

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: P331512-830

Luminaire Tested: **S122DIW-S485D970U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331512-830
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-S485D970U830-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH 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: 5030.2 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Indirect

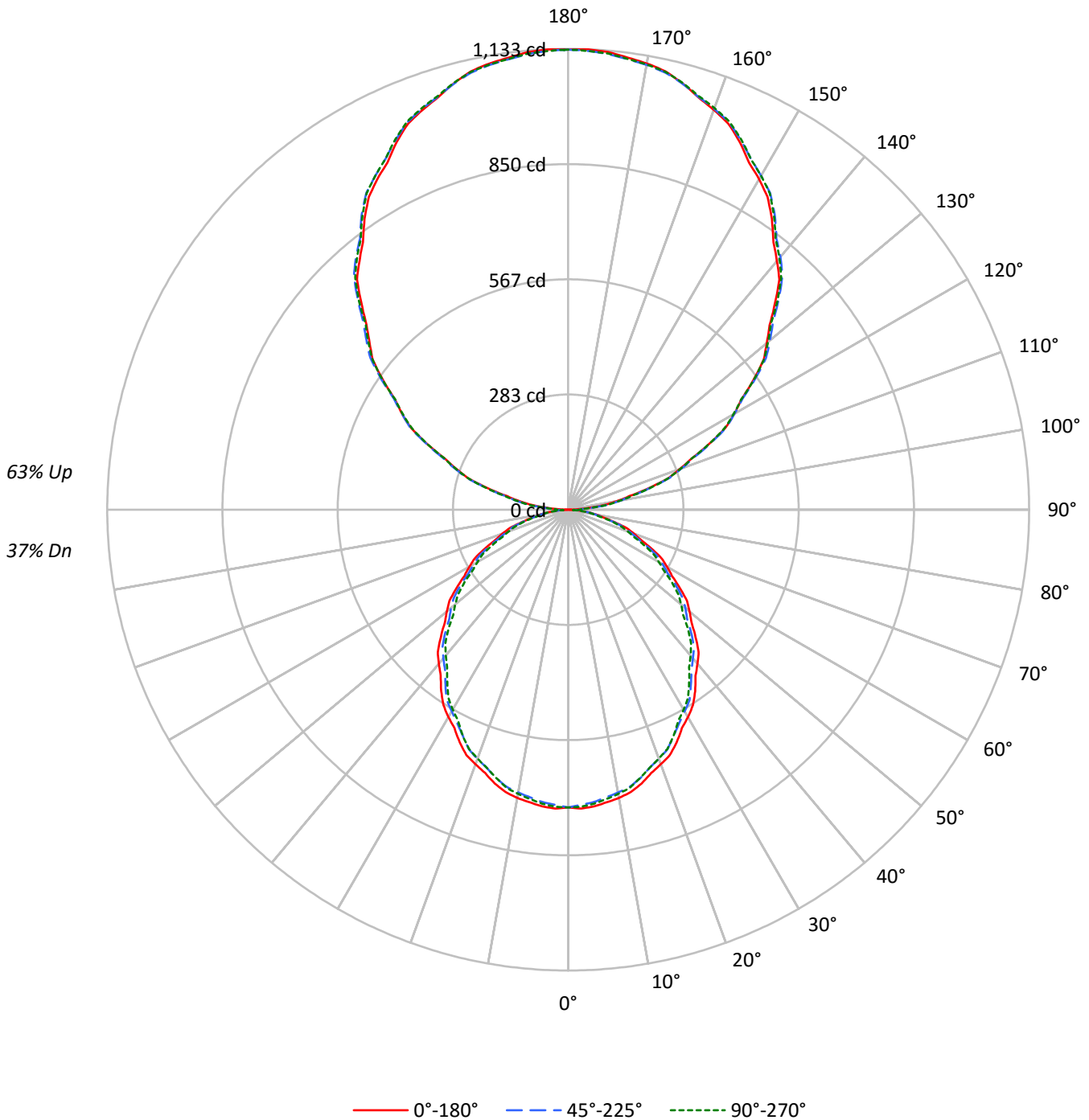
Input Watts (W): 45.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	95	91	87	83	86	82	79	76	67	64	62	52	51	49	39	38	37	31
2	86	79	73	68	78	72	67	62	58	55	52	46	43	41	34	33	31	26
3	79	69	62	57	71	63	57	52	51	47	43	41	37	35	30	28	27	22
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17
6	61	49	41	35	55	45	38	33	37	31	28	29	25	23	22	20	18	15
7	56	44	36	31	51	40	33	29	33	28	24	27	23	20	20	18	16	13
8	52	40	32	27	47	37	30	25	30	25	21	24	20	18	19	16	14	12
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10
10	45	33	26	22	41	31	24	20	25	21	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11820	11820	11820
5°	11866	11694	11763
10°	11795	11576	11632
15°	11649	11425	11413
20°	11442	11201	11187
25°	11236	10922	10922
30°	10972	10670	10577
35°	10724	10364	10212
40°	10416	10060	9866
45°	10111	9757	9515
50°	9779	9442	9105
55°	9433	9073	8740
60°	9045	8638	8318
65°	8630	8202	7824
70°	8105	7676	7312
75°	7380	7068	6900
80°	6546	6341	6025
85°	5335	5076	4557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	1.4
10°-20°	193.7	3.9
20°-30°	284.7	5.7
30°-40°	330.7	6.6
40°-50°	330.4	6.6
50°-60°	288.1	5.7
60°-70°	213.0	4.2
70°-80°	120.7	2.4
80°-90°	36.9	0.7
90°-100°	71.7	1.4
100°-110°	222.6	4.4
110°-120°	380.6	7.6
120°-130°	500.5	9.9
130°-140°	561.7	11.2
140°-150°	550.8	10.9
150°-160°	462.0	9.2
160°-170°	306.4	6.1
170°-180°	107.1	2.1
0°-30°	547.2	10.9
0°-40°	878.0	17.5
0°-60°	1496.4	29.7
0°-90°	1867.0	37.1
90°-120°	674.9	13.4
90°-150°	2287.8	45.5
90°-180°	3163.0	62.9
0°-180°	5030.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	732	729	722	727	726	69
15°	697	692	684	686	683	196
25°	631	625	613	614	613	290
35°	544	537	526	522	518	340
45°	443	438	427	420	417	342
55°	335	331	322	314	310	299
65°	226	222	215	208	205	223
75°	118	117	113	109	111	126
85°	29	28	27	25	25	33
90°	1	13	33	32	32	4
95°	50	59	61	61	59	57
105°	205	208	210	212	212	217
115°	382	387	386	385	382	378
125°	556	564	561	559	558	496
135°	719	729	731	730	728	555
145°	872	879	885	886	882	545
155°	998	1000	1003	1008	1005	459
165°	1085	1085	1084	1090	1086	306
175°	1129	1126	1124	1131	1126	107
180°	1131	1131	1131	1131	1131	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	735.5	734.8	734.2	733.6	732.9	732.0	730.6	729.2	727.8	726.4	727.7
5°	732.1	731.4	730.8	730.2	729.6	728.4	726.7	725.0	723.2	721.5	722.7
7.5°	725.6	724.6	723.7	722.6	721.7	720.4	718.6	716.9	715.1	713.3	714.6
10°	719.4	718.3	717.2	716.1	715.0	713.5	711.6	709.8	707.9	706.1	707.3
12.5°	711.0	710.0	709.0	708.0	707.1	705.7	703.8	701.9	700.0	698.1	699.0
15°	696.9	696.0	695.0	694.1	693.1	691.6	689.6	687.6	685.5	683.5	684.1
17.5°	678.8	678.0	677.0	676.1	675.1	673.6	671.6	669.5	667.4	665.3	666.1
20°	665.9	665.0	664.0	663.1	662.1	660.6	658.4	656.2	654.0	651.9	652.3
22.5°	653.0	651.7	650.4	649.0	647.7	646.0	643.9	641.9	639.8	637.7	637.8
25°	630.7	629.4	628.2	627.0	625.8	623.8	621.1	618.4	615.8	613.1	613.4
27.5°	605.4	604.3	603.1	602.0	600.9	599.3	597.2	595.0	593.0	590.9	590.4
30°	588.5	587.2	586.0	584.8	583.4	581.6	579.3	577.0	574.7	572.3	571.8
32.5°	570.4	569.5	568.4	567.4	566.5	564.7	562.2	559.8	557.3	554.9	554.0
35°	544.1	542.5	541.0	539.4	537.9	535.8	533.4	530.8	528.3	525.8	524.9
37.5°	514.4	513.0	511.7	510.3	508.9	507.0	504.4	502.0	499.5	497.0	495.8
40°	494.2	492.9	491.6	490.4	489.2	487.3	484.7	482.3	479.8	477.3	475.9
42.5°	474.5	473.2	471.9	470.7	469.5	467.6	465.1	462.6	460.1	457.5	456.0
45°	442.8	441.7	440.5	439.5	438.4	436.7	434.3	432.0	429.6	427.3	425.6
47.5°	411.2	410.2	409.2	408.1	407.1	405.4	402.9	400.5	398.0	395.6	393.8
50°	389.3	388.5	387.7	386.9	386.2	384.7	382.5	380.3	378.1	375.9	373.7
52.5°	367.9	366.8	365.8	364.8	363.7	362.2	360.1	358.1	356.0	353.9	352.1
55°	335.1	334.1	333.2	332.2	331.3	329.9	328.0	326.1	324.2	322.3	320.6
57.5°	302.1	301.3	300.6	299.9	299.2	297.7	295.7	293.6	291.5	289.5	287.6
60°	280.1	279.6	278.9	278.2	277.7	276.3	274.1	271.8	269.7	267.5	265.8
62.5°	258.7	257.8	256.7	255.7	254.8	253.4	251.8	250.1	248.4	246.7	245.1
65°	225.9	225.0	224.0	223.1	222.3	220.9	219.4	217.8	216.2	214.7	213.3
67.5°	192.6	191.8	191.1	190.3	189.5	188.5	187.1	185.7	184.3	182.9	181.8
70°	171.7	171.2	170.5	169.8	169.3	168.2	166.8	165.4	164.0	162.6	161.6
72.5°	150.3	149.8	149.1	148.5	147.9	147.1	146.2	145.2	144.4	143.5	142.3
75°	118.3	117.9	117.6	117.3	117.0	116.5	115.6	114.9	114.1	113.3	112.4
77.5°	89.5	89.0	88.5	87.9	87.4	87.0	86.7	86.3	86.1	85.8	85.3
80°	70.4	70.2	70.1	69.9	69.7	69.6	69.2	68.9	68.6	68.2	67.8
82.5°	52.4	52.3	52.3	52.3	52.2	52.1	51.9	51.7	51.6	51.4	50.8
85°	28.8	28.7	28.6	28.4	28.3	28.1	27.9	27.8	27.6	27.4	27.0
87.5°	10.4	10.6	10.8	11.1	11.4	11.9	12.5	13.2	13.9	14.6	14.1
90°	0.9	3.5	6.0	8.6	11.1	14.7	19.4	24.0	28.7	33.4	33.0
92.5°	17.0	18.9	20.7	22.6	24.5	25.9	27.1	28.2	29.2	30.3	30.4
95°	49.7	51.7	53.9	56.0	58.2	59.4	59.9	60.2	60.7	61.1	61.1
97.5°	90.7	92.6	94.4	96.3	98.1	99.5	100.3	101.1	101.9	102.7	102.7
100°	121.2	122.9	124.6	126.3	128.0	129.2	129.8	130.4	131.1	131.8	131.8
102.5°	153.4	154.7	156.0	157.4	158.7	159.9	160.6	161.5	162.2	163.1	163.2
105°	205.3	205.9	206.5	207.2	207.8	208.3	208.8	209.2	209.6	210.0	210.5
107.5°	257.6	258.5	259.4	260.3	261.3	261.7	261.7	261.7	261.7	261.7	261.9
110°	291.2	292.5	293.7	295.0	296.2	296.9	296.9	296.9	296.9	296.9	296.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	327.8	329.1	330.4	331.7	332.9	333.5	333.3	333.1	333.0	332.8	332.2
115°	381.8	383.1	384.4	385.7	386.9	387.4	386.9	386.5	386.1	385.7	385.5
117.5°	435.7	437.4	439.1	440.8	442.5	442.7	441.6	440.4	439.2	438.0	437.5
120°	471.6	473.3	475.0	476.7	478.4	478.4	476.7	475.0	473.3	471.6	471.6
122.5°	504.4	506.5	508.5	510.6	512.6	513.0	511.8	510.7	509.4	508.2	507.7
125°	555.6	557.5	559.4	561.4	563.3	563.9	563.3	562.6	561.9	561.4	560.7
127.5°	605.5	607.8	610.3	612.7	615.1	616.0	615.2	614.4	613.7	612.9	612.1
130°	636.8	639.5	642.2	645.1	647.8	648.9	648.6	648.1	647.7	647.2	646.9
132.5°	671.8	674.1	676.4	678.6	680.9	682.0	682.1	682.2	682.3	682.4	681.5
135°	718.9	721.2	723.5	725.9	728.2	729.5	730.0	730.4	730.8	731.2	731.0
137.5°	768.3	770.2	772.1	774.0	775.9	777.2	777.7	778.3	778.8	779.4	779.2
140°	798.1	800.0	801.9	803.8	805.7	807.2	808.3	809.4	810.4	811.4	811.4
142.5°	828.7	830.6	832.5	834.3	836.3	837.6	838.3	839.1	839.8	840.5	840.7
145°	872.5	874.0	875.5	877.0	878.5	879.9	881.2	882.4	883.7	885.0	885.1
147.5°	911.7	913.5	915.3	917.0	918.8	920.1	921.0	921.8	922.7	923.5	924.0
150°	938.4	939.7	940.9	942.3	943.5	944.6	945.5	946.3	947.2	948.0	948.6
152.5°	962.1	963.4	964.7	965.9	967.2	968.4	969.4	970.3	971.4	972.4	973.2
155°	997.6	998.2	998.9	999.6	1000.1	1000.8	1001.5	1002.1	1002.7	1003.3	1004.4
157.5°	1027.9	1028.4	1028.8	1029.3	1029.6	1030.1	1030.5	1030.9	1031.2	1031.6	1033.0
160°	1046.3	1046.7	1047.2	1047.5	1048.0	1048.3	1048.6	1048.8	1049.0	1049.1	1050.5
162.5°	1063.1	1063.2	1063.3	1063.4	1063.5	1063.6	1063.8	1064.0	1064.2	1064.4	1065.9
165°	1085.4	1085.2	1085.1	1084.8	1084.6	1084.5	1084.5	1084.5	1084.5	1084.5	1086.0
167.5°	1104.2	1103.5	1102.9	1102.2	1101.6	1101.3	1101.3	1101.2	1101.2	1101.1	1102.6
170°	1114.1	1113.4	1112.9	1112.2	1111.5	1111.2	1110.9	1110.7	1110.5	1110.3	1111.7
172.5°	1121.0	1120.3	1119.6	1119.1	1118.4	1117.9	1117.8	1117.6	1117.4	1117.1	1118.6
175°	1129.4	1128.7	1128.1	1127.5	1126.8	1126.2	1125.9	1125.4	1125.0	1124.5	1126.1
177.5°	1132.8	1132.3	1131.8	1131.2	1130.8	1130.3	1130.0	1129.6	1129.4	1129.0	1130.0
180°	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	732.1	732.1	732.1	732.1	732.1	732.1	732.1	732.1
2.5°	729.0	730.2	731.4	732.0	731.7	731.4	731.2	730.9
5°	724.1	725.3	726.5	727.0	726.7	726.3	726.0	725.8
7.5°	715.9	717.1	718.4	718.8	718.5	718.1	717.7	717.5
10°	708.5	709.8	711.1	711.4	711.0	710.5	710.0	709.5
12.5°	699.9	700.8	701.6	701.9	701.5	701.3	700.9	700.5
15°	684.8	685.4	686.0	685.9	685.1	684.4	683.6	682.8
17.5°	666.8	667.5	668.3	668.2	667.4	666.8	666.0	665.2
20°	652.8	653.3	653.7	653.7	653.0	652.3	651.8	651.1
22.5°	637.9	638.0	638.1	638.0	637.6	637.3	636.9	636.5
25°	613.8	614.1	614.3	614.3	614.1	613.8	613.4	613.1
27.5°	589.9	589.5	589.0	588.4	587.7	586.9	586.2	585.4
30°	571.4	570.9	570.4	569.9	569.2	568.6	568.0	567.3
32.5°	553.2	552.3	551.5	550.7	550.1	549.5	548.8	548.2
35°	524.0	523.0	522.1	521.2	520.5	519.6	518.9	518.1
37.5°	494.6	493.5	492.4	491.3	490.6	489.8	489.1	488.4
40°	474.5	473.1	471.6	470.6	470.0	469.4	468.7	468.1
42.5°	454.5	453.0	451.4	450.3	449.3	448.5	447.6	446.7
45°	423.9	422.2	420.4	419.2	418.6	418.0	417.4	416.7
47.5°	392.0	390.1	388.3	387.0	386.1	385.2	384.3	383.3
50°	371.6	369.3	367.1	365.6	364.9	364.1	363.3	362.5
52.5°	350.3	348.5	346.7	345.3	344.2	343.2	342.1	341.1
55°	318.7	316.8	314.9	313.6	312.7	312.0	311.2	310.5
57.5°	285.8	283.9	282.1	280.9	280.2	279.7	279.1	278.4
60°	264.0	262.3	260.6	259.5	259.0	258.5	258.1	257.6
62.5°	243.5	241.9	240.3	239.2	238.6	238.0	237.4	236.8
65°	211.9	210.5	209.1	207.9	207.2	206.4	205.7	204.8
67.5°	180.7	179.6	178.5	177.7	177.0	176.3	175.8	175.1
70°	160.4	159.3	158.3	157.4	156.7	156.1	155.5	154.9
72.5°	141.3	140.2	139.1	138.3	137.8	137.2	136.8	136.3
75°	111.4	110.6	109.6	109.2	109.6	109.9	110.2	110.6
77.5°	84.8	84.4	83.9	83.4	82.9	82.6	82.1	81.6
80°	67.3	66.8	66.4	66.0	65.7	65.4	65.0	64.8
82.5°	50.2	49.6	49.0	48.6	48.6	48.5	48.4	48.4
85°	26.5	26.0	25.5	25.3	25.1	25.0	24.8	24.6
87.5°	13.7	13.2	12.7	12.4	12.3	12.3	12.2	12.2
90°	32.5	32.1	31.7	31.6	31.9	32.0	32.2	32.4
92.5°	30.5	30.6	30.7	30.7	30.8	30.8	30.9	30.9
95°	61.1	61.1	61.1	60.9	60.4	60.0	59.6	59.2
97.5°	102.7	102.7	102.7	102.7	102.6	102.6	102.5	102.5
100°	131.8	131.8	131.8	131.7	131.4	131.2	131.0	130.8
102.5°	163.4	163.5	163.7	163.7	163.5	163.2	163.1	162.9
105°	210.8	211.3	211.7	212.0	212.0	212.0	212.0	212.0
107.5°	262.1	262.3	262.4	262.0	261.1	260.0	259.1	258.2
110°	296.9	296.9	296.9	296.6	296.0	295.3	294.6	294.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	331.8	331.3	330.7	330.3	329.8	329.3	328.9	328.4
115°	385.2	385.0	384.8	384.4	383.8	383.1	382.5	381.8
117.5°	437.0	436.5	435.9	435.4	434.8	434.1	433.5	432.8
120°	471.6	471.6	471.6	471.3	470.6	470.0	469.4	468.7
122.5°	507.3	506.7	506.2	505.8	505.3	504.8	504.4	503.9
125°	560.1	559.4	558.8	558.4	558.2	558.0	557.7	557.5
127.5°	611.3	610.6	609.8	609.1	608.4	607.8	607.1	606.4
130°	646.4	646.0	645.5	644.9	644.0	643.2	642.3	641.5
132.5°	680.5	679.6	678.6	677.9	677.2	676.5	675.8	675.1
135°	730.8	730.7	730.4	730.0	729.3	728.7	728.1	727.5
137.5°	779.0	778.9	778.7	778.2	777.3	776.5	775.6	774.8
140°	811.4	811.4	811.4	811.1	810.2	809.4	808.5	807.7
142.5°	840.8	841.0	841.1	840.8	840.0	839.1	838.3	837.4
145°	885.4	885.6	885.8	885.5	884.7	883.8	883.0	882.1
147.5°	924.4	924.9	925.4	925.2	924.4	923.6	922.8	922.0
150°	949.2	949.9	950.6	950.6	949.9	949.2	948.6	948.0
152.5°	974.0	974.9	975.6	975.6	974.9	974.0	973.2	972.4
155°	1005.5	1006.5	1007.6	1007.8	1007.2	1006.5	1005.9	1005.2
157.5°	1034.5	1035.9	1037.4	1037.6	1036.6	1035.6	1034.5	1033.5
160°	1051.7	1053.0	1054.2	1054.5	1053.7	1052.8	1052.0	1051.1
162.5°	1067.3	1068.7	1070.3	1070.4	1069.4	1068.4	1067.3	1066.4
165°	1087.5	1088.9	1090.4	1090.6	1089.6	1088.5	1087.5	1086.4
167.5°	1104.1	1105.6	1107.0	1107.2	1106.2	1105.0	1103.9	1102.9
170°	1113.2	1114.7	1116.3	1116.3	1115.0	1113.8	1112.5	1111.3
172.5°	1120.1	1121.6	1123.0	1123.2	1121.9	1120.7	1119.4	1118.1
175°	1127.6	1129.1	1130.5	1130.7	1129.4	1128.1	1126.8	1125.6
177.5°	1131.1	1132.0	1133.0	1133.0	1132.0	1131.1	1130.0	1129.0
180°	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2	1131.2

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