

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: P331888-840

Luminaire Tested: **S123DIP-S340D805U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331888-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S340D805U840-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4389.0 lumens
Efficiency: N/A
Efficacy: 140.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

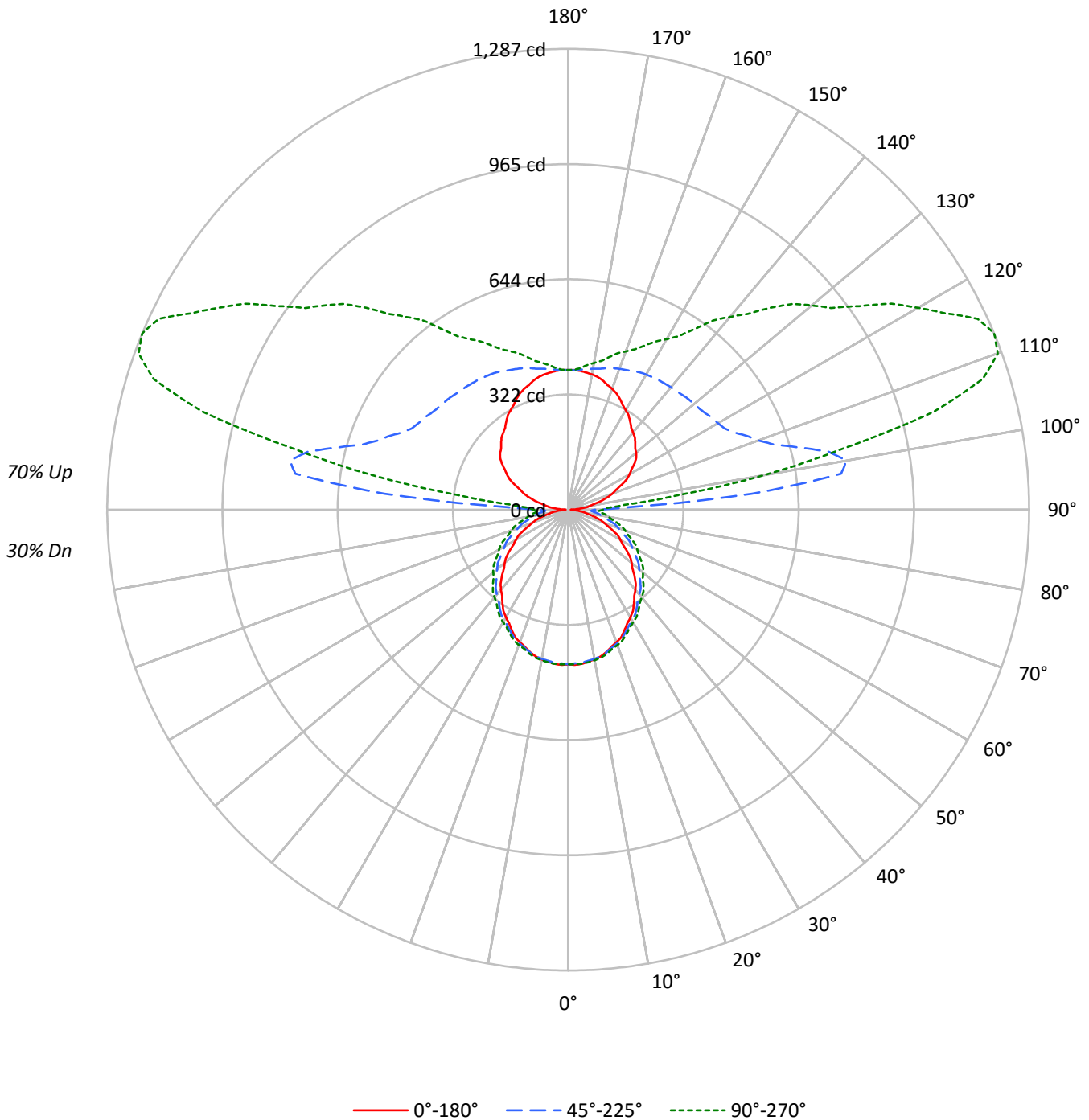
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	92	92	92	92	72	72	72	55	55	55	38	38	38	30
1	93	88	84	81	83	79	76	73	62	60	58	47	45	44	33	32	31	24
2	84	77	70	65	75	69	64	59	54	51	47	41	38	36	28	27	25	20
3	77	67	60	54	68	60	54	49	48	43	39	36	33	30	25	23	21	16
4	70	59	51	45	62	53	47	41	42	37	33	32	28	26	22	20	18	14
5	64	52	44	39	57	47	40	35	37	32	29	28	25	22	20	18	16	12
6	59	47	39	33	52	42	35	30	34	28	25	25	22	19	18	16	14	10
7	54	42	34	29	48	38	31	26	30	25	22	23	19	17	16	14	12	9
8	50	38	31	25	45	34	28	23	28	23	19	21	17	15	15	13	11	8
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	11	10	7
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	10	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4649	4649	4649
5°	4664	4533	4534
10°	4622	4428	4406
15°	4562	4309	4265
20°	4477	4174	4110
25°	4372	4019	3947
30°	4265	3879	3780
35°	4143	3731	3649
40°	4030	3595	3508
45°	3902	3466	3395
50°	3776	3338	3272
55°	3636	3207	3158
60°	3499	3074	3045
65°	3360	2931	2907
70°	3149	2772	2766
75°	2886	2590	2626
80°	2583	2410	2462
85°	2294	2286	2367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	0.9
10°-20°	116.7	2.7
20°-30°	174.6	4.0
30°-40°	208.5	4.8
40°-50°	218.1	5.0
50°-60°	204.7	4.7
60°-70°	171.0	3.9
70°-80°	122.3	2.8
80°-90°	76.0	1.7
90°-100°	262.8	6.0
100°-110°	648.3	14.8
110°-120°	627.1	14.3
120°-130°	495.1	11.3
130°-140°	386.0	8.8
140°-150°	285.0	6.5
150°-160°	197.8	4.5
160°-170°	116.2	2.6
170°-180°	37.8	0.9
0°-30°	332.3	7.6
0°-40°	540.8	12.3
0°-60°	963.6	22.0
0°-90°	1332.9	30.4
90°-120°	1538.2	35.0
90°-150°	2704.3	61.6
90°-180°	3056.0	69.6
0°-180°	4389.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	432	431	429	432	432	41
15°	412	413	413	417	417	116
25°	372	376	378	384	384	171
35°	320	327	334	340	342	200
45°	262	273	285	293	297	202
55°	200	215	232	244	248	179
65°	138	156	177	191	196	136
75°	75	97	120	135	142	80
85°	23	47	72	87	92	24
90°	8	39	73	91	97	6
95°	32	111	515	197	157	33
105°	95	151	670	1158	1057	101
115°	164	210	510	1100	1261	163
125°	226	268	468	846	992	201
135°	265	315	452	690	797	204
145°	301	345	441	558	616	189
155°	342	369	427	486	506	157
165°	373	384	409	434	441	105
175°	389	390	392	398	397	37
180°	390	390	390	390	390	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9
2.5°	433.8	433.6	433.3	433.1	432.8	432.4	431.7	431.0	430.4	429.7	430.4
5°	432.4	432.2	432.0	431.8	431.6	431.2	430.5	429.9	429.3	428.7	429.5
7.5°	428.2	428.3	428.3	428.3	428.4	428.1	427.5	426.9	426.3	425.7	426.7
10°	424.4	424.6	424.9	425.1	425.3	425.2	424.5	424.0	423.5	423.0	424.0
12.5°	419.9	420.2	420.5	420.8	421.1	421.0	420.7	420.3	420.0	419.6	420.6
15°	411.7	412.0	412.3	412.6	412.9	413.1	412.9	412.8	412.7	412.6	413.7
17.5°	401.4	402.0	402.6	403.2	403.8	404.1	404.1	404.0	404.0	404.0	405.0
20°	393.8	394.5	395.1	395.8	396.4	396.8	397.0	397.2	397.4	397.6	398.6
22.5°	386.0	386.6	387.2	387.8	388.5	388.9	389.2	389.5	389.8	390.1	391.3
25°	371.7	372.7	373.9	374.9	375.9	376.6	376.9	377.2	377.5	377.9	379.2
27.5°	357.4	358.6	359.8	361.0	362.2	363.1	363.8	364.5	365.2	365.8	367.0
30°	347.3	348.6	350.0	351.3	352.7	353.8	354.7	355.5	356.3	357.2	358.4
32.5°	336.0	337.5	339.0	340.5	342.0	343.4	344.5	345.6	346.7	347.7	349.1
35°	319.9	321.6	323.4	325.0	326.7	328.2	329.5	330.9	332.2	333.7	335.2
37.5°	303.1	304.9	306.8	308.7	310.5	312.4	314.0	315.7	317.4	319.0	320.8
40°	291.8	293.7	295.5	297.4	299.2	301.2	303.4	305.5	307.5	309.6	311.4
42.5°	279.3	281.7	283.9	286.2	288.5	290.7	293.0	295.1	297.3	299.4	301.4
45°	261.7	264.2	266.6	269.1	271.7	274.2	276.8	279.4	282.1	284.7	286.7
47.5°	243.1	245.9	248.7	251.7	254.5	257.4	260.3	263.4	266.3	269.3	271.6
50°	231.1	234.0	236.9	239.8	242.8	245.8	249.0	252.4	255.6	258.8	261.3
52.5°	218.2	221.4	224.4	227.5	230.7	234.0	237.5	241.2	244.7	248.2	250.7
55°	199.5	203.0	206.4	209.8	213.3	216.9	220.7	224.5	228.2	232.0	234.8
57.5°	181.3	184.8	188.4	192.1	195.6	199.5	203.6	207.7	211.9	216.0	218.8
60°	168.4	172.2	176.0	179.8	183.5	187.5	191.9	196.1	200.4	204.7	207.6
62.5°	156.4	160.3	164.1	167.9	171.8	176.0	180.6	185.1	189.7	194.2	197.0
65°	137.8	142.0	146.0	150.1	154.2	158.5	163.1	167.7	172.3	176.9	180.1
67.5°	119.1	123.4	127.7	132.0	136.3	140.9	145.5	150.3	154.9	159.7	163.0
70°	105.8	110.4	114.8	119.4	123.8	128.7	133.6	138.7	143.7	148.7	152.1
72.5°	93.8	98.4	102.8	107.3	111.8	116.6	121.8	127.0	132.2	137.4	140.9
75°	74.8	79.8	84.6	89.6	94.5	99.6	104.8	110.0	115.2	120.5	123.9
77.5°	58.3	63.2	68.2	73.1	78.1	83.2	88.5	93.7	99.0	104.3	108.0
80°	46.6	51.7	56.9	62.0	67.1	72.4	77.8	83.2	88.7	94.1	97.7
82.5°	36.5	41.6	46.9	52.0	57.3	62.6	68.2	73.6	79.2	84.7	88.3
85°	23.0	28.3	33.5	38.8	43.9	49.4	54.9	60.4	65.9	71.5	75.0
87.5°	12.8	18.4	23.8	29.6	35.0	40.7	46.5	52.3	58.1	63.9	67.3
90°	7.7	14.4	21.1	28.6	35.3	42.1	49.8	57.5	65.2	72.9	75.6
92.5°	15.6	24.8	36.2	47.0	58.2	74.8	100.7	140.0	178.5	171.6	145.2
95°	32.0	38.5	51.2	68.8	93.3	128.8	201.0	323.8	458.4	514.7	429.6
97.5°	50.4	54.8	65.3	80.7	104.6	142.2	211.2	348.7	569.5	768.8	822.5
100°	62.6	66.8	75.6	90.1	112.4	147.2	207.3	329.0	541.4	788.6	947.2
102.5°	75.5	80.0	87.9	101.3	121.4	153.5	207.8	311.7	501.4	745.3	951.2
105°	95.3	100.2	107.4	119.5	136.9	164.9	212.1	297.9	451.6	670.0	899.6
107.5°	115.9	120.5	127.1	138.7	154.8	180.8	222.5	294.3	418.9	603.3	811.8
110°	130.8	135.0	140.8	151.4	166.7	191.8	231.6	295.7	405.7	565.4	756.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	144.6	148.6	154.0	164.3	179.3	203.5	240.5	300.1	397.3	539.2	708.4
115°	164.2	168.6	174.6	183.8	198.4	222.3	256.0	307.9	392.2	510.5	649.6
117.5°	184.2	188.5	193.3	201.4	217.1	239.0	272.3	318.7	390.6	492.0	612.7
120°	197.7	200.6	205.0	213.5	229.0	250.7	282.6	327.1	391.3	483.2	593.0
122.5°	209.6	212.4	216.5	225.3	239.9	262.8	293.9	335.0	394.0	477.0	576.5
125°	226.4	228.0	232.8	241.5	256.4	279.2	309.9	347.7	398.1	468.3	554.9
127.5°	239.5	241.8	247.5	256.3	272.8	295.3	324.5	358.2	403.3	462.6	535.5
130°	247.7	250.0	257.0	266.4	282.9	305.2	333.4	365.4	407.0	458.8	524.7
132.5°	253.7	256.7	264.4	275.7	292.3	313.8	340.9	371.9	409.3	456.3	514.5
135°	264.7	267.7	276.3	288.0	304.5	326.3	351.9	379.9	412.7	452.5	501.0
137.5°	275.0	278.2	286.6	299.2	315.6	335.6	359.7	386.0	414.8	448.5	489.2
140°	281.6	285.5	293.4	306.0	321.8	341.7	365.0	388.9	416.1	446.4	481.9
142.5°	289.1	292.4	300.8	312.0	327.8	346.3	368.6	391.7	416.7	443.6	475.1
145°	301.2	303.6	310.5	322.2	335.6	353.8	374.3	395.6	417.7	441.3	467.5
147.5°	313.2	314.6	321.5	331.7	344.7	360.2	379.0	398.1	417.7	438.4	460.2
150°	321.3	322.1	328.4	338.7	349.7	364.0	382.1	398.7	417.7	435.9	455.6
152.5°	329.5	329.7	336.0	345.1	354.8	368.4	384.1	400.0	415.8	432.6	450.5
155°	341.8	341.8	346.6	354.5	363.1	374.3	387.7	400.3	413.7	427.2	442.9
157.5°	351.6	352.2	356.1	363.0	370.4	379.0	389.7	401.1	411.0	422.2	434.4
160°	359.2	359.2	362.4	368.7	374.3	382.1	391.6	401.1	409.8	418.5	428.7
162.5°	365.0	365.0	367.5	372.5	377.4	384.1	392.2	400.4	407.3	414.7	423.0
165°	373.4	372.6	374.3	378.2	381.3	386.9	393.1	398.7	403.4	409.0	415.3
167.5°	379.9	379.0	379.8	382.7	385.0	388.5	393.0	397.5	399.7	403.3	407.9
170°	383.7	382.1	382.9	385.3	386.9	388.5	392.4	395.6	397.2	399.5	403.4
172.5°	386.3	385.3	385.5	387.2	388.1	389.1	392.4	395.0	395.3	396.4	399.0
175°	389.2	388.5	387.7	389.2	389.2	390.0	391.6	393.1	392.4	392.4	393.9
177.5°	390.6	390.0	389.4	390.0	390.0	390.0	390.6	391.9	390.6	390.0	390.6
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	431.9	431.9	431.9	431.9	431.9	431.9	431.9	431.9
2.5°	431.0	431.7	432.4	432.6	432.6	432.5	432.4	432.3
5°	430.3	431.2	432.0	432.4	432.3	432.1	432.0	431.9
7.5°	427.8	428.8	429.8	430.3	430.2	430.0	429.9	429.8
10°	425.2	426.2	427.2	427.6	427.4	427.2	427.0	426.8
12.5°	421.5	422.5	423.4	423.8	423.6	423.4	423.2	423.0
15°	414.8	415.8	416.9	417.3	417.2	417.1	417.0	416.9
17.5°	405.9	406.9	407.8	408.2	408.0	407.9	407.8	407.6
20°	399.5	400.4	401.4	401.9	402.0	402.1	402.2	402.3
22.5°	392.4	393.6	394.9	395.5	395.4	395.3	395.3	395.2
25°	380.5	381.9	383.2	384.0	384.0	384.0	384.0	384.0
27.5°	368.1	369.3	370.5	371.1	371.2	371.3	371.3	371.4
30°	359.6	360.9	362.1	362.7	362.7	362.7	362.7	362.7
32.5°	350.4	351.7	353.0	353.9	354.2	354.4	354.7	354.9
35°	336.8	338.3	339.9	340.9	341.3	341.7	342.1	342.5
37.5°	322.6	324.4	326.2	327.2	327.5	327.9	328.2	328.5
40°	313.2	315.0	316.7	317.8	318.2	318.7	319.1	319.5
42.5°	303.4	305.3	307.2	308.5	309.1	309.6	310.2	310.8
45°	288.6	290.6	292.7	294.1	294.9	295.7	296.6	297.4
47.5°	273.8	276.1	278.3	279.7	280.3	281.0	281.7	282.4
50°	263.6	266.0	268.4	270.0	270.7	271.5	272.2	273.0
52.5°	253.3	255.7	258.2	259.9	260.8	261.8	262.6	263.5
55°	237.6	240.4	243.3	245.1	245.9	246.8	247.6	248.4
57.5°	221.7	224.5	227.3	229.2	230.2	231.3	232.3	233.2
60°	210.6	213.5	216.4	218.4	219.5	220.8	221.9	223.1
62.5°	200.0	202.9	205.8	207.8	208.9	210.0	211.1	212.2
65°	183.2	186.3	189.5	191.6	192.6	193.7	194.7	195.7
67.5°	166.4	169.9	173.3	175.5	176.3	177.2	178.1	178.9
70°	155.4	158.8	162.1	164.3	165.3	166.3	167.4	168.4
72.5°	144.2	147.6	151.1	153.4	154.4	155.4	156.5	157.5
75°	127.3	130.8	134.3	136.6	137.8	139.2	140.4	141.7
77.5°	111.6	115.2	118.9	121.1	122.1	123.1	124.0	125.0
80°	101.2	104.8	108.4	110.6	111.7	112.7	113.8	114.8
82.5°	91.8	95.3	99.0	101.2	102.3	103.3	104.3	105.4
85°	78.7	82.2	85.7	88.1	89.1	90.2	91.2	92.2
87.5°	71.0	74.7	78.5	81.1	81.9	83.1	84.3	85.2
90°	80.0	84.3	88.7	92.6	92.8	94.7	96.5	96.7
92.5°	123.6	113.3	110.6	108.8	108.3	106.8	108.7	108.2
95°	337.3	248.9	210.4	184.1	170.2	164.1	159.6	157.4
97.5°	758.0	620.1	521.3	429.0	371.7	337.3	317.0	311.2
100°	977.9	917.0	827.6	717.5	638.8	582.2	552.5	554.3
102.5°	1049.4	1050.3	999.4	930.3	869.3	824.7	800.0	782.8
105°	1067.5	1149.4	1167.3	1148.7	1113.4	1084.3	1060.0	1057.0
107.5°	1001.8	1132.8	1204.8	1234.8	1236.3	1227.1	1219.5	1213.2
110°	940.4	1088.3	1190.5	1247.6	1270.5	1277.7	1277.0	1276.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	879.2	1030.3	1144.4	1217.2	1258.6	1279.1	1286.0	1287.2
115°	798.2	938.1	1056.6	1144.4	1204.5	1240.0	1256.6	1261.4
117.5°	738.5	859.5	966.2	1055.2	1117.8	1158.4	1181.9	1188.1
120°	706.7	815.8	912.9	994.2	1057.3	1102.3	1122.0	1127.4
122.5°	681.4	780.1	870.2	945.8	1002.0	1042.5	1064.1	1070.8
125°	647.1	735.4	813.3	878.0	929.3	964.7	985.2	991.5
127.5°	616.9	695.7	766.2	825.1	870.7	901.1	919.7	925.4
130°	597.8	670.9	736.8	791.7	834.2	863.3	880.5	887.5
132.5°	580.0	647.2	708.6	761.1	801.1	830.3	845.7	850.8
135°	555.7	613.7	666.9	713.1	752.3	776.5	791.2	797.3
137.5°	533.6	581.3	627.1	667.2	700.2	724.8	737.3	741.4
140°	520.6	562.4	601.9	636.9	667.4	690.0	703.2	703.0
142.5°	508.0	544.0	578.2	608.7	634.8	654.9	666.8	666.5
145°	493.5	520.5	546.5	570.1	590.3	607.2	614.0	615.9
147.5°	481.8	502.7	523.3	540.0	555.3	566.9	573.3	574.3
150°	473.7	491.9	508.5	523.6	535.6	544.5	549.5	549.7
152.5°	466.8	482.4	497.1	509.6	519.0	527.0	529.9	530.0
155°	456.4	469.0	480.8	490.3	497.4	503.7	505.3	506.0
157.5°	445.2	455.9	465.0	472.4	478.6	483.3	484.6	484.4
160°	439.0	447.7	455.6	461.1	466.7	471.3	471.3	470.6
162.5°	431.4	438.8	446.1	451.0	454.6	458.7	458.7	458.0
165°	421.6	426.4	431.9	435.9	439.0	442.1	441.3	441.3
167.5°	413.0	416.7	419.9	422.7	424.1	426.4	425.6	425.6
170°	407.4	409.8	412.9	414.5	415.3	416.9	416.1	416.1
172.5°	402.3	404.0	406.6	407.6	407.7	409.3	407.9	407.3
175°	395.6	396.4	397.9	397.9	397.9	398.7	397.9	397.2
177.5°	391.3	391.9	392.5	392.5	391.9	392.5	391.3	391.3
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0

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