

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: P332495-935

Luminaire Tested: **SA4XXDIP-C350D365U935-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332495-935
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-C350D365U935-4F0-1E-UDD-D4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2367.9 lumens
Efficiency: N/A
Efficacy: 116.6 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: General Diffuse

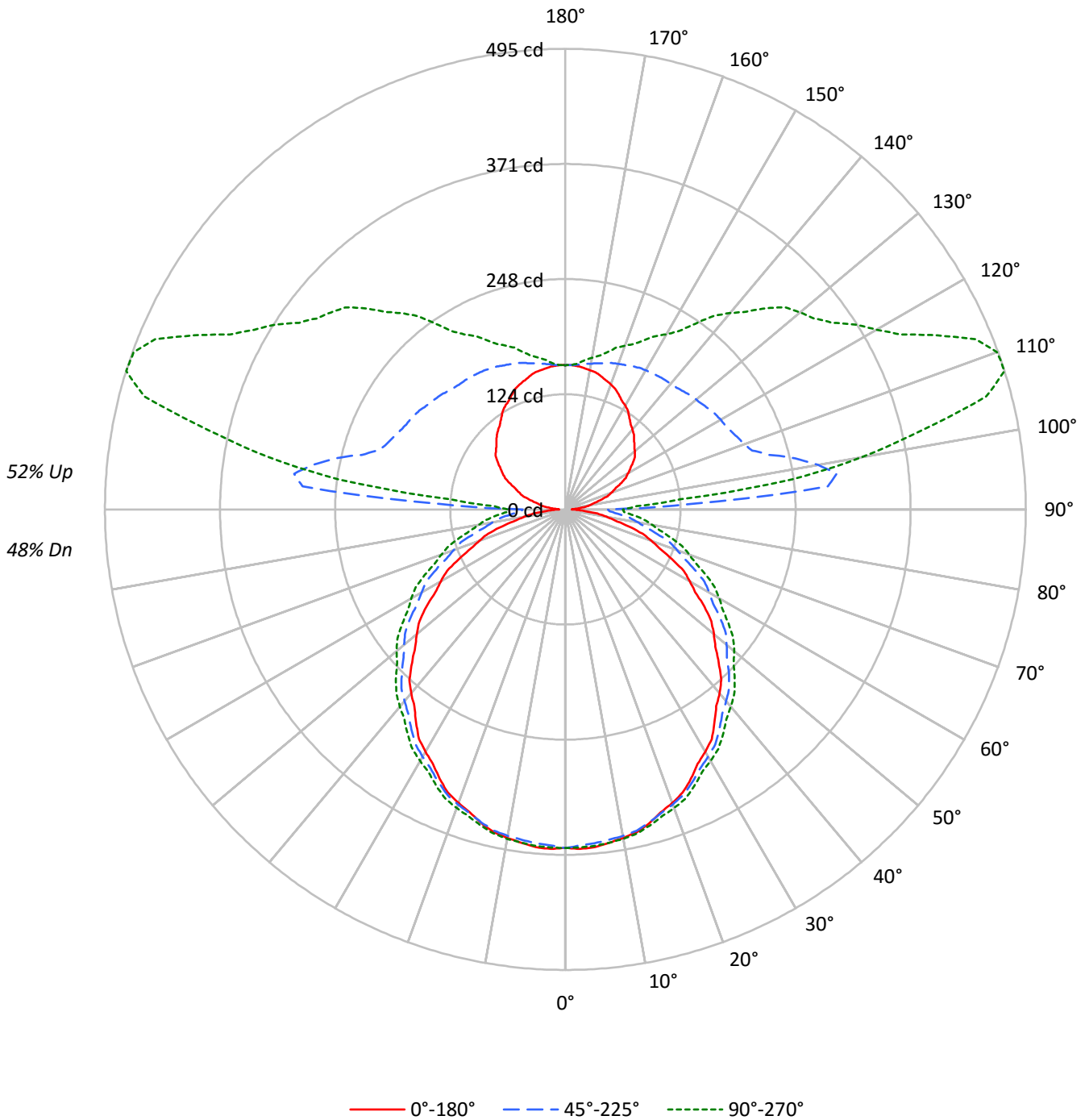
Input Watts (W): 20.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	96	92	87	84	89	84	81	77	71	68	66	58	56	55	47	45	44	39
2	87	79	73	67	80	73	68	63	61	57	54	51	48	45	41	38	36	32
3	79	70	62	56	73	64	57	52	54	49	45	44	41	37	36	33	31	26
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	29	26	22
5	66	54	46	40	61	50	43	37	42	37	32	35	31	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	34	29	24	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	21	18	15	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2938	2938	2938
5°	2948	2871	2880
10°	2929	2825	2823
15°	2902	2770	2755
20°	2863	2710	2690
25°	2819	2643	2617
30°	2770	2576	2543
35°	2716	2507	2478
40°	2672	2442	2410
45°	2607	2382	2352
50°	2553	2313	2291
55°	2496	2248	2220
60°	2408	2164	2153
65°	2309	2076	2073
70°	2192	1973	1979
75°	2029	1861	1894
80°	1846	1754	1809
85°	1616	1659	1762



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	1.5
10°-20°	98.7	4.2
20°-30°	149.3	6.3
30°-40°	180.7	7.6
40°-50°	191.0	8.1
50°-60°	179.7	7.6
60°-70°	149.1	6.3
70°-80°	104.7	4.4
80°-90°	60.1	2.5
90°-100°	147.0	6.2
100°-110°	258.9	10.9
110°-120°	226.0	9.5
120°-130°	185.3	7.8
130°-140°	150.5	6.4
140°-150°	112.6	4.8
150°-160°	78.6	3.3
160°-170°	46.2	2.0
170°-180°	15.0	0.6
0°-30°	282.5	11.9
0°-40°	463.2	19.6
0°-60°	833.9	35.2
0°-90°	1147.8	48.5
90°-120°	631.9	26.7
90°-150°	1080.3	45.6
90°-180°	1220.0	51.5
0°-180°	2367.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	364	363	360	363	363	35
15°	349	350	348	352	352	98
25°	320	322	323	327	328	147
35°	280	284	288	294	296	175
45°	233	241	249	255	258	180
55°	183	191	203	211	214	163
65°	126	139	153	163	167	125
75°	70	85	102	113	117	75
85°	22	39	57	69	73	23
90°	7	25	46	58	62	5
95°	15	51	283	169	124	15
105°	39	64	226	467	468	42
115°	65	85	197	370	442	65
125°	89	106	188	310	350	79
135°	105	124	179	268	306	81
145°	120	137	175	220	244	75
155°	136	147	170	192	200	63
165°	148	153	163	172	175	42
175°	154	155	156	158	158	15
180°	155	155	155	155	155	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9
2.5°	365.2	365.0	364.8	364.5	364.4	363.9	363.4	362.8	362.2	361.6	362.1
5°	364.4	364.0	363.8	363.5	363.3	362.8	362.1	361.5	360.9	360.2	361.0
7.5°	361.3	361.1	360.9	360.8	360.6	360.2	359.7	359.2	358.7	358.2	359.0
10°	358.6	358.5	358.4	358.3	358.3	358.0	357.6	357.1	356.6	356.2	357.0
12.5°	355.1	355.0	355.0	355.0	355.0	354.8	354.5	354.2	353.9	353.6	354.3
15°	349.2	349.4	349.5	349.6	349.7	349.6	349.2	349.0	348.7	348.4	349.2
17.5°	341.4	341.6	341.9	342.2	342.4	342.6	342.5	342.4	342.4	342.3	343.2
20°	335.8	336.0	336.4	336.7	336.9	337.1	337.2	337.3	337.3	337.4	338.4
22.5°	329.6	329.9	330.3	330.6	331.0	331.2	331.4	331.6	331.7	331.9	332.8
25°	319.5	320.0	320.6	321.2	321.7	322.1	322.4	322.6	322.9	323.2	324.2
27.5°	308.2	309.1	309.9	310.6	311.4	312.0	312.5	312.9	313.3	313.7	314.6
30°	300.7	301.5	302.2	302.9	303.7	304.4	305.0	305.6	306.3	306.9	307.9
32.5°	292.7	293.5	294.4	295.2	296.1	296.9	297.6	298.3	299.0	299.7	300.8
35°	279.6	280.7	281.7	282.8	284.0	284.9	285.9	286.7	287.7	288.5	289.8
37.5°	266.5	267.7	269.0	270.2	271.5	272.6	273.8	274.9	276.0	277.2	278.4
40°	258.0	259.2	260.4	261.5	262.7	263.9	265.2	266.5	267.7	269.0	270.4
42.5°	248.2	249.5	250.8	252.2	253.5	254.9	256.4	257.9	259.3	260.8	262.3
45°	233.1	234.8	236.5	238.2	240.0	241.7	243.4	245.1	246.8	248.6	250.1
47.5°	218.7	220.5	222.2	224.0	225.8	227.6	229.6	231.7	233.7	235.7	237.2
50°	208.3	210.3	212.2	214.2	216.2	218.2	220.2	222.2	224.2	226.2	228.0
52.5°	197.9	199.8	201.8	203.8	205.8	207.9	210.2	212.5	214.7	217.1	218.9
55°	182.6	184.5	186.4	188.3	190.2	192.5	195.2	197.9	200.6	203.4	205.2
57.5°	165.6	167.9	170.2	172.6	175.0	177.5	180.2	182.9	185.5	188.3	190.5
60°	154.5	156.8	159.2	161.5	163.8	166.5	169.5	172.5	175.5	178.5	180.6
62.5°	143.7	146.3	148.9	151.4	153.9	156.8	159.7	162.7	165.7	168.8	170.8
65°	126.3	129.2	132.2	135.0	137.9	140.9	144.0	147.1	150.2	153.3	155.5
67.5°	109.6	112.7	115.8	118.9	121.9	125.1	128.5	131.7	135.0	138.3	140.6
70°	98.2	101.3	104.4	107.5	110.6	113.8	117.3	120.7	124.2	127.6	130.0
72.5°	87.1	90.3	93.4	96.6	99.7	103.1	106.8	110.5	114.1	117.8	120.1
75°	70.1	73.4	76.8	80.2	83.5	87.0	90.9	94.7	98.5	102.3	104.9
77.5°	54.2	57.8	61.3	64.8	68.4	72.2	76.1	80.2	84.1	88.1	90.7
80°	44.4	48.0	51.7	55.3	58.9	62.7	66.7	70.7	74.6	78.7	81.4
82.5°	34.6	38.4	42.2	46.0	49.7	53.6	57.6	61.6	65.5	69.6	72.3
85°	21.6	25.4	29.2	33.0	36.9	40.7	44.9	48.9	53.0	57.1	59.8
87.5°	12.1	15.9	19.8	23.6	27.3	31.2	35.5	39.4	43.6	47.6	50.2
90°	6.8	11.0	15.6	19.5	23.4	27.2	32.9	36.9	41.3	45.8	48.1
92.5°	9.6	14.5	20.7	27.6	35.3	45.2	64.6	92.0	119.0	134.9	121.3
95°	15.3	19.2	25.3	32.2	42.5	58.6	88.9	142.4	218.9	283.4	292.9
97.5°	22.8	25.4	30.6	36.9	45.6	59.5	83.5	128.5	204.4	294.1	355.7
100°	27.6	30.0	34.4	40.5	48.6	61.3	82.7	120.7	186.3	275.6	355.9
102.5°	32.5	35.0	39.0	44.4	52.1	64.1	83.8	117.5	173.7	253.3	336.0
105°	39.3	42.0	45.3	50.8	58.1	69.5	87.5	116.1	162.0	226.5	300.3
107.5°	47.6	49.7	52.7	58.0	64.7	75.9	92.4	118.6	158.1	210.5	271.1
110°	52.9	54.8	57.5	62.4	69.2	79.6	96.2	120.6	157.3	204.6	256.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	57.9	59.6	62.5	67.1	73.6	83.9	99.9	123.0	157.3	200.8	247.0
115°	65.1	66.9	69.8	73.7	80.2	90.3	105.4	126.6	157.7	197.2	237.5
117.5°	73.1	74.4	76.8	80.7	86.5	96.7	110.9	130.4	158.5	194.4	231.8
120°	78.1	79.0	81.4	85.0	90.5	100.4	114.6	133.1	159.1	192.8	228.3
122.5°	83.0	83.6	85.8	89.0	94.7	104.3	118.3	135.6	159.8	190.9	224.8
125°	88.9	90.1	91.9	95.1	100.7	110.4	123.6	139.8	161.3	188.5	219.5
127.5°	94.5	95.4	97.6	101.3	107.2	116.6	129.0	143.5	162.0	185.4	212.6
130°	97.4	98.5	100.8	105.3	111.0	120.5	132.3	145.6	162.6	183.6	208.3
132.5°	100.6	101.4	104.5	108.7	114.9	123.8	135.3	148.1	163.3	182.0	204.5
135°	104.6	105.8	108.8	114.0	120.4	128.6	139.3	150.9	164.0	179.3	198.4
137.5°	109.0	110.1	113.3	118.2	124.8	132.4	142.1	152.6	164.0	177.3	193.2
140°	112.2	113.0	116.2	121.3	127.7	134.9	144.1	154.0	164.5	176.1	190.4
142.5°	115.3	116.1	119.2	124.2	130.3	137.3	146.1	155.1	164.9	175.5	188.1
145°	120.0	120.8	123.8	127.9	133.6	140.3	148.2	156.4	165.2	174.7	184.9
147.5°	125.4	125.6	128.2	132.5	137.2	143.2	150.6	157.8	165.6	173.6	182.2
150°	128.8	129.1	131.4	134.9	139.4	145.2	151.9	158.5	165.6	172.8	180.5
152.5°	131.6	131.7	134.1	137.5	141.5	146.9	152.8	159.0	165.1	171.6	178.5
155°	136.0	136.3	138.2	141.2	144.6	149.1	154.3	159.5	164.4	169.8	175.6
157.5°	140.3	140.3	142.1	144.4	147.3	150.9	155.3	159.5	163.5	167.9	172.6
160°	143.0	143.0	144.2	146.4	148.8	152.1	155.8	159.5	162.8	166.4	170.4
162.5°	145.4	145.3	146.2	148.1	150.2	152.9	156.3	159.5	162.0	165.0	168.5
165°	148.2	148.2	148.8	150.3	151.9	153.7	156.4	158.9	160.7	162.8	165.2
167.5°	150.9	150.6	150.9	152.1	152.9	154.4	156.4	158.1	159.2	160.6	162.3
170°	152.1	151.9	152.1	153.1	153.7	154.5	156.1	157.6	158.3	159.1	160.4
172.5°	153.3	153.1	153.1	153.8	154.1	154.8	155.8	157.1	157.3	157.6	158.7
175°	154.5	154.3	154.3	154.5	154.9	154.9	155.5	156.4	156.1	156.1	156.7
177.5°	155.2	154.9	154.6	154.9	154.9	154.9	155.2	155.6	155.2	155.2	155.4
180°	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9
2.5°	362.7	363.2	363.7	363.9	363.9	363.8	363.7	363.6
5°	361.7	362.4	363.2	363.5	363.4	363.3	363.2	363.1
7.5°	359.8	360.6	361.4	361.8	361.7	361.6	361.5	361.4
10°	357.8	358.6	359.5	359.8	359.7	359.6	359.6	359.5
12.5°	355.1	355.9	356.5	356.9	356.9	356.9	356.9	356.8
15°	350.1	350.9	351.7	352.1	352.0	351.9	351.8	351.7
17.5°	344.0	344.8	345.7	346.0	345.9	345.9	345.9	345.8
20°	339.2	340.2	341.0	341.6	341.6	341.6	341.6	341.6
22.5°	333.7	334.6	335.5	336.0	336.2	336.3	336.5	336.7
25°	325.2	326.1	327.2	327.7	327.8	327.9	328.0	328.0
27.5°	315.6	316.5	317.5	318.0	318.1	318.1	318.2	318.4
30°	308.8	309.9	310.8	311.4	311.6	311.9	312.0	312.2
32.5°	302.0	303.2	304.3	305.0	305.1	305.3	305.5	305.7
35°	291.1	292.3	293.6	294.4	294.6	294.9	295.2	295.5
37.5°	279.7	280.9	282.2	283.1	283.4	283.6	284.0	284.2
40°	271.7	273.0	274.4	275.3	275.6	276.0	276.4	276.7
42.5°	263.8	265.4	266.8	267.8	268.0	268.3	268.6	268.9
45°	251.7	253.2	254.8	255.7	256.2	256.7	257.1	257.5
47.5°	238.8	240.4	242.0	243.1	243.7	244.2	244.7	245.3
50°	229.8	231.6	233.4	234.6	235.1	235.7	236.3	236.8
52.5°	220.7	222.5	224.3	225.5	226.0	226.5	227.1	227.6
55°	207.0	208.8	210.6	211.8	212.3	212.8	213.4	214.0
57.5°	192.6	194.8	196.9	198.2	198.7	199.2	199.8	200.3
60°	182.7	184.8	186.8	188.2	189.0	189.7	190.5	191.1
62.5°	172.9	175.0	177.0	178.5	179.2	179.9	180.6	181.3
65°	157.7	160.1	162.3	163.8	164.5	165.2	166.0	166.7
67.5°	142.9	145.3	147.5	149.0	149.7	150.4	151.1	151.9
70°	132.4	134.9	137.3	138.9	139.5	140.2	140.8	141.4
72.5°	122.5	124.9	127.3	128.8	129.5	130.2	131.0	131.6
75°	107.4	109.9	112.4	114.1	114.9	115.7	116.6	117.4
77.5°	93.2	95.8	98.4	100.1	101.0	101.9	102.7	103.6
80°	84.1	86.8	89.5	91.3	92.0	92.7	93.4	94.1
82.5°	75.1	77.9	80.7	82.5	83.3	84.0	84.9	85.7
85°	62.5	65.2	67.9	69.7	70.6	71.5	72.4	73.4
87.5°	52.9	55.5	58.3	60.0	60.9	61.7	62.4	63.2
90°	51.1	54.0	56.9	58.6	59.7	60.7	61.1	61.8
92.5°	103.2	91.0	84.4	80.0	77.1	76.2	75.9	76.5
95°	265.8	221.1	182.8	154.9	140.8	132.2	127.5	124.4
97.5°	370.8	355.7	328.3	298.1	277.0	259.5	251.2	245.6
100°	402.9	411.4	398.9	378.0	352.1	334.2	325.7	323.9
102.5°	399.3	432.0	438.6	430.8	415.3	402.5	393.6	392.4
105°	372.2	427.1	459.5	473.6	474.8	473.1	469.6	468.5
107.5°	335.0	393.3	438.0	466.6	482.2	489.8	493.5	495.0
110°	312.5	367.2	413.5	448.3	470.7	484.1	490.3	493.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	295.4	344.0	387.7	422.5	447.8	464.0	472.3	477.5
115°	277.5	316.9	354.6	385.0	409.7	428.6	439.0	442.1
117.5°	267.3	300.1	330.1	356.1	377.4	393.5	404.0	406.7
120°	262.2	292.2	318.4	341.3	359.4	373.5	382.1	386.2
122.5°	257.6	286.7	310.7	330.9	346.2	358.3	365.6	369.6
125°	250.4	278.3	301.0	318.8	331.6	341.0	347.2	349.7
127.5°	241.7	268.3	290.8	307.9	320.7	329.2	334.7	337.2
130°	235.1	260.9	283.2	300.4	313.4	321.6	326.9	329.3
132.5°	228.6	252.7	274.5	291.7	304.4	313.6	318.7	321.2
135°	219.0	240.2	260.2	276.4	289.1	298.2	303.6	306.0
137.5°	210.4	228.5	245.5	260.1	272.0	280.8	285.2	287.9
140°	205.5	221.0	235.9	249.5	260.5	267.7	272.4	275.3
142.5°	201.2	214.8	227.6	239.4	249.2	255.8	259.9	262.0
145°	195.2	206.1	215.8	224.8	232.7	238.2	241.7	243.6
147.5°	190.4	198.6	206.0	212.8	218.8	223.5	226.1	227.0
150°	187.8	194.8	200.9	206.3	211.2	215.2	217.0	217.2
152.5°	185.1	191.1	196.7	201.2	205.3	208.5	209.7	210.0
155°	181.1	185.9	190.5	194.2	197.2	199.6	200.5	200.5
157.5°	176.8	180.8	184.7	187.6	189.9	191.7	192.3	192.3
160°	174.1	177.4	180.7	183.2	185.0	186.8	187.2	187.2
162.5°	171.4	174.3	176.8	179.1	180.4	182.2	182.5	182.3
165°	167.6	169.5	171.6	173.1	174.4	175.6	175.3	175.0
167.5°	164.1	165.5	167.2	168.1	168.7	169.5	169.4	169.2
170°	161.9	162.8	164.0	165.0	165.6	165.8	165.6	165.6
172.5°	160.0	160.6	161.4	162.0	162.4	162.6	162.4	161.9
175°	157.3	157.6	158.3	158.3	158.3	158.9	158.3	157.6
177.5°	155.6	155.8	155.8	156.1	155.8	156.1	155.6	155.2
180°	154.9	154.9	154.9	154.9	154.9	154.9	154.9	154.9

(END OF REPORT)