

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: P332552-927

Luminaire Tested: **SA4XXDIP-C575D590U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332552-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C575D590U927-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3648.4 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

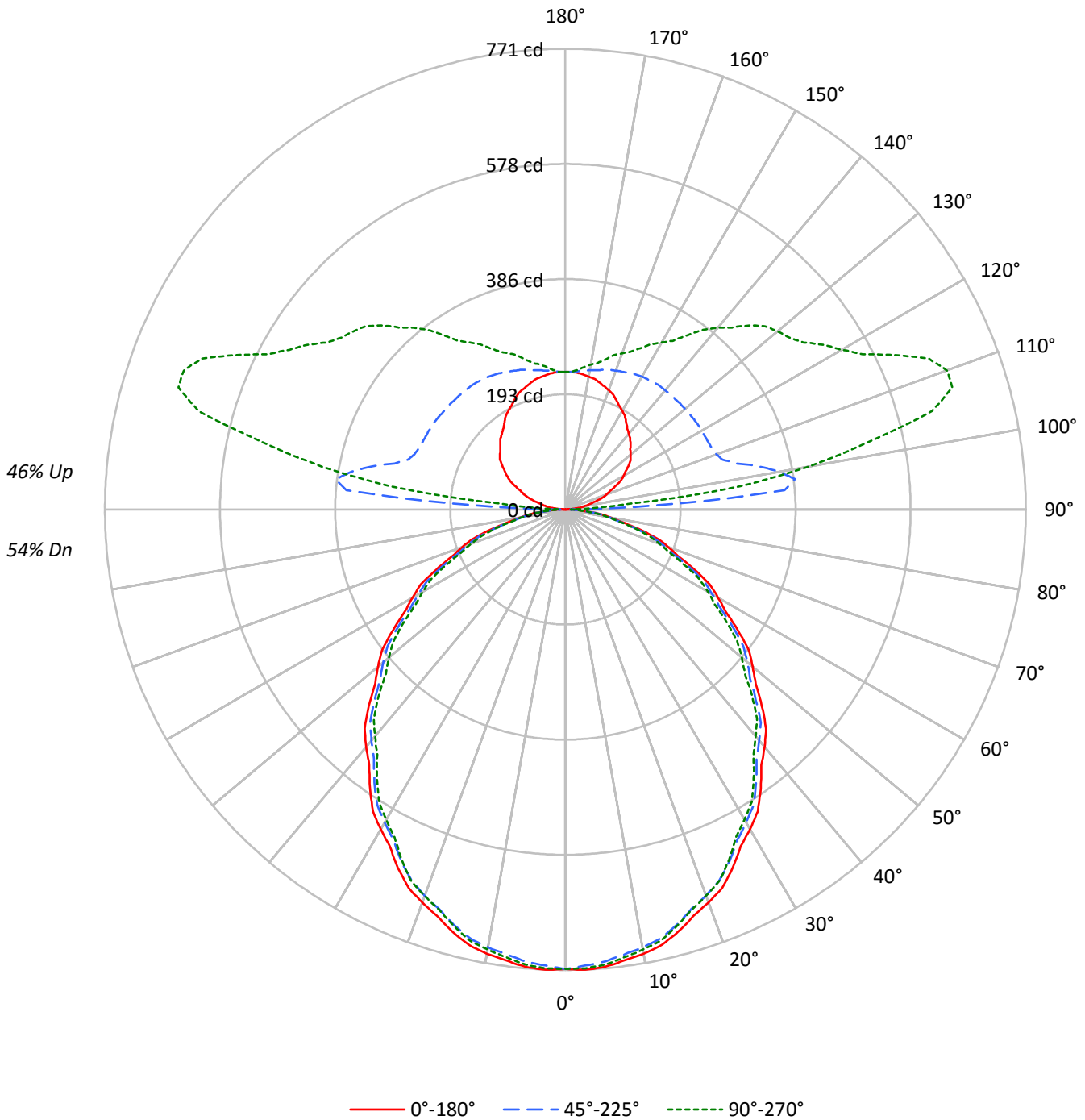
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P332552-927

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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	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54				54
1	99	94	90	87	91	88	84	81	75	73	70	64	62	60	53	52	51	46				46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	50	47	44	43	38				38
3	82	72	65	59	76	67	61	56	58	53	49	49	46	42	41	39	36	32				32
4	75	64	56	50	69	60	53	47	52	46	42	44	40	36	37	34	31	28				28
5	69	57	49	43	64	53	46	41	46	40	36	39	35	32	33	30	27	24				24
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	30	27	24	21				21
7	59	46	38	33	54	43	36	31	38	32	28	32	28	24	28	24	21	19				19
8	54	42	34	29	50	39	32	27	34	29	25	30	25	22	25	22	19	17				17
9	51	38	31	26	47	36	29	25	32	26	22	27	23	20	23	20	17	15				15
10	47	35	28	23	44	33	27	22	29	24	20	25	21	18	22	18	16	14				14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6211	6211	6211
5°	6229	6155	6199
10°	6190	6105	6135
15°	6115	6018	6033
20°	6016	5910	5916
25°	5903	5787	5770
30°	5764	5643	5591
35°	5619	5492	5419
40°	5469	5321	5223
45°	5313	5151	5053
50°	5141	5001	4847
55°	4954	4807	4650
60°	4766	4589	4448
65°	4556	4380	4204
70°	4322	4102	3944
75°	3961	3768	3671
80°	3524	3380	3296
85°	3084	2973	2908



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.5	2.0
10°-20°	204.1	5.6
20°-30°	300.5	8.2
30°-40°	349.3	9.6
40°-50°	349.3	9.6
50°-60°	305.5	8.4
60°-70°	226.9	6.2
70°-80°	128.9	3.5
80°-90°	38.5	1.1
90°-100°	166.1	4.6
100°-110°	345.8	9.5
110°-120°	309.7	8.5
120°-130°	260.5	7.1
130°-140°	217.2	6.0
140°-150°	166.0	4.5
150°-160°	116.6	3.2
160°-170°	68.6	1.9
170°-180°	22.3	0.6
0°-30°	577.0	15.8
0°-40°	926.3	25.4
0°-60°	1581.2	43.3
0°-90°	1975.5	54.1
90°-120°	821.6	22.5
90°-150°	1465.3	40.2
90°-180°	1673.0	45.9
0°-180°	3648.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	769	766	760	766	765	73
15°	732	729	720	723	722	206
25°	663	658	650	650	648	305
35°	570	566	557	553	550	356
45°	465	461	451	445	443	359
55°	352	350	342	334	330	315
65°	238	235	229	223	220	236
75°	127	124	121	118	118	135
85°	33	33	32	32	31	37
90°	0	4	8	9	10	3
95°	15	47	368	182	110	17
105°	53	77	296	638	636	56
115°	93	117	264	508	610	92
125°	130	154	263	432	487	115
135°	154	183	261	384	436	119
145°	178	203	259	324	356	111
155°	202	218	252	286	298	93
165°	220	227	242	256	260	62
175°	230	230	232	235	234	22
180°	230	230	230	230	230	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	771.3	771.0	770.6	770.3	770.0	769.2	768.0	766.8	765.6	764.4	765.5
5°	768.7	768.2	767.6	767.1	766.5	765.5	764.0	762.5	761.0	759.5	761.0
7.5°	761.5	761.0	760.5	759.9	759.4	758.3	756.6	754.9	753.2	751.5	752.8
10°	755.1	754.6	754.1	753.5	753.0	751.8	750.0	748.2	746.5	744.7	745.8
12.5°	746.8	746.2	745.7	745.1	744.6	743.4	741.5	739.6	737.7	735.8	737.0
15°	731.7	731.2	730.6	730.1	729.5	728.3	726.2	724.1	722.1	720.0	720.8
17.5°	713.6	712.9	712.3	711.5	710.8	709.6	707.6	705.7	703.7	701.8	702.3
20°	700.3	699.6	698.9	698.2	697.5	696.2	694.1	692.1	690.0	687.9	688.3
22.5°	686.0	685.1	684.2	683.3	682.4	680.9	678.8	676.8	674.7	672.6	673.4
25°	662.7	661.7	660.8	659.8	658.9	657.4	655.5	653.6	651.6	649.7	649.9
27.5°	636.0	635.1	634.1	633.1	632.1	630.7	628.9	627.2	625.3	623.6	623.3
30°	618.3	617.2	616.1	615.0	613.9	612.4	610.7	608.9	607.1	605.4	604.8
32.5°	599.5	598.6	597.5	596.6	595.6	594.1	592.3	590.4	588.5	586.6	586.0
35°	570.2	569.3	568.3	567.4	566.4	564.9	563.0	561.1	559.2	557.3	556.3
37.5°	539.2	538.4	537.5	536.6	535.8	534.3	532.3	530.2	528.1	526.1	525.1
40°	519.0	517.9	516.8	515.8	514.7	513.1	511.0	509.0	506.9	504.9	503.5
42.5°	497.3	496.7	496.1	495.4	494.7	493.2	491.0	488.7	486.4	484.2	482.6
45°	465.4	464.5	463.5	462.6	461.6	460.0	457.8	455.6	453.4	451.2	449.7
47.5°	432.0	431.3	430.7	430.0	429.4	428.0	426.0	424.0	421.9	419.9	418.2
50°	409.3	408.8	408.2	407.7	407.1	405.9	404.0	402.0	400.1	398.2	396.3
52.5°	387.1	386.5	385.8	385.2	384.5	383.2	381.1	379.1	377.1	375.0	373.4
55°	352.0	351.6	351.2	350.8	350.4	349.2	347.3	345.3	343.4	341.5	339.8
57.5°	318.5	318.0	317.5	317.0	316.6	315.4	313.5	311.6	309.7	307.8	306.3
60°	295.2	294.6	293.9	293.2	292.6	291.3	289.5	287.7	286.0	284.2	283.0
62.5°	272.6	272.0	271.4	270.8	270.3	269.0	267.2	265.3	263.4	261.5	260.4
65°	238.5	237.9	237.2	236.5	235.8	234.8	233.5	232.0	230.7	229.3	227.9
67.5°	204.3	203.7	203.0	202.4	201.8	200.8	199.5	198.2	196.9	195.5	194.2
70°	183.1	182.1	181.2	180.2	179.3	178.2	177.1	176.0	174.9	173.8	172.8
72.5°	160.4	159.5	158.5	157.5	156.5	155.7	154.8	153.9	153.0	152.1	151.2
75°	127.0	126.3	125.6	124.9	124.2	123.6	122.9	122.2	121.5	120.8	120.3
77.5°	95.1	94.7	94.4	94.2	93.9	93.4	92.8	92.2	91.6	91.0	90.8
80°	75.8	75.4	75.0	74.6	74.1	73.8	73.6	73.3	73.0	72.7	72.5
82.5°	57.1	56.9	56.7	56.5	56.3	56.2	56.2	56.1	56.0	56.0	55.8
85°	33.3	33.3	33.3	33.3	33.3	33.1	32.9	32.6	32.3	32.1	32.1
87.5°	12.9	13.0	13.2	13.2	13.1	13.0	13.5	13.3	13.4	13.5	13.4
90°	0.5	1.3	2.7	3.2	3.6	3.6	6.3	6.3	7.2	8.2	7.7
92.5°	5.1	7.5	11.7	17.3	23.8	33.3	56.2	91.3	125.5	143.3	119.4
95°	14.9	16.2	20.8	26.7	37.5	56.5	95.8	169.9	277.9	368.3	378.7
97.5°	26.8	26.8	30.7	36.0	45.4	61.3	91.6	152.7	260.2	387.9	475.8
100°	34.4	34.4	37.5	42.9	51.5	66.0	92.6	143.7	235.9	363.3	479.0
102.5°	41.6	42.3	45.1	50.1	58.4	72.1	96.3	141.2	219.6	332.6	451.9
105°	52.8	54.3	56.5	61.9	70.0	83.2	104.8	142.4	205.7	296.4	402.7
107.5°	65.4	66.2	68.5	74.3	82.1	95.0	114.9	149.0	203.1	276.2	362.9
110°	73.7	74.5	76.8	82.2	90.4	102.6	122.5	154.1	203.8	269.3	343.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	81.6	82.5	85.2	90.2	98.3	110.5	129.7	159.5	206.0	266.1	331.8
115°	93.1	94.4	97.6	102.1	110.7	122.9	141.0	168.1	210.2	264.4	321.3
117.5°	105.0	106.3	109.1	114.1	122.1	134.8	151.9	176.9	214.5	263.9	316.6
120°	113.0	113.9	117.0	122.0	129.7	142.4	159.5	183.0	217.9	263.9	314.1
122.5°	120.2	121.1	124.3	128.9	137.3	149.6	166.8	188.8	221.1	263.6	311.2
125°	129.7	131.5	134.2	139.2	147.7	160.4	176.7	197.5	225.9	263.0	306.4
127.5°	138.1	139.6	142.8	148.5	157.4	170.2	185.9	205.0	229.8	262.0	300.0
130°	142.8	144.6	148.2	155.0	163.6	176.7	192.0	209.7	232.7	261.7	296.0
132.5°	147.5	148.9	153.7	160.1	169.4	181.7	197.1	214.4	235.3	261.3	292.4
135°	154.1	155.9	160.4	168.1	177.6	189.3	204.2	220.5	239.1	260.7	286.9
137.5°	160.7	162.4	167.4	174.7	184.6	195.7	209.7	224.9	241.3	260.6	282.3
140°	165.4	166.8	171.7	179.4	188.9	199.7	213.3	227.8	243.1	260.3	279.7
142.5°	170.5	171.8	176.4	183.7	192.9	203.4	216.6	229.9	244.5	260.3	277.6
145°	177.6	179.0	183.5	189.8	198.4	208.3	220.1	232.3	245.4	259.4	273.9
147.5°	185.6	186.1	190.0	196.5	203.7	212.7	223.7	234.3	245.8	257.8	270.5
150°	190.7	191.2	194.8	200.2	207.0	215.6	225.5	235.4	245.8	256.7	268.0
152.5°	195.4	195.5	199.1	204.1	210.2	218.1	227.0	236.1	245.1	254.8	265.1
155°	202.0	202.5	205.2	209.7	214.7	221.4	229.1	236.8	244.0	252.2	260.7
157.5°	208.4	208.4	211.0	214.4	218.8	224.1	230.7	236.8	242.9	249.4	256.4
160°	212.4	212.4	214.2	217.4	220.9	225.9	231.4	236.8	241.8	247.2	253.1
162.5°	216.0	215.6	217.1	219.9	223.2	227.0	232.1	236.8	240.7	245.0	250.2
165°	220.1	220.1	220.9	223.2	225.5	228.2	232.3	235.9	238.6	241.8	245.4
167.5°	224.1	223.7	224.1	225.9	227.1	229.2	232.2	234.8	236.5	238.5	241.1
170°	225.9	225.5	225.9	227.3	228.2	229.6	231.8	234.1	235.0	236.3	238.1
172.5°	227.8	227.3	227.4	228.4	228.9	229.9	231.5	233.4	233.5	234.2	235.6
175°	229.6	229.1	229.1	229.6	230.0	230.0	230.9	232.3	231.8	231.8	232.7
177.5°	230.4	230.0	229.7	230.0	230.0	230.0	230.4	231.1	230.4	230.4	230.8
180°	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	766.6	767.7	768.8	769.3	769.1	769.1	769.0	768.8
5°	762.5	764.0	765.5	766.1	765.8	765.6	765.2	765.0
7.5°	754.0	755.2	756.4	756.9	756.8	756.6	756.5	756.2
10°	746.9	748.0	749.1	749.5	749.2	748.9	748.6	748.4
12.5°	738.2	739.4	740.6	741.0	740.6	740.2	739.9	739.5
15°	721.7	722.5	723.3	723.5	723.1	722.7	722.2	721.8
17.5°	702.8	703.3	703.9	703.9	703.7	703.4	703.1	702.9
20°	688.8	689.2	689.6	689.7	689.4	689.1	688.9	688.6
22.5°	674.1	674.9	675.7	675.7	675.3	674.8	674.3	673.8
25°	650.0	650.1	650.3	650.1	649.5	649.0	648.4	647.8
27.5°	623.0	622.6	622.3	621.8	621.1	620.4	619.7	619.0
30°	604.3	603.7	603.2	602.5	601.8	601.2	600.5	599.8
32.5°	585.3	584.6	584.0	583.3	582.7	581.9	581.2	580.6
35°	555.3	554.4	553.4	552.6	551.9	551.2	550.6	549.9
37.5°	524.0	522.9	521.9	520.9	520.1	519.1	518.2	517.3
40°	502.2	500.7	499.4	498.4	497.6	497.0	496.3	495.6
42.5°	481.0	479.3	477.8	476.7	476.3	475.9	475.4	474.9
45°	448.2	446.7	445.2	444.3	443.9	443.5	443.0	442.6
47.5°	416.5	414.8	413.1	411.8	410.7	409.6	408.6	407.6
50°	394.3	392.4	390.5	389.2	388.3	387.5	386.7	385.9
52.5°	371.6	369.9	368.3	366.9	365.8	364.8	363.8	362.7
55°	338.3	336.6	334.9	333.7	332.9	332.1	331.2	330.4
57.5°	304.8	303.2	301.6	300.4	299.6	298.8	298.0	297.2
60°	281.7	280.5	279.2	278.3	277.6	276.9	276.2	275.5
62.5°	259.3	258.1	257.0	256.1	255.4	254.8	254.1	253.3
65°	226.6	225.2	223.9	222.8	222.1	221.4	220.8	220.1
67.5°	192.9	191.6	190.3	189.5	189.3	189.2	188.9	188.8
70°	171.7	170.6	169.4	168.7	168.3	167.9	167.5	167.1
72.5°	150.4	149.5	148.6	148.0	147.6	147.2	146.8	146.3
75°	119.7	119.1	118.7	118.3	118.1	118.0	117.9	117.7
77.5°	90.6	90.5	90.3	90.1	89.7	89.4	89.0	88.6
80°	72.2	71.9	71.6	71.5	71.3	71.1	71.1	70.9
82.5°	55.6	55.5	55.3	55.1	55.1	54.9	54.7	54.6
85°	32.1	32.1	32.1	32.0	31.8	31.7	31.6	31.4
87.5°	13.5	13.5	13.6	13.6	13.7	13.9	13.7	13.7
90°	8.2	8.6	9.0	9.0	9.5	9.9	9.5	9.5
92.5°	88.7	66.8	53.2	44.1	38.7	36.4	34.8	34.8
95°	334.9	264.8	204.2	160.4	138.3	124.3	116.1	110.3
97.5°	494.7	468.7	424.5	377.3	344.9	317.7	304.1	294.7
100°	545.0	554.1	531.9	498.4	459.1	431.6	418.0	414.4
102.5°	542.5	587.3	593.7	579.8	555.6	535.7	521.4	518.5
105°	506.1	584.3	629.1	647.6	648.5	644.8	638.5	635.8
107.5°	454.6	537.7	600.8	641.0	663.4	673.7	678.2	679.4
110°	423.4	501.6	567.1	616.9	649.0	667.9	676.0	680.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	400.7	469.8	531.7	581.4	617.8	640.8	652.2	658.8
115°	377.8	433.4	486.2	529.7	565.3	592.5	606.9	610.5
117.5°	366.5	412.6	454.2	490.9	521.4	544.2	558.8	561.7
120°	361.6	403.5	439.7	471.7	497.6	517.5	529.2	534.2
122.5°	357.2	397.8	430.6	458.8	480.5	497.6	507.5	512.5
125°	349.7	388.6	419.8	444.7	462.7	475.9	484.4	487.1
127.5°	340.7	377.9	409.0	432.5	450.8	462.4	469.6	472.3
130°	333.5	369.2	399.9	423.9	442.4	453.7	461.0	463.7
132.5°	325.9	359.4	389.4	413.4	431.6	444.3	451.1	453.9
135°	315.4	344.8	372.3	395.0	413.0	425.7	432.9	435.6
137.5°	305.9	330.8	354.0	374.5	391.3	403.9	409.8	413.0
140°	300.5	321.8	342.1	361.1	376.9	386.8	393.2	396.8
142.5°	295.5	314.2	331.6	348.1	362.0	371.3	376.9	379.4
145°	288.3	303.6	317.3	329.9	341.2	348.9	353.4	355.6
147.5°	282.4	294.6	305.5	315.4	323.8	330.3	333.7	334.6
150°	278.8	289.2	298.3	306.4	313.6	319.5	322.2	322.7
152.5°	274.8	283.8	292.1	298.8	304.9	309.7	311.3	311.8
155°	268.9	276.1	282.9	288.3	292.9	296.4	297.8	297.8
157.5°	262.4	268.5	274.2	278.5	282.0	284.7	285.5	285.5
160°	258.5	263.5	268.4	272.0	274.7	277.5	277.9	277.9
162.5°	254.5	258.7	262.6	265.9	267.9	270.6	271.1	270.7
165°	249.0	251.7	254.8	257.1	259.0	260.7	260.3	259.8
167.5°	243.7	245.7	248.3	249.6	250.6	251.7	251.6	251.3
170°	240.4	241.8	243.6	244.9	245.8	246.3	245.8	245.8
172.5°	237.5	238.5	239.6	240.6	241.1	241.6	241.1	240.4
175°	233.6	234.1	235.0	235.0	235.0	235.9	235.0	234.1
177.5°	231.1	231.5	231.5	231.8	231.5	231.8	231.1	230.4
180°	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0

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