

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: P332522-927

Luminaire Tested: **SA4XXDIP-C350D1035U927-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332522-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXDIP-C350D1035U927-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1035 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

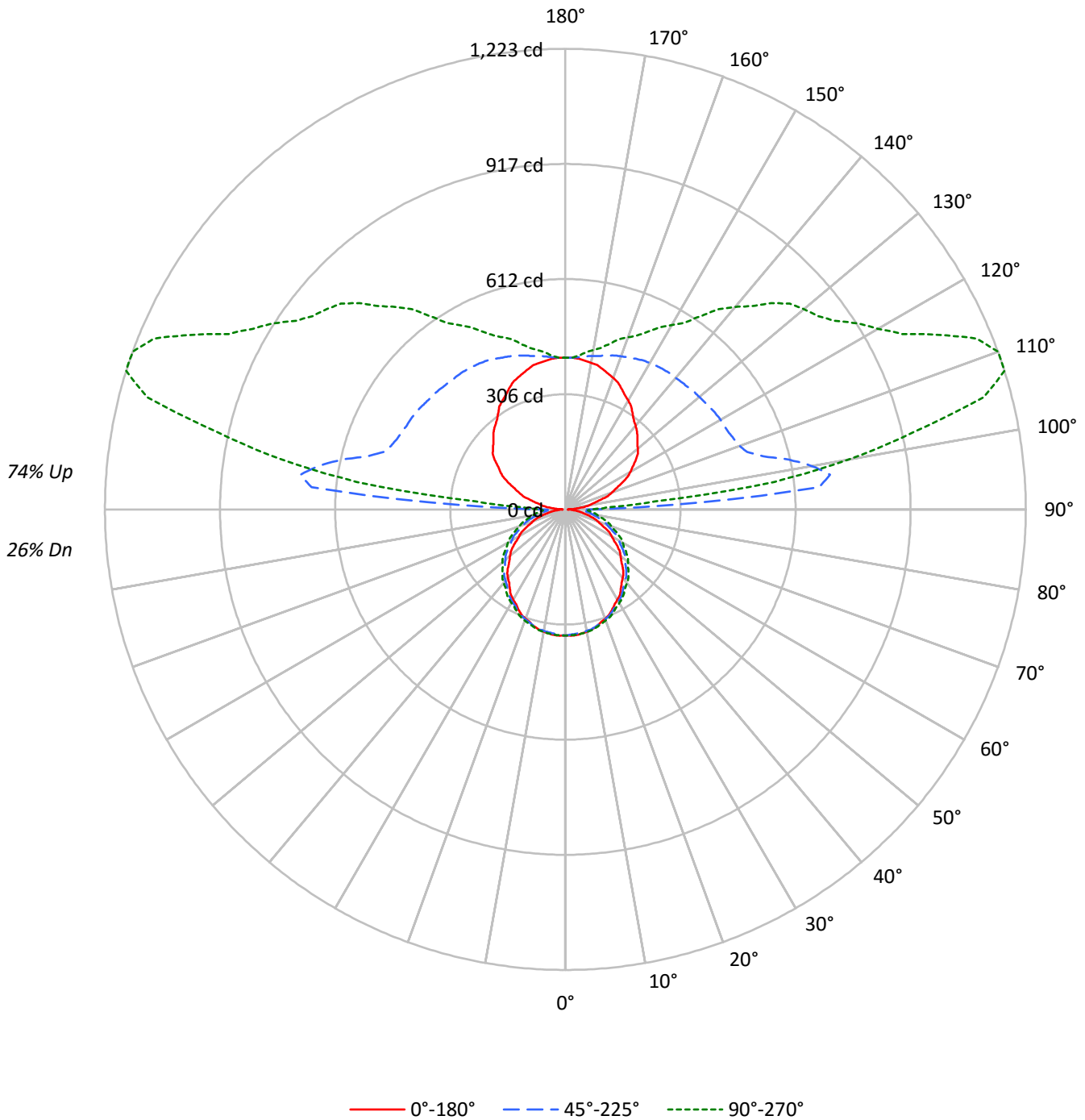
Lumens per Lamp: N/A
Luminaire Lumens: 4071.3 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

Input Watts (W): 37.3
Input Voltage (V): 120
Input Current (Ain): 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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26
1	92	87	84	80	82	78	75	72	60	58	56	44	43	41	29	28	28	21
2	83	76	70	65	74	68	63	58	53	49	46	38	36	34	25	24	23	17
3	76	67	59	54	67	59	53	48	46	42	38	34	31	29	22	21	19	14
4	69	59	51	45	61	52	46	41	41	36	32	30	27	24	20	18	16	12
5	63	52	44	38	56	47	40	35	36	31	28	27	23	21	18	16	14	10
6	58	46	39	33	52	42	35	30	32	28	24	24	21	18	16	14	12	9
7	54	42	34	29	48	37	31	26	29	24	21	22	18	16	15	12	11	8
8	50	38	30	25	44	34	27	23	27	22	18	20	16	14	13	11	10	7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	12	10	9	6
10	43	31	24	20	38	28	22	18	22	18	14	17	13	11	11	9	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2704	2704	2704
5°	2712	2641	2650
10°	2694	2599	2596
15°	2670	2549	2535
20°	2635	2494	2475
25°	2594	2432	2408
30°	2549	2370	2340
35°	2498	2307	2280
40°	2458	2247	2218
45°	2398	2191	2164
50°	2348	2128	2108
55°	2296	2068	2042
60°	2214	1991	1982
65°	2125	1909	1908
70°	2018	1816	1820
75°	1867	1712	1743
80°	1701	1613	1665
85°	1489	1525	1621



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.7	0.8
10°-20°	90.8	2.2
20°-30°	137.4	3.4
30°-40°	166.2	4.1
40°-50°	175.7	4.3
50°-60°	165.4	4.1
60°-70°	137.2	3.4
70°-80°	96.4	2.4
80°-90°	56.7	1.4
90°-100°	323.1	7.9
100°-110°	629.1	15.5
110°-120°	558.1	13.7
120°-130°	465.0	11.4
130°-140°	384.1	9.4
140°-150°	291.2	7.2
150°-160°	204.1	5.0
160°-170°	120.1	2.9
170°-180°	39.1	1.0
0°-30°	259.9	6.4
0°-40°	426.1	10.5
0°-60°	767.2	18.8
0°-90°	1057.5	26.0
90°-120°	1510.2	37.1
90°-150°	2650.5	65.1
90°-180°	3014.0	74.0
0°-180°	4071.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	335	335	335	335	335	
5°	335	334	331	334	334	32
15°	321	322	321	324	324	90
25°	294	296	297	301	302	135
35°	257	262	266	270	272	161
45°	214	222	229	235	237	166
55°	168	176	187	194	197	150
65°	116	128	141	150	153	115
75°	64	78	94	104	108	69
85°	20	36	52	63	68	21
90°	7	27	51	63	68	5
95°	31	100	677	361	239	33
105°	96	145	544	1151	1150	102
115°	165	210	480	914	1097	164
125°	228	271	471	774	872	203
135°	270	322	460	681	774	209
145°	311	356	454	568	626	195
155°	354	382	441	500	521	163
165°	385	397	423	448	455	109
175°	402	402	406	411	410	38
180°	402	402	402	402	402	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	336.0	335.8	335.6	335.4	335.3	334.9	334.4	333.8	333.3	332.7	333.2
5°	335.3	334.9	334.7	334.5	334.2	333.8	333.2	332.6	332.1	331.4	332.2
7.5°	332.4	332.2	332.1	331.9	331.8	331.4	331.0	330.5	330.0	329.5	330.3
10°	329.9	329.9	329.8	329.7	329.6	329.4	329.0	328.5	328.1	327.7	328.4
12.5°	326.7	326.6	326.6	326.6	326.6	326.5	326.1	325.9	325.6	325.3	326.0
15°	321.3	321.5	321.5	321.6	321.7	321.6	321.3	321.1	320.8	320.6	321.3
17.5°	314.1	314.3	314.6	314.8	315.1	315.2	315.1	315.1	315.1	315.0	315.8
20°	309.0	309.2	309.5	309.7	310.0	310.1	310.2	310.3	310.4	310.5	311.3
22.5°	303.2	303.6	303.9	304.2	304.5	304.8	304.9	305.1	305.2	305.4	306.2
25°	294.0	294.5	295.0	295.5	296.0	296.4	296.6	296.8	297.1	297.4	298.3
27.5°	283.6	284.4	285.1	285.8	286.5	287.1	287.5	287.9	288.3	288.7	289.5
30°	276.7	277.4	278.1	278.7	279.4	280.0	280.6	281.1	281.8	282.3	283.3
32.5°	269.3	270.1	270.8	271.6	272.4	273.1	273.8	274.4	275.1	275.8	276.8
35°	257.2	258.3	259.2	260.2	261.3	262.1	263.0	263.8	264.7	265.5	266.6
37.5°	245.2	246.3	247.5	248.6	249.8	250.8	251.9	252.9	254.0	255.0	256.2
40°	237.3	238.4	239.6	240.6	241.7	242.8	244.0	245.2	246.3	247.5	248.7
42.5°	228.4	229.6	230.8	232.0	233.2	234.5	235.9	237.3	238.6	240.0	241.4
45°	214.4	216.0	217.6	219.2	220.8	222.4	223.9	225.5	227.1	228.7	230.1
47.5°	201.2	202.9	204.5	206.1	207.7	209.5	211.3	213.2	215.0	216.8	218.2
50°	191.6	193.5	195.3	197.1	198.9	200.7	202.6	204.5	206.3	208.1	209.8
52.5°	182.0	183.9	185.7	187.5	189.3	191.3	193.4	195.5	197.6	199.7	201.4
55°	168.0	169.8	171.5	173.3	175.0	177.1	179.6	182.1	184.6	187.1	188.8
57.5°	152.3	154.5	156.6	158.8	161.0	163.3	165.8	168.3	170.7	173.3	175.2
60°	142.1	144.3	146.5	148.6	150.8	153.2	156.0	158.8	161.4	164.2	166.1
62.5°	132.2	134.6	137.0	139.3	141.6	144.3	146.9	149.7	152.5	155.3	157.2
65°	116.2	118.9	121.6	124.2	126.9	129.7	132.5	135.3	138.2	141.0	143.1
67.5°	100.8	103.7	106.5	109.4	112.2	115.1	118.2	121.2	124.2	127.2	129.4
70°	90.4	93.2	96.0	98.9	101.7	104.7	107.9	111.1	114.2	117.4	119.6
72.5°	80.2	83.1	86.0	88.9	91.7	94.9	98.2	101.6	105.0	108.4	110.5
75°	64.5	67.6	70.7	73.8	76.8	80.1	83.7	87.1	90.6	94.1	96.5
77.5°	49.9	53.2	56.4	59.7	62.9	66.4	70.0	73.8	77.4	81.0	83.4
80°	40.9	44.2	47.5	50.9	54.2	57.7	61.4	65.0	68.7	72.4	74.9
82.5°	31.8	35.3	38.8	42.3	45.7	49.3	53.0	56.6	60.3	64.0	66.5
85°	19.9	23.4	26.9	30.3	33.9	37.5	41.3	45.0	48.7	52.5	55.0
87.5°	11.2	15.0	18.9	22.4	26.0	29.5	34.1	37.7	41.7	45.6	47.9
90°	6.8	11.7	17.4	21.5	25.7	29.2	37.5	41.0	46.2	51.3	53.0
92.5°	14.7	21.9	32.2	44.9	59.5	79.2	122.9	187.9	251.3	286.2	246.6
95°	31.0	36.1	46.7	59.8	81.5	117.8	190.0	323.1	515.6	677.2	697.6
97.5°	51.3	53.6	62.7	74.6	93.3	124.0	180.4	290.8	482.1	709.2	865.1
100°	64.2	66.4	74.1	85.8	103.0	130.9	180.9	273.5	438.1	664.3	869.0
102.5°	76.9	80.0	86.8	97.6	113.9	140.5	185.9	267.7	408.1	609.0	820.0
105°	95.9	100.0	105.6	116.7	132.6	158.0	199.0	267.7	381.5	543.5	731.5
107.5°	117.6	120.6	126.0	137.4	152.4	177.1	214.8	277.6	375.1	506.0	659.7
110°	131.9	134.7	139.7	150.4	165.8	189.3	227.0	285.2	375.1	492.7	623.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	145.5	148.1	153.8	163.7	179.0	202.2	238.5	293.5	377.6	485.5	602.4
115°	165.2	168.3	174.6	183.2	199.0	222.0	256.4	306.5	382.7	480.3	581.8
117.5°	186.0	188.6	194.0	203.1	217.7	241.3	273.8	320.0	388.4	477.2	571.2
120°	199.6	201.5	207.2	216.2	229.8	253.3	285.8	329.3	392.6	475.7	565.1
122.5°	212.2	213.9	219.4	227.6	242.3	265.0	297.4	338.2	397.0	473.6	558.6
125°	228.5	231.6	236.2	244.9	259.8	282.9	313.5	352.0	403.9	470.8	548.3
127.5°	243.1	245.6	251.2	261.0	276.6	299.7	328.8	363.8	408.8	466.8	534.7
130°	251.0	254.1	260.4	272.1	287.1	310.6	338.9	371.1	412.7	464.6	526.2
132.5°	259.3	261.7	269.8	281.0	297.2	319.3	347.3	378.6	416.2	462.8	518.6
135°	270.5	273.6	281.5	294.9	311.6	332.4	359.1	388.2	421.1	459.7	506.9
137.5°	281.9	284.9	293.5	306.3	323.4	343.1	367.7	394.6	423.7	457.8	496.9
140°	290.2	292.5	301.1	314.5	331.0	350.0	373.8	399.2	426.1	456.3	491.4
142.5°	298.7	301.1	309.2	321.9	337.9	356.2	379.3	402.7	428.2	455.7	486.9
145°	311.2	313.5	321.3	332.2	347.2	364.6	385.2	406.5	429.4	453.9	479.7
147.5°	325.3	326.0	332.9	344.1	356.6	372.2	391.5	410.1	430.2	451.1	473.5
150°	334.1	334.9	341.0	350.5	362.3	377.2	394.7	412.0	430.2	449.2	469.0
152.5°	342.1	342.1	348.5	357.4	367.9	381.7	397.2	413.3	429.0	446.0	463.9
155°	353.5	354.3	359.0	366.9	375.7	387.5	400.9	414.4	427.1	441.3	456.3
157.5°	364.7	364.7	369.2	375.3	382.9	392.3	403.6	414.4	425.0	436.4	448.5
160°	371.7	371.7	374.9	380.4	386.7	395.5	404.9	414.4	423.1	432.6	442.9
162.5°	378.0	377.4	379.9	384.8	390.5	397.4	406.2	414.4	421.2	428.8	437.8
165°	385.2	385.2	386.7	390.7	394.7	399.3	406.5	412.8	417.6	423.1	429.4
167.5°	392.3	391.5	392.3	395.3	397.5	401.1	406.3	410.9	413.8	417.4	421.8
170°	395.5	394.7	395.5	397.8	399.3	401.7	405.7	409.6	411.2	413.6	416.8
172.5°	398.5	397.8	397.9	399.7	400.6	402.3	405.0	408.4	408.7	409.8	412.3
175°	401.7	400.9	400.9	401.7	402.5	402.5	404.1	406.5	405.7	405.7	407.3
177.5°	403.1	402.5	401.9	402.5	402.5	402.5	403.1	404.4	403.1	403.1	403.8
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	333.7	334.1	334.6	334.8	334.8	334.7	334.6	334.5
5°	332.8	333.4	334.1	334.5	334.4	334.2	334.1	334.1
7.5°	331.1	331.8	332.6	332.9	332.8	332.7	332.6	332.6
10°	329.2	329.9	330.7	331.1	331.0	330.9	330.8	330.7
12.5°	326.7	327.4	328.0	328.4	328.4	328.4	328.4	328.3
15°	322.1	322.8	323.6	323.9	323.8	323.8	323.7	323.6
17.5°	316.5	317.3	318.1	318.4	318.3	318.2	318.2	318.1
20°	312.1	313.0	313.8	314.3	314.3	314.3	314.3	314.3
22.5°	307.0	307.8	308.7	309.2	309.3	309.4	309.6	309.7
25°	299.2	300.1	301.0	301.5	301.6	301.7	301.7	301.8
27.5°	290.3	291.2	292.1	292.6	292.6	292.7	292.8	292.9
30°	284.2	285.1	286.0	286.5	286.7	286.9	287.1	287.2
32.5°	277.8	278.9	280.0	280.6	280.7	280.9	281.1	281.2
35°	267.8	268.9	270.1	270.8	271.1	271.3	271.6	271.9
37.5°	257.4	258.5	259.7	260.5	260.7	260.9	261.3	261.5
40°	250.0	251.2	252.5	253.3	253.6	254.0	254.3	254.6
42.5°	242.7	244.2	245.5	246.4	246.6	246.8	247.2	247.4
45°	231.6	233.0	234.4	235.3	235.8	236.1	236.5	236.9
47.5°	219.8	221.2	222.7	223.6	224.2	224.7	225.1	225.7
50°	211.4	213.1	214.8	215.9	216.3	216.8	217.4	217.9
52.5°	203.0	204.7	206.4	207.5	207.9	208.4	209.0	209.5
55°	190.4	192.1	193.8	194.9	195.4	195.8	196.4	196.9
57.5°	177.2	179.2	181.2	182.4	182.8	183.3	183.8	184.3
60°	168.1	170.0	171.9	173.2	173.9	174.5	175.2	175.9
62.5°	159.1	161.0	162.9	164.2	164.9	165.5	166.2	166.8
65°	145.1	147.3	149.3	150.7	151.4	152.0	152.7	153.4
67.5°	131.5	133.6	135.7	137.1	137.8	138.4	139.0	139.7
70°	121.8	124.1	126.4	127.8	128.3	129.0	129.5	130.1
72.5°	112.7	114.9	117.1	118.5	119.1	119.8	120.5	121.1
75°	98.8	101.1	103.5	105.0	105.8	106.5	107.3	108.0
77.5°	85.8	88.2	90.5	92.1	92.9	93.7	94.5	95.3
80°	77.4	79.9	82.4	84.0	84.6	85.3	86.0	86.6
82.5°	69.1	71.7	74.2	75.9	76.6	77.3	78.1	78.8
85°	57.5	60.0	62.5	64.2	65.0	65.8	66.6	67.5
87.5°	50.5	53.1	55.6	57.2	58.1	59.0	59.6	60.3
90°	56.2	59.4	62.6	64.2	65.6	67.1	66.9	67.6
92.5°	195.4	159.2	137.8	123.4	114.8	111.1	109.2	109.8
95°	623.1	502.8	399.1	323.8	285.9	262.1	248.6	239.1
97.5°	900.5	857.1	782.0	700.8	644.8	597.9	574.9	559.1
100°	986.7	1004.8	968.3	911.2	843.0	795.4	772.2	766.4
102.5°	980.7	1061.4	1074.8	1051.8	1010.2	975.9	951.6	947.1
105°	914.7	1053.5	1133.9	1167.8	1170.0	1164.3	1153.9	1149.9
107.5°	822.1	969.8	1082.1	1154.0	1193.7	1212.3	1220.8	1223.4
110°	766.2	905.0	1021.5	1109.8	1166.6	1200.6	1215.4	1223.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	724.8	847.6	957.7	1046.0	1110.4	1151.3	1171.9	1184.1
115°	682.5	781.6	875.9	953.0	1016.1	1064.1	1090.0	1096.9
117.5°	660.4	742.6	817.1	882.6	936.7	977.2	1003.5	1009.0
120°	649.9	725.1	790.0	847.3	893.1	928.5	949.7	959.2
122.5°	640.8	713.4	772.7	823.0	861.7	892.1	910.1	919.4
125°	625.7	695.4	751.5	796.1	828.2	851.6	867.1	872.4
127.5°	607.5	674.1	730.0	772.3	804.6	825.6	838.8	844.1
130°	593.4	657.4	712.6	755.6	788.5	808.7	821.9	827.1
132.5°	578.8	638.9	692.8	735.7	768.0	790.8	803.4	808.6
135°	558.0	610.8	660.4	700.8	732.9	755.6	768.7	774.0
137.5°	539.5	584.2	626.1	662.7	692.6	714.9	725.7	731.8
140°	528.9	567.0	603.7	637.7	665.8	683.7	695.1	701.9
142.5°	519.1	552.8	584.2	613.7	638.6	655.1	665.2	670.0
145°	505.6	533.0	557.1	579.7	599.8	613.6	621.9	626.1
147.5°	494.4	515.9	534.9	552.5	567.3	579.1	585.3	587.0
150°	488.0	506.1	522.0	536.2	548.8	559.1	563.9	564.7
152.5°	481.0	496.6	511.2	522.9	533.7	542.0	544.9	545.7
155°	470.6	483.2	495.0	504.5	512.5	518.8	521.2	521.2
157.5°	459.3	469.9	479.9	487.5	493.5	498.2	499.6	499.6
160°	452.3	461.1	469.8	476.1	480.9	485.6	486.4	486.4
162.5°	445.4	452.8	459.6	465.3	468.8	473.6	474.4	473.7
165°	435.8	440.5	446.0	450.0	453.1	456.3	455.5	454.7
167.5°	426.4	430.1	434.5	436.9	438.5	440.5	440.4	439.7
170°	420.7	423.1	426.3	428.6	430.2	431.0	430.2	430.2
172.5°	415.7	417.4	419.3	421.0	422.0	422.8	422.0	420.7
175°	408.8	409.6	411.2	411.2	411.2	412.8	411.2	409.6
177.5°	404.4	405.0	405.0	405.7	405.0	405.7	404.4	403.1
180°	402.5	402.5	402.5	402.5	402.5	402.5	402.5	402.5

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