

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: P332888-935

Luminaire Tested: **S124RDIP-S350D1035U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332888-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S350D1035U935-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4414.1 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

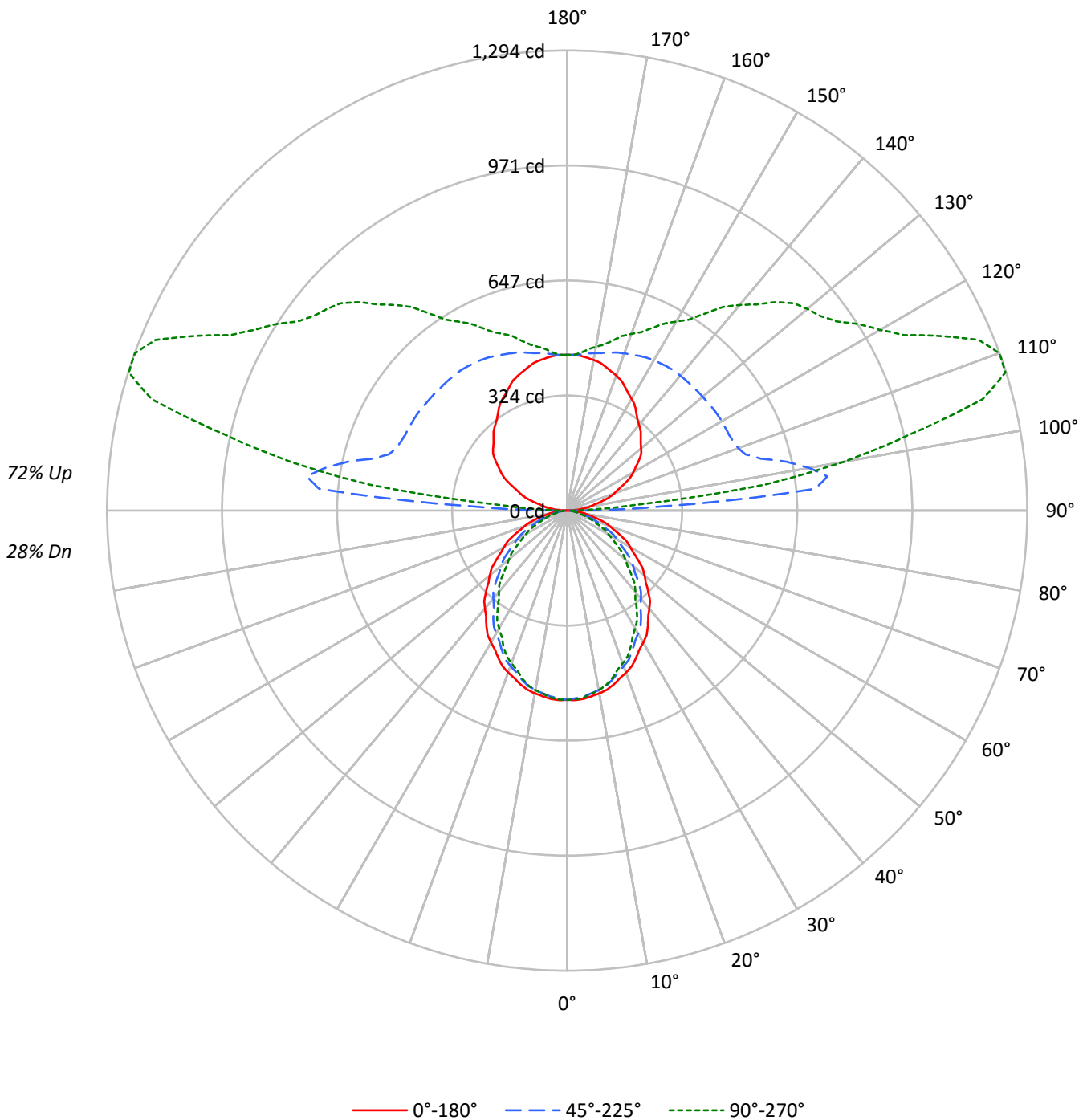
Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36
1	93	89	85	82	83	80	77	74	62	60	58	46	45	44	32	31	30
2	85	78	72	67	76	70	65	61	55	51	49	41	39	37	28	27	26
3	77	68	61	56	69	61	56	51	48	44	41	36	34	31	25	24	22
4	71	60	53	47	63	54	48	43	43	38	35	32	29	27	22	21	19
5	65	54	46	40	58	48	42	37	38	34	30	29	26	23	20	18	17
6	60	48	40	35	53	43	37	32	35	30	26	26	23	20	18	16	15
7	55	43	36	30	49	39	33	28	31	26	23	24	20	18	17	15	13
8	51	39	32	27	46	36	29	25	28	24	20	22	18	16	15	13	12
9	47	36	29	24	42	32	26	22	26	21	18	20	17	14	14	12	11
10	44	33	26	21	40	30	24	19	24	19	16	18	15	13	13	11	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4297	4297	4297
5°	4306	4254	4280
10°	4279	4203	4203
15°	4231	4115	4084
20°	4163	3998	3924
25°	4077	3862	3764
30°	3993	3719	3564
35°	3900	3571	3362
40°	3789	3402	3144
45°	3685	3234	2923
50°	3567	3041	2688
55°	3441	2839	2432
60°	3303	2619	2172
65°	3177	2344	1914
70°	2991	2039	1626
75°	2757	1691	1323
80°	2404	1288	1213
85°	2038	1176	1093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.0	1.1
10°-20°	139.4	3.2
20°-30°	201.3	4.6
30°-40°	228.2	5.2
40°-50°	220.4	5.0
50°-60°	183.2	4.2
60°-70°	126.5	2.9
70°-80°	64.1	1.5
80°-90°	18.9	0.4
90°-100°	316.0	7.2
100°-110°	657.7	14.9
110°-120°	589.1	13.3
120°-130°	495.5	11.2
130°-140°	413.2	9.4
140°-150°	315.7	7.2
150°-160°	221.9	5.0
160°-170°	130.5	3.0
170°-180°	42.5	1.0
0°-30°	390.7	8.9
0°-40°	619.0	14.0
0°-60°	1022.6	23.2
0°-90°	1232.1	27.9
90°-120°	1562.8	35.4
90°-150°	2787.1	63.1
90°-180°	3182.0	72.1
0°-180°	4414.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	531	530	525	529	528	50
15°	506	502	492	491	489	143
25°	458	450	434	427	423	211
35°	396	382	362	349	341	247
45°	323	307	283	264	256	249
55°	244	228	202	181	173	219
65°	166	148	123	106	100	164
75°	88	73	54	45	42	93
85°	22	14	13	12	12	25
90°	1	7	16	17	18	3
95°	28	89	700	347	210	32
105°	101	146	564	1214	1209	107
115°	177	222	503	966	1161	176
125°	247	293	500	822	927	220
135°	293	349	496	730	829	227
145°	338	387	493	615	676	212
155°	384	415	480	543	566	177
165°	419	432	460	487	494	118
175°	437	438	441	447	445	41
180°	438	438	438	438	438	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3
2.5°	533.6	533.2	533.0	532.7	532.4	531.8	531.1	530.3	529.4	528.7	529.4
5°	531.4	531.1	530.7	530.4	529.9	529.3	528.1	527.1	526.0	525.0	525.8
7.5°	526.6	526.2	525.9	525.5	525.1	524.2	522.8	521.3	520.0	518.6	519.1
10°	522.0	521.6	521.2	520.7	520.2	519.2	517.5	515.9	514.3	512.7	513.1
12.5°	516.2	515.7	515.1	514.6	514.1	512.9	510.9	509.0	507.1	505.1	505.4
15°	506.2	505.3	504.5	503.7	502.9	501.4	499.1	496.8	494.6	492.3	492.1
17.5°	494.0	492.8	491.6	490.5	489.3	487.3	484.7	481.9	479.2	476.5	476.0
20°	484.6	483.4	482.2	481.0	479.8	477.8	474.7	471.6	468.5	465.4	464.7
22.5°	474.2	472.8	471.5	470.2	468.8	466.5	463.2	459.9	456.7	453.3	452.3
25°	457.7	456.1	454.4	452.8	451.2	448.5	444.8	441.1	437.3	433.6	432.0
27.5°	440.4	438.3	436.3	434.3	432.2	429.2	425.2	421.3	417.3	413.4	411.4
30°	428.3	426.0	423.8	421.5	419.3	416.0	411.7	407.5	403.2	399.0	396.7
32.5°	415.6	413.0	410.5	407.9	405.4	401.9	397.5	393.1	388.7	384.4	381.7
35°	395.7	392.8	389.9	387.0	384.1	380.4	375.9	371.3	366.9	362.3	359.2
37.5°	374.4	371.4	368.5	365.5	362.5	358.5	353.4	348.4	343.5	338.5	335.0
40°	359.5	356.5	353.4	350.5	347.5	343.5	338.3	333.1	328.0	322.8	319.0
42.5°	345.1	342.0	338.8	335.7	332.6	328.3	323.0	317.5	312.2	306.8	302.9
45°	322.8	319.4	316.1	312.7	309.4	305.0	299.5	294.1	288.7	283.3	278.8
47.5°	299.7	296.3	292.8	289.3	285.9	281.3	275.7	270.0	264.3	258.7	254.1
50°	284.0	280.5	277.0	273.5	269.9	265.3	259.5	253.7	247.9	242.1	237.5
52.5°	268.1	264.6	261.1	257.7	254.3	249.5	243.6	237.6	231.7	225.8	221.2
55°	244.5	240.9	237.3	233.7	230.1	225.2	219.4	213.5	207.6	201.7	197.0
57.5°	221.2	217.4	213.7	209.9	206.1	201.4	195.5	189.8	184.0	178.1	173.4
60°	204.6	201.0	197.3	193.7	190.1	185.4	179.6	173.7	168.0	162.2	157.5
62.5°	189.6	185.8	182.0	178.3	174.5	169.7	163.8	157.8	151.9	145.9	141.5
65°	166.3	162.4	158.5	154.6	150.7	145.9	140.1	134.2	128.5	122.7	118.8
67.5°	142.1	138.4	134.6	130.9	127.2	122.6	117.2	111.8	106.4	101.1	97.7
70°	126.7	123.0	119.2	115.4	111.5	107.0	101.9	96.7	91.5	86.4	83.4
72.5°	110.5	107.0	103.6	100.1	96.7	92.6	87.6	82.7	77.9	73.0	70.5
75°	88.4	85.1	81.7	78.4	75.0	71.2	67.0	62.7	58.5	54.2	52.1
77.5°	66.1	63.3	60.4	57.6	54.8	51.6	48.1	44.7	41.2	37.8	36.6
80°	51.7	49.2	46.5	43.9	41.2	38.6	35.9	33.1	30.4	27.7	27.5
82.5°	39.3	36.9	34.5	32.1	29.7	27.7	26.2	24.6	23.1	21.5	21.4
85°	22.0	20.2	18.4	16.5	14.7	13.7	13.4	13.2	12.9	12.7	12.5
87.5°	7.7	7.4	7.4	7.0	6.5	6.2	7.1	7.1	7.4	7.7	7.4
90°	0.9	2.6	5.2	6.0	6.9	6.9	12.1	12.1	13.8	15.5	14.6
92.5°	9.8	14.3	22.4	32.8	45.4	63.3	106.9	173.7	238.6	272.7	227.1
95°	28.3	30.9	39.5	50.7	71.4	107.5	182.2	323.2	528.7	700.5	720.3
97.5°	50.9	50.9	58.3	68.6	86.3	116.6	174.2	290.5	494.7	737.8	904.9
100°	65.3	65.3	71.4	81.6	98.0	125.5	176.2	273.4	448.7	691.0	911.1
102.5°	79.0	80.4	85.8	95.4	111.1	137.2	183.0	268.5	417.8	632.7	859.5
105°	100.6	103.1	107.5	117.8	133.2	158.2	199.4	270.8	391.1	563.9	765.9
107.5°	124.3	126.1	130.3	141.3	156.1	180.6	218.5	283.4	386.2	525.4	690.2
110°	140.1	141.8	146.1	156.4	171.9	195.1	232.9	293.1	387.6	512.3	652.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	155.2	157.0	162.0	171.6	187.0	210.3	246.7	303.4	391.8	506.1	631.1
115°	177.1	179.6	185.6	194.2	210.6	233.8	268.2	319.8	399.7	502.8	611.1
117.5°	199.8	202.2	207.5	217.0	232.2	256.3	289.0	336.4	408.1	502.0	602.2
120°	214.9	216.6	222.7	232.0	246.7	270.8	303.4	348.1	414.3	502.0	597.4
122.5°	228.7	230.3	236.3	245.1	261.1	284.5	317.2	359.1	420.5	501.3	591.9
125°	246.7	250.1	255.3	264.8	281.0	305.1	336.0	375.7	429.8	500.2	582.8
127.5°	262.7	265.4	271.6	282.4	299.5	323.7	353.6	389.9	437.1	498.3	570.6
130°	271.6	275.1	281.9	294.8	311.2	336.0	365.3	398.8	442.6	497.7	563.0
132.5°	280.5	283.3	292.2	304.4	322.2	345.7	375.0	407.8	447.5	497.0	556.1
135°	293.1	296.5	305.1	319.8	337.8	360.2	388.5	419.5	454.7	495.9	545.8
137.5°	305.7	308.9	318.4	332.3	351.0	372.4	398.8	427.7	459.0	495.8	536.8
140°	314.6	317.2	326.7	341.2	359.3	380.0	405.7	433.2	462.4	495.1	532.1
142.5°	324.3	326.8	335.5	349.5	366.9	386.8	411.9	437.3	465.2	495.1	528.0
145°	337.8	340.4	349.0	361.0	377.4	396.2	418.6	441.8	466.7	493.4	520.9
147.5°	353.1	354.0	361.5	373.9	387.4	404.5	425.5	445.7	467.6	490.3	514.5
150°	362.7	363.6	370.5	380.8	393.6	410.0	429.0	447.8	467.6	488.2	509.7
152.5°	371.7	371.9	378.8	388.3	399.8	414.8	431.7	449.2	466.2	484.7	504.2
155°	384.2	385.0	390.2	398.8	408.3	421.2	435.8	450.4	464.2	479.7	495.9
157.5°	396.4	396.4	401.2	407.9	416.2	426.4	438.7	450.4	461.9	474.3	487.5
160°	404.0	404.0	407.4	413.5	420.3	429.8	440.1	450.4	459.9	470.2	481.4
162.5°	410.9	410.2	412.9	418.3	424.5	431.9	441.4	450.4	457.8	466.1	475.9
165°	418.6	418.6	420.3	424.6	429.0	434.0	441.8	448.7	453.8	459.9	466.7
167.5°	426.4	425.5	426.4	429.6	432.0	435.9	441.6	446.6	449.7	453.7	458.5
170°	429.8	429.0	429.8	432.4	434.0	436.6	440.9	445.2	446.9	449.5	453.0
172.5°	433.2	432.4	432.5	434.4	435.4	437.3	440.2	443.8	444.2	445.4	448.2
175°	436.6	435.8	435.8	436.6	437.5	437.5	439.2	441.8	440.9	440.9	442.6
177.5°	438.2	437.5	436.8	437.5	437.5	437.5	438.2	439.5	438.2	438.2	438.9
180°	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	532.3	532.3	532.3	532.3	532.3	532.3	532.3	532.3
2.5°	530.3	531.1	531.8	532.2	532.1	532.1	532.0	531.9
5°	526.8	527.6	528.6	528.9	528.7	528.6	528.3	528.1
7.5°	519.7	520.3	520.9	521.0	520.7	520.5	520.1	519.9
10°	513.4	513.8	514.1	514.1	513.8	513.4	513.1	512.7
12.5°	505.6	505.8	506.1	505.9	505.4	504.9	504.4	503.9
15°	492.0	491.8	491.5	491.2	490.5	489.9	489.3	488.6
17.5°	475.4	475.0	474.5	473.7	472.8	471.8	470.9	469.9
20°	464.0	463.2	462.5	461.6	460.4	459.2	458.1	456.8
22.5°	451.2	450.0	449.0	448.0	447.0	446.1	445.1	444.1
25°	430.5	429.0	427.5	426.3	425.3	424.4	423.5	422.6
27.5°	409.5	407.6	405.7	404.2	402.8	401.5	400.2	398.9
30°	394.4	392.2	389.9	388.1	386.6	385.2	383.7	382.3
32.5°	379.1	376.4	373.8	371.8	370.4	369.0	367.6	366.3
35°	356.1	353.1	350.0	347.7	346.0	344.4	342.8	341.1
37.5°	331.6	328.1	324.7	322.1	320.5	318.8	317.2	315.6
40°	315.1	311.3	307.5	304.9	303.2	301.6	300.0	298.3
42.5°	299.0	295.2	291.3	288.5	286.8	285.1	283.4	281.7
45°	274.4	269.9	265.4	262.4	260.8	259.2	257.5	256.0
47.5°	249.5	244.9	240.3	237.1	235.3	233.5	231.7	230.0
50°	233.0	228.5	223.9	220.8	219.1	217.4	215.7	214.0
52.5°	216.5	212.0	207.4	204.1	202.4	200.6	198.8	197.0
55°	192.3	187.6	182.9	179.7	178.0	176.2	174.5	172.8
57.5°	168.6	163.8	159.0	156.0	154.7	153.4	152.1	150.8
60°	152.7	148.1	143.4	140.3	138.8	137.4	136.0	134.5
62.5°	137.2	132.9	128.5	125.8	124.6	123.5	122.3	121.1
65°	114.9	111.0	107.1	104.6	103.5	102.5	101.3	100.2
67.5°	94.4	91.0	87.6	85.4	84.2	83.0	81.8	80.6
70°	80.4	77.4	74.5	72.5	71.5	70.7	69.7	68.9
72.5°	67.9	65.3	62.9	61.1	60.3	59.5	58.6	57.8
75°	50.0	48.0	45.9	44.6	44.0	43.5	43.0	42.4
77.5°	35.4	34.2	33.0	32.3	32.1	31.9	31.8	31.6
80°	27.2	26.9	26.6	26.4	26.3	26.3	26.2	26.1
82.5°	21.1	20.9	20.8	20.6	20.5	20.4	20.3	20.2
85°	12.3	12.1	11.9	11.8	11.8	11.8	11.8	11.8
87.5°	7.5	7.6	7.7	7.7	7.9	8.2	8.1	8.2
90°	15.5	16.4	17.2	17.2	18.1	18.9	18.1	18.1
92.5°	168.8	127.1	101.1	83.9	73.8	69.1	66.2	66.2
95°	636.9	503.7	388.5	305.1	263.0	236.3	220.9	209.7
97.5°	941.1	891.5	807.4	717.7	656.0	604.2	578.5	560.6
100°	1036.6	1053.8	1011.7	948.0	873.3	820.9	795.0	788.2
102.5°	1031.8	1117.1	1129.3	1102.8	1056.9	1018.9	991.8	986.3
105°	962.7	1111.4	1196.4	1231.7	1233.5	1226.6	1214.5	1209.4
107.5°	864.5	1022.9	1142.7	1219.3	1261.8	1281.4	1290.0	1292.3
110°	805.4	954.1	1078.7	1173.3	1234.3	1270.4	1285.9	1293.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	762.1	893.5	1011.3	1105.9	1175.2	1218.8	1240.5	1253.0
115°	718.6	824.3	924.9	1007.4	1075.3	1126.9	1154.3	1161.2
117.5°	697.2	784.8	863.8	933.8	991.8	1035.1	1062.9	1068.2
120°	687.6	767.6	836.4	897.3	946.3	984.2	1006.5	1016.0
122.5°	679.4	756.6	819.2	872.6	914.0	946.3	965.3	974.7
125°	665.3	739.2	798.5	845.8	880.2	905.1	921.4	926.6
127.5°	648.1	718.8	777.9	822.8	857.3	879.5	893.2	898.4
130°	634.4	702.2	760.7	806.2	841.5	863.0	876.8	881.9
132.5°	619.9	683.7	740.7	786.4	820.9	845.1	858.2	863.3
135°	599.9	655.8	708.3	751.2	785.7	809.7	823.5	828.6
137.5°	581.9	629.2	673.4	712.2	744.3	768.1	779.5	785.7
140°	571.6	612.0	650.7	686.7	716.9	735.8	747.8	754.7
142.5°	562.0	597.5	630.8	662.0	688.6	706.2	716.9	721.7
145°	548.4	577.6	603.4	627.5	648.9	663.6	672.2	676.5
147.5°	537.2	560.4	581.1	599.9	615.8	628.4	634.9	636.4
150°	530.4	550.1	567.3	582.8	596.5	607.7	612.9	613.7
152.5°	522.8	539.8	555.6	568.3	580.1	589.1	592.2	593.1
155°	511.4	525.2	538.0	548.4	557.0	563.9	566.5	566.5
157.5°	499.2	510.7	521.6	529.9	536.3	541.5	543.0	543.0
160°	491.6	501.1	510.6	517.5	522.6	527.8	528.7	528.7
162.5°	484.1	492.1	499.6	505.8	509.5	514.7	515.6	514.9
165°	473.6	478.8	484.7	489.0	492.5	495.9	495.1	494.2
167.5°	463.5	467.4	472.3	474.8	476.6	478.8	478.6	477.9
170°	457.3	459.9	463.3	465.9	467.6	468.5	467.6	467.6
172.5°	451.8	453.7	455.7	457.6	458.7	459.5	458.7	457.3
175°	444.4	445.2	446.9	446.9	446.9	448.7	446.9	445.2
177.5°	439.5	440.2	440.2	440.9	440.2	440.9	439.5	438.2
180°	437.5	437.5	437.5	437.5	437.5	437.5	437.5	437.5

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