

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: P332905-927

Luminaire Tested: **SA4XXRDIP-C575D590U927-4F0-1E-UDD-F1**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P332905-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D590U927-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 590 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3482.6 lumens
Efficiency: N/A
Efficacy: 106.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: General Diffuse

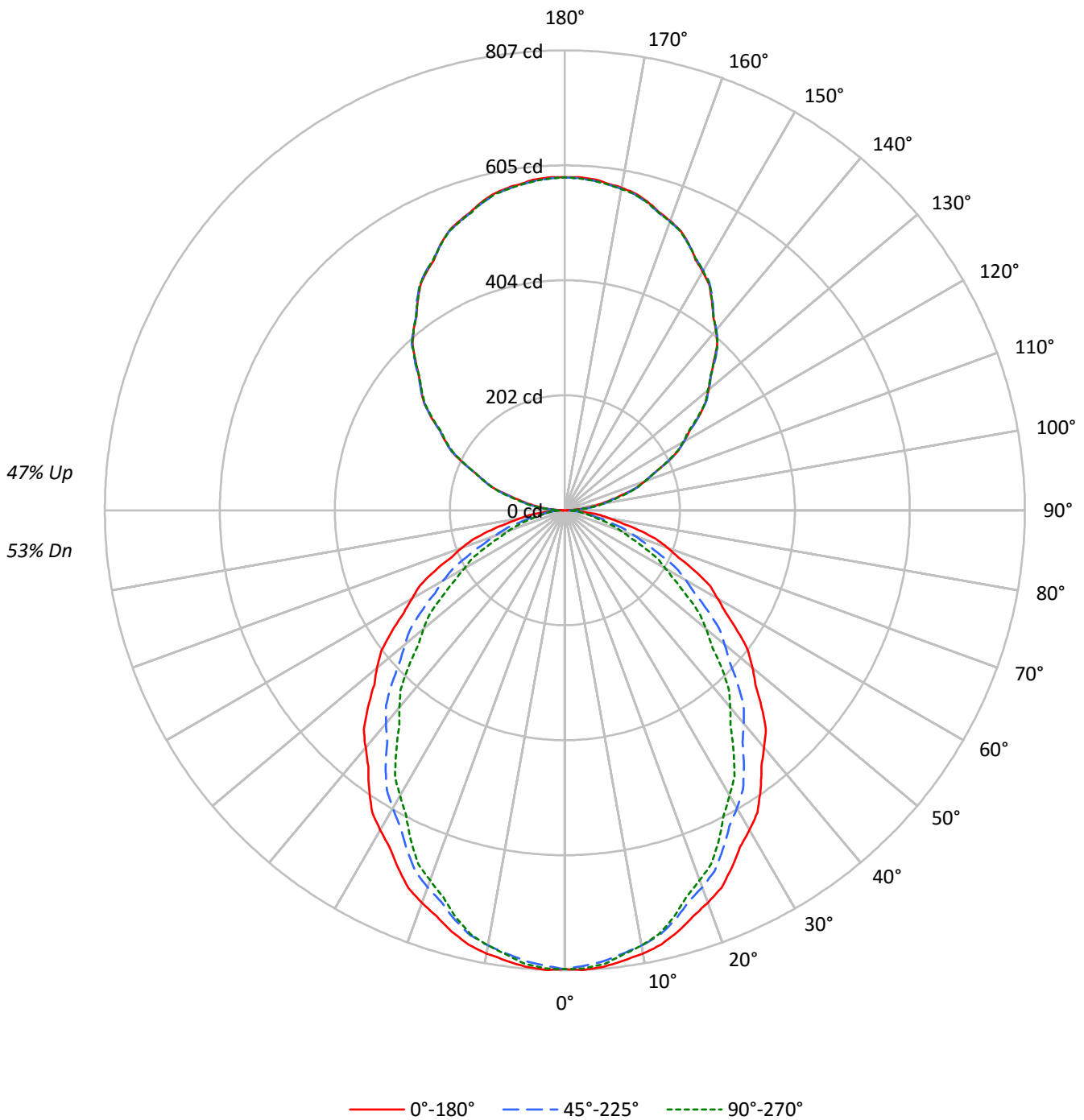
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53
1	99	95	91	87	91	88	85	82	75	73	71	64	62	60	53	52	51	46
2	90	83	77	72	83	77	72	67	66	62	59	56	53	51	47	45	43	39
3	82	73	66	60	76	68	62	57	59	54	50	50	46	43	42	39	37	33
4	76	65	57	51	70	61	54	48	52	47	43	45	41	37	37	35	32	29
5	69	58	50	44	64	54	47	42	47	41	37	40	36	33	34	31	28	25
6	64	52	44	38	59	49	42	36	42	37	32	36	32	29	31	27	25	22
7	59	47	39	34	55	44	37	32	38	33	29	33	29	25	28	25	22	20
8	55	43	35	30	51	40	33	28	35	30	26	30	26	23	26	23	20	18
9	51	39	32	27	48	37	30	25	32	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	27	23	30	24	21	26	22	19	22	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6500	6500	6500
5°	6514	6434	6474
10°	6473	6357	6357
15°	6399	6224	6177
20°	6296	6048	5936
25°	6167	5842	5694
30°	6039	5626	5390
35°	5899	5401	5084
40°	5730	5145	4755
45°	5574	4891	4419
50°	5397	4598	4064
55°	5206	4294	3678
60°	4996	3961	3284
65°	4804	3543	2896
70°	4525	3085	2460
75°	4173	2558	1999
80°	3640	1948	1836
85°	3084	1769	1658



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	2.2
10°-20°	210.9	6.1
20°-30°	304.5	8.7
30°-40°	345.2	9.9
40°-50°	333.3	9.6
50°-60°	277.2	8.0
60°-70°	191.4	5.5
70°-80°	97.0	2.8
80°-90°	26.6	0.8
90°-100°	38.5	1.1
100°-110°	114.1	3.3
110°-120°	193.7	5.6
120°-130°	255.5	7.3
130°-140°	286.9	8.2
140°-150°	281.9	8.1
150°-160°	237.1	6.8
160°-170°	157.8	4.5
170°-180°	55.2	1.6
0°-30°	591.0	17.0
0°-40°	936.2	26.9
0°-60°	1546.7	44.4
0°-90°	1861.8	53.5
90°-120°	346.4	9.9
90°-150°	1170.7	33.6
90°-180°	1621.0	46.5
0°-180°	3482.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	805	805	805	805	805	
5°	804	801	794	800	799	76
15°	766	760	745	743	739	216
25°	692	680	656	646	639	319
35°	599	578	548	528	516	374
45°	488	465	428	399	387	376
55°	370	344	305	274	261	331
65°	252	224	186	160	152	248
75°	134	111	82	68	64	141
85°	33	22	19	18	18	37
90°	1	6	10	13	14	3
95°	27	31	34	36	36	30
105°	105	106	108	109	110	112
115°	197	197	196	196	195	194
125°	287	287	286	286	285	256
135°	370	373	373	372	370	286
145°	450	451	452	451	450	281
155°	515	515	515	516	515	237
165°	561	559	558	561	559	158
175°	583	581	581	583	581	55
180°	584	584	584	584	584	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1
2.5°	807.1	806.6	806.2	805.7	805.3	804.5	803.3	802.1	800.8	799.6	800.8
5°	803.8	803.3	802.7	802.2	801.7	800.6	798.9	797.3	795.6	794.0	795.4
7.5°	796.5	796.0	795.4	794.9	794.2	792.9	790.8	788.6	786.5	784.3	785.2
10°	789.6	789.0	788.3	787.6	787.0	785.4	782.9	780.4	777.9	775.5	776.0
12.5°	780.8	780.0	779.2	778.4	777.6	775.8	772.9	769.9	767.1	764.1	764.5
15°	765.6	764.4	763.2	761.9	760.7	758.4	754.9	751.5	748.1	744.7	744.4
17.5°	747.3	745.4	743.7	741.9	740.1	737.2	733.1	729.0	724.8	720.7	720.0
20°	732.9	731.2	729.4	727.6	725.8	722.6	718.0	713.3	708.6	704.0	702.9
22.5°	717.2	715.2	713.2	711.1	709.2	705.7	700.7	695.7	690.7	685.7	684.0
25°	692.3	689.8	687.3	684.8	682.4	678.3	672.7	667.1	661.5	655.9	653.6
27.5°	666.1	663.1	660.0	656.9	653.7	649.2	643.2	637.2	631.2	625.2	622.3
30°	647.8	644.4	641.0	637.6	634.2	629.2	622.8	616.4	609.9	603.5	600.1
32.5°	628.7	624.8	620.9	617.0	613.2	607.9	601.3	594.6	588.0	581.3	577.3
35°	598.6	594.2	589.8	585.4	581.1	575.4	568.5	561.7	554.8	548.0	543.4
37.5°	566.4	561.9	557.4	552.9	548.3	542.2	534.6	527.0	519.5	511.9	506.7
40°	543.7	539.2	534.6	530.1	525.6	519.4	511.7	503.8	496.1	488.2	482.4
42.5°	522.0	517.3	512.5	507.8	503.0	496.6	488.5	480.3	472.2	464.1	458.2
45°	488.2	483.2	478.1	473.0	467.9	461.3	453.0	444.9	436.7	428.4	421.7
47.5°	453.4	448.1	442.8	437.6	432.4	425.5	416.9	408.4	399.9	391.3	384.4
50°	429.7	424.3	419.0	413.6	408.3	401.2	392.4	383.7	374.9	366.1	359.3
52.5°	405.5	400.3	395.1	389.8	384.5	377.5	368.4	359.5	350.5	341.5	334.5
55°	369.9	364.4	358.9	353.4	347.9	340.7	331.8	323.0	314.0	305.1	298.0
57.5°	334.6	328.9	323.2	317.5	311.8	304.6	295.8	287.0	278.3	269.5	262.3
60°	309.4	304.0	298.5	293.0	287.6	280.4	271.6	262.8	254.1	245.3	238.2
62.5°	286.8	281.1	275.4	269.7	264.0	256.7	247.6	238.7	229.7	220.7	214.1
65°	251.5	245.7	239.7	233.9	227.9	220.6	211.8	203.1	194.3	185.5	179.7
67.5°	214.9	209.2	203.6	198.0	192.3	185.4	177.3	169.1	161.1	152.9	147.8
70°	191.7	185.9	180.2	174.4	168.7	161.9	154.1	146.3	138.5	130.7	126.2
72.5°	167.1	161.8	156.6	151.5	146.2	140.0	132.6	125.2	117.8	110.4	106.6
75°	133.8	128.7	123.7	118.6	113.5	107.7	101.3	94.8	88.4	82.0	78.8
77.5°	100.0	95.7	91.4	87.1	82.8	78.0	72.8	67.7	62.4	57.2	55.4
80°	78.3	74.3	70.3	66.4	62.4	58.4	54.3	50.1	46.0	41.9	41.5
82.5°	59.6	55.9	52.3	48.6	45.0	42.0	39.6	37.2	34.9	32.6	32.2
85°	33.3	30.6	27.8	25.0	22.3	20.8	20.4	20.0	19.5	19.1	18.9
87.5°	11.6	10.9	10.3	9.7	9.0	8.7	8.7	8.8	8.9	8.9	8.9
90°	1.3	2.5	3.6	4.7	5.8	6.7	7.5	8.3	9.1	9.9	10.5
92.5°	9.7	10.9	12.2	13.5	14.7	15.6	16.2	16.8	17.3	17.9	18.2
95°	27.1	28.0	28.9	29.8	30.7	31.5	32.2	33.0	33.7	34.3	34.6
97.5°	47.4	48.1	48.8	49.5	50.2	51.0	51.8	52.7	53.5	54.3	54.7
100°	63.2	63.7	64.1	64.5	64.9	65.5	66.4	67.3	68.2	69.2	69.3
102.5°	79.9	80.0	80.2	80.3	80.5	81.0	81.8	82.6	83.5	84.3	84.6
105°	105.3	105.4	105.4	105.6	105.7	105.9	106.3	106.7	107.1	107.5	107.8
107.5°	131.9	132.1	132.1	132.3	132.5	132.5	132.5	132.6	132.7	132.8	133.0
110°	150.0	150.2	150.4	150.6	150.8	150.8	150.8	150.7	150.6	150.4	150.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	168.8	168.8	168.9	168.9	169.0	168.9	168.7	168.5	168.3	168.2	168.1
115°	197.0	197.0	197.0	197.0	197.0	196.9	196.7	196.5	196.3	196.1	196.0
117.5°	223.6	223.6	223.7	223.8	223.9	223.9	223.7	223.6	223.4	223.3	222.9
120°	241.3	241.7	242.1	242.5	242.9	243.0	242.6	242.3	242.0	241.7	241.2
122.5°	259.7	259.8	260.0	260.2	260.3	260.4	260.2	260.1	259.9	259.8	259.4
125°	286.9	286.9	286.9	286.9	286.9	286.8	286.8	286.7	286.5	286.5	286.2
127.5°	311.6	311.9	312.2	312.5	312.8	312.8	312.7	312.5	312.4	312.2	312.0
130°	328.9	329.2	329.5	329.9	330.1	330.3	330.3	330.3	330.3	330.3	330.1
132.5°	346.7	346.9	347.1	347.3	347.5	347.6	347.5	347.5	347.4	347.3	347.1
135°	370.0	370.7	371.2	371.9	372.5	372.7	372.7	372.7	372.7	372.7	372.6
137.5°	395.5	395.8	396.1	396.3	396.6	396.9	397.0	397.2	397.4	397.5	397.3
140°	412.5	412.7	412.9	413.1	413.3	413.4	413.4	413.4	413.4	413.4	413.3
142.5°	428.0	428.3	428.5	428.6	428.9	428.9	428.8	428.7	428.6	428.6	428.6
145°	449.6	450.0	450.4	450.8	451.1	451.4	451.5	451.6	451.7	451.8	451.7
147.5°	470.9	471.3	471.8	472.3	472.9	473.0	472.9	472.9	472.8	472.7	472.6
150°	483.9	484.3	484.7	485.1	485.5	485.7	485.7	485.7	485.7	485.7	485.7
152.5°	496.2	496.5	496.7	496.9	497.2	497.3	497.4	497.5	497.6	497.6	497.9
155°	515.1	515.1	515.1	515.1	515.1	515.0	514.9	514.8	514.8	514.6	515.0
157.5°	531.0	530.8	530.6	530.4	530.3	530.1	530.1	530.1	530.1	530.0	530.4
160°	540.3	540.3	540.2	540.1	540.0	539.9	539.8	539.7	539.6	539.5	539.8
162.5°	549.1	548.8	548.5	548.3	548.0	547.8	547.7	547.6	547.6	547.4	548.0
165°	560.7	560.4	560.1	559.8	559.5	559.3	559.0	558.9	558.6	558.5	559.0
167.5°	569.7	569.3	568.8	568.4	568.0	567.8	567.8	567.8	567.8	567.8	568.5
170°	574.7	574.3	573.7	573.2	572.7	572.5	572.6	572.7	572.8	572.9	573.5
172.5°	578.3	577.9	577.5	577.1	576.6	576.5	576.5	576.5	576.5	576.6	577.2
175°	583.3	582.8	582.3	581.8	581.3	581.0	580.9	580.8	580.7	580.6	581.3
177.5°	584.9	584.6	584.2	583.8	583.3	583.1	583.1	583.1	583.1	583.1	583.7
180°	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	805.1	805.1	805.1	805.1	805.1	805.1	805.1	805.1
2.5°	802.1	803.3	804.5	805.0	804.9	804.8	804.7	804.6
5°	796.7	798.1	799.5	800.0	799.7	799.5	799.2	798.9
7.5°	786.1	787.0	787.9	788.1	787.7	787.2	786.8	786.3
10°	776.6	777.1	777.7	777.7	777.1	776.6	776.0	775.5
12.5°	764.8	765.1	765.5	765.2	764.5	763.7	763.0	762.2
15°	744.1	743.9	743.5	743.0	742.0	741.0	740.1	739.1
17.5°	719.2	718.4	717.6	716.5	715.1	713.7	712.2	710.7
20°	701.8	700.7	699.6	698.2	696.4	694.6	692.8	691.0
22.5°	682.5	680.8	679.1	677.6	676.1	674.7	673.3	671.8
25°	651.3	648.9	646.6	644.8	643.3	642.0	640.6	639.2
27.5°	619.4	616.6	613.7	611.2	609.3	607.3	605.4	603.4
30°	596.7	593.2	589.8	587.0	584.8	582.6	580.4	578.2
32.5°	573.4	569.4	565.4	562.4	560.3	558.3	556.1	554.1
35°	538.7	534.0	529.4	525.9	523.4	520.9	518.4	515.9
37.5°	501.5	496.3	491.1	487.3	484.7	482.3	479.8	477.4
40°	476.7	471.0	465.2	461.1	458.6	456.1	453.7	451.2
42.5°	452.3	446.5	440.6	436.4	433.8	431.3	428.6	426.1
45°	415.0	408.3	401.6	397.0	394.5	392.1	389.6	387.1
47.5°	377.4	370.4	363.5	358.6	355.9	353.2	350.5	347.8
50°	352.4	345.6	338.7	334.1	331.4	328.8	326.2	323.6
52.5°	327.6	320.6	313.7	308.9	306.1	303.4	300.7	298.0
55°	290.9	283.8	276.6	271.8	269.2	266.6	264.0	261.3
57.5°	255.0	247.8	240.6	236.0	234.0	232.0	230.0	228.1
60°	231.1	223.9	216.8	212.2	210.0	207.8	205.7	203.4
62.5°	207.6	201.0	194.4	190.2	188.5	186.7	185.0	183.2
65°	173.8	167.9	162.0	158.2	156.6	155.0	153.3	151.6
67.5°	142.8	137.7	132.6	129.2	127.4	125.6	123.7	121.9
70°	121.7	117.2	112.6	109.6	108.3	106.9	105.5	104.2
72.5°	102.7	98.9	95.0	92.4	91.2	89.9	88.6	87.4
75°	75.7	72.6	69.4	67.4	66.5	65.8	65.0	64.1
77.5°	53.6	51.7	49.8	48.8	48.6	48.3	48.1	47.8
80°	41.1	40.7	40.2	40.0	39.8	39.7	39.6	39.5
82.5°	31.9	31.6	31.4	31.1	31.0	30.8	30.7	30.6
85°	18.5	18.3	18.0	17.9	17.9	17.9	17.9	17.9
87.5°	9.0	9.0	9.0	9.0	9.2	9.3	9.4	9.6
90°	11.2	11.7	12.4	12.8	13.0	13.2	13.4	13.5
92.5°	18.6	19.0	19.3	19.6	19.7	19.8	20.0	20.0
95°	34.9	35.3	35.6	35.7	35.7	35.7	35.7	35.7
97.5°	55.1	55.4	55.8	55.9	55.9	55.9	55.9	55.9
100°	69.6	69.7	69.9	70.0	70.0	70.0	70.0	70.0
102.5°	84.8	85.2	85.4	85.6	85.7	85.8	85.9	86.0
105°	108.1	108.4	108.8	109.0	109.3	109.6	110.0	110.3
107.5°	133.3	133.6	133.9	134.0	134.0	134.0	134.0	134.0
110°	150.0	149.9	149.6	149.7	150.0	150.3	150.6	150.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	168.1	168.0	168.0	168.0	168.1	168.1	168.2	168.3
115°	195.9	195.8	195.7	195.6	195.5	195.4	195.3	195.2
117.5°	222.6	222.3	221.9	221.7	221.4	221.3	221.0	220.9
120°	240.7	240.2	239.7	239.6	239.8	240.0	240.2	240.3
122.5°	259.1	258.8	258.4	258.1	257.7	257.4	257.0	256.7
125°	286.1	285.8	285.7	285.4	285.3	285.0	284.9	284.6
127.5°	311.8	311.6	311.4	311.2	311.1	310.9	310.8	310.6
130°	329.9	329.7	329.5	329.2	328.8	328.4	328.0	327.6
132.5°	346.9	346.7	346.5	346.3	346.1	345.9	345.8	345.6
135°	372.3	372.2	371.9	371.7	371.4	371.1	370.8	370.5
137.5°	397.0	396.7	396.5	396.3	396.4	396.5	396.6	396.6
140°	413.2	413.1	413.0	412.9	412.8	412.7	412.6	412.5
142.5°	428.6	428.6	428.5	428.5	428.5	428.5	428.4	428.4
145°	451.6	451.5	451.4	451.2	450.9	450.6	450.3	450.0
147.5°	472.5	472.5	472.4	472.3	472.2	472.1	472.0	471.9
150°	485.7	485.7	485.7	485.7	485.5	485.4	485.4	485.3
152.5°	498.1	498.4	498.6	498.6	498.4	498.0	497.8	497.6
155°	515.4	515.8	516.3	516.3	515.8	515.4	515.0	514.6
157.5°	530.7	531.0	531.3	531.2	530.9	530.6	530.2	529.9
160°	540.1	540.3	540.7	540.6	540.1	539.6	539.1	538.6
162.5°	548.5	549.1	549.6	549.6	549.1	548.6	548.1	547.6
165°	559.7	560.2	560.9	560.9	560.5	560.2	559.8	559.4
167.5°	569.0	569.7	570.3	570.2	569.7	569.0	568.4	567.8
170°	574.1	574.7	575.3	575.3	574.6	573.9	573.1	572.4
172.5°	577.9	578.6	579.2	579.2	578.5	577.8	577.1	576.5
175°	582.0	582.7	583.4	583.4	582.7	582.0	581.3	580.6
177.5°	584.2	584.8	585.3	585.3	584.7	584.1	583.4	582.7
180°	584.2	584.2	584.2	584.2	584.2	584.2	584.2	584.2

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