

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: P332756-830

Luminaire Tested: **S124DIW-S575D770U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332756-830
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-S575D770U830-4F0-1E-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: 4861.1 lumens
Efficiency: N/A
Efficacy: 129.3 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

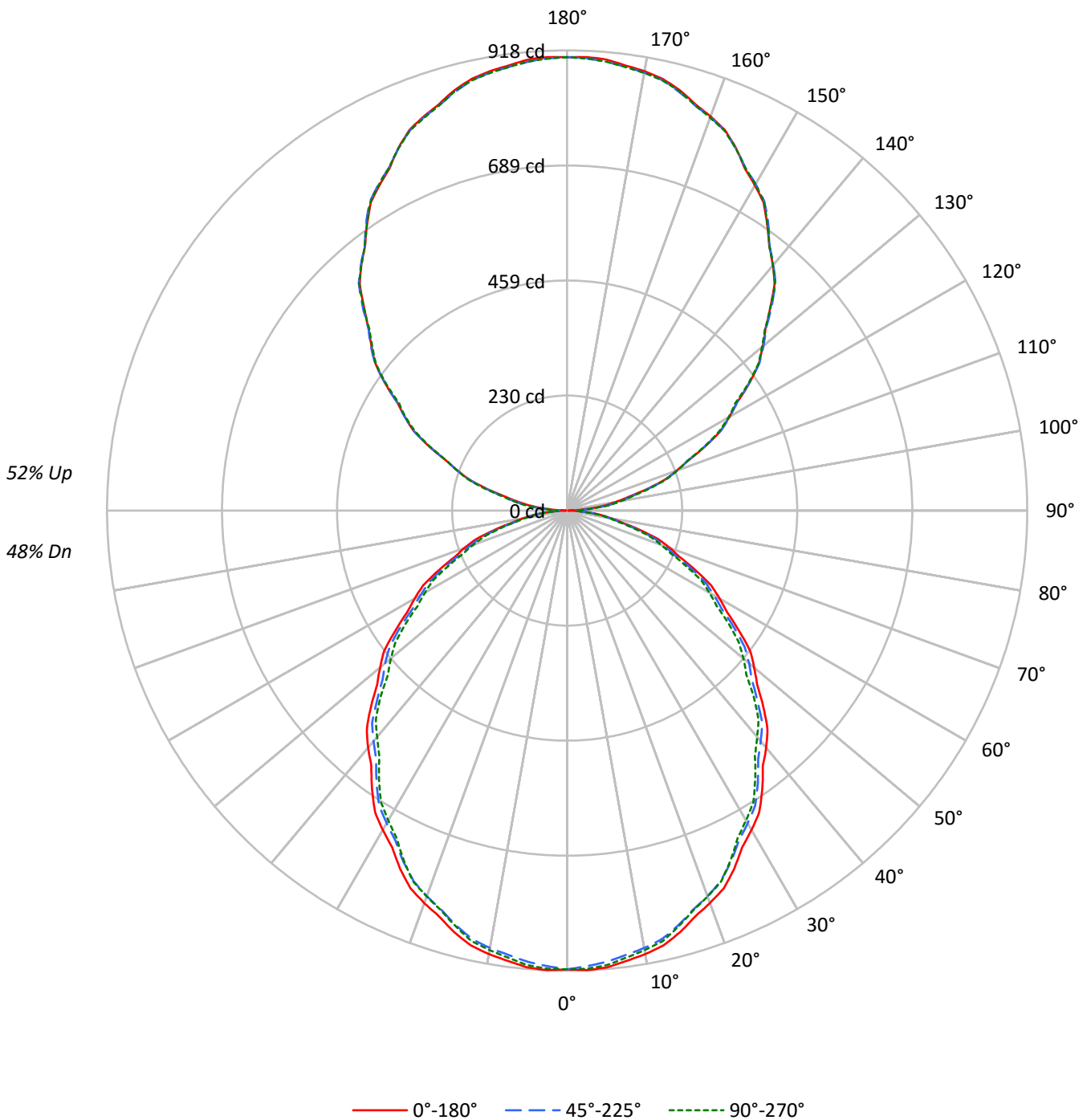
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	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	1.8
10°-20°	242.9	5.0
20°-30°	357.5	7.4
30°-40°	415.6	8.5
40°-50°	415.6	8.5
50°-60°	363.5	7.5
60°-70°	270.0	5.6
70°-80°	153.4	3.2
80°-90°	47.0	1.0
90°-100°	59.7	1.2
100°-110°	176.7	3.6
110°-120°	300.0	6.2
120°-130°	395.5	8.1
130°-140°	444.2	9.1
140°-150°	436.5	9.0
150°-160°	367.1	7.6
160°-170°	244.3	5.0
170°-180°	85.5	1.8
0°-30°	686.6	14.1
0°-40°	1102.1	22.7
0°-60°	1881.3	38.7
0°-90°	2351.6	48.4
90°-120°	536.4	11.0
90°-150°	1812.6	37.3
90°-180°	2510.0	51.6
0°-180°	4861.1	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	5
95°	42	48	53	55	55	47
105°	163	164	166	169	171	173
115°	305	305	304	303	302	301
125°	444	444	444	442	441	396
135°	573	577	577	576	574	443
145°	696	699	700	699	697	435
155°	798	797	797	799	797	367
165°	868	866	865	868	866	245
175°	903	900	899	903	899	86
180°	904	904	904	904	904	



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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°	15.0	17.0	18.9	20.8	22.8	24.2	25.1	25.9	26.9	27.7	28.3
95°	41.9	43.4	44.8	46.2	47.6	48.8	49.9	51.0	52.1	53.2	53.6
97.5°	73.3	74.5	75.6	76.6	77.8	79.0	80.3	81.5	82.8	84.1	84.6
100°	97.9	98.6	99.2	99.8	100.4	101.4	102.8	104.2	105.7	107.1	107.4
102.5°	123.7	123.9	124.1	124.4	124.7	125.5	126.7	128.0	129.2	130.5	131.0
105°	163.0	163.2	163.3	163.4	163.6	164.0	164.7	165.2	165.9	166.5	166.9
107.5°	204.2	204.4	204.6	204.8	205.0	205.2	205.3	205.4	205.5	205.6	205.9
110°	232.2	232.5	232.9	233.2	233.5	233.6	233.4	233.3	233.1	232.9	232.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	261.4	261.4	261.5	261.6	261.6	261.5	261.2	260.9	260.6	260.3	260.3
115°	305.0	305.0	305.0	305.0	305.0	304.8	304.5	304.3	303.9	303.6	303.4
117.5°	346.1	346.3	346.4	346.5	346.7	346.6	346.4	346.2	345.9	345.7	345.2
120°	373.5	374.2	374.8	375.4	376.1	376.1	375.7	375.2	374.8	374.3	373.4
122.5°	402.1	402.4	402.6	402.8	403.1	403.1	402.9	402.7	402.5	402.3	401.7
125°	444.2	444.2	444.2	444.2	444.2	444.1	443.9	443.8	443.7	443.5	443.2
127.5°	482.4	482.9	483.3	483.8	484.3	484.4	484.1	483.9	483.6	483.4	483.1
130°	509.3	509.7	510.2	510.7	511.1	511.3	511.3	511.3	511.3	511.3	511.0
132.5°	536.7	537.1	537.3	537.7	538.1	538.2	538.0	537.9	537.8	537.6	537.3
135°	573.0	573.8	574.8	575.7	576.6	577.1	577.1	577.1	577.1	577.1	576.8
137.5°	612.4	612.8	613.2	613.7	614.2	614.4	614.7	614.9	615.2	615.5	615.0
140°	638.7	638.9	639.3	639.6	639.9	640.1	640.1	640.1	640.1	640.1	639.9
142.5°	662.7	663.1	663.4	663.6	664.0	664.1	663.9	663.8	663.7	663.5	663.5
145°	696.1	696.6	697.3	698.0	698.5	698.9	699.1	699.3	699.4	699.6	699.4
147.5°	729.1	729.8	730.6	731.3	732.1	732.4	732.3	732.1	732.0	731.9	731.7
150°	749.2	749.8	750.5	751.1	751.7	752.1	752.1	752.1	752.1	752.1	752.1
152.5°	768.3	768.6	769.0	769.4	769.8	770.0	770.1	770.2	770.3	770.4	770.8
155°	797.5	797.5	797.5	797.5	797.5	797.4	797.2	797.1	796.9	796.8	797.4
157.5°	822.1	821.8	821.5	821.2	821.0	820.9	820.8	820.8	820.8	820.7	821.1
160°	836.7	836.5	836.3	836.2	836.0	835.8	835.8	835.6	835.4	835.3	835.8
162.5°	850.1	849.7	849.2	848.9	848.5	848.2	848.0	847.9	847.7	847.5	848.4
165°	868.2	867.7	867.2	866.8	866.3	865.9	865.5	865.3	865.0	864.6	865.5
167.5°	881.9	881.4	880.7	880.1	879.4	879.0	879.1	879.1	879.1	879.2	880.1
170°	889.9	889.0	888.3	887.5	886.7	886.4	886.6	886.7	886.8	887.0	888.0
172.5°	895.4	894.8	894.1	893.4	892.8	892.5	892.5	892.6	892.6	892.6	893.7
175°	903.1	902.3	901.5	900.8	900.0	899.6	899.4	899.2	899.1	898.9	900.0
177.5°	905.6	905.0	904.4	903.8	903.1	902.9	902.9	902.9	902.9	902.9	903.7
180°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5



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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°	28.8	29.4	30.0	30.3	30.5	30.7	30.9	31.1
95°	54.1	54.6	55.0	55.2	55.2	55.2	55.2	55.2
97.5°	85.2	85.8	86.3	86.6	86.6	86.6	86.6	86.6
100°	107.6	107.9	108.3	108.4	108.4	108.4	108.4	108.4
102.5°	131.4	131.9	132.2	132.5	132.7	132.8	132.9	133.1
105°	167.4	167.9	168.3	168.8	169.3	169.8	170.2	170.7
107.5°	206.4	206.8	207.3	207.5	207.5	207.5	207.4	207.4
110°	232.3	232.1	231.7	231.8	232.2	232.7	233.2	233.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	260.2	260.1	260.1	260.1	260.2	260.3	260.4	260.5
115°	303.3	303.1	302.9	302.8	302.7	302.6	302.4	302.2
117.5°	344.7	344.1	343.6	343.2	342.9	342.5	342.2	342.0
120°	372.7	371.9	371.2	370.9	371.3	371.6	371.8	372.1
122.5°	401.1	400.7	400.1	399.5	399.0	398.4	397.9	397.4
125°	442.9	442.6	442.2	442.0	441.7	441.3	441.0	440.7
127.5°	482.8	482.5	482.1	481.8	481.6	481.4	481.1	480.9
130°	510.8	510.4	510.1	509.6	509.1	508.4	507.7	507.2
132.5°	537.1	536.8	536.4	536.1	535.9	535.6	535.4	535.2
135°	576.5	576.2	575.9	575.5	575.0	574.6	574.1	573.6
137.5°	614.6	614.3	613.9	613.7	613.8	613.9	614.0	614.1
140°	639.8	639.6	639.4	639.3	639.1	638.9	638.9	638.7
142.5°	663.5	663.5	663.5	663.5	663.4	663.4	663.4	663.3
145°	699.3	699.1	698.9	698.6	698.1	697.7	697.2	696.7
147.5°	731.6	731.5	731.3	731.2	731.0	730.9	730.8	730.6
150°	752.1	752.1	752.1	752.0	751.8	751.6	751.5	751.3
152.5°	771.2	771.6	771.9	771.9	771.6	771.2	770.7	770.3
155°	798.1	798.6	799.3	799.3	798.6	798.1	797.4	796.8
157.5°	821.6	822.1	822.6	822.6	822.0	821.5	821.0	820.4
160°	836.2	836.7	837.2	837.0	836.2	835.4	834.6	833.9
162.5°	849.2	850.1	850.9	850.9	850.2	849.4	848.7	847.8
165°	866.5	867.4	868.4	868.6	867.9	867.2	866.7	866.0
167.5°	881.1	881.9	882.9	882.9	881.9	881.0	880.1	879.0
170°	888.9	889.9	890.8	890.7	889.6	888.5	887.4	886.4
172.5°	894.8	895.8	896.8	896.8	895.7	894.7	893.5	892.5
175°	901.1	902.2	903.2	903.2	902.2	901.1	900.0	898.9
177.5°	904.6	905.4	906.3	906.3	905.2	904.3	903.2	902.3
180°	904.5	904.5	904.5	904.5	904.5	904.5	904.5	904.5

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