

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: P332756-940

Luminaire Tested: **S124DIW-S575D770U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332756-940
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-S575D770U940-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4598.9 lumens
Efficiency: N/A
Efficacy: 122.3 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: General Diffuse

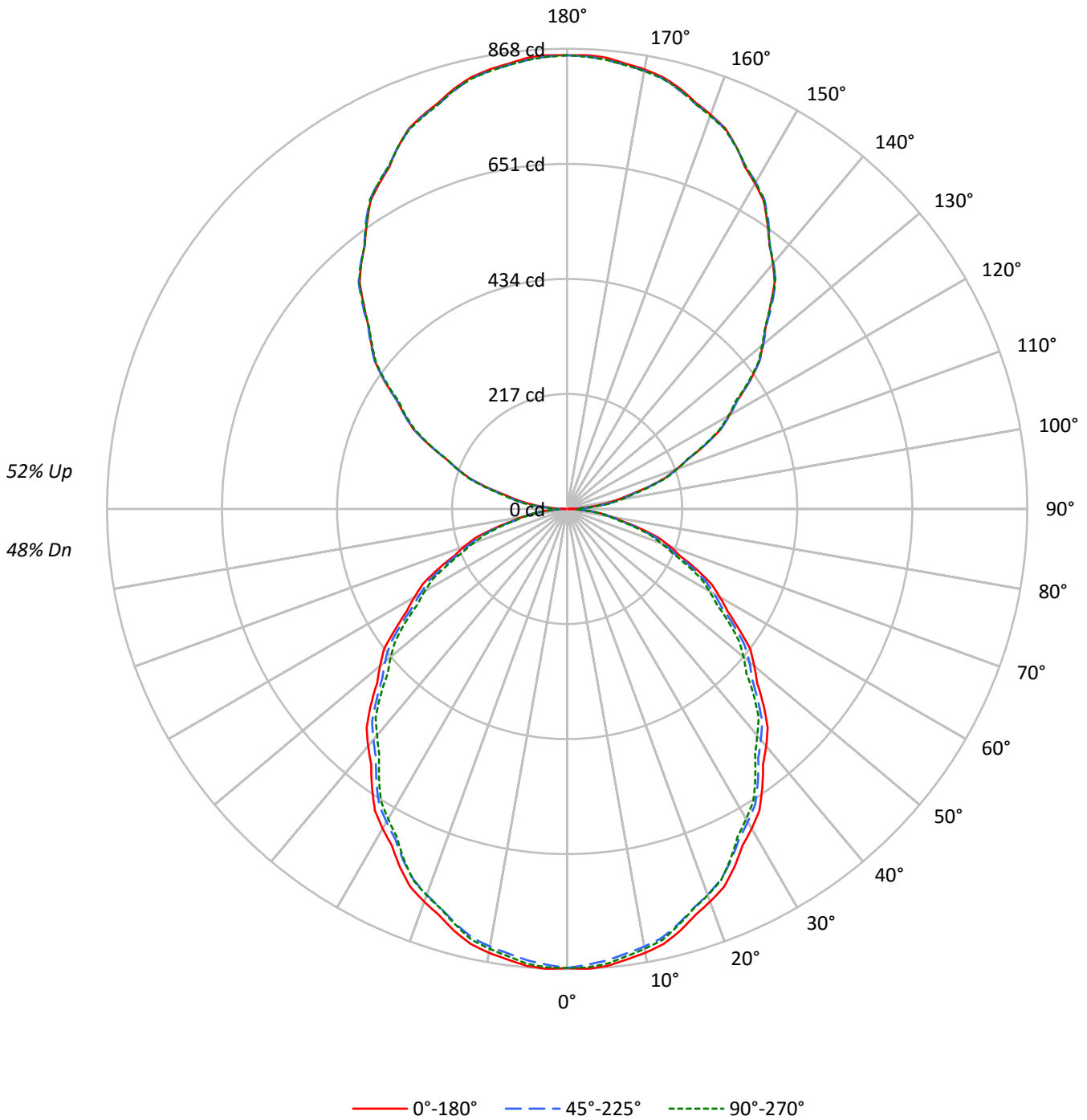
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	97	93	89	86	89	86	82	79	72	70	68	60	58	56	48	47	46	41
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	40	39	34
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33	29
4	74	63	55	49	68	58	51	46	50	44	40	41	37	34	34	31	28	25
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	21
6	63	50	42	37	57	47	40	34	40	34	30	33	29	26	27	24	22	19
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19	17
8	54	41	34	28	49	38	32	27	33	27	24	28	24	20	23	20	17	15
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6990	6990	6990
5°	7012	6928	6978
10°	6968	6871	6906
15°	6884	6774	6791
20°	6772	6653	6659
25°	6644	6515	6495
30°	6488	6352	6293
35°	6326	6182	6099
40°	6157	5989	5879
45°	5981	5799	5688
50°	5786	5630	5456
55°	5576	5410	5234
60°	5365	5165	5007
65°	5129	4932	4732
70°	4865	4617	4440
75°	4457	4242	4133
80°	3966	3808	3710
85°	3473	3344	3279



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.6	1.8
10°-20°	229.8	5.0
20°-30°	338.2	7.4
30°-40°	393.2	8.5
40°-50°	393.2	8.5
50°-60°	343.9	7.5
60°-70°	255.4	5.6
70°-80°	145.1	3.2
80°-90°	44.4	1.0
90°-100°	56.4	1.2
100°-110°	167.2	3.6
110°-120°	283.8	6.2
120°-130°	374.2	8.1
130°-140°	420.2	9.1
140°-150°	413.0	9.0
150°-160°	347.3	7.6
160°-170°	231.1	5.0
170°-180°	80.9	1.8
0°-30°	649.5	14.1
0°-40°	1042.7	22.7
0°-60°	1779.8	38.7
0°-90°	2224.8	48.4
90°-120°	507.4	11.0
90°-150°	1714.8	37.3
90°-180°	2374.0	51.6
0°-180°	4598.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	866	866	866	866	866	
5°	865	862	855	862	861	82
15°	824	820	810	814	812	232
25°	746	741	731	732	729	343
35°	642	637	627	622	619	401
45°	524	519	508	501	498	404
55°	396	394	384	376	372	355
65°	268	265	258	251	248	266
75°	143	139	136	133	132	152
85°	38	37	36	36	35	41
90°	2	9	14	18	20	5
95°	40	46	50	52	52	44
105°	154	155	158	160	162	164
115°	289	288	287	287	286	284
125°	420	420	420	418	417	374
135°	542	546	546	545	543	419
145°	658	661	662	661	659	412
155°	754	754	754	756	754	347
165°	821	819	818	822	819	231
175°	854	851	850	854	850	81
180°	856	856	856	856	856	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	868.2	867.8	867.5	867.1	866.7	865.9	864.5	863.2	861.7	860.4	861.7
5°	865.3	864.7	864.1	863.4	862.8	861.7	860.0	858.3	856.6	854.9	856.6
7.5°	857.2	856.6	856.0	855.4	854.8	853.5	851.7	849.8	847.8	846.0	847.4
10°	850.0	849.4	848.8	848.2	847.6	846.2	844.3	842.2	840.3	838.2	839.5
12.5°	840.6	840.0	839.4	838.7	838.1	836.8	834.6	832.5	830.4	828.2	829.6
15°	823.7	823.0	822.4	821.8	821.2	819.7	817.4	815.1	812.8	810.5	811.4
17.5°	803.3	802.5	801.7	800.9	800.1	798.7	796.5	794.3	792.1	790.0	790.5
20°	788.3	787.5	786.8	786.0	785.2	783.6	781.3	779.0	776.7	774.4	774.8
22.5°	772.1	771.2	770.2	769.1	768.1	766.4	764.1	761.8	759.5	757.2	758.0
25°	745.9	744.8	743.8	742.7	741.6	740.0	737.8	735.7	733.5	731.4	731.6
27.5°	716.0	714.9	713.7	712.7	711.5	710.0	707.9	706.0	703.9	702.0	701.6
30°	696.0	694.7	693.5	692.2	691.1	689.4	687.4	685.4	683.4	681.4	680.8
32.5°	674.8	673.8	672.6	671.5	670.5	668.8	666.7	664.6	662.5	660.3	659.6
35°	641.9	640.8	639.7	638.6	637.6	635.9	633.7	631.6	629.5	627.3	626.2
37.5°	607.0	606.0	605.0	604.0	603.1	601.5	599.1	596.8	594.5	592.2	591.0
40°	584.2	583.0	581.8	580.6	579.3	577.6	575.2	572.9	570.6	568.3	566.8
42.5°	559.8	559.1	558.4	557.6	556.9	555.2	552.7	550.1	547.5	545.0	543.2
45°	523.9	522.8	521.7	520.7	519.6	517.8	515.3	512.8	510.4	507.9	506.2
47.5°	486.2	485.5	484.8	484.0	483.3	481.8	479.6	477.2	474.9	472.7	470.7
50°	460.7	460.1	459.5	458.9	458.3	456.9	454.8	452.5	450.4	448.3	446.1
52.5°	435.8	435.1	434.3	433.5	432.8	431.3	429.0	426.8	424.5	422.1	420.3
55°	396.2	395.7	395.3	394.8	394.4	393.1	390.9	388.7	386.6	384.4	382.5
57.5°	358.5	357.9	357.4	356.9	356.3	355.1	352.9	350.8	348.7	346.5	344.7
60°	332.3	331.6	330.8	330.0	329.3	327.9	325.9	323.9	321.9	319.9	318.5
62.5°	306.8	306.2	305.5	304.9	304.3	302.8	300.8	298.6	296.5	294.4	293.1
65°	268.5	267.8	267.0	266.3	265.5	264.3	262.8	261.2	259.7	258.2	256.5
67.5°	230.0	229.3	228.5	227.8	227.1	226.0	224.5	223.1	221.6	220.1	218.6
70°	206.1	205.0	203.9	202.9	201.8	200.6	199.4	198.1	196.9	195.6	194.5
72.5°	180.6	179.5	178.4	177.3	176.2	175.2	174.2	173.3	172.3	171.2	170.2
75°	142.9	142.1	141.4	140.6	139.8	139.1	138.3	137.5	136.8	136.0	135.4
77.5°	107.0	106.6	106.3	106.0	105.7	105.1	104.4	103.8	103.1	102.5	102.2
80°	85.3	84.9	84.4	84.0	83.5	83.1	82.8	82.5	82.2	81.9	81.6
82.5°	64.3	64.0	63.8	63.6	63.4	63.2	63.2	63.1	63.0	63.0	62.8
85°	37.5	37.5	37.5	37.5	37.5	37.3	37.0	36.7	36.4	36.1	36.1
87.5°	14.8	15.1	15.2	15.4	15.6	15.8	15.9	16.1	16.1	16.2	16.4
90°	2.0	3.6	5.3	6.9	8.5	9.9	11.1	12.2	13.4	14.5	15.4
92.5°	14.2	16.1	17.8	19.7	21.6	22.9	23.7	24.5	25.4	26.2	26.8
95°	39.7	41.0	42.4	43.7	45.0	46.2	47.2	48.2	49.3	50.3	50.7
97.5°	69.4	70.4	71.5	72.5	73.6	74.7	76.0	77.1	78.4	79.5	80.1
100°	92.6	93.3	93.8	94.4	95.0	95.9	97.3	98.6	100.0	101.3	101.6
102.5°	117.0	117.3	117.4	117.7	118.0	118.7	119.8	121.1	122.3	123.5	123.9
105°	154.2	154.4	154.5	154.6	154.8	155.2	155.8	156.3	156.9	157.5	157.9
107.5°	193.2	193.4	193.6	193.8	193.9	194.1	194.2	194.3	194.4	194.5	194.8
110°	219.7	220.0	220.3	220.6	220.9	221.0	220.8	220.7	220.5	220.3	220.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	247.3	247.3	247.4	247.4	247.4	247.4	247.1	246.8	246.6	246.3	246.3
115°	288.6	288.6	288.6	288.6	288.6	288.4	288.1	287.8	287.5	287.2	287.0
117.5°	327.4	327.6	327.7	327.8	328.0	327.9	327.7	327.5	327.3	327.1	326.5
120°	353.4	354.0	354.5	355.2	355.8	355.8	355.4	355.0	354.5	354.1	353.3
122.5°	380.4	380.7	380.8	381.1	381.4	381.4	381.2	380.9	380.8	380.6	380.0
125°	420.3	420.3	420.3	420.3	420.3	420.2	420.0	419.9	419.7	419.5	419.3
127.5°	456.4	456.8	457.3	457.7	458.2	458.3	458.0	457.8	457.5	457.4	457.0
130°	481.8	482.2	482.7	483.1	483.6	483.8	483.8	483.8	483.8	483.8	483.5
132.5°	507.7	508.1	508.4	508.7	509.1	509.2	509.0	508.9	508.8	508.6	508.4
135°	542.1	542.9	543.8	544.7	545.5	546.0	546.0	546.0	546.0	546.0	545.7
137.5°	579.3	579.8	580.1	580.6	581.0	581.3	581.6	581.8	582.0	582.3	581.8
140°	604.2	604.5	604.8	605.1	605.4	605.6	605.6	605.6	605.6	605.6	605.4
142.5°	627.0	627.3	627.6	627.9	628.2	628.3	628.1	628.0	627.9	627.8	627.8
145°	658.5	659.1	659.7	660.3	660.8	661.2	661.4	661.6	661.6	661.8	661.6
147.5°	689.7	690.5	691.2	691.9	692.6	692.9	692.8	692.6	692.5	692.4	692.2
150°	708.8	709.4	710.0	710.6	711.1	711.5	711.5	711.5	711.5	711.5	711.5
152.5°	726.8	727.2	727.5	727.9	728.3	728.4	728.5	728.7	728.8	728.9	729.2
155°	754.5	754.5	754.5	754.5	754.5	754.4	754.2	754.1	753.9	753.9	754.4
157.5°	777.8	777.5	777.2	776.9	776.7	776.6	776.5	776.5	776.5	776.4	776.9
160°	791.6	791.4	791.2	791.1	790.9	790.8	790.7	790.5	790.3	790.2	790.7
162.5°	804.2	803.9	803.4	803.1	802.7	802.5	802.3	802.2	802.0	801.8	802.6
165°	821.4	820.9	820.5	820.0	819.6	819.2	818.9	818.6	818.3	818.0	818.9
167.5°	834.4	833.8	833.2	832.6	832.0	831.6	831.7	831.7	831.7	831.8	832.7
170°	841.9	841.1	840.3	839.6	838.9	838.6	838.7	838.9	839.0	839.2	840.1
172.5°	847.1	846.5	845.9	845.3	844.6	844.4	844.4	844.5	844.5	844.5	845.5
175°	854.4	853.6	852.9	852.2	851.5	851.0	850.9	850.7	850.6	850.4	851.5
177.5°	856.8	856.2	855.6	855.1	854.4	854.2	854.2	854.2	854.2	854.2	855.0
180°	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	865.9	865.9	865.9	865.9	865.9	865.9	865.9	865.9
2.5°	862.9	864.2	865.4	865.9	865.8	865.7	865.6	865.4
5°	858.3	860.0	861.7	862.4	862.0	861.7	861.4	861.1
7.5°	848.7	850.1	851.4	852.0	851.9	851.7	851.5	851.2
10°	840.7	842.0	843.2	843.6	843.3	843.0	842.7	842.4
12.5°	831.0	832.3	833.7	834.1	833.7	833.2	832.9	832.4
15°	812.3	813.2	814.1	814.4	814.0	813.5	813.0	812.5
17.5°	791.1	791.7	792.3	792.4	792.1	791.8	791.5	791.2
20°	775.3	775.8	776.2	776.3	776.0	775.7	775.4	775.1
22.5°	758.8	759.6	760.5	760.6	760.1	759.6	759.0	758.4
25°	731.6	731.8	732.0	731.7	731.1	730.5	729.9	729.2
27.5°	701.2	700.8	700.4	699.9	699.1	698.4	697.6	696.8
30°	680.2	679.6	678.9	678.2	677.4	676.7	675.9	675.1
32.5°	658.8	658.1	657.4	656.6	655.9	655.1	654.2	653.5
35°	625.1	624.0	622.9	622.1	621.3	620.5	619.7	618.9
37.5°	589.9	588.6	587.5	586.4	585.4	584.3	583.4	582.3
40°	565.3	563.7	562.1	561.0	560.2	559.5	558.7	557.9
42.5°	541.4	539.6	537.8	536.6	536.2	535.7	535.1	534.6
45°	504.5	502.8	501.1	500.1	499.6	499.2	498.6	498.2
47.5°	468.9	466.9	465.0	463.5	462.4	461.1	459.9	458.8
50°	443.9	441.8	439.6	438.1	437.1	436.2	435.3	434.4
52.5°	418.3	416.4	414.6	413.0	411.8	410.6	409.5	408.3
55°	380.8	378.9	377.0	375.6	374.7	373.8	372.8	371.9
57.5°	343.0	341.3	339.5	338.1	337.2	336.4	335.5	334.6
60°	317.1	315.8	314.3	313.3	312.5	311.7	310.9	310.1
62.5°	291.9	290.5	289.3	288.3	287.5	286.8	286.0	285.2
65°	255.0	253.5	252.0	250.8	250.0	249.2	248.5	247.7
67.5°	217.1	215.7	214.2	213.3	213.1	212.9	212.7	212.5
70°	193.2	192.0	190.7	189.9	189.4	189.0	188.5	188.1
72.5°	169.2	168.3	167.3	166.6	166.1	165.7	165.2	164.7
75°	134.7	134.1	133.6	133.1	133.0	132.9	132.7	132.5
77.5°	102.0	101.8	101.7	101.4	100.9	100.6	100.1	99.8
80°	81.2	81.0	80.6	80.4	80.3	80.1	80.0	79.8
82.5°	62.6	62.4	62.2	62.1	62.0	61.8	61.6	61.4
85°	36.1	36.1	36.1	36.0	35.8	35.7	35.6	35.4
87.5°	16.6	16.8	16.9	17.0	17.1	17.2	17.2	17.3
90°	16.3	17.2	18.1	18.6	19.0	19.3	19.5	19.9
92.5°	27.3	27.8	28.4	28.7	28.9	29.1	29.2	29.4
95°	51.2	51.6	52.1	52.3	52.3	52.3	52.3	52.3
97.5°	80.6	81.1	81.7	81.9	81.9	81.9	81.9	81.9
100°	101.8	102.1	102.5	102.5	102.5	102.5	102.5	102.5
102.5°	124.3	124.8	125.1	125.4	125.6	125.6	125.7	125.9
105°	158.4	158.8	159.3	159.7	160.2	160.6	161.0	161.5
107.5°	195.3	195.6	196.1	196.3	196.3	196.3	196.2	196.2
110°	219.8	219.5	219.2	219.3	219.7	220.2	220.6	221.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	246.2	246.1	246.1	246.1	246.2	246.3	246.4	246.5
115°	287.0	286.8	286.6	286.5	286.3	286.2	286.1	285.9
117.5°	326.1	325.6	325.0	324.7	324.4	324.0	323.8	323.5
120°	352.6	351.9	351.2	350.9	351.2	351.5	351.8	352.0
122.5°	379.5	379.1	378.5	378.0	377.5	376.9	376.5	375.9
125°	419.0	418.7	418.4	418.1	417.9	417.5	417.2	417.0
127.5°	456.7	456.5	456.1	455.8	455.7	455.4	455.1	455.0
130°	483.2	482.9	482.6	482.1	481.6	481.0	480.4	479.8
132.5°	508.1	507.8	507.5	507.2	507.0	506.8	506.5	506.3
135°	545.4	545.1	544.8	544.5	544.0	543.6	543.1	542.7
137.5°	581.5	581.1	580.8	580.6	580.7	580.8	580.9	580.9
140°	605.3	605.1	604.9	604.8	604.7	604.5	604.4	604.2
142.5°	627.8	627.7	627.7	627.7	627.6	627.6	627.6	627.5
145°	661.6	661.4	661.2	660.9	660.5	660.0	659.6	659.2
147.5°	692.1	692.1	691.9	691.8	691.6	691.5	691.3	691.2
150°	711.5	711.5	711.5	711.4	711.2	711.1	711.0	710.8
152.5°	729.6	730.0	730.3	730.3	730.0	729.6	729.2	728.8
155°	755.0	755.5	756.2	756.2	755.5	755.0	754.4	753.9
157.5°	777.3	777.8	778.2	778.2	777.7	777.2	776.7	776.1
160°	791.1	791.6	792.0	791.8	791.1	790.3	789.6	788.9
162.5°	803.4	804.2	805.0	805.0	804.3	803.6	802.9	802.1
165°	819.7	820.6	821.5	821.7	821.1	820.5	819.9	819.3
167.5°	833.6	834.4	835.3	835.3	834.4	833.5	832.6	831.6
170°	841.0	841.9	842.8	842.7	841.6	840.6	839.5	838.6
172.5°	846.5	847.5	848.5	848.5	847.4	846.4	845.3	844.4
175°	852.5	853.5	854.5	854.5	853.5	852.5	851.5	850.4
177.5°	855.8	856.6	857.5	857.4	856.4	855.5	854.5	853.6
180°	855.7	855.7	855.7	855.7	855.7	855.7	855.7	855.7

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