

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: P332549-830

Luminaire Tested: **S124DIP-S575D590U830-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332549-830
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-S575D590U830-4F0-1E-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: 4224.6 lumens
Efficiency: N/A
Efficacy: 128.8 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

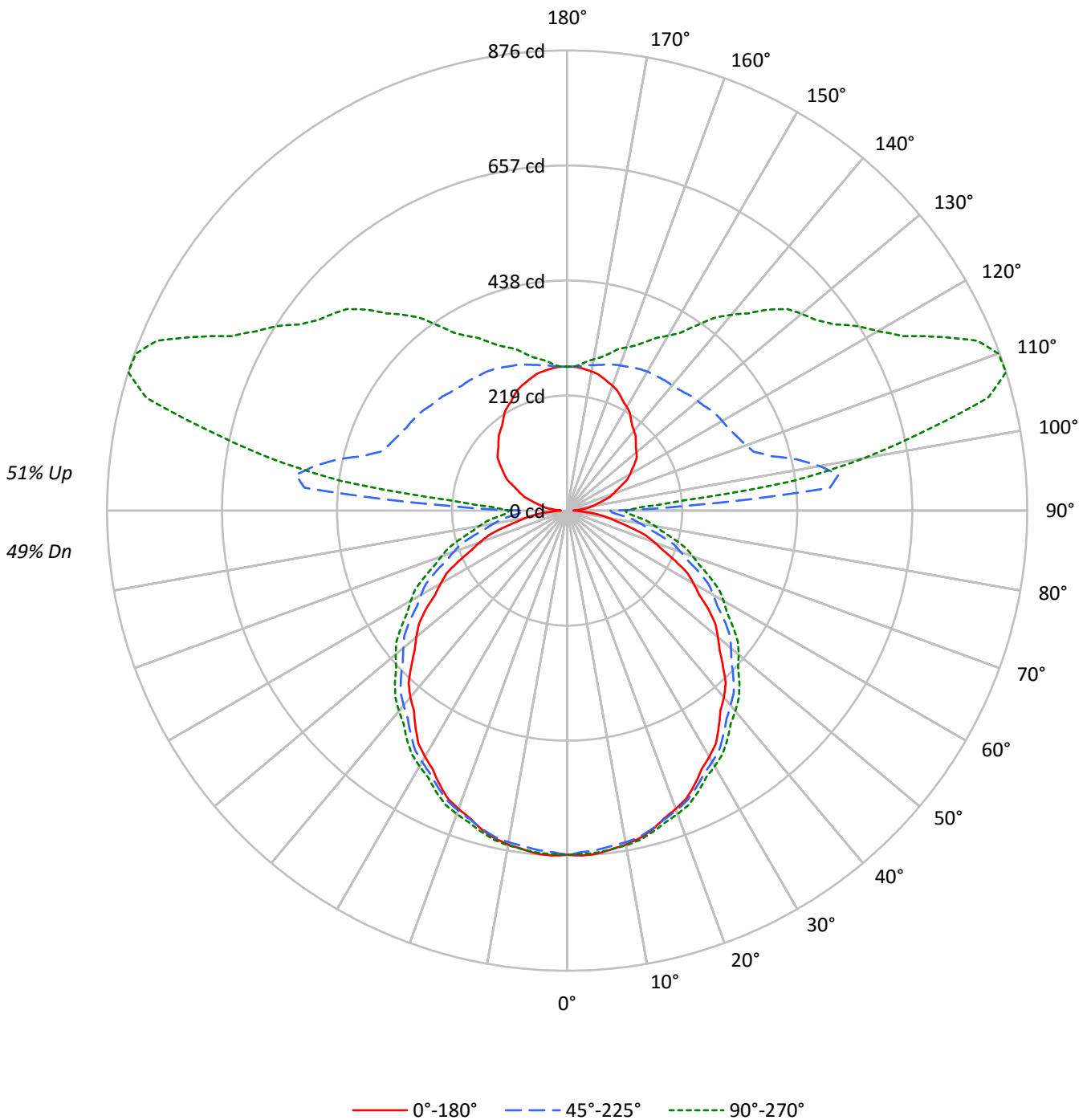
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	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	1.5
10°-20°	177.7	4.2
20°-30°	268.7	6.4
30°-40°	325.1	7.7
40°-50°	343.7	8.1
50°-60°	323.5	7.7
60°-70°	268.4	6.4
70°-80°	188.5	4.5
80°-90°	108.1	2.6
90°-100°	261.0	6.2
100°-110°	458.2	10.8
110°-120°	399.9	9.5
120°-130°	327.7	7.8
130°-140°	266.1	6.3
140°-150°	199.0	4.7
150°-160°	138.8	3.3
160°-170°	81.6	1.9
170°-180°	26.6	0.6
0°-30°	508.4	12.0
0°-40°	833.5	19.7
0°-60°	1500.7	35.5
0°-90°	2065.7	48.9
90°-120°	1119.1	26.5
90°-150°	1911.9	45.3
90°-180°	2159.0	51.1
0°-180°	4224.6	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°	12	46	82	104	111	9
95°	27	90	502	300	221	27
105°	70	113	401	826	829	75
115°	115	151	349	654	782	114
125°	157	187	334	548	618	140
135°	185	220	317	474	541	143
145°	212	242	309	389	430	133
155°	240	259	300	340	354	111
165°	262	270	288	305	309	74
175°	273	274	276	280	278	26
180°	274	274	274	274	274	



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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°	21.8	28.7	35.6	42.4	49.2	56.1	63.8	71.0	78.3	85.7	90.3
90°	12.3	19.9	28.0	35.1	42.1	48.9	59.1	66.2	74.2	82.3	86.5
92.5°	17.2	25.9	36.9	49.3	63.0	80.6	115.0	163.7	211.3	239.6	215.7
95°	27.2	34.3	45.1	57.4	75.7	104.2	157.8	252.6	387.8	502.0	518.8
97.5°	40.5	45.1	54.4	65.4	81.2	105.7	148.4	227.7	362.1	520.8	629.6
100°	48.9	53.2	61.2	71.8	86.3	108.8	146.8	214.1	330.1	488.0	630.1
102.5°	57.5	62.1	69.2	78.9	92.4	113.7	148.6	208.3	307.9	448.6	594.7
105°	69.5	74.4	80.3	90.0	103.0	123.2	155.0	205.8	287.0	401.1	531.6
107.5°	84.2	87.9	93.3	102.8	114.8	134.3	163.7	210.1	280.1	372.8	479.9
110°	93.5	96.9	101.8	110.6	122.5	141.0	170.4	213.8	278.6	362.2	453.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	102.4	105.5	110.7	118.7	130.4	148.6	176.8	217.8	278.5	355.4	437.2
115°	115.2	118.2	123.5	130.4	142.0	159.9	186.6	224.0	279.3	349.0	420.4
117.5°	129.2	131.6	135.8	142.6	153.1	171.0	196.2	230.8	280.5	344.0	410.2
120°	138.1	139.7	143.9	150.3	159.9	177.6	202.7	235.4	281.5	341.1	404.1
122.5°	146.7	147.9	151.7	157.3	167.4	184.3	209.2	239.9	282.8	337.8	397.7
125°	157.2	159.2	162.3	168.1	178.1	195.1	218.6	247.3	285.3	333.5	388.1
127.5°	167.1	168.6	172.4	179.0	189.5	206.1	227.9	253.7	286.4	327.9	376.0
130°	172.1	174.1	178.2	186.2	196.1	213.0	233.8	257.5	287.5	324.5	368.3
132.5°	177.7	179.3	184.6	192.2	203.0	218.8	239.1	261.7	288.7	321.8	361.6
135°	184.8	187.0	192.4	201.5	212.7	227.3	246.2	266.7	289.9	316.9	350.6
137.5°	192.7	194.5	200.3	208.9	220.4	233.9	251.0	269.7	289.8	313.4	341.5
140°	198.2	199.7	205.5	214.4	225.6	238.5	254.8	272.1	290.6	311.1	336.4
142.5°	203.7	205.3	210.8	219.4	230.3	242.6	258.3	274.1	291.3	310.0	332.4
145°	212.1	213.5	218.7	226.0	236.1	247.9	261.8	276.4	292.0	308.6	326.8
147.5°	221.6	222.0	226.6	234.1	242.4	253.1	266.2	278.8	292.5	306.7	322.0
150°	227.6	228.0	232.1	238.5	246.4	256.5	268.3	280.1	292.5	305.4	318.9
152.5°	232.6	232.7	237.0	243.0	250.2	259.5	270.0	281.0	291.6	303.2	315.4
155°	240.3	240.9	244.1	249.5	255.4	263.4	272.6	281.7	290.3	300.0	310.2
157.5°	248.0	248.0	251.0	255.1	260.3	266.6	274.5	281.7	289.0	296.7	305.0
160°	252.7	252.7	254.9	258.6	262.9	268.8	275.3	281.7	287.7	294.1	301.1
162.5°	257.0	256.6	258.3	261.6	265.5	270.1	276.2	281.7	286.3	291.5	297.7
165°	261.8	261.8	262.9	265.6	268.3	271.5	276.4	280.7	283.9	287.7	292.0
167.5°	266.6	266.2	266.6	268.7	270.2	272.7	276.3	279.4	281.3	283.8	286.8
170°	268.8	268.3	268.8	270.4	271.5	273.1	275.8	278.5	279.6	281.2	283.3
172.5°	271.0	270.4	270.5	271.7	272.4	273.5	275.4	277.7	277.9	278.6	280.3
175°	273.1	272.6	272.6	273.1	273.7	273.7	274.8	276.4	275.8	275.8	276.9
177.5°	274.1	273.7	273.2	273.7	273.7	273.7	274.1	274.9	274.1	274.1	274.6
180°	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7



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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°	95.1	100.0	104.8	107.9	109.4	110.9	112.4	113.8
90°	91.7	97.0	102.3	105.3	107.2	109.0	109.7	111.0
92.5°	183.9	162.3	150.7	142.9	137.9	136.3	135.7	137.0
95°	471.0	392.1	324.4	275.2	250.3	235.2	227.0	221.4
97.5°	656.5	629.7	581.5	528.1	491.0	460.0	445.3	435.5
100°	712.9	728.1	706.2	669.2	623.5	591.9	576.9	573.7
102.5°	706.8	764.4	776.3	762.5	735.1	712.6	696.8	694.7
105°	658.7	755.8	813.1	837.9	840.3	837.3	831.0	829.2
107.5°	593.0	696.0	775.0	825.5	853.3	866.7	873.3	875.8
110°	553.1	649.9	731.6	793.2	832.7	856.6	867.6	873.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	522.8	608.7	686.0	747.5	792.2	820.9	835.7	844.8
115°	491.2	560.8	627.4	681.4	724.9	758.4	776.7	782.1
117.5°	473.0	531.1	584.0	630.1	667.6	696.1	714.7	719.4
120°	463.8	517.1	563.4	603.8	635.7	660.7	676.0	683.2
122.5°	455.7	507.3	549.7	585.3	612.4	633.8	646.8	653.8
125°	442.9	492.2	532.4	564.0	586.5	603.1	614.3	618.5
127.5°	427.4	474.6	514.4	544.5	567.3	582.2	592.0	596.3
130°	415.8	461.3	500.8	531.2	554.2	568.6	578.2	582.5
132.5°	404.3	447.0	485.4	515.9	538.4	554.6	563.7	567.9
135°	387.1	424.7	460.1	488.7	511.2	527.3	536.9	541.0
137.5°	372.0	404.0	433.9	459.9	480.8	496.4	504.4	509.1
140°	363.3	390.7	417.0	441.0	460.6	473.3	481.6	486.7
142.5°	355.5	379.7	402.3	423.1	440.5	452.1	459.5	463.2
145°	345.0	364.3	381.4	397.2	411.3	421.1	427.2	430.5
147.5°	336.3	350.9	364.0	376.2	386.5	394.9	399.5	401.1
150°	331.8	344.1	354.9	364.6	373.2	380.1	383.3	383.9
152.5°	327.0	337.6	347.5	355.5	362.8	368.5	370.4	371.0
155°	319.9	328.5	336.6	343.0	348.5	352.7	354.3	354.3
157.5°	312.3	319.5	326.2	331.4	335.5	338.7	339.7	339.7
160°	307.6	313.5	319.3	323.7	326.9	330.2	330.6	330.6
162.5°	302.8	307.8	312.5	316.4	318.8	322.0	322.5	322.1
165°	296.2	299.4	303.2	305.9	308.1	310.2	309.7	309.2
167.5°	289.9	292.4	295.4	297.0	298.1	299.4	299.4	299.0
170°	286.1	287.7	289.8	291.4	292.5	293.0	292.5	292.5
172.5°	282.6	283.8	285.1	286.3	286.9	287.5	286.9	286.1
175°	278.0	278.5	279.6	279.6	279.6	280.7	279.6	278.5
177.5°	274.9	275.4	275.4	275.8	275.4	275.8	274.9	274.1
180°	273.7	273.7	273.7	273.7	273.7	273.7	273.7	273.7

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