

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: P331888-935

Luminaire Tested: **S123DIP-S340D805U935-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331888-935
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-S340D805U935-4F0-1E-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: 3742.0 lumens
Efficiency: N/A
Efficacy: 119.9 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

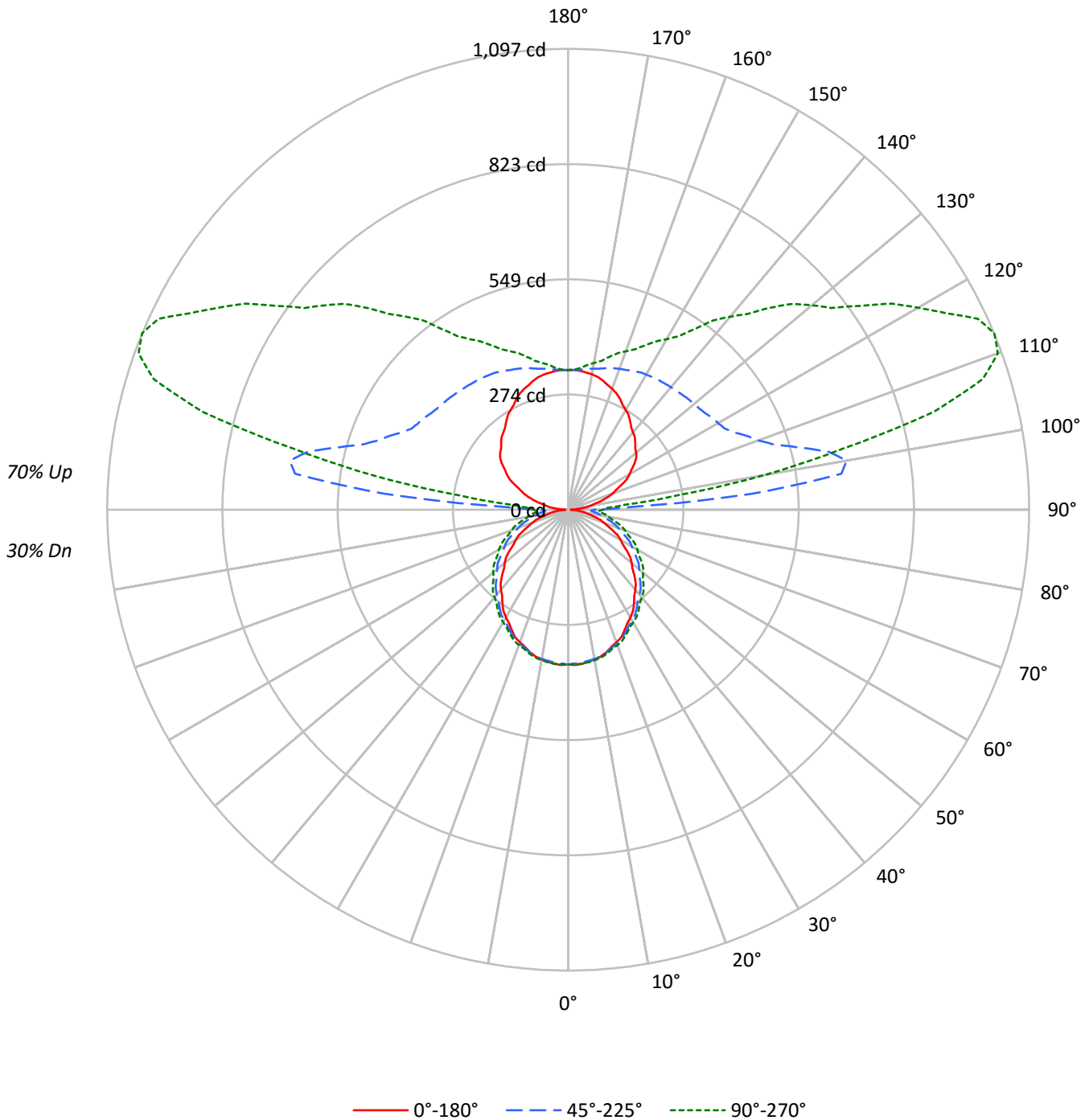
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3963	3963	3963
5°	3977	3865	3866
10°	3941	3776	3757
15°	3890	3674	3636
20°	3818	3559	3504
25°	3728	3427	3365
30°	3637	3307	3224
35°	3533	3181	3112
40°	3435	3065	2991
45°	3327	2955	2895
50°	3219	2846	2789
55°	3100	2734	2693
60°	2984	2620	2596
65°	2865	2499	2479
70°	2685	2362	2359
75°	2462	2208	2239
80°	2201	2054	2100
85°	1955	1950	2018



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	0.9
10°-20°	99.5	2.7
20°-30°	148.9	4.0
30°-40°	177.8	4.8
40°-50°	186.0	5.0
50°-60°	174.5	4.7
60°-70°	145.8	3.9
70°-80°	104.3	2.8
80°-90°	64.8	1.7
90°-100°	224.1	6.0
100°-110°	552.7	14.8
110°-120°	534.6	14.3
120°-130°	422.1	11.3
130°-140°	329.1	8.8
140°-150°	243.0	6.5
150°-160°	168.7	4.5
160°-170°	99.1	2.6
170°-180°	32.2	0.9
0°-30°	283.3	7.6
0°-40°	461.0	12.3
0°-60°	821.6	22.0
0°-90°	1136.4	30.4
90°-120°	1311.4	35.0
90°-150°	2305.6	61.6
90°-180°	2606.0	69.6
0°-180°	3742.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	368	368	368	368	368	
5°	369	368	366	368	368	35
15°	351	352	352	356	355	99
25°	317	321	322	327	327	146
35°	273	279	284	290	292	171
45°	223	233	243	250	254	172
55°	170	183	198	208	212	152
65°	118	133	151	162	167	116
75°	64	83	103	116	121	68
85°	20	40	61	74	79	21
90°	6	33	62	77	82	5
95°	27	95	439	168	134	28
105°	81	129	571	987	901	86
115°	140	179	435	938	1076	139
125°	193	228	399	721	845	171
135°	226	269	386	588	680	174
145°	257	294	376	476	525	161
155°	291	314	364	414	431	134
165°	318	327	349	370	376	90
175°	332	332	335	339	339	32
180°	332	332	332	332	332	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	369.9	369.7	369.5	369.3	369.0	368.7	368.1	367.5	367.0	366.4	367.0
5°	368.7	368.5	368.3	368.2	368.0	367.6	367.0	366.5	366.0	365.5	366.2
7.5°	365.1	365.2	365.2	365.2	365.2	365.0	364.5	363.9	363.4	362.9	363.8
10°	361.9	362.1	362.2	362.4	362.6	362.5	362.0	361.5	361.1	360.7	361.5
12.5°	358.0	358.3	358.5	358.8	359.0	359.0	358.7	358.3	358.1	357.7	358.6
15°	351.0	351.3	351.5	351.8	352.1	352.2	352.1	352.0	351.9	351.8	352.8
17.5°	342.2	342.8	343.3	343.8	344.3	344.6	344.6	344.5	344.5	344.5	345.3
20°	335.8	336.3	336.8	337.4	337.9	338.3	338.5	338.6	338.8	339.0	339.8
22.5°	329.1	329.6	330.1	330.6	331.2	331.6	331.8	332.1	332.3	332.6	333.6
25°	316.9	317.8	318.7	319.6	320.5	321.1	321.3	321.6	321.8	322.2	323.3
27.5°	304.7	305.7	306.8	307.8	308.8	309.6	310.1	310.7	311.3	311.9	312.9
30°	296.1	297.2	298.4	299.5	300.7	301.6	302.4	303.1	303.8	304.5	305.6
32.5°	286.5	287.7	289.0	290.3	291.6	292.7	293.7	294.6	295.6	296.4	297.6
35°	272.8	274.2	275.7	277.1	278.5	279.8	280.9	282.1	283.3	284.5	285.8
37.5°	258.4	259.9	261.6	263.2	264.8	266.3	267.7	269.1	270.6	272.0	273.5
40°	248.7	250.4	251.9	253.6	255.1	256.8	258.6	260.5	262.2	264.0	265.5
42.5°	238.2	240.1	242.0	244.0	246.0	247.9	249.8	251.6	253.5	255.3	257.0
45°	223.1	225.2	227.3	229.5	231.6	233.8	236.0	238.2	240.5	242.7	244.4
47.5°	207.2	209.7	212.1	214.6	217.0	219.5	222.0	224.5	227.0	229.6	231.5
50°	197.0	199.5	202.0	204.5	207.0	209.6	212.3	215.2	217.9	220.7	222.7
52.5°	186.1	188.7	191.3	194.0	196.7	199.5	202.5	205.6	208.6	211.6	213.8
55°	170.1	173.1	176.0	178.9	181.8	184.9	188.1	191.4	194.6	197.8	200.2
57.5°	154.5	157.6	160.7	163.8	166.8	170.1	173.6	177.1	180.6	184.2	186.6
60°	143.6	146.8	150.1	153.3	156.4	159.9	163.6	167.2	170.8	174.5	177.0
62.5°	133.4	136.6	139.9	143.2	146.5	150.1	153.9	157.8	161.7	165.6	168.0
65°	117.5	121.1	124.5	127.9	131.5	135.2	139.1	143.0	146.9	150.8	153.5
67.5°	101.5	105.2	108.9	112.5	116.2	120.1	124.1	128.1	132.1	136.1	139.0
70°	90.2	94.1	97.9	101.8	105.6	109.7	113.9	118.2	122.5	126.7	129.7
72.5°	80.0	83.9	87.6	91.5	95.3	99.4	103.8	108.3	112.7	117.2	120.1
75°	63.8	68.0	72.2	76.4	80.6	84.9	89.4	93.8	98.2	102.7	105.6
77.5°	49.7	53.9	58.1	62.3	66.6	70.9	75.4	79.9	84.4	88.9	92.0
80°	39.7	44.1	48.5	52.9	57.2	61.7	66.3	70.9	75.6	80.2	83.3
82.5°	31.1	35.5	40.0	44.3	48.8	53.4	58.1	62.8	67.5	72.2	75.3
85°	19.6	24.1	28.6	33.1	37.5	42.1	46.8	51.5	56.2	61.0	64.0
87.5°	10.9	15.7	20.3	25.2	29.9	34.7	39.6	44.6	49.5	54.5	57.3
90°	6.5	12.3	18.0	24.4	30.1	35.9	42.4	49.0	55.6	62.2	64.5
92.5°	13.3	21.2	30.8	40.0	49.6	63.8	85.8	119.3	152.2	146.3	123.8
95°	27.3	32.8	43.7	58.6	79.6	109.8	171.3	276.0	390.8	438.9	366.3
97.5°	43.0	46.8	55.7	68.8	89.2	121.2	180.0	297.3	485.5	655.5	701.3
100°	53.4	56.9	64.5	76.8	95.8	125.5	176.8	280.5	461.6	672.4	807.5
102.5°	64.4	68.2	74.9	86.4	103.5	130.9	177.2	265.8	427.5	635.4	811.0
105°	81.3	85.4	91.6	101.9	116.8	140.6	180.8	254.0	385.0	571.3	767.0
107.5°	98.8	102.7	108.4	118.2	132.0	154.1	189.7	250.9	357.1	514.4	692.2
110°	111.5	115.1	120.0	129.1	142.2	163.5	197.4	252.1	345.9	482.1	645.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	123.3	126.7	131.3	140.1	152.8	173.5	205.1	255.9	338.7	459.7	604.0
115°	140.0	143.8	148.9	156.7	169.2	189.5	218.3	262.5	334.4	435.2	553.9
117.5°	157.0	160.7	164.8	171.7	185.1	203.8	232.1	271.7	333.0	419.5	522.4
120°	168.6	171.0	174.8	182.0	195.3	213.8	240.9	278.9	333.6	412.0	505.6
122.5°	178.7	181.1	184.6	192.1	204.6	224.0	250.6	285.6	336.0	406.7	491.5
125°	193.0	194.4	198.5	205.9	218.6	238.1	264.2	296.4	339.4	399.2	473.1
127.5°	204.2	206.1	211.0	218.5	232.6	251.8	276.6	305.4	343.9	394.4	456.6
130°	211.2	213.2	219.1	227.1	241.2	260.2	284.2	311.5	347.0	391.2	447.4
132.5°	216.3	218.9	225.4	235.1	249.2	267.5	290.7	317.1	349.0	389.0	438.7
135°	225.7	228.3	235.6	245.6	259.6	278.2	300.1	323.9	351.9	385.8	427.1
137.5°	234.5	237.2	244.4	255.1	269.1	286.1	306.7	329.1	353.6	382.4	417.1
140°	240.0	243.4	250.1	260.9	274.4	291.4	311.2	331.6	354.7	380.6	410.9
142.5°	246.5	249.3	256.5	266.0	279.5	295.2	314.3	334.0	355.2	378.2	405.1
145°	256.8	258.8	264.8	274.7	286.1	301.6	319.1	337.3	356.1	376.3	398.6
147.5°	267.0	268.2	274.1	282.8	293.9	307.1	323.1	339.4	356.1	373.8	392.4
150°	274.0	274.7	280.0	288.8	298.2	310.3	325.8	339.9	356.1	371.6	388.4
152.5°	280.9	281.1	286.5	294.2	302.5	314.1	327.4	341.0	354.5	368.9	384.1
155°	291.4	291.4	295.5	302.2	309.6	319.1	330.5	341.3	352.8	364.2	377.6
157.5°	299.8	300.3	303.6	309.5	315.8	323.1	332.3	342.0	350.4	360.0	370.4
160°	306.3	306.3	309.0	314.4	319.1	325.8	333.9	342.0	349.4	356.8	365.5
162.5°	311.2	311.2	313.3	317.6	321.8	327.4	334.4	341.4	347.2	353.5	360.7
165°	318.4	317.7	319.1	322.4	325.1	329.8	335.2	339.9	344.0	348.7	354.0
167.5°	323.9	323.1	323.8	326.3	328.2	331.2	335.1	338.9	340.8	343.9	347.8
170°	327.2	325.8	326.5	328.5	329.8	331.2	334.6	337.3	338.6	340.6	344.0
172.5°	329.3	328.5	328.6	330.1	330.9	331.7	334.6	336.7	337.0	337.9	340.2
175°	331.8	331.2	330.5	331.8	331.8	332.5	333.9	335.2	334.6	334.6	335.9
177.5°	333.0	332.5	332.0	332.5	332.5	332.5	333.0	334.2	333.0	332.5	333.0
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	368.2	368.2	368.2	368.2	368.2	368.2	368.2	368.2
2.5°	367.5	368.1	368.7	368.9	368.9	368.8	368.7	368.6
5°	366.9	367.6	368.3	368.7	368.6	368.4	368.3	368.2
7.5°	364.7	365.6	366.4	366.9	366.8	366.6	366.5	366.4
10°	362.5	363.3	364.2	364.5	364.4	364.2	364.0	363.9
12.5°	359.4	360.2	361.0	361.4	361.2	361.0	360.8	360.7
15°	353.6	354.5	355.4	355.8	355.7	355.6	355.5	355.4
17.5°	346.0	346.9	347.7	348.0	347.8	347.8	347.7	347.5
20°	340.6	341.4	342.2	342.7	342.8	342.9	342.9	343.0
22.5°	334.6	335.6	336.7	337.2	337.1	337.0	337.0	336.9
25°	324.4	325.6	326.7	327.4	327.4	327.4	327.4	327.4
27.5°	313.8	314.9	315.9	316.4	316.5	316.6	316.6	316.7
30°	306.6	307.7	308.8	309.3	309.3	309.3	309.3	309.3
32.5°	298.8	299.9	301.0	301.7	302.0	302.1	302.4	302.6
35°	287.1	288.4	289.8	290.7	291.0	291.4	291.7	292.1
37.5°	275.0	276.6	278.1	279.0	279.2	279.6	279.8	280.1
40°	267.0	268.5	270.0	271.0	271.3	271.7	272.1	272.4
42.5°	258.6	260.3	261.9	263.0	263.6	264.0	264.5	265.0
45°	246.1	247.8	249.5	250.7	251.4	252.1	252.9	253.6
47.5°	233.4	235.4	237.3	238.5	239.0	239.6	240.1	240.7
50°	224.7	226.8	228.9	230.2	230.8	231.4	232.0	232.7
52.5°	215.9	218.0	220.2	221.6	222.4	223.2	223.9	224.6
55°	202.6	205.0	207.4	209.0	209.7	210.4	211.1	211.8
57.5°	189.0	191.4	193.8	195.4	196.3	197.2	198.0	198.8
60°	179.5	182.0	184.5	186.2	187.2	188.2	189.2	190.2
62.5°	170.5	173.0	175.5	177.2	178.1	179.0	179.9	180.9
65°	156.2	158.9	161.5	163.3	164.2	165.1	166.0	166.9
67.5°	141.9	144.8	147.7	149.6	150.3	151.1	151.9	152.6
70°	132.5	135.3	138.2	140.1	140.9	141.8	142.8	143.6
72.5°	123.0	125.9	128.8	130.8	131.6	132.5	133.5	134.3
75°	108.6	111.5	114.5	116.5	117.5	118.6	119.7	120.8
77.5°	95.1	98.2	101.3	103.2	104.1	105.0	105.7	106.6
80°	86.3	89.4	92.4	94.3	95.2	96.1	97.0	97.9
82.5°	78.3	81.3	84.4	86.3	87.2	88.1	88.9	89.9
85°	67.1	70.1	73.1	75.1	75.9	76.9	77.7	78.6
87.5°	60.5	63.7	66.9	69.1	69.8	70.9	71.9	72.7
90°	68.2	71.9	75.6	79.0	79.1	80.8	82.3	82.5
92.5°	105.4	96.6	94.3	92.7	92.3	91.1	92.6	92.2
95°	287.6	212.2	179.3	157.0	145.1	139.9	136.0	134.2
97.5°	646.3	528.7	444.4	365.8	316.9	287.6	270.3	265.4
100°	833.7	781.8	705.6	611.7	544.7	496.4	471.1	472.6
102.5°	894.7	895.4	852.0	793.2	741.1	703.1	682.1	667.4
105°	910.2	980.0	995.2	979.4	949.3	924.5	903.7	901.2
107.5°	854.1	965.8	1027.2	1052.7	1054.0	1046.2	1039.7	1034.3
110°	801.8	927.9	1015.0	1063.7	1083.2	1089.3	1088.7	1088.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	749.6	878.4	975.7	1037.8	1073.1	1090.5	1096.4	1097.4
115°	680.5	799.8	900.9	975.7	1026.9	1057.2	1071.3	1075.5
117.5°	629.6	732.8	823.8	899.7	953.0	987.7	1007.7	1013.0
120°	602.5	695.5	778.3	847.7	901.5	939.8	956.6	961.2
122.5°	580.9	665.1	741.9	806.4	854.3	888.8	907.2	912.9
125°	551.7	627.0	693.4	748.6	792.3	822.5	840.0	845.3
127.5°	526.0	593.1	653.2	703.4	742.4	768.3	784.1	789.0
130°	509.7	572.0	628.2	675.0	711.3	736.1	750.7	756.6
132.5°	494.5	551.8	604.2	648.9	683.0	707.9	721.0	725.4
135°	473.8	523.2	568.6	608.0	641.4	662.0	674.6	679.8
137.5°	455.0	495.6	534.7	568.9	597.0	617.9	628.6	632.1
140°	443.8	479.5	513.2	543.0	569.0	588.3	599.5	599.3
142.5°	433.1	463.8	493.0	519.0	541.2	558.4	568.5	568.3
145°	420.8	443.8	466.0	486.0	503.3	517.7	523.5	525.1
147.5°	410.8	428.6	446.2	460.4	473.5	483.4	488.8	489.7
150°	403.9	419.4	433.5	446.4	456.7	464.3	468.5	468.6
152.5°	398.0	411.3	423.8	434.5	442.5	449.4	451.8	451.9
155°	389.1	399.8	409.9	418.0	424.0	429.5	430.8	431.4
157.5°	379.6	388.7	396.5	402.8	408.0	412.1	413.2	413.0
160°	374.3	381.7	388.4	393.1	397.9	401.8	401.8	401.2
162.5°	367.8	374.1	380.3	384.5	387.6	391.1	391.1	390.5
165°	359.5	363.5	368.2	371.6	374.3	376.9	376.3	376.3
167.5°	352.1	355.2	358.0	360.4	361.6	363.5	362.8	362.8
170°	347.3	349.4	352.1	353.4	354.0	355.4	354.7	354.7
172.5°	343.0	344.5	346.6	347.5	347.6	349.0	347.8	347.2
175°	337.3	337.9	339.2	339.2	339.2	339.9	339.2	338.6
177.5°	333.6	334.2	334.7	334.7	334.2	334.7	333.6	333.6
180°	332.5	332.5	332.5	332.5	332.5	332.5	332.5	332.5

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