

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: P332432-935

Luminaire Tested: **S123RDIW-S775D460U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332432-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIW-S775D460U935-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 460 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4100.4 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

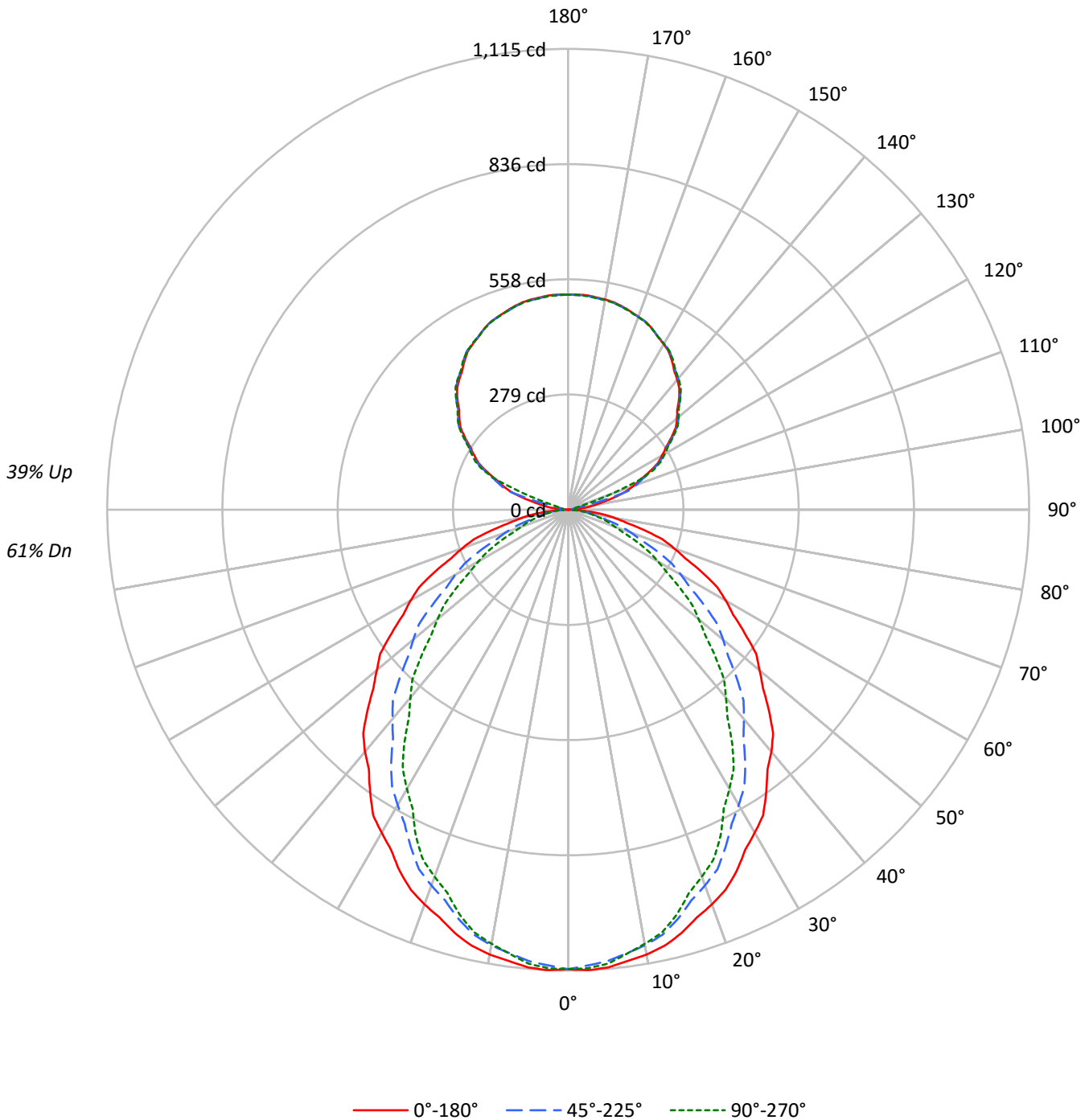
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	66	66	66
1	101	96	93	89	94	90	87	84	79	77	75	69	67	65	59	58	57
2	92	85	79	74	86	80	74	70	70	66	62	61	58	55	53	51	49
3	84	75	68	62	79	70	64	59	62	57	53	54	50	47	47	44	42
4	77	67	59	53	72	63	56	50	55	50	45	49	44	41	42	39	36
5	71	60	51	45	66	56	49	43	50	44	39	44	39	36	38	35	32
6	66	54	45	40	61	51	43	38	45	39	35	40	35	31	35	31	28
7	61	49	41	35	57	46	39	34	41	35	31	36	32	28	32	28	25
8	57	44	36	31	53	42	35	30	37	32	27	33	29	25	29	26	23
9	53	41	33	28	49	38	32	27	34	29	25	31	26	23	27	23	21
10	49	37	30	25	46	35	29	24	32	26	22	28	24	21	25	22	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11965	11965	11965
5°	12011	11846	11914
10°	11943	11696	11657
15°	11814	11422	11303
20°	11639	11080	10822
25°	11457	10696	10354
30°	11216	10253	9692
35°	10970	9809	9087
40°	10742	9285	8335
45°	10443	8770	7658
50°	10114	8182	6899
55°	9779	7512	6191
60°	9472	6794	5414
65°	9070	6016	4638
70°	8567	5051	3745
75°	7835	3976	3523
80°	6986	3521	3242
85°	5903	3112	2890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	2.5
10°-20°	290.4	7.1
20°-30°	418.2	10.2
30°-40°	471.1	11.5
40°-50°	450.7	11.0
50°-60°	369.0	9.0
60°-70°	249.0	6.1
70°-80°	125.3	3.1
80°-90°	34.6	0.8
90°-100°	18.9	0.5
100°-110°	90.2	2.2
110°-120°	216.7	5.3
120°-130°	276.0	6.7
130°-140°	294.8	7.2
140°-150°	275.7	6.7
150°-160°	222.4	5.4
160°-170°	143.5	3.5
170°-180°	49.5	1.2
0°-30°	813.0	19.8
0°-40°	1284.1	31.3
0°-60°	2103.8	51.3
0°-90°	2512.6	61.3
90°-120°	325.9	7.9
90°-150°	1172.4	28.6
90°-180°	1588.0	38.7
0°-180°	4100.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1112	1107	1096	1104	1103	105
15°	1060	1049	1025	1020	1014	299
25°	965	941	901	882	872	443
35°	835	801	746	709	692	522
45°	686	644	576	526	503	529
55°	521	475	400	350	330	467
65°	356	305	236	194	182	352
75°	188	145	96	87	85	201
85°	48	29	25	24	23	54
90°	0	4	9	11	12	3
95°	24	9	12	15	15	29
105°	115	117	85	20	17	122
115°	216	219	222	226	228	213
125°	305	308	309	310	311	272
135°	379	382	383	384	383	292
145°	438	440	441	442	442	274
155°	482	482	482	484	482	222
165°	509	508	507	510	508	144
175°	521	519	519	522	519	50
180°	521	521	521	521	521	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1115.2	1114.6	1113.9	1113.3	1112.7	1111.4	1109.4	1107.5	1105.6	1103.6	1105.4
5°	1111.6	1110.6	1109.6	1108.6	1107.6	1105.9	1103.5	1101.0	1098.6	1096.3	1098.0
7.5°	1101.3	1100.3	1099.2	1098.0	1097.0	1094.8	1091.7	1088.6	1085.5	1082.4	1083.4
10°	1092.7	1091.2	1089.9	1088.5	1087.0	1084.5	1080.9	1077.4	1073.8	1070.1	1070.3
12.5°	1080.4	1078.8	1077.3	1075.7	1074.2	1071.2	1066.8	1062.4	1057.9	1053.5	1053.4
15°	1060.2	1058.0	1055.8	1053.6	1051.4	1047.5	1041.9	1036.3	1030.6	1025.0	1024.1
17.5°	1034.7	1032.3	1029.7	1027.1	1024.5	1019.7	1012.5	1005.4	998.2	991.2	989.0
20°	1016.1	1012.8	1009.6	1006.4	1003.2	997.8	990.2	982.6	975.0	967.3	964.8
22.5°	995.1	991.4	987.7	984.0	980.3	974.5	966.4	958.3	950.2	942.1	938.8
25°	964.7	959.7	954.6	949.6	944.6	937.5	928.2	919.0	909.8	900.6	896.4
27.5°	927.6	922.1	916.6	911.1	905.6	897.7	887.4	877.2	866.9	856.6	850.8
30°	902.4	896.4	890.4	884.4	878.4	869.8	858.6	847.3	836.1	824.9	818.1
32.5°	877.2	870.4	863.6	856.8	850.0	840.6	828.7	816.9	805.0	793.2	785.7
35°	834.8	827.6	820.4	813.2	806.0	796.2	783.8	771.3	758.9	746.5	737.9
37.5°	791.9	783.9	775.8	767.8	759.8	749.2	736.0	722.7	709.5	696.2	686.4
40°	764.5	755.7	746.8	738.0	729.3	717.7	703.5	689.3	675.0	660.8	650.4
42.5°	733.5	724.7	715.8	707.1	698.3	686.5	671.8	657.0	642.4	627.7	616.3
45°	686.0	677.1	668.0	659.0	650.0	637.8	622.3	606.9	591.5	576.1	564.6
47.5°	638.7	628.8	618.9	609.0	599.1	586.4	571.0	555.5	540.1	524.7	512.3
50°	604.0	594.6	585.2	575.8	566.4	553.5	537.4	521.1	504.9	488.6	476.2
52.5°	573.0	562.8	552.6	542.3	532.2	519.0	502.9	486.9	470.8	454.7	441.9
55°	521.1	511.3	501.4	491.6	481.8	468.4	451.3	434.4	417.3	400.3	388.7
57.5°	473.1	462.4	451.8	441.0	430.3	416.5	399.3	382.2	365.1	348.0	337.0
60°	440.0	429.0	417.9	406.9	395.9	382.0	365.4	348.8	332.2	315.6	304.7
62.5°	406.7	395.7	384.7	373.7	362.7	348.9	332.3	315.6	299.0	282.3	272.2
65°	356.1	345.1	334.1	323.0	312.0	298.7	283.1	267.4	251.8	236.2	226.4
67.5°	305.5	294.3	283.2	272.0	260.9	247.8	232.8	217.8	202.9	187.9	180.6
70°	272.2	261.5	250.6	239.8	229.0	216.5	202.5	188.6	174.5	160.5	153.4
72.5°	239.1	228.4	217.7	207.1	196.5	184.8	172.0	159.3	146.5	133.8	128.0
75°	188.4	178.8	169.2	159.5	150.0	139.7	128.6	117.6	106.6	95.6	93.6
77.5°	142.2	133.5	124.8	116.1	107.5	99.6	92.5	85.4	78.4	71.2	70.2
80°	112.7	104.4	96.3	88.1	79.8	73.6	69.4	65.2	61.0	56.8	56.2
82.5°	84.6	77.5	70.3	63.3	56.2	51.7	49.7	47.7	45.8	43.8	43.2
85°	47.8	43.4	39.0	34.5	30.1	27.6	27.0	26.4	25.8	25.2	24.9
87.5°	17.4	15.8	14.2	12.6	11.0	10.3	10.6	10.8	11.0	11.2	11.1
90°	0.3	1.2	2.1	2.9	3.8	4.8	5.9	7.1	8.2	9.3	9.6
92.5°	7.2	7.0	6.7	6.5	6.2	6.5	7.4	8.2	9.0	9.9	10.4
95°	23.6	20.1	16.5	13.0	9.5	8.2	9.1	10.1	11.0	12.0	12.6
97.5°	47.4	45.8	44.3	42.7	41.1	37.2	31.0	24.8	18.7	12.5	13.2
100°	65.3	67.1	68.8	70.5	72.2	66.4	53.0	39.6	26.2	12.7	13.4
102.5°	85.8	87.0	88.3	89.5	90.7	84.0	69.4	54.8	40.1	25.5	23.3
105°	115.3	116.2	117.2	118.1	119.1	115.6	107.9	100.2	92.5	84.7	69.5
107.5°	146.4	147.1	147.9	148.6	149.4	150.4	151.6	152.8	154.0	155.2	144.1
110°	167.1	167.8	168.5	169.2	169.9	170.7	171.6	172.5	173.5	174.4	171.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	186.9	187.5	188.1	188.7	189.4	190.2	191.1	192.1	193.0	194.0	194.0
115°	216.2	216.7	217.2	217.7	218.3	219.0	219.7	220.5	221.3	222.1	222.9
117.5°	244.6	245.3	245.9	246.5	247.2	247.7	248.1	248.5	248.9	249.3	249.9
120°	262.3	263.0	263.8	264.6	265.4	265.9	266.1	266.4	266.7	266.9	267.6
122.5°	280.3	280.9	281.5	282.1	282.8	283.3	283.6	283.9	284.2	284.6	285.0
125°	304.8	305.5	306.2	306.9	307.5	308.1	308.4	308.8	309.1	309.4	309.6
127.5°	328.6	329.3	330.0	330.7	331.4	331.9	332.3	332.8	333.2	333.6	333.9
130°	343.5	344.2	344.9	345.6	346.3	346.8	347.2	347.5	347.8	348.1	348.4
132.5°	357.7	358.4	359.1	359.8	360.5	360.9	361.3	361.5	361.8	362.1	362.4
135°	379.4	380.0	380.5	381.0	381.5	381.9	382.3	382.6	383.0	383.3	383.6
137.5°	398.0	398.7	399.3	400.0	400.6	401.1	401.3	401.5	401.7	401.8	402.3
140°	410.4	411.0	411.5	412.0	412.5	412.8	413.1	413.4	413.6	413.9	414.2
142.5°	421.9	422.4	422.9	423.4	424.0	424.3	424.6	424.8	425.1	425.3	425.6
145°	437.9	438.5	439.1	439.7	440.3	440.7	440.8	441.0	441.2	441.3	441.5
147.5°	453.0	453.4	453.7	454.2	454.5	454.9	455.0	455.2	455.4	455.6	455.7
150°	462.3	462.5	462.8	463.0	463.3	463.5	463.6	463.8	464.0	464.2	464.3
152.5°	470.6	470.7	470.9	471.0	471.1	471.2	471.3	471.4	471.5	471.7	471.9
155°	482.3	482.2	482.0	481.9	481.7	481.6	481.7	481.8	481.9	482.0	482.4
157.5°	491.5	491.5	491.5	491.5	491.5	491.4	491.3	491.2	491.1	491.0	491.5
160°	497.1	497.0	496.9	496.8	496.7	496.6	496.5	496.5	496.4	496.3	496.8
162.5°	502.3	502.1	501.9	501.7	501.4	501.3	501.2	501.1	501.0	500.9	501.5
165°	508.7	508.4	508.2	507.9	507.6	507.5	507.4	507.3	507.2	507.1	507.8
167.5°	513.7	513.3	513.0	512.6	512.3	512.1	512.1	512.1	512.1	512.1	512.8
170°	516.4	516.1	515.7	515.4	515.1	514.9	514.9	514.9	514.9	514.9	515.6
172.5°	518.2	517.9	517.5	517.0	516.6	516.4	516.5	516.6	516.7	516.7	517.4
175°	520.6	520.2	519.8	519.4	518.9	518.8	518.8	518.9	519.0	519.1	519.7
177.5°	521.2	520.9	520.6	520.2	519.9	519.8	519.9	519.9	520.0	520.0	520.6
180°	520.6	520.6	520.6	520.6	520.6	520.6	520.6	520.6	520.6	520.6	520.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6	1111.6
2.5°	1107.2	1109.0	1110.7	1111.5	1111.1	1110.8	1110.4	1110.2
5°	1099.8	1101.6	1103.5	1104.1	1103.8	1103.4	1102.9	1102.6
7.5°	1084.4	1085.4	1086.4	1086.6	1085.9	1085.2	1084.5	1083.8
10°	1070.6	1070.7	1070.9	1070.6	1069.5	1068.5	1067.6	1066.5
12.5°	1053.3	1053.2	1053.1	1052.4	1051.3	1050.1	1049.0	1047.8
15°	1023.0	1022.0	1021.1	1019.9	1018.5	1017.0	1015.6	1014.3
17.5°	986.9	984.8	982.7	980.6	978.4	976.4	974.3	972.2
20°	962.2	959.5	956.9	954.4	952.0	949.6	947.2	944.8
22.5°	935.6	932.4	929.1	926.3	924.1	921.9	919.6	917.4
25°	892.3	888.0	883.8	880.6	878.4	876.2	874.0	871.8
27.5°	844.9	839.1	833.3	828.6	825.3	821.9	818.6	815.2
30°	811.3	804.4	797.6	792.6	789.5	786.3	783.0	779.8
32.5°	778.3	770.9	763.4	757.9	754.6	751.2	747.9	744.5
35°	729.3	720.7	712.0	705.9	702.3	698.7	695.1	691.5
37.5°	676.6	666.8	657.0	650.0	645.5	641.0	636.6	632.1
40°	640.0	629.6	619.1	611.7	607.0	602.4	597.8	593.2
42.5°	604.9	593.5	582.1	574.4	570.2	566.1	562.0	557.8
45°	553.3	541.8	530.4	522.3	517.5	512.6	507.9	503.1
47.5°	499.8	487.4	475.0	466.7	462.4	458.1	453.8	449.5
50°	463.8	451.3	438.9	430.4	425.9	421.2	416.6	412.0
52.5°	429.0	416.0	403.1	394.6	390.5	386.3	382.2	378.1
55°	377.0	365.4	353.8	345.9	342.0	337.9	334.0	329.9
57.5°	326.1	315.0	304.1	296.9	293.5	290.1	286.6	283.3
60°	293.9	283.1	272.2	265.2	261.7	258.3	254.9	251.5
62.5°	262.0	251.8	241.7	234.8	231.2	227.6	224.1	220.5
65°	216.5	206.7	196.9	190.9	188.7	186.5	184.3	182.1
67.5°	173.2	165.9	158.5	153.7	151.4	149.0	146.6	144.2
70°	146.5	139.4	132.4	127.9	125.6	123.4	121.2	119.0
72.5°	122.3	116.6	110.9	107.5	106.6	105.7	104.8	103.8
75°	91.5	89.5	87.6	86.4	85.9	85.6	85.2	84.7
77.5°	69.1	67.9	66.9	66.1	65.8	65.3	64.9	64.6
80°	55.6	55.0	54.4	53.9	53.5	53.1	52.7	52.3
82.5°	42.6	42.0	41.4	41.1	41.0	40.9	40.8	40.7
85°	24.5	24.0	23.7	23.4	23.4	23.4	23.4	23.4
87.5°	11.0	10.9	10.8	10.8	10.6	10.5	10.4	10.2
90°	10.0	10.3	10.7	10.9	11.1	11.3	11.5	11.6
92.5°	11.0	11.5	12.1	12.4	12.6	12.7	12.7	12.8
95°	13.2	13.8	14.4	14.7	14.7	14.7	14.7	14.7
97.5°	13.9	14.6	15.2	15.6	15.7	15.8	15.8	15.9
100°	14.1	14.8	15.5	15.9	16.0	16.1	16.2	16.3
102.5°	21.2	19.0	17.0	15.9	16.1	16.3	16.4	16.5
105°	54.2	39.1	23.8	16.4	16.5	16.7	16.9	17.0
107.5°	132.9	121.8	110.6	99.4	87.8	76.4	64.9	53.5
110°	168.8	165.9	163.1	155.6	143.3	131.0	118.6	106.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	194.1	194.1	194.2	192.9	190.3	187.7	185.1	182.5
115°	223.8	224.6	225.5	226.1	226.4	226.8	227.1	227.5
117.5°	250.6	251.3	252.0	252.4	252.4	252.5	252.6	252.7
120°	268.3	269.0	269.7	270.0	270.0	270.0	270.0	270.0
122.5°	285.5	286.0	286.5	286.7	286.8	286.9	287.0	287.1
125°	309.8	310.0	310.1	310.3	310.5	310.6	310.8	311.0
127.5°	334.2	334.4	334.7	334.8	334.6	334.4	334.2	334.1
130°	348.8	349.1	349.5	349.6	349.4	349.2	349.0	348.9
132.5°	362.7	363.1	363.4	363.5	363.3	363.0	362.7	362.6
135°	383.8	384.1	384.4	384.4	384.1	383.8	383.6	383.3
137.5°	402.7	403.0	403.5	403.6	403.5	403.3	403.1	402.9
140°	414.6	414.9	415.3	415.3	415.2	415.0	414.8	414.7
142.5°	425.9	426.2	426.5	426.5	426.2	426.0	425.8	425.5
145°	441.7	441.9	442.0	442.1	442.1	442.1	442.1	442.1
147.5°	455.9	456.1	456.2	456.1	455.7	455.3	455.0	454.5
150°	464.5	464.7	464.9	464.9	464.6	464.3	464.1	463.8
152.5°	472.3	472.5	472.9	472.8	472.4	472.0	471.7	471.2
155°	482.8	483.3	483.7	483.6	483.1	482.6	482.1	481.6
157.5°	492.1	492.6	493.1	493.0	492.3	491.7	491.0	490.3
160°	497.3	497.8	498.3	498.3	497.7	497.1	496.5	495.9
162.5°	502.1	502.7	503.3	503.3	502.7	502.2	501.7	501.2
165°	508.5	509.2	509.9	509.9	509.3	508.8	508.2	507.6
167.5°	513.5	514.1	514.8	514.8	514.1	513.5	512.8	512.1
170°	516.3	516.9	517.6	517.6	516.9	516.3	515.6	514.9
172.5°	518.1	518.8	519.4	519.4	518.7	517.9	517.2	516.4
175°	520.3	520.9	521.5	521.5	520.8	520.1	519.4	518.8
177.5°	521.2	521.7	522.3	522.2	521.5	520.8	520.1	519.4
180°	520.6	520.6	520.6	520.6	520.6	520.6	520.6	520.6

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