We calculated the insolation data from the VTB software and validated the results with data from the National Solar Radiation Database (NSRD). We looked at the daily and monthly solar irradiance data and the two sources correlated to a good degree.
**Figure 2:** Hourly Solar Illumination data from NSRD

**Figure 3:** Monthly Solar Illumination data from VTB
Results and Conclusions:

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Yearly Insolation Average (W/m²)</th>
<th>Maximum Insolation (W/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTB</td>
<td>325</td>
<td>919</td>
</tr>
<tr>
<td>NSRD</td>
<td>326</td>
<td>978</td>
</tr>
</tbody>
</table>

Insolation varies significantly within a single day and also through different months of a year. There is higher insolation during mid-day on hourly basis. For months, June/July have higher insolation on average.

Next Steps:
What is the DC power depending on Insolation? On average for a year, month? At Maximum Insolation?