

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: P331300-930

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

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331300-930
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: SA2XXDIP-C485D530U930-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 530 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3335.7 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

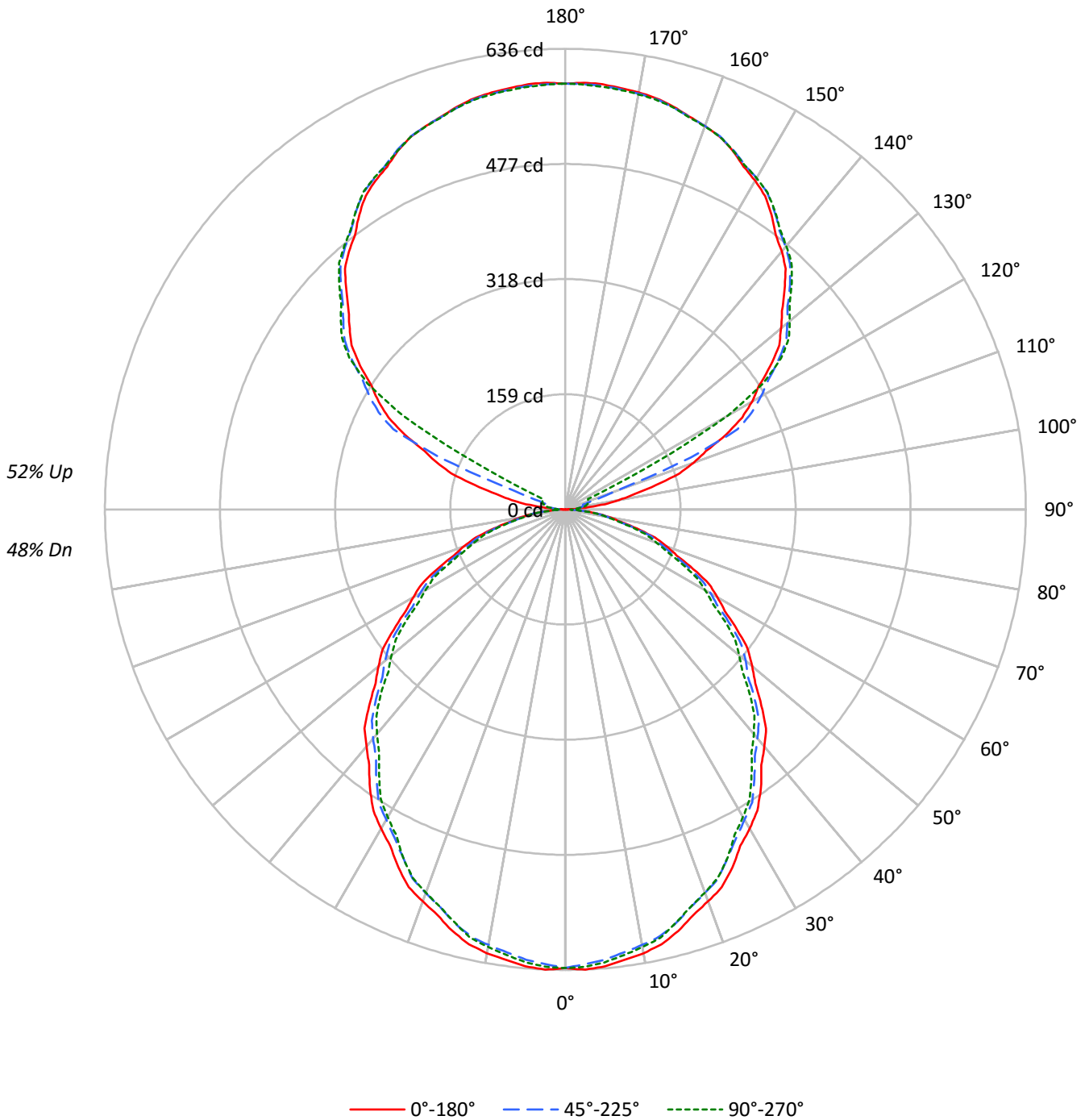
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48				48
1	97	93	89	86	90	86	82	79	72	70	68	60	58	57	48	47	46	41				41
2	89	81	75	70	81	75	70	65	63	59	56	52	50	47	42	41	39	34				34
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33	29				29
4	74	63	55	49	68	59	52	46	50	44	40	41	37	34	34	31	28	25				25
5	68	56	48	42	62	52	45	40	44	39	35	37	33	30	30	27	25	22				22
6	63	51	42	37	57	47	40	34	40	34	30	34	29	26	27	24	22	19				19
7	58	46	38	32	53	42	35	30	36	31	27	30	26	23	25	22	19	17				17
8	54	41	34	28	49	39	32	27	33	28	24	28	24	20	23	20	17	15				15
9	50	38	30	25	46	35	28	24	30	25	21	26	21	18	21	18	16	14				14
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	12				12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10224	10224	10224
5°	10263	10115	10175
10°	10203	10012	10063
15°	10076	9884	9872
20°	9897	9689	9677
25°	9720	9449	9449
30°	9491	9229	9148
35°	9278	8966	8834
40°	9010	8703	8534
45°	8745	8439	8229
50°	8457	8166	7877
55°	8158	7848	7561
60°	7824	7472	7195
65°	7465	7095	6770
70°	7010	6637	6326
75°	6382	6114	5964
80°	5662	5486	5207
85°	4613	4390	3946



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	1.8
10°-20°	167.6	5.0
20°-30°	246.3	7.4
30°-40°	286.1	8.6
40°-50°	285.8	8.6
50°-60°	249.2	7.5
60°-70°	184.3	5.5
70°-80°	104.4	3.1
80°-90°	29.5	0.9
90°-100°	19.6	0.6
100°-110°	71.9	2.2
110°-120°	192.3	5.8
120°-130°	317.4	9.5
130°-140°	337.5	10.1
140°-150°	313.7	9.4
150°-160°	252.2	7.6
160°-170°	162.5	4.9
170°-180°	55.9	1.7
0°-30°	473.4	14.2
0°-40°	759.4	22.8
0°-60°	1294.4	38.8
0°-90°	1612.5	48.3
90°-120°	283.8	8.5
90°-150°	1252.5	37.5
90°-180°	1723.0	51.7
0°-180°	3335.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	633	633	633	633	633	
5°	633	631	624	629	628	60
15°	603	599	591	593	591	170
25°	546	540	530	531	530	251
35°	471	464	455	451	448	294
45°	383	378	370	363	360	295
55°	290	286	279	272	269	259
65°	195	192	186	180	177	193
75°	102	101	98	95	96	109
85°	25	24	24	22	21	29
90°	0	5	8	11	12	3
95°	28	15	17	19	18	34
105°	129	135	26	30	32	138
115°	245	252	262	75	35	241
125°	346	352	360	362	364	308
135°	428	435	439	443	442	330
145°	496	497	503	506	504	310
155°	547	543	548	550	547	252
165°	576	574	575	578	575	163
175°	589	586	587	590	586	56
180°	588	588	588	588	588	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	636.2	635.6	635.1	634.5	634.0	633.2	631.9	630.8	629.6	628.4	629.5
5°	633.2	632.7	632.2	631.6	631.1	630.1	628.6	627.1	625.6	624.1	625.2
7.5°	627.6	626.8	626.0	625.1	624.3	623.1	621.6	620.1	618.6	617.0	618.2
10°	622.3	621.3	620.4	619.5	618.5	617.2	615.6	614.0	612.4	610.7	611.8
12.5°	615.0	614.2	613.3	612.5	611.6	610.4	608.8	607.2	605.5	603.9	604.6
15°	602.8	602.0	601.2	600.4	599.6	598.3	596.5	594.8	593.0	591.3	591.7
17.5°	587.2	586.4	585.6	584.8	584.0	582.7	580.9	579.1	577.3	575.5	576.2
20°	576.0	575.2	574.4	573.6	572.7	571.4	569.5	567.6	565.7	563.9	564.3
22.5°	564.8	563.7	562.6	561.4	560.3	558.8	557.0	555.2	553.4	551.6	551.7
25°	545.6	544.5	543.4	542.3	541.3	539.6	537.3	534.9	532.6	530.4	530.6
27.5°	523.7	522.7	521.7	520.7	519.8	518.4	516.6	514.7	512.9	511.1	510.7
30°	509.1	507.9	506.9	505.8	504.7	503.1	501.1	499.1	497.1	495.0	494.6
32.5°	493.4	492.6	491.7	490.8	490.0	488.4	486.3	484.2	482.1	480.0	479.2
35°	470.7	469.3	468.0	466.6	465.3	463.5	461.4	459.2	457.0	454.9	454.0
37.5°	445.0	443.8	442.6	441.4	440.2	438.5	436.3	434.2	432.0	429.9	428.8
40°	427.5	426.3	425.3	424.2	423.1	421.5	419.3	417.2	415.0	412.9	411.6
42.5°	410.4	409.3	408.2	407.2	406.1	404.5	402.3	400.1	397.9	395.7	394.4
45°	383.0	382.0	381.1	380.2	379.2	377.7	375.7	373.7	371.6	369.6	368.1
47.5°	355.7	354.8	353.9	353.0	352.1	350.7	348.5	346.4	344.3	342.2	340.6
50°	336.7	336.1	335.3	334.7	334.0	332.7	330.8	329.0	327.0	325.1	323.3
52.5°	318.2	317.3	316.4	315.5	314.6	313.3	311.5	309.7	307.9	306.1	304.6
55°	289.8	289.0	288.2	287.4	286.6	285.4	283.7	282.1	280.5	278.8	277.3
57.5°	261.3	260.7	260.0	259.4	258.8	257.6	255.8	254.0	252.2	250.4	248.7
60°	242.3	241.8	241.2	240.7	240.2	239.0	237.1	235.1	233.3	231.4	229.9
62.5°	223.8	223.0	222.1	221.2	220.4	219.2	217.8	216.3	214.8	213.4	212.0
65°	195.4	194.6	193.8	193.0	192.2	191.1	189.8	188.4	187.0	185.7	184.5
67.5°	166.6	165.9	165.3	164.6	164.0	163.1	161.8	160.6	159.4	158.2	157.3
70°	148.5	148.1	147.5	146.9	146.4	145.5	144.3	143.1	141.9	140.6	139.7
72.5°	130.0	129.6	129.0	128.4	127.9	127.3	126.5	125.6	124.9	124.1	123.1
75°	102.3	102.0	101.7	101.5	101.2	100.8	100.0	99.4	98.7	98.0	97.2
77.5°	77.5	77.0	76.6	76.1	75.6	75.3	75.0	74.7	74.4	74.2	73.8
80°	60.9	60.7	60.7	60.5	60.3	60.2	59.8	59.6	59.4	59.0	58.6
82.5°	45.3	45.2	45.2	45.2	45.2	45.1	44.9	44.8	44.6	44.4	43.9
85°	24.9	24.9	24.7	24.5	24.5	24.3	24.1	24.1	23.9	23.7	23.3
87.5°	8.9	8.8	8.8	8.8	8.8	8.8	8.7	8.6	8.6	8.6	8.3
90°	0.4	1.5	2.5	3.5	4.6	5.5	6.3	7.0	7.7	8.5	9.0
92.5°	8.6	8.5	8.4	8.3	8.2	8.4	8.7	9.1	9.5	9.9	10.1
95°	27.6	24.5	21.4	18.3	15.2	13.9	14.6	15.2	15.9	16.6	17.0
97.5°	54.9	46.1	37.3	28.5	19.7	16.1	17.6	19.2	20.7	22.2	22.6
100°	75.3	62.4	49.4	36.4	23.5	17.9	19.4	21.0	22.7	24.2	25.0
102.5°	97.8	95.1	92.3	89.5	86.8	78.7	65.3	51.9	38.4	24.9	25.9
105°	129.3	132.2	135.0	137.9	140.7	129.2	103.4	77.6	51.8	25.9	27.0
107.5°	165.3	167.6	169.9	172.2	174.5	160.1	129.2	98.2	67.3	36.4	35.3
110°	188.5	190.5	192.5	194.4	196.4	183.8	156.5	129.1	101.7	74.4	65.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	210.3	212.1	213.8	215.6	217.3	214.8	208.1	201.3	194.5	187.8	153.3
115°	244.7	246.2	247.9	249.5	251.1	253.1	255.4	257.8	260.2	262.5	218.7
117.5°	275.4	277.2	279.0	280.8	282.6	284.3	285.9	287.6	289.2	290.7	280.2
120°	297.8	299.2	300.7	302.1	303.5	305.1	306.8	308.5	310.1	311.9	313.0
122.5°	316.9	318.4	319.9	321.4	322.9	324.6	326.4	328.2	330.1	332.0	332.6
125°	345.9	347.2	348.4	349.6	350.8	352.4	354.2	356.0	357.8	359.5	360.2
127.5°	372.2	373.6	375.0	376.3	377.6	379.0	380.3	381.7	383.0	384.4	385.3
130°	388.9	390.4	391.9	393.5	394.9	396.2	397.3	398.3	399.3	400.4	401.5
132.5°	405.9	407.2	408.5	409.8	411.1	412.2	413.3	414.3	415.3	416.4	417.3
135°	428.0	429.6	431.0	432.6	434.1	435.3	436.1	437.0	437.8	438.6	439.6
137.5°	450.5	451.4	452.5	453.6	454.6	455.7	456.6	457.6	458.5	459.5	460.5
140°	465.0	465.8	466.6	467.3	468.1	469.0	470.0	471.1	472.1	473.1	474.0
142.5°	477.3	478.0	478.7	479.3	480.0	480.9	482.2	483.3	484.5	485.8	486.5
145°	496.5	496.4	496.4	496.3	496.2	496.9	498.6	500.1	501.7	503.4	504.0
147.5°	513.3	512.9	512.6	512.3	511.8	512.5	514.0	515.7	517.2	518.9	519.3
150°	524.2	523.5	522.9	522.2	521.5	522.0	523.5	525.0	526.5	528.0	528.6
152.5°	533.4	532.6	531.9	531.2	530.4	530.8	532.2	533.7	535.1	536.5	537.1
155°	546.7	545.9	545.0	544.2	543.3	543.5	544.6	545.8	546.9	548.0	548.6
157.5°	557.2	556.5	555.8	555.1	554.3	554.4	555.1	556.0	556.8	557.6	558.2
160°	563.4	562.8	562.2	561.7	561.1	561.1	561.7	562.2	562.8	563.4	563.9
162.5°	568.8	568.2	567.6	567.0	566.6	566.5	567.0	567.4	567.9	568.4	569.1
165°	576.1	575.5	574.9	574.4	573.8	573.7	574.0	574.2	574.5	574.8	575.5
167.5°	581.6	581.0	580.4	579.8	579.3	579.1	579.4	579.7	579.9	580.2	580.8
170°	584.6	584.1	583.5	582.9	582.4	582.1	582.4	582.5	582.7	582.9	583.6
172.5°	586.7	586.1	585.5	585.0	584.4	584.2	584.4	584.6	584.7	585.0	585.6
175°	589.3	588.6	588.0	587.3	586.6	586.4	586.6	586.8	586.9	587.2	587.8
177.5°	589.7	589.2	588.6	588.2	587.6	587.3	587.4	587.5	587.6	587.7	588.2
180°	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	633.2	633.2	633.2	633.2	633.2	633.2	633.2	633.2
2.5°	630.6	631.6	632.7	633.2	632.9	632.7	632.5	632.3
5°	626.3	627.4	628.4	628.8	628.6	628.3	628.0	627.8
7.5°	619.2	620.3	621.4	621.7	621.5	621.2	620.9	620.6
10°	612.9	614.0	615.1	615.4	615.0	614.6	614.2	613.8
12.5°	605.4	606.2	606.9	607.2	606.8	606.6	606.3	605.9
15°	592.3	592.9	593.4	593.3	592.6	592.0	591.3	590.6
17.5°	576.7	577.4	578.0	578.0	577.3	576.7	576.1	575.4
20°	564.7	565.1	565.5	565.4	564.8	564.3	563.8	563.2
22.5°	551.8	551.9	552.0	551.9	551.5	551.2	550.9	550.6
25°	530.9	531.2	531.4	531.4	531.2	530.9	530.6	530.4
27.5°	510.3	509.9	509.5	509.0	508.3	507.7	507.0	506.4
30°	494.2	493.8	493.4	492.9	492.4	491.9	491.3	490.7
32.5°	478.5	477.8	477.0	476.4	475.8	475.3	474.7	474.2
35°	453.2	452.4	451.6	450.9	450.2	449.5	448.8	448.2
37.5°	427.9	426.9	425.9	425.0	424.4	423.7	423.1	422.5
40°	410.4	409.2	408.0	407.1	406.5	406.0	405.4	404.9
42.5°	393.1	391.8	390.4	389.5	388.7	387.9	387.2	386.4
45°	366.6	365.2	363.6	362.6	362.1	361.6	361.0	360.4
47.5°	339.1	337.5	335.9	334.8	333.9	333.2	332.4	331.6
50°	321.4	319.4	317.6	316.3	315.6	315.0	314.2	313.6
52.5°	303.0	301.4	299.9	298.6	297.7	296.9	296.0	295.1
55°	275.7	274.0	272.4	271.3	270.5	269.9	269.2	268.6
57.5°	247.2	245.6	244.0	243.0	242.4	241.9	241.4	240.8
60°	228.4	226.9	225.4	224.5	224.0	223.6	223.2	222.8
62.5°	210.6	209.2	207.8	206.9	206.4	205.9	205.4	204.8
65°	183.3	182.1	180.8	179.9	179.2	178.6	177.9	177.2
67.5°	156.3	155.3	154.4	153.7	153.1	152.5	152.1	151.5
70°	138.8	137.8	136.9	136.2	135.6	135.0	134.5	134.0
72.5°	122.2	121.2	120.3	119.6	119.2	118.7	118.3	117.9
75°	96.4	95.6	94.8	94.5	94.8	95.1	95.3	95.6
77.5°	73.4	73.0	72.6	72.2	71.7	71.4	71.0	70.6
80°	58.2	57.8	57.5	57.1	56.8	56.6	56.3	56.0
82.5°	43.5	42.9	42.4	42.1	42.1	42.0	41.9	41.9
85°	22.9	22.5	22.1	21.9	21.7	21.6	21.4	21.3
87.5°	8.1	7.8	7.6	7.4	7.4	7.3	7.3	7.2
90°	9.5	9.9	10.4	10.8	10.9	11.1	11.3	11.5
92.5°	10.4	10.6	10.8	11.0	11.2	11.3	11.4	11.5
95°	17.5	18.0	18.5	18.7	18.6	18.5	18.4	18.3
97.5°	23.0	23.3	23.7	24.0	24.1	24.2	24.3	24.5
100°	25.8	26.5	27.3	27.7	28.0	28.1	28.3	28.5
102.5°	26.9	27.9	28.9	29.5	29.8	30.0	30.2	30.6
105°	28.0	29.1	30.1	30.8	31.2	31.6	32.0	32.4
107.5°	34.2	33.2	32.1	31.8	32.1	32.5	32.9	33.3
110°	55.5	46.1	36.6	32.1	32.4	32.9	33.3	33.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	118.8	84.3	49.8	32.8	33.0	33.3	33.7	33.9
115°	175.0	131.2	87.4	62.1	55.3	48.5	41.7	34.9
117.5°	269.6	259.0	248.4	232.0	209.5	187.2	164.9	142.4
120°	314.1	315.3	316.4	310.6	297.8	285.1	272.3	259.5
122.5°	333.3	334.0	334.7	333.8	331.3	328.8	326.4	323.8
125°	360.9	361.5	362.2	362.6	363.0	363.2	363.5	363.8
127.5°	386.3	387.3	388.2	388.7	388.8	388.9	388.9	389.0
130°	402.4	403.5	404.6	405.0	404.9	404.8	404.7	404.6
132.5°	418.2	419.1	420.0	420.3	420.2	420.1	420.0	420.0
135°	440.6	441.5	442.5	442.9	442.6	442.5	442.3	442.1
137.5°	461.4	462.3	463.3	463.5	463.2	462.8	462.6	462.3
140°	474.8	475.6	476.5	476.7	476.2	475.8	475.3	474.8
142.5°	487.3	488.0	488.9	489.0	488.5	488.0	487.5	487.1
145°	504.7	505.3	506.0	506.1	505.6	505.2	504.7	504.2
147.5°	519.8	520.3	520.8	520.8	520.5	520.1	519.7	519.3
150°	529.1	529.7	530.3	530.4	529.9	529.4	528.9	528.5
152.5°	537.7	538.3	538.8	538.7	538.2	537.5	536.9	536.3
155°	549.2	549.8	550.3	550.2	549.4	548.7	548.0	547.1
157.5°	558.8	559.5	560.1	560.1	559.3	558.6	557.8	557.1
160°	564.4	565.0	565.6	565.6	564.9	564.3	563.5	562.9
162.5°	569.7	570.4	571.0	571.0	570.1	569.3	568.5	567.7
165°	576.2	576.8	577.5	577.5	576.8	576.2	575.5	574.8
167.5°	581.5	582.2	582.9	582.8	581.9	581.1	580.2	579.4
170°	584.2	584.9	585.5	585.5	584.6	583.8	582.9	582.0
172.5°	586.3	586.9	587.6	587.5	586.7	585.8	585.0	584.1
175°	588.5	589.1	589.8	589.7	588.7	587.7	586.9	585.9
177.5°	588.7	589.3	589.8	589.7	589.1	588.3	587.7	587.0
180°	588.0	588.0	588.0	588.0	588.0	588.0	588.0	588.0

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