

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: P333042-930

Luminaire Tested: **S124RDIW-S575D770U930-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333042-930
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: S124RDIW-S575D770U930-4F0-1E-UDD-F1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4087.4 lumens
Efficiency: N/A
Efficacy: 108.7 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

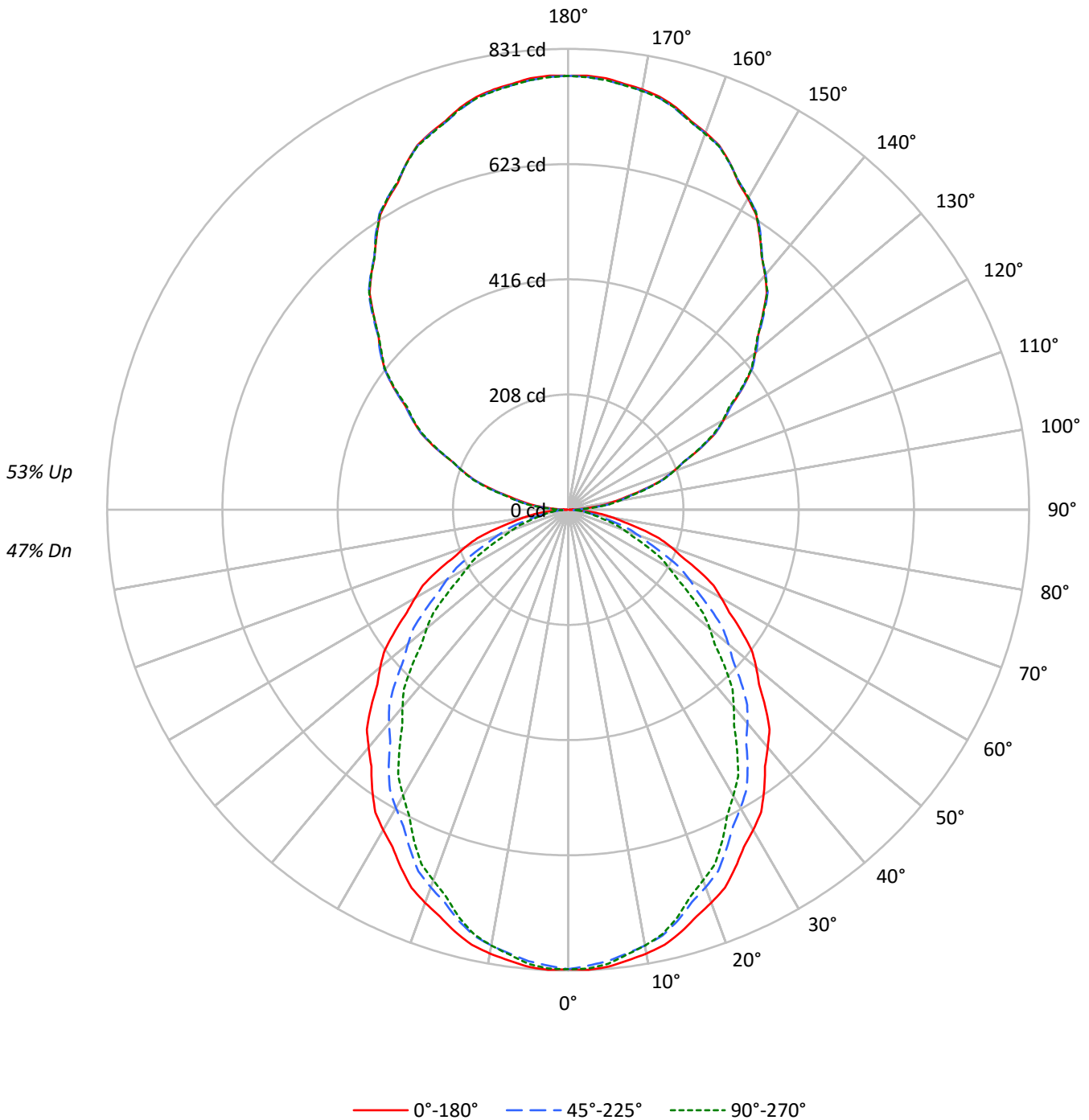
Input Watts (W): 37.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47
1	97	93	89	86	89	86	83	80	72	70	67	59	58	56	47	46	45	40
2	89	82	76	71	81	75	70	66	63	60	56	52	50	47	42	40	39	34
3	81	72	65	59	74	66	60	55	56	51	48	46	43	40	37	35	33	29
4	74	64	56	50	68	59	52	47	50	45	41	41	38	35	34	31	29	25
5	68	57	49	43	63	53	46	40	45	39	35	37	33	30	30	27	25	22
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22	19
7	58	46	38	33	53	43	36	31	37	31	27	31	27	23	25	22	20	17
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	31	26	46	36	29	25	31	25	22	26	22	19	21	18	16	14
10	47	35	28	23	43	33	26	22	28	23	20	24	20	17	20	17	15	13

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	1.9
10°-20°	217.0	5.3
20°-30°	313.4	7.7
30°-40°	355.3	8.7
40°-50°	343.1	8.4
50°-60°	285.3	7.0
60°-70°	197.0	4.8
70°-80°	99.8	2.4
80°-90°	28.0	0.7
90°-100°	51.6	1.3
100°-110°	152.9	3.7
110°-120°	259.5	6.3
120°-130°	342.1	8.4
130°-140°	384.2	9.4
140°-150°	377.6	9.2
150°-160°	317.6	7.8
160°-170°	211.3	5.2
170°-180°	74.0	1.8
0°-30°	608.3	14.9
0°-40°	963.6	23.6
0°-60°	1591.9	38.9
0°-90°	1916.7	46.9
90°-120°	463.9	11.4
90°-150°	1567.9	38.4
90°-180°	2171.0	53.1
0°-180°	4087.4	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°	2	8	13	17	18	4
95°	36	42	46	48	48	40
105°	141	142	144	146	148	150
115°	264	264	263	262	261	260
125°	384	384	384	382	381	342
135°	496	499	499	498	496	383
145°	602	604	605	604	603	377
155°	690	690	689	691	689	317
165°	751	749	748	751	749	212
175°	781	778	778	781	778	74
180°	782	782	782	782	782	



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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°	12.1	11.4	10.8	10.2	9.6	9.4	9.5	9.5	9.7	9.8	9.8
90°	1.8	3.3	4.8	6.3	7.7	9.0	10.1	11.2	12.2	13.3	14.1
92.5°	13.0	14.7	16.3	18.0	19.7	21.0	21.7	22.4	23.2	24.0	24.5
95°	36.3	37.5	38.7	39.9	41.2	42.2	43.1	44.1	45.1	46.0	46.4
97.5°	63.4	64.4	65.4	66.3	67.3	68.3	69.5	70.5	71.7	72.7	73.2
100°	84.7	85.3	85.8	86.3	86.8	87.7	88.9	90.2	91.4	92.6	92.9
102.5°	107.0	107.2	107.4	107.6	107.9	108.5	109.6	110.7	111.8	112.9	113.3
105°	141.0	141.1	141.3	141.4	141.5	141.9	142.4	142.9	143.5	144.0	144.4
107.5°	176.7	176.8	177.0	177.2	177.3	177.5	177.6	177.7	177.7	177.8	178.1
110°	200.9	201.1	201.5	201.7	201.9	202.0	201.9	201.8	201.6	201.5	201.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	226.1	226.1	226.2	226.2	226.2	226.2	225.9	225.7	225.4	225.2	225.2
115°	263.8	263.8	263.8	263.8	263.8	263.7	263.4	263.2	262.9	262.6	262.4
117.5°	299.4	299.5	299.6	299.7	299.9	299.8	299.6	299.5	299.2	299.1	298.6
120°	323.1	323.7	324.2	324.7	325.3	325.3	325.0	324.6	324.2	323.8	323.0
122.5°	347.8	348.1	348.2	348.5	348.7	348.7	348.5	348.3	348.1	348.0	347.5
125°	384.3	384.3	384.3	384.3	384.3	384.2	384.0	383.9	383.8	383.6	383.4
127.5°	417.3	417.7	418.1	418.5	418.9	419.0	418.7	418.6	418.3	418.2	417.8
130°	440.5	440.9	441.3	441.7	442.1	442.3	442.3	442.3	442.3	442.3	442.1
132.5°	464.2	464.6	464.8	465.1	465.5	465.5	465.4	465.3	465.2	465.0	464.8
135°	495.6	496.4	497.2	498.0	498.8	499.2	499.2	499.2	499.2	499.2	499.0
137.5°	529.7	530.1	530.4	530.8	531.2	531.5	531.7	531.9	532.1	532.4	532.0
140°	552.4	552.7	553.0	553.3	553.5	553.7	553.7	553.7	553.7	553.7	553.5
142.5°	573.2	573.6	573.8	574.1	574.4	574.5	574.3	574.2	574.1	574.0	574.0
145°	602.1	602.6	603.2	603.7	604.2	604.5	604.7	604.9	605.0	605.1	605.0
147.5°	630.6	631.3	631.9	632.6	633.2	633.5	633.4	633.2	633.2	633.1	632.9
150°	648.1	648.6	649.1	649.7	650.2	650.5	650.5	650.5	650.5	650.5	650.5
152.5°	664.6	664.9	665.2	665.5	665.9	666.0	666.1	666.3	666.3	666.4	666.8
155°	689.8	689.8	689.8	689.8	689.8	689.7	689.6	689.5	689.3	689.3	689.7
157.5°	711.1	710.9	710.6	710.4	710.1	710.0	710.0	710.0	710.0	709.9	710.3
160°	723.7	723.6	723.4	723.3	723.2	723.0	722.9	722.8	722.6	722.5	722.9
162.5°	735.3	735.0	734.6	734.3	733.9	733.7	733.5	733.4	733.3	733.1	733.9
165°	751.0	750.6	750.2	749.7	749.3	749.0	748.7	748.4	748.2	747.9	748.7
167.5°	762.9	762.4	761.8	761.2	760.7	760.3	760.4	760.4	760.4	760.5	761.3
170°	769.7	769.0	768.3	767.7	767.0	766.7	766.9	767.0	767.1	767.3	768.1
172.5°	774.5	774.0	773.4	772.8	772.3	772.0	772.0	772.1	772.1	772.1	773.1
175°	781.2	780.5	779.8	779.2	778.5	778.1	778.0	777.8	777.7	777.6	778.5
177.5°	783.3	782.9	782.3	781.8	781.2	781.0	781.0	781.0	781.0	781.0	781.7
180°	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4



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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°	9.9	9.9	9.9	10.1	10.3	10.4	10.6	10.8
90°	14.9	15.7	16.6	17.0	17.4	17.6	17.9	18.2
92.5°	24.9	25.4	25.9	26.3	26.4	26.6	26.7	26.9
95°	46.8	47.2	47.6	47.8	47.8	47.8	47.8	47.8
97.5°	73.7	74.2	74.7	74.9	74.9	74.9	74.9	74.9
100°	93.1	93.4	93.7	93.8	93.8	93.8	93.8	93.8
102.5°	113.7	114.1	114.4	114.6	114.8	114.9	115.0	115.1
105°	144.8	145.2	145.6	146.0	146.4	146.8	147.2	147.7
107.5°	178.6	178.9	179.3	179.4	179.4	179.4	179.4	179.4
110°	201.0	200.7	200.4	200.5	200.9	201.3	201.7	202.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	225.1	225.0	225.0	225.0	225.1	225.2	225.3	225.3
115°	262.4	262.2	262.0	262.0	261.8	261.7	261.5	261.4
117.5°	298.2	297.7	297.2	296.9	296.6	296.3	296.0	295.8
120°	322.4	321.7	321.1	320.8	321.1	321.4	321.6	321.9
122.5°	347.0	346.6	346.1	345.6	345.1	344.6	344.2	343.7
125°	383.1	382.9	382.5	382.3	382.0	381.7	381.5	381.2
127.5°	417.6	417.4	417.0	416.8	416.6	416.4	416.1	416.0
130°	441.8	441.5	441.2	440.8	440.3	439.8	439.2	438.7
132.5°	464.6	464.3	464.0	463.7	463.6	463.3	463.1	462.9
135°	498.6	498.4	498.1	497.8	497.4	497.0	496.6	496.2
137.5°	531.7	531.3	531.0	530.8	530.9	531.0	531.1	531.2
140°	553.4	553.3	553.1	553.0	552.9	552.7	552.6	552.4
142.5°	574.0	573.9	573.9	573.9	573.8	573.8	573.8	573.7
145°	604.9	604.7	604.5	604.3	603.9	603.5	603.1	602.7
147.5°	632.8	632.8	632.6	632.5	632.3	632.3	632.1	631.9
150°	650.5	650.5	650.5	650.4	650.3	650.1	650.0	649.9
152.5°	667.1	667.4	667.7	667.7	667.4	667.1	666.7	666.3
155°	690.3	690.8	691.4	691.4	690.8	690.3	689.7	689.3
157.5°	710.7	711.1	711.5	711.5	711.0	710.6	710.1	709.6
160°	723.3	723.7	724.1	724.0	723.3	722.6	721.9	721.3
162.5°	734.6	735.3	736.1	736.1	735.4	734.7	734.1	733.4
165°	749.5	750.3	751.1	751.3	750.7	750.2	749.7	749.1
167.5°	762.1	762.9	763.7	763.7	762.9	762.1	761.2	760.3
170°	768.9	769.7	770.5	770.5	769.5	768.6	767.6	766.7
172.5°	774.0	774.9	775.8	775.8	774.8	773.9	772.9	772.0
175°	779.4	780.4	781.3	781.3	780.4	779.4	778.5	777.6
177.5°	782.4	783.2	784.0	783.9	783.0	782.2	781.3	780.5
180°	782.4	782.4	782.4	782.4	782.4	782.4	782.4	782.4

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