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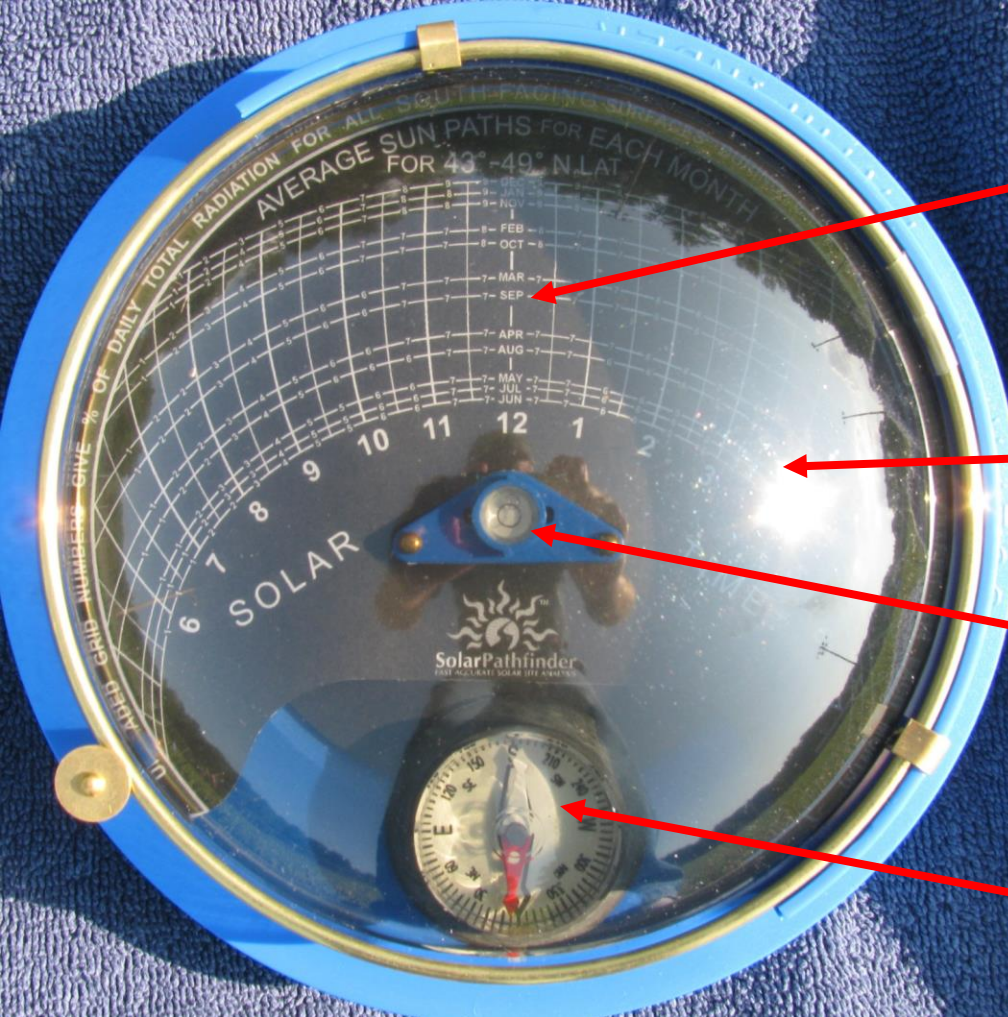
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SOLAR SITE ANALYSIS: THE SOLAR PATHFINDER





Sunpath Diagram

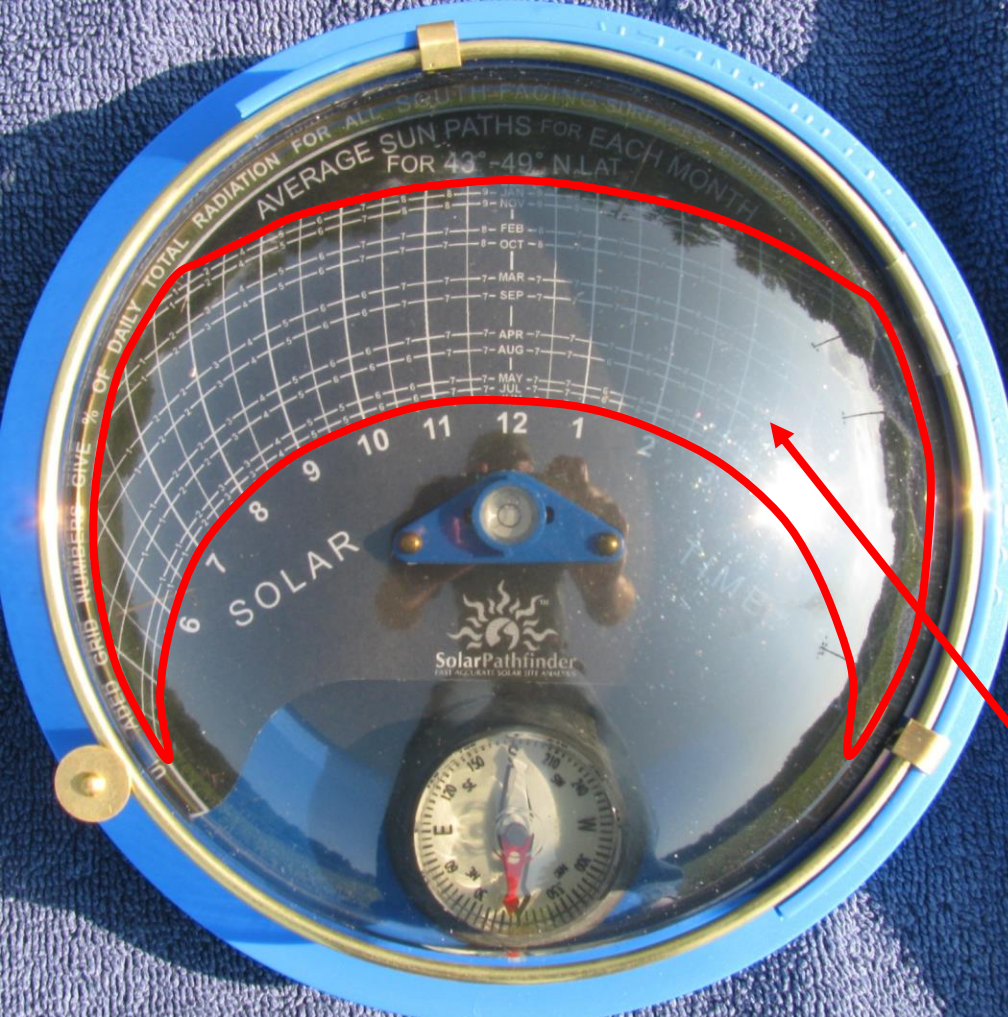
(Placed flat on the base just below the dome)

Reflective Dome

Level Bubble

Compass





1. Solar Window

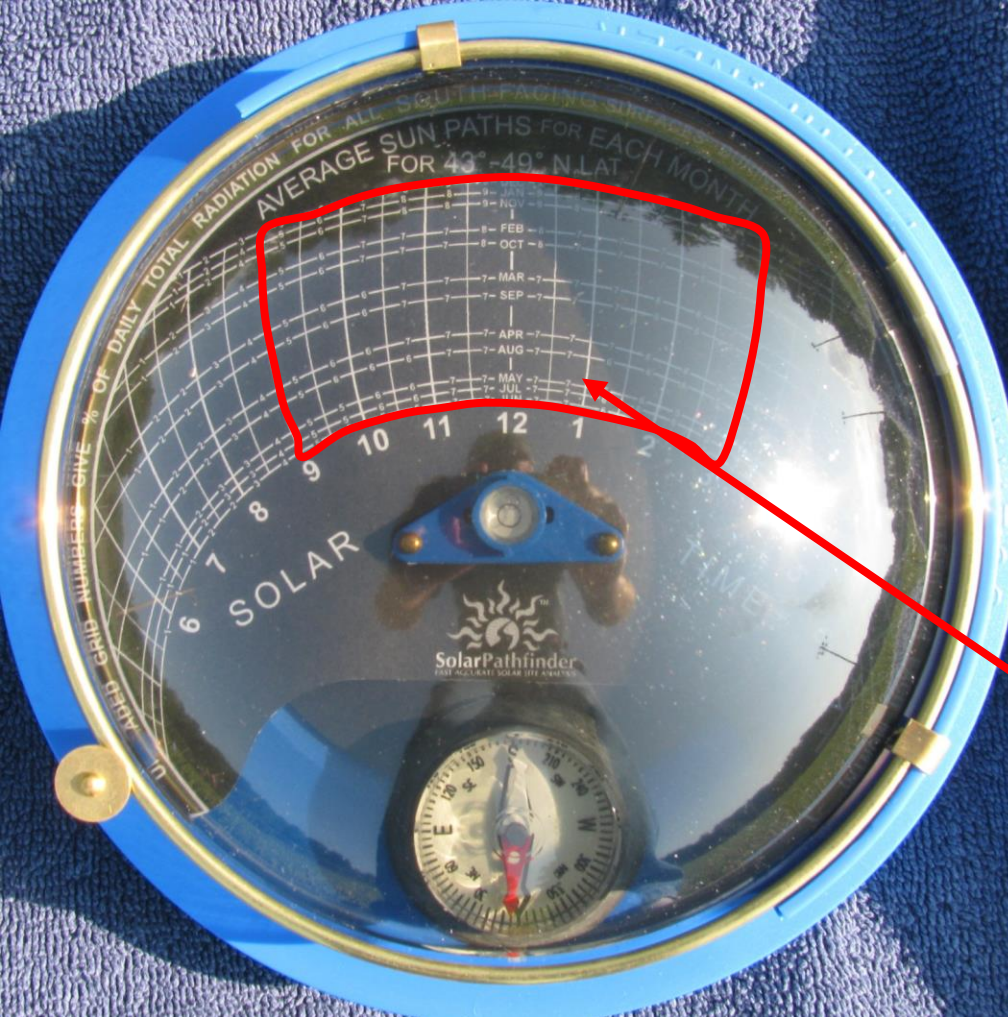
(astronomical definition):

The area of sky open to sunlight for a site is called the **Solar Window**. Assuming there are no obstructions:

- The upper limit of the Solar Window is the sun's path on the first day of summer--the summer solstice.
- The lower limit of the Solar Window is the sun's path on the first day of winter--the winter solstice.
- The east and west edges of the Solar Window can be defined by the horizons.

This would define a **Complete Solar Window**.





Sunlight is usually weak early in the morning and late in the afternoon. In addition, early and late sunlight strike a fixed solar PV panel at an angle that doesn't produce electricity very well.

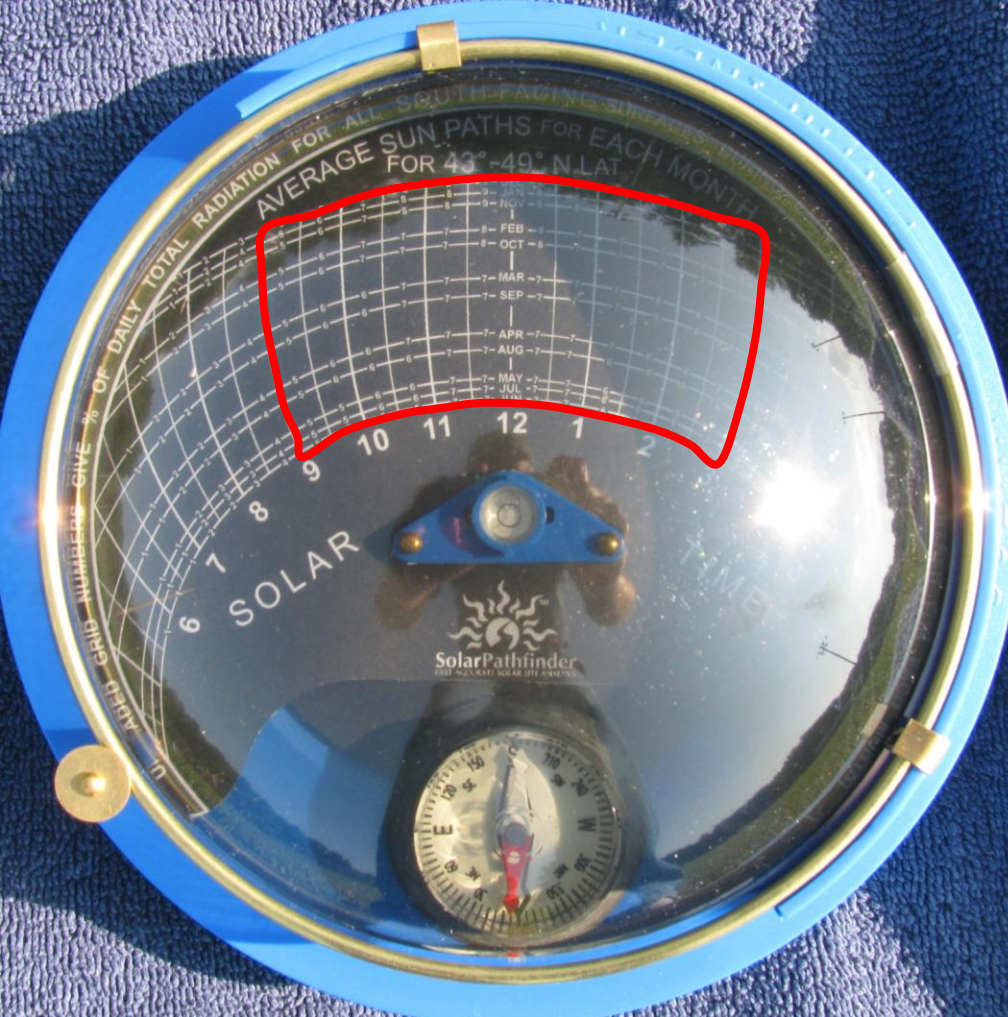
So, for photovoltaic solar panels, the hours from 9:00 a.m. to 3:00 p.m are the most critical for converting sunlight into electrical energy. For this reason, in the solar PV industry, the term **Solar Window** usually refers to these critical six hours

2. Solar Window

(as commonly used in the PV industry):

The three hours on either side of solar noon when the sun is at its highest altitude and greatest intensity for the day.





2. Solar Window (for PV industry):

The three hours on either side of solar noon when the sun is at its highest altitude and greatest intensity for the day.

As a general rule, if very much of the Solar Window is shaded, the site may not receive enough sunlight to justify the expense of installing a solar PV array.





Pathfinder:

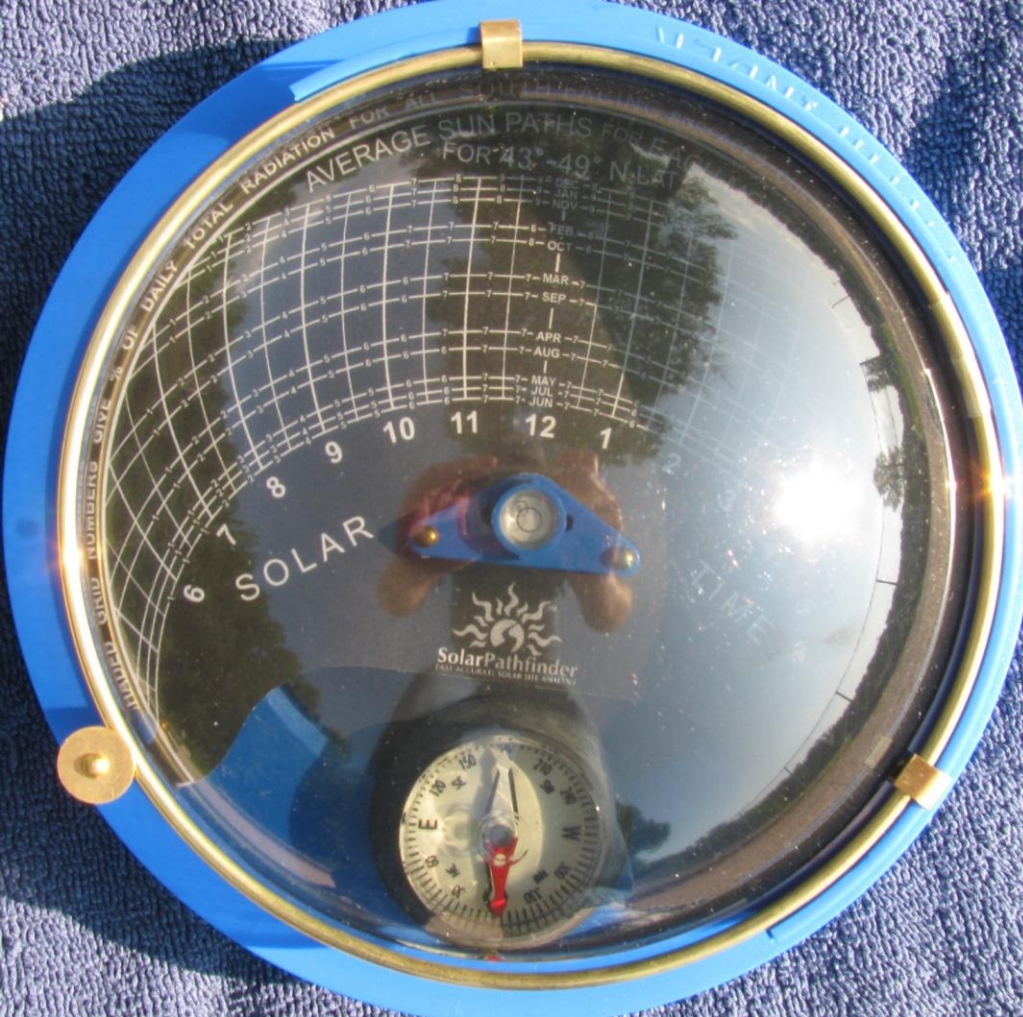
**Assess these Examples
for Available Sun**



1.



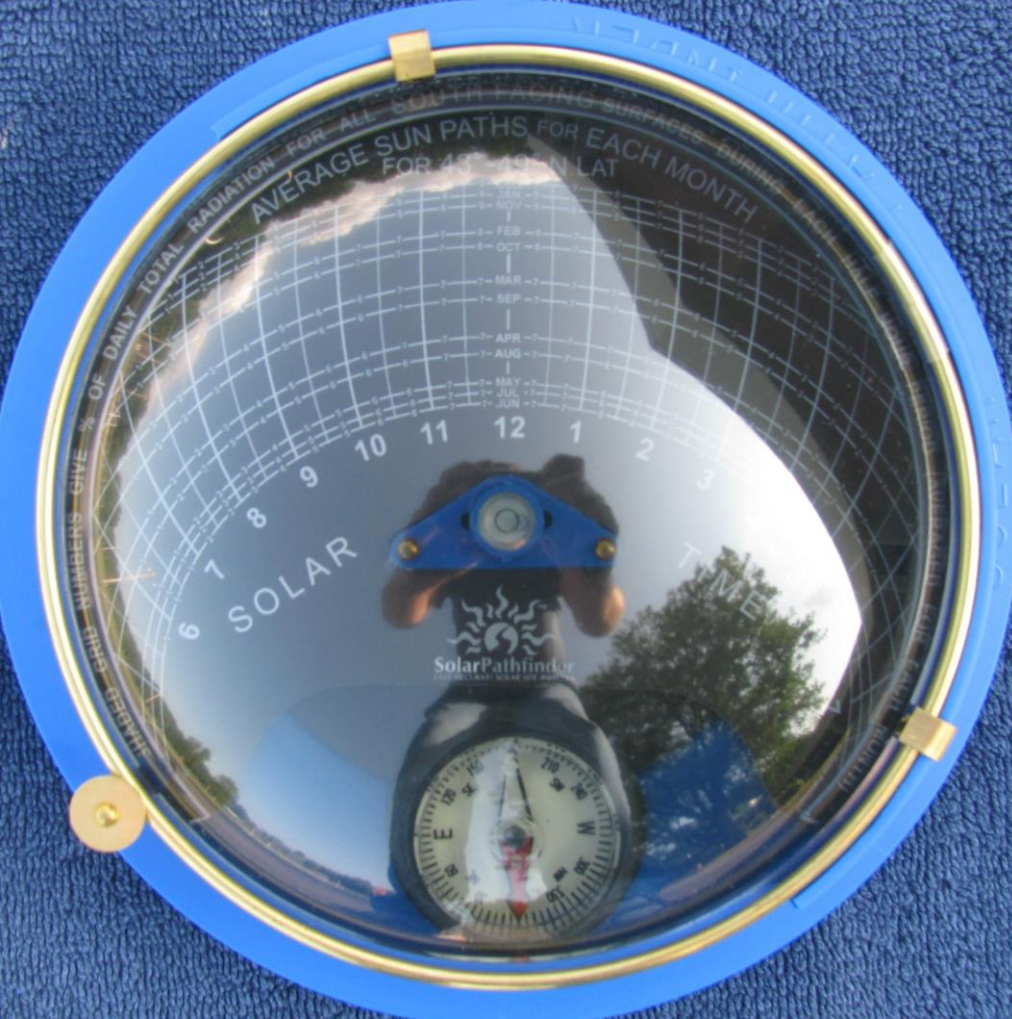
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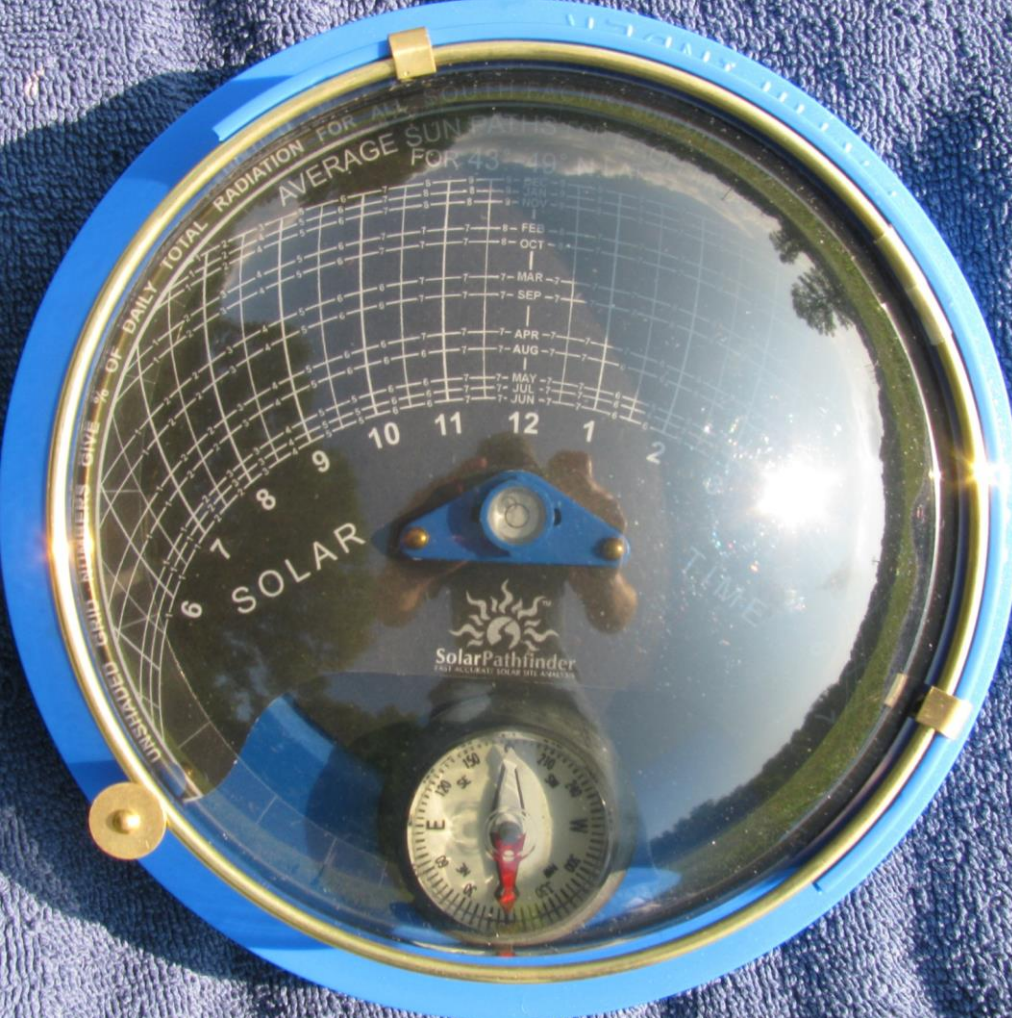
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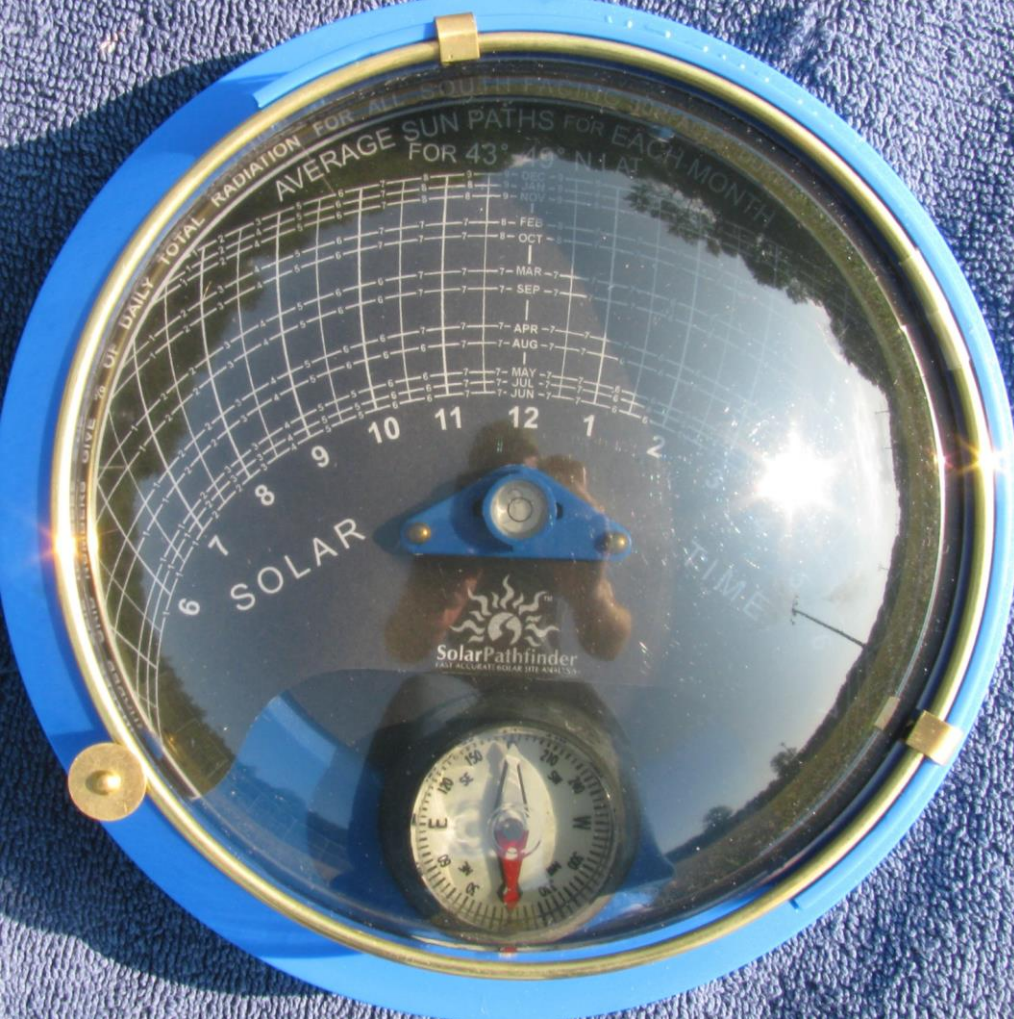
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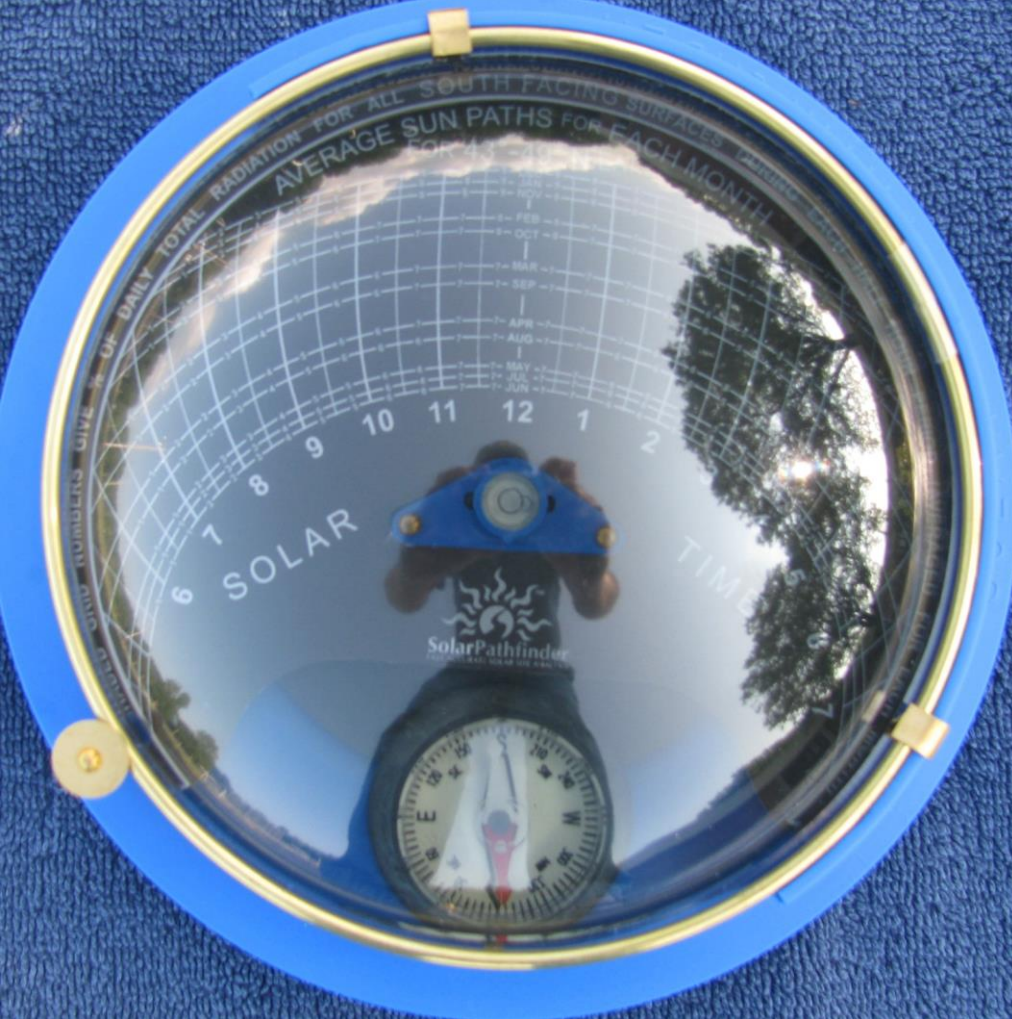
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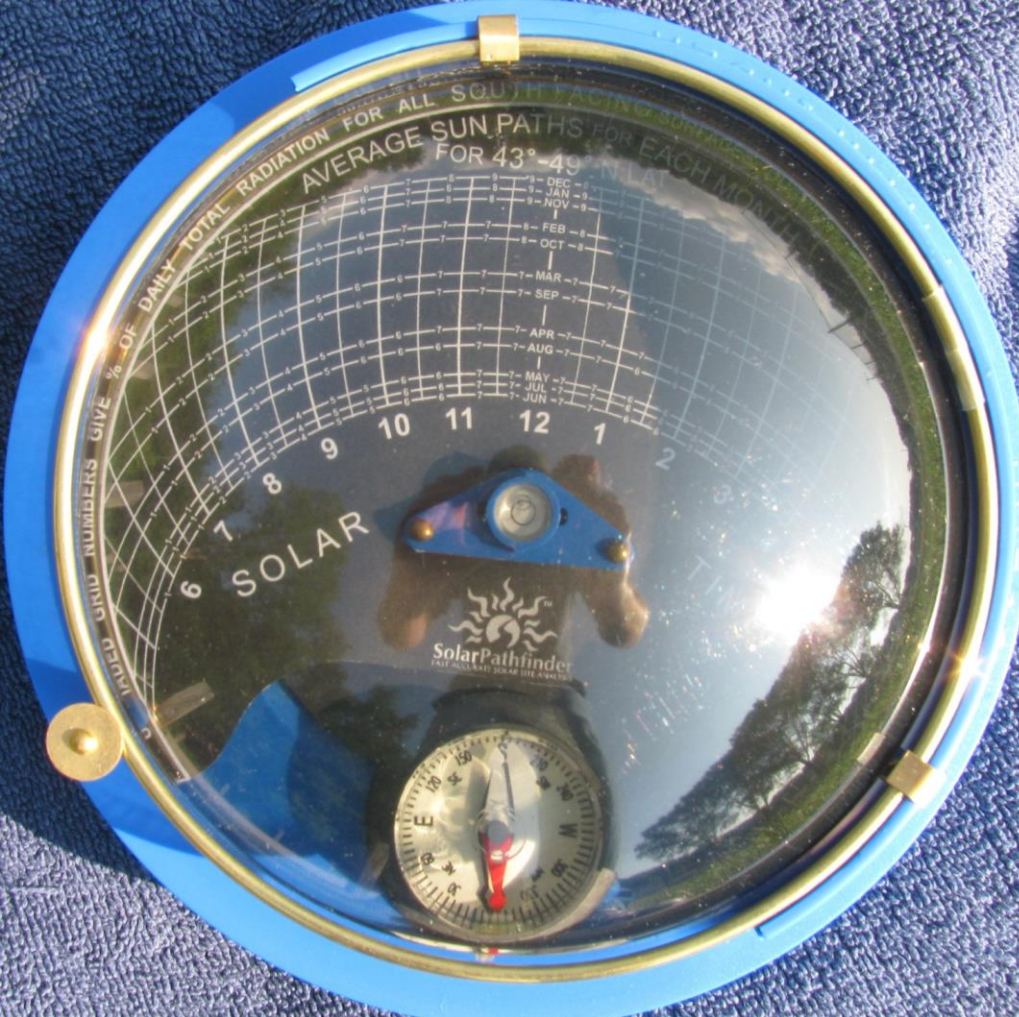
6.



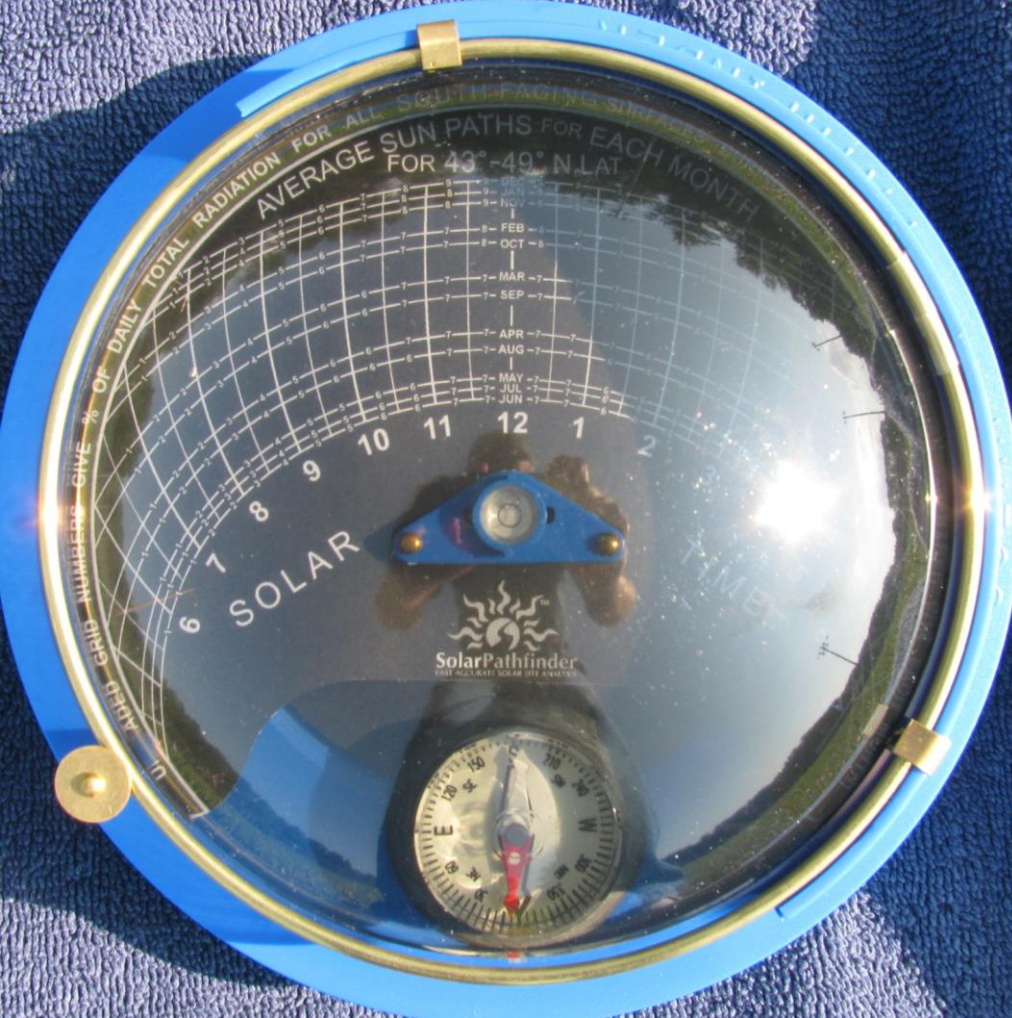
7.



8.



9.





SOLAR SITE ANALYSIS: THE SOLAR PATHFINDER

