

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: P331290-930

Luminaire Tested: **SA2XXDIP-C485D330U930-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331290-930
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-C485D330U930-4F0-1E-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: 2646.6 lumens
Efficiency: N/A
Efficacy: 96.2 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

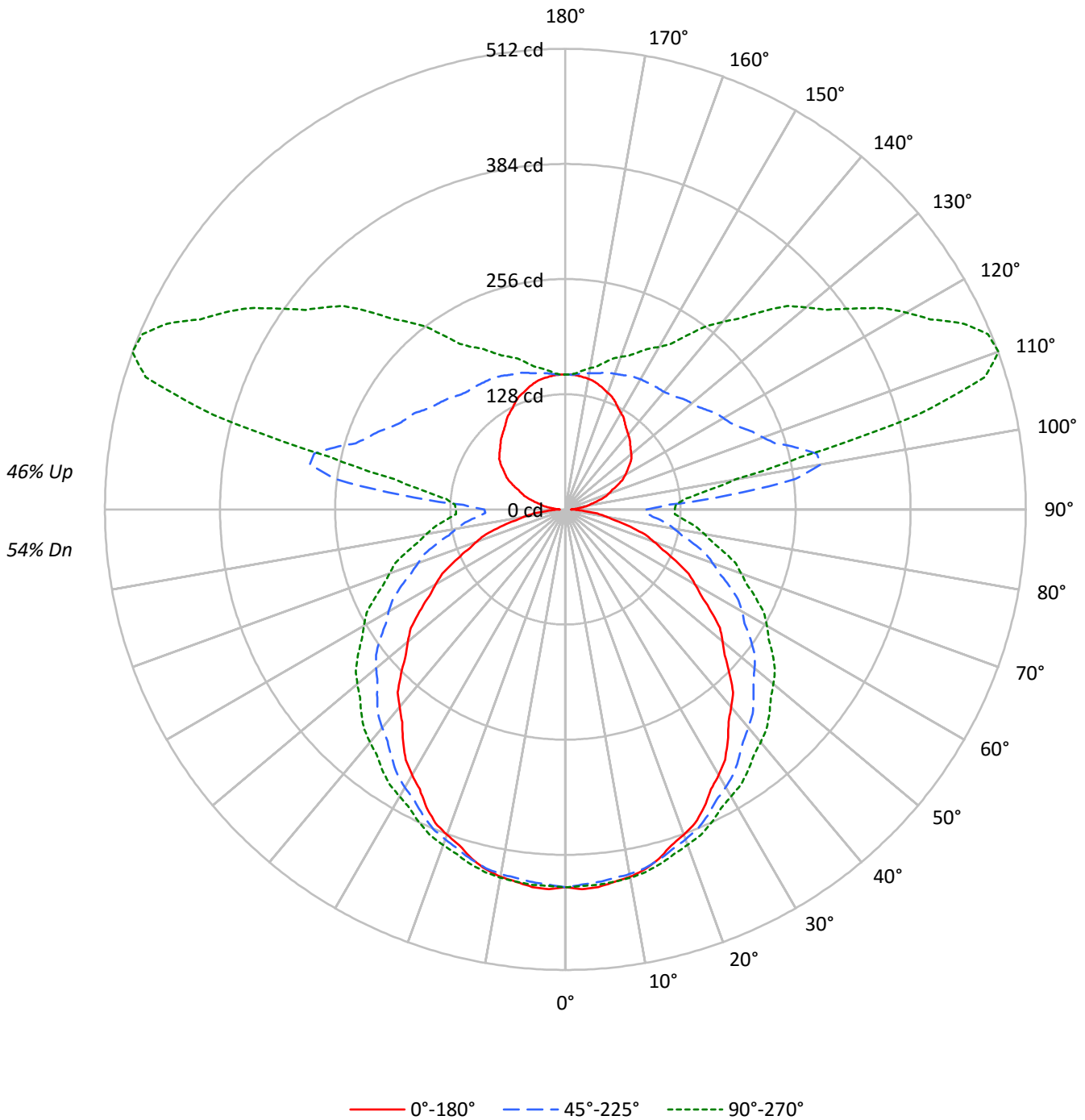
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	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	1.5
10°-20°	114.2	4.3
20°-30°	173.0	6.5
30°-40°	210.7	8.0
40°-50°	226.7	8.6
50°-60°	220.1	8.3
60°-70°	192.2	7.3
70°-80°	148.0	5.6
80°-90°	100.7	3.8
90°-100°	128.3	4.8
100°-110°	253.2	9.6
110°-120°	248.9	9.4
120°-130°	196.2	7.4
130°-140°	150.5	5.7
140°-150°	109.2	4.1
150°-160°	75.8	2.9
160°-170°	44.6	1.7
170°-180°	14.5	0.5
0°-30°	327.0	12.4
0°-40°	537.7	20.3
0°-60°	984.5	37.2
0°-90°	1425.4	53.9
90°-120°	630.4	23.8
90°-150°	1086.3	41.0
90°-180°	1221.0	46.1
0°-180°	2646.6	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	46	90	113	122	5
95°	15	59	183	135	133	15
105°	38	75	266	454	405	41
115°	64	88	215	423	489	64
125°	88	105	192	335	389	78
135°	102	122	176	270	312	79
145°	116	133	169	213	236	73
155°	132	142	164	185	193	61
165°	144	148	157	166	169	40
175°	150	150	151	153	152	14
180°	150	150	150	150	150	



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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°	12.0	20.2	28.5	36.7	44.9	53.4	62.4	71.4	80.5	89.1	94.6
90°	6.4	15.1	24.1	32.5	40.9	50.1	60.2	70.8	81.2	90.2	95.3
92.5°	9.1	18.0	27.4	36.0	45.2	55.8	70.6	88.1	104.6	113.4	112.9
95°	14.9	22.5	31.7	40.7	51.6	65.8	87.2	120.3	161.8	183.0	174.0
97.5°	20.7	27.9	36.6	46.1	57.2	71.7	96.1	138.8	202.2	257.6	272.0
100°	26.4	32.3	39.9	49.5	60.3	74.7	97.5	140.2	210.0	288.5	334.9
102.5°	31.2	36.4	43.6	52.8	63.3	77.4	98.9	137.5	202.4	286.2	356.3
105°	38.2	43.3	49.2	57.5	67.8	81.3	101.8	134.5	189.1	265.8	347.2
107.5°	46.4	50.4	55.5	62.6	72.1	85.1	105.0	134.1	180.1	244.5	316.7
110°	51.4	55.3	59.7	66.1	74.9	87.9	107.2	134.6	176.3	233.7	297.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	56.5	59.9	64.2	70.0	78.0	90.9	109.4	135.3	173.5	225.3	283.2
115°	64.4	67.3	70.5	75.5	82.7	94.2	112.8	136.4	170.5	215.2	264.7
117.5°	71.9	74.0	76.8	80.8	87.3	98.7	115.8	137.9	168.0	207.4	251.0
120°	77.0	78.7	81.0	84.1	90.4	101.4	118.1	139.1	166.6	202.9	243.3
122.5°	81.9	83.0	85.0	88.0	93.9	104.9	120.5	140.0	165.7	199.0	236.4
125°	87.6	88.5	90.3	93.7	99.5	109.7	124.4	141.7	163.9	192.4	225.7
127.5°	92.7	93.8	96.0	99.7	105.1	115.0	128.7	143.7	162.8	187.0	215.8
130°	95.7	96.7	99.5	103.4	109.0	118.4	131.3	145.1	162.3	183.6	209.4
132.5°	98.5	99.7	102.7	106.8	112.7	121.8	133.5	146.5	161.9	180.5	203.6
135°	102.0	103.1	106.6	111.0	117.6	126.3	136.9	148.3	161.2	176.3	195.6
137.5°	105.9	107.3	110.7	115.3	121.8	129.6	139.3	149.3	160.4	172.8	189.1
140°	108.9	109.9	113.2	117.7	123.9	131.5	140.4	149.6	159.6	170.6	185.2
142.5°	111.9	112.7	115.8	120.3	126.2	133.2	141.7	150.4	159.6	169.7	182.1
145°	115.8	117.0	119.8	124.2	130.0	136.2	144.1	152.1	160.1	168.8	178.9
147.5°	120.7	121.5	124.3	128.2	133.1	138.7	146.0	153.1	160.4	167.8	175.9
150°	123.8	124.7	127.0	130.8	135.1	140.3	146.9	153.5	160.1	167.1	174.0
152.5°	127.1	127.5	129.8	133.1	137.2	141.9	147.8	153.8	159.7	165.9	172.4
155°	131.7	131.9	133.6	136.8	140.0	144.3	149.2	154.1	159.0	163.9	169.4
157.5°	135.4	135.7	137.1	139.9	142.4	146.0	150.2	154.1	157.7	161.8	166.6
160°	137.9	138.3	139.4	141.7	144.1	147.2	150.7	154.1	157.0	160.5	164.4
162.5°	140.6	140.3	141.5	143.3	145.4	147.9	150.9	153.8	156.3	159.3	162.7
165°	143.5	143.2	143.7	145.4	146.9	148.6	151.2	153.3	155.0	157.0	159.6
167.5°	145.9	145.5	146.0	147.2	148.2	149.3	151.2	152.9	153.7	155.0	156.6
170°	147.5	146.9	147.2	148.1	148.6	149.5	150.9	152.4	153.0	153.8	155.0
172.5°	148.4	148.1	147.9	148.8	149.1	149.8	150.7	151.7	152.1	152.5	153.4
175°	149.5	149.2	149.0	149.5	149.5	149.8	150.3	150.9	150.7	150.9	151.2
177.5°	150.0	149.5	149.4	149.8	149.8	149.8	150.0	150.5	150.0	149.8	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8



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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°	100.1	105.5	111.1	114.8	116.5	118.3	120.0	121.7
90°	100.4	105.3	111.2	115.0	116.7	118.3	119.9	121.6
92.5°	111.7	113.5	116.3	118.0	119.4	120.1	122.0	123.1
95°	155.8	143.3	136.4	133.5	131.3	130.6	131.4	133.3
97.5°	250.9	223.9	197.7	180.3	168.0	162.6	160.0	159.1
100°	333.9	303.2	268.7	237.1	214.7	203.8	197.0	193.2
102.5°	387.2	384.0	360.0	326.4	301.8	282.2	273.2	267.7
105°	411.8	449.1	457.6	451.2	434.9	418.5	407.6	405.0
107.5°	384.8	438.4	472.9	489.8	493.6	494.1	493.1	489.3
110°	362.8	418.7	459.9	486.4	500.3	507.3	511.4	512.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	342.3	396.2	439.9	469.9	488.6	499.2	505.6	508.7
115°	316.3	364.7	406.5	439.0	460.9	475.6	484.6	488.7
117.5°	295.4	338.3	376.6	407.1	429.3	444.7	454.0	457.5
120°	284.2	323.8	358.1	386.9	408.5	423.5	433.4	437.8
122.5°	274.8	311.3	343.9	370.0	389.4	404.0	412.7	416.4
125°	260.7	294.1	323.1	347.2	365.1	377.2	385.6	389.1
127.5°	246.9	277.0	304.4	326.5	342.3	353.8	361.2	364.2
130°	238.0	266.0	292.0	313.2	328.3	339.2	346.1	349.4
132.5°	229.3	255.4	279.4	299.4	314.4	325.2	331.6	334.8
135°	217.2	239.0	260.9	279.0	292.4	303.0	309.3	311.5
137.5°	206.8	225.2	242.8	258.5	270.8	279.8	285.4	288.0
140°	200.3	216.3	231.7	245.8	255.9	264.2	269.3	271.8
142.5°	195.2	208.7	221.8	233.7	243.1	250.6	255.2	256.2
145°	188.6	198.9	208.6	217.8	225.3	230.9	234.5	236.0
147.5°	183.7	191.3	198.4	204.6	210.7	214.9	217.2	218.1
150°	180.9	187.3	193.3	198.4	202.8	206.3	208.0	208.3
152.5°	178.4	184.3	189.4	193.9	197.3	200.2	201.5	201.6
155°	174.9	179.4	183.8	186.9	190.1	192.2	193.3	192.7
157.5°	170.8	174.6	178.2	180.8	183.0	184.7	185.2	185.2
160°	168.2	171.4	174.6	176.6	178.6	180.0	180.3	180.3
162.5°	165.7	168.4	171.1	172.7	174.7	175.7	175.9	175.7
165°	161.9	163.9	165.9	167.1	168.2	169.4	169.4	169.1
167.5°	158.2	159.8	161.2	162.2	162.7	163.4	163.3	163.0
170°	156.5	157.3	158.4	159.0	159.3	160.1	159.9	159.3
172.5°	154.3	155.0	155.9	156.2	156.5	156.9	156.6	156.3
175°	152.1	152.4	152.7	153.0	153.0	153.3	153.0	152.4
177.5°	150.5	150.5	150.7	150.7	150.7	150.7	150.5	150.0
180°	149.8	149.8	149.8	149.8	149.8	149.8	149.8	149.8

(END OF REPORT)