

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: P332129-930

Luminaire Tested: **S123DIW-S560D755U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332129-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIW-S560D755U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 755 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4063.2 lumens
Efficiency: N/A
Efficacy: 108.1 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

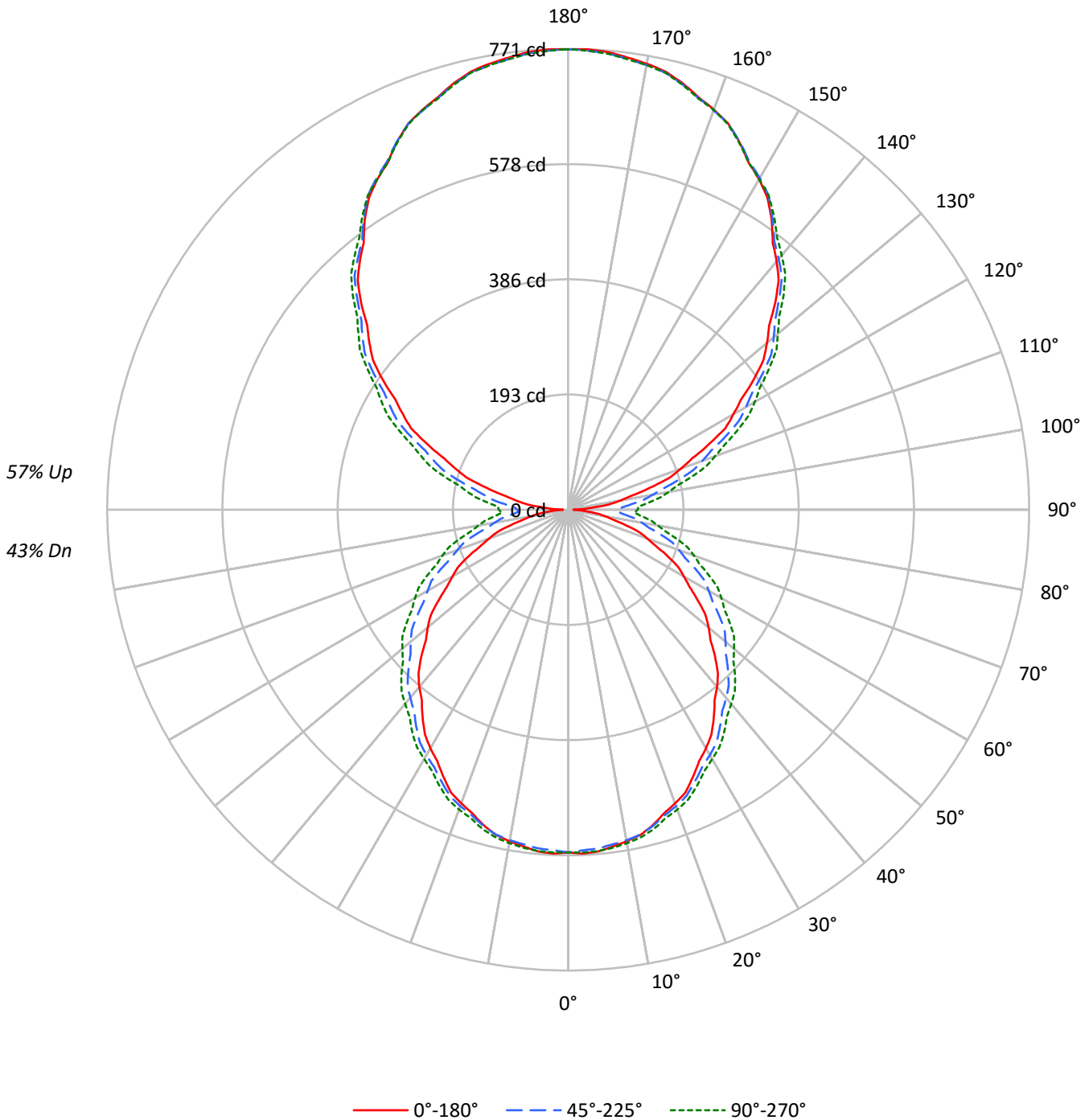
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43
1	95	91	86	83	87	83	79	76	68	66	63	55	53	52	43	42	40	35
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	60	48	40	34	55	44	37	32	37	31	27	30	26	23	24	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	32	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	26	21	41	30	24	19	26	20	17	21	17	14	17	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	1.3
10°-20°	154.9	3.8
20°-30°	231.7	5.7
30°-40°	276.7	6.8
40°-50°	289.5	7.1
50°-60°	271.7	6.7
60°-70°	226.9	5.6
70°-80°	162.4	4.0
80°-90°	99.1	2.4
90°-100°	110.9	2.7
100°-110°	194.8	4.8
110°-120°	285.3	7.0
120°-130°	353.1	8.7
130°-140°	385.3	9.5
140°-150°	372.9	9.2
150°-160°	312.6	7.7
160°-170°	208.1	5.1
170°-180°	72.9	1.8
0°-30°	441.0	10.9
0°-40°	717.7	17.7
0°-60°	1279.0	31.5
0°-90°	1767.3	43.5
90°-120°	591.1	14.5
90°-150°	1702.4	41.9
90°-180°	2296.0	56.5
0°-180°	4063.2	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	46	85	108	116	8
95°	43	72	107	128	135	45
105°	141	158	190	207	214	151
115°	260	270	291	306	311	258
125°	378	381	397	407	410	337
135°	490	493	499	507	510	377
145°	593	594	596	600	600	370
155°	678	678	679	681	677	312
165°	739	737	737	740	736	208
175°	768	766	766	769	766	73
180°	770	770	770	770	770	



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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	23.9	31.1	38.2	45.5	52.7	60.2	67.6	75.0	82.5	87.3
90°	8.7	16.9	25.0	33.2	41.3	49.8	58.6	67.4	76.2	85.1	90.3
92.5°	22.3	29.4	36.4	43.4	50.5	58.0	66.0	73.9	81.9	89.8	94.8
95°	42.6	48.9	55.3	61.6	68.0	75.1	83.0	90.8	98.7	106.6	111.5
97.5°	69.5	75.1	80.7	86.3	91.9	98.3	105.6	112.8	120.1	127.4	132.2
100°	87.9	93.2	98.4	103.6	108.9	115.0	122.1	129.1	136.2	143.3	147.7
102.5°	109.2	113.7	118.1	122.6	127.1	133.0	140.1	147.2	154.4	161.6	165.9
105°	141.1	144.7	148.4	152.0	155.6	160.9	168.1	175.3	182.5	189.6	193.6
107.5°	177.7	180.7	183.7	186.6	189.6	194.2	200.4	206.5	212.6	218.8	223.0
110°	200.4	203.2	205.9	208.7	211.5	215.8	221.6	227.4	233.3	239.0	243.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	224.6	226.8	229.0	231.3	233.5	237.3	242.6	248.0	253.5	258.9	262.9
115°	260.3	262.4	264.5	266.5	268.6	272.0	276.7	281.4	286.2	290.9	294.3
117.5°	296.8	298.1	299.3	300.6	301.9	304.8	309.1	313.4	317.8	322.1	325.4
120°	319.0	320.5	322.0	323.5	325.0	327.7	331.6	335.5	339.4	343.3	346.4
122.5°	342.8	343.6	344.6	345.6	346.5	349.0	353.0	357.0	361.0	365.0	367.8
125°	378.3	378.7	379.1	379.5	379.9	382.0	385.7	389.5	393.2	397.0	399.3
127.5°	411.6	412.4	413.1	413.8	414.6	416.5	419.5	422.5	425.6	428.6	430.6
130°	434.0	434.9	435.9	436.8	437.7	439.4	441.7	444.1	446.5	448.8	450.9
132.5°	455.8	456.7	457.8	458.9	459.9	461.4	463.3	465.2	467.2	469.1	471.0
135°	489.6	490.2	491.0	491.6	492.3	493.3	494.7	496.1	497.5	498.9	500.8
137.5°	521.0	521.5	522.0	522.6	523.2	524.1	525.3	526.5	527.7	528.9	530.5
140°	542.3	542.9	543.6	544.2	544.9	545.5	546.1	546.7	547.1	547.7	549.7
142.5°	562.1	562.6	563.2	563.8	564.4	564.8	565.1	565.4	565.7	566.1	567.8
145°	593.0	593.2	593.3	593.5	593.6	593.9	594.3	594.7	595.1	595.5	596.5
147.5°	619.5	620.0	620.5	621.0	621.5	621.9	622.3	622.6	623.1	623.5	623.8
150°	638.5	638.7	639.0	639.3	639.5	639.8	640.0	640.3	640.6	640.8	640.8
152.5°	654.0	654.3	654.7	655.1	655.4	655.7	655.8	656.0	656.2	656.3	656.6
155°	678.4	678.4	678.4	678.4	678.4	678.4	678.6	678.7	678.8	679.0	679.6
157.5°	699.2	699.0	698.9	698.7	698.5	698.5	698.6	698.7	698.9	699.0	699.5
160°	712.2	712.0	711.8	711.4	711.2	711.0	711.0	711.0	711.0	711.0	711.8
162.5°	723.9	723.5	723.1	722.8	722.4	722.3	722.4	722.4	722.6	722.7	723.3
165°	738.9	738.5	738.1	737.7	737.3	737.0	737.0	737.0	737.0	737.0	737.8
167.5°	750.9	750.3	749.8	749.3	748.7	748.5	748.6	748.7	748.9	748.9	749.7
170°	757.7	757.1	756.6	756.0	755.5	755.2	755.2	755.2	755.2	755.2	756.2
172.5°	763.0	762.5	761.9	761.3	760.8	760.5	760.5	760.5	760.5	760.5	761.4
175°	768.5	768.0	767.4	767.0	766.4	766.1	766.1	766.1	766.1	766.1	767.0
177.5°	770.9	770.4	770.0	769.6	769.2	768.9	768.9	768.9	768.9	768.9	769.6
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4



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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°	92.1	96.9	101.7	104.9	106.3	107.8	109.3	110.6
90°	95.6	100.9	106.2	109.6	111.2	112.9	114.5	116.2
92.5°	99.9	104.9	110.0	113.1	114.1	115.3	116.4	117.5
95°	116.3	121.2	126.0	129.1	130.4	131.8	133.2	134.6
97.5°	136.9	141.7	146.4	149.4	150.8	152.1	153.4	154.8
100°	152.1	156.5	161.0	164.0	165.7	167.4	169.0	170.6
102.5°	170.2	174.6	178.9	181.6	183.0	184.3	185.7	187.0
105°	197.5	201.3	205.2	207.9	209.5	210.9	212.5	213.9
107.5°	227.1	231.2	235.4	238.0	239.0	240.1	241.2	242.2
110°	247.4	251.5	255.7	258.1	259.0	259.8	260.7	261.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	267.1	271.3	275.4	278.0	279.2	280.4	281.5	282.7
115°	297.8	301.3	304.8	307.0	307.9	308.9	309.9	310.9
117.5°	328.6	331.9	335.2	337.2	337.9	338.6	339.3	340.1
120°	349.4	352.5	355.6	357.4	358.2	358.8	359.5	360.3
122.5°	370.5	373.2	375.9	377.6	378.2	378.8	379.4	380.0
125°	401.8	404.1	406.5	407.9	408.3	408.8	409.2	409.6
127.5°	432.6	434.6	436.6	437.7	438.1	438.4	438.7	439.0
130°	453.1	455.1	457.2	458.2	458.1	458.0	457.9	457.8
132.5°	472.9	474.7	476.6	477.7	477.8	478.1	478.3	478.5
135°	502.8	504.8	506.7	507.9	508.3	508.7	509.2	509.6
137.5°	532.1	533.8	535.4	536.3	536.5	536.7	536.9	537.0
140°	551.6	553.6	555.5	556.4	556.1	555.9	555.6	555.4
142.5°	569.5	571.3	573.0	573.8	573.8	573.7	573.7	573.7
145°	597.5	598.4	599.4	599.9	599.9	599.9	599.9	599.9
147.5°	624.1	624.4	624.8	624.8	624.4	624.2	623.9	623.5
150°	640.8	640.8	640.8	640.6	640.1	639.5	639.0	638.5
152.5°	656.8	657.0	657.2	657.0	656.3	655.7	655.1	654.4
155°	680.0	680.6	681.1	680.9	680.0	679.1	678.1	677.2
157.5°	700.1	700.7	701.2	701.1	700.3	699.6	698.9	698.1
160°	712.4	713.1	713.7	713.8	713.3	712.7	712.2	711.7
162.5°	724.0	724.7	725.4	725.3	724.4	723.6	722.7	721.8
165°	738.7	739.5	740.3	740.2	739.3	738.3	737.4	736.5
167.5°	750.6	751.5	752.3	752.3	751.5	750.6	749.7	748.9
170°	757.1	758.1	759.0	759.0	758.1	757.1	756.2	755.2
172.5°	762.2	763.0	763.9	763.9	762.9	762.0	761.0	760.1
175°	767.8	768.5	769.3	769.3	768.3	767.4	766.5	765.5
177.5°	770.2	770.9	771.5	771.4	770.7	769.9	769.2	768.4
180°	770.4	770.4	770.4	770.4	770.4	770.4	770.4	770.4

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