

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: P331299-930

Luminaire Tested: **SA2XXDIP-C485D530U930-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331299-930  
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-C485D530U930-4F0-1E-UDD-D4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 530 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

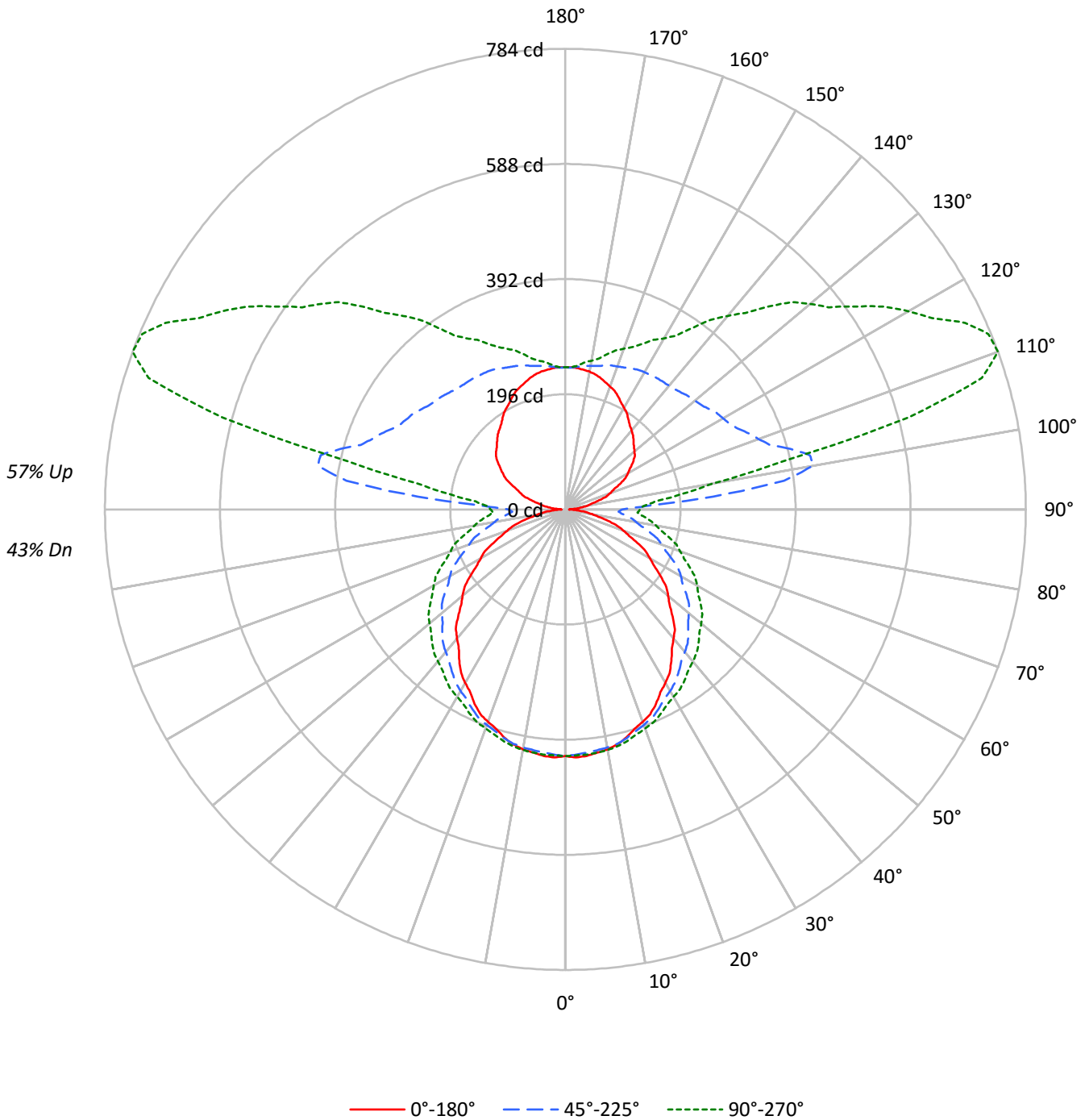
Lumens per Lamp: N/A  
Luminaire Lumens: 3287.5 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 32.8  
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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43
1	95	90	86	82	87	82	79	75	68	65	63	54	53	51	42	41	40	34
2	86	78	71	66	78	71	66	61	59	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	23
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	20	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	18	15	12
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6783	6783	6783
5°	6816	6530	6505
10°	6774	6337	6266
15°	6681	6133	6014
20°	6562	5913	5771
25°	6445	5701	5552
30°	6282	5486	5330
35°	6116	5276	5174
40°	5941	5099	5017
45°	5775	4940	4885
50°	5598	4794	4753
55°	5410	4638	4620
60°	5180	4477	4479
65°	4944	4290	4310
70°	4679	4085	4131
75°	4335	3888	3964
80°	3800	3685	3794
85°	3277	3510	3661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.8	1.2
10°-20°	114.2	3.5
20°-30°	173.0	5.3
30°-40°	210.7	6.4
40°-50°	226.7	6.9
50°-60°	220.1	6.7
60°-70°	192.2	5.8
70°-80°	148.0	4.5
80°-90°	101.5	3.1
90°-100°	165.1	5.0
100°-110°	378.0	11.5
110°-120°	381.5	11.6
120°-130°	305.3	9.3
130°-140°	238.1	7.2
140°-150°	175.4	5.3
150°-160°	122.4	3.7
160°-170°	72.0	2.2
170°-180°	23.4	0.7
0°-30°	327.0	9.9
0°-40°	537.7	16.4
0°-60°	984.5	29.9
0°-90°	1426.2	43.4
90°-120°	924.6	28.1
90°-150°	1643.5	50.0
90°-180°	1861.0	56.6
0°-180°	3287.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	420	420	420	420	420	
5°	421	419	416	419	419	40
15°	402	403	403	408	408	113
25°	365	370	375	382	384	168
35°	315	325	337	350	354	197
45°	258	275	296	314	321	199
55°	198	220	251	273	281	177
65°	135	165	201	225	234	134
75°	75	109	148	173	182	79
85°	22	60	99	123	133	24
90°	6	48	96	119	127	5
95°	21	74	252	161	153	21
105°	60	107	397	689	604	64
115°	102	136	325	649	751	101
125°	141	167	298	518	602	125
135°	164	196	280	424	488	127
145°	187	215	272	342	377	117
155°	212	229	265	299	311	98
165°	232	238	253	269	273	65
175°	241	242	244	247	246	23
180°	242	242	242	242	242	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	422.6	422.2	421.9	421.6	421.3	420.7	420.0	419.2	418.5	417.7	418.2
5°	421.3	420.9	420.5	420.1	419.7	419.1	418.3	417.5	416.7	415.9	416.7
7.5°	417.6	417.3	417.0	416.8	416.5	416.0	415.4	414.8	414.2	413.5	414.5
10°	414.7	414.4	414.1	413.8	413.6	413.3	412.9	412.5	412.1	411.6	412.7
12.5°	409.8	409.9	409.9	409.9	410.0	409.9	409.6	409.3	409.0	408.7	409.8
15°	401.9	402.1	402.4	402.7	402.9	403.1	403.1	403.1	403.1	403.1	404.3
17.5°	391.7	392.2	392.8	393.4	394.0	394.4	394.8	395.3	395.7	396.2	397.4
20°	384.8	385.5	386.2	386.9	387.5	388.2	388.7	389.2	389.8	390.3	391.8
22.5°	377.5	378.3	379.1	379.8	380.7	381.4	382.2	382.9	383.7	384.5	386.0
25°	365.3	366.3	367.2	368.2	369.1	370.2	371.5	372.7	373.9	375.0	376.7
27.5°	350.7	352.3	353.8	355.4	356.9	358.4	359.8	361.3	362.6	364.1	366.2
30°	341.0	342.8	344.5	346.3	348.1	349.8	351.6	353.3	355.1	356.8	359.0
32.5°	330.3	332.2	334.2	336.2	338.2	340.2	342.3	344.4	346.4	348.5	351.0
35°	314.8	317.1	319.4	321.7	324.0	326.4	329.0	331.6	334.1	336.7	339.7
37.5°	298.0	300.7	303.3	306.0	308.6	311.6	315.0	318.2	321.6	324.9	328.2
40°	286.8	289.8	292.8	295.7	298.7	302.0	305.7	309.3	313.0	316.7	320.2
42.5°	276.1	279.1	282.0	285.0	288.0	291.6	295.8	299.9	304.2	308.3	312.2
45°	258.2	261.8	265.5	269.1	272.8	277.0	281.7	286.4	291.2	296.0	300.1
47.5°	240.5	244.5	248.5	252.4	256.4	261.2	266.8	272.3	277.9	283.4	287.8
50°	228.4	232.5	236.8	240.9	245.1	250.2	256.3	262.4	268.6	274.6	279.2
52.5°	216.6	221.0	225.4	229.9	234.3	239.7	246.1	252.5	258.9	265.4	270.0
55°	197.9	202.8	207.7	212.5	217.4	223.3	230.4	237.4	244.4	251.4	256.3
57.5°	179.4	184.9	190.4	195.8	201.4	207.7	214.8	222.0	229.2	236.4	241.7
60°	166.2	172.0	177.9	183.7	189.5	196.2	204.0	211.7	219.4	227.1	232.3
62.5°	154.5	160.5	166.6	172.7	178.7	185.6	193.2	201.0	208.7	216.4	221.8
65°	135.2	141.8	148.5	155.1	161.7	169.0	177.0	185.0	193.0	201.0	206.5
67.5°	117.4	124.3	131.3	138.2	145.1	152.6	160.9	169.0	177.2	185.3	190.9
70°	104.8	111.8	118.8	125.8	132.9	140.6	149.0	157.4	165.8	174.1	179.9
72.5°	93.0	100.3	107.5	114.8	122.1	130.0	138.4	146.9	155.4	163.9	169.7
75°	74.9	82.5	90.0	97.6	105.2	113.3	122.0	130.6	139.3	148.0	153.8
77.5°	57.4	65.3	73.2	81.1	89.1	97.4	106.2	115.0	123.8	132.6	138.4
80°	45.7	53.9	62.2	70.4	78.7	87.2	96.0	104.8	113.6	122.4	128.1
82.5°	36.0	44.1	52.2	60.3	68.5	77.0	85.9	94.8	103.7	112.7	118.3
85°	21.9	30.3	38.7	47.1	55.4	64.0	72.6	81.3	90.0	98.7	104.4
87.5°	12.1	20.4	28.8	37.1	45.3	54.0	63.1	72.4	81.6	90.3	95.8
90°	6.5	15.8	25.5	34.2	43.0	52.7	63.7	75.6	87.1	96.2	101.1
92.5°	11.3	21.1	31.7	41.1	51.5	63.8	82.6	105.7	127.3	136.4	132.3
95°	21.1	29.4	40.4	51.0	64.7	83.1	112.6	161.2	223.2	252.3	234.6
97.5°	30.7	39.0	49.5	61.5	75.7	95.1	129.7	193.9	291.3	375.9	396.2
100°	40.0	46.5	55.7	68.1	82.4	101.7	134.0	198.2	306.2	428.2	500.2
102.5°	48.1	53.7	62.5	74.5	88.7	107.7	137.9	195.7	296.0	426.6	536.8
105°	59.8	65.6	72.7	83.6	97.8	116.3	145.2	193.6	277.4	396.9	525.3
107.5°	73.1	77.7	84.0	93.5	106.8	124.8	152.8	195.6	265.8	365.5	479.3
110°	81.4	86.0	91.6	100.3	112.8	130.9	158.0	198.1	261.5	349.9	450.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	89.7	93.8	99.2	107.2	118.9	137.0	163.0	200.9	258.8	338.3	429.3
115°	102.4	106.2	110.5	117.6	128.3	144.7	170.8	205.2	256.4	324.8	402.4
117.5°	115.0	117.8	121.6	127.5	137.4	153.7	177.8	210.1	255.2	315.4	383.4
120°	123.2	125.6	128.9	133.6	143.5	159.5	183.0	213.5	254.8	309.9	372.8
122.5°	131.0	132.7	135.7	140.5	150.0	166.0	188.2	216.5	254.8	305.5	363.4
125°	140.7	142.1	144.9	150.5	159.8	175.0	196.0	221.3	254.5	297.8	349.4
127.5°	148.9	150.6	154.4	160.4	169.2	184.3	204.0	226.2	254.9	291.9	336.3
130°	153.7	155.5	160.0	166.3	175.5	189.9	209.0	229.5	255.6	288.2	327.7
132.5°	158.2	160.3	165.2	171.9	181.5	195.5	213.2	232.7	256.2	284.9	320.2
135°	164.3	166.2	171.7	178.7	189.4	203.1	219.3	236.9	256.9	280.5	309.9
137.5°	170.6	172.8	178.4	185.7	196.3	208.7	224.0	239.8	257.3	277.0	301.7
140°	175.5	177.2	182.6	189.9	200.0	212.1	226.4	241.1	257.1	274.6	296.8
142.5°	180.3	181.6	186.7	194.0	203.7	215.0	228.7	242.7	257.5	273.6	292.8
145°	186.9	188.7	193.4	200.4	209.7	219.9	232.4	245.5	258.5	272.5	288.1
147.5°	194.7	196.1	200.6	207.0	214.7	223.8	235.6	247.1	258.9	270.8	283.9
150°	199.9	201.3	205.0	211.1	218.1	226.4	237.1	247.9	258.5	269.7	280.9
152.5°	205.1	205.8	209.5	214.8	221.4	229.0	238.6	248.2	257.8	267.8	278.3
155°	212.5	213.0	215.7	220.9	226.0	232.9	240.8	248.7	256.7	264.6	273.4
157.5°	218.6	219.1	221.4	225.8	229.9	235.7	242.4	248.7	254.5	261.2	268.8
160°	222.7	223.1	225.0	228.8	232.4	237.6	243.2	248.7	253.4	259.0	265.5
162.5°	226.8	226.5	228.4	231.4	234.7	238.7	243.5	248.3	252.3	257.1	262.5
165°	231.5	231.1	232.0	234.8	237.1	239.9	244.1	247.4	250.1	253.4	257.6
167.5°	235.5	234.9	235.7	237.5	239.2	240.9	244.0	246.7	248.0	250.1	252.7
170°	238.1	237.1	237.6	239.0	239.9	241.3	243.6	246.0	246.9	248.3	250.1
172.5°	239.5	239.0	238.7	240.1	240.7	241.7	243.3	244.8	245.4	246.1	247.5
175°	241.3	240.8	240.4	241.3	241.3	241.7	242.7	243.6	243.2	243.6	244.1
177.5°	242.1	241.4	241.0	241.7	241.7	241.7	242.1	242.9	242.1	241.7	242.1
180°	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
2.5°	418.8	419.3	419.9	420.0	419.8	419.6	419.4	419.1
5°	417.5	418.3	419.1	419.5	419.3	419.2	419.1	418.9
7.5°	415.5	416.5	417.4	417.8	417.8	417.6	417.4	417.4
10°	413.8	414.8	416.0	416.5	416.3	416.1	416.0	415.9
12.5°	410.8	412.0	413.0	413.5	413.4	413.2	413.1	412.9
15°	405.5	406.8	408.0	408.5	408.4	408.2	408.1	408.0
17.5°	398.7	400.0	401.2	401.9	401.9	401.9	401.9	401.9
20°	393.3	394.8	396.2	397.0	397.0	397.0	397.0	397.0
22.5°	387.4	388.9	390.4	391.3	391.5	391.7	391.9	392.2
25°	378.3	379.9	381.6	382.6	383.0	383.4	383.8	384.3
27.5°	368.3	370.3	372.3	373.5	373.8	374.1	374.4	374.7
30°	361.2	363.3	365.5	366.7	367.1	367.5	367.9	368.4
32.5°	353.5	356.0	358.5	360.1	360.9	361.6	362.3	363.1
35°	342.7	345.7	348.6	350.6	351.6	352.5	353.4	354.4
37.5°	331.5	334.8	338.1	340.2	341.3	342.3	343.2	344.3
40°	323.7	327.2	330.7	333.0	334.3	335.5	336.7	337.9
42.5°	316.0	319.8	323.7	326.3	327.4	328.6	329.9	331.1
45°	304.4	308.5	312.7	315.4	316.8	318.2	319.5	320.9
47.5°	292.1	296.5	300.9	303.9	305.3	306.8	308.3	309.8
50°	283.8	288.4	293.0	296.0	297.6	299.1	300.5	302.0
52.5°	274.8	279.5	284.2	287.3	288.9	290.6	292.1	293.8
55°	261.2	266.1	270.9	274.3	276.1	277.8	279.6	281.3
57.5°	246.9	252.1	257.4	260.9	262.7	264.5	266.3	268.1
60°	237.4	242.6	247.7	251.2	253.1	255.0	256.9	258.8
62.5°	227.3	232.8	238.2	241.9	243.7	245.5	247.3	249.1
65°	212.1	217.6	223.1	226.8	228.5	230.3	232.0	233.8
67.5°	196.6	202.1	207.7	211.5	213.3	215.2	217.0	218.8
70°	185.8	191.6	197.4	201.1	202.8	204.4	206.0	207.7
72.5°	175.4	181.1	186.8	190.6	192.5	194.4	196.4	198.4
75°	159.6	165.4	171.2	175.0	176.8	178.6	180.3	182.1
77.5°	144.2	150.0	155.8	159.6	161.5	163.4	165.3	167.2
80°	133.8	139.4	145.1	148.9	150.8	152.7	154.6	156.5
82.5°	124.0	129.7	135.3	139.1	140.9	142.7	144.5	146.3
85°	110.0	115.7	121.4	125.1	127.0	129.0	130.9	132.7
87.5°	101.2	106.6	112.3	115.9	117.7	119.4	121.2	122.9
90°	106.1	110.6	116.9	120.9	122.5	124.2	125.7	127.3
92.5°	127.1	126.7	128.1	128.7	129.9	130.0	132.1	132.9
95°	202.1	178.9	164.5	157.7	153.3	151.2	151.4	153.4
97.5°	359.1	312.3	267.1	236.8	216.2	206.4	201.1	198.9
100°	495.4	442.8	384.1	331.1	293.9	275.4	263.4	256.6
102.5°	583.7	575.5	533.9	477.4	437.0	404.3	389.0	379.1
105°	626.7	684.0	694.8	682.6	655.3	627.9	609.4	604.4
107.5°	586.4	670.1	723.0	748.5	753.7	753.6	751.1	743.9
110°	552.9	640.5	704.3	745.3	766.9	777.1	782.9	783.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	522.0	606.2	674.2	720.7	750.1	766.3	775.8	779.8
115°	483.1	558.8	623.7	674.4	708.9	731.8	745.3	751.1
117.5°	452.5	519.4	578.6	626.2	661.3	685.3	699.4	704.3
120°	436.5	498.0	551.1	596.0	630.1	653.4	668.3	674.5
122.5°	423.3	479.8	530.2	570.9	601.4	624.1	637.4	642.5
125°	403.7	455.3	499.8	537.1	565.3	584.2	597.0	601.9
127.5°	384.3	431.0	473.0	507.4	532.1	549.8	561.1	565.2
130°	371.9	415.1	455.1	488.0	511.8	528.7	539.1	543.9
132.5°	359.8	399.9	436.8	467.7	491.3	508.2	517.8	522.2
135°	343.0	376.5	410.0	438.1	459.1	475.5	484.9	488.0
137.5°	328.8	356.9	383.8	408.2	427.3	441.5	449.7	453.5
140°	319.8	344.3	367.9	389.9	405.5	418.4	426.2	429.8
142.5°	312.8	333.5	353.7	372.0	386.9	398.5	405.4	406.7
145°	303.4	319.5	334.8	348.9	360.9	369.4	374.7	376.8
147.5°	296.3	308.5	319.8	330.0	339.5	346.1	349.6	350.7
150°	292.0	302.2	312.0	320.3	327.3	332.9	335.7	336.1
152.5°	287.9	297.4	305.7	312.9	318.4	323.3	325.3	325.4
155°	282.3	289.7	296.6	301.7	306.9	310.1	312.0	311.0
157.5°	275.7	281.8	287.7	291.7	295.3	298.1	298.9	298.9
160°	271.5	276.6	281.8	285.0	288.3	290.6	291.1	291.1
162.5°	267.4	271.8	276.2	278.7	281.9	283.6	284.0	283.6
165°	261.3	264.6	267.8	269.7	271.5	273.4	273.4	273.0
167.5°	255.4	258.0	260.2	261.9	262.7	263.7	263.7	263.1
170°	252.5	253.9	255.8	256.7	257.1	258.5	258.0	257.1
172.5°	249.2	250.1	251.6	252.2	252.7	253.3	252.8	252.3
175°	245.5	246.0	246.5	246.9	246.9	247.4	246.9	246.0
177.5°	242.9	242.9	243.3	243.3	243.3	243.3	242.9	242.1
180°	241.7	241.7	241.7	241.7	241.7	241.7	241.7	241.7

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