

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: P331648-927

Luminaire Tested: **SA2XXRDIP-C485D330U927-4F0-1E-UDD-F**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331648-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C485D330U927-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 330 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2382.8 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

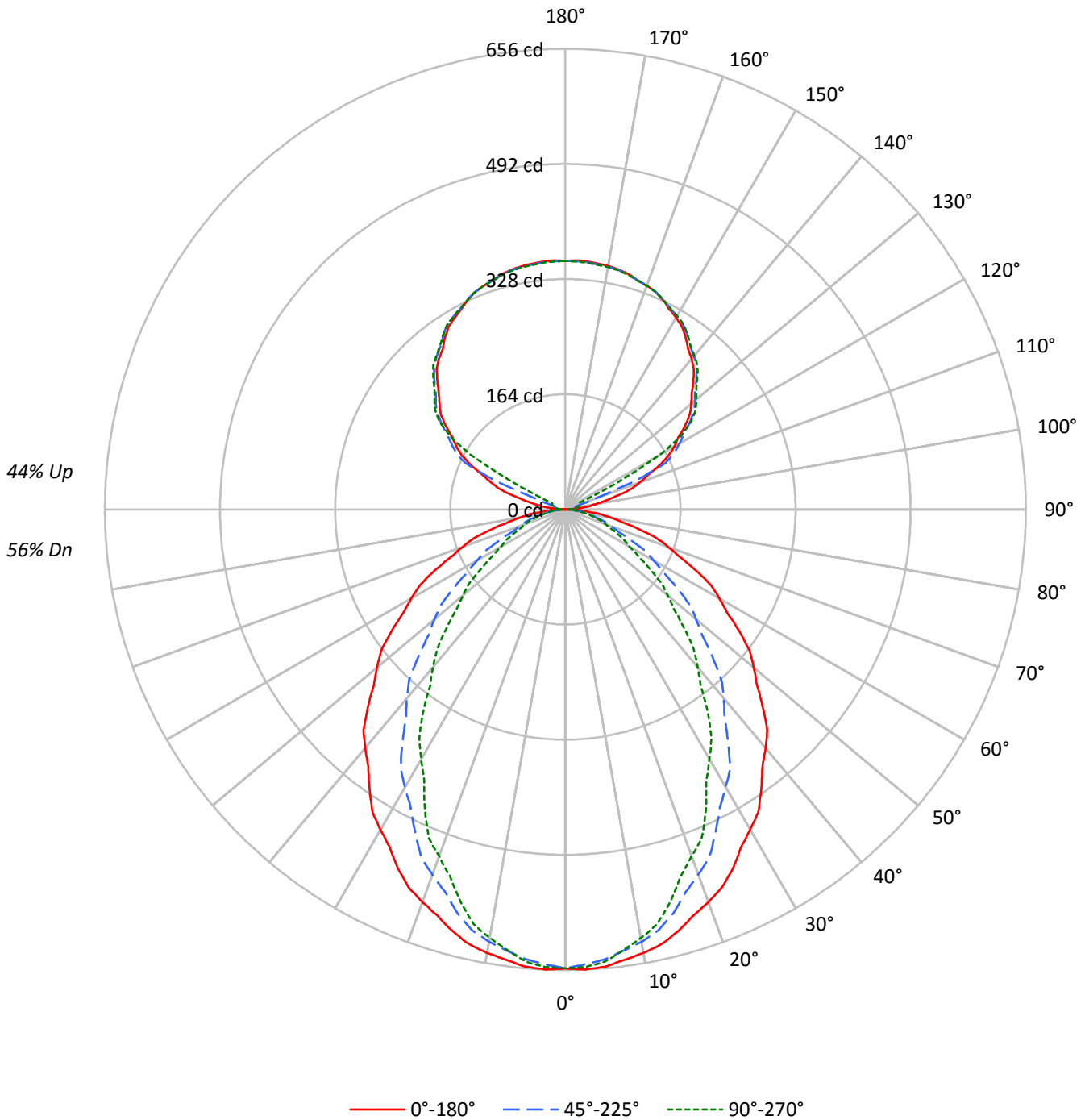
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	100	96	92	89	93	89	86	83	77	75	73	66	64	63	56	55	53	49
2	91	84	78	73	85	79	73	69	68	64	61	59	56	53	50	48	46	42
3	84	74	67	62	78	70	63	58	61	56	52	52	49	46	45	42	40	36
4	77	66	59	53	71	62	55	50	54	49	45	47	43	40	40	37	35	31
5	71	59	51	46	66	56	49	43	49	43	39	42	38	35	36	33	31	28
6	65	54	46	40	61	50	43	38	44	39	34	39	34	31	33	30	27	24
7	61	49	41	35	56	46	39	34	40	35	30	35	31	27	31	27	24	22
8	56	44	37	31	52	42	35	30	37	31	27	32	28	25	28	25	22	20
9	53	41	33	28	49	38	32	27	34	28	25	30	25	22	26	23	20	18
10	49	37	30	25	46	35	29	24	31	26	22	28	23	20	24	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10555	10555	10555
5°	10595	10423	10481
10°	10516	10252	10165
15°	10394	9949	9663
20°	10227	9514	9036
25°	10055	9021	8432
30°	9818	8516	7655
35°	9585	7965	6974
40°	9352	7396	6184
45°	9079	6754	5471
50°	8796	6106	4770
55°	8510	5413	4096
60°	8176	4682	3400
65°	7798	3931	3095
70°	7345	3238	2851
75°	6787	2951	2658
80°	5997	2641	2427
85°	4705	2075	2075



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.2	2.6
10°-20°	168.0	7.1
20°-30°	235.9	9.9
30°-40°	257.3	10.8
40°-50°	236.6	9.9
50°-60°	185.8	7.8
60°-70°	121.1	5.1
70°-80°	62.5	2.6
80°-90°	17.1	0.7
90°-100°	11.8	0.5
100°-110°	43.3	1.8
110°-120°	115.7	4.9
120°-130°	191.1	8.0
130°-140°	203.2	8.5
140°-150°	188.9	7.9
150°-160°	151.8	6.4
160°-170°	97.8	4.1
170°-180°	33.7	1.4
0°-30°	465.2	19.5
0°-40°	722.4	30.3
0°-60°	1144.8	48.0
0°-90°	1345.5	56.5
90°-120°	170.8	7.2
90°-150°	754.0	31.6
90°-180°	1037.0	43.5
0°-180°	2382.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	654	654	654	654	654	
5°	654	650	643	648	647	62
15°	622	615	595	584	578	175
25°	564	544	506	483	473	259
35°	486	455	404	368	354	304
45°	398	357	296	255	240	307
55°	302	255	192	158	146	270
65°	204	156	103	84	81	202
75°	109	69	47	43	43	115
85°	25	14	11	11	11	30
90°	0	3	5	6	7	2
95°	17	9	10	11	11	20
105°	78	81	16	18	20	83
115°	147	152	158	45	21	145
125°	208	212	216	218	219	186
135°	258	262	264	266	266	199
145°	299	299	303	305	304	187
155°	329	327	330	331	329	152
165°	347	345	346	348	346	98
175°	355	353	354	355	353	34
180°	354	354	354	354	354	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7
2.5°	656.1	655.6	655.1	654.5	654.0	653.2	652.0	650.9	649.7	648.6	649.6
5°	653.7	653.1	652.4	651.8	651.1	649.9	648.2	646.5	644.8	643.1	644.3
7.5°	647.0	646.2	645.4	644.5	643.7	642.3	640.3	638.3	636.4	634.4	634.7
10°	641.4	640.4	639.4	638.6	637.6	635.9	633.3	630.6	628.0	625.3	625.0
12.5°	634.2	633.1	631.9	630.8	629.7	627.5	624.1	620.8	617.3	614.0	613.3
15°	621.8	620.4	618.9	617.4	616.0	613.1	608.6	604.1	599.7	595.2	592.7
17.5°	606.6	604.4	602.1	599.9	597.7	593.7	588.0	582.3	576.6	570.8	567.8
20°	595.2	592.6	589.9	587.3	584.6	580.0	573.5	566.9	560.3	553.7	550.5
22.5°	582.9	580.0	576.9	574.0	571.1	565.9	558.5	551.0	543.7	536.2	532.0
25°	564.4	560.2	556.0	551.8	547.6	541.1	532.4	523.8	515.1	506.4	501.1
27.5°	542.2	537.6	533.0	528.5	523.9	516.7	506.9	497.1	487.4	477.5	471.3
30°	526.6	521.6	516.6	511.6	506.6	498.8	488.3	477.8	467.2	456.8	450.0
32.5°	511.4	505.6	499.7	493.9	488.1	479.7	469.1	458.3	447.6	436.9	429.2
35°	486.3	479.6	472.9	466.2	459.5	450.4	438.8	427.2	415.7	404.1	395.8
37.5°	461.2	453.8	446.5	439.1	431.8	421.9	409.6	397.3	384.9	372.6	363.5
40°	443.7	435.9	427.9	420.1	412.2	401.9	389.1	376.4	363.6	350.9	341.5
42.5°	425.7	417.4	409.1	400.8	392.5	381.8	368.6	355.4	342.2	329.1	319.4
45°	397.6	388.8	379.9	371.1	362.3	351.0	337.2	323.4	309.6	295.8	286.5
47.5°	370.1	360.8	351.5	342.1	332.8	321.0	306.7	292.5	278.2	264.0	254.7
50°	350.2	340.9	331.6	322.3	312.9	301.0	286.5	272.1	257.6	243.1	234.1
52.5°	330.8	321.1	311.3	301.6	291.8	279.9	265.7	251.6	237.4	223.3	214.5
55°	302.3	292.1	281.8	271.6	261.3	249.1	234.9	220.7	206.4	192.3	184.4
57.5°	273.1	262.6	252.1	241.5	231.0	219.0	205.3	191.6	178.0	164.4	157.1
60°	253.2	242.7	232.2	221.7	211.1	199.2	185.6	172.1	158.5	145.0	138.2
62.5°	233.8	223.3	212.8	202.2	191.7	180.1	167.2	154.2	141.3	128.4	122.0
65°	204.1	193.5	182.8	172.1	161.5	150.3	138.5	126.6	114.8	102.9	98.5
67.5°	175.5	164.9	154.3	143.8	133.2	122.6	111.9	101.3	90.6	80.0	78.0
70°	155.6	145.4	135.1	124.8	114.5	104.9	95.9	86.7	77.7	68.6	67.3
72.5°	136.7	126.8	117.0	107.2	97.4	88.8	81.5	74.2	66.9	59.7	58.5
75°	108.8	99.7	90.5	81.3	72.0	65.2	60.8	56.2	51.8	47.3	46.4
77.5°	81.5	73.4	65.4	57.3	49.3	44.1	42.0	39.8	37.6	35.5	34.9
80°	64.5	57.8	51.1	44.4	37.6	33.7	32.3	31.1	29.7	28.4	27.9
82.5°	48.9	43.6	38.4	33.2	28.0	24.9	24.0	23.1	22.2	21.3	21.0
85°	25.4	22.7	19.9	17.2	14.4	12.8	12.4	12.0	11.6	11.2	11.2
87.5°	7.6	6.9	6.2	5.5	4.8	4.4	4.5	4.6	4.8	4.8	4.8
90°	0.2	0.9	1.5	2.1	2.8	3.3	3.7	4.2	4.7	5.1	5.4
92.5°	5.1	5.1	5.1	5.0	4.9	5.1	5.2	5.5	5.7	5.9	6.1
95°	16.6	14.7	12.9	11.0	9.1	8.4	8.8	9.2	9.6	10.0	10.3
97.5°	33.0	27.7	22.4	17.2	11.9	9.7	10.6	11.5	12.4	13.4	13.6
100°	45.3	37.5	29.7	21.9	14.2	10.7	11.7	12.7	13.6	14.6	15.1
102.5°	58.9	57.2	55.5	53.9	52.3	47.4	39.3	31.2	23.1	15.0	15.6
105°	77.9	79.5	81.3	83.0	84.7	77.8	62.3	46.7	31.1	15.6	16.2
107.5°	99.5	100.9	102.3	103.7	105.0	96.4	77.8	59.2	40.5	21.9	21.2
110°	113.4	114.6	115.9	117.1	118.3	110.6	94.2	77.7	61.2	44.8	39.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	126.6	127.6	128.7	129.8	130.8	129.3	125.2	121.2	117.1	113.0	92.3
115°	147.3	148.2	149.2	150.2	151.1	152.3	153.8	155.2	156.6	158.0	131.7
117.5°	165.8	166.8	167.9	169.1	170.1	171.1	172.1	173.1	174.0	175.1	168.7
120°	179.3	180.1	181.0	181.9	182.7	183.6	184.7	185.7	186.7	187.7	188.5
122.5°	190.8	191.7	192.6	193.5	194.4	195.4	196.5	197.6	198.8	199.9	200.3
125°	208.3	209.0	209.7	210.5	211.2	212.1	213.2	214.3	215.3	216.4	216.8
127.5°	224.0	224.9	225.7	226.6	227.4	228.1	228.9	229.8	230.6	231.4	232.0
130°	234.1	235.0	235.9	236.9	237.7	238.5	239.2	239.8	240.4	241.1	241.6
132.5°	244.4	245.1	245.9	246.7	247.5	248.1	248.7	249.4	250.0	250.6	251.2
135°	257.7	258.6	259.5	260.4	261.3	262.1	262.5	263.1	263.6	264.1	264.7
137.5°	271.2	271.8	272.4	273.1	273.7	274.3	274.9	275.4	276.1	276.6	277.2
140°	280.0	280.4	280.8	281.3	281.8	282.3	283.0	283.6	284.2	284.8	285.3
142.5°	287.3	287.7	288.1	288.6	289.0	289.5	290.3	291.0	291.7	292.4	292.9
145°	298.9	298.9	298.8	298.7	298.7	299.1	300.1	301.1	302.1	303.0	303.4
147.5°	309.0	308.8	308.6	308.3	308.2	308.5	309.4	310.5	311.4	312.4	312.6
150°	315.5	315.1	314.7	314.3	313.9	314.3	315.1	316.1	317.0	317.9	318.2
152.5°	321.1	320.7	320.2	319.7	319.3	319.5	320.4	321.2	322.1	323.0	323.3
155°	329.2	328.6	328.1	327.6	327.1	327.2	327.9	328.5	329.2	329.9	330.3
157.5°	335.4	335.0	334.5	334.1	333.7	333.7	334.2	334.7	335.2	335.6	336.0
160°	339.1	338.8	338.4	338.1	337.8	337.8	338.1	338.4	338.8	339.1	339.5
162.5°	342.4	342.1	341.7	341.4	341.0	341.0	341.3	341.6	341.9	342.2	342.6
165°	346.8	346.5	346.1	345.8	345.5	345.4	345.5	345.7	345.9	346.0	346.4
167.5°	350.1	349.7	349.4	349.0	348.7	348.6	348.8	349.0	349.1	349.3	349.7
170°	352.0	351.6	351.3	350.9	350.5	350.5	350.5	350.7	350.8	350.9	351.3
172.5°	353.2	352.8	352.4	352.1	351.8	351.6	351.8	351.9	352.0	352.1	352.5
175°	354.7	354.3	353.9	353.6	353.2	353.0	353.2	353.2	353.4	353.5	353.9
177.5°	355.0	354.7	354.3	354.0	353.7	353.6	353.6	353.7	353.7	353.8	354.1
180°	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	653.7	653.7	653.7	653.7	653.7	653.7	653.7	653.7
2.5°	650.6	651.7	652.8	653.2	653.0	652.8	652.5	652.4
5°	645.5	646.7	647.8	648.2	647.8	647.5	647.1	646.7
7.5°	635.0	635.3	635.7	635.6	634.9	634.1	633.5	632.8
10°	624.6	624.2	623.8	623.2	622.4	621.6	620.8	620.0
12.5°	612.6	611.9	611.2	610.1	608.8	607.5	606.2	604.9
15°	590.2	587.7	585.2	583.3	581.9	580.7	579.3	578.1
17.5°	564.8	561.9	558.9	556.3	554.1	551.8	549.5	547.2
20°	547.2	543.9	540.6	537.5	534.6	531.7	528.9	525.9
22.5°	527.8	523.6	519.4	516.1	514.0	511.8	509.7	507.5
25°	495.7	490.3	484.9	481.2	479.2	477.2	475.3	473.3
27.5°	465.0	458.7	452.4	447.7	444.6	441.5	438.3	435.2
30°	443.3	436.7	429.9	424.8	421.2	417.7	414.2	410.6
32.5°	421.5	413.9	406.2	400.8	397.4	394.1	390.7	387.4
35°	387.5	379.2	371.0	365.4	362.5	359.6	356.7	353.8
37.5°	354.3	345.2	336.1	329.9	326.6	323.3	320.0	316.6
40°	332.2	322.8	313.5	307.1	303.7	300.3	296.8	293.4
42.5°	309.7	300.1	290.5	284.0	280.7	277.3	274.0	270.7
45°	277.1	267.8	258.5	252.2	249.1	245.9	242.7	239.6
47.5°	245.4	236.1	226.9	220.8	217.9	215.1	212.1	209.3
50°	225.0	215.9	206.8	201.0	198.2	195.4	192.7	189.9
52.5°	205.7	197.0	188.2	182.6	180.1	177.5	174.9	172.4
55°	176.5	168.6	160.7	155.5	153.0	150.5	148.1	145.5
57.5°	149.9	142.7	135.5	130.8	128.7	126.6	124.5	122.3
60°	131.5	124.8	118.1	113.8	111.6	109.5	107.4	105.3
62.5°	115.6	109.2	102.8	99.0	97.8	96.5	95.2	94.0
65°	94.0	89.5	85.1	82.6	82.2	81.8	81.4	81.0
67.5°	75.9	73.8	71.8	70.6	70.1	69.7	69.3	68.8
70°	66.0	64.7	63.4	62.4	61.9	61.4	60.8	60.4
72.5°	57.4	56.3	55.2	54.5	54.2	53.9	53.6	53.2
75°	45.5	44.6	43.6	43.1	43.0	42.9	42.7	42.6
77.5°	34.5	33.9	33.4	33.0	32.8	32.6	32.4	32.2
80°	27.3	26.9	26.3	26.1	26.1	26.1	26.1	26.1
82.5°	20.7	20.4	20.0	19.9	19.9	19.9	19.9	19.9
85°	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
87.5°	4.8	4.7	4.6	4.6	4.6	4.7	4.7	4.7
90°	5.7	5.9	6.3	6.5	6.6	6.7	6.8	6.9
92.5°	6.3	6.4	6.5	6.7	6.7	6.8	6.8	6.9
95°	10.5	10.9	11.1	11.2	11.2	11.1	11.1	11.0
97.5°	13.9	14.0	14.3	14.4	14.5	14.6	14.7	14.7
100°	15.5	16.0	16.4	16.7	16.8	17.0	17.0	17.2
102.5°	16.2	16.8	17.3	17.7	17.9	18.1	18.2	18.4
105°	16.9	17.5	18.1	18.5	18.8	19.0	19.3	19.5
107.5°	20.6	20.0	19.3	19.1	19.3	19.6	19.8	20.0
110°	33.4	27.7	22.0	19.3	19.6	19.8	20.0	20.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	71.5	50.8	30.0	19.7	19.9	20.0	20.3	20.4
115°	105.4	79.0	52.6	37.4	33.3	29.2	25.1	21.0
117.5°	162.3	155.9	149.6	139.7	126.2	112.7	99.3	85.8
120°	189.1	189.8	190.4	187.0	179.3	171.6	163.9	156.2
122.5°	200.7	201.1	201.5	200.9	199.5	198.0	196.5	195.0
125°	217.2	217.6	218.0	218.3	218.5	218.6	218.8	219.0
127.5°	232.6	233.1	233.7	234.0	234.1	234.1	234.1	234.2
130°	242.2	242.9	243.5	243.8	243.8	243.7	243.7	243.6
132.5°	251.8	252.2	252.8	253.0	252.9	252.9	252.9	252.8
135°	265.2	265.8	266.3	266.6	266.5	266.3	266.3	266.1
137.5°	277.7	278.3	278.8	279.0	278.8	278.7	278.5	278.3
140°	285.8	286.4	286.8	287.0	286.7	286.5	286.1	285.8
142.5°	293.3	293.8	294.3	294.4	294.1	293.8	293.5	293.2
145°	303.8	304.2	304.6	304.7	304.4	304.1	303.8	303.5
147.5°	312.9	313.2	313.5	313.5	313.3	313.1	312.8	312.6
150°	318.5	318.9	319.2	319.2	319.0	318.7	318.4	318.1
152.5°	323.7	324.0	324.3	324.3	323.9	323.6	323.2	322.8
155°	330.6	330.9	331.3	331.2	330.7	330.3	329.9	329.4
157.5°	336.4	336.8	337.2	337.2	336.7	336.3	335.8	335.4
160°	339.8	340.2	340.5	340.5	340.1	339.7	339.3	338.9
162.5°	342.9	343.3	343.7	343.7	343.2	342.7	342.2	341.7
165°	346.8	347.2	347.6	347.6	347.2	346.8	346.4	346.0
167.5°	350.1	350.5	350.9	350.8	350.3	349.7	349.3	348.7
170°	351.7	352.1	352.5	352.4	352.0	351.4	350.9	350.4
172.5°	352.9	353.3	353.7	353.7	353.2	352.7	352.1	351.6
175°	354.3	354.7	355.1	355.0	354.4	353.9	353.2	352.7
177.5°	354.4	354.7	355.1	355.0	354.6	354.2	353.8	353.4
180°	353.9	353.9	353.9	353.9	353.9	353.9	353.9	353.9

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