

## The new Johanna 60 and 65 master sailplans

In 2014 I made a string of master sailplans in the so-called Johanna style. Common for these are

- equal batten length,
- almost equal sail area in each panel,
- 7 batten panels, the 4 lower with parallel battens with  $10^\circ$  rise
- $70^\circ$  yard angle.

Recently I have introduced two more standards:

- The halyard slingpoint sits 55% of the yard length from the throat. In case I use two slingpoints, the aft one sits about 3-5% of B further aft.
- The halyard drift is set to minimum 18% of the yard length (not counting with the yard itself)

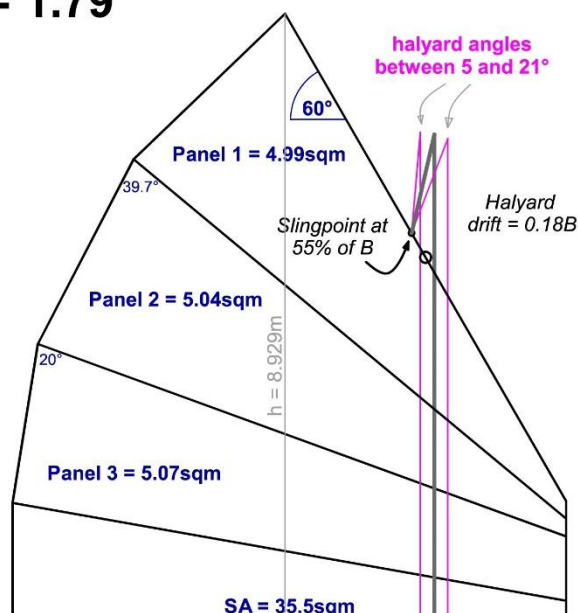
This has worked well, but it has one shortcoming:

It restricts maximum mast balance to about between 12 and 17%. To allow one to increase the maximum balance, and thus be freer to adjust the mast's position to the deck layout, these two new strings of *Johanna 65* and *Johanna 60* sailplans will allow one to rig the sails with any mast balance between 12 and 26%. The mast, with its (suggested) outer limit positions, are now shown on Sheet 1 of each sailplan.

A few extra details are shown on the AR= 1.80 sailplan on the Johanna 60 rig, like halyard angle and halyard drift. These halyard angle limitations are actually the same for all aspect ratios and yard angles.

### Johanna 60 Master sail

**AR = 1.79**



The Sheet 1 of the AR=1.79 sailplan. All sailplans use the same max/min halyard angles and drift

Note: The Johanna 60 and 65 sailplans are based on the original *Johanna 70* version. The four lower panels are therefore identical, but the three top panels have been re-drawn. *This may alter the AR value a little*, for instance from AR=1.80 to AR =1.79 when lowering the yard angle from 70 to 60°.

When you are to make Sheet 3, which deals with the round to make camber (see Chapter 5, p.3 and Chapter 4, p. 5-7 of TCPJR), you can use the original *Johanna* sailplan (re-named *Johanna 70*) as reference.

The sailplans are presented with AR in rising order. Each sailplan comes with two sheets. I let the Johanna 65 and Johanna 60 sailplans sit in two separate files. The old Johanna 70 string of sailplans is not touched except for renaming it Johanna 70 rig.

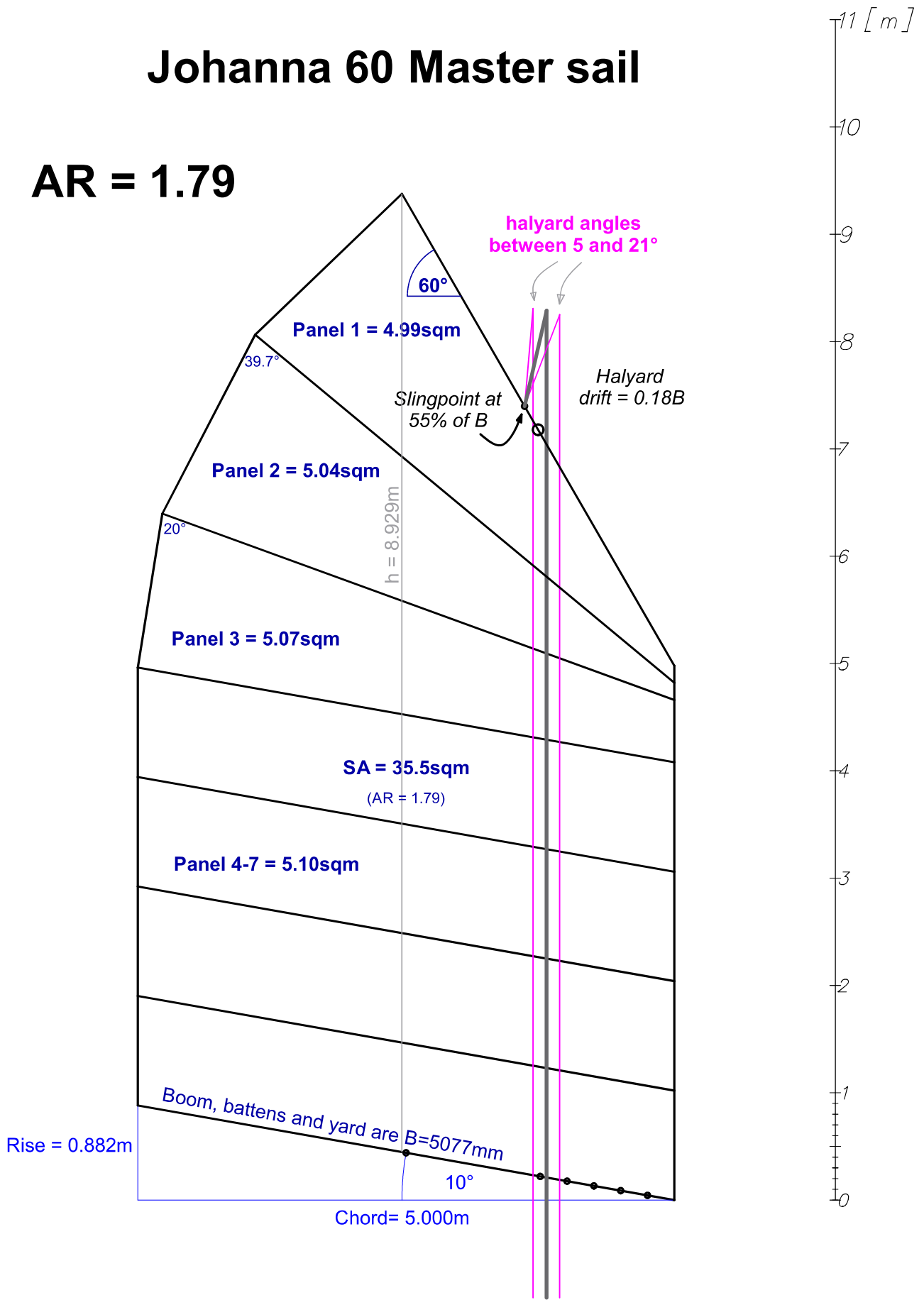
Stavanger, 27.3.2024,

Arne Kverneland

PS: My recommended dimensions around the halyard; the angles, lengths and positions are *recommendations*, which I generally stay within when I rig my sails. However, they are not written in the JR Constitution, so can be ‘pushed’ a little if needed. The smaller the rig, the freer one is to jazz a little...

# Johanna 60 Master sail

AR = 1.79

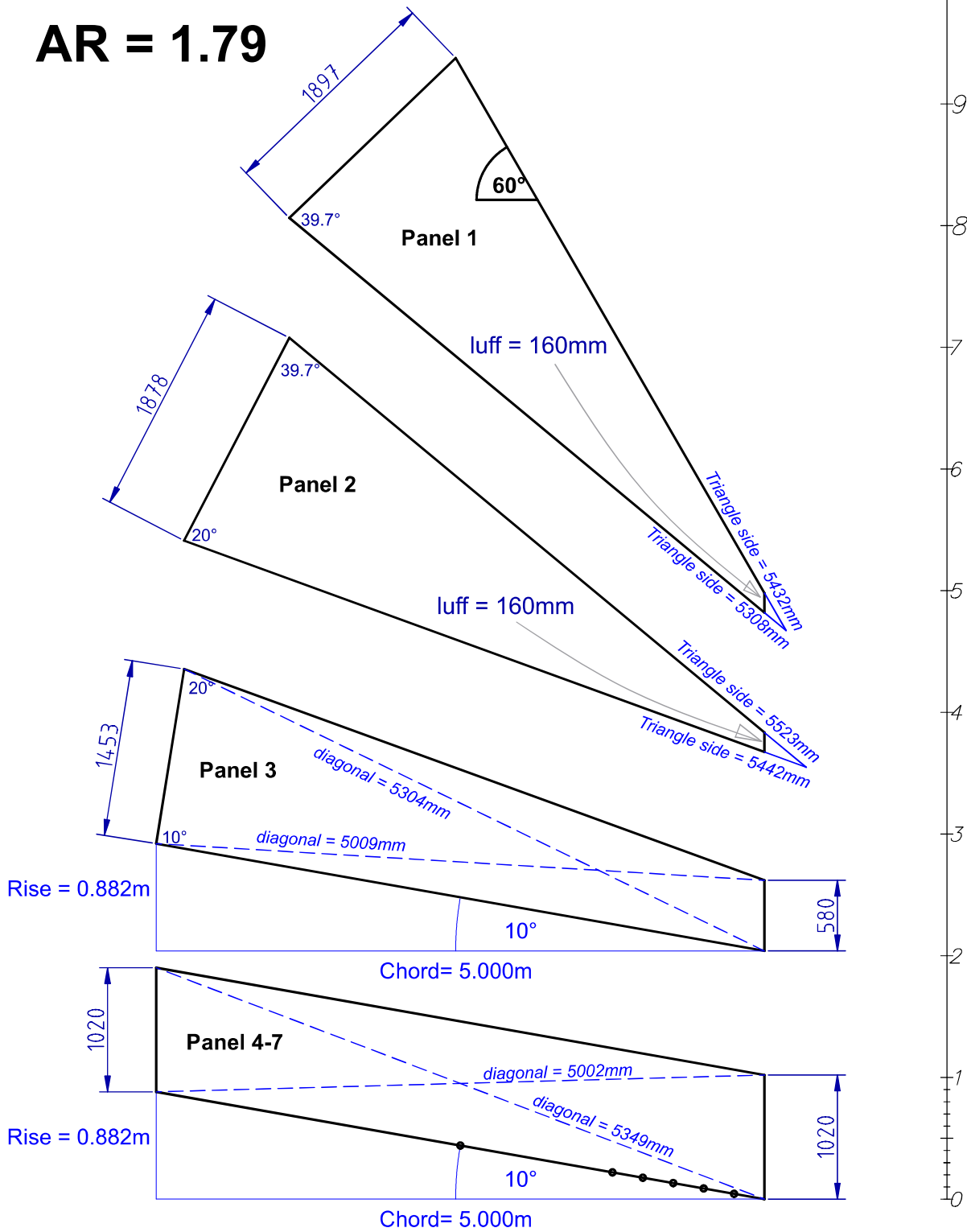


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SHEET 1

# Johanna 60 Master sail

AR = 1.79



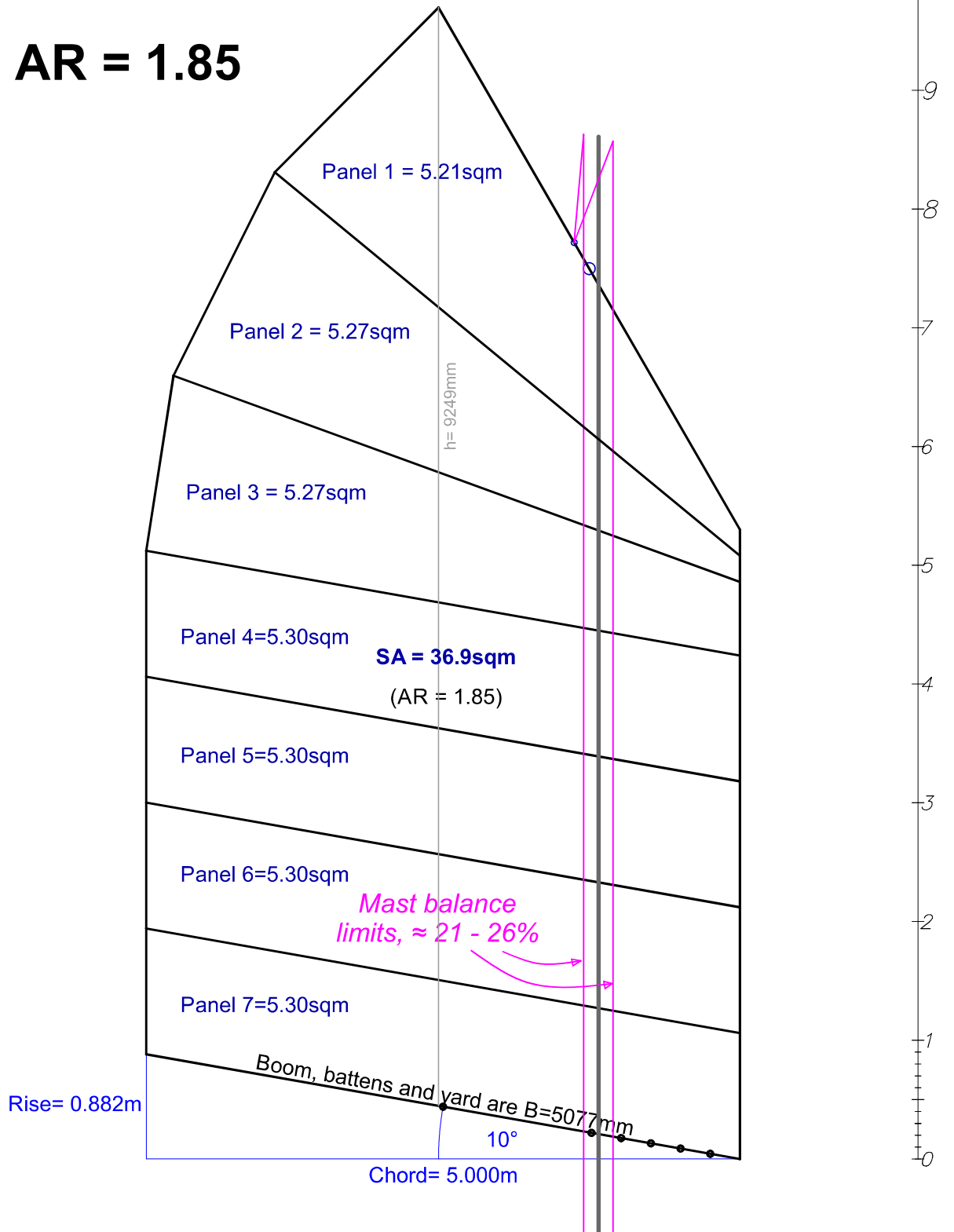
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Arne Kverneland

SHEET 2

# Johanna 60 Master sail

11 [m]

**AR = 1.85**



**Stavanger, 20240326**

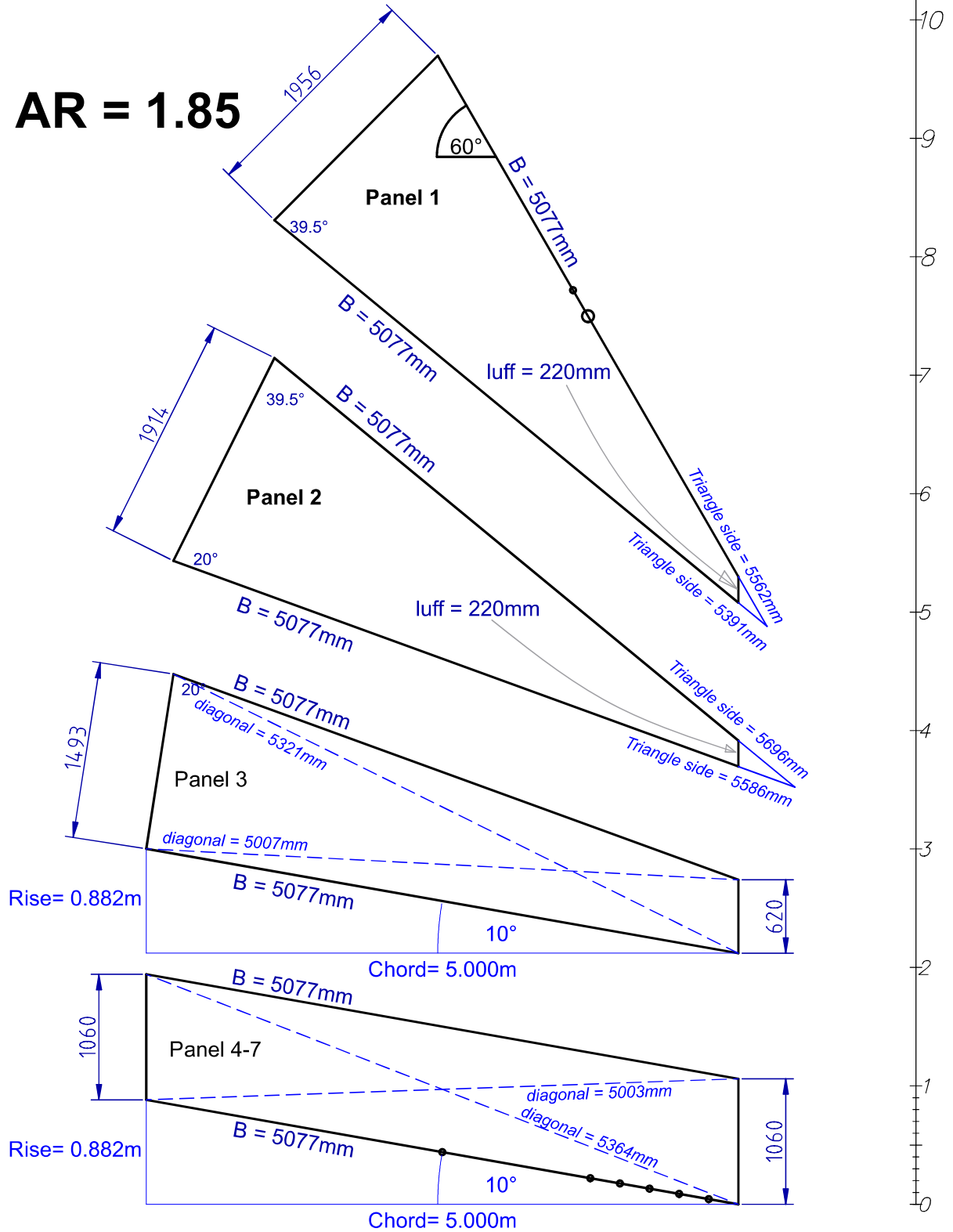
*Arne Kverneland*

**SHEET 1**

# Johanna 60 Master sail

11 [m]

AR = 1.85



Stavanger, 20240326

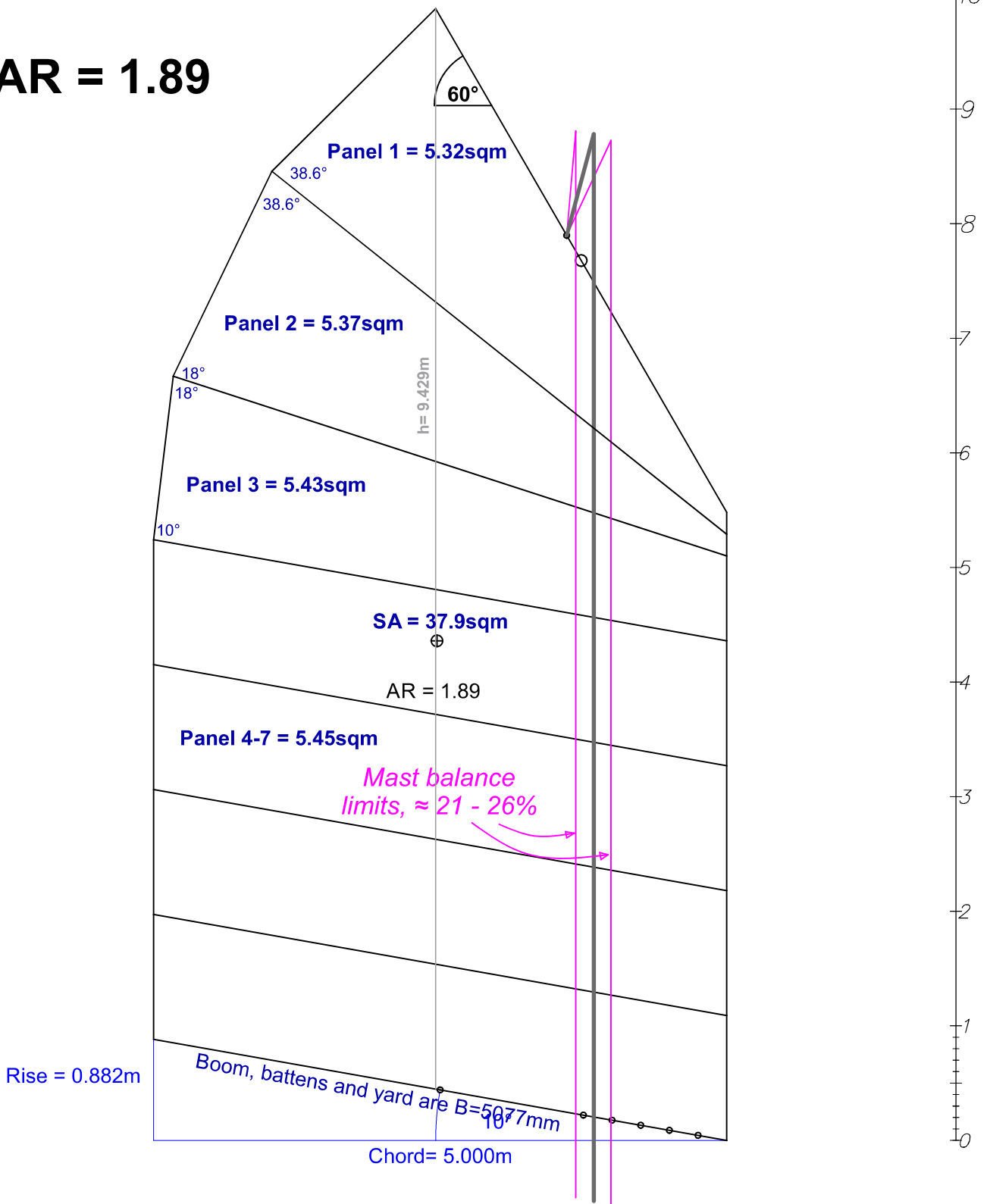
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SHEET 2

# Johanna 60 Master sail

11 [m]

AR = 1.89



Stavanger, 20240405

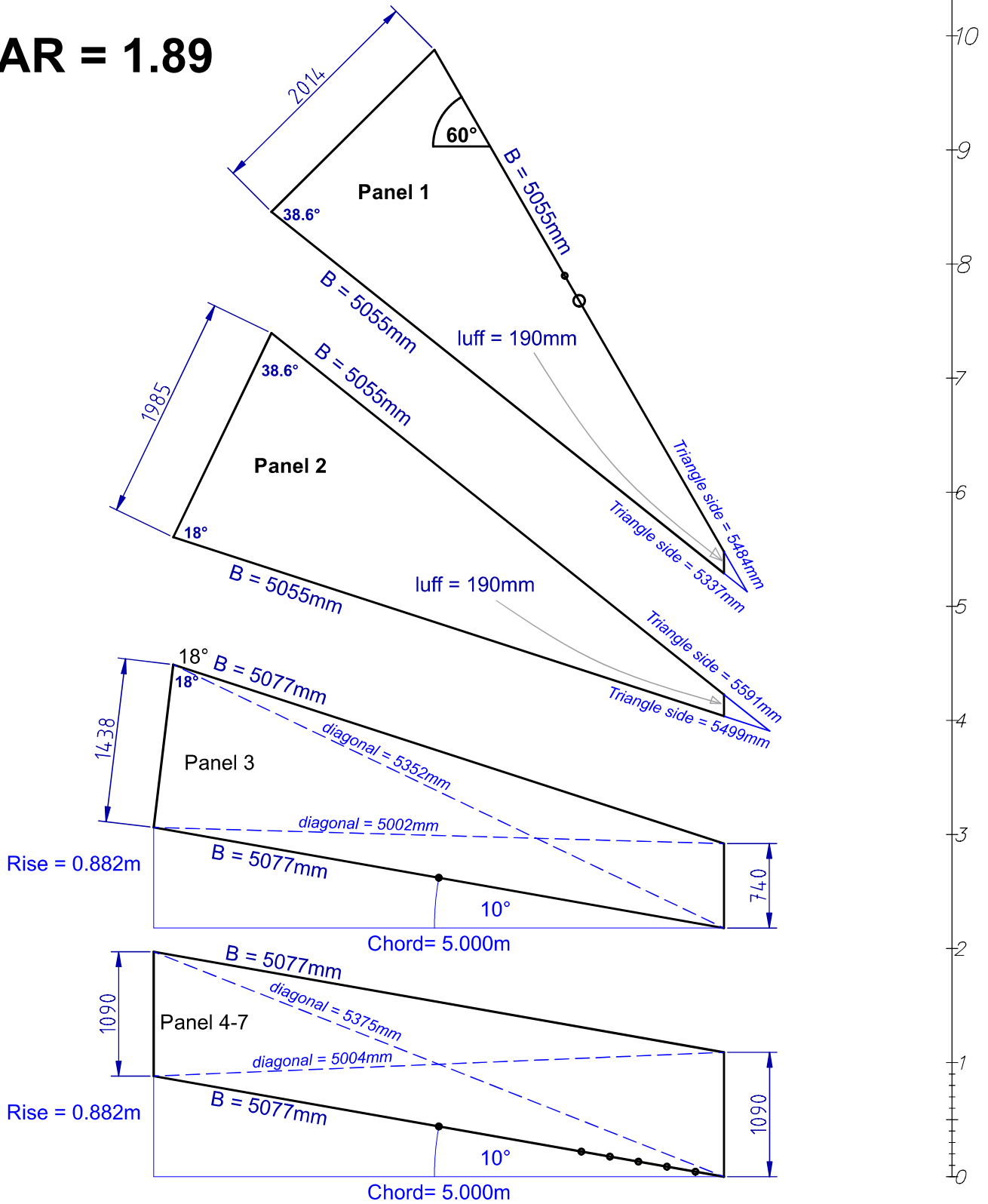
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SHEET 1

# Johanna 60 Master sail

11 [m]

AR = 1.89



Stavanger, 20240405

Arne Kverneland

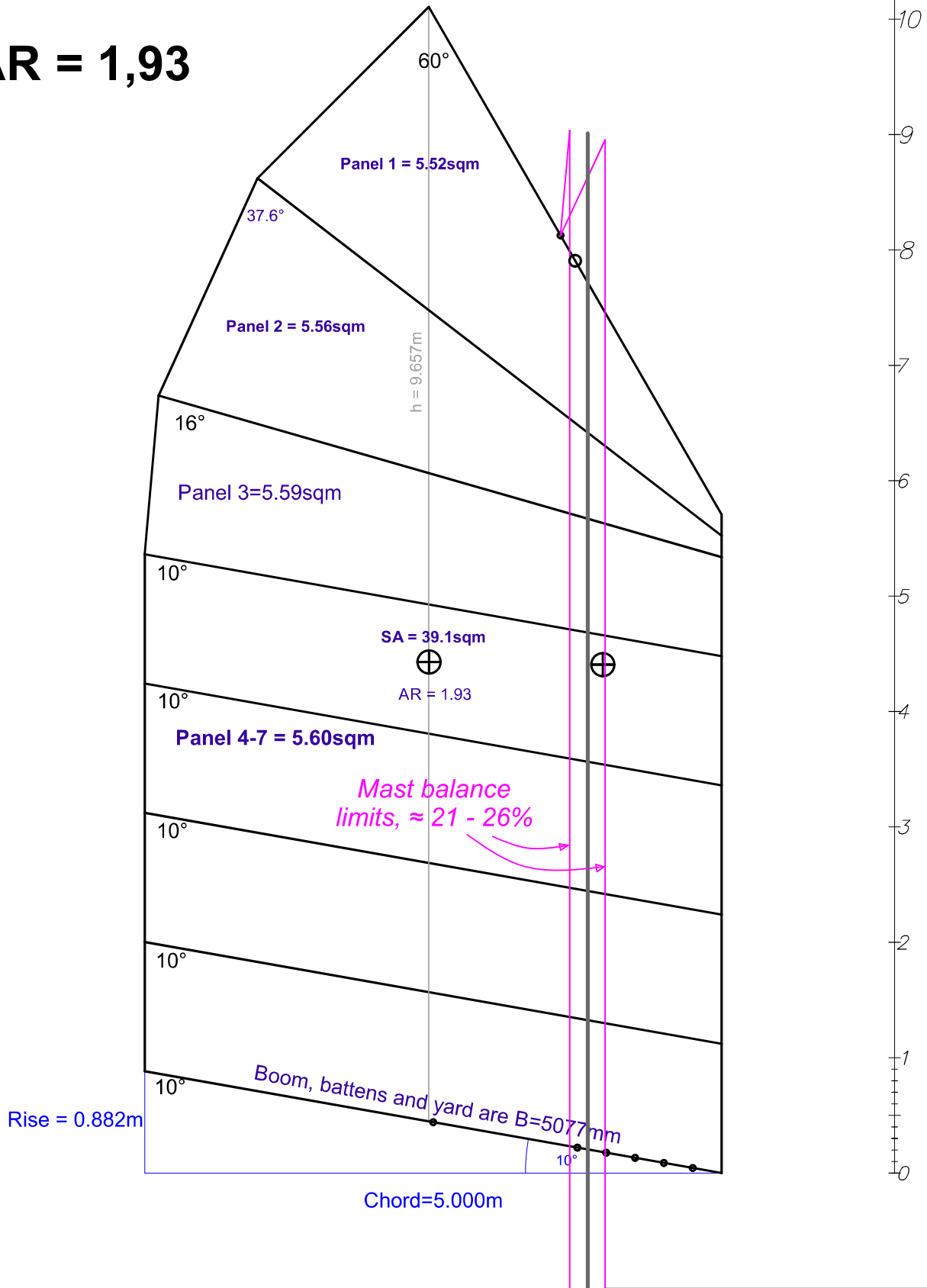
SHEET 2



# Johanna 60 Master sail

11 [m]

AR = 1,93



Stavanger, 20240405

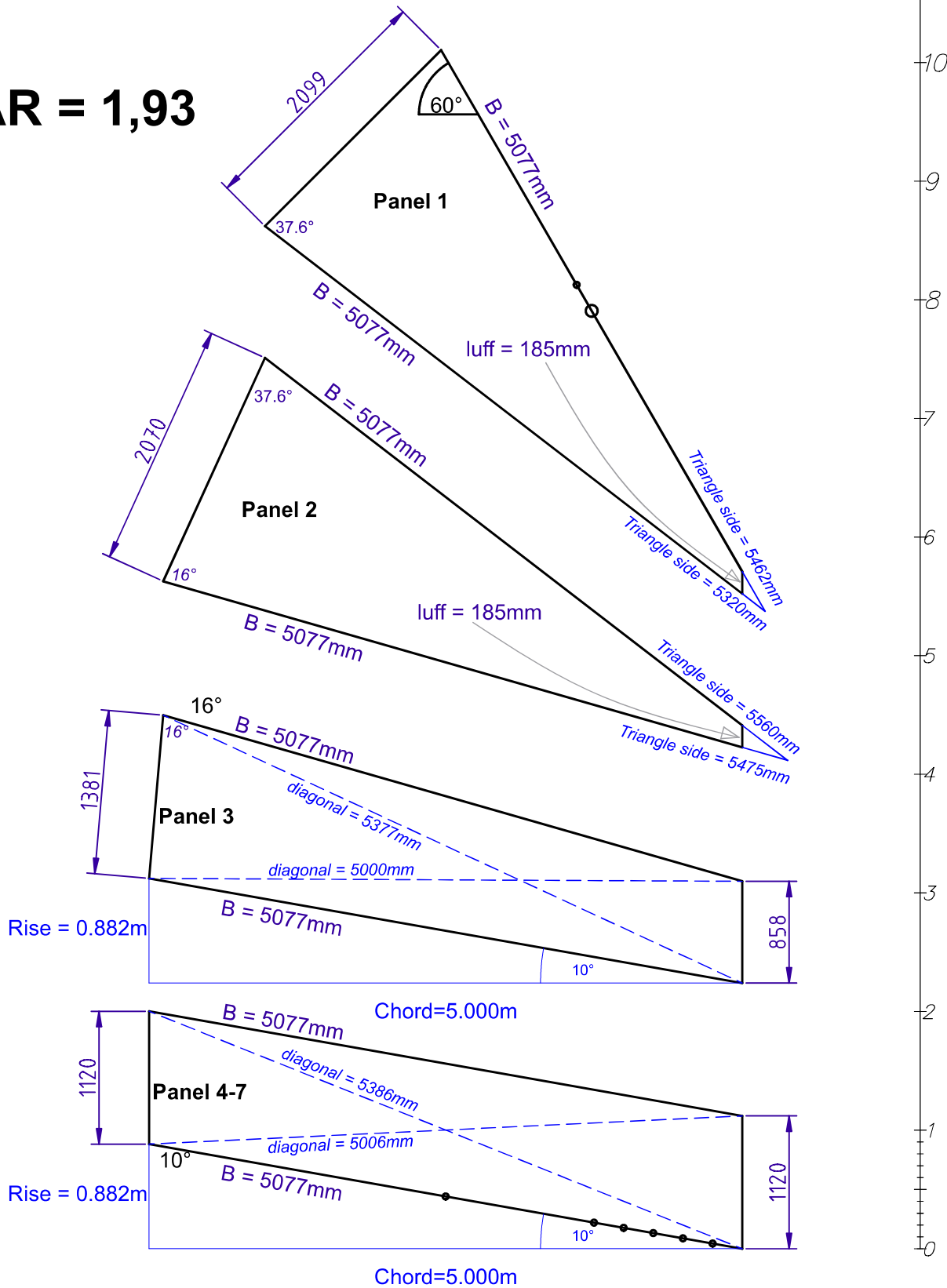
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SHEET 1

# Johanna 60 Master sail

11 [m]

AR = 1,93



Stavanger, 20240405

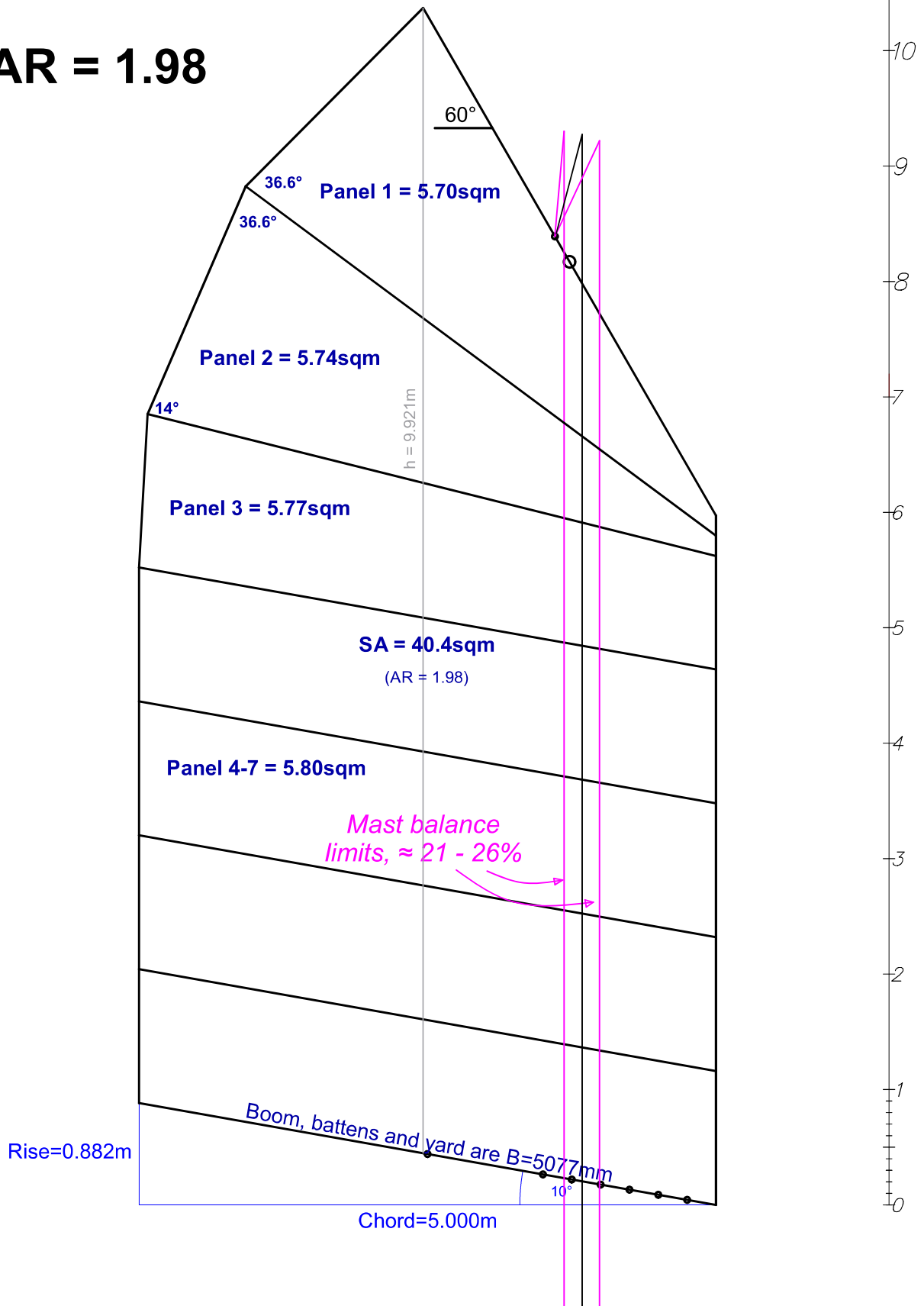
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SHEET 2

# Johanna 60 Master sail

11 [m]

AR = 1.98



Stavanger, 20240405

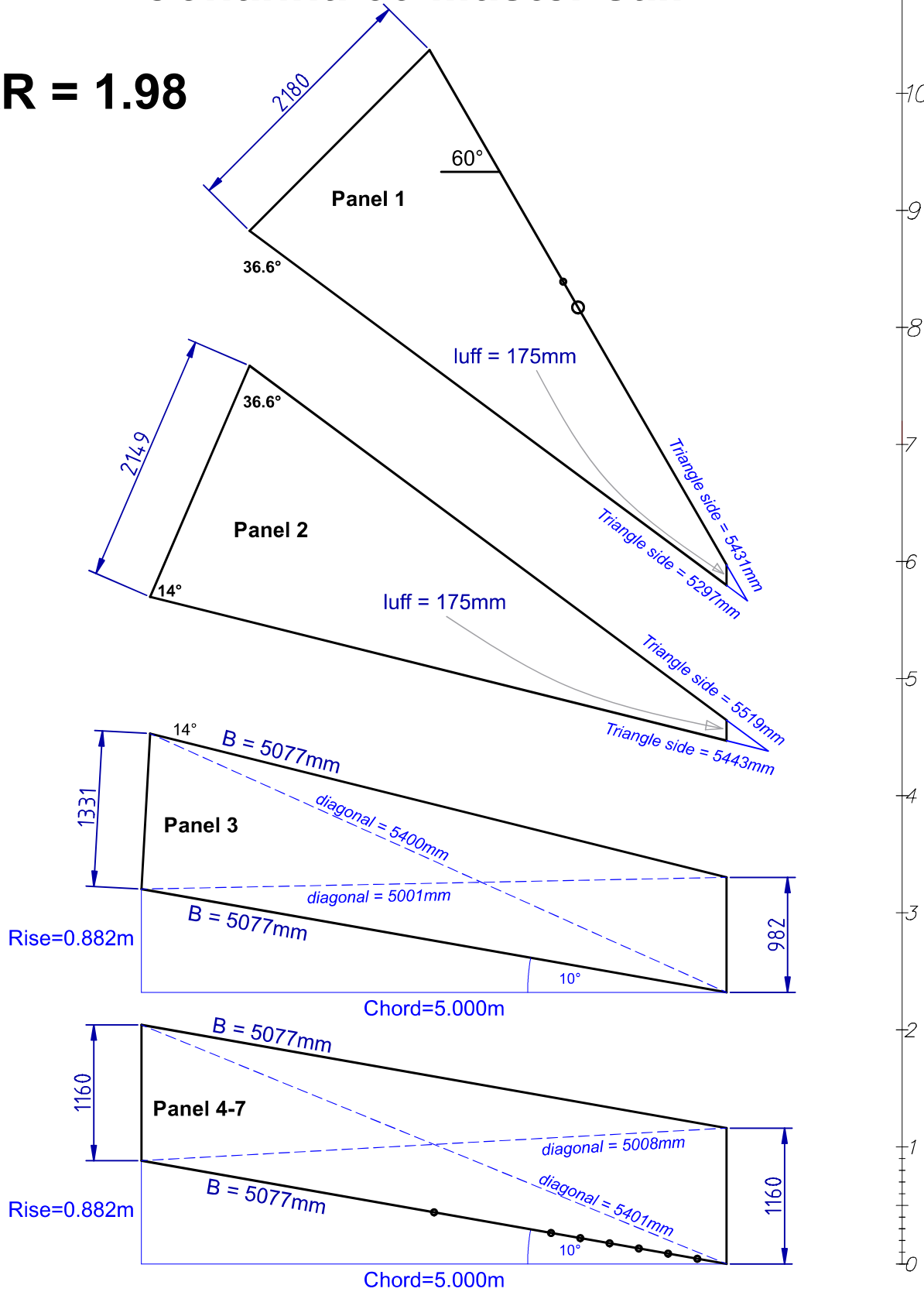
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SHEET 1

# Johanna 60 Master sail

11 [m]

AR = 1.98



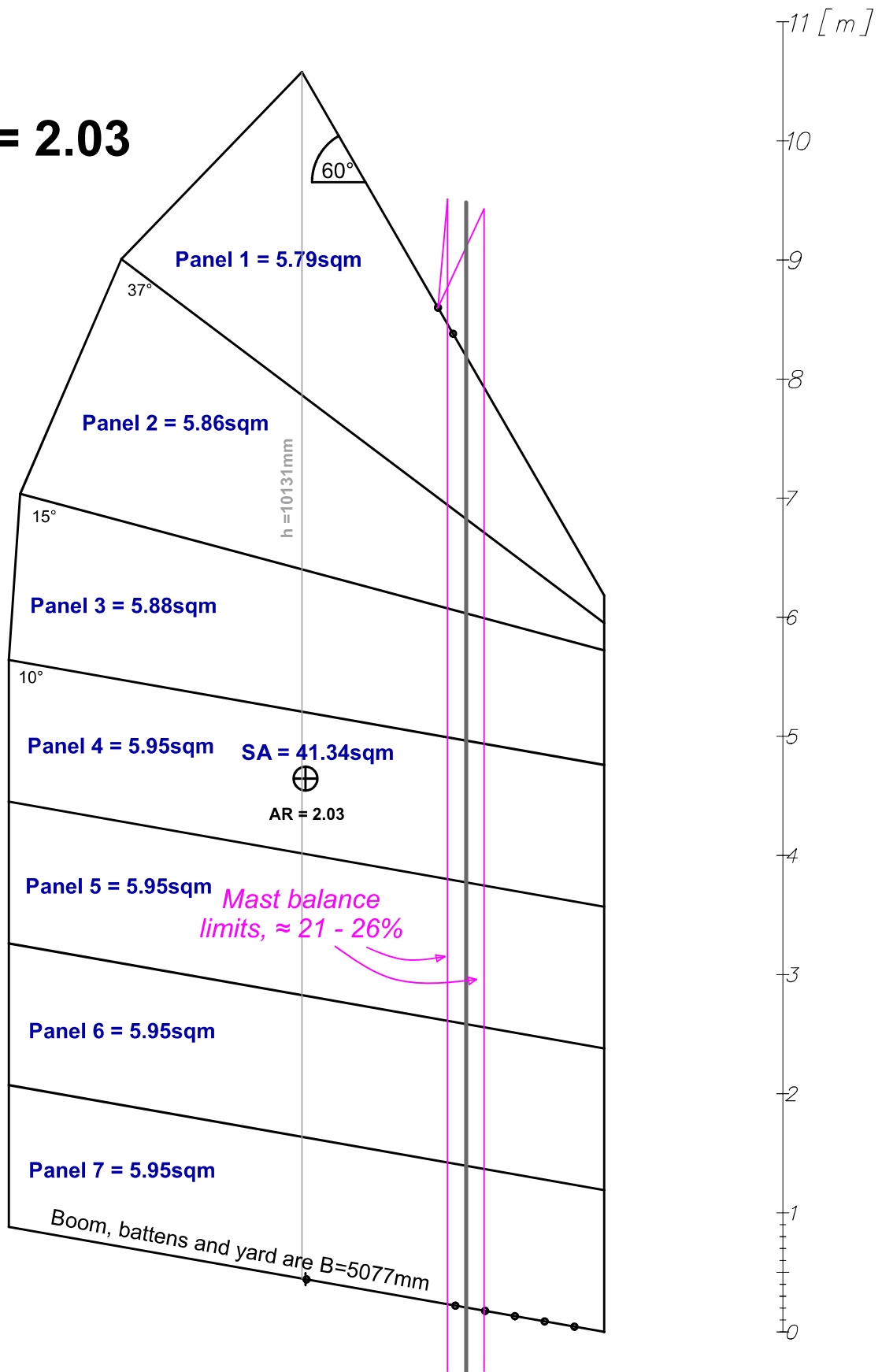
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SHEET 2

# Johanna 60 Master sail

**AR = 2.03**

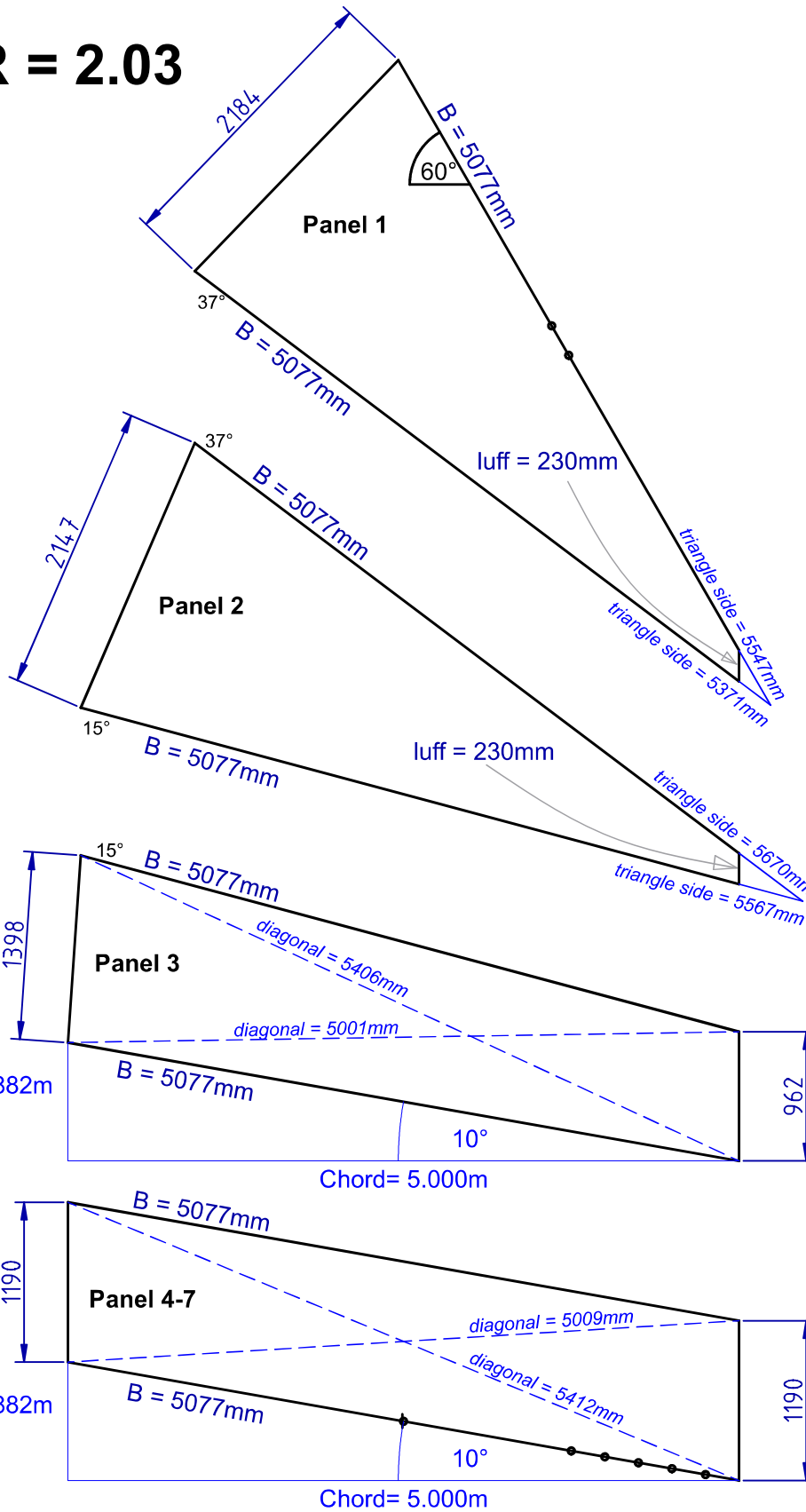
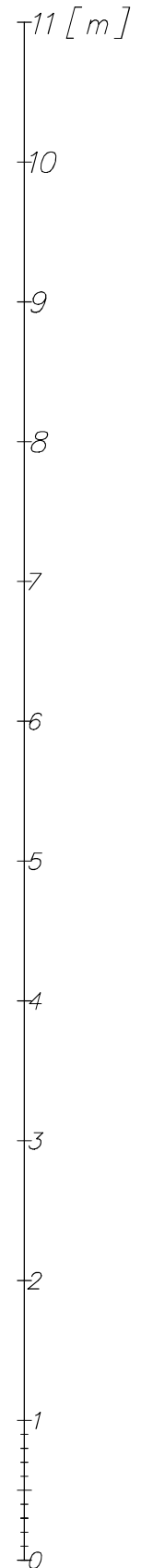


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**SHEET 1**

# Johanna 60 Master sail

**AR = 2.03**



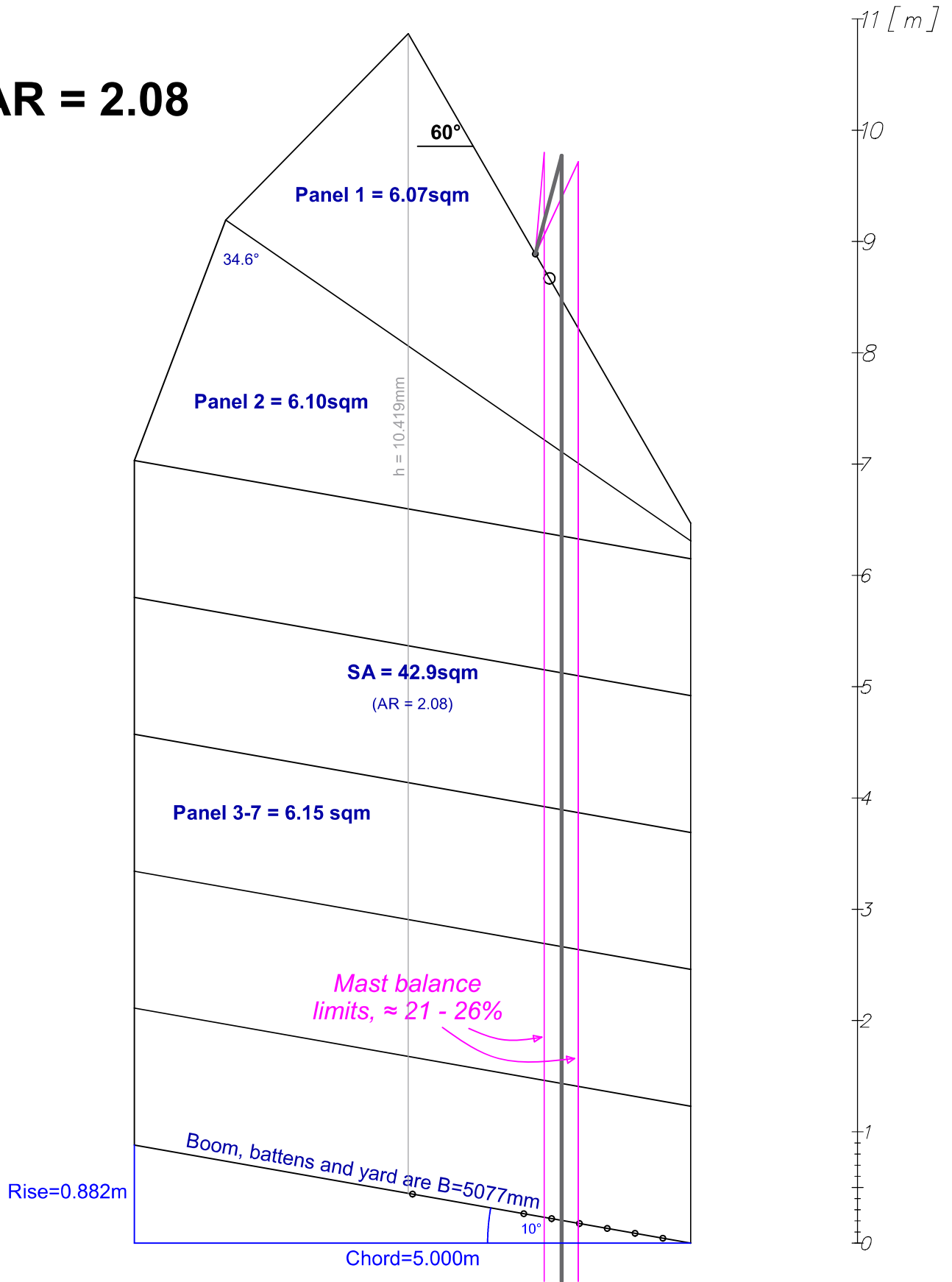
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**SHEET 2**

# Johanna 60 Master sail

AR = 2.08

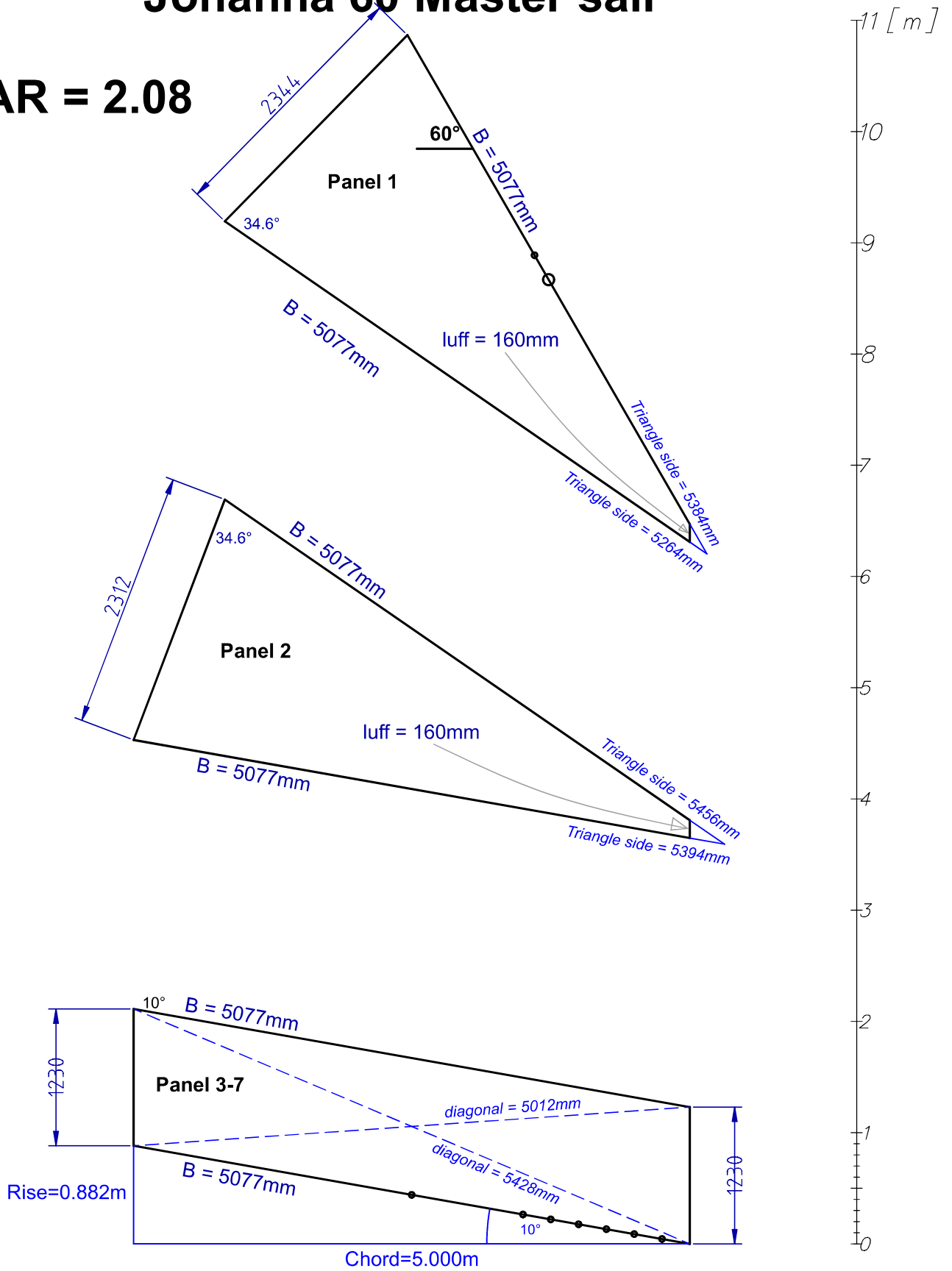


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SHEET 1

# Johanna 60 Master sail

AR = 2.08



Stavanger, 20240405

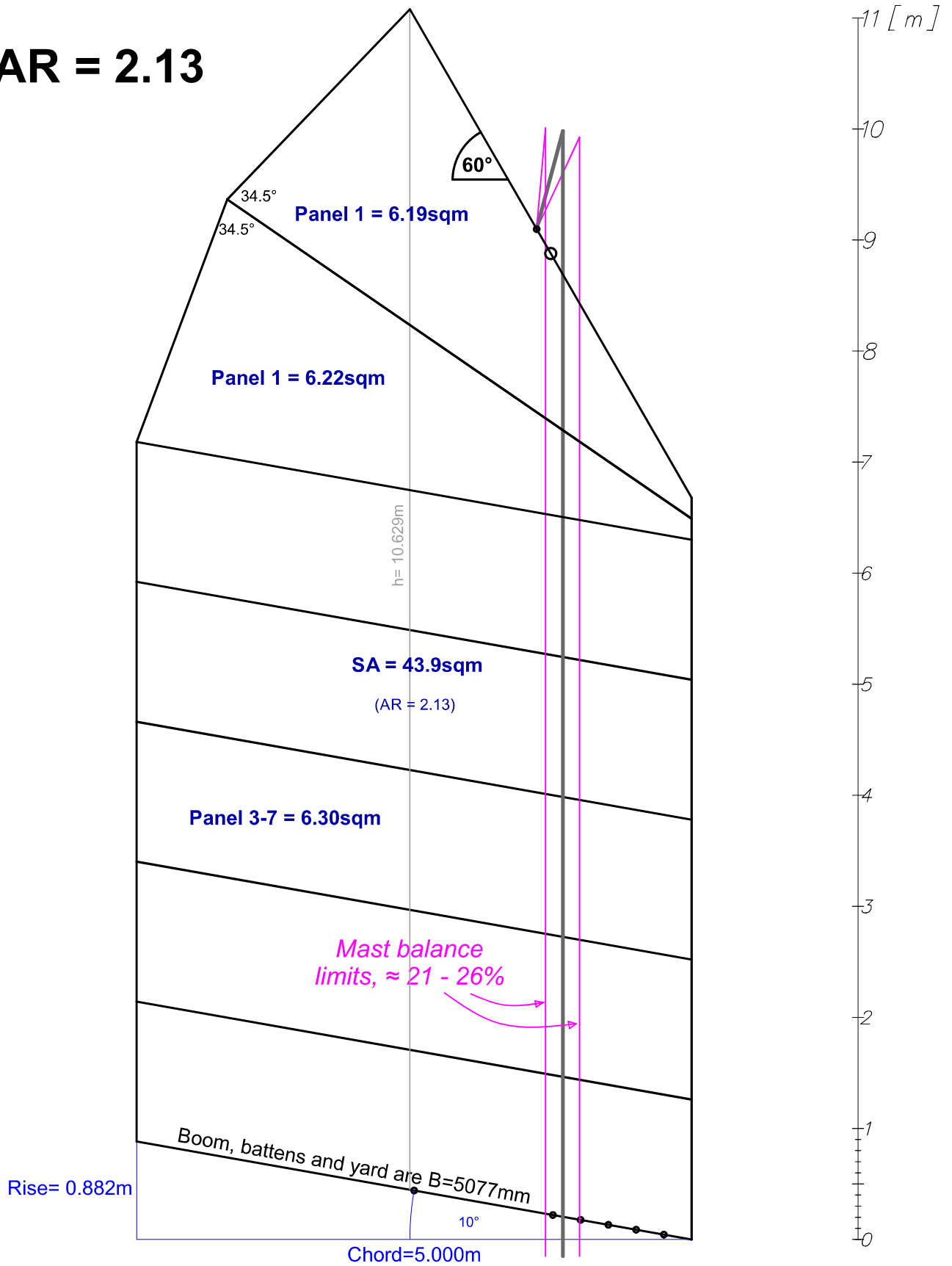
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**SHEET 2**



# Johanna 60 Master sail

AR = 2.13



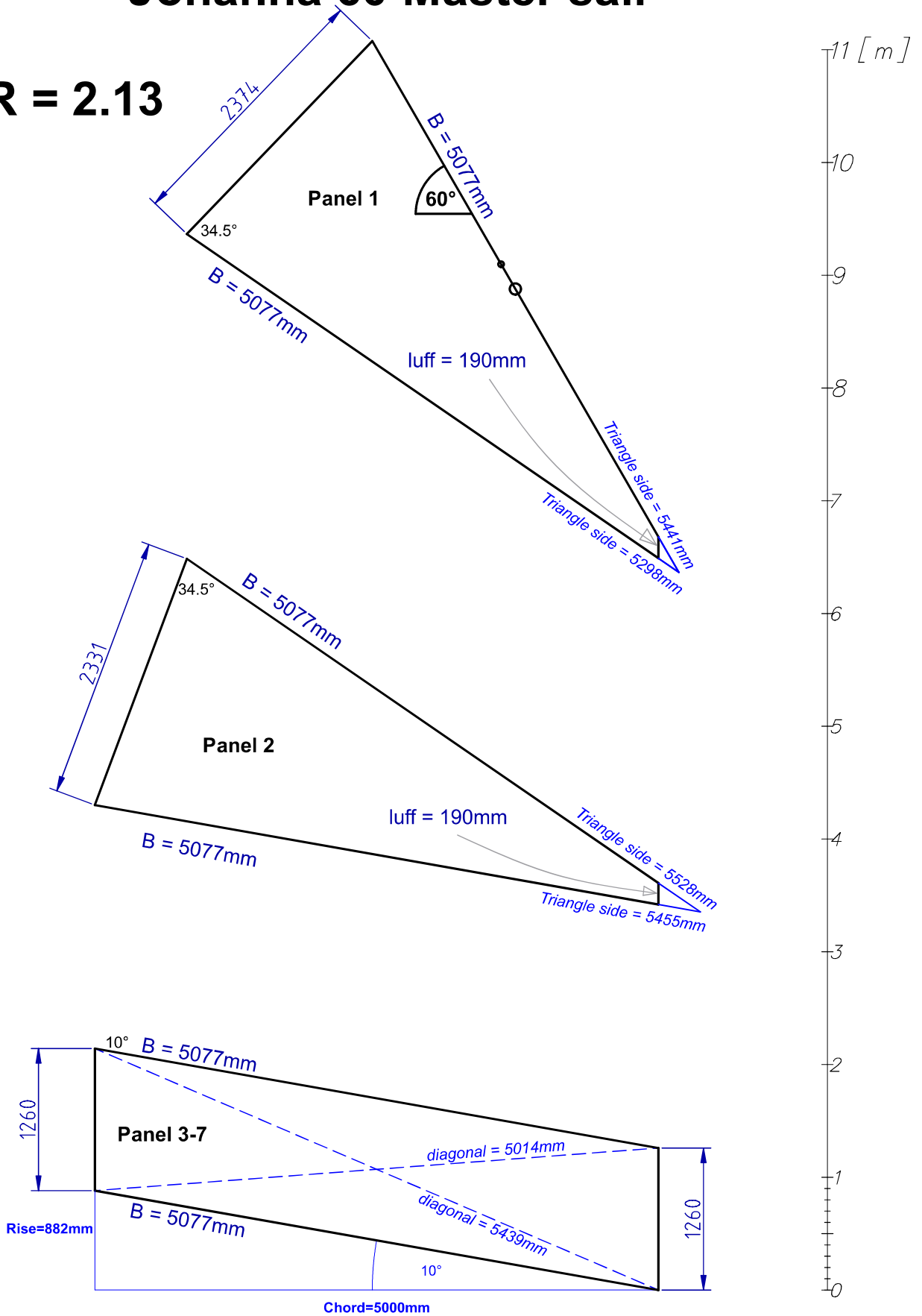
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SHEET 1

# Johanna 60 Master sail

AR = 2.13



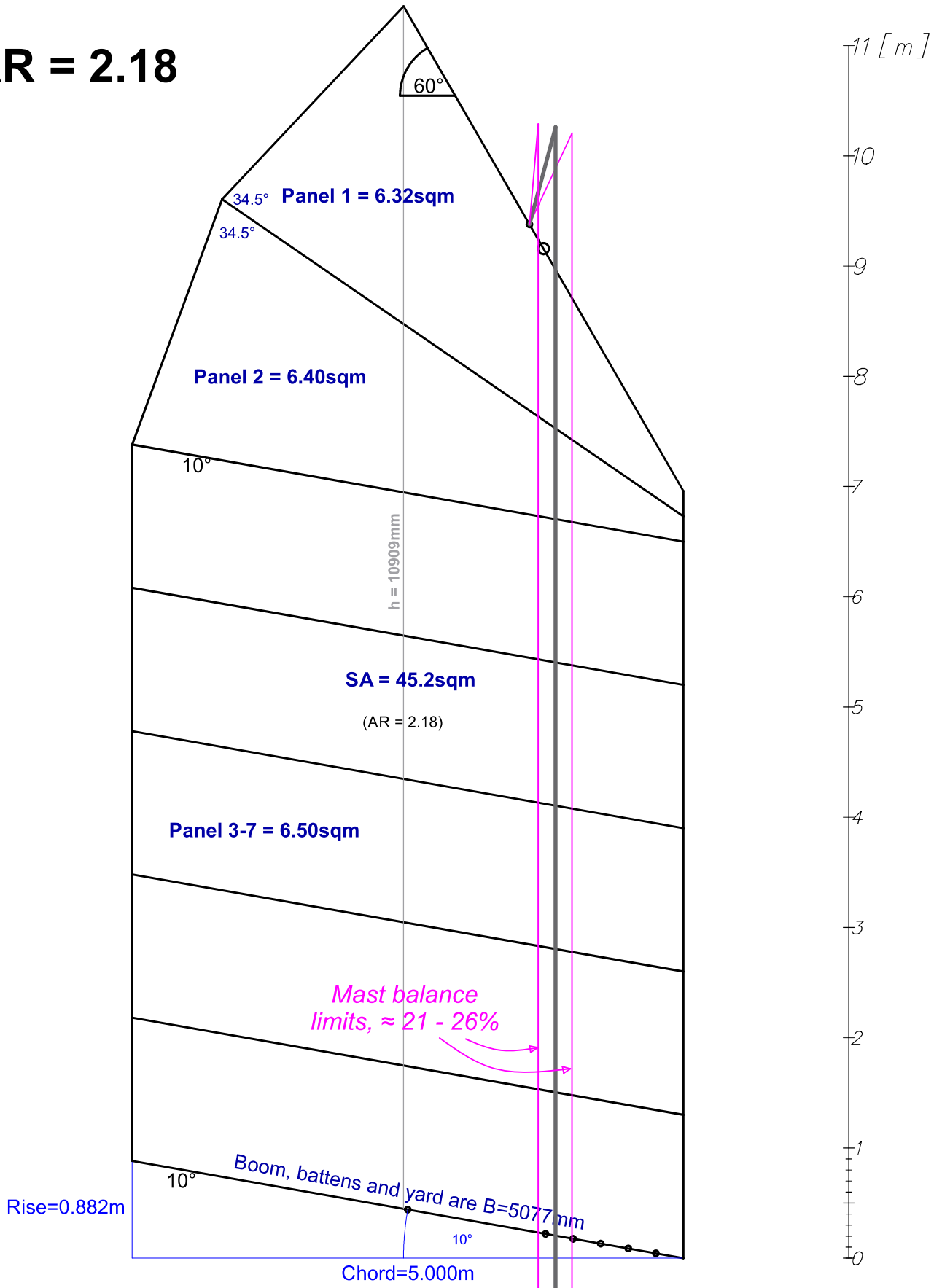
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SHEET 2

# Johanna 60 Master sail

**AR = 2.18**



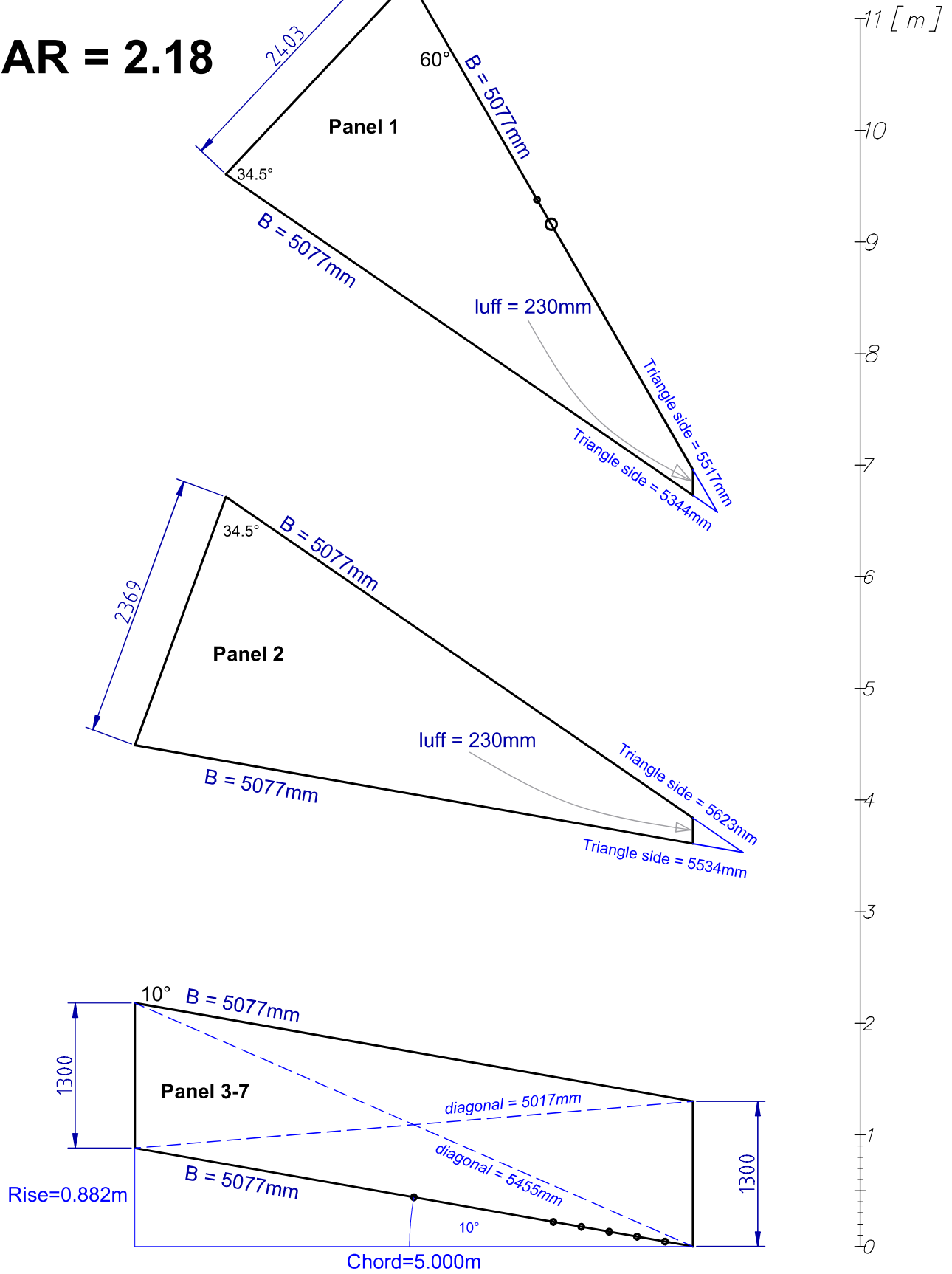
**Stavanger, 20240405**

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**SHEET 1**

# Johanna 60 Master sail

AR = 2.18



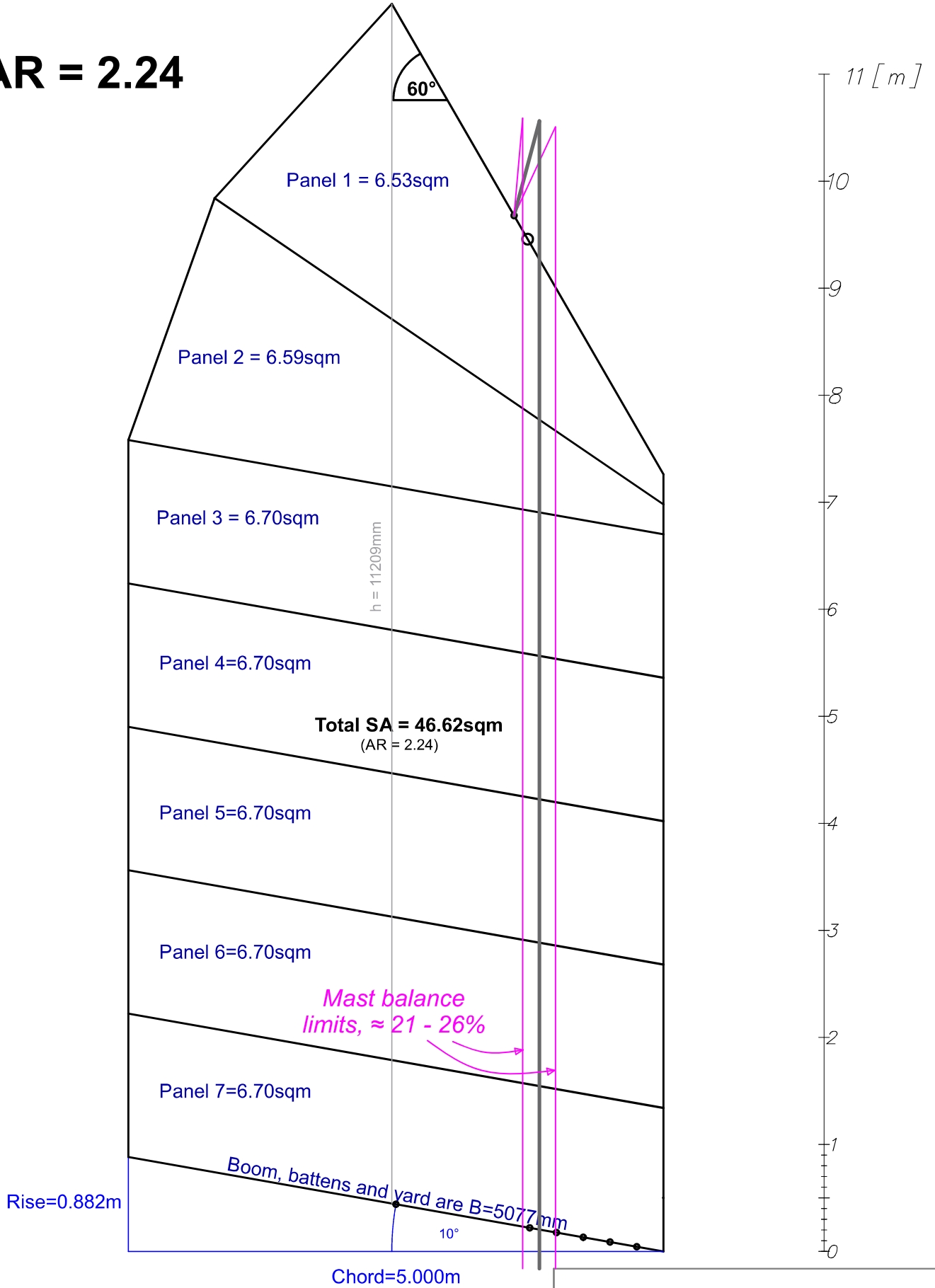
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**SHEET 2**

# Johanna 60 Master sail

AR = 2.24



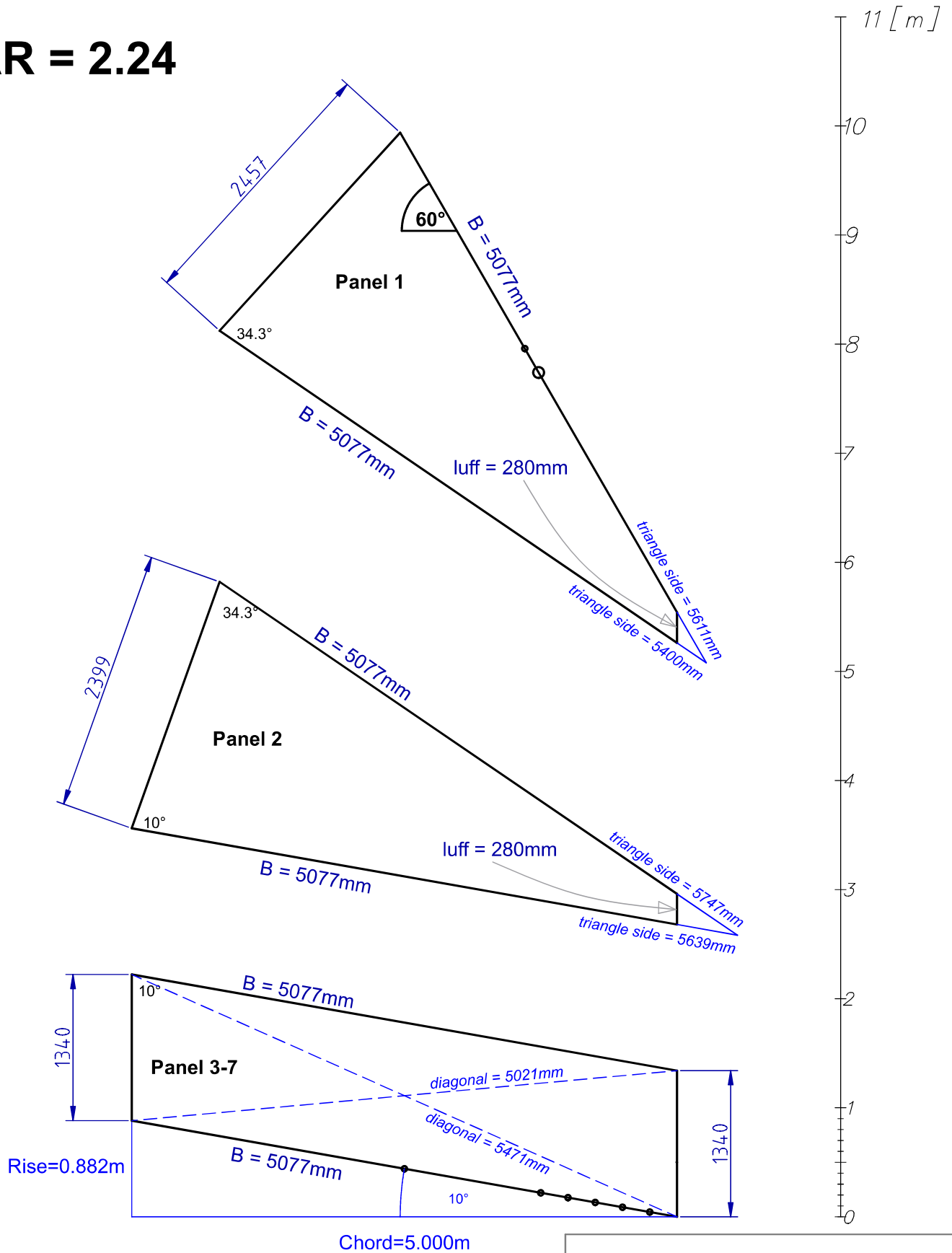
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SHEET 1

# Johanna 60 Master sail

AR = 2.24



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SHEET 2