

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: P331896-930

Luminaire Tested: **S123DIP-S340D1025U930-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331896-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D1025U930-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1025 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4045.4 lumens
Efficiency: N/A
Efficacy: 108.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

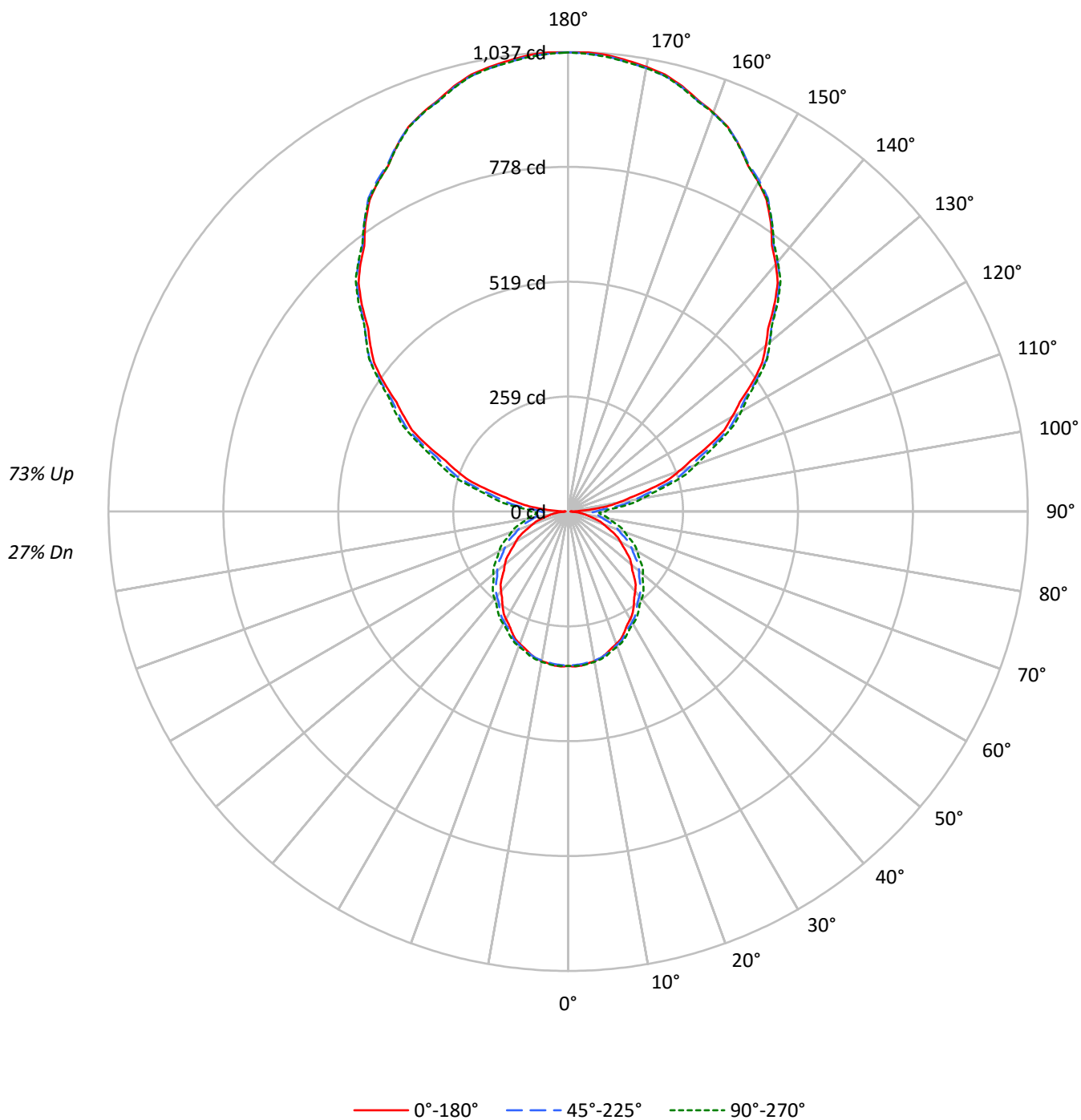
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot



TEST NUMBER: P331896-930

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			
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	11		
6	58	46	39	33	52	42	35	30	33	28	24	24	21	18	16	14	13	9		
7	54	42	34	29	48	38	31	26	29	25	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	25	20	24	20	16	18	15	13	12	10	9	6		
10	43	31	24	20	38	28	22	18	22	18	15	17	14	11	12	9	8	6		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3753	3753	3753
5°	3765	3659	3661
10°	3732	3575	3556
15°	3684	3479	3443
20°	3615	3370	3318
25°	3530	3245	3186
30°	3444	3132	3053
35°	3345	3012	2946
40°	3252	2903	2833
45°	3149	2798	2741
50°	3047	2695	2641
55°	2936	2589	2550
60°	2826	2482	2458
65°	2714	2366	2347
70°	2542	2237	2234
75°	2331	2092	2120
80°	2084	1946	1988
85°	1855	1845	1910

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.1	0.8
10°-20°	94.2	2.3
20°-30°	141.0	3.5
30°-40°	168.3	4.2
40°-50°	176.1	4.4
50°-60°	165.3	4.1
60°-70°	138.0	3.4
70°-80°	98.8	2.4
80°-90°	62.0	1.5
90°-100°	104.5	2.6
100°-110°	229.2	5.7
110°-120°	361.7	8.9
120°-130°	462.3	11.4
130°-140°	512.6	12.7
140°-150°	500.3	12.4
150°-160°	420.4	10.4
160°-170°	279.8	6.9
170°-180°	98.0	2.4
0°-30°	268.3	6.6
0°-40°	436.6	10.8
0°-60°	778.0	19.2
0°-90°	1076.7	26.6
90°-120°	695.3	17.2
90°-150°	2170.5	53.7
90°-180°	2969.0	73.4
0°-180°	4045.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	349	349	349	349	349	
5°	349	348	346	349	349	33
15°	332	333	333	337	337	94
25°	300	304	305	310	310	138
35°	258	264	269	275	276	162
45°	211	220	230	237	240	163
55°	161	174	187	197	201	144
65°	111	126	143	154	158	110
75°	60	78	97	109	114	64
85°	19	38	58	70	74	20
90°	6	33	62	78	84	6
95°	52	73	98	112	117	57
105°	186	198	220	231	236	199
115°	348	355	367	376	379	344
125°	507	510	519	524	523	452
135°	658	662	665	669	669	506
145°	797	798	801	803	801	498
155°	912	912	913	916	911	420
165°	994	991	991	996	990	280
175°	1034	1030	1030	1035	1030	98
180°	1036	1036	1036	1036	1036	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	350.3	350.1	349.8	349.7	349.4	349.1	348.5	348.0	347.5	346.9	347.5
5°	349.1	348.9	348.8	348.6	348.5	348.1	347.6	347.1	346.6	346.1	346.7
7.5°	345.7	345.8	345.8	345.8	345.8	345.6	345.1	344.6	344.1	343.6	344.5
10°	342.7	342.8	343.0	343.2	343.3	343.2	342.8	342.3	341.9	341.5	342.3
12.5°	339.0	339.2	339.5	339.7	340.0	339.9	339.7	339.3	339.1	338.8	339.6
15°	332.4	332.6	332.9	333.1	333.4	333.5	333.4	333.3	333.2	333.1	334.0
17.5°	324.1	324.6	325.1	325.5	326.0	326.3	326.3	326.2	326.2	326.2	326.9
20°	318.0	318.5	318.9	319.5	320.0	320.3	320.5	320.7	320.8	321.0	321.8
22.5°	311.6	312.1	312.6	313.1	313.6	314.0	314.2	314.5	314.7	315.0	315.9
25°	300.1	300.9	301.8	302.6	303.5	304.0	304.3	304.5	304.8	305.1	306.1
27.5°	288.5	289.5	290.5	291.5	292.4	293.2	293.7	294.2	294.8	295.3	296.3
30°	280.4	281.4	282.6	283.6	284.8	285.6	286.3	287.0	287.6	288.4	289.3
32.5°	271.3	272.5	273.7	274.9	276.1	277.2	278.1	279.0	279.9	280.7	281.8
35°	258.3	259.7	261.1	262.4	263.7	265.0	266.0	267.2	268.2	269.4	270.6
37.5°	244.7	246.1	247.7	249.2	250.7	252.2	253.5	254.9	256.2	257.6	259.0
40°	235.5	237.1	238.6	240.1	241.6	243.2	244.9	246.6	248.3	250.0	251.4
42.5°	225.5	227.4	229.2	231.1	232.9	234.7	236.5	238.2	240.0	241.7	243.4
45°	211.2	213.3	215.2	217.3	219.3	221.4	223.5	225.6	227.7	229.8	231.5
47.5°	196.2	198.5	200.8	203.2	205.5	207.8	210.2	212.6	215.0	217.4	219.2
50°	186.5	188.9	191.3	193.6	196.0	198.4	201.1	203.7	206.4	209.0	210.9
52.5°	176.2	178.7	181.2	183.7	186.2	188.9	191.8	194.7	197.5	200.4	202.4
55°	161.1	163.9	166.6	169.4	172.2	175.1	178.1	181.2	184.3	187.3	189.6
57.5°	146.3	149.2	152.1	155.1	157.9	161.1	164.4	167.7	171.0	174.4	176.7
60°	136.0	139.0	142.1	145.1	148.1	151.4	154.9	158.3	161.8	165.3	167.6
62.5°	126.3	129.4	132.5	135.6	138.7	142.1	145.8	149.4	153.1	156.8	159.1
65°	111.3	114.6	117.9	121.2	124.5	128.0	131.7	135.4	139.1	142.8	145.4
67.5°	96.1	99.6	103.1	106.6	110.1	113.7	117.5	121.3	125.1	128.9	131.6
70°	85.4	89.1	92.7	96.4	100.0	103.9	107.9	111.9	116.0	120.0	122.8
72.5°	75.7	79.4	83.0	86.7	90.3	94.2	98.3	102.6	106.7	111.0	113.7
75°	60.4	64.4	68.3	72.3	76.3	80.4	84.6	88.8	93.0	97.3	100.0
77.5°	47.0	51.0	55.0	59.0	63.0	67.2	71.4	75.7	79.9	84.2	87.2
80°	37.6	41.7	45.9	50.1	54.1	58.5	62.8	67.2	71.6	76.0	78.8
82.5°	29.4	33.6	37.8	42.0	46.2	50.5	55.0	59.4	63.9	68.4	71.3
85°	18.6	22.8	27.1	31.3	35.5	39.9	44.4	48.8	53.2	57.7	60.6
87.5°	10.3	14.8	19.4	24.0	28.5	33.2	38.0	42.7	47.5	52.3	55.4
90°	5.8	11.7	17.6	23.6	29.5	35.9	42.5	49.2	55.8	62.5	66.0
92.5°	24.3	29.3	34.2	39.2	44.2	49.4	55.0	60.6	66.2	71.7	75.1
95°	52.2	56.7	61.3	65.9	70.4	75.5	81.1	86.7	92.2	97.8	101.2
97.5°	89.0	92.9	96.9	100.8	104.7	109.1	114.1	119.1	124.1	129.1	132.5
100°	114.1	117.9	121.6	125.5	129.2	133.5	138.4	143.1	147.9	152.7	155.6
102.5°	143.1	146.2	149.3	152.4	155.4	159.5	164.4	169.5	174.5	179.5	182.5
105°	186.1	188.6	190.9	193.3	195.7	199.5	204.8	210.0	215.3	220.5	222.9
107.5°	235.9	237.7	239.7	241.7	243.6	246.6	250.7	254.8	258.9	263.0	265.8
110°	266.8	268.6	270.5	272.4	274.3	277.1	280.9	284.6	288.3	292.0	295.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	299.3	300.8	302.2	303.7	305.2	307.6	310.9	314.2	317.6	320.8	323.8
115°	347.8	349.4	350.9	352.5	354.0	356.1	358.8	361.5	364.1	366.8	369.0
117.5°	396.9	397.9	398.8	399.8	400.8	402.5	404.9	407.2	409.6	412.1	414.0
120°	427.1	428.7	430.2	431.7	433.2	434.9	436.8	438.6	440.5	442.4	444.2
122.5°	459.1	460.1	461.1	462.1	463.1	464.7	466.9	469.0	471.2	473.4	474.8
125°	507.4	507.8	508.4	509.0	509.5	510.9	512.9	515.0	517.1	519.2	520.2
127.5°	552.3	553.3	554.4	555.5	556.5	557.9	559.5	561.2	562.8	564.4	565.1
130°	582.2	583.6	585.0	586.3	587.7	588.9	590.0	591.3	592.4	593.5	594.4
132.5°	611.9	613.3	614.7	616.1	617.6	618.8	619.7	620.7	621.7	622.6	623.3
135°	657.5	658.5	659.5	660.6	661.5	662.4	663.2	663.9	664.6	665.4	666.2
137.5°	699.8	700.6	701.5	702.3	703.1	704.0	705.0	706.0	707.0	708.0	708.6
140°	728.8	729.7	730.6	731.5	732.4	733.0	733.5	733.9	734.3	734.7	735.9
142.5°	755.5	756.3	757.2	758.0	758.8	759.5	759.8	760.2	760.5	760.9	761.9
145°	797.1	797.4	797.7	797.9	798.3	798.7	799.2	799.7	800.3	800.8	801.3
147.5°	833.2	833.9	834.5	835.2	835.8	836.4	836.9	837.4	837.9	838.5	838.6
150°	858.6	859.0	859.3	859.7	860.1	860.4	860.8	861.1	861.5	861.9	861.9
152.5°	879.5	880.0	880.4	880.9	881.4	881.8	882.1	882.2	882.5	882.7	883.0
155°	912.3	912.3	912.3	912.3	912.3	912.4	912.6	912.7	913.0	913.1	913.9
157.5°	940.3	940.1	939.9	939.6	939.5	939.4	939.6	939.7	939.9	940.0	940.8
160°	957.9	957.5	957.2	956.8	956.4	956.3	956.3	956.3	956.3	956.3	957.2
162.5°	973.5	973.0	972.5	972.0	971.5	971.3	971.4	971.6	971.8	971.9	972.8
165°	993.7	993.1	992.6	992.1	991.6	991.2	991.2	991.2	991.2	991.2	992.3
167.5°	1009.8	1009.1	1008.4	1007.6	1006.9	1006.7	1006.8	1006.9	1007.1	1007.2	1008.4
170°	1019.0	1018.2	1017.5	1016.8	1016.0	1015.7	1015.7	1015.7	1015.7	1015.7	1016.9
172.5°	1026.1	1025.4	1024.7	1023.9	1023.2	1022.8	1022.8	1022.8	1022.8	1022.8	1023.9
175°	1033.6	1032.8	1032.1	1031.4	1030.7	1030.3	1030.3	1030.3	1030.3	1030.3	1031.4
177.5°	1036.7	1036.1	1035.5	1034.9	1034.4	1034.0	1034.0	1034.0	1034.0	1034.0	1034.9
180°	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	348.7	348.7	348.7	348.7	348.7	348.7	348.7	348.7
2.5°	348.0	348.5	349.1	349.3	349.3	349.2	349.1	349.0
5°	347.4	348.1	348.8	349.1	349.0	348.9	348.8	348.7
7.5°	345.4	346.2	347.0	347.4	347.3	347.2	347.1	347.0
10°	343.2	344.1	344.9	345.2	345.0	344.9	344.7	344.5
12.5°	340.3	341.1	341.9	342.2	342.0	341.9	341.7	341.5
15°	334.8	335.7	336.6	336.9	336.8	336.7	336.6	336.6
17.5°	327.7	328.5	329.2	329.5	329.4	329.3	329.2	329.1
20°	322.5	323.3	324.1	324.5	324.6	324.7	324.7	324.8
22.5°	316.8	317.8	318.8	319.3	319.2	319.1	319.1	319.0
25°	307.2	308.3	309.4	310.0	310.0	310.0	310.0	310.0
27.5°	297.2	298.2	299.1	299.6	299.7	299.8	299.8	299.9
30°	290.3	291.4	292.4	292.9	292.9	292.9	292.9	292.9
32.5°	282.9	284.0	285.0	285.7	285.9	286.1	286.3	286.5
35°	271.9	273.1	274.4	275.2	275.6	275.9	276.2	276.5
37.5°	260.4	261.9	263.3	264.2	264.4	264.7	265.0	265.2
40°	252.8	254.3	255.7	256.6	256.9	257.3	257.6	258.0
42.5°	244.9	246.5	248.0	249.1	249.6	250.0	250.5	250.9
45°	233.0	234.6	236.3	237.4	238.1	238.7	239.5	240.1
47.5°	221.0	222.9	224.7	225.8	226.3	226.9	227.4	228.0
50°	212.8	214.7	216.7	218.0	218.6	219.2	219.7	220.4
52.5°	204.5	206.4	208.5	209.9	210.6	211.3	212.0	212.7
55°	191.8	194.1	196.4	197.9	198.5	199.3	199.9	200.6
57.5°	179.0	181.2	183.5	185.1	185.9	186.7	187.5	188.3
60°	170.0	172.4	174.7	176.3	177.2	178.2	179.1	180.1
62.5°	161.4	163.8	166.2	167.8	168.7	169.5	170.4	171.3
65°	147.9	150.4	153.0	154.7	155.5	156.4	157.2	158.0
67.5°	134.4	137.1	139.9	141.7	142.4	143.1	143.8	144.5
70°	125.5	128.2	130.9	132.6	133.5	134.3	135.2	136.0
72.5°	116.4	119.2	122.0	123.8	124.7	125.5	126.4	127.2
75°	102.8	105.6	108.4	110.3	111.3	112.3	113.3	114.4
77.5°	90.1	93.0	96.0	97.8	98.6	99.4	100.1	100.9
80°	81.7	84.6	87.5	89.3	90.2	91.0	91.9	92.7
82.5°	74.1	77.0	79.9	81.7	82.6	83.4	84.2	85.1
85°	63.5	66.4	69.2	71.1	71.9	72.8	73.6	74.4
87.5°	58.3	61.3	64.3	66.4	67.3	68.2	69.1	70.0
90°	69.6	73.2	76.8	79.2	80.5	81.6	82.8	84.1
92.5°	78.5	81.9	85.3	87.2	87.8	88.4	88.9	89.5
95°	104.5	107.9	111.2	113.3	114.1	115.0	115.9	116.7
97.5°	135.8	139.2	142.5	144.6	145.4	146.1	146.9	147.7
100°	158.7	161.7	164.6	166.7	168.0	169.2	170.4	171.5
102.5°	185.3	188.3	191.2	193.1	193.8	194.6	195.3	196.2
105°	225.3	227.6	230.0	231.8	232.8	234.0	235.1	236.3
107.5°	268.6	271.5	274.3	276.1	276.5	277.1	277.6	278.1
110°	297.9	300.8	303.7	305.3	305.7	306.0	306.3	306.6

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	326.9	329.8	332.8	334.7	335.3	336.0	336.6	337.4
115°	371.2	373.5	375.7	377.0	377.5	378.0	378.5	379.0
117.5°	416.0	417.9	419.9	420.9	421.1	421.3	421.4	421.6
120°	446.0	447.7	449.5	450.5	450.7	450.9	451.1	451.3
122.5°	476.2	477.7	479.1	479.8	479.9	480.0	480.0	480.1
125°	521.3	522.4	523.3	523.8	523.7	523.6	523.4	523.3
127.5°	565.7	566.4	567.0	567.3	567.0	566.7	566.5	566.2
130°	595.3	596.1	597.0	597.1	596.3	595.6	594.8	594.0
132.5°	623.9	624.6	625.3	625.4	625.0	624.6	624.2	623.8
135°	667.0	667.8	668.5	669.0	669.0	669.1	669.2	669.3
137.5°	709.1	709.7	710.3	710.5	710.2	710.0	709.6	709.4
140°	736.9	738.0	739.2	739.2	738.4	737.6	736.7	735.9
142.5°	762.8	763.8	764.8	764.9	764.3	763.8	763.3	762.7
145°	801.8	802.3	802.8	802.8	802.5	802.1	801.7	801.3
147.5°	838.9	839.0	839.2	838.9	838.1	837.4	836.6	835.8
150°	861.9	861.9	861.9	861.4	860.5	859.6	858.7	857.7
152.5°	883.3	883.5	883.9	883.5	882.6	881.7	880.8	879.9
155°	914.6	915.3	916.0	915.7	914.5	913.2	911.9	910.7
157.5°	941.5	942.2	943.1	942.9	941.9	940.9	939.9	938.8
160°	958.1	959.0	959.9	959.9	959.3	958.5	957.8	957.1
162.5°	973.7	974.6	975.5	975.3	974.2	973.1	971.9	970.8
165°	993.4	994.5	995.6	995.5	994.3	993.0	991.7	990.4
167.5°	1009.4	1010.6	1011.7	1011.7	1010.6	1009.4	1008.4	1007.2
170°	1018.2	1019.5	1020.8	1020.8	1019.5	1018.2	1016.9	1015.7
172.5°	1025.1	1026.2	1027.3	1027.3	1026.0	1024.7	1023.4	1022.1
175°	1032.5	1033.6	1034.7	1034.5	1033.3	1032.0	1030.8	1029.5
177.5°	1035.8	1036.7	1037.5	1037.5	1036.5	1035.4	1034.5	1033.4
180°	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0	1036.0

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