

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: P331891-935

Luminaire Tested: **S123DIP-S340D805U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331891-935
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-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3718.5 lumens
Efficiency: N/A
Efficacy: 119.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

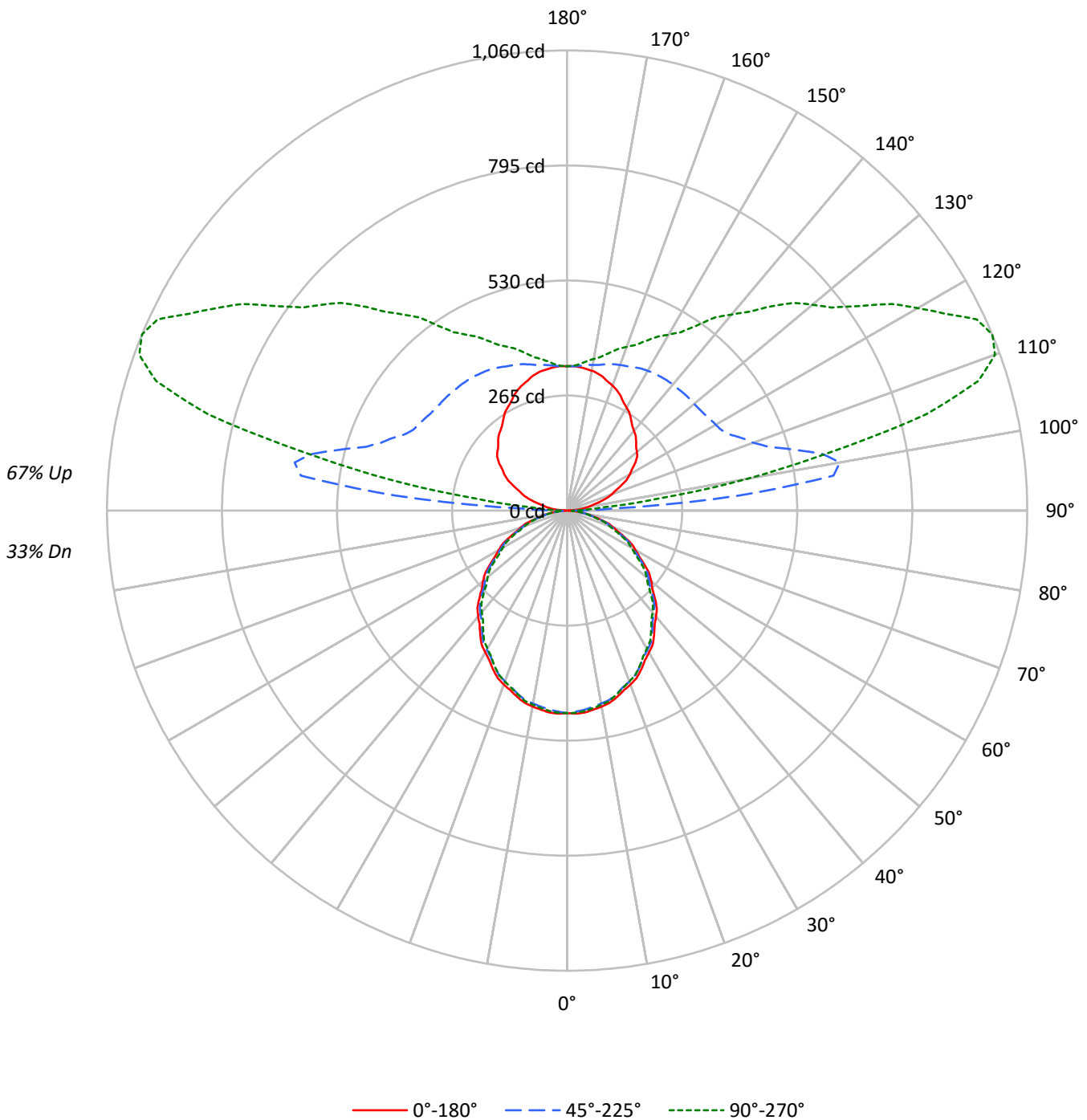
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33				
1	94	90	86	82	84	81	78	75	64	62	60	49	48	47	35	35	34	27				
2	85	78	72	67	77	71	66	61	56	53	50	43	41	39	31	30	28	23				
3	78	69	62	56	70	62	56	51	50	45	42	38	35	33	28	26	24	19				
4	71	61	53	47	64	55	48	43	44	39	36	34	31	28	25	23	21	17				
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	20	18	14				
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	18	16	13				
7	55	43	36	30	50	39	33	28	32	27	23	25	21	19	18	16	14	11				
8	51	39	32	27	46	36	29	25	29	24	21	23	19	17	17	14	13	10				
9	48	36	28	24	43	33	26	22	27	22	18	21	17	15	15	13	11	9				
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10	8				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5022	5022	5022
5°	5046	4976	5010
10°	5012	4933	4964
15°	4953	4878	4886
20°	4885	4798	4802
25°	4793	4703	4694
30°	4692	4598	4561
35°	4586	4486	4428
40°	4477	4363	4295
45°	4354	4250	4147
50°	4232	4113	3997
55°	4074	3969	3847
60°	3914	3800	3679
65°	3769	3617	3505
70°	3559	3408	3257
75°	3256	3136	3003
80°	2938	2814	2783
85°	2569	2482	2384



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	1.2
10°-20°	124.1	3.3
20°-30°	183.3	4.9
30°-40°	214.1	5.8
40°-50°	215.3	5.8
50°-60°	189.1	5.1
60°-70°	140.9	3.8
70°-80°	80.3	2.2
80°-90°	25.6	0.7
90°-100°	185.1	5.0
100°-110°	524.0	14.1
110°-120°	515.5	13.9
120°-130°	411.2	11.1
130°-140°	324.2	8.7
140°-150°	242.0	6.5
150°-160°	168.6	4.5
160°-170°	99.1	2.7
170°-180°	32.2	0.9
0°-30°	351.4	9.4
0°-40°	565.5	15.2
0°-60°	969.9	26.1
0°-90°	1216.6	32.7
90°-120°	1224.6	32.9
90°-150°	2201.9	59.2
90°-180°	2502.0	67.3
0°-180°	3718.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	467	467	467	467	467	
5°	467	465	460	464	464	44
15°	444	443	438	441	438	125
25°	404	401	396	396	395	186
35°	349	346	341	339	337	218
45°	286	284	279	275	272	221
55°	217	216	212	207	205	194
65°	148	146	142	139	138	146
75°	78	77	75	73	72	84
85°	21	20	20	19	19	23
90°	1	8	17	19	20	3
95°	23	74	399	116	78	25
105°	78	115	541	946	856	83
115°	138	172	414	908	1041	137
125°	192	226	386	700	821	170
135°	225	268	381	576	666	174
145°	256	294	376	473	520	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°	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6
2.5°	468.2	467.9	467.6	467.4	467.0	466.5	465.7	464.9	464.2	463.4	464.1
5°	467.0	466.5	466.1	465.6	465.2	464.5	463.5	462.5	461.5	460.5	461.4
7.5°	462.4	461.9	461.5	461.1	460.6	459.9	458.9	457.9	456.8	455.8	456.6
10°	458.6	458.1	457.6	457.2	456.8	456.0	454.8	453.7	452.5	451.3	452.1
12.5°	453.4	453.1	452.6	452.3	451.9	451.2	450.1	449.0	447.9	446.9	447.5
15°	444.5	444.2	443.8	443.4	443.1	442.3	441.2	440.0	438.9	437.7	438.4
17.5°	434.1	433.7	433.3	432.7	432.3	431.5	430.3	429.2	428.0	426.9	427.3
20°	426.5	425.9	425.4	424.8	424.3	423.4	422.3	421.1	420.0	418.9	419.2
22.5°	417.8	417.2	416.7	416.2	415.7	414.8	413.6	412.5	411.3	410.2	410.4
25°	403.6	403.0	402.5	402.0	401.5	400.6	399.4	398.3	397.1	396.0	396.1
27.5°	388.4	387.9	387.4	386.8	386.3	385.5	384.3	383.0	381.8	380.5	380.6
30°	377.5	377.0	376.6	376.2	375.7	374.9	373.7	372.4	371.2	369.9	369.9
32.5°	366.6	366.0	365.4	364.8	364.3	363.4	362.5	361.5	360.6	359.6	359.1
35°	349.0	348.5	347.9	347.4	346.9	346.0	344.9	343.7	342.6	341.4	340.9
37.5°	331.1	330.4	329.7	329.0	328.4	327.4	326.2	325.0	323.9	322.7	322.1
40°	318.6	318.0	317.5	316.9	316.4	315.5	314.3	313.0	311.8	310.5	309.8
42.5°	306.0	305.4	304.8	304.2	303.6	302.6	301.4	300.1	298.9	297.6	297.0
45°	286.0	285.7	285.3	285.0	284.6	283.9	282.7	281.5	280.3	279.2	278.2
47.5°	266.2	265.7	265.2	264.7	264.2	263.4	262.3	261.1	260.1	259.0	258.0
50°	252.7	252.3	251.8	251.4	251.0	250.1	249.0	247.9	246.7	245.6	244.5
52.5°	238.6	238.3	238.0	237.7	237.4	236.6	235.4	234.2	233.0	231.7	230.9
55°	217.1	217.0	216.9	216.8	216.7	216.0	214.9	213.7	212.6	211.5	210.4
57.5°	196.5	196.2	195.9	195.6	195.3	194.7	193.7	192.8	191.9	191.0	190.1
60°	181.8	181.7	181.6	181.5	181.4	180.8	179.7	178.7	177.6	176.5	175.7
62.5°	168.6	168.3	168.2	167.9	167.6	167.0	165.9	164.9	163.8	162.7	162.0
65°	148.0	147.6	147.1	146.7	146.3	145.6	144.7	143.8	142.9	142.0	141.3
67.5°	126.3	125.9	125.5	125.1	124.8	124.2	123.6	122.9	122.2	121.5	120.9
70°	113.1	112.6	112.1	111.5	111.0	110.5	109.9	109.3	108.8	108.3	107.7
72.5°	99.4	98.9	98.6	98.2	97.7	97.3	96.7	96.1	95.5	94.9	94.3
75°	78.3	77.8	77.5	77.1	76.8	76.5	76.2	75.9	75.7	75.4	75.0
77.5°	59.5	59.3	59.2	59.0	58.7	58.5	58.2	57.9	57.5	57.2	56.9
80°	47.4	47.1	46.8	46.6	46.2	46.1	45.9	45.7	45.5	45.4	45.2
82.5°	35.5	35.4	35.4	35.3	35.2	35.2	35.1	35.1	35.1	35.0	34.9
85°	20.8	20.7	20.5	20.3	20.1	20.1	20.1	20.1	20.1	20.1	19.9
87.5°	8.6	8.7	8.7	9.0	9.0	9.1	9.5	9.7	10.1	10.4	10.2
90°	1.4	2.7	4.0	6.0	7.4	8.8	10.8	12.8	14.8	16.8	16.2
92.5°	8.4	12.4	18.1	23.3	28.9	38.9	56.6	85.5	113.9	103.5	78.1
95°	22.9	24.9	32.3	43.7	61.2	87.5	144.7	245.0	355.4	399.2	323.8
97.5°	39.0	39.7	45.5	55.4	72.7	101.1	155.8	268.9	452.9	618.6	661.9
100°	49.9	50.5	55.2	64.7	80.8	107.0	154.1	253.7	430.8	637.5	770.1
102.5°	61.1	62.3	66.5	75.4	90.0	114.0	156.3	240.8	398.5	602.4	775.5
105°	78.1	80.1	84.1	92.2	105.0	125.9	162.2	231.5	358.8	541.2	734.4
107.5°	96.1	98.2	102.0	109.9	122.0	141.4	173.2	230.9	333.5	487.1	662.5
110°	109.1	111.1	114.4	121.8	133.3	152.1	182.4	233.6	323.8	456.4	617.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	120.9	123.0	126.3	133.7	145.2	163.4	191.6	238.9	318.4	435.9	578.0
115°	138.0	140.7	144.7	151.4	162.9	181.1	206.6	247.7	316.4	414.0	530.5
117.5°	155.1	158.2	161.5	167.7	180.6	197.3	222.7	259.3	317.6	401.1	501.8
120°	166.9	168.9	172.3	179.1	191.8	208.7	232.9	267.9	319.8	395.1	486.7
122.5°	177.2	179.2	182.5	189.9	202.1	220.0	243.7	276.0	323.5	391.4	474.3
125°	191.8	193.2	197.3	204.7	217.4	235.6	259.2	288.8	329.2	386.4	458.4
127.5°	203.0	205.0	210.0	217.6	231.7	249.9	272.6	299.3	335.6	384.0	444.4
130°	210.0	212.1	218.1	226.2	240.3	258.5	280.7	306.3	339.9	382.4	436.9
132.5°	215.4	218.0	224.5	234.3	248.4	266.0	287.7	312.7	343.2	381.8	429.9
135°	224.8	227.6	235.0	245.0	259.2	277.3	298.2	321.1	348.0	381.0	420.7
137.5°	233.7	236.5	243.8	254.6	268.5	285.4	305.5	327.3	351.3	379.5	412.8
140°	239.6	243.0	249.8	260.5	274.0	290.8	310.3	330.5	353.4	379.0	407.9
142.5°	246.1	248.9	256.2	265.9	279.4	295.1	314.1	333.7	355.0	377.9	403.6
145°	256.5	258.5	264.6	274.7	286.1	301.6	319.1	337.3	356.1	376.3	397.9
147.5°	267.0	268.2	274.1	282.8	293.9	307.1	323.1	339.4	356.1	373.8	392.2
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°	466.6	466.6	466.6	466.6	466.6	466.6	466.6	466.6
2.5°	464.8	465.5	466.2	466.6	466.5	466.4	466.3	466.2
5°	462.4	463.2	464.2	464.5	464.3	464.2	463.9	463.7
7.5°	457.4	458.2	459.0	459.3	459.3	459.2	459.1	458.9
10°	453.0	453.7	454.5	454.9	454.7	454.5	454.3	454.2
12.5°	448.0	448.6	449.2	449.4	449.4	449.2	449.1	449.0
15°	439.1	439.8	440.6	440.7	440.1	439.5	439.0	438.5
17.5°	427.8	428.3	428.9	429.0	428.8	428.6	428.4	428.3
20°	419.6	419.9	420.3	420.3	420.0	419.7	419.5	419.2
22.5°	410.7	411.0	411.3	411.3	411.0	410.6	410.3	409.9
25°	396.1	396.2	396.3	396.2	396.0	395.7	395.5	395.2
27.5°	380.6	380.7	380.7	380.6	380.3	380.0	379.6	379.3
30°	369.9	369.9	369.9	369.5	368.9	368.3	367.7	367.0
32.5°	358.6	358.1	357.7	357.2	356.9	356.5	356.2	355.9
35°	340.4	339.8	339.2	338.8	338.4	337.9	337.4	337.0
37.5°	321.4	320.8	320.1	319.7	319.4	319.1	318.8	318.6
40°	309.1	308.4	307.6	307.1	306.8	306.4	306.1	305.7
42.5°	296.3	295.5	294.8	294.3	293.9	293.6	293.3	292.8
45°	277.1	276.0	274.9	274.2	273.7	273.3	272.9	272.4
47.5°	256.9	255.9	254.8	254.1	253.7	253.3	252.9	252.5
50°	243.6	242.5	241.6	240.8	240.3	239.8	239.3	238.7
52.5°	230.1	229.2	228.3	227.6	227.1	226.6	226.1	225.6
55°	209.5	208.4	207.5	206.8	206.4	205.9	205.4	205.0
57.5°	189.2	188.3	187.4	186.8	186.2	185.7	185.2	184.7
60°	175.0	174.1	173.3	172.7	172.2	171.8	171.3	170.9
62.5°	161.1	160.3	159.5	158.9	158.7	158.3	158.1	157.7
65°	140.6	139.9	139.1	138.7	138.4	138.1	137.8	137.6
67.5°	120.2	119.6	119.0	118.5	118.1	117.7	117.4	117.0
70°	107.1	106.4	105.8	105.3	104.9	104.4	103.9	103.5
72.5°	93.8	93.2	92.6	92.2	92.0	91.8	91.5	91.3
75°	74.6	74.0	73.6	73.3	73.0	72.8	72.5	72.2
77.5°	56.6	56.3	56.0	55.9	55.9	55.9	55.9	55.9
80°	45.1	45.0	44.9	44.9	44.9	44.9	44.9	44.9
82.5°	34.8	34.6	34.4	34.3	34.3	34.2	34.1	34.0
85°	19.7	19.5	19.4	19.3	19.3	19.3	19.3	19.3
87.5°	10.2	10.3	10.4	10.7	10.5	10.7	10.8	10.7
90°	16.8	17.5	18.2	19.5	18.9	19.5	20.2	19.5
92.5°	56.7	44.9	39.7	36.2	35.0	33.0	33.7	32.5
95°	242.4	164.3	128.5	104.4	91.5	85.5	80.8	78.1
97.5°	604.1	483.9	397.0	316.5	266.8	236.5	218.3	212.6
100°	793.7	739.1	660.4	564.7	496.8	447.6	421.4	422.1
102.5°	856.6	854.9	809.0	748.4	695.5	656.6	634.6	619.1
105°	875.1	942.4	955.2	937.7	906.7	881.1	859.6	856.3
107.5°	822.1	931.3	990.3	1014.3	1014.9	1006.3	998.9	992.7
110°	771.5	895.3	980.1	1027.3	1046.0	1051.5	1050.1	1048.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	721.3	847.9	943.0	1003.5	1038.0	1054.7	1059.8	1060.1
115°	655.0	772.1	871.1	944.4	994.9	1024.5	1038.0	1041.4
117.5°	606.9	708.0	796.9	871.3	923.9	957.9	977.2	981.9
120°	581.6	672.4	753.3	821.2	874.4	912.1	928.2	932.3
122.5°	561.7	643.9	718.8	782.0	829.1	863.1	880.9	886.0
125°	535.1	608.6	673.1	727.0	770.1	799.7	816.5	821.2
127.5°	512.0	577.4	635.8	684.8	723.1	748.4	763.6	767.9
130°	497.5	558.0	612.6	658.3	694.1	718.2	732.4	737.8
132.5°	484.0	539.8	590.5	634.1	667.6	691.9	704.4	708.2
135°	465.8	513.6	557.3	595.7	628.7	648.9	661.0	665.7
137.5°	449.3	488.4	526.2	559.4	587.1	607.6	617.9	621.0
140°	439.5	473.9	506.2	535.1	560.8	579.5	590.4	589.7
142.5°	430.4	459.9	487.9	513.1	534.9	551.6	561.3	560.6
145°	419.4	441.6	463.1	482.7	499.5	513.6	519.0	520.3
147.5°	410.4	428.0	445.4	459.3	472.0	481.6	486.7	487.2
150°	403.9	419.4	433.5	446.3	456.4	463.8	467.9	467.9
152.5°	398.0	411.3	423.8	434.5	442.4	449.3	451.7	451.7
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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