

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: P332905-930

Luminaire Tested: **S124RDIP-S575D590U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332905-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124RDIP-S575D590U930-4F0-1E-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: 3584.3 lumens
Efficiency: N/A
Efficacy: 109.3 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

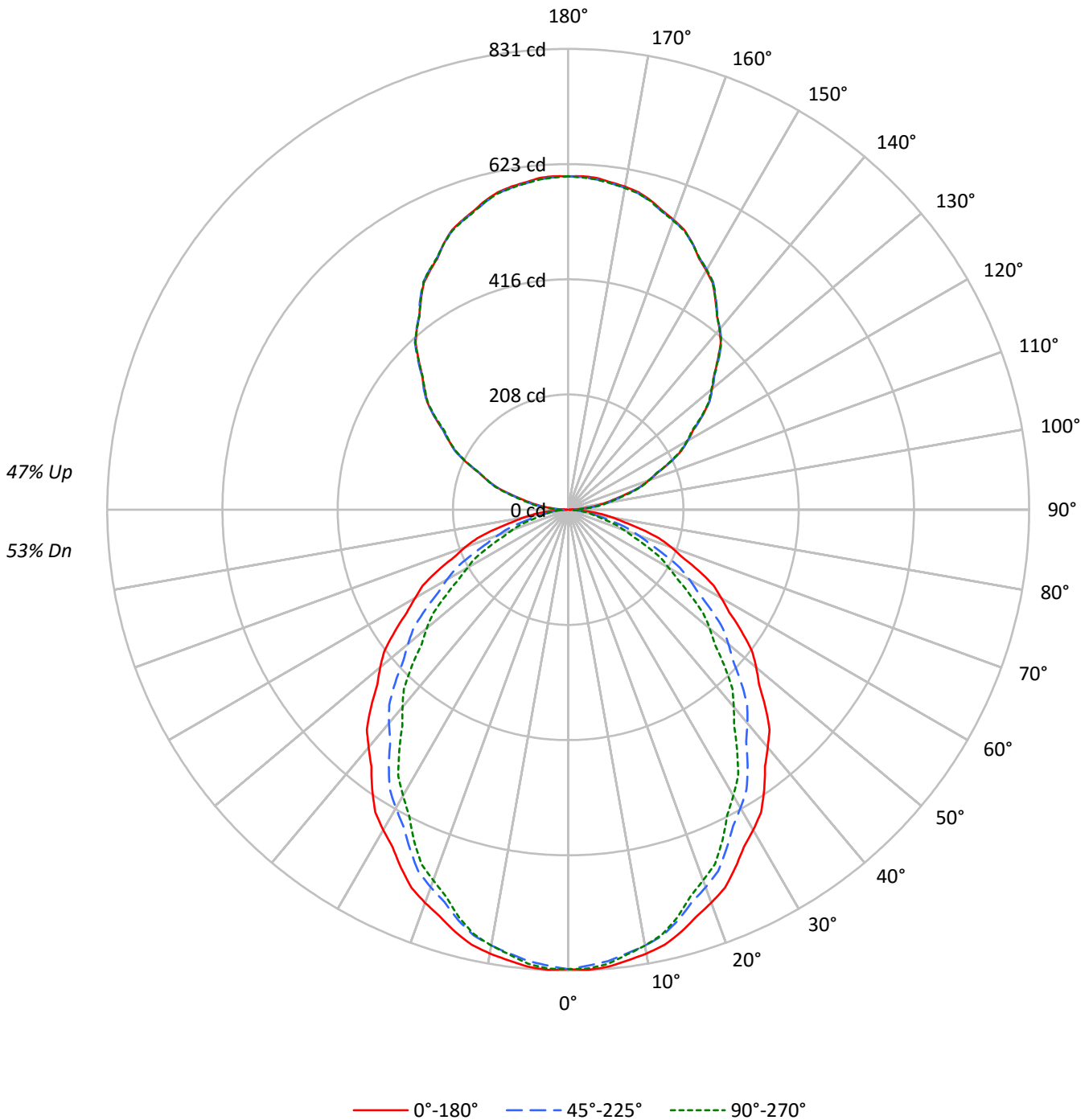
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6689	6689	6689
5°	6704	6622	6663
10°	6662	6542	6542
15°	6586	6405	6358
20°	6480	6225	6110
25°	6347	6013	5860
30°	6216	5790	5547
35°	6071	5558	5233
40°	5896	5296	4894
45°	5737	5034	4548
50°	5554	4732	4182
55°	5358	4421	3786
60°	5142	4077	3381
65°	4946	3647	2980
70°	4657	3175	2530
75°	4295	2633	2059
80°	3747	2004	1888
85°	3168	1815	1704



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	2.2
10°-20°	217.0	6.1
20°-30°	313.4	8.7
30°-40°	355.3	9.9
40°-50°	343.1	9.6
50°-60°	285.3	8.0
60°-70°	197.0	5.5
70°-80°	99.8	2.8
80°-90°	27.4	0.8
90°-100°	39.7	1.1
100°-110°	117.5	3.3
110°-120°	199.4	5.6
120°-130°	262.9	7.3
130°-140°	295.3	8.2
140°-150°	290.2	8.1
150°-160°	244.0	6.8
160°-170°	162.4	4.5
170°-180°	56.9	1.6
0°-30°	608.3	17.0
0°-40°	963.6	26.9
0°-60°	1591.9	44.4
0°-90°	1916.1	53.5
90°-120°	356.5	9.9
90°-150°	1204.9	33.6
90°-180°	1668.0	46.5
0°-180°	3584.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	827	824	817	823	822	78
15°	788	782	766	765	761	222
25°	712	700	675	664	658	328
35°	616	595	564	543	531	385
45°	502	478	441	411	398	387
55°	381	354	314	282	269	340
65°	259	231	191	165	156	256
75°	138	114	84	70	66	145
85°	34	22	20	18	18	39
90°	1	6	10	13	14	3
95°	28	32	35	37	37	31
105°	108	109	111	112	114	115
115°	203	203	202	201	201	200
125°	295	295	295	294	293	263
135°	381	384	384	383	381	295
145°	463	464	465	464	463	289
155°	530	530	530	531	530	244
165°	577	576	575	577	576	163
175°	600	598	598	600	598	57
180°	601	601	601	601	601	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	830.6	830.1	829.7	829.2	828.8	827.9	826.7	825.5	824.2	823.0	824.2
5°	827.3	826.7	826.1	825.6	825.1	823.9	822.2	820.5	818.8	817.2	818.6
7.5°	819.8	819.2	818.6	818.1	817.4	816.0	813.8	811.6	809.4	807.2	808.1
10°	812.7	812.0	811.3	810.6	809.9	808.3	805.8	803.2	800.6	798.1	798.7
12.5°	803.6	802.7	801.9	801.1	800.3	798.4	795.4	792.4	789.5	786.4	786.8
15°	788.0	786.7	785.5	784.2	782.9	780.5	777.0	773.5	769.9	766.4	766.1
17.5°	769.1	767.2	765.4	763.5	761.7	758.7	754.5	750.2	746.0	741.8	741.0
20°	754.3	752.5	750.6	748.9	747.0	743.7	738.9	734.1	729.3	724.6	723.4
22.5°	738.1	736.1	734.0	731.9	729.9	726.3	721.1	716.0	710.9	705.7	704.0
25°	712.5	710.0	707.4	704.8	702.3	698.1	692.4	686.6	680.8	675.1	672.6
27.5°	685.6	682.4	679.2	676.0	672.8	668.1	661.9	655.8	649.6	643.4	640.5
30°	666.8	663.2	659.7	656.2	652.7	647.6	641.0	634.4	627.7	621.1	617.6
32.5°	647.0	643.0	639.0	635.0	631.1	625.7	618.8	612.0	605.1	598.3	594.2
35°	616.0	611.6	607.0	602.5	598.0	592.2	585.1	578.1	571.0	564.0	559.2
37.5°	582.9	578.3	573.6	569.0	564.3	558.1	550.2	542.4	534.7	526.8	521.5
40°	559.5	554.9	550.2	545.6	541.0	534.6	526.6	518.5	510.5	502.5	496.5
42.5°	537.2	532.4	527.5	522.6	517.7	511.1	502.7	494.3	486.0	477.6	471.6
45°	502.5	497.3	492.0	486.8	481.6	474.7	466.3	457.9	449.4	440.9	434.0
47.5°	466.6	461.2	455.8	450.4	445.0	437.9	429.1	420.4	411.6	402.8	395.6
50°	442.2	436.7	431.2	425.7	420.2	412.9	403.9	394.9	385.9	376.8	369.8
52.5°	417.4	412.0	406.6	401.2	395.7	388.5	379.2	370.0	360.7	351.5	344.3
55°	380.7	375.0	369.4	363.7	358.1	350.7	341.5	332.4	323.2	314.1	306.7
57.5°	344.4	338.5	332.6	326.8	320.9	313.5	304.4	295.4	286.4	277.4	269.9
60°	318.5	312.8	307.2	301.6	296.0	288.6	279.6	270.5	261.5	252.5	245.2
62.5°	295.1	289.3	283.4	277.5	271.7	264.2	254.9	245.6	236.4	227.1	220.4
65°	258.9	252.8	246.7	240.7	234.6	227.1	218.0	209.0	200.0	190.9	184.9
67.5°	221.2	215.3	209.5	203.7	198.0	190.9	182.5	174.1	165.8	157.4	152.1
70°	197.3	191.4	185.5	179.5	173.7	166.6	158.6	150.6	142.5	134.5	129.9
72.5°	171.9	166.6	161.2	155.9	150.5	144.1	136.5	128.9	121.2	113.7	109.7
75°	137.7	132.5	127.3	122.1	116.8	110.9	104.3	97.6	91.0	84.4	81.1
77.5°	102.9	98.5	94.1	89.6	85.2	80.3	74.9	69.6	64.2	58.9	57.0
80°	80.6	76.5	72.4	68.3	64.2	60.1	55.8	51.6	47.4	43.1	42.7
82.5°	61.3	57.6	53.8	50.1	46.3	43.2	40.8	38.3	36.0	33.5	33.2
85°	34.2	31.5	28.6	25.8	23.0	21.4	21.0	20.5	20.1	19.6	19.4
87.5°	12.0	11.3	10.6	9.9	9.2	9.0	9.0	9.0	9.1	9.1	9.1
90°	1.4	2.5	3.7	4.8	6.0	6.9	7.7	8.6	9.4	10.2	10.8
92.5°	9.9	11.3	12.6	13.9	15.2	16.1	16.7	17.3	17.9	18.4	18.8
95°	27.9	28.9	29.8	30.7	31.6	32.4	33.2	33.9	34.7	35.3	35.6
97.5°	48.8	49.5	50.2	51.0	51.7	52.5	53.3	54.2	55.0	55.9	56.3
100°	65.1	65.6	66.0	66.4	66.8	67.4	68.3	69.3	70.2	71.2	71.3
102.5°	82.2	82.3	82.5	82.7	82.8	83.4	84.2	85.0	85.9	86.7	87.1
105°	108.4	108.4	108.5	108.7	108.8	109.0	109.4	109.8	110.2	110.6	111.0
107.5°	135.7	135.9	136.0	136.2	136.3	136.4	136.4	136.5	136.6	136.6	136.9
110°	154.4	154.6	154.8	155.0	155.2	155.2	155.2	155.1	155.0	154.8	154.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	173.7	173.7	173.8	173.8	173.9	173.8	173.7	173.4	173.3	173.1	173.0
115°	202.8	202.8	202.8	202.8	202.8	202.6	202.4	202.2	202.0	201.8	201.7
117.5°	230.1	230.2	230.2	230.3	230.4	230.4	230.2	230.1	229.9	229.8	229.4
120°	248.3	248.7	249.2	249.6	250.0	250.1	249.7	249.4	249.1	248.7	248.3
122.5°	267.3	267.4	267.6	267.7	267.9	268.0	267.8	267.7	267.5	267.4	267.0
125°	295.3	295.3	295.3	295.3	295.3	295.2	295.1	295.1	294.9	294.8	294.6
127.5°	320.7	321.0	321.3	321.6	321.9	322.0	321.8	321.6	321.5	321.3	321.1
130°	338.5	338.8	339.2	339.5	339.7	339.9	339.9	339.9	339.9	339.9	339.7
132.5°	356.8	357.0	357.2	357.4	357.7	357.8	357.7	357.6	357.5	357.4	357.2
135°	380.8	381.5	382.0	382.7	383.4	383.6	383.6	383.6	383.6	383.6	383.4
137.5°	407.1	407.3	407.6	407.9	408.2	408.5	408.6	408.8	409.0	409.1	408.9
140°	424.5	424.8	424.9	425.2	425.3	425.5	425.5	425.5	425.5	425.5	425.3
142.5°	440.5	440.8	441.0	441.2	441.4	441.4	441.3	441.2	441.2	441.1	441.1
145°	462.7	463.1	463.5	463.9	464.3	464.6	464.7	464.8	464.9	465.0	464.9
147.5°	484.6	485.1	485.6	486.1	486.7	486.8	486.7	486.7	486.6	486.5	486.4
150°	498.0	498.5	498.9	499.3	499.7	499.9	499.9	499.9	499.9	499.9	499.9
152.5°	510.7	510.9	511.2	511.4	511.7	511.8	511.9	512.0	512.1	512.2	512.4
155°	530.1	530.1	530.1	530.1	530.1	530.0	529.9	529.9	529.8	529.6	530.0
157.5°	546.5	546.3	546.1	545.9	545.8	545.6	545.6	545.6	545.6	545.5	545.8
160°	556.1	556.0	556.0	555.9	555.7	555.6	555.5	555.5	555.3	555.2	555.5
162.5°	565.1	564.8	564.5	564.3	564.0	563.8	563.7	563.6	563.5	563.4	563.9
165°	577.1	576.7	576.4	576.2	575.8	575.6	575.4	575.2	574.9	574.8	575.4
167.5°	586.3	585.9	585.4	585.0	584.6	584.3	584.3	584.4	584.4	584.4	585.1
170°	591.5	591.0	590.4	590.0	589.4	589.2	589.3	589.4	589.5	589.6	590.3
172.5°	595.2	594.8	594.4	593.9	593.5	593.3	593.3	593.3	593.3	593.4	594.0
175°	600.3	599.8	599.3	598.8	598.3	597.9	597.9	597.8	597.6	597.5	598.3
177.5°	602.0	601.6	601.2	600.8	600.3	600.1	600.1	600.1	600.1	600.1	600.7
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	825.5	826.7	827.9	828.5	828.4	828.3	828.2	828.1
5°	819.9	821.4	822.8	823.4	823.0	822.8	822.5	822.2
7.5°	809.0	809.9	810.9	811.1	810.7	810.2	809.8	809.3
10°	799.2	799.8	800.4	800.4	799.8	799.2	798.7	798.1
12.5°	787.1	787.4	787.8	787.6	786.8	786.0	785.2	784.4
15°	765.8	765.6	765.2	764.7	763.6	762.6	761.7	760.7
17.5°	740.2	739.4	738.6	737.4	736.0	734.5	733.0	731.5
20°	722.3	721.1	720.0	718.5	716.7	714.9	713.1	711.2
22.5°	702.4	700.7	699.0	697.4	695.9	694.4	692.9	691.4
25°	670.3	667.8	665.4	663.6	662.1	660.7	659.3	657.9
27.5°	637.5	634.5	631.6	629.1	627.0	625.0	623.1	621.0
30°	614.1	610.5	607.0	604.1	601.9	599.6	597.4	595.1
32.5°	590.1	586.0	581.9	578.8	576.7	574.5	572.3	570.2
35°	554.4	549.6	544.9	541.2	538.7	536.1	533.5	531.0
37.5°	516.1	510.8	505.4	501.5	498.9	496.4	493.8	491.3
40°	490.6	484.7	478.7	474.6	472.0	469.4	466.9	464.4
42.5°	465.5	459.5	453.5	449.1	446.5	443.8	441.2	438.5
45°	427.1	420.2	413.3	408.5	406.0	403.5	401.0	398.4
47.5°	388.4	381.2	374.1	369.1	366.3	363.5	360.8	357.9
50°	362.7	355.7	348.6	343.8	341.1	338.4	335.7	333.0
52.5°	337.1	330.0	322.9	317.9	315.0	312.3	309.5	306.7
55°	299.4	292.0	284.7	279.7	277.0	274.3	271.7	269.0
57.5°	262.4	255.0	247.6	242.9	240.8	238.8	236.8	234.7
60°	237.8	230.5	223.1	218.4	216.1	213.9	211.7	209.4
62.5°	213.6	206.8	200.1	195.8	194.0	192.2	190.4	188.6
65°	178.9	172.8	166.7	162.8	161.2	159.5	157.8	156.0
67.5°	146.9	141.7	136.5	133.0	131.1	129.2	127.3	125.5
70°	125.2	120.6	115.9	112.8	111.5	110.1	108.6	107.2
72.5°	105.7	101.7	97.8	95.1	93.8	92.5	91.2	89.9
75°	77.9	74.7	71.4	69.4	68.5	67.7	66.9	66.0
77.5°	55.1	53.2	51.3	50.2	50.0	49.7	49.5	49.2
80°	42.3	41.9	41.4	41.2	41.0	40.8	40.8	40.6
82.5°	32.9	32.5	32.3	32.0	31.9	31.7	31.6	31.5
85°	19.1	18.8	18.5	18.4	18.4	18.4	18.4	18.4
87.5°	9.2	9.2	9.2	9.3	9.5	9.6	9.7	9.9
90°	11.5	12.1	12.7	13.1	13.4	13.5	13.8	13.9
92.5°	19.2	19.6	19.9	20.1	20.3	20.4	20.5	20.6
95°	36.0	36.3	36.6	36.8	36.8	36.8	36.8	36.8
97.5°	56.7	57.0	57.4	57.6	57.6	57.6	57.6	57.6
100°	71.6	71.7	72.0	72.1	72.1	72.1	72.1	72.1
102.5°	87.3	87.6	87.9	88.1	88.2	88.3	88.4	88.5
105°	111.3	111.6	111.9	112.2	112.5	112.8	113.2	113.5
107.5°	137.2	137.5	137.8	137.9	137.9	137.9	137.9	137.9
110°	154.4	154.3	154.0	154.1	154.4	154.7	155.0	155.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	173.0	172.9	172.9	172.9	173.0	173.0	173.1	173.2
115°	201.6	201.5	201.4	201.3	201.2	201.1	201.0	200.9
117.5°	229.1	228.8	228.4	228.1	227.9	227.7	227.5	227.3
120°	247.8	247.2	246.7	246.5	246.8	247.0	247.2	247.4
122.5°	266.7	266.4	266.0	265.6	265.2	264.9	264.5	264.2
125°	294.4	294.2	294.0	293.8	293.6	293.3	293.2	292.9
127.5°	320.9	320.7	320.5	320.3	320.2	320.0	319.8	319.7
130°	339.5	339.3	339.1	338.8	338.3	337.9	337.5	337.1
132.5°	357.0	356.8	356.6	356.4	356.2	356.0	355.9	355.7
135°	383.2	383.0	382.8	382.5	382.2	381.9	381.6	381.3
137.5°	408.5	408.3	408.1	407.9	408.0	408.1	408.1	408.2
140°	425.3	425.2	425.1	424.9	424.9	424.8	424.7	424.5
142.5°	441.1	441.1	441.0	441.0	441.0	441.0	440.9	440.9
145°	464.8	464.7	464.6	464.4	464.1	463.7	463.4	463.2
147.5°	486.3	486.2	486.2	486.1	486.0	485.8	485.8	485.7
150°	499.9	499.9	499.9	499.9	499.7	499.6	499.5	499.5
152.5°	512.7	512.9	513.1	513.1	512.9	512.6	512.3	512.1
155°	530.4	530.8	531.3	531.3	530.8	530.4	530.0	529.6
157.5°	546.2	546.5	546.8	546.7	546.4	546.1	545.7	545.4
160°	555.9	556.1	556.4	556.4	555.9	555.3	554.8	554.3
162.5°	564.5	565.1	565.7	565.7	565.2	564.6	564.1	563.6
165°	576.0	576.6	577.2	577.3	576.9	576.5	576.1	575.7
167.5°	585.6	586.3	586.9	586.9	586.3	585.6	585.0	584.3
170°	590.8	591.5	592.1	592.1	591.3	590.6	589.9	589.1
172.5°	594.8	595.5	596.1	596.1	595.4	594.7	593.9	593.3
175°	599.0	599.7	600.4	600.4	599.7	599.0	598.3	597.5
177.5°	601.3	601.9	602.4	602.4	601.8	601.1	600.4	599.7
180°	601.3	601.3	601.3	601.3	601.3	601.3	601.3	601.3

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