

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: P331922-930

Luminaire Tested: **S123DIP-S560D585U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331922-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D585U930-4F0-1E-UDD-D
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3837.1 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

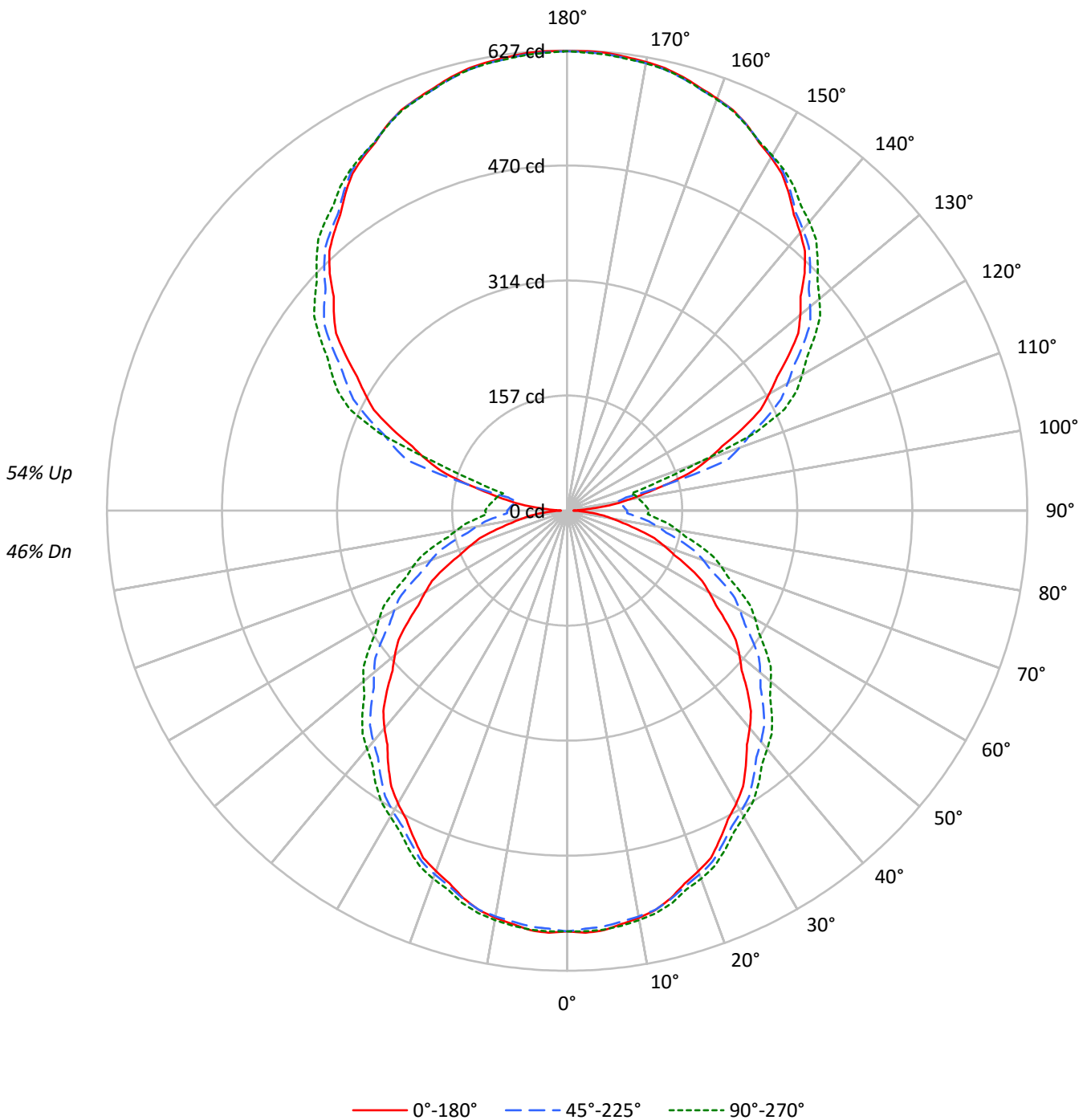
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: S123DIP-S560D585U930-4F0-1E-UDD-D

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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	46
1	96	91	87	83	88	84	80	77	70	67	65	57	55	53	45	44	42	37
2	87	79	73	67	79	73	67	62	60	56	53	49	46	44	39	37	35	30
3	79	69	62	55	72	64	57	51	53	48	44	43	40	36	34	32	29	25
4	72	61	53	47	66	56	49	43	47	41	37	38	34	31	30	27	25	21
5	66	54	46	40	60	50	43	37	42	36	32	34	30	27	27	24	22	18
6	61	48	40	34	55	45	37	32	38	32	28	31	27	23	25	21	19	16
7	56	44	36	30	51	40	33	28	34	28	24	28	24	20	22	19	17	14
8	52	40	32	26	48	37	30	25	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	27	22	28	23	19	24	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	18	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6171	6171	6171
5°	6191	6015	6019
10°	6135	5878	5848
15°	6056	5720	5660
20°	5943	5540	5454
25°	5804	5333	5238
30°	5660	5147	5019
35°	5500	4950	4844
40°	5347	4771	4656
45°	5177	4599	4506
50°	5010	4430	4341
55°	4826	4256	4193
60°	4646	4080	4040
65°	4462	3891	3859
70°	4185	3680	3673
75°	3832	3437	3484
80°	3426	3199	3268
85°	3052	3034	3143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	1.4
10°-20°	154.9	4.0
20°-30°	231.7	6.0
30°-40°	276.7	7.2
40°-50°	289.5	7.5
50°-60°	271.7	7.1
60°-70°	226.9	5.9
70°-80°	162.4	4.2
80°-90°	98.6	2.6
90°-100°	83.5	2.2
100°-110°	153.1	4.0
110°-120°	290.3	7.6
120°-130°	348.8	9.1
130°-140°	362.1	9.4
140°-150°	333.1	8.7
150°-160°	267.4	7.0
160°-170°	172.6	4.5
170°-180°	59.5	1.5
0°-30°	441.0	11.5
0°-40°	717.7	18.7
0°-60°	1279.0	33.3
0°-90°	1766.8	46.0
90°-120°	526.9	13.7
90°-150°	1570.9	40.9
90°-180°	2070.0	53.9
0°-180°	3837.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	573	573	573	573	573	
5°	574	573	569	574	573	54
15°	546	548	548	554	553	154
25°	493	499	502	509	510	227
35°	425	435	443	452	455	266
45°	347	362	378	389	395	268
55°	265	286	308	324	330	237
65°	183	208	235	253	260	181
75°	99	129	160	180	188	106
85°	31	62	95	115	122	32
90°	9	44	82	104	112	7
95°	35	42	76	98	105	40
105°	144	162	149	88	90	152
115°	263	274	300	319	326	260
125°	368	373	392	406	411	329
135°	458	460	468	480	483	352
145°	527	530	531	536	539	330
155°	580	579	579	581	579	267
165°	612	610	610	613	610	173
175°	626	624	624	627	624	60
180°	626	626	626	626	626	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	575.8	575.5	575.2	574.8	574.5	573.9	573.0	572.1	571.2	570.3	571.2
5°	574.0	573.6	573.4	573.2	572.8	572.3	571.4	570.6	569.8	568.9	570.1
7.5°	568.3	568.3	568.4	568.5	568.6	568.2	567.4	566.6	565.7	564.9	566.3
10°	563.4	563.6	563.9	564.2	564.4	564.3	563.5	562.9	562.1	561.5	562.9
12.5°	557.3	557.7	558.2	558.5	558.9	558.9	558.4	557.9	557.4	556.9	558.2
15°	546.5	546.9	547.3	547.7	548.1	548.3	548.1	548.0	547.9	547.7	549.1
17.5°	532.7	533.5	534.4	535.2	536.1	536.5	536.4	536.3	536.3	536.2	537.4
20°	522.8	523.6	524.4	525.2	526.0	526.6	526.9	527.2	527.4	527.7	529.0
22.5°	512.3	513.1	513.9	514.8	515.6	516.2	516.6	517.0	517.4	517.7	519.3
25°	493.4	494.8	496.2	497.6	499.0	499.9	500.3	500.7	501.1	501.5	503.3
27.5°	474.4	476.0	477.6	479.2	480.7	481.9	482.8	483.7	484.6	485.5	487.1
30°	460.9	462.7	464.5	466.4	468.1	469.6	470.7	471.8	472.9	474.0	475.7
32.5°	445.9	447.9	450.0	452.0	454.0	455.8	457.2	458.6	460.1	461.5	463.3
35°	424.7	426.9	429.1	431.4	433.6	435.6	437.4	439.2	441.0	442.8	444.9
37.5°	402.2	404.7	407.2	409.7	412.2	414.6	416.8	419.0	421.2	423.5	425.8
40°	387.2	389.7	392.2	394.7	397.2	399.8	402.6	405.4	408.1	410.9	413.3
42.5°	370.7	373.8	376.8	379.8	382.9	385.9	388.8	391.7	394.6	397.5	400.1
45°	347.2	350.6	353.9	357.3	360.5	363.9	367.5	370.9	374.4	377.8	380.5
47.5°	322.6	326.4	330.2	333.9	337.7	341.6	345.6	349.5	353.5	357.5	360.4
50°	306.6	310.5	314.4	318.3	322.2	326.3	330.6	334.9	339.2	343.5	346.7
52.5°	289.7	293.8	297.9	302.0	306.1	310.5	315.3	320.0	324.7	329.5	332.8
55°	264.8	269.4	273.9	278.5	283.2	287.9	292.9	297.9	302.9	307.9	311.6
57.5°	240.6	245.3	250.1	254.9	259.7	264.8	270.3	275.7	281.2	286.7	290.4
60°	223.6	228.6	233.6	238.6	243.5	248.9	254.6	260.3	266.0	271.7	275.6
62.5°	207.6	212.7	217.8	222.9	228.0	233.6	239.6	245.6	251.7	257.7	261.5
65°	183.0	188.4	193.8	199.3	204.6	210.4	216.5	222.6	228.7	234.8	239.0
67.5°	158.0	163.8	169.5	175.2	181.0	186.9	193.2	199.4	205.6	211.8	216.4
70°	140.6	146.5	152.5	158.4	164.4	170.7	177.3	184.0	190.7	197.4	201.8
72.5°	124.5	130.5	136.5	142.4	148.4	154.8	161.7	168.6	175.5	182.4	186.9
75°	99.3	105.8	112.3	118.9	125.4	132.2	139.1	146.0	153.0	159.9	164.4
77.5°	77.3	83.9	90.5	97.0	103.6	110.4	117.4	124.4	131.4	138.4	143.2
80°	61.8	68.6	75.4	82.3	89.0	96.0	103.2	110.5	117.7	124.9	129.6
82.5°	48.3	55.3	62.1	69.1	76.0	83.1	90.4	97.8	105.1	112.4	117.2
85°	30.6	37.5	44.5	51.4	58.4	65.5	72.9	80.2	87.6	94.9	99.6
87.5°	16.7	23.8	31.0	38.1	45.2	52.4	59.8	67.1	74.4	81.8	86.6
90°	8.6	16.4	24.2	32.1	39.9	48.0	56.5	64.9	73.3	81.7	86.8
92.5°	16.3	22.1	28.0	33.8	39.6	46.6	54.5	62.5	70.5	78.5	83.7
95°	35.2	36.4	37.6	38.7	39.9	44.5	52.4	60.3	68.3	76.2	81.3
97.5°	63.1	66.1	69.1	72.1	75.1	76.1	75.2	74.2	73.2	72.3	77.3
100°	84.2	90.7	97.2	103.7	110.2	108.6	98.9	89.1	79.4	69.7	74.5
102.5°	108.3	113.7	119.2	124.7	130.2	127.3	115.9	104.6	93.3	81.9	83.3
105°	143.6	148.1	152.5	156.9	161.4	162.0	158.7	155.3	152.0	148.7	134.3
107.5°	180.2	183.9	187.7	191.4	195.2	200.6	207.7	214.8	222.0	229.1	219.4
110°	204.6	208.0	211.2	214.6	217.9	222.9	229.6	236.3	243.0	249.7	249.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	228.4	231.2	234.1	236.8	239.6	244.3	250.7	257.2	263.7	270.1	273.7
115°	263.1	265.4	267.7	269.9	272.2	276.3	282.3	288.1	294.1	300.0	304.4
117.5°	297.1	298.9	300.7	302.5	304.3	307.7	312.9	318.0	323.2	328.4	332.5
120°	317.8	319.4	321.0	322.6	324.2	327.5	332.4	337.3	342.2	347.1	351.1
122.5°	339.3	340.5	341.6	342.8	343.9	346.8	351.6	356.3	361.0	365.8	369.5
125°	368.3	369.2	370.0	370.8	371.6	374.2	378.7	383.1	387.6	392.0	395.1
127.5°	397.0	397.6	398.4	399.0	399.7	401.9	405.8	409.6	413.4	417.3	420.4
130°	414.8	415.5	416.2	416.9	417.5	419.5	422.7	425.8	429.1	432.3	435.3
132.5°	431.5	432.2	433.0	433.8	434.6	436.3	438.9	441.4	443.9	446.5	449.4
135°	457.5	457.9	458.4	458.9	459.3	460.6	462.5	464.5	466.4	468.3	471.2
137.5°	479.6	480.3	480.9	481.7	482.3	483.2	484.3	485.3	486.5	487.5	490.2
140°	494.0	494.6	495.2	495.9	496.5	497.2	497.9	498.6	499.4	500.0	502.6
142.5°	507.8	508.3	508.7	509.3	509.8	510.2	510.6	511.0	511.4	511.8	514.0
145°	527.0	527.6	528.2	528.8	529.4	529.8	529.9	530.2	530.4	530.6	531.9
147.5°	544.5	545.0	545.5	545.9	546.4	546.7	547.0	547.1	547.4	547.6	548.1
150°	555.7	556.0	556.3	556.6	556.9	557.2	557.4	557.6	557.8	558.0	558.2
152.5°	565.7	565.9	566.0	566.1	566.3	566.5	566.6	566.7	566.8	567.0	567.3
155°	579.8	579.7	579.4	579.3	579.0	579.0	579.1	579.2	579.3	579.4	579.9
157.5°	590.8	590.8	590.8	590.8	590.8	590.7	590.6	590.5	590.4	590.3	590.9
160°	597.5	597.5	597.4	597.2	597.1	597.0	596.9	596.8	596.7	596.6	597.2
162.5°	603.9	603.6	603.3	603.1	602.8	602.6	602.5	602.4	602.3	602.2	602.9
165°	611.5	611.1	610.9	610.6	610.3	610.0	609.9	609.8	609.8	609.6	610.5
167.5°	617.4	617.0	616.6	616.2	615.8	615.6	615.6	615.6	615.6	615.6	616.4
170°	620.8	620.4	620.0	619.5	619.1	618.9	618.9	618.9	618.9	618.9	619.8
172.5°	623.1	622.6	622.0	621.5	621.0	620.9	620.9	621.0	621.1	621.2	622.0
175°	625.9	625.4	624.8	624.4	623.9	623.6	623.7	623.9	623.9	624.0	624.8
177.5°	626.6	626.2	625.8	625.4	625.0	624.8	624.9	625.0	625.1	625.2	625.8
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	573.3	573.3	573.3	573.3	573.3	573.3	573.3	573.3
2.5°	572.1	573.0	573.9	574.3	574.1	574.1	574.0	573.8
5°	571.2	572.3	573.4	573.9	573.7	573.6	573.5	573.3
7.5°	567.7	569.1	570.5	571.1	571.0	570.8	570.6	570.5
10°	564.3	565.7	567.0	567.5	567.3	567.0	566.7	566.5
12.5°	559.5	560.8	562.1	562.6	562.3	562.0	561.7	561.5
15°	550.5	551.9	553.3	553.9	553.8	553.6	553.5	553.3
17.5°	538.7	540.0	541.2	541.8	541.5	541.4	541.2	541.0
20°	530.3	531.5	532.7	533.5	533.5	533.7	533.9	533.9
22.5°	520.9	522.5	524.1	524.8	524.7	524.6	524.6	524.5
25°	505.1	507.0	508.7	509.6	509.6	509.6	509.6	509.6
27.5°	488.6	490.2	491.7	492.6	492.7	492.8	492.9	493.0
30°	477.4	479.0	480.7	481.5	481.5	481.5	481.5	481.5
32.5°	465.0	466.8	468.6	469.7	470.0	470.3	470.7	471.0
35°	446.9	449.1	451.1	452.4	453.0	453.6	454.1	454.7
37.5°	428.1	430.5	432.8	434.3	434.7	435.1	435.6	436.0
40°	415.6	418.0	420.4	421.8	422.4	423.0	423.5	424.0
42.5°	402.6	405.2	407.8	409.4	410.3	411.0	411.8	412.5
45°	383.1	385.7	388.4	390.3	391.3	392.5	393.6	394.7
47.5°	363.5	366.4	369.3	371.3	372.1	373.0	373.9	374.7
50°	349.8	353.1	356.3	358.3	359.3	360.3	361.3	362.2
52.5°	336.1	339.4	342.8	345.0	346.2	347.3	348.5	349.8
55°	315.4	319.1	322.9	325.3	326.4	327.5	328.6	329.8
57.5°	294.2	298.0	301.7	304.3	305.6	306.9	308.2	309.5
60°	279.5	283.3	287.2	289.9	291.5	292.9	294.5	296.0
62.5°	265.5	269.4	273.2	275.9	277.3	278.7	280.1	281.5
65°	243.1	247.3	251.5	254.3	255.7	257.1	258.4	259.8
67.5°	220.9	225.5	230.1	232.9	234.1	235.2	236.4	237.6
70°	206.3	210.7	215.2	218.0	219.4	220.8	222.2	223.6
72.5°	191.4	196.0	200.6	203.6	205.0	206.4	207.7	209.1
75°	169.0	173.7	178.2	181.3	183.0	184.7	186.3	188.0
77.5°	148.1	152.9	157.7	160.8	162.1	163.3	164.6	165.9
80°	134.4	139.1	143.8	146.8	148.2	149.6	151.0	152.4
82.5°	121.9	126.5	131.3	134.4	135.7	137.1	138.5	139.9
85°	104.4	109.1	113.8	116.8	118.2	119.6	121.0	122.4
87.5°	91.4	96.2	101.0	104.1	105.6	107.0	108.4	109.8
90°	92.0	97.1	102.2	105.7	107.2	108.8	110.4	112.0
92.5°	89.0	94.2	99.5	102.9	104.3	105.7	107.1	108.5
95°	86.3	91.3	96.4	99.5	100.9	102.3	103.7	105.1
97.5°	82.3	87.2	92.1	95.4	96.9	98.3	99.9	101.3
100°	79.4	84.2	89.1	92.3	93.8	95.2	96.7	98.2
102.5°	84.6	86.0	87.3	88.8	90.3	92.0	93.5	95.1
105°	119.8	105.5	91.1	84.5	86.0	87.5	88.9	90.4
107.5°	209.8	200.1	190.4	179.2	166.6	154.1	141.5	129.0
110°	250.1	250.3	250.5	243.8	230.1	216.4	202.8	189.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	277.3	280.8	284.4	285.2	283.3	281.4	279.5	277.6
115°	308.8	313.1	317.5	320.4	322.0	323.4	325.0	326.5
117.5°	336.6	340.8	344.9	347.6	348.7	349.8	351.1	352.2
120°	355.1	359.1	363.1	365.7	366.6	367.6	368.6	369.6
122.5°	373.1	376.7	380.4	382.8	383.8	384.9	386.0	387.0
125°	398.3	401.4	404.5	406.6	407.8	409.0	410.2	411.3
127.5°	423.4	426.5	429.6	431.5	432.2	432.9	433.7	434.5
130°	438.4	441.4	444.4	446.3	446.9	447.5	448.2	448.8
132.5°	452.4	455.3	458.3	460.1	460.7	461.4	462.0	462.7
135°	473.9	476.7	479.6	481.1	481.5	481.9	482.3	482.7
137.5°	492.9	495.6	498.3	499.9	500.3	500.8	501.3	501.8
140°	505.1	507.5	510.1	511.5	512.0	512.5	513.0	513.5
142.5°	516.2	518.4	520.6	521.9	522.3	522.7	523.1	523.5
145°	533.2	534.5	535.8	536.8	537.4	537.9	538.4	539.0
147.5°	548.7	549.2	549.8	550.0	550.1	550.1	550.1	550.2
150°	558.4	558.6	558.8	558.9	558.9	558.9	558.8	558.8
152.5°	567.7	568.0	568.4	568.4	568.0	567.5	567.1	566.7
155°	580.4	581.0	581.5	581.4	580.8	580.2	579.6	578.9
157.5°	591.5	592.2	592.8	592.6	591.8	591.1	590.3	589.5
160°	597.9	598.4	599.1	599.0	598.3	597.6	596.9	596.1
162.5°	603.6	604.3	605.0	605.0	604.4	603.7	603.1	602.5
165°	611.3	612.1	612.9	613.0	612.3	611.6	610.8	610.1
167.5°	617.3	618.1	618.9	618.9	618.1	617.3	616.4	615.6
170°	620.6	621.4	622.2	622.2	621.4	620.6	619.8	618.9
172.5°	622.8	623.6	624.4	624.4	623.5	622.6	621.7	620.8
175°	625.5	626.2	627.0	626.9	626.1	625.3	624.4	623.5
177.5°	626.5	627.1	627.8	627.7	626.9	626.1	625.3	624.4
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9

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