

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: P331661-927

Luminaire Tested: **SA2XXRDIP-C485D725U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331661-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C485D725U927-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3399.2 lumens
Efficiency: N/A
Efficacy: 88.5 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: Semi-Indirect

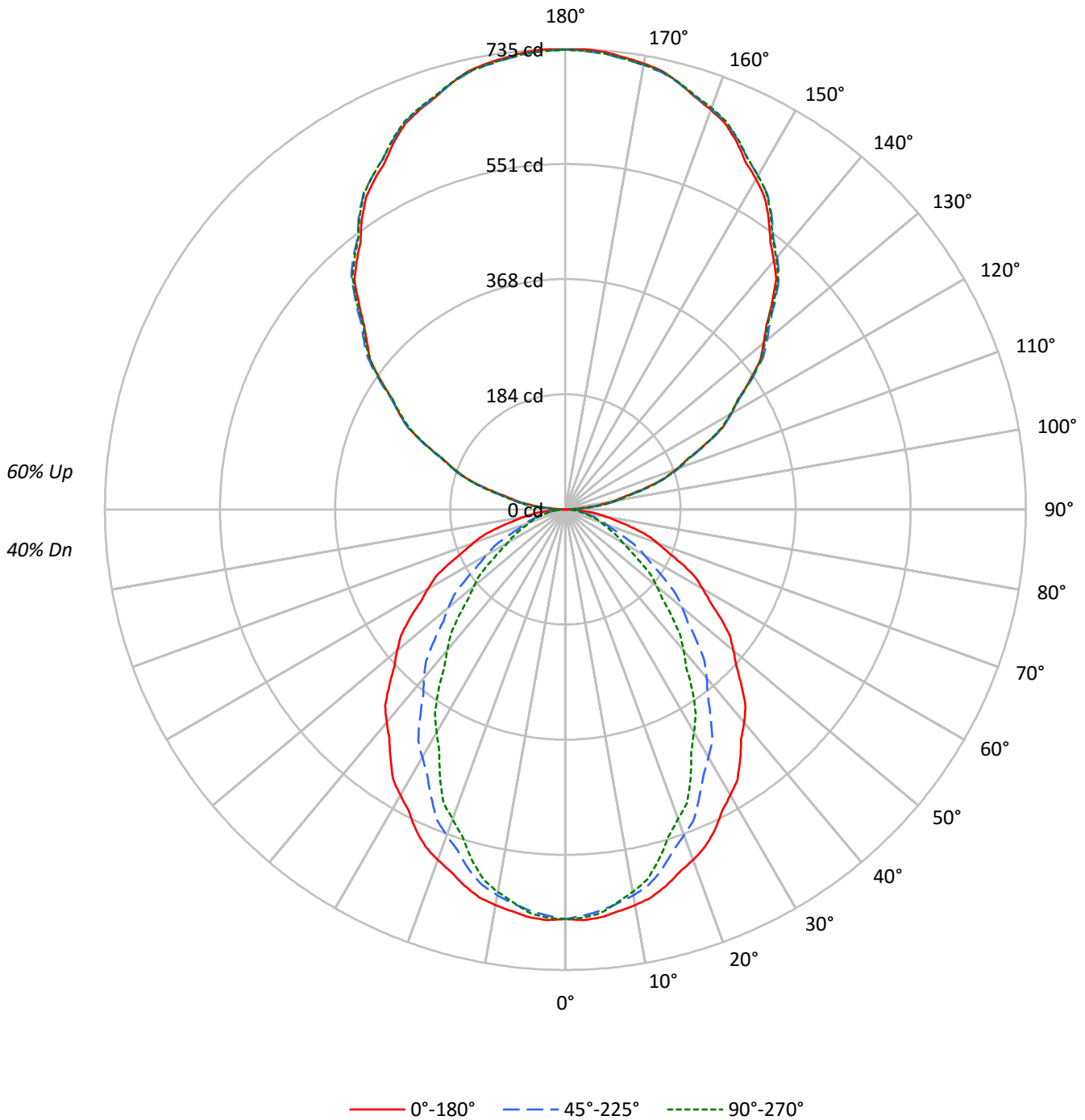
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40				
1	96	92	88	85	87	84	80	78	68	66	64	55	53	52	42	41	40	34				
2	88	80	75	70	79	74	69	64	60	57	54	48	46	44	37	36	34	29				
3	80	71	64	59	73	65	59	54	54	49	46	43	40	37	33	31	30	25				
4	73	63	56	50	67	58	51	46	48	43	39	39	35	32	30	28	26	22				
5	67	56	49	43	61	52	45	40	43	38	34	35	31	28	27	25	23	19				
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	25	22	20	17				
7	58	46	38	33	52	42	35	31	35	30	26	29	25	22	23	20	18	15				
8	53	42	34	29	49	38	32	27	32	27	23	26	23	20	21	18	16	14				
9	50	38	31	26	45	35	29	24	30	25	21	24	21	18	19	17	15	13				
10	46	35	28	23	42	32	26	22	27	22	19	22	19	16	18	15	13	12				

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	1.8
10°-20°	168.0	4.9
20°-30°	235.9	6.9
30°-40°	257.3	7.6
40°-50°	236.6	7.0
50°-60°	185.8	5.5
60°-70°	121.1	3.6
70°-80°	62.5	1.8
80°-90°	19.1	0.6
90°-100°	46.5	1.4
100°-110°	144.4	4.2
110°-120°	246.8	7.3
120°-130°	324.6	9.5
130°-140°	364.3	10.7
140°-150°	357.2	10.5
150°-160°	299.6	8.8
160°-170°	198.7	5.8
170°-180°	69.5	2.0
0°-30°	465.2	13.7
0°-40°	722.4	21.3
0°-60°	1144.8	33.7
0°-90°	1347.5	39.6
90°-120°	437.7	12.9
90°-150°	1483.9	43.7
90°-180°	2052.0	60.4
0°-180°	3399.2	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°	1	8	22	21	21	3
95°	32	38	40	40	38	37
105°	133	135	136	137	137	141
115°	248	251	250	249	248	245
125°	360	366	364	362	362	322
135°	466	473	474	474	472	360
145°	566	570	574	574	572	353
155°	647	649	651	654	652	298
165°	704	703	703	707	705	198
175°	732	731	729	733	730	70
180°	734	734	734	734	734	



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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°	7.7	7.2	6.7	6.2	5.6	5.7	6.3	6.9	7.5	8.2	7.9
90°	0.6	2.3	4.0	5.5	7.2	9.6	12.6	15.6	18.6	21.7	21.4
92.5°	11.0	12.2	13.5	14.7	15.8	16.8	17.5	18.2	19.0	19.7	19.7
95°	32.2	33.6	34.9	36.4	37.7	38.5	38.8	39.1	39.4	39.6	39.6
97.5°	58.9	60.0	61.2	62.4	63.7	64.6	65.0	65.6	66.1	66.6	66.6
100°	78.7	79.8	80.8	81.9	83.0	83.8	84.2	84.6	85.0	85.5	85.5
102.5°	99.4	100.3	101.2	102.1	103.0	103.7	104.2	104.7	105.2	105.8	105.8
105°	133.2	133.6	134.0	134.4	134.8	135.1	135.4	135.7	135.9	136.3	136.5
107.5°	167.1	167.7	168.3	168.9	169.4	169.8	169.8	169.8	169.8	169.8	169.9
110°	188.9	189.6	190.5	191.3	192.2	192.6	192.6	192.6	192.6	192.6	192.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	212.6	213.5	214.3	215.1	215.9	216.3	216.2	216.1	215.9	215.9	215.6
115°	247.7	248.5	249.3	250.2	251.0	251.3	251.0	250.7	250.4	250.2	250.0
117.5°	282.6	283.7	284.8	285.9	287.0	287.2	286.4	285.7	284.9	284.1	283.8
120°	305.9	307.0	308.1	309.2	310.3	310.3	309.2	308.1	307.0	305.9	305.9
122.5°	327.2	328.5	329.9	331.1	332.5	332.7	332.0	331.2	330.4	329.6	329.3
125°	360.4	361.6	362.8	364.1	365.4	365.8	365.4	364.9	364.5	364.1	363.7
127.5°	392.7	394.3	395.9	397.4	398.9	399.5	399.0	398.5	398.0	397.5	397.0
130°	413.0	414.8	416.6	418.4	420.2	420.9	420.6	420.3	420.1	419.9	419.5
132.5°	435.8	437.3	438.7	440.1	441.6	442.4	442.4	442.5	442.5	442.6	442.0
135°	466.3	467.8	469.3	470.8	472.3	473.2	473.5	473.7	474.0	474.3	474.2
137.5°	498.4	499.6	500.8	502.1	503.3	504.1	504.5	504.8	505.2	505.5	505.4
140°	517.7	518.9	520.1	521.3	522.6	523.6	524.3	525.0	525.6	526.3	526.3
142.5°	537.5	538.7	540.0	541.2	542.4	543.3	543.8	544.2	544.7	545.2	545.3
145°	565.9	566.9	567.9	568.9	569.8	570.7	571.6	572.4	573.1	574.0	574.2
147.5°	591.4	592.5	593.7	594.8	596.0	596.8	597.4	597.9	598.5	599.0	599.3
150°	608.7	609.5	610.3	611.2	612.0	612.7	613.2	613.8	614.3	614.9	615.3
152.5°	624.0	624.9	625.7	626.5	627.3	628.0	628.8	629.4	630.0	630.7	631.2
155°	647.1	647.5	647.9	648.3	648.7	649.1	649.5	650.0	650.4	650.8	651.5
157.5°	666.8	667.0	667.3	667.6	667.9	668.1	668.4	668.6	668.8	669.1	670.0
160°	678.7	678.9	679.2	679.5	679.8	679.9	680.1	680.2	680.4	680.5	681.4
162.5°	689.5	689.6	689.7	689.7	689.8	689.8	690.0	690.1	690.3	690.4	691.3
165°	704.0	703.9	703.8	703.6	703.5	703.4	703.4	703.4	703.4	703.4	704.4
167.5°	716.1	715.7	715.3	714.9	714.5	714.3	714.3	714.2	714.2	714.2	715.2
170°	722.6	722.2	721.8	721.4	721.0	720.6	720.6	720.4	720.3	720.1	721.1
172.5°	727.1	726.7	726.3	725.8	725.4	725.2	725.0	724.8	724.8	724.6	725.6
175°	732.5	732.1	731.7	731.3	730.9	730.6	730.2	730.0	729.7	729.4	730.4
177.5°	734.7	734.4	734.1	733.7	733.4	733.2	732.9	732.7	732.5	732.3	732.9
180°	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7



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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°	7.8	7.6	7.4	7.4	7.4	7.4	7.5	7.5
90°	21.2	20.8	20.6	20.5	20.7	20.8	20.9	21.1
92.5°	19.8	19.9	19.9	20.0	20.0	20.0	20.0	20.0
95°	39.6	39.6	39.6	39.5	39.2	39.0	38.7	38.4
97.5°	66.6	66.6	66.6	66.6	66.6	66.5	66.5	66.5
100°	85.5	85.5	85.5	85.4	85.2	85.1	85.0	84.8
102.5°	106.0	106.1	106.2	106.2	106.1	105.9	105.8	105.6
105°	136.8	137.0	137.4	137.4	137.4	137.4	137.4	137.4
107.5°	170.0	170.1	170.2	170.0	169.4	168.7	168.1	167.5
110°	192.6	192.6	192.6	192.3	191.9	191.5	191.2	190.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	215.2	214.8	214.5	214.2	213.9	213.6	213.3	213.0
115°	249.9	249.8	249.6	249.3	248.9	248.5	248.1	247.7
117.5°	283.4	283.1	282.7	282.4	282.0	281.5	281.1	280.7
120°	305.9	305.9	305.9	305.7	305.2	304.8	304.4	304.0
122.5°	329.0	328.7	328.4	328.0	327.7	327.4	327.1	326.9
125°	363.3	362.8	362.4	362.2	362.0	361.9	361.8	361.6
127.5°	396.6	396.0	395.5	395.1	394.7	394.2	393.8	393.3
130°	419.3	419.0	418.7	418.3	417.7	417.2	416.7	416.1
132.5°	441.4	440.8	440.2	439.7	439.2	438.8	438.3	437.9
135°	474.0	473.9	473.7	473.5	473.1	472.7	472.2	471.8
137.5°	505.3	505.2	505.1	504.8	504.2	503.7	503.1	502.6
140°	526.3	526.3	526.3	526.0	525.5	525.0	524.4	523.9
142.5°	545.3	545.5	545.6	545.3	544.8	544.2	543.8	543.2
145°	574.3	574.4	574.6	574.3	573.8	573.2	572.7	572.1
147.5°	599.6	599.9	600.2	600.2	599.6	599.0	598.6	598.0
150°	615.7	616.1	616.6	616.6	616.1	615.7	615.3	614.9
152.5°	631.8	632.3	632.8	632.8	632.3	631.8	631.2	630.7
155°	652.1	652.8	653.6	653.7	653.2	652.8	652.4	652.0
157.5°	671.0	671.9	672.9	673.0	672.3	671.7	671.0	670.3
160°	682.1	683.0	683.8	684.0	683.4	682.9	682.3	681.8
162.5°	692.3	693.2	694.2	694.3	693.6	693.0	692.3	691.7
165°	705.4	706.3	707.3	707.4	706.7	706.0	705.4	704.6
167.5°	716.1	717.1	718.0	718.2	717.5	716.8	716.1	715.3
170°	722.1	723.0	724.0	724.1	723.3	722.4	721.6	720.7
172.5°	726.5	727.5	728.4	728.5	727.7	726.8	726.0	725.2
175°	731.3	732.3	733.2	733.3	732.5	731.7	730.9	730.1
177.5°	733.6	734.3	734.9	734.9	734.3	733.6	732.9	732.3
180°	733.7	733.7	733.7	733.7	733.7	733.7	733.7	733.7

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