

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: P332750-930

Luminaire Tested: **S124DIW-S575D470U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332750-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S575D470U930-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3358.5 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: Semi-Direct

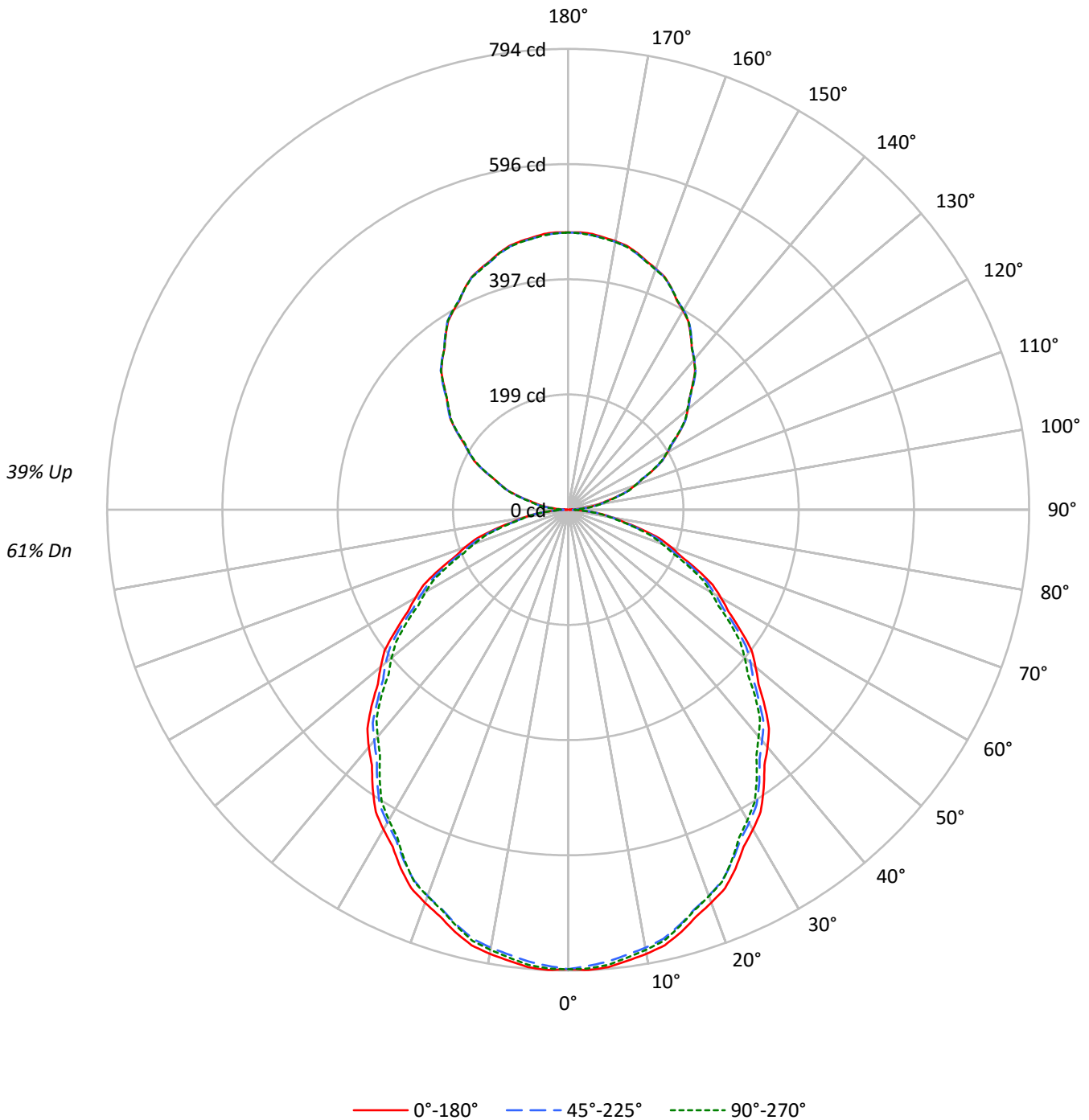
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	100	96	92	88	93	90	86	83	78	76	73	68	66	64	58	57	55	51
2	91	84	77	72	85	78	73	68	69	64	61	59	56	54	51	49	47	43
3	83	73	66	60	77	69	62	57	60	55	51	53	49	45	45	42	40	36
4	76	65	57	51	71	61	54	48	54	48	44	47	42	39	40	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	36	33	30	27
6	64	52	44	38	60	49	42	36	43	37	33	38	33	30	33	29	26	24
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23	21
8	55	43	35	30	52	41	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	32	26	48	37	30	25	33	27	23	29	24	21	26	22	19	17
10	48	36	29	24	45	34	27	23	31	25	21	27	22	19	24	20	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6391	6391	6391
5°	6412	6334	6380
10°	6370	6283	6314
15°	6294	6193	6209
20°	6192	6082	6088
25°	6075	5956	5940
30°	5931	5808	5754
35°	5784	5653	5577
40°	5630	5476	5376
45°	5469	5302	5200
50°	5291	5148	4987
55°	5098	4947	4787
60°	4907	4721	4579
65°	4690	4508	4327
70°	4447	4223	4057
75°	4077	3877	3780
80°	3626	3477	3394
85°	3168	3057	3001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.6	2.2
10°-20°	210.1	6.3
20°-30°	309.2	9.2
30°-40°	359.5	10.7
40°-50°	359.5	10.7
50°-60°	314.5	9.4
60°-70°	233.5	7.0
70°-80°	132.7	4.0
80°-90°	39.7	1.2
90°-100°	31.5	0.9
100°-110°	93.3	2.8
110°-120°	158.4	4.7
120°-130°	208.9	6.2
130°-140°	234.6	7.0
140°-150°	230.5	6.9
150°-160°	193.9	5.8
160°-170°	129.0	3.8
170°-180°	45.2	1.3
0°-30°	593.9	17.7
0°-40°	953.4	28.4
0°-60°	1627.3	48.5
0°-90°	2033.2	60.5
90°-120°	283.3	8.4
90°-150°	957.2	28.5
90°-180°	1325.0	39.5
0°-180°	3358.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	792	792	792	792	792	
5°	791	788	782	788	787	75
15°	753	750	741	744	743	212
25°	682	677	669	669	667	314
35°	587	582	574	569	566	367
45°	479	474	464	458	456	369
55°	362	360	352	344	340	324
65°	246	242	236	230	226	243
75°	131	128	124	122	121	139
85°	34	34	33	33	32	38
90°	1	5	8	10	11	3
95°	22	25	28	29	29	25
105°	86	86	88	89	90	91
115°	161	161	160	160	160	159
125°	235	235	234	234	233	209
135°	303	305	305	304	303	234
145°	368	369	369	369	368	230
155°	421	421	421	422	421	194
165°	458	457	457	459	457	129
175°	477	475	475	477	475	45
180°	478	478	478	478	478	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7
2.5°	793.8	793.4	793.1	792.8	792.5	791.7	790.4	789.2	787.9	786.7	787.8
5°	791.2	790.6	790.0	789.5	788.9	787.8	786.3	784.7	783.2	781.6	783.2
7.5°	783.7	783.2	782.7	782.1	781.5	780.4	778.7	777.0	775.2	773.5	774.8
10°	777.1	776.7	776.1	775.5	774.9	773.7	771.9	770.1	768.3	766.4	767.5
12.5°	768.6	768.0	767.4	766.9	766.3	765.1	763.1	761.2	759.2	757.2	758.5
15°	753.1	752.5	752.0	751.4	750.8	749.5	747.4	745.3	743.1	741.0	741.8
17.5°	734.4	733.7	733.0	732.3	731.6	730.3	728.2	726.3	724.2	722.3	722.8
20°	720.7	720.0	719.3	718.6	717.9	716.5	714.4	712.2	710.1	708.0	708.4
22.5°	706.0	705.1	704.2	703.2	702.3	700.7	698.6	696.5	694.4	692.3	693.1
25°	682.0	681.0	680.0	679.1	678.1	676.6	674.6	672.6	670.7	668.7	668.9
27.5°	654.6	653.6	652.6	651.6	650.5	649.1	647.3	645.5	643.6	641.8	641.5
30°	636.3	635.2	634.1	632.9	631.9	630.3	628.5	626.6	624.8	623.1	622.5
32.5°	617.0	616.0	615.0	614.0	613.0	611.5	609.6	607.6	605.7	603.7	603.1
35°	586.9	585.9	584.9	583.9	582.9	581.4	579.4	577.5	575.5	573.6	572.5
37.5°	555.0	554.1	553.2	552.3	551.4	549.9	547.8	545.7	543.6	541.4	540.4
40°	534.2	533.0	531.9	530.8	529.7	528.1	525.9	523.8	521.7	519.6	518.2
42.5°	511.8	511.2	510.5	509.8	509.2	507.6	505.3	503.0	500.6	498.3	496.7
45°	479.0	478.0	477.0	476.1	475.1	473.4	471.2	468.9	466.7	464.4	462.8
47.5°	444.6	443.9	443.3	442.5	441.9	440.5	438.5	436.3	434.2	432.2	430.4
50°	421.3	420.7	420.1	419.6	419.0	417.8	415.8	413.8	411.8	409.9	407.9
52.5°	398.4	397.8	397.1	396.4	395.7	394.4	392.2	390.2	388.1	386.0	384.3
55°	362.2	361.8	361.4	361.0	360.6	359.4	357.4	355.4	353.4	351.5	349.8
57.5°	327.8	327.3	326.8	326.3	325.8	324.7	322.7	320.7	318.8	316.8	315.2
60°	303.9	303.2	302.5	301.7	301.1	299.8	298.0	296.1	294.3	292.4	291.2
62.5°	280.5	280.0	279.3	278.8	278.2	276.9	275.0	273.0	271.1	269.1	268.0
65°	245.5	244.8	244.1	243.4	242.7	241.7	240.3	238.8	237.4	236.0	234.6
67.5°	210.3	209.6	209.0	208.3	207.7	206.7	205.3	204.0	202.6	201.2	199.9
70°	188.4	187.4	186.5	185.5	184.5	183.4	182.3	181.2	180.0	178.9	177.8
72.5°	165.1	164.1	163.1	162.1	161.1	160.2	159.3	158.4	157.5	156.5	155.6
75°	130.7	130.0	129.3	128.6	127.8	127.2	126.5	125.7	125.1	124.3	123.8
77.5°	97.8	97.5	97.2	96.9	96.6	96.1	95.5	94.9	94.2	93.7	93.4
80°	78.0	77.6	77.2	76.8	76.3	76.0	75.7	75.4	75.2	74.8	74.6
82.5°	58.8	58.5	58.4	58.1	58.0	57.8	57.8	57.7	57.6	57.6	57.4
85°	34.2	34.2	34.2	34.2	34.2	34.1	33.8	33.6	33.3	33.0	33.0
87.5°	13.5	13.5	13.5	13.6	13.7	13.7	13.8	13.8	13.8	13.8	13.9
90°	1.1	2.0	2.9	3.8	4.7	5.5	6.2	6.8	7.5	8.2	8.6
92.5°	7.9	9.0	9.9	11.0	12.1	12.8	13.3	13.7	14.2	14.6	14.9
95°	22.2	22.9	23.6	24.4	25.1	25.8	26.3	26.9	27.5	28.0	28.3
97.5°	38.7	39.3	39.9	40.5	41.1	41.7	42.4	43.0	43.7	44.4	44.7
100°	51.7	52.0	52.3	52.7	53.1	53.6	54.3	55.0	55.8	56.5	56.7
102.5°	65.3	65.5	65.6	65.7	65.9	66.3	66.9	67.6	68.2	69.0	69.1
105°	86.1	86.2	86.3	86.3	86.4	86.6	86.9	87.2	87.6	87.9	88.1
107.5°	107.9	107.9	108.1	108.2	108.3	108.4	108.4	108.4	108.5	108.5	108.8
110°	122.6	122.8	122.9	123.1	123.3	123.4	123.3	123.2	123.1	123.0	122.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	138.0	138.0	138.1	138.1	138.2	138.1	137.9	137.8	137.6	137.5	137.5
115°	161.1	161.1	161.1	161.1	161.1	161.0	160.9	160.7	160.5	160.4	160.3
117.5°	182.8	182.9	183.0	183.0	183.0	183.0	183.0	182.8	182.7	182.5	182.3
120°	197.3	197.6	198.0	198.3	198.6	198.6	198.4	198.1	197.9	197.6	197.2
122.5°	212.4	212.5	212.6	212.7	212.9	212.9	212.8	212.6	212.5	212.5	212.1
125°	234.6	234.6	234.6	234.6	234.6	234.6	234.5	234.4	234.3	234.2	234.1
127.5°	254.8	255.0	255.3	255.5	255.8	255.8	255.7	255.5	255.4	255.3	255.1
130°	269.0	269.2	269.5	269.7	269.9	270.0	270.0	270.0	270.0	270.0	269.9
132.5°	283.4	283.6	283.8	284.0	284.1	284.2	284.1	284.1	284.1	284.0	283.8
135°	302.6	303.0	303.5	304.0	304.5	304.8	304.8	304.8	304.8	304.8	304.6
137.5°	323.4	323.7	323.8	324.1	324.3	324.5	324.7	324.8	324.9	325.1	324.8
140°	337.3	337.5	337.6	337.8	337.9	338.0	338.0	338.0	338.0	338.0	337.9
142.5°	350.0	350.2	350.3	350.5	350.7	350.7	350.7	350.6	350.5	350.4	350.4
145°	367.6	367.9	368.3	368.6	368.9	369.1	369.2	369.2	369.3	369.4	369.3
147.5°	385.1	385.4	385.8	386.2	386.6	386.8	386.7	386.6	386.6	386.5	386.5
150°	395.7	396.0	396.3	396.6	397.0	397.1	397.1	397.1	397.1	397.1	397.1
152.5°	405.7	405.9	406.1	406.3	406.5	406.7	406.7	406.8	406.8	406.9	407.1
155°	421.2	421.2	421.2	421.2	421.2	421.1	421.0	420.9	420.9	420.8	421.1
157.5°	434.1	434.0	433.9	433.7	433.6	433.5	433.5	433.5	433.4	433.4	433.7
160°	441.9	441.8	441.7	441.6	441.6	441.5	441.4	441.3	441.2	441.2	441.4
162.5°	449.0	448.7	448.5	448.3	448.1	447.9	447.8	447.8	447.7	447.6	448.1
165°	458.4	458.2	458.0	457.7	457.5	457.3	457.1	457.0	456.8	456.6	457.1
167.5°	465.8	465.5	465.1	464.8	464.4	464.2	464.2	464.3	464.3	464.3	464.8
170°	469.9	469.5	469.1	468.7	468.3	468.1	468.2	468.3	468.4	468.5	469.0
172.5°	472.9	472.5	472.2	471.9	471.5	471.3	471.3	471.4	471.4	471.4	472.0
175°	477.0	476.5	476.1	475.7	475.3	475.1	475.0	474.9	474.8	474.7	475.3
177.5°	478.3	477.9	477.6	477.3	477.0	476.8	476.8	476.8	476.8	476.8	477.3
180°	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	791.7	791.7	791.7	791.7	791.7	791.7	791.7	791.7
2.5°	789.0	790.1	791.2	791.7	791.6	791.5	791.4	791.2
5°	784.7	786.3	787.8	788.5	788.1	787.9	787.6	787.3
7.5°	776.0	777.2	778.4	779.0	778.9	778.7	778.5	778.3
10°	768.7	769.8	770.9	771.4	771.0	770.8	770.5	770.2
12.5°	759.8	761.0	762.2	762.6	762.2	761.8	761.5	761.1
15°	742.7	743.6	744.4	744.6	744.2	743.8	743.3	742.9
17.5°	723.3	723.8	724.4	724.5	724.2	723.9	723.7	723.4
20°	708.9	709.3	709.7	709.8	709.5	709.2	709.0	708.7
22.5°	693.8	694.6	695.4	695.5	695.0	694.5	694.0	693.4
25°	669.0	669.1	669.3	669.0	668.5	667.9	667.3	666.8
27.5°	641.2	640.7	640.4	639.9	639.2	638.5	637.8	637.1
30°	621.9	621.3	620.8	620.1	619.4	618.7	618.0	617.3
32.5°	602.3	601.7	601.0	600.3	599.7	598.9	598.2	597.5
35°	571.5	570.5	569.6	568.8	568.0	567.3	566.6	565.9
37.5°	539.3	538.2	537.1	536.1	535.2	534.3	533.4	532.4
40°	516.8	515.4	514.0	512.9	512.2	511.5	510.8	510.1
42.5°	495.0	493.3	491.7	490.6	490.2	489.8	489.3	488.8
45°	461.3	459.7	458.2	457.2	456.8	456.4	455.9	455.5
47.5°	428.7	426.9	425.2	423.8	422.7	421.6	420.5	419.5
50°	405.9	403.9	401.9	400.6	399.7	398.8	398.0	397.1
52.5°	382.5	380.7	379.0	377.6	376.5	375.4	374.4	373.3
55°	348.1	346.4	344.7	343.4	342.6	341.8	340.9	340.1
57.5°	313.6	312.0	310.4	309.2	308.3	307.5	306.7	305.9
60°	289.9	288.7	287.4	286.4	285.7	285.0	284.3	283.6
62.5°	266.8	265.6	264.5	263.6	262.9	262.2	261.5	260.7
65°	233.2	231.8	230.4	229.3	228.6	227.9	227.2	226.5
67.5°	198.5	197.2	195.8	195.0	194.9	194.7	194.4	194.3
70°	176.7	175.5	174.4	173.7	173.2	172.8	172.4	171.9
72.5°	154.7	153.8	153.0	152.3	151.9	151.5	151.1	150.6
75°	123.2	122.6	122.1	121.7	121.6	121.5	121.3	121.2
77.5°	93.3	93.1	92.9	92.7	92.3	92.0	91.6	91.2
80°	74.3	74.0	73.7	73.5	73.4	73.2	73.1	73.0
82.5°	57.2	57.1	56.9	56.7	56.7	56.5	56.3	56.2
85°	33.0	33.0	33.0	32.9	32.8	32.6	32.5	32.4
87.5°	14.0	14.1	14.2	14.3	14.3	14.3	14.3	14.4
90°	9.1	9.6	10.1	10.4	10.6	10.8	10.9	11.1
92.5°	15.2	15.5	15.8	16.0	16.1	16.2	16.3	16.4
95°	28.5	28.8	29.0	29.2	29.2	29.2	29.2	29.2
97.5°	45.0	45.3	45.6	45.7	45.7	45.7	45.7	45.7
100°	56.8	57.0	57.2	57.2	57.2	57.2	57.2	57.2
102.5°	69.4	69.6	69.9	70.0	70.0	70.1	70.2	70.3
105°	88.5	88.7	88.9	89.2	89.4	89.7	89.9	90.2
107.5°	109.0	109.3	109.5	109.6	109.6	109.6	109.5	109.5
110°	122.7	122.5	122.4	122.4	122.6	122.9	123.1	123.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	137.5	137.4	137.4	137.4	137.5	137.5	137.5	137.5
115°	160.2	160.1	160.0	160.0	159.9	159.8	159.7	159.6
117.5°	182.1	181.7	181.5	181.2	181.1	180.9	180.8	180.6
120°	196.8	196.4	196.0	195.9	196.1	196.2	196.4	196.6
122.5°	211.9	211.6	211.3	211.0	210.8	210.4	210.1	209.9
125°	233.9	233.7	233.6	233.4	233.3	233.1	232.9	232.8
127.5°	254.9	254.8	254.6	254.5	254.4	254.2	254.1	254.0
130°	269.7	269.5	269.4	269.1	268.8	268.5	268.2	267.8
132.5°	283.6	283.5	283.3	283.2	283.0	282.9	282.7	282.7
135°	304.4	304.3	304.1	303.9	303.7	303.5	303.2	303.0
137.5°	324.6	324.4	324.2	324.1	324.2	324.2	324.2	324.3
140°	337.9	337.8	337.7	337.6	337.5	337.5	337.4	337.3
142.5°	350.4	350.4	350.4	350.3	350.3	350.3	350.3	350.3
145°	369.2	369.2	369.1	368.9	368.7	368.4	368.2	367.9
147.5°	386.4	386.3	386.3	386.2	386.1	386.0	386.0	385.9
150°	397.1	397.1	397.1	397.1	397.1	397.0	396.9	396.8
152.5°	407.3	407.5	407.7	407.6	407.5	407.2	407.1	406.8
155°	421.4	421.8	422.1	422.1	421.8	421.4	421.1	420.8
157.5°	433.9	434.1	434.4	434.4	434.1	433.8	433.6	433.3
160°	441.6	441.9	442.1	442.1	441.6	441.2	440.8	440.3
162.5°	448.5	449.0	449.4	449.4	449.0	448.6	448.2	447.8
165°	457.6	458.1	458.6	458.7	458.4	458.0	457.7	457.4
167.5°	465.3	465.8	466.3	466.3	465.8	465.3	464.7	464.2
170°	469.4	469.9	470.4	470.3	469.8	469.2	468.6	468.1
172.5°	472.5	473.1	473.6	473.6	473.0	472.5	471.9	471.3
175°	475.9	476.5	477.0	477.0	476.5	475.9	475.3	474.7
177.5°	477.8	478.2	478.7	478.6	478.1	477.6	477.0	476.5
180°	477.7	477.7	477.7	477.7	477.7	477.7	477.7	477.7

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