

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: P333038-935

Luminaire Tested: **S124RDIW-S575D470U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333038-935
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: S124RDIW-S575D470U935-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3422.7 lumens
Efficiency: N/A
Efficacy: 113.3 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

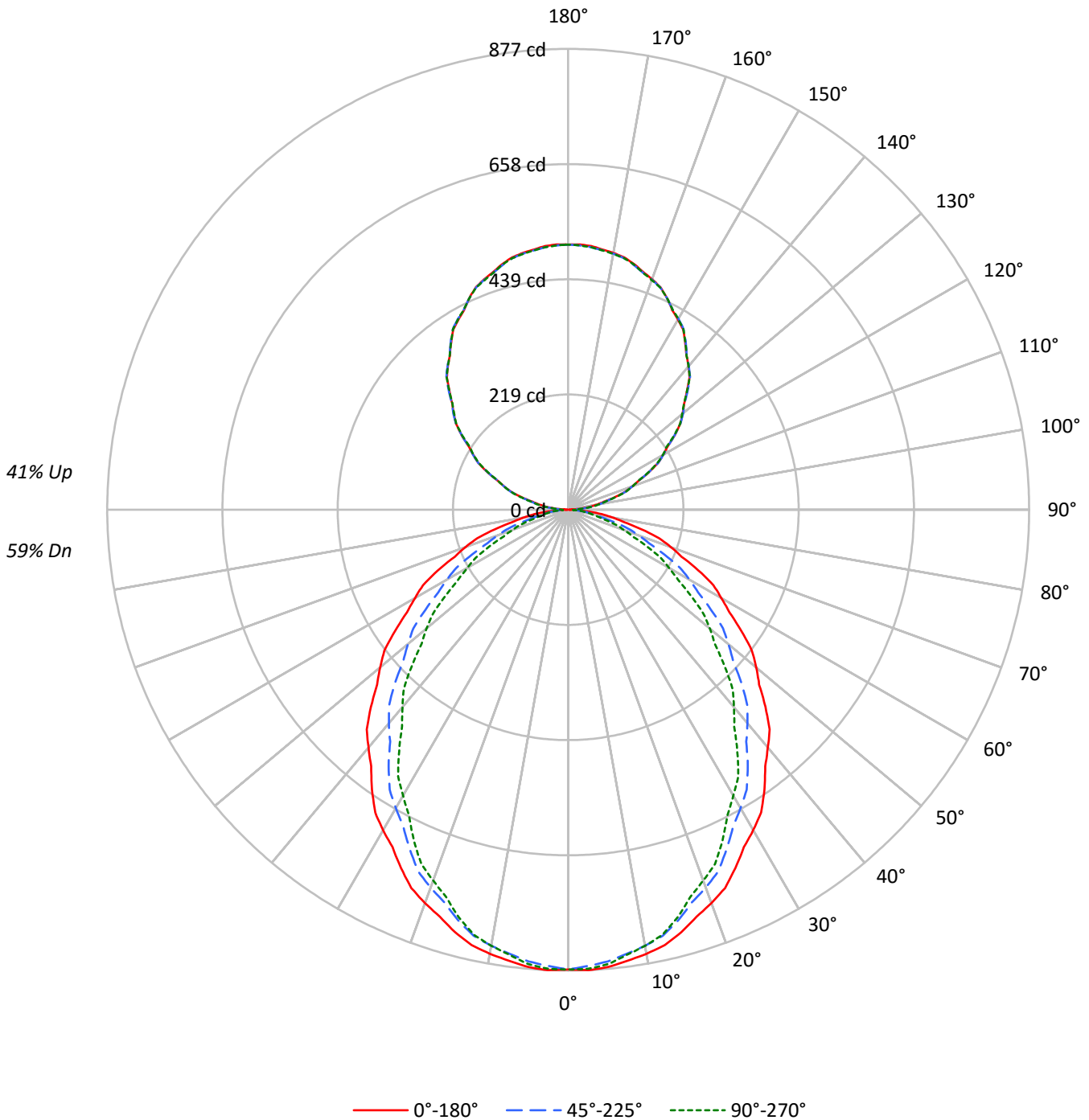
Input Watts (W): 30.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	109	109	109	102	102	102	102	88	88	88	76	76	76	64	64	64	59
1	100	96	92	89	93	90	86	83	78	76	73	67	66	64	58	56	55	50
2	91	84	78	73	85	79	73	69	69	65	61	60	57	54	51	49	47	43
3	84	74	67	61	78	70	63	58	61	56	52	53	49	46	45	43	40	37
4	77	66	58	52	71	62	55	49	54	49	44	47	43	40	41	38	35	32
5	71	59	51	45	66	55	48	43	49	43	39	43	38	35	37	33	31	28
6	65	53	45	39	61	50	43	37	44	38	34	39	34	30	34	30	27	24
7	60	48	40	34	56	45	38	33	40	34	30	35	31	27	31	27	24	22
8	56	44	36	31	52	41	34	29	37	31	27	32	28	24	28	25	22	20
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	26	22	20	18
10	49	37	30	25	46	35	28	24	31	26	22	28	23	20	24	21	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7064	7064	7064
5°	7080	6994	7037
10°	7035	6909	6909
15°	6955	6764	6714
20°	6844	6574	6453
25°	6702	6350	6188
30°	6564	6114	5858
35°	6412	5870	5527
40°	6227	5592	5168
45°	6058	5316	4804
50°	5865	4999	4417
55°	5658	4669	3997
60°	5430	4306	3570
65°	5223	3851	3148
70°	4919	3354	2672
75°	4535	2779	2174
80°	3956	2115	1994
85°	3353	1927	1806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.2	2.4
10°-20°	229.2	6.7
20°-30°	331.0	9.7
30°-40°	375.2	11.0
40°-50°	362.3	10.6
50°-60°	301.3	8.8
60°-70°	208.0	6.1
70°-80°	105.4	3.1
80°-90°	28.6	0.8
90°-100°	33.3	1.0
100°-110°	98.6	2.9
110°-120°	167.3	4.9
120°-130°	220.6	6.4
130°-140°	247.7	7.2
140°-150°	243.4	7.1
150°-160°	204.8	6.0
160°-170°	136.2	4.0
170°-180°	47.7	1.4
0°-30°	642.4	18.8
0°-40°	1017.6	29.7
0°-60°	1681.1	49.1
0°-90°	2023.1	59.1
90°-120°	299.1	8.7
90°-150°	1010.9	29.5
90°-180°	1400.0	40.9
0°-180°	3422.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	874	871	863	869	868	83
15°	832	825	809	808	803	234
25°	752	740	713	702	695	347
35°	651	628	596	573	561	406
45°	531	505	466	434	421	409
55°	402	374	332	298	284	359
65°	273	244	202	174	165	270
75°	145	120	89	74	70	154
85°	36	23	21	20	20	41
90°	1	5	9	11	12	3
95°	23	27	30	31	31	26
105°	91	91	93	94	95	96
115°	170	170	169	169	169	168
125°	248	248	247	247	246	221
135°	320	322	322	321	320	247
145°	388	390	390	390	389	243
155°	445	445	444	446	444	205
165°	484	483	482	484	483	136
175°	504	502	501	504	501	48
180°	504	504	504	504	504	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	877.2	876.7	876.2	875.7	875.3	874.3	873.1	871.8	870.4	869.1	870.4
5°	873.7	873.1	872.5	871.8	871.3	870.1	868.3	866.5	864.7	863.0	864.4
7.5°	865.7	865.1	864.5	863.9	863.2	861.8	859.5	857.1	854.8	852.5	853.4
10°	858.2	857.6	856.8	856.0	855.3	853.6	850.9	848.2	845.5	842.8	843.4
12.5°	848.6	847.7	846.9	846.0	845.2	843.2	840.0	836.8	833.7	830.5	830.9
15°	832.2	830.8	829.5	828.1	826.7	824.2	820.5	816.8	813.0	809.3	809.1
17.5°	812.2	810.2	808.3	806.3	804.4	801.2	796.8	792.3	787.8	783.3	782.6
20°	796.6	794.7	792.7	790.8	788.8	785.4	780.3	775.2	770.2	765.2	764.0
22.5°	779.5	777.3	775.2	772.9	770.8	767.0	761.6	756.1	750.7	745.3	743.5
25°	752.4	749.8	747.0	744.3	741.7	737.3	731.2	725.0	718.9	712.9	710.3
27.5°	724.0	720.7	717.3	713.9	710.5	705.6	699.0	692.6	686.0	679.5	676.4
30°	704.1	700.4	696.7	693.0	689.3	683.9	676.9	669.9	662.9	655.9	652.2
32.5°	683.3	679.1	674.9	670.6	666.5	660.7	653.5	646.3	639.0	631.8	627.5
35°	650.6	645.8	641.0	636.3	631.5	625.4	617.9	610.5	603.0	595.6	590.6
37.5°	615.6	610.7	605.8	600.9	595.9	589.4	581.1	572.8	564.6	556.4	550.7
40°	590.9	586.0	581.1	576.2	571.3	564.6	556.1	547.6	539.2	530.6	524.3
42.5°	567.3	562.2	557.1	551.9	546.7	539.8	530.9	522.0	513.2	504.4	498.0
45°	530.6	525.1	519.6	514.1	508.6	501.4	492.4	483.5	474.6	465.6	458.3
47.5°	492.8	487.1	481.3	475.6	469.9	462.4	453.1	443.9	434.6	425.3	417.8
50°	467.0	461.2	455.4	449.5	443.8	436.1	426.5	417.1	407.5	398.0	390.5
52.5°	440.7	435.1	429.4	423.7	417.9	410.3	400.5	390.7	380.9	371.2	363.6
55°	402.0	396.1	390.1	384.1	378.2	370.3	360.7	351.0	341.3	331.7	323.9
57.5°	363.7	357.5	351.3	345.1	338.9	331.1	321.5	311.9	302.5	292.9	285.1
60°	336.3	330.4	324.4	318.5	312.5	304.8	295.2	285.7	276.2	266.7	258.9
62.5°	311.7	305.5	299.3	293.1	286.9	279.0	269.1	259.4	249.6	239.9	232.7
65°	273.4	267.0	260.5	254.2	247.7	239.8	230.2	220.8	211.2	201.6	195.3
67.5°	233.6	227.4	221.3	215.2	209.1	201.6	192.7	183.8	175.0	166.2	160.7
70°	208.4	202.1	195.9	189.6	183.4	176.0	167.5	159.0	150.5	142.1	137.2
72.5°	181.6	175.9	170.2	164.6	158.9	152.1	144.1	136.1	128.0	120.0	115.9
75°	145.4	139.9	134.4	128.9	123.4	117.1	110.1	103.1	96.1	89.1	85.7
77.5°	108.7	104.0	99.4	94.6	90.0	84.8	79.1	73.5	67.8	62.2	60.2
80°	85.1	80.8	76.5	72.2	67.8	63.5	59.0	54.5	50.0	45.5	45.1
82.5°	64.7	60.8	56.8	52.9	48.9	45.6	43.0	40.5	38.0	35.4	35.0
85°	36.2	33.2	30.2	27.2	24.3	22.6	22.1	21.7	21.2	20.8	20.5
87.5°	12.6	11.8	11.0	10.2	9.5	9.1	9.1	9.2	9.2	9.2	9.2
90°	1.2	2.2	3.1	4.0	5.0	5.8	6.5	7.2	7.9	8.6	9.1
92.5°	8.4	9.5	10.5	11.6	12.7	13.5	14.0	14.5	15.0	15.4	15.8
95°	23.4	24.2	25.0	25.7	26.5	27.2	27.8	28.4	29.0	29.6	29.9
97.5°	40.9	41.5	42.1	42.8	43.4	44.1	44.8	45.5	46.1	46.9	47.2
100°	54.6	54.9	55.3	55.6	56.1	56.6	57.3	58.1	58.9	59.7	59.8
102.5°	69.0	69.1	69.2	69.4	69.6	70.0	70.7	71.4	72.1	72.8	73.0
105°	90.9	91.0	91.1	91.2	91.3	91.4	91.8	92.1	92.5	92.8	93.1
107.5°	113.9	114.0	114.2	114.3	114.3	114.4	114.5	114.5	114.6	114.6	114.9
110°	129.5	129.7	129.8	130.0	130.2	130.3	130.2	130.1	130.0	129.9	129.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	145.8	145.8	145.9	145.9	145.9	145.9	145.7	145.5	145.3	145.3	145.2
115°	170.1	170.1	170.1	170.1	170.1	170.0	169.9	169.7	169.5	169.4	169.3
117.5°	193.0	193.1	193.2	193.3	193.3	193.3	193.2	193.0	193.0	192.8	192.5
120°	208.4	208.7	209.1	209.4	209.7	209.7	209.5	209.2	209.0	208.7	208.3
122.5°	224.3	224.4	224.5	224.6	224.8	224.8	224.7	224.5	224.5	224.4	224.0
125°	247.7	247.7	247.7	247.7	247.7	247.7	247.6	247.5	247.5	247.4	247.2
127.5°	269.1	269.3	269.6	269.8	270.1	270.2	270.0	269.8	269.8	269.6	269.4
130°	284.0	284.3	284.6	284.8	285.1	285.2	285.2	285.2	285.2	285.2	285.0
132.5°	299.3	299.5	299.7	299.9	300.1	300.1	300.1	300.0	300.0	299.9	299.7
135°	319.5	320.0	320.6	321.1	321.6	321.8	321.8	321.8	321.8	321.8	321.7
137.5°	341.6	341.8	342.0	342.2	342.5	342.7	342.9	343.0	343.1	343.3	343.0
140°	356.2	356.4	356.5	356.7	356.9	357.0	357.0	357.0	357.0	357.0	356.9
142.5°	369.6	369.8	370.0	370.1	370.3	370.4	370.3	370.2	370.1	370.1	370.1
145°	388.2	388.6	388.9	389.3	389.6	389.8	389.9	389.9	390.0	390.1	390.0
147.5°	406.7	407.0	407.4	407.9	408.3	408.5	408.4	408.3	408.3	408.2	408.1
150°	417.8	418.2	418.5	418.9	419.2	419.4	419.4	419.4	419.4	419.4	419.4
152.5°	428.4	428.7	428.9	429.1	429.3	429.5	429.5	429.6	429.6	429.7	429.9
155°	444.8	444.8	444.8	444.8	444.8	444.7	444.6	444.5	444.4	444.4	444.7
157.5°	458.5	458.3	458.2	458.1	457.9	457.8	457.8	457.8	457.7	457.7	458.0
160°	466.7	466.6	466.5	466.4	466.3	466.2	466.1	466.1	466.0	465.9	466.1
162.5°	474.2	473.9	473.6	473.5	473.2	473.0	472.9	472.9	472.8	472.7	473.2
165°	484.1	483.9	483.6	483.4	483.1	482.9	482.8	482.6	482.4	482.2	482.8
167.5°	491.9	491.5	491.2	490.9	490.4	490.3	490.3	490.3	490.3	490.3	490.9
170°	496.3	495.8	495.4	495.0	494.6	494.4	494.5	494.6	494.6	494.7	495.2
172.5°	499.4	499.0	498.7	498.3	497.9	497.7	497.7	497.8	497.8	497.8	498.4
175°	503.7	503.3	502.8	502.4	502.0	501.7	501.6	501.5	501.4	501.4	502.0
177.5°	505.1	504.7	504.4	504.0	503.7	503.5	503.5	503.5	503.5	503.5	504.0
180°	504.5	504.5	504.5	504.5	504.5	504.5	504.5	504.5	504.5	504.5	504.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	871.8	873.1	874.3	874.9	874.9	874.7	874.6	874.5
5°	865.9	867.5	868.9	869.5	869.2	868.9	868.6	868.3
7.5°	854.4	855.3	856.4	856.5	856.1	855.6	855.1	854.6
10°	844.0	844.6	845.2	845.2	844.6	844.0	843.4	842.8
12.5°	831.2	831.6	832.0	831.7	830.9	830.1	829.2	828.4
15°	808.7	808.5	808.1	807.5	806.4	805.4	804.3	803.3
17.5°	781.7	780.8	780.0	778.8	777.2	775.7	774.0	772.5
20°	762.8	761.6	760.3	758.8	756.9	754.9	753.0	751.1
22.5°	741.8	739.9	738.1	736.5	734.9	733.3	731.8	730.1
25°	707.8	705.2	702.7	700.8	699.2	697.8	696.3	694.7
27.5°	673.2	670.1	667.0	664.3	662.2	660.0	658.0	655.8
30°	648.5	644.7	641.0	638.0	635.6	633.2	630.9	628.4
32.5°	623.2	618.9	614.5	611.2	609.0	606.7	604.4	602.2
35°	585.5	580.4	575.4	571.5	568.9	566.1	563.4	560.8
37.5°	545.0	539.4	533.7	529.6	526.8	524.2	521.5	518.8
40°	518.1	511.9	505.6	501.2	498.4	495.8	493.1	490.4
42.5°	491.6	485.3	478.9	474.3	471.5	468.7	465.9	463.1
45°	451.1	443.8	436.4	431.4	428.8	426.1	423.4	420.8
47.5°	410.2	402.6	395.0	389.8	386.8	383.9	381.0	378.0
50°	383.1	375.7	368.2	363.1	360.2	357.4	354.6	351.7
52.5°	356.0	348.4	341.0	335.7	332.7	329.8	326.8	323.9
55°	316.2	308.4	300.7	295.4	292.6	289.7	286.9	284.0
57.5°	277.2	269.3	261.5	256.5	254.3	252.2	250.0	247.9
60°	251.2	243.4	235.7	230.7	228.3	225.8	223.5	221.1
62.5°	225.6	218.4	211.3	206.7	204.8	202.9	201.0	199.1
65°	188.9	182.4	176.1	171.9	170.2	168.4	166.6	164.8
67.5°	155.2	149.6	144.1	140.4	138.4	136.5	134.5	132.5
70°	132.2	127.3	122.3	119.2	117.7	116.2	114.7	113.2
72.5°	111.7	107.5	103.2	100.5	99.1	97.7	96.3	95.0
75°	82.2	78.9	75.4	73.3	72.3	71.5	70.6	69.7
77.5°	58.2	56.2	54.2	53.0	52.8	52.5	52.3	52.0
80°	44.7	44.3	43.7	43.5	43.3	43.1	43.0	42.9
82.5°	34.7	34.4	34.1	33.8	33.7	33.5	33.4	33.2
85°	20.1	19.9	19.5	19.5	19.5	19.5	19.5	19.5
87.5°	9.2	9.2	9.1	9.2	9.4	9.6	9.7	9.8
90°	9.6	10.2	10.7	11.0	11.2	11.4	11.5	11.7
92.5°	16.1	16.4	16.7	16.9	17.0	17.1	17.2	17.3
95°	30.1	30.4	30.7	30.8	30.8	30.8	30.8	30.8
97.5°	47.5	47.9	48.1	48.3	48.3	48.3	48.3	48.3
100°	60.0	60.2	60.4	60.4	60.4	60.4	60.4	60.4
102.5°	73.3	73.5	73.8	74.0	74.0	74.0	74.1	74.2
105°	93.4	93.7	93.9	94.2	94.5	94.7	95.0	95.2
107.5°	115.1	115.4	115.6	115.7	115.7	115.7	115.6	115.6
110°	129.6	129.4	129.2	129.2	129.5	129.8	130.0	130.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	145.2	145.1	145.1	145.1	145.2	145.2	145.3	145.3
115°	169.2	169.1	169.0	168.9	168.8	168.8	168.7	168.6
117.5°	192.3	191.9	191.7	191.4	191.2	191.1	190.9	190.7
120°	207.8	207.4	207.0	206.9	207.1	207.2	207.4	207.6
122.5°	223.8	223.4	223.2	222.8	222.6	222.2	221.9	221.6
125°	247.0	246.8	246.7	246.5	246.3	246.2	246.0	245.8
127.5°	269.2	269.1	268.9	268.7	268.6	268.5	268.4	268.2
130°	284.8	284.6	284.5	284.2	283.9	283.5	283.2	282.8
132.5°	299.5	299.4	299.2	299.0	298.9	298.8	298.6	298.5
135°	321.5	321.3	321.2	321.0	320.7	320.5	320.2	319.9
137.5°	342.8	342.6	342.3	342.2	342.3	342.3	342.4	342.5
140°	356.8	356.7	356.6	356.5	356.5	356.4	356.3	356.2
142.5°	370.1	370.1	370.1	370.0	370.0	370.0	370.0	370.0
145°	389.9	389.9	389.8	389.6	389.3	389.1	388.8	388.6
147.5°	408.0	407.9	407.9	407.9	407.8	407.7	407.6	407.5
150°	419.4	419.4	419.4	419.4	419.3	419.2	419.1	419.0
152.5°	430.2	430.3	430.6	430.5	430.3	430.1	429.9	429.6
155°	445.1	445.4	445.7	445.7	445.4	445.1	444.7	444.4
157.5°	458.2	458.5	458.7	458.7	458.5	458.1	457.9	457.5
160°	466.4	466.7	466.9	466.8	466.4	466.0	465.5	465.0
162.5°	473.6	474.2	474.6	474.6	474.2	473.7	473.3	472.9
165°	483.3	483.8	484.3	484.4	484.1	483.7	483.4	483.0
167.5°	491.4	491.9	492.4	492.4	491.9	491.4	490.8	490.3
170°	495.8	496.3	496.8	496.7	496.1	495.5	494.9	494.3
172.5°	499.0	499.6	500.2	500.2	499.6	498.9	498.3	497.7
175°	502.6	503.2	503.8	503.8	503.2	502.6	502.0	501.4
177.5°	504.5	505.0	505.5	505.4	504.9	504.4	503.8	503.3
180°	504.5	504.5	504.5	504.5	504.5	504.5	504.5	504.5

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