

The ENDORSE-Daylight Web Service

A tool for the analysis of daylight availability, shading and lighting use, in buildings

You are an architect, an engineer, a building owner, you would like to know:

How much energy you could save by dimming the lights with respect to daylight?

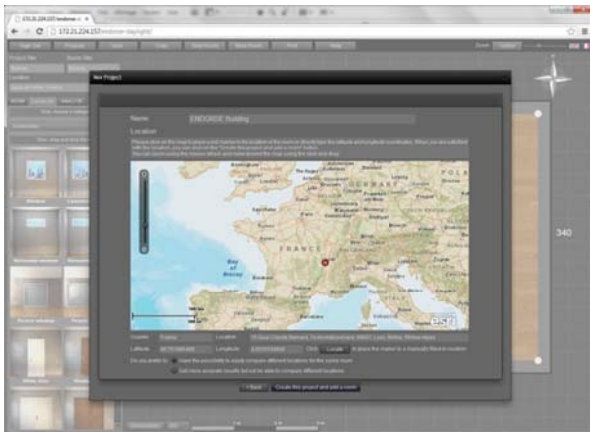
How often the shades will be used to protect your users against bright sunshine?

How often daylight will contribute to the lighting of your building?

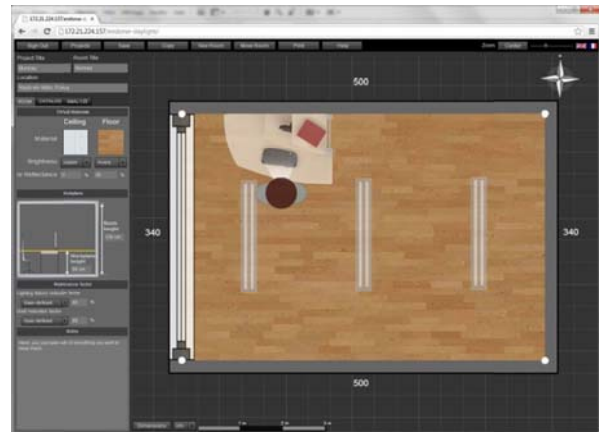
The ENDORSE-Daylight web service produces this information for you.

You have nothing to install on your PC: it is available directly in your web browser.

The interface is simple and intuitive. You describe only what is needed for a lighting simulation: the room, its location, the windows, the shades, the luminaires, and the occupant. This process takes only a few minutes.

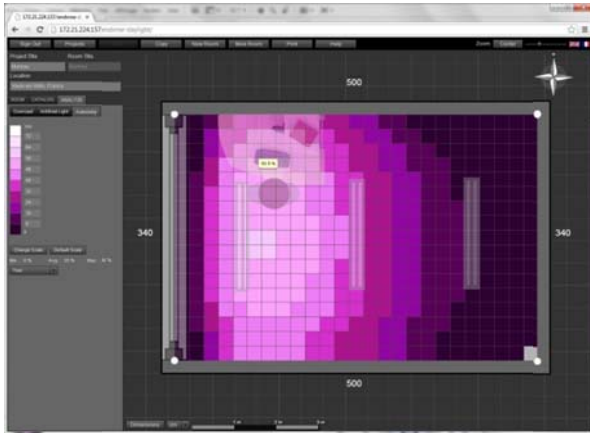


Select any site in Europe and Africa. Daylight data is based on GMES-MACC irradiance data derived from METEOSAT images (15 mn values, 5 km resolution).

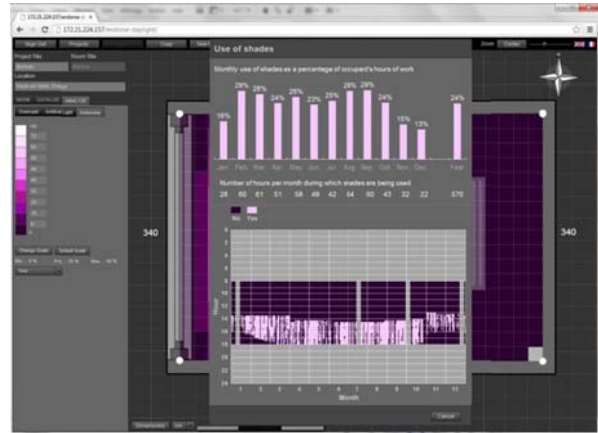


Draw your room; add windows, shades, lighting fixtures and an occupant. The shades and the power of lighting fixtures will be adjusted dynamically to satisfy the visual needs of the occupant.

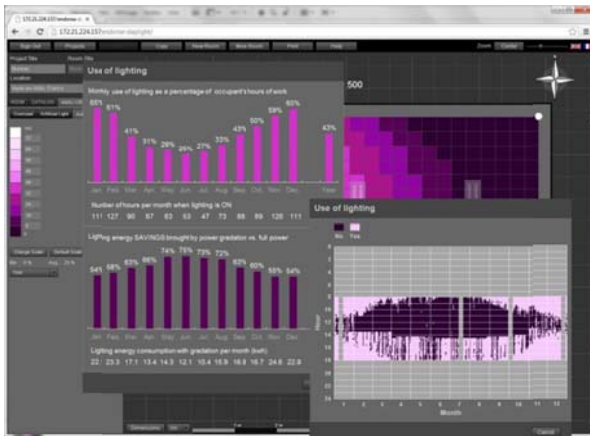
Once the room is described, simply click on “Analyze”. The service computes the influence of the sun and the outdoor sky inside the room. Then, every 15 mn, for an entire year, it computes indoor illuminances, adjusting shades and lighting fixtures, to satisfy occupant needs. The computation uses PHANIE-2010, a sophisticated light simulation tool, developed for more than 20 years, by researchers at CSTB, France. At the end, the service produces monthly statistics on daylight availability, use of shades and lighting energy. It sends you an email and a link to visualize the results.



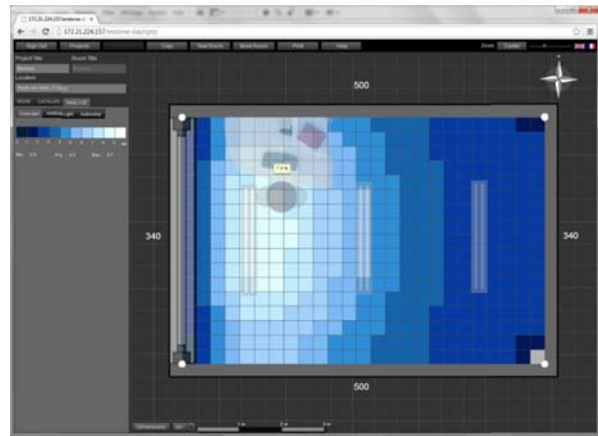
See how often daylight maintains the illuminance needed by the occupant, for a given month, or for the whole year.



See how shades are used to satisfy the occupant's visual comfort, per month as hours and percentage of working hours, or per month and hour in the year.



See when and how often lighting is used and how much energy has been saved by using dimmable lighting fixtures.



See daylight factor values. They are still a reference, even though climatic information is more useful.

Thanks to the ENDORSE-Daylight web service, Climate Based Daylight Analysis is finally accessible, simple and easy! If you are interested in testing the service, send an email to: dumortier@entpe.fr.

The service has been developed at ENTPE with help from Asynth.com and CSTB-France thanks to the ENDORSE-EU project (grant agreement n°262892).

