

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: P331290-927

Luminaire Tested: **SA2XXDIP-C485D330U927-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331290-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D330U927-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2571.6 lumens
Efficiency: N/A
Efficacy: 93.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

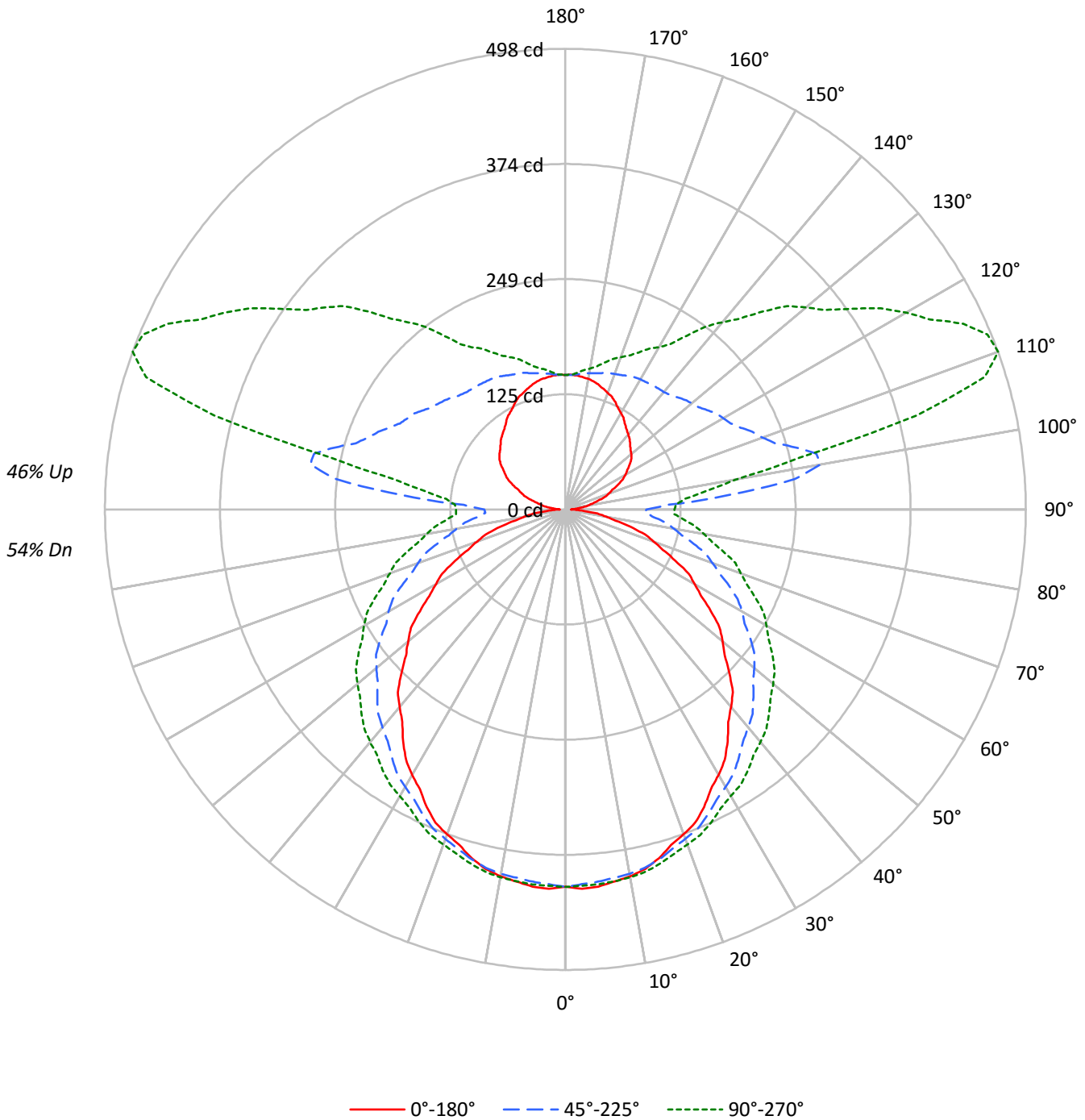
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	60	60	60	54				
1	97	92	87	83	90	85	81	78	73	70	67	61	59	57	50	49	47	42				
2	88	79	73	67	81	74	68	62	63	58	54	53	49	46	43	41	38	34				
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	38	35	32	28				
4	73	61	52	46	67	57	49	43	48	42	38	41	36	32	33	30	27	24				
5	66	54	45	39	61	50	43	37	43	37	32	36	31	28	30	26	23	20				
6	61	48	40	34	56	45	37	32	39	32	28	33	28	24	27	23	20	17				
7	56	44	35	29	52	41	33	28	35	29	24	30	25	21	25	21	18	15				
8	52	40	31	26	48	37	30	24	32	26	22	27	22	19	23	19	16	14				
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12				
10	46	33	26	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	1.5
10°-20°	110.9	4.3
20°-30°	168.1	6.5
30°-40°	204.7	8.0
40°-50°	220.3	8.6
50°-60°	213.9	8.3
60°-70°	186.8	7.3
70°-80°	143.8	5.6
80°-90°	97.8	3.8
90°-100°	124.7	4.8
100°-110°	246.0	9.6
110°-120°	241.9	9.4
120°-130°	190.6	7.4
130°-140°	146.2	5.7
140°-150°	106.1	4.1
150°-160°	73.7	2.9
160°-170°	43.4	1.7
170°-180°	14.1	0.5
0°-30°	317.7	12.4
0°-40°	522.4	20.3
0°-60°	956.6	37.2
0°-90°	1384.9	53.9
90°-120°	612.6	23.8
90°-150°	1055.5	41.0
90°-180°	1187.0	46.2
0°-180°	2571.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	6	44	88	110	118	5
95°	14	57	178	131	130	14
105°	37	72	258	442	394	40
115°	63	86	209	411	475	62
125°	85	102	187	326	378	76
135°	99	118	171	262	303	77
145°	112	129	164	207	229	71
155°	128	138	159	180	187	59
165°	139	144	153	162	164	39
175°	145	145	147	148	148	14
180°	146	146	146	146	146	



TEST NUMBER: P331290-927

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.6	19.6	27.7	35.6	43.6	51.9	60.6	69.4	78.2	86.6	91.9
90°	6.2	14.7	23.4	31.6	39.8	48.6	58.5	68.8	78.9	87.6	92.6
92.5°	8.9	17.5	26.6	34.9	43.9	54.2	68.6	85.6	101.6	110.2	109.7
95°	14.5	21.9	30.8	39.5	50.1	63.9	84.7	116.9	157.2	177.8	169.1
97.5°	20.1	27.1	35.6	44.8	55.5	69.6	93.4	134.9	196.5	250.3	264.3
100°	25.7	31.4	38.8	48.1	58.6	72.6	94.7	136.3	204.1	280.3	325.4
102.5°	30.3	35.4	42.4	51.3	61.6	75.2	96.1	133.6	196.7	278.1	346.2
105°	37.1	42.1	47.8	55.8	65.8	79.0	98.9	130.7	183.7	258.3	337.3
107.5°	45.1	49.0	53.9	60.8	70.0	82.7	102.0	130.3	175.0	237.6	307.8
110°	50.0	53.7	58.0	64.2	72.8	85.4	104.2	130.8	171.3	227.1	289.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	54.9	58.2	62.3	68.0	75.8	88.3	106.3	131.5	168.6	218.9	275.2
115°	62.6	65.4	68.5	73.4	80.3	91.6	109.6	132.5	165.6	209.1	257.2
117.5°	69.9	71.9	74.6	78.5	84.8	95.9	112.5	134.0	163.2	201.5	243.9
120°	74.9	76.4	78.7	81.8	87.9	98.5	114.8	135.1	161.9	197.2	236.4
122.5°	79.5	80.6	82.5	85.5	91.3	102.0	117.1	136.0	161.0	193.4	229.7
125°	85.2	86.0	87.7	91.0	96.6	106.5	120.9	137.7	159.2	187.0	219.3
127.5°	90.1	91.1	93.3	96.9	102.1	111.8	125.0	139.7	158.2	181.7	209.7
130°	93.0	94.0	96.6	100.4	105.9	115.0	127.6	141.0	157.7	178.4	203.4
132.5°	95.7	96.9	99.8	103.8	109.5	118.4	129.8	142.4	157.3	175.4	197.8
135°	99.1	100.2	103.6	107.8	114.2	122.7	133.0	144.1	156.6	171.3	190.0
137.5°	102.9	104.3	107.6	112.0	118.4	126.0	135.4	145.0	155.8	167.9	183.7
140°	105.8	106.8	110.0	114.4	120.4	127.8	136.4	145.4	155.1	165.8	179.9
142.5°	108.8	109.5	112.5	116.8	122.6	129.4	137.7	146.2	155.1	164.9	177.0
145°	112.5	113.7	116.5	120.6	126.3	132.4	140.0	147.8	155.6	164.0	173.8
147.5°	117.2	118.0	120.7	124.6	129.3	134.8	141.9	148.8	155.8	163.0	171.0
150°	120.3	121.2	123.4	127.1	131.3	136.3	142.8	149.2	155.6	162.3	169.1
152.5°	123.5	123.9	126.1	129.3	133.3	137.8	143.6	149.4	155.2	161.2	167.5
155°	127.9	128.2	129.8	132.9	136.0	140.2	145.0	149.7	154.5	159.2	164.6
157.5°	131.6	131.9	133.2	135.9	138.4	141.9	145.9	149.7	153.2	157.2	161.8
160°	134.0	134.4	135.5	137.7	140.0	143.1	146.4	149.7	152.6	155.9	159.8
162.5°	136.6	136.3	137.5	139.3	141.3	143.7	146.6	149.5	151.9	154.8	158.0
165°	139.4	139.1	139.7	141.3	142.8	144.4	146.9	148.9	150.6	152.6	155.0
167.5°	141.7	141.4	141.9	143.0	144.0	145.0	146.9	148.5	149.3	150.6	152.2
170°	143.3	142.8	143.1	143.9	144.4	145.3	146.6	148.1	148.6	149.5	150.6
172.5°	144.2	143.9	143.7	144.6	144.9	145.5	146.5	147.4	147.7	148.1	149.0
175°	145.3	145.0	144.7	145.3	145.3	145.5	146.1	146.6	146.4	146.6	146.9
177.5°	145.8	145.3	145.1	145.5	145.5	145.5	145.8	146.2	145.8	145.5	145.8
180°	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	97.3	102.5	108.0	111.5	113.2	114.9	116.6	118.3
90°	97.6	102.3	108.1	111.8	113.4	114.9	116.5	118.1
92.5°	108.5	110.3	113.0	114.6	116.1	116.7	118.5	119.6
95°	151.4	139.3	132.5	129.7	127.6	126.9	127.7	129.5
97.5°	243.8	217.5	192.1	175.2	163.3	158.0	155.4	154.6
100°	324.5	294.6	261.1	230.4	208.6	198.0	191.4	187.7
102.5°	376.2	373.1	349.8	317.1	293.3	274.2	265.5	260.1
105°	400.1	436.4	444.7	438.4	422.6	406.6	396.0	393.6
107.5°	373.9	426.0	459.5	475.9	479.6	480.1	479.1	475.4
110°	352.5	406.8	446.9	472.6	486.1	492.9	496.9	498.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	332.6	384.9	427.4	456.5	474.8	485.1	491.3	494.2
115°	307.4	354.3	395.0	426.5	447.8	462.2	470.9	474.8
117.5°	287.0	328.8	365.9	395.5	417.2	432.1	441.2	444.6
120°	276.2	314.6	347.9	376.0	397.0	411.5	421.1	425.4
122.5°	267.0	302.5	334.1	359.5	378.3	392.5	401.0	404.6
125°	253.3	285.7	313.9	337.3	354.7	366.5	374.7	378.1
127.5°	239.9	269.2	295.7	317.3	332.6	343.7	350.9	353.9
130°	231.2	258.4	283.7	304.3	319.0	329.6	336.3	339.5
132.5°	222.8	248.1	271.5	290.9	305.5	316.0	322.2	325.3
135°	211.0	232.3	253.5	271.1	284.2	294.5	300.6	302.7
137.5°	200.9	218.8	235.9	251.2	263.1	271.9	277.3	279.8
140°	194.6	210.2	225.1	238.8	248.7	256.7	261.7	264.1
142.5°	189.6	202.8	215.6	227.0	236.2	243.5	248.0	249.0
145°	183.2	193.3	202.7	211.6	219.0	224.3	227.8	229.3
147.5°	178.5	185.8	192.7	198.8	204.7	208.8	211.0	211.9
150°	175.8	182.0	187.8	192.8	197.0	200.4	202.1	202.4
152.5°	173.3	179.0	184.0	188.4	191.7	194.6	195.8	195.9
155°	169.9	174.4	178.6	181.6	184.7	186.7	187.8	187.3
157.5°	166.0	169.7	173.2	175.6	177.8	179.4	179.9	179.9
160°	163.4	166.5	169.6	171.6	173.6	174.9	175.2	175.2
162.5°	161.0	163.7	166.3	167.8	169.8	170.7	171.0	170.7
165°	157.3	159.2	161.2	162.3	163.4	164.6	164.6	164.3
167.5°	153.8	155.3	156.6	157.6	158.1	158.8	158.7	158.4
170°	152.0	152.8	153.9	154.5	154.8	155.6	155.3	154.8
172.5°	150.0	150.6	151.5	151.8	152.1	152.5	152.2	151.9
175°	147.8	148.1	148.4	148.6	148.6	148.9	148.6	148.1
177.5°	146.2	146.2	146.5	146.5	146.5	146.5	146.2	145.8
180°	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5

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