

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: P332549-940

Luminaire Tested: **SA4XXDIP-C575D590U940-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332549-940
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-C575D590U940-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3996.8 lumens
Efficiency: N/A
Efficacy: 121.9 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

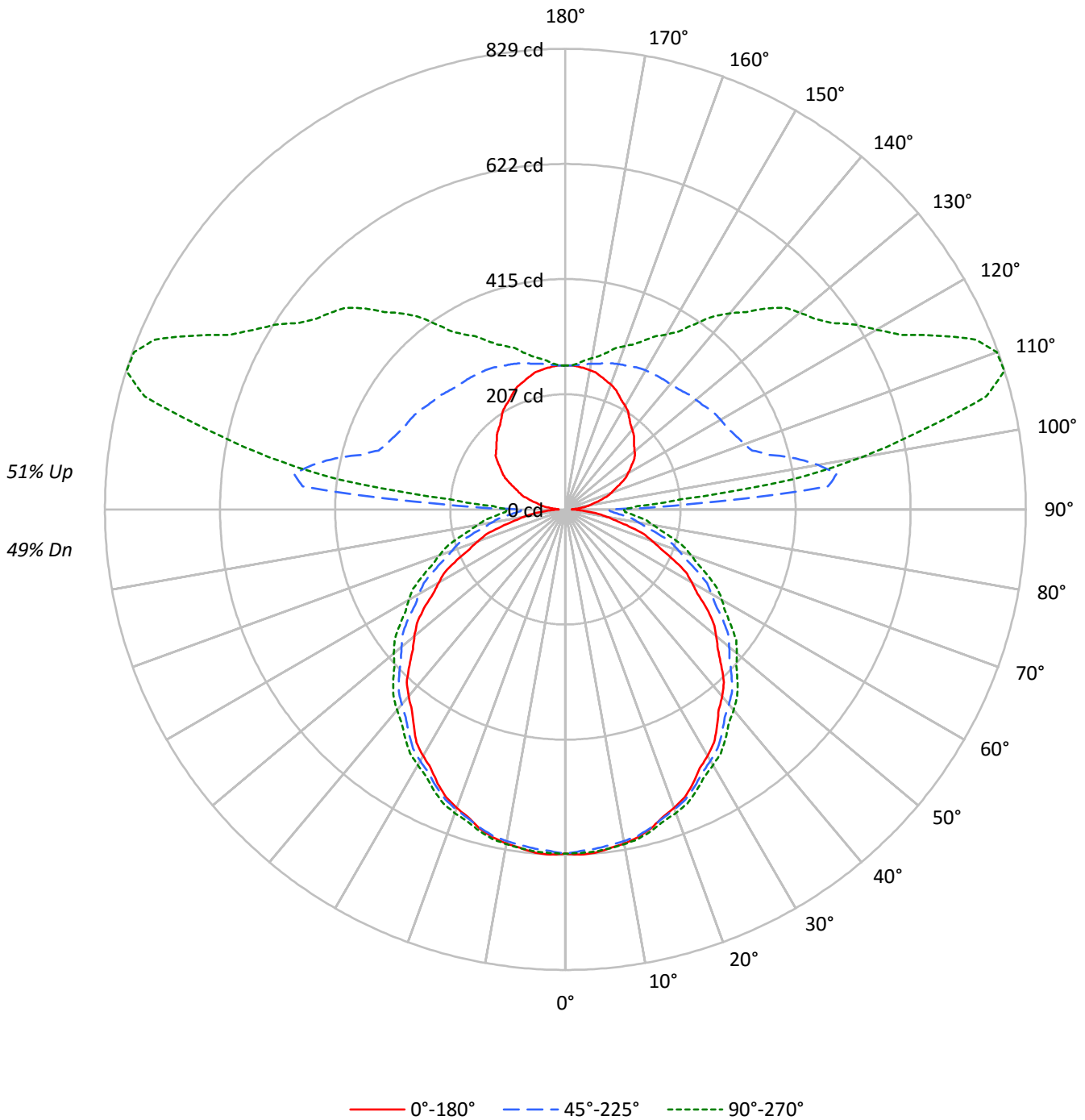
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49																												
1	97	92	88	84	89	85	81	78	71	68	66	59	57	55	47	46	45	39																												
2	87	80	73	68	80	73	68	63	62	57	54	51	48	45	41	39	37	32																												
3	80	70	62	56	73	64	57	52	54	49	45	45	41	38	36	33	31	27																												
4	73	61	53	47	66	57	49	44	48	42	38	40	35	32	32	29	26	22																												
5	67	54	46	40	61	50	43	37	43	37	32	35	31	27	29	25	23	19																												
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17																												
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	24	20	17	15																												
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13																												
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12																												
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	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	1.5
10°-20°	168.1	4.2
20°-30°	254.2	6.4
30°-40°	307.6	7.7
40°-50°	325.2	8.1
50°-60°	306.0	7.7
60°-70°	253.9	6.4
70°-80°	178.3	4.5
80°-90°	102.3	2.6
90°-100°	246.9	6.2
100°-110°	433.5	10.8
110°-120°	378.4	9.5
120°-130°	310.0	7.8
130°-140°	251.8	6.3
140°-150°	188.3	4.7
150°-160°	131.3	3.3
160°-170°	77.2	1.9
170°-180°	25.1	0.6
0°-30°	481.0	12.0
0°-40°	788.6	19.7
0°-60°	1419.8	35.5
0°-90°	1954.3	48.9
90°-120°	1058.8	26.5
90°-150°	1808.8	45.3
90°-180°	2043.0	51.1
0°-180°	3996.8	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	43	78	98	105	8
95°	26	85	475	284	210	26
105°	66	107	380	781	784	70
115°	109	143	330	619	740	108
125°	149	177	316	519	585	133
135°	175	208	300	449	512	135
145°	201	229	292	368	407	126
155°	227	245	284	321	335	105
165°	248	255	272	288	292	70
175°	258	259	261	264	264	25
180°	259	259	259	259	259	



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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°	20.6	27.1	33.7	40.1	46.5	53.1	60.4	67.1	74.1	81.1	85.4
90°	11.6	18.8	26.5	33.2	39.9	46.3	55.9	62.6	70.2	77.8	81.9
92.5°	16.3	24.5	34.9	46.6	59.6	76.2	108.8	154.9	199.9	226.7	204.1
95°	25.8	32.5	42.6	54.3	71.6	98.6	149.3	239.0	366.8	474.9	490.8
97.5°	38.3	42.7	51.5	61.9	76.8	100.0	140.4	215.4	342.6	492.7	595.7
100°	46.3	50.3	57.9	67.9	81.7	102.9	138.9	202.5	312.3	461.7	596.1
102.5°	54.4	58.8	65.5	74.6	87.4	107.5	140.6	197.1	291.3	424.4	562.7
105°	65.7	70.4	76.0	85.2	97.5	116.5	146.7	194.7	271.5	379.5	502.9
107.5°	79.6	83.2	88.3	97.3	108.6	127.1	154.9	198.8	265.0	352.7	454.1
110°	88.5	91.7	96.3	104.6	115.9	133.4	161.2	202.2	263.6	342.7	429.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	96.8	99.8	104.7	112.3	123.3	140.6	167.3	206.1	263.5	336.3	413.7
115°	109.0	111.8	116.8	123.3	134.4	151.2	176.6	212.0	264.2	330.2	397.7
117.5°	122.3	124.5	128.5	134.9	144.8	161.8	185.7	218.4	265.4	325.5	388.1
120°	130.6	132.2	136.2	142.2	151.3	168.0	191.8	222.7	266.4	322.7	382.3
122.5°	138.8	139.9	143.6	148.8	158.4	174.3	198.0	226.9	267.5	319.6	376.2
125°	148.7	150.6	153.6	159.0	168.5	184.6	206.8	234.0	269.9	315.5	367.2
127.5°	158.1	159.5	163.1	169.3	179.2	195.0	215.6	240.0	271.0	310.2	355.7
130°	162.8	164.7	168.6	176.1	185.6	201.5	221.2	243.6	272.0	307.0	348.5
132.5°	168.1	169.6	174.7	181.8	192.1	207.0	226.2	247.6	273.1	304.4	342.1
135°	174.9	176.9	182.0	190.6	201.3	215.1	232.9	252.4	274.3	299.8	331.7
137.5°	182.3	184.0	189.5	197.6	208.5	221.3	237.5	255.1	274.2	296.5	323.1
140°	187.5	189.0	194.4	202.9	213.4	225.6	241.0	257.4	274.9	294.4	318.3
142.5°	192.7	194.2	199.4	207.6	217.8	229.5	244.3	259.3	275.6	293.3	314.5
145°	200.6	202.0	206.9	213.8	223.4	234.5	247.7	261.4	276.3	291.9	309.2
147.5°	209.6	210.0	214.4	221.5	229.3	239.4	251.8	263.8	276.7	290.2	304.6
150°	215.3	215.7	219.6	225.6	233.1	242.6	253.9	265.0	276.7	288.9	301.7
152.5°	220.1	220.2	224.2	229.9	236.7	245.5	255.5	265.8	275.9	286.9	298.4
155°	227.4	227.9	231.0	236.0	241.7	249.2	257.9	266.5	274.6	283.8	293.5
157.5°	234.6	234.6	237.5	241.4	246.3	252.3	259.7	266.5	273.4	280.7	288.6
160°	239.1	239.1	241.1	244.7	248.7	254.3	260.5	266.5	272.2	278.2	284.9
162.5°	243.2	242.7	244.3	247.5	251.2	255.6	261.3	266.5	270.9	275.8	281.6
165°	247.7	247.7	248.7	251.3	253.9	256.9	261.4	265.6	268.6	272.2	276.3
167.5°	252.3	251.8	252.3	254.2	255.7	258.0	261.4	264.3	266.2	268.5	271.3
170°	254.3	253.9	254.3	255.8	256.9	258.4	260.9	263.5	264.5	266.0	268.0
172.5°	256.4	255.8	255.9	257.1	257.7	258.8	260.6	262.7	262.9	263.6	265.2
175°	258.4	257.9	257.9	258.4	259.0	259.0	259.9	261.4	260.9	260.9	262.0
177.5°	259.3	259.0	258.5	259.0	259.0	259.0	259.3	260.1	259.3	259.3	259.8
180°	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0



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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°	90.0	94.6	99.2	102.1	103.5	105.0	106.3	107.6
90°	86.8	91.8	96.8	99.6	101.4	103.1	103.8	105.0
92.5°	174.0	153.6	142.6	135.2	130.5	128.9	128.4	129.7
95°	445.6	371.0	306.9	260.4	236.8	222.5	214.7	209.5
97.5°	621.1	595.8	550.1	499.6	464.5	435.2	421.2	412.0
100°	674.5	688.8	668.1	633.1	589.9	560.0	545.8	542.8
102.5°	668.7	723.2	734.4	721.4	695.4	674.1	659.2	657.2
105°	623.2	715.1	769.3	792.7	795.0	792.1	786.2	784.4
107.5°	561.0	658.4	733.2	781.0	807.3	819.9	826.2	828.6
110°	523.3	614.8	692.1	750.5	787.8	810.4	820.8	826.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	494.6	575.9	649.0	707.2	749.5	776.6	790.6	799.2
115°	464.7	530.6	593.5	644.6	685.8	717.5	734.8	739.9
117.5°	447.5	502.5	552.5	596.1	631.6	658.5	676.2	680.6
120°	438.8	489.2	533.0	571.2	601.5	625.1	639.5	646.4
122.5°	431.1	479.9	520.0	553.8	579.3	599.6	611.9	618.6
125°	419.0	465.7	503.7	533.6	554.9	570.6	581.1	585.1
127.5°	404.4	449.0	486.7	515.1	536.7	550.8	560.1	564.2
130°	393.4	436.4	473.8	502.6	524.3	538.0	547.1	551.1
132.5°	382.5	422.8	459.2	488.0	509.3	524.7	533.3	537.3
135°	366.2	401.8	435.2	462.4	483.7	498.8	507.9	511.8
137.5°	352.0	382.2	410.5	435.1	454.9	469.7	477.2	481.6
140°	343.7	369.6	394.5	417.2	435.8	447.7	455.7	460.5
142.5°	336.4	359.2	380.6	400.3	416.7	427.8	434.7	438.2
145°	326.4	344.6	360.8	375.8	389.1	398.4	404.1	407.2
147.5°	318.2	332.0	344.4	355.9	365.7	373.6	378.0	379.4
150°	313.9	325.6	335.7	344.9	353.0	359.6	362.7	363.2
152.5°	309.3	319.4	328.8	336.4	343.2	348.7	350.4	351.0
155°	302.6	310.8	318.4	324.5	329.7	333.7	335.2	335.2
157.5°	295.4	302.3	308.6	313.5	317.4	320.5	321.4	321.4
160°	291.0	296.6	302.1	306.2	309.2	312.4	312.8	312.8
162.5°	286.5	291.2	295.6	299.3	301.6	304.6	305.1	304.7
165°	280.3	283.3	286.9	289.4	291.5	293.5	293.0	292.5
167.5°	274.3	276.6	279.5	281.0	282.0	283.3	283.2	282.9
170°	270.6	272.2	274.2	275.7	276.7	277.2	276.7	276.7
172.5°	267.3	268.5	269.7	270.8	271.4	272.0	271.4	270.6
175°	263.0	263.5	264.5	264.5	264.5	265.6	264.5	263.5
177.5°	260.1	260.6	260.6	260.9	260.6	260.9	260.1	259.3
180°	259.0	259.0	259.0	259.0	259.0	259.0	259.0	259.0

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