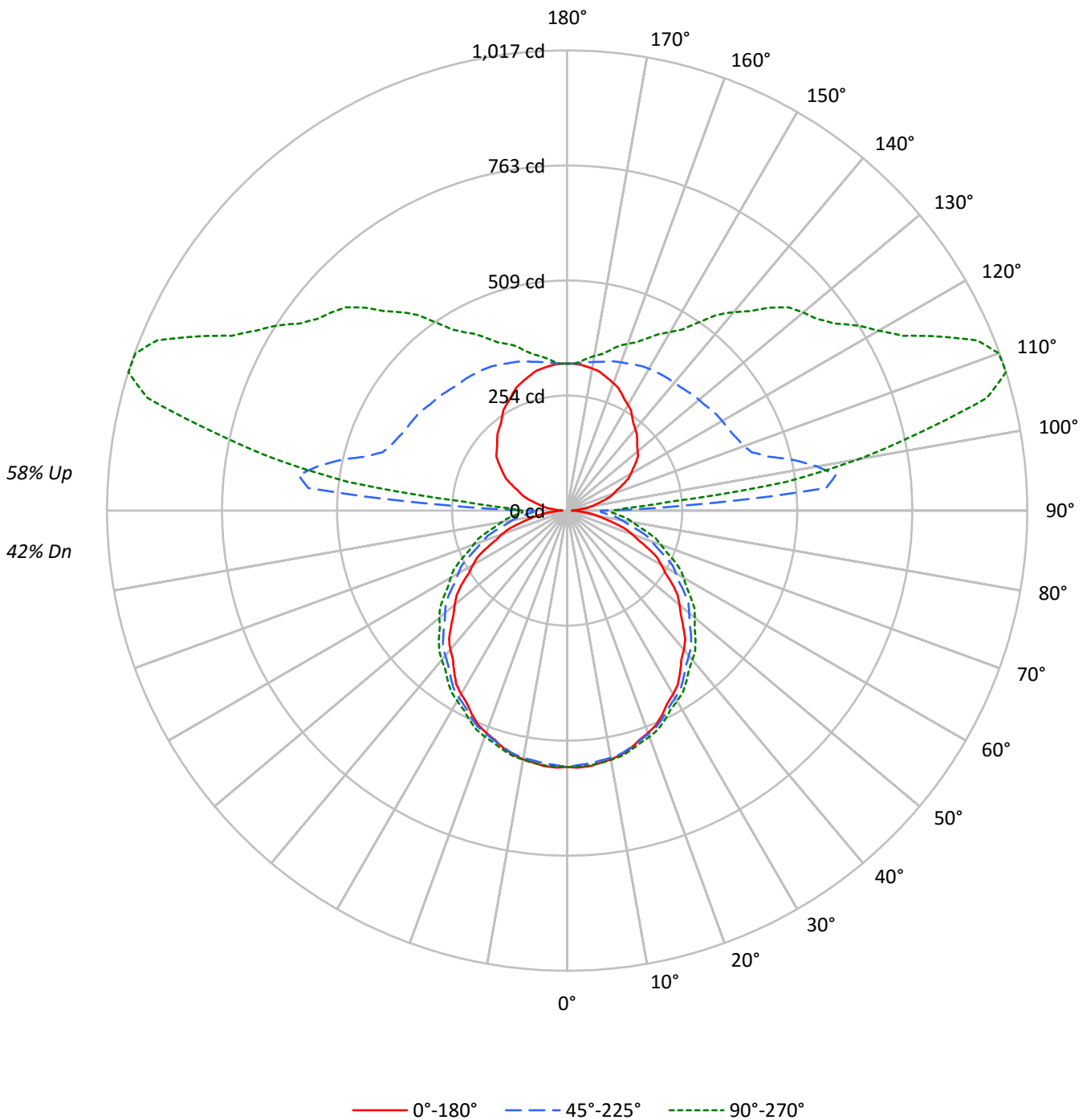
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	48	48	48	42
1	95	90	86	83	86	82	79	76	68	65	63	54	52	51	41	40	39	33
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	32	27
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	60	52	46	65	55	48	43	46	40	36	36	33	29	28	25	23	19
5	66	54	45	39	59	49	42	36	41	35	31	33	29	25	25	22	20	16
6	60	48	40	34	55	44	37	31	36	31	27	29	25	22	23	20	17	14
7	56	43	35	30	50	40	33	27	33	27	23	27	22	19	21	18	15	13
8	52	39	31	26	47	36	29	24	30	24	21	24	20	17	19	16	14	11
9	48	36	28	23	44	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	33	25	21	41	30	24	19	25	20	16	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.6	1.2
10°-20°	153.7	3.6
20°-30°	232.4	5.4
30°-40°	281.2	6.6
40°-50°	297.3	6.9
50°-60°	279.8	6.5
60°-70°	232.1	5.4
70°-80°	163.1	3.8
80°-90°	94.0	2.2
90°-100°	289.1	6.7
100°-110°	528.3	12.3
110°-120°	464.1	10.8
120°-130°	382.9	8.9
130°-140°	313.1	7.3
140°-150°	235.5	5.5
150°-160°	164.6	3.8
160°-170°	96.8	2.3
170°-180°	31.5	0.7
0°-30°	439.8	10.2
0°-40°	721.0	16.8
0°-60°	1298.1	30.2
0°-90°	1787.3	41.6
90°-120°	1281.5	29.9
90°-150°	2212.9	51.5
90°-180°	2506.0	58.4
0°-180°	4293.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	11	41	74	93	100	8
95°	29	96	575	329	234	30
105°	80	127	460	958	960	86
115°	135	175	403	760	910	134
125°	186	220	389	639	721	165
135°	219	260	374	557	634	169
145°	251	287	366	460	508	158
155°	285	308	356	403	420	131
165°	310	320	341	361	367	88
175°	324	324	327	332	330	31
180°	324	324	324	324	324	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	18.9	24.9	31.1	36.9	42.8	48.8	55.7	61.9	68.3	74.8	78.7
90°	10.8	17.7	25.3	31.6	37.8	43.7	53.6	59.6	66.9	74.3	77.7
92.5°	16.9	25.3	36.4	49.2	63.6	82.4	120.9	176.4	230.6	262.0	232.2
95°	29.3	35.9	46.9	59.8	79.7	111.8	173.0	283.3	441.5	574.8	593.2
97.5°	45.2	49.2	58.7	70.4	87.5	114.8	163.2	255.3	412.5	598.5	726.1
100°	55.4	59.1	67.3	78.5	94.3	119.3	162.4	239.9	375.5	560.8	727.7
102.5°	65.6	69.9	77.0	87.4	102.2	125.9	165.3	234.1	350.1	514.9	686.9
105°	80.3	85.0	91.1	101.5	115.8	138.3	174.1	232.3	326.7	460.1	613.4
107.5°	97.8	101.3	106.9	117.3	130.6	152.5	185.5	238.6	319.8	427.9	553.6
110°	109.0	112.3	117.4	127.0	140.5	161.1	194.1	243.7	318.7	416.1	523.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	119.7	122.7	128.2	137.1	150.3	170.7	202.4	249.2	319.5	409.0	504.8
115°	135.1	138.3	144.1	151.7	165.1	185.2	215.2	258.0	321.7	402.8	486.2
117.5°	151.8	154.4	159.1	166.9	179.0	199.3	227.7	267.1	324.5	398.3	475.6
120°	162.6	164.3	169.1	176.6	187.8	207.9	236.3	273.5	326.7	395.7	469.4
122.5°	172.8	174.1	178.6	185.2	197.2	216.5	244.6	279.6	329.0	392.7	462.8
125°	185.5	187.9	191.6	198.4	210.4	230.0	256.5	289.3	333.0	388.8	452.7
127.5°	197.2	199.1	203.6	211.5	224.0	243.2	268.1	297.7	335.5	383.6	439.7
130°	203.3	205.8	210.8	220.1	232.1	251.7	275.6	302.7	337.5	380.5	431.5
132.5°	210.0	211.9	218.3	227.3	240.3	258.6	282.1	308.2	339.5	378.0	424.3
135°	218.7	221.2	227.6	238.4	251.8	268.9	290.9	314.9	341.9	373.6	412.8
137.5°	228.0	230.2	237.1	247.3	261.1	277.0	297.2	319.0	342.8	370.5	403.0
140°	234.6	236.4	243.2	254.0	267.2	282.5	301.7	322.3	344.1	368.4	397.7
142.5°	241.2	243.1	249.6	259.9	272.7	287.5	306.0	324.8	345.4	367.5	393.4
145°	251.2	252.9	259.2	268.0	280.0	293.9	310.5	327.7	346.2	365.9	387.2
147.5°	262.5	263.0	268.5	277.5	287.5	300.0	315.6	330.6	346.8	363.6	381.7
150°	269.6	270.2	275.1	282.7	292.0	304.1	318.1	332.2	346.8	362.1	378.1
152.5°	275.8	275.9	281.0	288.0	296.6	307.7	320.2	333.1	345.8	359.5	374.0
155°	284.9	285.6	289.4	295.8	302.8	312.3	323.2	334.0	344.2	355.7	367.9
157.5°	294.0	294.0	297.6	302.6	308.7	316.2	325.4	334.0	342.6	351.8	361.6
160°	299.6	299.6	302.1	306.6	311.8	318.8	326.4	334.0	341.0	348.7	357.0
162.5°	304.8	304.2	306.2	310.2	314.8	320.2	327.4	334.0	339.6	345.7	352.9
165°	310.5	310.5	311.8	315.0	318.1	322.0	327.7	332.8	336.6	341.0	346.2
167.5°	316.2	315.6	316.2	318.6	320.4	323.3	327.6	331.3	333.5	336.5	340.1
170°	318.8	318.1	318.8	320.7	322.0	323.8	327.0	330.2	331.5	333.4	336.0
172.5°	321.3	320.7	320.8	322.2	322.9	324.3	326.5	329.2	329.5	330.4	332.4
175°	323.8	323.2	323.2	323.8	324.5	324.5	325.8	327.7	327.0	327.0	328.3
177.5°	325.0	324.5	324.0	324.5	324.5	324.5	325.0	326.0	325.0	325.0	325.5
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	82.9	87.2	91.4	94.0	95.4	96.8	97.8	99.1
90°	82.4	87.2	91.9	94.5	96.3	98.1	98.6	99.6
92.5°	192.9	165.9	150.7	140.5	134.0	131.8	130.7	131.8
95°	535.2	440.2	358.6	299.3	269.3	250.8	240.6	233.6
97.5°	756.6	723.6	664.9	600.8	556.3	519.1	501.2	489.1
100°	824.7	841.2	813.8	769.0	714.5	676.6	658.5	654.4
102.5°	818.3	885.3	898.0	880.8	847.8	820.8	801.7	798.7
105°	763.0	876.8	943.4	971.8	974.2	970.3	962.5	959.8
107.5°	686.3	807.2	899.5	958.6	991.2	1006.7	1014.2	1016.8
110°	640.0	753.5	849.2	921.5	967.9	995.8	1008.4	1015.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	605.1	705.7	796.2	868.5	921.0	954.5	971.7	982.1
115°	569.0	650.5	728.1	791.4	842.8	882.0	903.4	909.5
117.5°	549.0	616.9	678.4	732.4	776.4	809.7	831.5	836.6
120°	539.1	601.2	655.0	702.3	739.7	768.9	786.6	794.8
122.5°	530.4	590.5	639.8	681.3	713.1	738.1	753.1	761.1
125°	516.6	574.1	620.7	657.5	683.9	703.2	716.2	720.9
127.5°	499.7	554.6	601.0	636.1	662.7	680.0	691.2	696.0
130°	487.0	539.9	585.8	621.3	648.2	665.0	676.0	680.7
132.5°	474.0	523.7	568.5	603.9	630.4	649.2	659.7	664.4
135°	455.2	498.9	540.1	573.5	599.8	618.5	629.6	634.2
137.5°	438.5	475.6	510.5	540.6	565.2	583.5	592.6	597.9
140°	428.8	460.6	491.2	519.3	542.3	557.0	566.6	572.4
142.5°	420.3	448.3	474.5	498.8	519.1	532.7	541.2	545.4
145°	408.4	431.0	450.9	469.4	486.0	497.3	504.3	508.1
147.5°	398.7	416.0	431.4	445.7	457.9	467.7	473.0	474.5
150°	393.3	408.0	420.8	432.2	442.5	450.7	454.5	455.2
152.5°	387.8	400.3	412.1	421.5	430.2	436.9	439.2	439.9
155°	379.3	389.6	399.1	406.8	413.1	418.2	420.1	420.1
157.5°	370.2	378.8	386.9	393.0	397.8	401.6	402.8	402.8
160°	364.7	371.7	378.7	383.8	387.6	391.4	392.1	392.1
162.5°	359.1	365.0	370.6	375.1	377.9	381.7	382.4	381.9
165°	351.2	355.1	359.5	362.7	365.3	367.9	367.2	366.6
167.5°	343.7	346.7	350.3	352.1	353.4	355.1	355.0	354.4
170°	339.2	341.0	343.6	345.5	346.8	347.4	346.8	346.8
172.5°	335.1	336.5	338.0	339.4	340.1	340.8	340.1	339.2
175°	329.6	330.2	331.5	331.5	331.5	332.8	331.5	330.2
177.5°	326.0	326.5	326.5	327.0	326.5	327.0	326.0	325.0
180°	324.5	324.5	324.5	324.5	324.5	324.5	324.5	324.5

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