

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: P332521-927

Luminaire Tested: **S124DIP-S350D1035U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332521-927
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: S124DIP-S350D1035U927-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3981.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

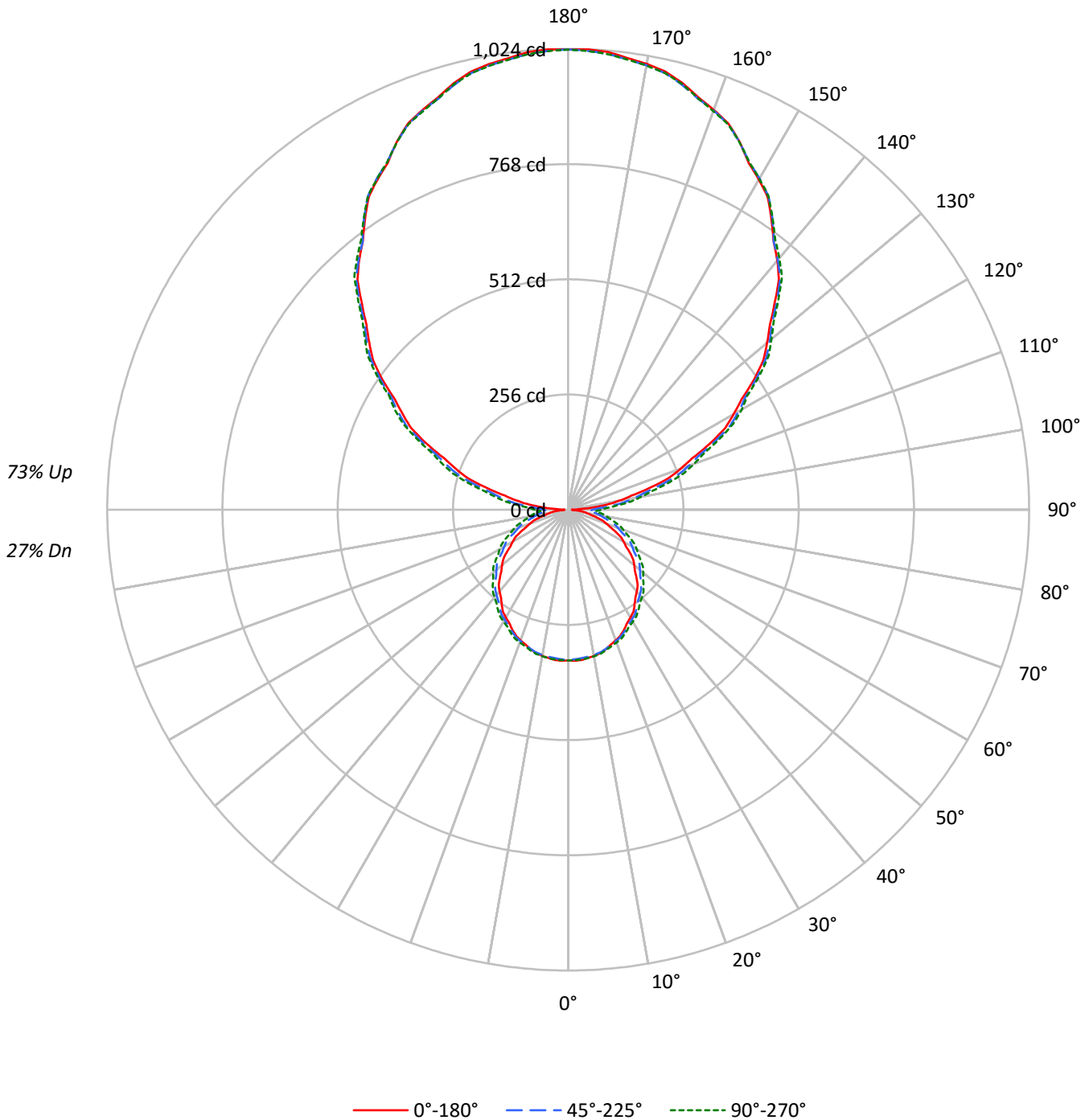
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	70	70	70	52	52	52	35	35	35	27
1	92	88	84	80	82	78	75	72	61	58	56	45	43	42	30	29	28	21
2	83	76	70	65	74	68	63	58	53	49	46	39	36	34	26	24	23	17
3	76	67	59	54	67	60	53	48	46	42	38	34	31	29	23	21	19	14
4	69	59	51	45	61	53	46	41	41	36	32	30	27	24	20	18	17	12
5	63	52	44	38	56	47	40	35	36	32	28	27	24	21	18	16	14	10
6	58	46	39	33	52	42	35	30	33	28	24	24	21	18	16	14	12	9
7	54	42	34	29	48	38	31	26	29	24	21	22	18	16	15	13	11	8
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	11	10	7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	12	10	9	6
10	43	31	24	20	38	28	22	18	22	18	15	17	13	11	11	9	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2704	2704	2704
5°	2712	2641	2650
10°	2694	2599	2596
15°	2670	2549	2535
20°	2635	2494	2475
25°	2594	2432	2408
30°	2549	2370	2340
35°	2498	2307	2280
40°	2458	2247	2218
45°	2398	2191	2164
50°	2348	2128	2108
55°	2296	2068	2042
60°	2214	1991	1982
65°	2125	1909	1908
70°	2018	1816	1820
75°	1867	1712	1743
80°	1701	1613	1665
85°	1489	1525	1621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	0.8
10°-20°	90.8	2.3
20°-30°	137.4	3.5
30°-40°	166.2	4.2
40°-50°	175.7	4.4
50°-60°	165.4	4.2
60°-70°	137.2	3.4
70°-80°	96.4	2.4
80°-90°	57.5	1.4
90°-100°	99.8	2.5
100°-110°	223.7	5.6
110°-120°	355.1	8.9
120°-130°	456.1	11.5
130°-140°	506.0	12.7
140°-150°	494.2	12.4
150°-160°	415.0	10.4
160°-170°	276.1	6.9
170°-180°	96.7	2.4
0°-30°	259.9	6.5
0°-40°	426.1	10.7
0°-60°	767.2	19.3
0°-90°	1058.4	26.6
90°-120°	678.6	17.0
90°-150°	2134.9	53.6
90°-180°	2923.0	73.4
0°-180°	3981.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	335	335	335	335	335	
5°	335	334	331	334	334	32
15°	321	322	321	324	324	90
25°	294	296	297	301	302	135
35°	257	262	266	270	272	161
45°	214	222	229	235	237	166
55°	168	176	187	194	197	150
65°	116	128	141	150	153	115
75°	64	78	94	104	108	69
85°	20	36	52	63	68	21
90°	8	32	54	70	75	7
95°	52	72	93	105	109	57
105°	188	196	213	224	230	199
115°	347	351	361	368	370	342
125°	504	504	512	517	518	449
135°	648	653	656	660	660	501
145°	787	790	791	792	791	492
155°	901	901	901	903	901	415
165°	981	979	977	982	979	276
175°	1021	1017	1016	1021	1016	97
180°	1022	1022	1022	1022	1022	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	336.0	335.8	335.6	335.4	335.3	334.9	334.4	333.8	333.3	332.7	333.2
5°	335.3	334.9	334.7	334.5	334.2	333.8	333.2	332.6	332.1	331.4	332.2
7.5°	332.4	332.2	332.1	331.9	331.8	331.4	331.0	330.5	330.0	329.5	330.3
10°	329.9	329.9	329.8	329.7	329.6	329.4	329.0	328.5	328.1	327.7	328.4
12.5°	326.7	326.6	326.6	326.6	326.6	326.5	326.1	325.9	325.6	325.3	326.0
15°	321.3	321.5	321.5	321.6	321.7	321.6	321.3	321.1	320.8	320.6	321.3
17.5°	314.1	314.3	314.6	314.8	315.1	315.2	315.1	315.1	315.1	315.0	315.8
20°	309.0	309.2	309.5	309.7	310.0	310.1	310.2	310.3	310.4	310.5	311.3
22.5°	303.2	303.6	303.9	304.2	304.5	304.8	304.9	305.1	305.2	305.4	306.2
25°	294.0	294.5	295.0	295.5	296.0	296.4	296.6	296.8	297.1	297.4	298.3
27.5°	283.6	284.4	285.1	285.8	286.5	287.1	287.5	287.9	288.3	288.7	289.5
30°	276.7	277.4	278.1	278.7	279.4	280.0	280.6	281.1	281.8	282.3	283.3
32.5°	269.3	270.1	270.8	271.6	272.4	273.1	273.8	274.4	275.1	275.8	276.8
35°	257.2	258.3	259.2	260.2	261.3	262.1	263.0	263.8	264.7	265.5	266.6
37.5°	245.2	246.3	247.5	248.6	249.8	250.8	251.9	252.9	254.0	255.0	256.2
40°	237.3	238.4	239.6	240.6	241.7	242.8	244.0	245.2	246.3	247.5	248.7
42.5°	228.4	229.6	230.8	232.0	233.2	234.5	235.9	237.3	238.6	240.0	241.4
45°	214.4	216.0	217.6	219.2	220.8	222.4	223.9	225.5	227.1	228.7	230.1
47.5°	201.2	202.9	204.5	206.1	207.7	209.5	211.3	213.2	215.0	216.8	218.2
50°	191.6	193.5	195.3	197.1	198.9	200.7	202.6	204.5	206.3	208.1	209.8
52.5°	182.0	183.9	185.7	187.5	189.3	191.3	193.4	195.5	197.6	199.7	201.4
55°	168.0	169.8	171.5	173.3	175.0	177.1	179.6	182.1	184.6	187.1	188.8
57.5°	152.3	154.5	156.6	158.8	161.0	163.3	165.8	168.3	170.7	173.3	175.2
60°	142.1	144.3	146.5	148.6	150.8	153.2	156.0	158.8	161.4	164.2	166.1
62.5°	132.2	134.6	137.0	139.3	141.6	144.3	146.9	149.7	152.5	155.3	157.2
65°	116.2	118.9	121.6	124.2	126.9	129.7	132.5	135.3	138.2	141.0	143.1
67.5°	100.8	103.7	106.5	109.4	112.2	115.1	118.2	121.2	124.2	127.2	129.4
70°	90.4	93.2	96.0	98.9	101.7	104.7	107.9	111.1	114.2	117.4	119.6
72.5°	80.2	83.1	86.0	88.9	91.7	94.9	98.2	101.6	105.0	108.4	110.5
75°	64.5	67.6	70.7	73.8	76.8	80.1	83.7	87.1	90.6	94.1	96.5
77.5°	49.9	53.2	56.4	59.7	62.9	66.4	70.0	73.8	77.4	81.0	83.4
80°	40.9	44.2	47.5	50.9	54.2	57.7	61.4	65.0	68.7	72.4	74.9
82.5°	31.8	35.3	38.8	42.3	45.7	49.3	53.0	56.6	60.3	64.0	66.5
85°	19.9	23.4	26.9	30.3	33.9	37.5	41.3	45.0	48.7	52.5	55.0
87.5°	11.6	15.4	19.2	22.9	26.7	30.6	34.5	38.4	42.4	46.3	49.0
90°	8.4	13.6	18.9	24.2	29.5	34.5	39.5	44.5	49.5	54.5	58.0
92.5°	22.7	27.8	33.0	38.3	43.5	48.4	52.9	57.5	62.0	66.6	69.6
95°	52.3	56.6	61.0	65.3	69.6	74.1	78.7	83.4	88.1	92.7	95.5
97.5°	87.3	90.9	94.6	98.2	101.8	106.1	110.9	115.7	120.5	125.3	128.2
100°	114.8	117.7	120.6	123.4	126.3	130.2	135.0	139.8	144.7	149.5	152.1
102.5°	143.9	146.1	148.3	150.4	152.7	156.1	160.7	165.3	169.9	174.5	177.2
105°	187.6	189.5	191.3	193.1	195.0	197.8	201.6	205.3	209.1	212.9	215.6
107.5°	234.2	235.8	237.3	238.9	240.5	242.8	245.8	248.8	251.8	254.8	257.5
110°	265.5	267.0	268.5	270.1	271.6	273.7	276.5	279.2	281.9	284.7	286.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	298.1	299.2	300.3	301.4	302.5	304.3	306.8	309.3	311.7	314.2	315.9
115°	347.0	347.8	348.5	349.3	350.0	351.5	353.9	356.2	358.5	360.8	362.4
117.5°	393.4	394.0	394.6	395.2	395.8	397.2	399.4	401.6	403.9	406.2	407.3
120°	424.1	425.1	426.0	427.0	427.9	429.4	431.3	433.1	435.0	436.9	437.7
122.5°	456.4	456.7	457.0	457.3	457.7	458.9	460.9	463.0	465.0	467.0	468.1
125°	503.6	503.5	503.4	503.4	503.3	504.1	506.0	508.0	509.9	511.8	513.0
127.5°	546.7	547.2	547.6	548.0	548.5	549.4	550.6	552.0	553.3	554.6	555.8
130°	576.8	577.2	577.7	578.1	578.5	579.4	580.7	582.1	583.4	584.8	585.9
132.5°	607.8	608.1	608.4	608.6	609.0	609.6	610.5	611.4	612.4	613.3	614.3
135°	648.3	649.4	650.5	651.5	652.5	653.4	653.9	654.5	655.1	655.7	656.7
137.5°	692.9	693.3	693.7	694.2	694.6	695.1	695.6	696.2	696.7	697.3	698.1
140°	722.6	722.9	723.2	723.5	723.7	723.9	724.0	724.1	724.1	724.2	725.2
142.5°	749.6	749.9	750.2	750.6	750.9	751.0	750.8	750.6	750.4	750.2	751.1
145°	787.1	787.7	788.4	789.0	789.6	790.0	790.2	790.4	790.5	790.7	791.0
147.5°	824.4	825.2	826.0	826.7	827.5	827.8	827.7	827.5	827.4	827.3	827.2
150°	847.2	847.9	848.4	849.1	849.7	850.0	850.0	850.0	850.0	850.0	850.0
152.5°	868.4	868.9	869.3	869.7	870.1	870.3	870.4	870.6	870.8	870.8	871.3
155°	901.4	901.4	901.4	901.4	901.4	901.3	901.1	900.9	900.8	900.6	901.3
157.5°	929.2	928.9	928.6	928.3	928.0	927.8	927.7	927.7	927.7	927.6	928.2
160°	945.7	945.5	945.3	945.2	945.0	944.8	944.6	944.4	944.3	944.1	944.6
162.5°	960.8	960.4	960.0	959.5	959.0	958.7	958.5	958.4	958.2	958.0	958.9
165°	981.3	980.7	980.2	979.7	979.1	978.7	978.3	978.0	977.6	977.3	978.3
167.5°	997.0	996.2	995.5	994.7	994.0	993.6	993.6	993.7	993.7	993.8	994.8
170°	1005.8	1004.9	1004.0	1003.1	1002.3	1001.9	1002.1	1002.3	1002.4	1002.6	1003.7
172.5°	1012.1	1011.4	1010.7	1009.9	1009.2	1008.8	1008.8	1008.8	1008.9	1008.9	1010.1
175°	1020.8	1019.9	1019.1	1018.2	1017.3	1016.8	1016.6	1016.4	1016.2	1016.1	1017.3
177.5°	1023.7	1022.9	1022.2	1021.5	1020.8	1020.5	1020.5	1020.5	1020.5	1020.5	1021.4
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	333.7	334.1	334.6	334.8	334.8	334.7	334.6	334.5
5°	332.8	333.4	334.1	334.5	334.4	334.2	334.1	334.1
7.5°	331.1	331.8	332.6	332.9	332.8	332.7	332.6	332.6
10°	329.2	329.9	330.7	331.1	331.0	330.9	330.8	330.7
12.5°	326.7	327.4	328.0	328.4	328.4	328.4	328.4	328.3
15°	322.1	322.8	323.6	323.9	323.8	323.8	323.7	323.6
17.5°	316.5	317.3	318.1	318.4	318.3	318.2	318.2	318.1
20°	312.1	313.0	313.8	314.3	314.3	314.3	314.3	314.3
22.5°	307.0	307.8	308.7	309.2	309.3	309.4	309.6	309.7
25°	299.2	300.1	301.0	301.5	301.6	301.7	301.7	301.8
27.5°	290.3	291.2	292.1	292.6	292.6	292.7	292.8	292.9
30°	284.2	285.1	286.0	286.5	286.7	286.9	287.1	287.2
32.5°	277.8	278.9	280.0	280.6	280.7	280.9	281.1	281.2
35°	267.8	268.9	270.1	270.8	271.1	271.3	271.6	271.9
37.5°	257.4	258.5	259.7	260.5	260.7	260.9	261.3	261.5
40°	250.0	251.2	252.5	253.3	253.6	254.0	254.3	254.6
42.5°	242.7	244.2	245.5	246.4	246.6	246.8	247.2	247.4
45°	231.6	233.0	234.4	235.3	235.8	236.1	236.5	236.9
47.5°	219.8	221.2	222.7	223.6	224.2	224.7	225.1	225.7
50°	211.4	213.1	214.8	215.9	216.3	216.8	217.4	217.9
52.5°	203.0	204.7	206.4	207.5	207.9	208.4	209.0	209.5
55°	190.4	192.1	193.8	194.9	195.4	195.8	196.4	196.9
57.5°	177.2	179.2	181.2	182.4	182.8	183.3	183.8	184.3
60°	168.1	170.0	171.9	173.2	173.9	174.5	175.2	175.9
62.5°	159.1	161.0	162.9	164.2	164.9	165.5	166.2	166.8
65°	145.1	147.3	149.3	150.7	151.4	152.0	152.7	153.4
67.5°	131.5	133.6	135.7	137.1	137.8	138.4	139.0	139.7
70°	121.8	124.1	126.4	127.8	128.3	129.0	129.5	130.1
72.5°	112.7	114.9	117.1	118.5	119.1	119.8	120.5	121.1
75°	98.8	101.1	103.5	105.0	105.8	106.5	107.3	108.0
77.5°	85.8	88.2	90.5	92.1	92.9	93.7	94.5	95.3
80°	77.4	79.9	82.4	84.0	84.6	85.3	86.0	86.6
82.5°	69.1	71.7	74.2	75.9	76.6	77.3	78.1	78.8
85°	57.5	60.0	62.5	64.2	65.0	65.8	66.6	67.5
87.5°	51.6	54.2	56.8	58.5	59.3	60.1	60.9	61.7
90°	61.5	65.0	68.4	70.7	71.7	72.6	73.7	74.7
92.5°	72.6	75.6	78.6	80.5	81.4	82.2	83.1	84.0
95°	98.2	101.1	103.9	105.6	106.3	107.1	107.8	108.6
97.5°	130.9	133.8	136.6	138.4	139.1	139.8	140.5	141.2
100°	154.7	157.2	159.9	161.4	162.1	162.6	163.2	163.8
102.5°	179.9	182.6	185.2	187.0	187.7	188.5	189.3	190.1
105°	218.2	220.8	223.4	225.3	226.5	227.7	228.9	230.0
107.5°	260.0	262.5	265.1	266.6	267.2	267.8	268.3	268.9
110°	287.8	289.4	291.0	292.3	293.5	294.7	295.9	297.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	317.7	319.5	321.3	322.6	323.4	324.1	324.9	325.7
115°	364.1	365.8	367.4	368.4	368.8	369.2	369.7	370.1
117.5°	408.4	409.6	410.7	411.4	411.7	412.0	412.3	412.6
120°	438.5	439.3	440.1	440.9	442.0	443.0	444.0	445.0
122.5°	469.1	470.2	471.3	471.8	471.8	471.7	471.7	471.7
125°	514.3	515.5	516.7	517.5	517.6	517.7	517.8	518.0
127.5°	556.9	558.1	559.2	559.9	560.2	560.5	560.8	561.1
130°	587.1	588.2	589.4	589.9	589.6	589.4	589.2	589.0
132.5°	615.4	616.6	617.6	618.3	618.5	618.7	618.9	619.2
135°	657.7	658.6	659.7	660.1	660.0	660.0	660.0	660.0
137.5°	698.9	699.6	700.4	701.0	701.5	702.0	702.6	703.1
140°	726.0	727.0	727.9	728.4	728.7	729.0	729.2	729.4
142.5°	752.0	753.0	753.8	754.5	754.8	755.1	755.4	755.7
145°	791.4	791.7	792.0	792.1	791.9	791.7	791.5	791.3
147.5°	827.1	827.0	827.0	827.0	827.0	827.1	827.2	827.3
150°	850.0	850.0	850.0	849.9	849.8	849.5	849.4	849.2
152.5°	871.7	872.1	872.6	872.6	872.1	871.6	871.2	870.7
155°	902.1	902.7	903.4	903.4	902.7	902.1	901.3	900.6
157.5°	928.7	929.2	929.8	929.7	929.2	928.5	928.0	927.3
160°	945.2	945.7	946.2	946.0	945.2	944.3	943.4	942.5
162.5°	959.9	960.8	961.8	961.9	961.0	960.1	959.3	958.3
165°	979.5	980.5	981.5	981.7	981.0	980.3	979.6	978.9
167.5°	995.9	997.0	998.0	998.0	996.9	995.8	994.7	993.6
170°	1004.7	1005.8	1006.9	1006.7	1005.5	1004.2	1003.1	1001.8
172.5°	1011.3	1012.5	1013.8	1013.7	1012.5	1011.2	1010.0	1008.8
175°	1018.5	1019.8	1021.0	1021.0	1019.8	1018.5	1017.3	1016.1
177.5°	1022.5	1023.4	1024.5	1024.4	1023.3	1022.1	1021.0	1019.9
180°	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4	1022.4

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