

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: P331795-930

Luminaire Tested: **S122RDIW-S485D970U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331795-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S485D970U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 970 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4541.6 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

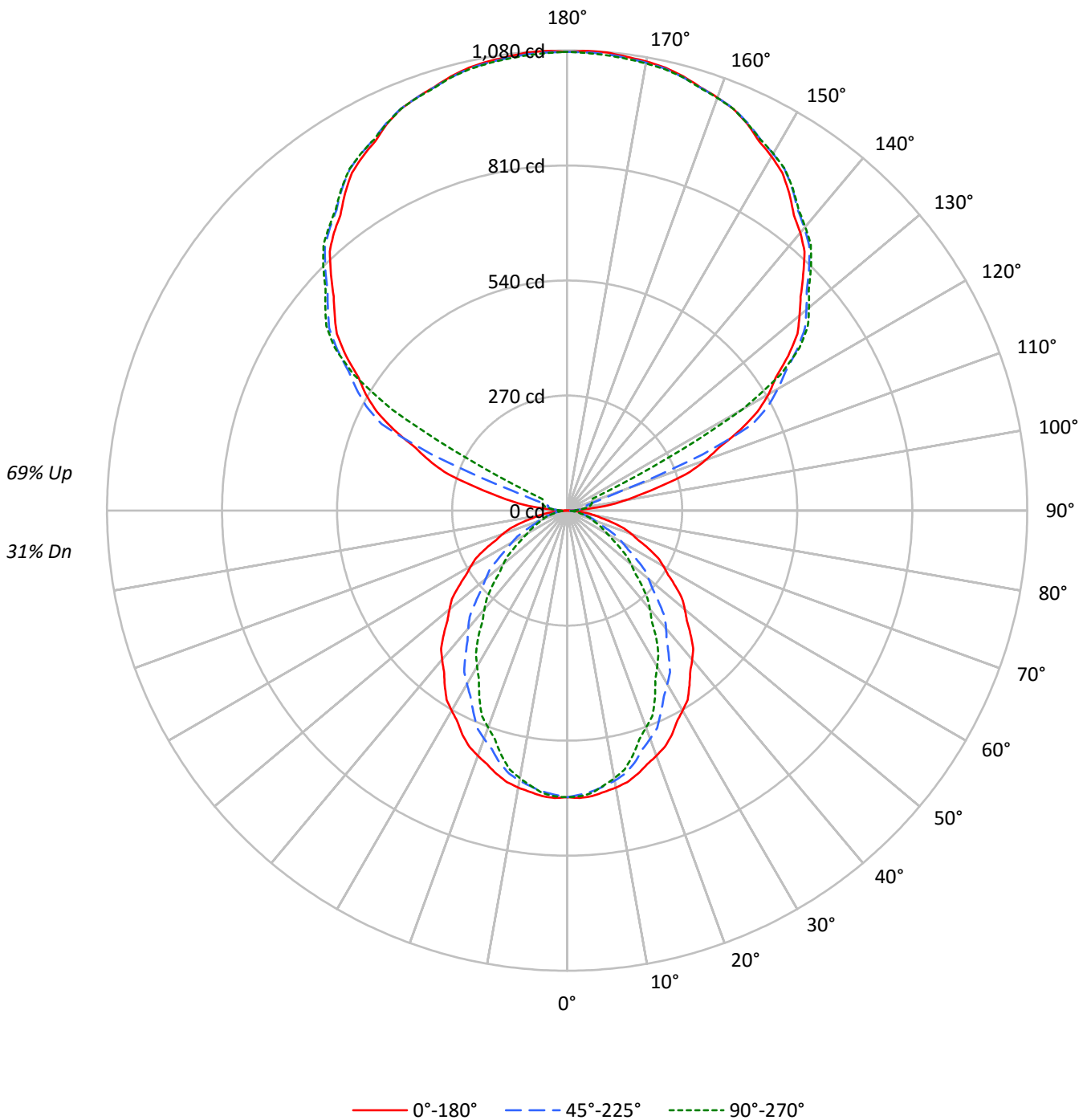
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	103	103	103	92	92	92	92	73	73	73	55	55	55	38	38	38	31
1	94	90	86	83	84	81	78	75	64	62	60	48	47	46	34	33	33	26
2	86	79	73	68	77	71	66	62	56	53	50	43	41	39	30	29	28	22
3	78	69	62	57	70	63	57	52	50	46	42	38	35	33	27	26	24	19
4	72	61	54	48	64	55	49	44	44	40	36	34	31	29	24	23	21	17
5	66	55	47	41	59	50	43	38	40	35	31	31	27	25	22	20	19	15
6	61	49	41	36	54	44	38	33	36	31	27	28	24	22	20	18	16	13
7	56	44	37	31	50	40	34	29	32	28	24	25	22	19	19	16	15	12
8	52	40	33	28	47	36	30	26	30	25	21	23	20	17	17	15	13	11
9	48	37	29	25	43	33	27	23	27	22	19	21	18	16	16	14	12	10
10	45	33	27	22	40	31	24	20	25	20	17	20	16	14	15	12	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10863	10863	10863
5°	10904	10728	10786
10°	10822	10552	10462
15°	10696	10238	9944
20°	10524	9792	9301
25°	10349	9285	8678
30°	10103	8764	7879
35°	9865	8198	7177
40°	9624	7611	6365
45°	9344	6951	5631
50°	9053	6285	4908
55°	8757	5571	4217
60°	8415	4818	3500
65°	8027	4046	3186
70°	7558	3333	2932
75°	6987	3038	2739
80°	6174	2715	2492
85°	4854	2149	2149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	1.4
10°-20°	172.9	3.8
20°-30°	242.8	5.3
30°-40°	264.8	5.8
40°-50°	243.5	5.4
50°-60°	191.2	4.2
60°-70°	124.7	2.7
70°-80°	64.3	1.4
80°-90°	19.3	0.4
90°-100°	35.9	0.8
100°-110°	131.7	2.9
110°-120°	352.0	7.8
120°-130°	581.1	12.8
130°-140°	618.0	13.6
140°-150°	574.4	12.6
150°-160°	461.8	10.2
160°-170°	297.6	6.6
170°-180°	102.4	2.3
0°-30°	478.7	10.5
0°-40°	743.5	16.4
0°-60°	1178.2	25.9
0°-90°	1386.5	30.5
90°-120°	519.7	11.4
90°-150°	2293.2	50.5
90°-180°	3155.0	69.5
0°-180°	4541.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	673	673	673	673	673	
5°	673	670	662	667	666	64
15°	640	632	612	601	595	180
25°	581	560	521	497	487	267
35°	500	468	416	379	364	313
45°	409	367	304	263	247	316
55°	311	263	198	163	150	278
65°	210	160	106	86	83	208
75°	112	71	49	45	44	119
85°	26	14	12	12	12	31
90°	1	9	16	19	21	3
95°	51	27	30	34	34	62
105°	237	247	48	56	59	253
115°	448	462	481	137	64	441
125°	633	644	658	664	666	565
135°	784	796	803	810	809	605
145°	909	909	922	927	923	568
155°	1001	995	1003	1007	1002	461
165°	1055	1051	1052	1057	1052	298
175°	1079	1074	1075	1080	1073	103
180°	1077	1077	1077	1077	1077	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	675.2	674.7	674.2	673.6	673.1	672.2	671.1	669.8	668.6	667.5	668.5
5°	672.8	672.1	671.5	670.8	670.1	668.9	667.2	665.4	663.7	661.9	663.1
7.5°	665.9	665.0	664.2	663.3	662.5	661.0	659.0	657.0	654.9	652.9	653.2
10°	660.1	659.1	658.1	657.2	656.2	654.4	651.8	649.0	646.3	643.6	643.2
12.5°	652.7	651.6	650.4	649.2	648.1	645.8	642.3	638.9	635.4	631.9	631.2
15°	639.9	638.5	637.0	635.4	634.0	631.0	626.3	621.7	617.2	612.5	610.0
17.5°	624.3	622.0	619.7	617.4	615.1	611.1	605.2	599.2	593.4	587.4	584.4
20°	612.5	609.8	607.2	604.5	601.7	597.0	590.2	583.4	576.7	569.9	566.6
22.5°	599.9	596.9	593.8	590.8	587.7	582.4	574.8	567.1	559.5	551.9	547.6
25°	580.9	576.6	572.3	567.9	563.5	556.9	548.0	539.1	530.1	521.2	515.7
27.5°	558.0	553.3	548.5	543.9	539.2	531.7	521.7	511.6	501.6	491.5	485.0
30°	541.9	536.8	531.7	526.5	521.4	513.4	502.6	491.7	480.9	470.1	463.2
32.5°	526.4	520.3	514.3	508.3	502.3	493.7	482.7	471.7	460.6	449.6	441.7
35°	500.5	493.6	486.7	479.8	472.9	463.5	451.6	439.7	427.8	415.9	407.3
37.5°	474.7	467.1	459.5	451.9	444.4	434.2	421.6	408.9	396.2	383.5	374.1
40°	456.6	448.6	440.4	432.4	424.2	413.6	400.5	387.3	374.2	361.1	351.5
42.5°	438.1	429.6	421.0	412.5	404.0	392.9	379.4	365.7	352.2	338.7	328.7
45°	409.2	400.1	391.0	382.0	372.9	361.3	347.1	332.9	318.6	304.4	294.8
47.5°	380.9	371.3	361.7	352.1	342.5	330.4	315.7	301.0	286.3	271.7	262.1
50°	360.4	350.8	341.3	331.7	322.0	309.8	294.9	280.1	265.1	250.2	240.9
52.5°	340.5	330.4	320.4	310.4	300.4	288.0	273.5	258.9	244.3	229.8	220.8
55°	311.1	300.6	290.0	279.5	269.0	256.3	241.7	227.1	212.5	197.9	189.8
57.5°	281.0	270.3	259.4	248.6	237.7	225.3	211.3	197.2	183.2	169.2	161.7
60°	260.6	249.8	239.0	228.1	217.3	205.0	191.0	177.1	163.1	149.2	142.3
62.5°	240.6	229.8	219.0	208.1	197.3	185.3	172.0	158.7	145.4	132.2	125.6
65°	210.1	199.1	188.2	177.2	166.2	154.7	142.5	130.3	118.1	105.9	101.3
67.5°	180.6	169.7	158.8	148.0	137.1	126.1	115.2	104.3	93.3	82.3	80.2
70°	160.1	149.6	139.0	128.5	117.9	107.9	98.7	89.3	80.0	70.6	69.3
72.5°	140.6	130.5	120.4	110.3	100.2	91.4	83.9	76.4	68.9	61.4	60.3
75°	112.0	102.6	93.1	83.6	74.1	67.1	62.5	57.9	53.3	48.7	47.8
77.5°	83.9	75.6	67.3	58.9	50.7	45.4	43.2	41.0	38.7	36.5	36.0
80°	66.4	59.4	52.6	45.7	38.7	34.7	33.3	32.0	30.6	29.2	28.7
82.5°	50.3	44.9	39.5	34.2	28.8	25.6	24.7	23.7	22.8	21.9	21.6
85°	26.2	23.3	20.5	17.7	14.8	13.2	12.8	12.4	12.0	11.6	11.6
87.5°	8.0	7.5	7.0	6.5	6.0	5.9	6.2	6.4	6.8	7.0	7.1
90°	0.8	2.7	4.6	6.5	8.4	10.0	11.4	12.8	14.2	15.6	16.5
92.5°	15.7	15.6	15.4	15.2	15.1	15.3	16.0	16.7	17.4	18.1	18.5
95°	50.6	44.9	39.2	33.5	27.8	25.5	26.7	28.0	29.2	30.4	31.2
97.5°	100.5	84.4	68.3	52.2	36.1	29.4	32.3	35.1	37.8	40.7	41.3
100°	137.9	114.1	90.4	66.8	43.0	32.6	35.5	38.5	41.5	44.4	45.8
102.5°	179.0	174.0	169.0	164.0	158.9	144.1	119.5	94.9	70.3	45.7	47.5
105°	236.8	242.1	247.2	252.4	257.6	236.6	189.3	142.0	94.8	47.5	49.4
107.5°	302.7	307.0	311.1	315.3	319.5	293.3	236.6	179.9	123.2	66.5	64.6
110°	345.1	348.8	352.4	356.0	359.6	336.5	286.4	236.4	186.4	136.3	119.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	385.0	388.2	391.4	394.7	397.9	393.3	381.0	368.6	356.2	343.9	280.7
115°	447.9	450.9	453.9	456.8	459.7	463.3	467.7	472.0	476.4	480.7	400.5
117.5°	504.2	507.5	510.8	514.0	517.4	520.5	523.5	526.4	529.5	532.4	513.0
120°	545.4	548.0	550.5	553.1	555.7	558.6	561.7	564.8	567.9	571.0	573.2
122.5°	580.2	582.9	585.7	588.4	591.2	594.3	597.6	601.0	604.4	607.8	609.0
125°	633.3	635.6	637.9	640.1	642.4	645.1	648.4	651.8	655.0	658.3	659.5
127.5°	681.5	684.0	686.5	689.0	691.5	694.0	696.4	698.9	701.3	703.8	705.6
130°	712.1	714.9	717.6	720.3	723.1	725.5	727.3	729.3	731.2	733.1	735.0
132.5°	743.2	745.6	748.0	750.2	752.6	754.7	756.7	758.6	760.4	762.4	764.0
135°	783.7	786.5	789.3	792.1	794.8	797.0	798.5	800.1	801.6	803.2	804.9
137.5°	824.7	826.6	828.6	830.5	832.4	834.3	836.1	837.8	839.6	841.4	843.1
140°	851.5	852.9	854.3	855.7	857.0	858.7	860.5	862.5	864.4	866.3	867.9
142.5°	873.9	875.1	876.4	877.7	878.9	880.6	882.8	885.0	887.2	889.3	890.8
145°	909.1	909.0	908.8	908.7	908.5	909.9	912.8	915.7	918.7	921.6	922.8
147.5°	939.9	939.1	938.5	937.8	937.2	938.3	941.3	944.1	947.1	950.0	950.9
150°	959.8	958.5	957.3	956.2	955.0	955.7	958.5	961.2	964.0	966.8	967.8
152.5°	976.6	975.3	973.9	972.6	971.2	971.8	974.4	977.1	979.7	982.4	983.4
155°	1001.1	999.5	997.9	996.4	994.8	995.1	997.2	999.2	1001.4	1003.4	1004.4
157.5°	1020.3	1019.0	1017.6	1016.3	1015.0	1015.0	1016.5	1018.0	1019.4	1020.8	1022.1
160°	1031.4	1030.5	1029.4	1028.3	1027.3	1027.3	1028.3	1029.4	1030.5	1031.4	1032.5
162.5°	1041.5	1040.4	1039.3	1038.3	1037.3	1037.2	1038.1	1039.0	1039.9	1040.8	1042.0
165°	1054.8	1053.8	1052.7	1051.7	1050.7	1050.4	1050.9	1051.4	1052.0	1052.5	1053.7
167.5°	1064.8	1063.7	1062.7	1061.7	1060.6	1060.4	1060.9	1061.4	1061.8	1062.3	1063.5
170°	1070.4	1069.3	1068.4	1067.3	1066.2	1065.9	1066.2	1066.6	1067.0	1067.3	1068.5
172.5°	1074.2	1073.1	1072.0	1071.1	1070.0	1069.7	1070.0	1070.3	1070.7	1071.1	1072.3
175°	1079.0	1077.7	1076.5	1075.4	1074.2	1073.7	1074.1	1074.4	1074.7	1075.1	1076.3
177.5°	1079.8	1078.8	1077.8	1076.8	1075.9	1075.5	1075.6	1075.7	1075.9	1076.0	1077.0
180°	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	672.8	672.8	672.8	672.8	672.8	672.8	672.8	672.8
2.5°	669.6	670.7	671.8	672.2	672.1	671.8	671.6	671.4
5°	664.3	665.5	666.8	667.2	666.8	666.3	665.9	665.5
7.5°	653.5	653.9	654.3	654.1	653.4	652.6	652.0	651.3
10°	642.8	642.4	642.0	641.4	640.6	639.8	639.0	638.1
12.5°	630.5	629.7	629.0	627.9	626.6	625.3	623.9	622.6
15°	607.4	604.9	602.3	600.3	598.9	597.6	596.2	594.9
17.5°	581.3	578.3	575.2	572.5	570.2	567.9	565.6	563.2
20°	563.1	559.8	556.4	553.2	550.2	547.2	544.3	541.3
22.5°	543.2	538.8	534.5	531.2	529.0	526.8	524.6	522.3
25°	510.1	504.6	499.0	495.2	493.2	491.1	489.2	487.1
27.5°	478.6	472.1	465.6	460.8	457.5	454.4	451.1	447.9
30°	456.2	449.4	442.5	437.2	433.5	429.9	426.2	422.6
32.5°	433.8	426.0	418.1	412.5	409.0	405.6	402.1	398.7
35°	398.8	390.3	381.8	376.0	373.1	370.1	367.1	364.1
37.5°	364.7	355.3	345.9	339.5	336.1	332.7	329.3	325.9
40°	341.9	332.2	322.6	316.1	312.6	309.1	305.5	302.0
42.5°	318.8	308.8	299.0	292.3	288.9	285.4	282.0	278.6
45°	285.2	275.7	266.0	259.6	256.3	253.1	249.8	246.6
47.5°	252.6	243.0	233.5	227.2	224.3	221.4	218.3	215.4
50°	231.5	222.3	212.9	206.8	204.0	201.1	198.3	195.4
52.5°	211.7	202.8	193.7	187.9	185.3	182.7	180.0	177.4
55°	181.6	173.5	165.4	160.0	157.5	154.9	152.4	149.8
57.5°	154.3	146.8	139.4	134.6	132.4	130.3	128.1	125.9
60°	135.3	128.5	121.6	117.1	114.9	112.7	110.6	108.4
62.5°	119.0	112.4	105.8	101.9	100.6	99.3	98.0	96.7
65°	96.8	92.1	87.6	85.0	84.6	84.2	83.8	83.4
67.5°	78.1	76.0	73.9	72.6	72.2	71.7	71.3	70.8
70°	67.9	66.6	65.2	64.2	63.8	63.2	62.6	62.1
72.5°	59.1	58.0	56.8	56.1	55.8	55.4	55.1	54.8
75°	46.8	45.9	44.9	44.4	44.3	44.1	43.9	43.9
77.5°	35.5	34.9	34.4	34.0	33.8	33.6	33.3	33.1
80°	28.1	27.6	27.1	26.8	26.8	26.8	26.8	26.8
82.5°	21.3	21.0	20.6	20.5	20.5	20.5	20.5	20.5
85°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
87.5°	7.2	7.2	7.3	7.3	7.4	7.5	7.6	7.6
90°	17.3	18.2	19.1	19.6	20.0	20.3	20.7	21.0
92.5°	19.0	19.4	19.9	20.2	20.4	20.6	20.8	21.0
95°	32.1	33.0	33.8	34.2	34.0	33.8	33.7	33.5
97.5°	42.1	42.7	43.5	43.9	44.1	44.3	44.5	44.7
100°	47.2	48.6	50.0	50.8	51.1	51.5	51.9	52.2
102.5°	49.2	51.0	52.8	54.0	54.5	55.0	55.4	55.9
105°	51.4	53.2	55.1	56.4	57.2	57.8	58.5	59.2
107.5°	62.6	60.7	58.8	58.1	58.9	59.5	60.3	60.9
110°	101.7	84.4	67.1	58.8	59.4	60.2	60.8	61.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	217.5	154.4	91.2	59.9	60.5	61.1	61.6	62.2
115°	320.3	240.2	160.0	113.7	101.3	88.8	76.3	63.9
117.5°	493.6	474.3	454.9	424.7	383.7	342.8	301.8	260.8
120°	575.2	577.2	579.4	568.7	545.4	522.0	498.6	475.2
122.5°	610.3	611.6	612.8	611.1	606.6	602.1	597.5	593.0
125°	660.7	661.9	663.2	664.0	664.6	665.0	665.5	666.1
127.5°	707.4	709.1	710.9	711.8	711.9	712.0	712.1	712.2
130°	736.9	738.8	740.7	741.6	741.4	741.2	741.0	740.9
132.5°	765.6	767.3	768.9	769.6	769.4	769.2	769.1	768.9
135°	806.7	808.4	810.1	810.8	810.5	810.1	809.8	809.4
137.5°	844.7	846.4	848.2	848.7	848.2	847.5	846.9	846.4
140°	869.4	871.0	872.5	872.9	872.0	871.1	870.3	869.4
142.5°	892.2	893.6	895.0	895.3	894.5	893.6	892.8	891.9
145°	924.1	925.3	926.4	926.7	925.8	924.9	924.1	923.2
147.5°	951.8	952.7	953.6	953.7	952.9	952.2	951.5	950.7
150°	968.9	969.9	970.9	971.0	970.2	969.3	968.4	967.6
152.5°	984.5	985.5	986.5	986.5	985.4	984.2	983.1	981.9
155°	1005.5	1006.5	1007.5	1007.4	1006.0	1004.6	1003.2	1001.8
157.5°	1023.2	1024.4	1025.6	1025.5	1024.1	1022.8	1021.4	1020.1
160°	1033.6	1034.5	1035.6	1035.5	1034.3	1033.1	1031.9	1030.7
162.5°	1043.2	1044.3	1045.5	1045.4	1043.8	1042.4	1040.9	1039.4
165°	1054.9	1056.1	1057.4	1057.4	1056.1	1054.9	1053.7	1052.5
167.5°	1064.7	1065.9	1067.1	1067.0	1065.4	1063.9	1062.3	1060.8
170°	1069.8	1070.9	1072.1	1072.0	1070.4	1068.9	1067.3	1065.8
172.5°	1073.4	1074.6	1075.9	1075.7	1074.2	1072.6	1071.1	1069.5
175°	1077.5	1078.7	1079.9	1079.7	1077.9	1076.2	1074.5	1072.8
177.5°	1078.0	1078.9	1079.9	1079.8	1078.5	1077.3	1076.0	1074.8
180°	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6	1076.6

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