

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: P331510-927

Luminaire Tested: **S122DIW-S485D970U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331510-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S485D970U927-4F0-1E-UDD-D1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 970 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4219.8 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

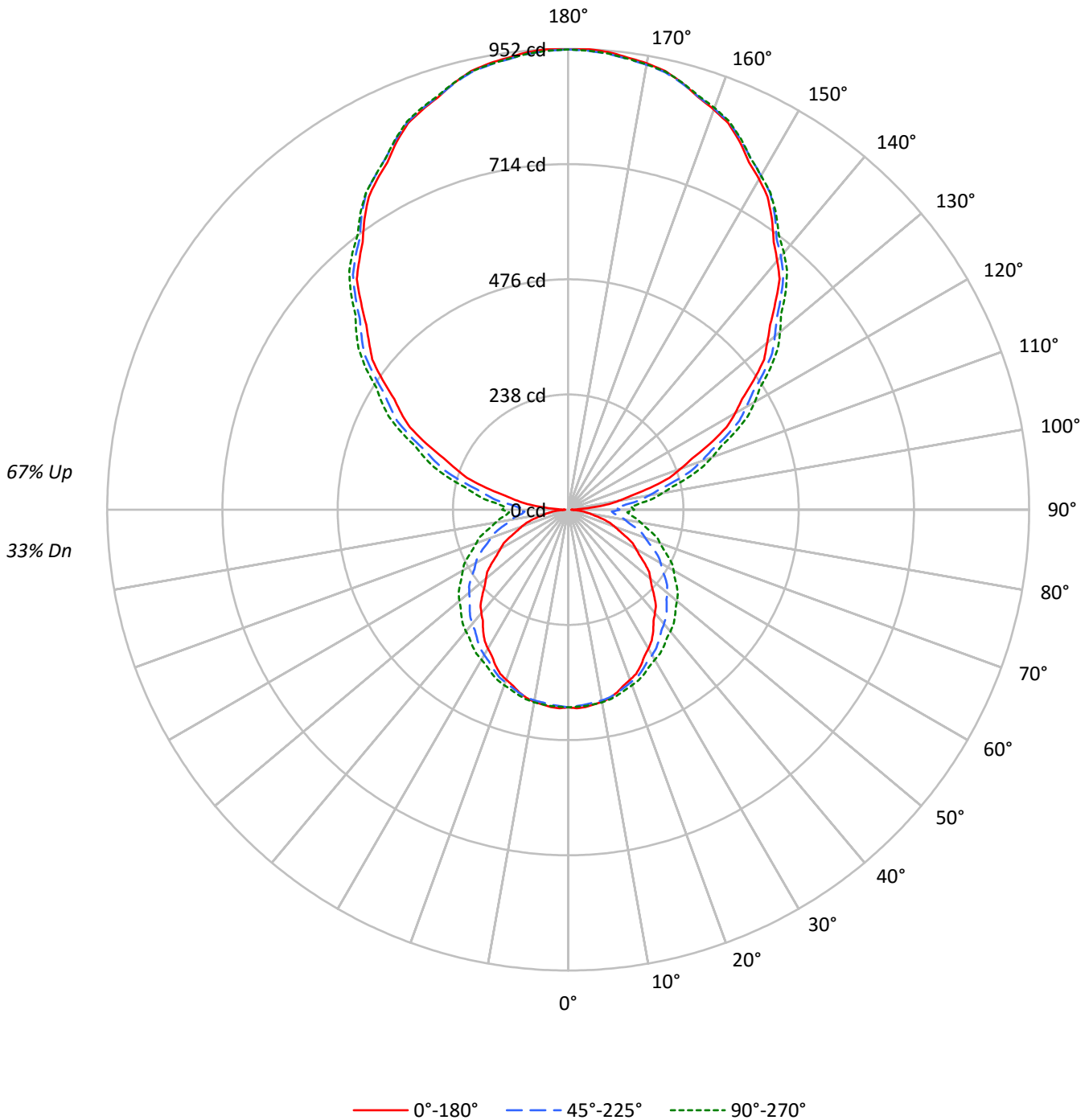
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	93	88	84	80	83	80	76	73	63	61	58	48	46	45	34	33	32	26
2	84	76	70	65	75	69	63	59	55	51	47	42	39	37	29	28	26	21
3	77	67	59	53	68	60	54	49	48	43	39	36	33	30	26	24	22	17
4	70	59	51	45	62	53	46	41	42	37	33	32	29	26	23	20	19	14
5	64	52	44	38	57	47	40	35	38	32	28	29	25	22	20	18	16	12
6	59	47	38	33	52	42	35	30	34	28	24	26	22	19	18	16	14	11
7	54	42	34	28	48	38	31	26	30	25	21	23	20	17	17	14	12	9
8	50	38	30	25	45	34	28	23	28	22	19	21	18	15	15	13	11	8
9	47	34	27	22	42	31	25	20	25	20	17	19	16	13	14	12	10	7
10	43	31	24	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	0.9
10°-20°	110.9	2.6
20°-30°	168.1	4.0
30°-40°	204.7	4.9
40°-50°	220.3	5.2
50°-60°	213.9	5.1
60°-70°	186.8	4.4
70°-80°	143.8	3.4
80°-90°	100.3	2.4
90°-100°	126.7	3.0
100°-110°	235.7	5.6
110°-120°	351.9	8.3
120°-130°	438.5	10.4
130°-140°	479.6	11.4
140°-150°	464.2	11.0
150°-160°	388.3	9.2
160°-170°	257.5	6.1
170°-180°	90.0	2.1
0°-30°	317.7	7.5
0°-40°	522.4	12.4
0°-60°	956.6	22.7
0°-90°	1387.4	32.9
90°-120°	714.3	16.9
90°-150°	2096.6	49.7
90°-180°	2832.0	67.1
0°-180°	4219.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	7	51	106	127	136	6
95°	46	82	119	141	147	52
105°	176	196	227	249	256	186
115°	323	335	360	376	381	320
125°	468	476	492	505	510	418
135°	605	614	621	632	635	467
145°	733	739	744	748	748	458
155°	838	841	843	847	845	386
165°	912	912	912	917	913	257
175°	949	947	945	950	946	90
180°	951	951	951	951	951	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.7	20.0	28.3	36.5	44.8	53.6	62.7	71.9	81.1	90.3	95.6
90°	6.7	16.5	26.2	36.0	45.8	56.8	69.2	81.5	93.9	106.2	111.1
92.5°	19.7	28.4	37.1	45.7	54.4	63.2	72.2	81.3	90.3	99.3	104.6
95°	46.4	54.4	62.3	70.3	78.3	86.4	94.7	102.9	111.1	119.4	124.4
97.5°	80.3	87.5	94.5	101.6	108.6	116.3	124.5	132.8	141.0	149.2	154.2
100°	106.1	112.3	118.6	124.9	131.2	138.3	146.2	154.1	162.0	169.9	174.8
102.5°	132.5	138.1	143.7	149.2	154.9	161.6	169.4	177.2	185.1	192.9	197.8
105°	175.5	179.8	184.2	188.5	192.9	198.6	205.8	213.0	220.2	227.4	232.3
107.5°	219.4	223.2	227.0	230.8	234.6	239.9	246.4	252.9	259.5	266.0	270.6
110°	247.1	250.8	254.4	258.2	261.9	267.0	273.4	279.9	286.3	292.7	296.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	277.9	281.1	284.5	287.7	291.0	295.6	301.7	307.6	313.6	319.6	323.4
115°	323.3	325.8	328.4	330.9	333.4	337.4	342.9	348.6	354.1	359.7	363.5
117.5°	368.0	370.3	372.7	375.1	377.5	380.9	385.4	389.8	394.3	398.8	402.3
120°	398.2	400.1	402.0	404.0	405.9	408.8	412.6	416.5	420.3	424.2	427.9
122.5°	425.7	427.7	429.6	431.5	433.4	436.3	440.3	444.3	448.2	452.2	455.3
125°	468.2	469.8	471.3	473.0	474.6	477.2	480.9	484.6	488.2	491.9	495.0
127.5°	510.0	511.9	513.8	515.7	517.6	520.0	522.8	525.5	528.2	531.0	533.6
130°	536.4	538.5	540.7	542.9	545.1	547.4	549.8	552.2	554.6	557.0	559.8
132.5°	565.9	567.7	569.4	571.2	572.9	574.9	577.1	579.3	581.5	583.7	586.0
135°	604.8	606.7	608.7	610.7	612.6	614.4	616.1	617.7	619.5	621.2	623.7
137.5°	646.3	647.9	649.5	651.1	652.7	653.9	655.0	656.0	657.1	658.1	660.4
140°	671.4	672.9	674.3	675.8	677.2	678.6	679.7	680.9	682.1	683.2	685.3
142.5°	697.0	698.5	700.0	701.5	702.9	704.0	704.6	705.4	706.0	706.6	708.4
145°	733.3	734.6	735.9	737.1	738.4	739.5	740.6	741.6	742.8	743.8	744.7
147.5°	766.3	767.8	769.3	770.7	772.2	773.3	774.0	774.8	775.5	776.2	776.7
150°	788.7	789.8	790.8	791.9	793.0	793.9	794.6	795.4	796.1	796.8	797.3
152.5°	808.7	809.7	810.8	811.8	812.9	813.9	814.8	815.6	816.4	817.3	817.9
155°	838.4	839.0	839.6	840.1	840.6	841.1	841.7	842.2	842.7	843.3	844.1
157.5°	864.0	864.4	864.7	865.1	865.4	865.8	866.1	866.4	866.7	867.0	868.2
160°	879.4	879.7	880.1	880.4	880.8	881.1	881.3	881.5	881.6	881.8	882.9
162.5°	893.5	893.6	893.7	893.7	893.8	893.9	894.1	894.3	894.5	894.6	895.9
165°	912.3	912.1	912.0	911.7	911.6	911.5	911.5	911.5	911.5	911.5	912.8
167.5°	928.0	927.5	926.9	926.4	925.9	925.6	925.6	925.5	925.5	925.4	926.7
170°	936.4	935.8	935.3	934.8	934.2	933.9	933.7	933.5	933.3	933.2	934.4
172.5°	942.1	941.6	941.0	940.6	940.0	939.6	939.4	939.3	939.1	938.9	940.2
175°	949.2	948.6	948.2	947.6	947.1	946.6	946.3	945.9	945.5	945.2	946.4
177.5°	952.1	951.6	951.3	950.8	950.4	950.0	949.7	949.4	949.2	948.9	949.7
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	100.9	106.2	111.5	115.0	116.8	118.4	120.2	121.9
90°	116.0	120.9	125.8	129.1	130.9	132.6	134.4	136.2
92.5°	109.8	115.0	120.3	123.7	125.2	126.9	128.5	130.2
95°	129.4	134.4	139.3	142.5	143.7	144.9	146.2	147.3
97.5°	159.0	163.9	168.7	171.9	173.4	175.0	176.5	178.0
100°	179.6	184.5	189.3	192.4	193.7	195.0	196.2	197.5
102.5°	202.7	207.6	212.5	215.6	216.8	218.1	219.4	220.6
105°	237.3	242.2	247.2	250.4	251.9	253.3	254.8	256.2
107.5°	275.1	279.7	284.3	286.8	287.5	288.1	288.8	289.4
110°	301.1	305.3	309.6	312.1	313.0	313.9	314.8	315.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	327.2	330.9	334.7	337.2	338.2	339.2	340.2	341.4
115°	367.2	371.0	374.7	377.1	378.0	378.9	379.8	380.7
117.5°	405.7	409.2	412.6	414.8	415.6	416.4	417.2	418.0
120°	431.5	435.2	438.9	441.2	442.1	443.0	443.9	444.8
122.5°	458.4	461.6	464.8	466.8	467.5	468.4	469.3	470.1
125°	498.0	501.0	504.0	506.0	507.0	507.9	509.0	510.0
127.5°	536.2	538.8	541.5	543.0	543.7	544.2	544.8	545.4
130°	562.6	565.4	568.2	569.8	570.1	570.5	570.8	571.2
132.5°	588.3	590.5	592.8	594.1	594.6	595.1	595.6	596.0
135°	626.3	628.8	631.4	633.0	633.5	634.1	634.5	635.1
137.5°	662.7	665.0	667.3	668.4	668.7	668.8	669.0	669.2
140°	687.4	689.5	691.6	692.7	692.8	692.8	692.9	693.0
142.5°	710.3	712.1	713.9	714.9	714.8	714.8	714.8	714.7
145°	745.8	746.7	747.7	748.1	748.1	748.0	748.0	747.9
147.5°	777.2	777.7	778.2	778.2	777.9	777.5	777.2	776.8
150°	797.8	798.4	798.9	798.9	798.4	797.8	797.3	796.8
152.5°	818.6	819.4	820.0	820.0	819.4	818.6	817.9	817.3
155°	845.1	846.0	846.8	847.0	846.5	846.0	845.4	844.9
157.5°	869.5	870.7	871.9	872.0	871.2	870.4	869.5	868.6
160°	883.9	885.0	886.1	886.3	885.6	884.9	884.2	883.4
162.5°	897.1	898.3	899.5	899.7	898.8	897.9	897.1	896.3
165°	914.0	915.2	916.5	916.6	915.8	914.9	914.0	913.1
167.5°	928.0	929.2	930.4	930.6	929.7	928.8	927.8	926.9
170°	935.6	936.9	938.2	938.3	937.2	936.1	935.0	934.0
172.5°	941.4	942.7	943.9	944.0	942.9	941.9	940.8	939.8
175°	947.7	949.0	950.1	950.3	949.2	948.2	947.1	946.0
177.5°	950.6	951.4	952.3	952.3	951.4	950.6	949.7	948.9
180°	950.8	950.8	950.8	950.8	950.8	950.8	950.8	950.8

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