CommONEnergy

Bartenbach

durlum

NATURAL LIGHTING

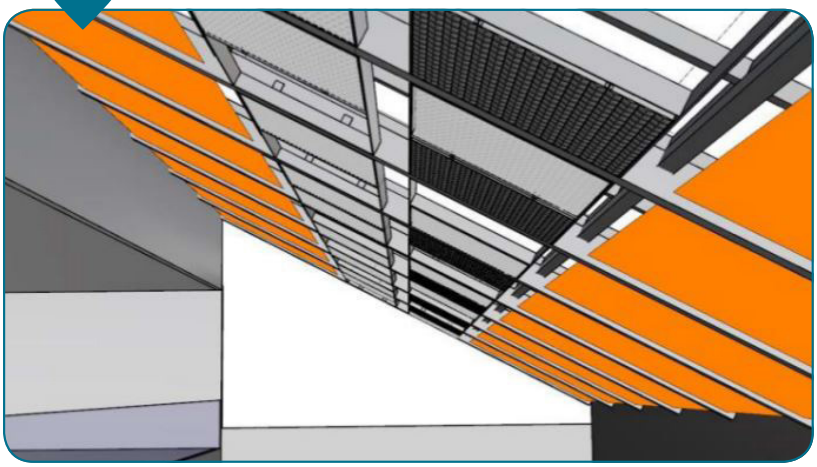
MODULAR SKYLIGHT

Natural light in commercial buildings plays a crucial role to improve visitors and employees' well-being and possibly increase sales and energy efficiency of the building.

Shopping centres, in their common areas, typically feature atria with a large skylight to get daylight inside the building.

However, existing skylights are often not properly designed when it comes to high-quality lighting: daylight openings are often too large and not positioned optimally. This leads to too high indoor luminance values, glare by direct sunlight, a high thermal gain and radiation load on goods.

TECHNOLOGY



USE

The system is applicable in all (larger) skylights, very common in existing shopping centres.

They suffer however in most cases from an overexposure to daylight and possible glare.

FEATURES

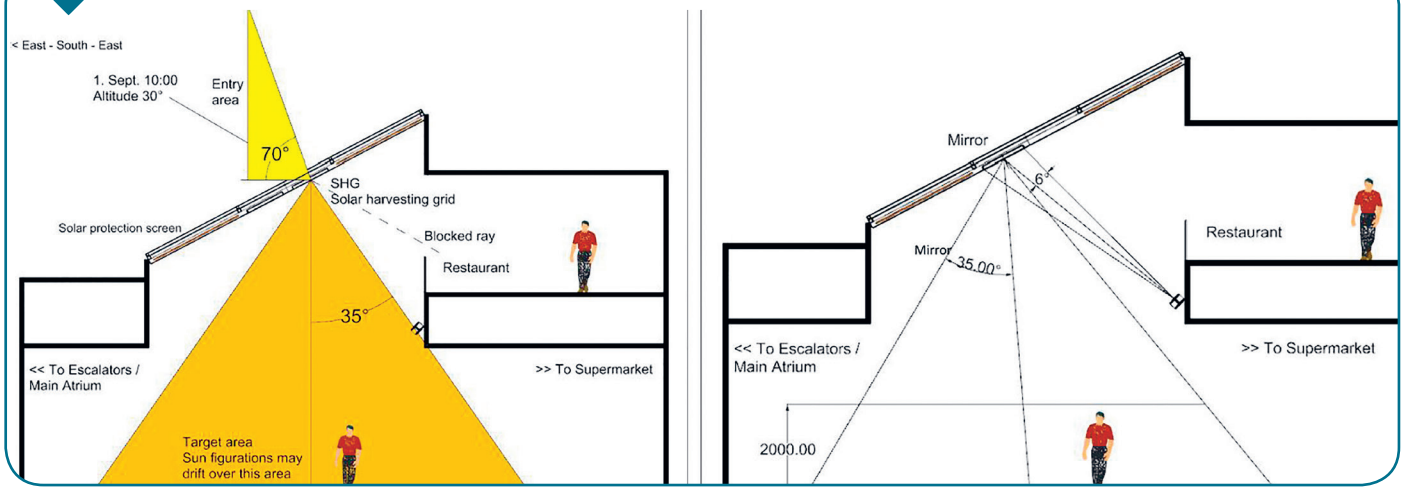
The Modular Skylight is flexible in its nature, meaning that it can easily be adapted to different situations by the use of different modules and position of the modules.

At the moment, there are two modules available, the Sun Harvesting Grid (redirection of daylight into the depth of the atrium) and the projector/mirror module (artificial lighting system, see flyer Hybrid LED Spot). It can also be combined with commercially-available shading systems, like roller blinds. Possible future modules could include photovoltaic modules and others using daylight.

BENEFITS

- Improvement of the common area atmosphere and well-being of the shopping centre visitors by using natural light/daylight
- Reduction of glare
- Improvement of thermal behaviour of the atrium
- Energy savings by using daylight and energy efficient LED lighting by projector/mirror system
- Easier maintenance of the artificial lighting system

HOW IT WORKS



CASE STUDIES

The system will be implemented in the demo case of Trondheim, Norway.

CONTACT DETAILS

info@durlum.de
www.durlum.de

info@bartenbach.com
www.bartenbach.com

The project CommON*Energy* (2013-2017) focuses on transforming shopping centres into energy efficient buildings, by developing smart renovation strategies and solutions to support their implementation as well as assess their environmental and social impact.

- 3 demo cases, 8 reference buildings & 23 partners from across Europe
- 25 technologies developed and installed in 4 years
- Up to 75% reduction of energy demand, leading to costs reduction
- A payback time of maximum 7 years

CommON*Energy*

The Comm*ONEnergy* project has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n. 608678

WWW.COMMONENERGYPROJECT.EU