

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: P332755-830

Luminaire Tested: **S124DIW-S575D770U830-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332755-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S575D770U830-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 770 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5245.1 lumens
Efficiency: N/A
Efficacy: 139.5 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

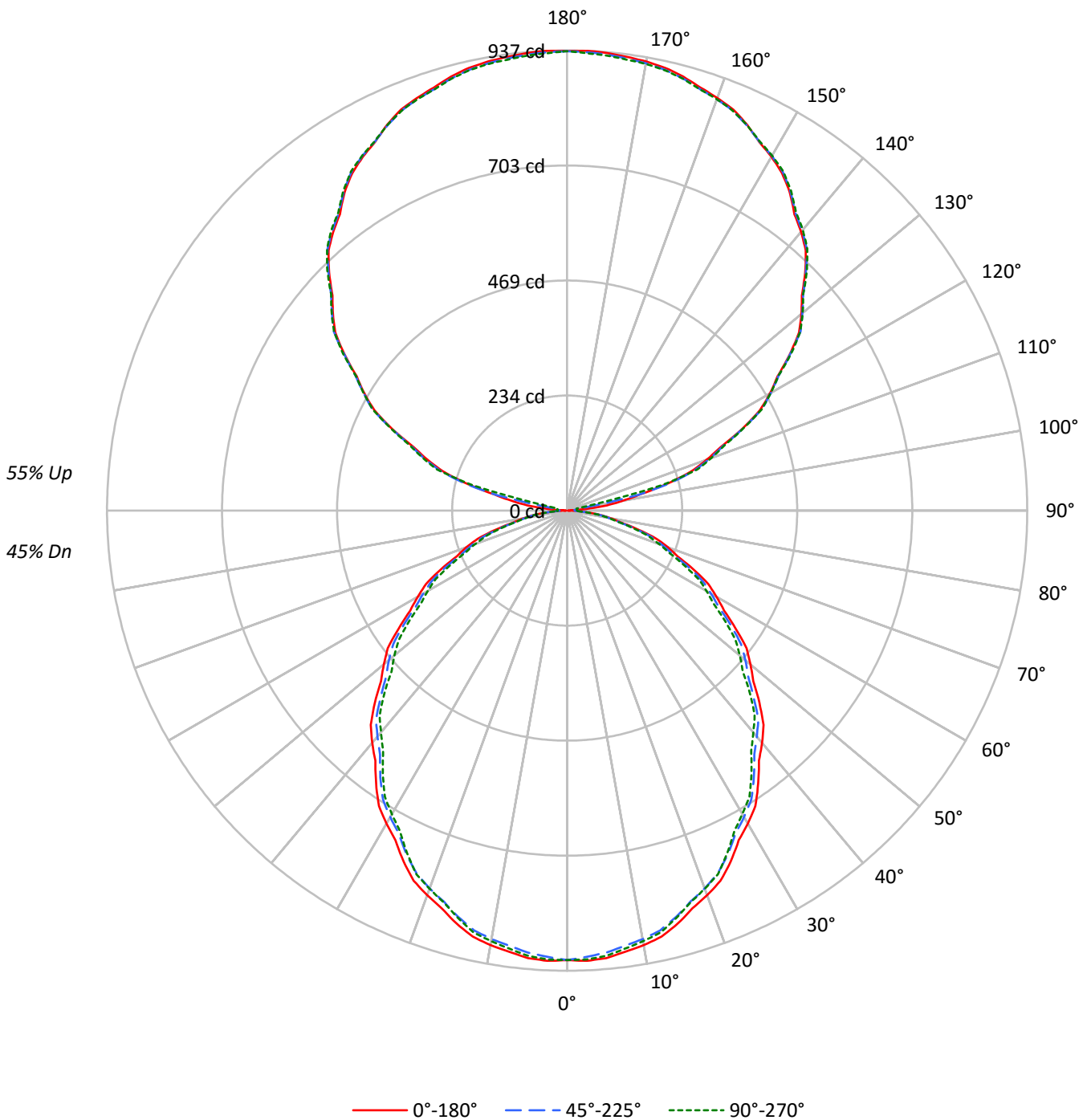
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	45				
1	97	92	88	85	88	85	81	78	70	68	66	57	56	54	45	44	43	38				
2	88	81	74	69	80	74	69	64	62	58	55	50	48	45	40	38	36	32				
3	80	71	64	58	73	65	59	54	54	50	46	45	41	38	35	33	31	27				
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	32	29	27	23				
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20				
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17				
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16				
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14				
9	49	37	30	25	45	35	28	23	29	24	20	25	20	18	20	17	15	13				
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7389	7389	7389
5°	7412	7323	7376
10°	7365	7263	7299
15°	7276	7160	7178
20°	7158	7032	7039
25°	7023	6886	6866
30°	6858	6715	6652
35°	6686	6535	6447
40°	6509	6330	6215
45°	6322	6130	6012
50°	6116	5951	5766
55°	5895	5719	5533
60°	5672	5459	5293
65°	5421	5213	5001
70°	5141	4881	4692
75°	4713	4482	4370
80°	4193	4021	3924
85°	3668	3538	3464



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.2	1.6
10°-20°	242.9	4.6
20°-30°	357.5	6.8
30°-40°	415.6	7.9
40°-50°	415.6	7.9
50°-60°	363.5	6.9
60°-70°	270.0	5.1
70°-80°	153.4	2.9
80°-90°	47.0	0.9
90°-100°	32.0	0.6
100°-110°	204.0	3.9
110°-120°	390.2	7.4
120°-130°	495.4	9.4
130°-140°	530.0	10.1
140°-150°	495.6	9.4
150°-160°	399.7	7.6
160°-170°	257.8	4.9
170°-180°	88.8	1.7
0°-30°	686.6	13.1
0°-40°	1102.1	21.0
0°-60°	1881.3	35.9
0°-90°	2351.6	44.8
90°-120°	626.2	11.9
90°-150°	2147.2	40.9
90°-180°	2894.0	55.2
0°-180°	5245.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	915	915	915	915	915	
5°	915	911	904	911	910	87
15°	871	867	857	861	859	245
25°	788	783	773	774	771	363
35°	678	673	663	658	654	424
45°	554	548	537	529	527	427
55°	419	416	406	398	393	375
65°	284	280	273	266	262	281
75°	151	147	144	141	140	161
85°	40	40	38	38	37	44
90°	2	10	15	19	21	4
95°	38	16	15	19	20	49
105°	211	215	218	223	199	220
115°	393	395	394	396	396	387
125°	553	555	554	556	557	493
135°	686	685	688	689	690	528
145°	791	793	793	793	795	494
155°	867	867	865	868	866	400
165°	914	911	911	916	910	258
175°	935	932	932	937	930	89
180°	935	935	935	935	935	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	917.7	917.3	916.9	916.5	916.2	915.2	913.8	912.4	910.9	909.5	910.8
5°	914.6	914.0	913.3	912.7	912.0	910.8	909.0	907.2	905.4	903.6	905.4
7.5°	906.1	905.4	904.8	904.2	903.5	902.2	900.2	898.2	896.2	894.2	895.7
10°	898.4	897.9	897.2	896.5	895.9	894.5	892.4	890.2	888.2	886.0	887.3
12.5°	888.5	887.9	887.2	886.6	885.9	884.5	882.2	880.0	877.7	875.4	876.8
15°	870.6	870.0	869.3	868.6	868.0	866.5	864.0	861.6	859.1	856.7	857.6
17.5°	849.0	848.2	847.4	846.6	845.7	844.2	841.9	839.6	837.3	835.0	835.6
20°	833.2	832.4	831.6	830.8	829.9	828.3	825.9	823.4	821.0	818.5	819.0
22.5°	816.1	815.1	814.1	812.9	811.9	810.1	807.7	805.2	802.8	800.3	801.3
25°	788.4	787.3	786.2	785.0	783.9	782.2	779.9	777.6	775.3	773.1	773.3
27.5°	756.8	755.6	754.4	753.3	752.1	750.5	748.3	746.2	744.0	742.0	741.6
30°	735.7	734.3	733.0	731.7	730.5	728.7	726.6	724.4	722.4	720.3	719.6
32.5°	713.3	712.2	711.0	709.8	708.7	706.9	704.7	702.5	700.2	698.0	697.2
35°	678.4	677.3	676.2	675.0	673.9	672.1	669.9	667.6	665.3	663.1	661.9
37.5°	641.6	640.6	639.5	638.5	637.4	635.7	633.3	630.8	628.4	625.9	624.7
40°	617.6	616.2	614.9	613.7	612.4	610.5	608.0	605.6	603.1	600.7	599.1
42.5°	591.7	591.0	590.2	589.4	588.6	586.8	584.2	581.5	578.7	576.1	574.2
45°	553.7	552.6	551.5	550.4	549.2	547.3	544.7	542.1	539.5	536.9	535.1
47.5°	514.0	513.2	512.5	511.6	510.9	509.3	506.9	504.4	502.0	499.6	497.6
50°	487.0	486.4	485.7	485.0	484.4	483.0	480.7	478.3	476.1	473.8	471.6
52.5°	460.6	459.9	459.0	458.3	457.5	455.9	453.5	451.1	448.7	446.2	444.2
55°	418.8	418.3	417.8	417.4	416.9	415.5	413.2	410.9	408.6	406.3	404.4
57.5°	378.9	378.3	377.8	377.2	376.6	375.3	373.1	370.8	368.5	366.3	364.4
60°	351.3	350.5	349.7	348.8	348.1	346.6	344.5	342.3	340.3	338.1	336.7
62.5°	324.3	323.7	322.9	322.3	321.6	320.1	317.9	315.7	313.4	311.1	309.8
65°	283.8	283.0	282.2	281.4	280.6	279.4	277.8	276.1	274.5	272.9	271.2
67.5°	243.1	242.3	241.6	240.8	240.1	238.9	237.3	235.8	234.2	232.6	231.1
70°	217.8	216.7	215.6	214.4	213.3	212.1	210.8	209.4	208.1	206.8	205.6
72.5°	190.9	189.7	188.6	187.4	186.2	185.2	184.2	183.1	182.1	181.0	179.9
75°	151.1	150.2	149.5	148.6	147.8	147.0	146.2	145.3	144.6	143.7	143.1
77.5°	113.1	112.7	112.4	112.1	111.7	111.1	110.4	109.7	109.0	108.3	108.0
80°	90.2	89.7	89.3	88.8	88.2	87.8	87.6	87.2	86.9	86.5	86.2
82.5°	68.0	67.7	67.5	67.2	67.0	66.8	66.8	66.7	66.6	66.6	66.4
85°	39.6	39.6	39.6	39.6	39.6	39.4	39.1	38.8	38.5	38.2	38.2
87.5°	15.6	15.9	16.1	16.3	16.5	16.7	16.8	17.0	17.1	17.2	17.3
90°	2.1	3.8	5.6	7.3	9.0	10.5	11.7	12.9	14.1	15.4	16.3
92.5°	8.9	9.0	9.0	9.0	9.1	9.9	11.1	12.3	13.6	14.8	15.7
95°	38.5	33.2	27.9	22.6	17.3	14.8	14.9	15.1	15.3	15.4	16.3
97.5°	81.7	85.0	88.3	91.6	94.9	87.8	70.5	53.2	35.8	18.5	18.6
100°	114.7	117.5	120.4	123.1	125.9	116.6	95.2	73.7	52.2	30.8	28.2
102.5°	151.7	153.7	155.8	157.9	159.9	159.5	156.7	153.9	151.1	148.4	119.8
105°	210.6	211.5	212.4	213.4	214.3	215.2	215.9	216.7	217.5	218.3	219.7
107.5°	265.3	265.8	266.3	266.7	267.2	268.0	269.0	270.0	271.1	272.1	272.9
110°	302.3	302.7	303.2	303.7	304.1	304.8	305.8	306.7	307.6	308.5	308.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	338.1	338.9	339.8	340.5	341.4	342.0	342.5	342.9	343.4	343.8	343.7
115°	393.2	393.7	394.2	394.5	395.0	395.2	395.0	394.9	394.7	394.5	394.9
117.5°	442.9	443.5	444.1	444.7	445.4	445.8	446.2	446.5	446.9	447.2	447.1
120°	476.5	477.1	477.7	478.3	478.9	479.2	479.0	478.9	478.7	478.5	478.9
122.5°	507.8	508.1	508.5	508.9	509.3	509.5	509.8	510.0	510.2	510.5	510.7
125°	552.7	553.4	553.9	554.6	555.2	555.3	555.1	554.8	554.4	554.1	554.6
127.5°	595.2	595.4	595.6	595.7	595.9	596.3	597.0	597.8	598.4	599.2	599.1
130°	622.6	622.8	623.0	623.1	623.3	623.6	624.1	624.5	625.0	625.5	625.7
132.5°	647.9	648.2	648.5	648.7	648.9	649.4	650.0	650.6	651.2	651.8	652.0
135°	685.6	685.5	685.3	685.1	685.0	685.2	685.9	686.5	687.1	687.8	688.1
137.5°	719.1	719.2	719.3	719.3	719.3	719.7	720.4	721.0	721.8	722.5	722.7
140°	740.9	741.2	741.5	741.9	742.2	742.4	742.8	743.1	743.4	743.8	744.1
142.5°	760.5	761.1	761.7	762.1	762.7	763.1	763.3	763.5	763.6	763.8	764.2
145°	790.6	791.1	791.5	792.0	792.5	792.7	792.7	792.7	792.7	792.7	792.9
147.5°	814.5	815.4	816.2	817.1	818.0	818.3	818.2	818.0	817.8	817.7	817.8
150°	831.9	832.5	833.1	833.8	834.3	834.6	834.4	834.2	834.2	834.0	834.0
152.5°	846.4	846.9	847.4	847.9	848.4	848.5	848.2	848.0	847.7	847.4	847.6
155°	866.9	867.0	867.1	867.3	867.5	867.3	866.9	866.4	865.9	865.4	866.1
157.5°	884.1	884.0	883.9	883.8	883.7	883.4	882.9	882.3	881.7	881.3	882.0
160°	894.1	893.6	893.2	892.8	892.3	891.9	891.8	891.6	891.5	891.4	892.3
162.5°	903.1	902.5	901.9	901.4	900.7	900.3	900.2	900.0	899.8	899.8	900.7
165°	914.5	913.6	912.9	912.1	911.3	911.0	911.0	911.0	911.0	911.0	912.2
167.5°	923.4	922.6	921.8	921.0	920.1	919.7	919.6	919.5	919.5	919.4	920.7
170°	928.4	927.5	926.5	925.6	924.7	924.3	924.4	924.6	924.7	924.9	926.1
172.5°	931.8	930.9	929.9	929.0	928.0	927.7	927.8	927.9	928.1	928.3	929.5
175°	935.4	934.4	933.6	932.6	931.7	931.3	931.4	931.6	931.8	931.9	933.3
177.5°	937.1	936.2	935.4	934.4	933.6	933.3	933.6	933.8	934.1	934.2	935.3
180°	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	915.3	915.3	915.3	915.3	915.3	915.3	915.3	915.3
2.5°	912.1	913.4	914.7	915.3	915.1	915.0	914.9	914.7
5°	907.2	909.0	910.8	911.5	911.2	910.9	910.5	910.2
7.5°	897.1	898.5	899.9	900.6	900.4	900.2	900.0	899.8
10°	888.6	889.9	891.3	891.7	891.4	891.1	890.7	890.4
12.5°	878.4	879.8	881.2	881.7	881.2	880.7	880.3	879.9
15°	858.7	859.6	860.5	860.8	860.4	859.9	859.3	858.8
17.5°	836.2	836.8	837.4	837.5	837.3	836.9	836.6	836.3
20°	819.5	820.0	820.5	820.6	820.2	819.9	819.6	819.3
22.5°	802.1	803.0	803.9	804.0	803.4	802.9	802.3	801.6
25°	773.4	773.5	773.7	773.5	772.8	772.1	771.5	770.8
27.5°	741.2	740.7	740.4	739.8	739.0	738.2	737.4	736.5
30°	719.0	718.3	717.7	716.9	716.0	715.3	714.4	713.6
32.5°	696.4	695.6	694.8	694.0	693.2	692.4	691.5	690.8
35°	660.7	659.6	658.5	657.5	656.7	655.8	655.1	654.2
37.5°	623.5	622.2	620.9	619.8	618.8	617.6	616.6	615.5
40°	597.5	595.8	594.2	593.0	592.1	591.4	590.5	589.7
42.5°	572.3	570.3	568.4	567.2	566.8	566.2	565.6	565.1
45°	533.3	531.5	529.7	528.6	528.1	527.6	527.1	526.6
47.5°	495.6	493.5	491.5	489.9	488.7	487.4	486.2	484.9
50°	469.2	466.9	464.7	463.1	462.0	461.1	460.1	459.1
52.5°	442.1	440.2	438.2	436.5	435.3	434.0	432.8	431.6
55°	402.5	400.5	398.5	397.0	396.1	395.1	394.1	393.1
57.5°	362.6	360.7	358.8	357.4	356.5	355.5	354.6	353.6
60°	335.2	333.8	332.2	331.1	330.3	329.5	328.7	327.8
62.5°	308.5	307.1	305.8	304.7	303.9	303.1	302.3	301.4
65°	269.6	268.0	266.4	265.1	264.3	263.4	262.7	261.8
67.5°	229.5	228.0	226.4	225.5	225.3	225.1	224.8	224.6
70°	204.2	202.9	201.6	200.8	200.2	199.7	199.3	198.8
72.5°	178.9	177.9	176.8	176.1	175.6	175.1	174.7	174.1
75°	142.4	141.8	141.2	140.7	140.5	140.4	140.3	140.1
77.5°	107.8	107.6	107.4	107.2	106.7	106.3	105.8	105.5
80°	85.9	85.6	85.2	85.0	84.8	84.6	84.5	84.4
82.5°	66.2	66.0	65.8	65.6	65.5	65.3	65.1	64.9
85°	38.2	38.2	38.2	38.1	37.9	37.7	37.6	37.4
87.5°	17.5	17.7	17.9	18.0	18.1	18.2	18.2	18.3
90°	17.2	18.2	19.1	19.7	20.1	20.4	20.6	21.0
92.5°	16.7	17.6	18.6	19.0	19.1	19.2	19.2	19.3
95°	17.2	18.2	19.1	19.7	19.8	20.0	20.2	20.3
97.5°	18.7	18.8	18.9	18.9	19.1	19.3	19.4	19.6
100°	25.5	22.8	20.2	18.9	19.1	19.3	19.4	19.6
102.5°	91.3	62.8	34.3	20.0	20.1	20.1	20.1	20.2
105°	221.1	222.4	223.9	221.8	216.2	210.6	205.0	199.4
107.5°	273.5	274.2	274.9	275.5	276.2	276.7	277.3	277.9
110°	309.2	309.4	309.8	310.2	310.7	311.1	311.6	312.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	343.7	343.7	343.6	343.8	344.4	345.0	345.6	346.2
115°	395.2	395.5	395.9	396.0	396.0	396.0	396.0	396.0
117.5°	447.0	447.0	447.0	446.9	446.9	446.8	446.7	446.7
120°	479.2	479.5	479.8	479.8	479.5	479.2	478.9	478.5
122.5°	510.9	511.0	511.2	511.1	510.9	510.5	510.2	509.9
125°	555.1	555.5	556.0	556.3	556.5	556.6	556.8	556.9
127.5°	599.0	598.9	598.8	598.7	598.6	598.4	598.3	598.2
130°	625.8	625.9	626.1	626.1	626.1	626.1	626.1	626.1
132.5°	652.1	652.2	652.4	652.4	652.3	652.1	652.1	652.0
135°	688.3	688.7	689.0	689.3	689.6	689.9	690.2	690.5
137.5°	723.1	723.5	723.8	724.0	723.9	723.8	723.7	723.6
140°	744.6	745.1	745.6	745.9	746.0	746.2	746.4	746.5
142.5°	764.6	764.9	765.3	765.4	765.4	765.4	765.5	765.5
145°	793.0	793.1	793.3	793.5	793.8	794.2	794.5	794.8
147.5°	817.9	818.1	818.2	818.4	818.5	818.7	818.9	819.0
150°	834.0	834.0	834.0	834.1	834.2	834.3	834.5	834.6
152.5°	847.9	848.1	848.4	848.5	848.4	848.3	848.2	848.1
155°	866.7	867.3	867.9	868.0	867.5	867.0	866.6	866.2
157.5°	882.9	883.7	884.5	884.5	883.7	882.9	882.0	881.3
160°	893.2	894.1	895.0	895.0	894.1	893.2	892.3	891.4
162.5°	901.6	902.5	903.4	903.4	902.4	901.3	900.2	899.2
165°	913.4	914.6	915.9	915.9	914.5	913.0	911.6	910.2
167.5°	922.1	923.4	924.8	924.7	923.1	921.6	920.0	918.5
170°	927.4	928.7	929.9	929.7	928.2	926.6	925.1	923.5
172.5°	930.8	932.0	933.2	933.0	931.3	929.7	928.0	926.3
175°	934.7	936.1	937.5	937.3	935.4	933.6	931.7	929.8
177.5°	936.3	937.3	938.3	938.0	936.5	935.0	933.6	932.1
180°	935.4	935.4	935.4	935.4	935.4	935.4	935.4	935.4

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