DESIGNING GREAT SCHOOLS

8 EXAMPLES OF HOW SKYLIGHTS CAN IMPROVE LEARNING

VELUX®
Commercial

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VELUX MODULAR SKYLIGHTS

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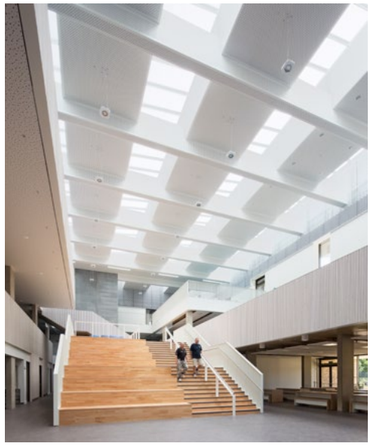

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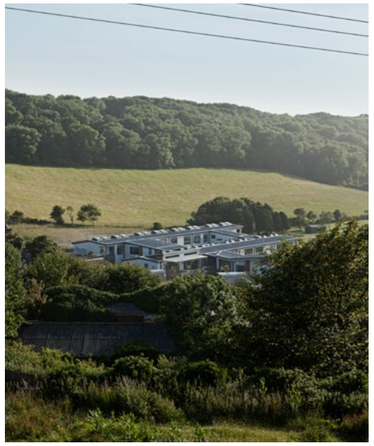

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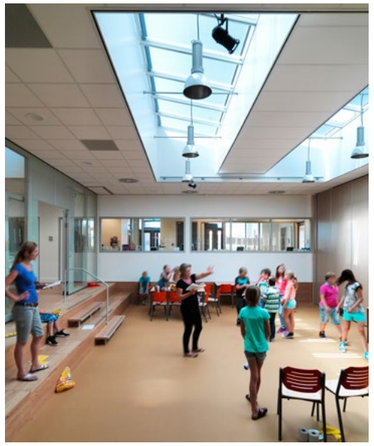

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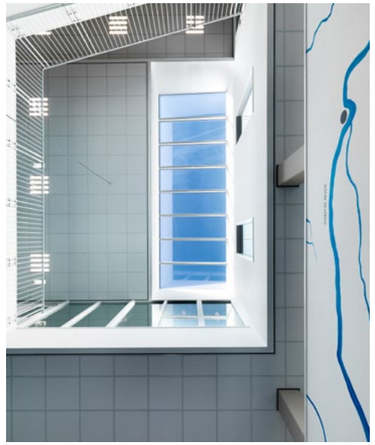

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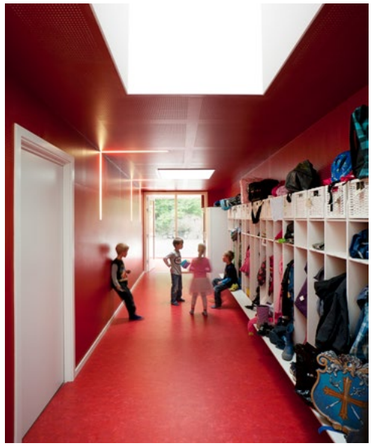

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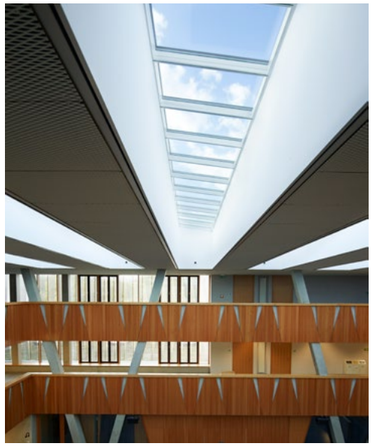


HESSENWALDSCHULE

Weiterstadt (GE)

DAYLIGHT IN SCHOOLS

MORE DAYLIGHT IMPROVES LEARNING

Students with the most daylight in their classrooms progressed:

20%
faster on math tests

26%
faster on reading tests

Students that had a well-designed skylight in their room improved:

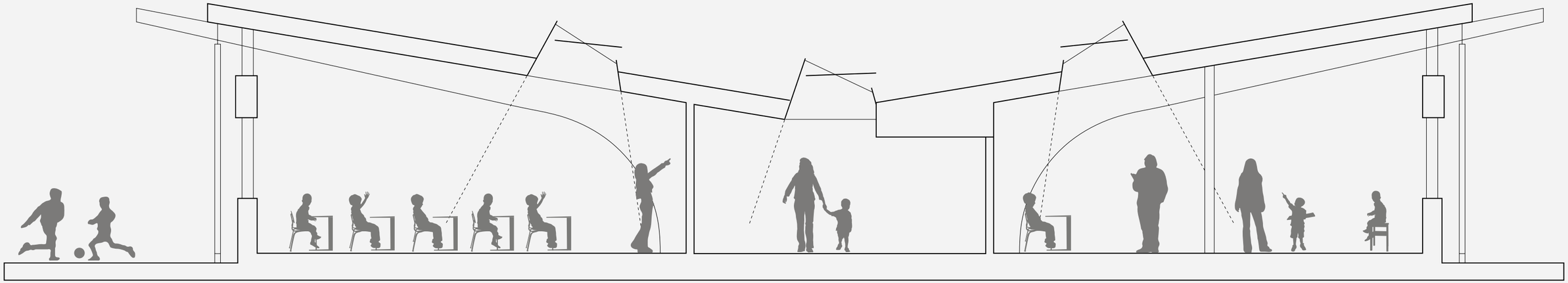
19–20%
faster than those without a skylight

Students in classrooms where windows could be opened were found to progress:

7–8%
faster than those with fixed windows

1999 by George Loisos for The California Board for Energy Efficiency Program. Submitted by HESCHONG MAHONE GROUP

Test score results for over 21,000 students in 2000 classrooms from districts, located in Orange County, California, Seattle, Washington, and Fort Collins, Colorado



COLLÈGE TOMI UNGERER

Dettwiller (FR)

INSTALLATION
August 2016

INSTALLER
Wiedemann & Fils

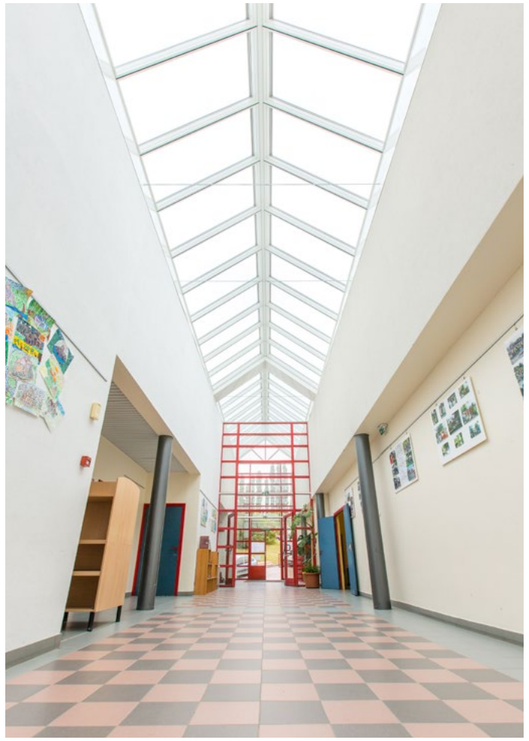
PRODUCT SOLUTION
Type of skylight: 3 ridgelights at 40°
Number of modules: 182 modules, 162 fixed and 20 venting
Size of modules: 900 mm x 1200 mm and 750 mm x 1200 mm

COMFORTABLE TEMPERATURES ALL YEAR ROUND

One of the primary concerns for Collège Tomi Ungerer was temperature. It was too hot in the summer and too expensive to heat in the winter. By replacing three glazing elements with 182 double-glazed and naturally venting VELUX Modular Skylights, they saw an average temperature decrease of 8.8°C on summer days and managed to save an impressive 38% on winter heating costs.

The ridgelights provide daylight, fresh air and comfortable temperatures in the school's hallways throughout the year.

As can be seen in the photo below, there is no visual difference between the venting and fixed modules, giving a beautifully uniform look from both below and above.



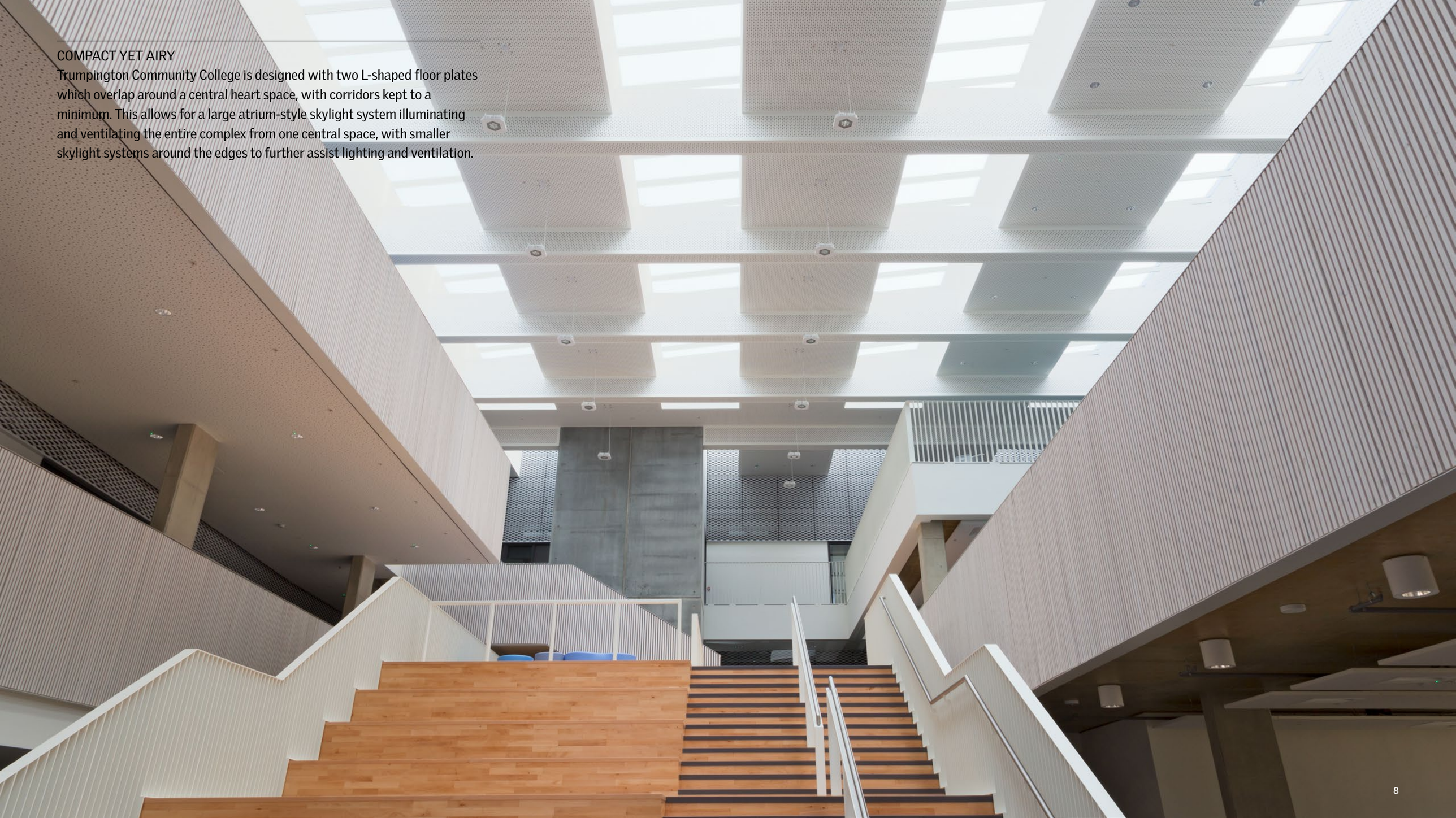
TRUMPINGTON COMMUNITY COLLEGE

Clay Farm, Cambridge (UK)

ARCHITECTS
Avanti Architects

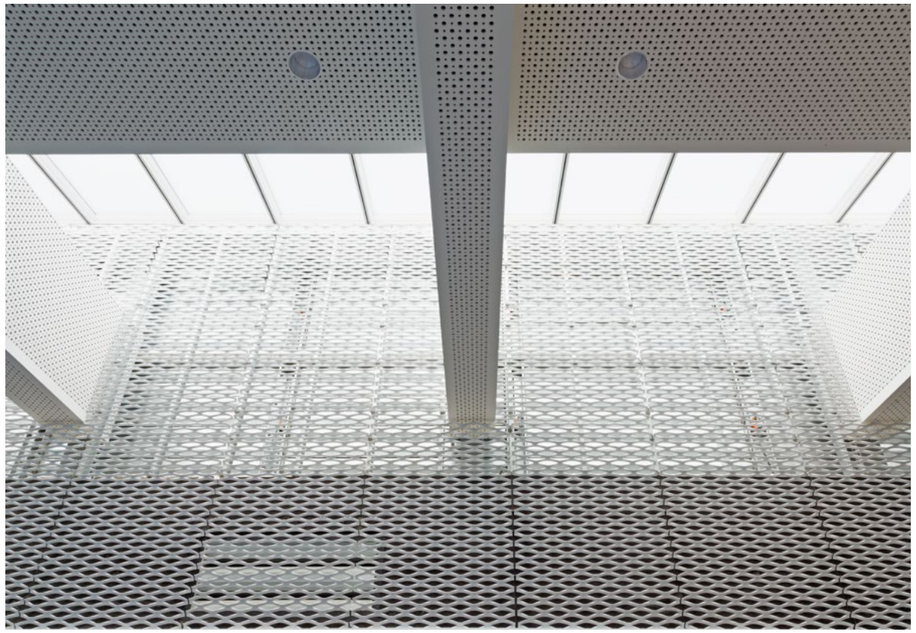
CONTRACTOR
Morgan Sindall

PRODUCT SOLUTION
Type of skylight: Longlights, wall-mounted longlights and northlights
Number of modules: 245 modules in different sizes



COMPACT YET AIRY

Trumpington Community College is designed with two L-shaped floor plates which overlap around a central heart space, with corridors kept to a minimum. This allows for a large atrium-style skylight system illuminating and ventilating the entire complex from one central space, with smaller skylight systems around the edges to further assist lighting and ventilation.



A large system of skylights illuminates the central atrium, while smaller systems provide light and air in stairwells and teaching spaces.

To minimize glare the skylight modules in the atrium were supplied with opal panes.

ST. FRANCIS PRIMARY SCHOOL

Ventnor, Isle of Wight (UK)

INSTALLATION
June - July 2012

ARCHITECTS
HNW Architects

CONTRACTOR
Willmott Dixon

PRODUCT SOLUTION
Type of skylight: Longlights with a 9° pitch
Number of modules: 82 modules, 41 fixed and 41 venting
Size of modules: 34 modules of 675 mm x 1200 mm and 48 modules of 800 mm x 1200 mm
All modules have integrated blinds

MODERN TEACHING IN AN OLD SCHOOL

The building was more than 60 years old, so an update was perhaps overdue. With 33 skylight modules over the classrooms, St. Francis now has "a truly 21st century feel", says Head Teacher Angela Hewkin. "The main difference is the light and spaciousness within. The old buildings were darker and less welcoming. The children seem to be more alert in the classrooms towards the end of the day, especially when we have hot summer weather. The air seems a lot clearer and attendance has improved," concludes the head teacher, who was involved in the design process from the start, and is delighted by the results.

Remote-controlled blinds enable teachers to dim the natural light when needed for displaying digital media, concentrating on specific tasks, or for smaller children to take a nap.

BREDE SCHOOL DE EGELANTIER

De Zilk (NL)

INSTALLATION
September 2013; installation took two days

ARCHITECTS
Korbee en van der Kroft Architecten

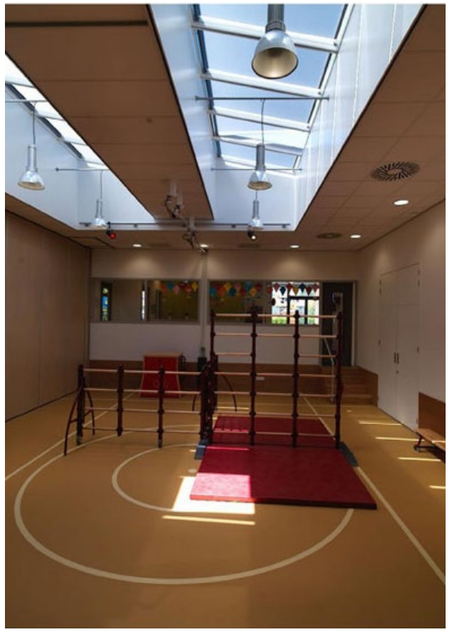
CONTRACTOR
Meijer Bouw Sassenheim

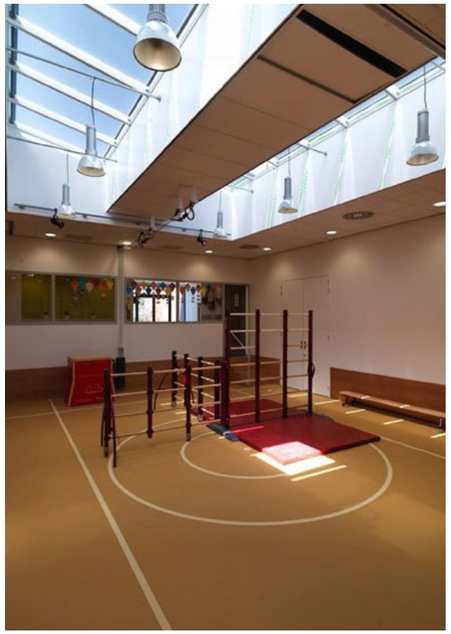
PRODUCT SOLUTION
Type of skylight: Longlights
Number of modules: 28 modules, 24 fixed and 4 venting
Size of modules: 900 mm x 1800 mm

FLEXIBLE ATRIUM

The sustainably built new school in De Zilk makes the most of all available natural resources. Powered by solar panels, heated by geothermal energy, lit by daylight, and with natural ventilation, the school is a living, breathing and integrated part of the environment.

The central atrium gets most of its light from the large VELUX Modular Skylights above, providing both daylight and fresh air. Electrical lighting hung directly beneath the skylights ensures adequate lighting during the evenings and on dark winter days.





RIVERS INTERNATIONAL SCHOOL

Arnhem (NL)

INSTALLATION
August 2016; installation took two days

ARCHITECTS
LIAG architecten en bouwadviseurs

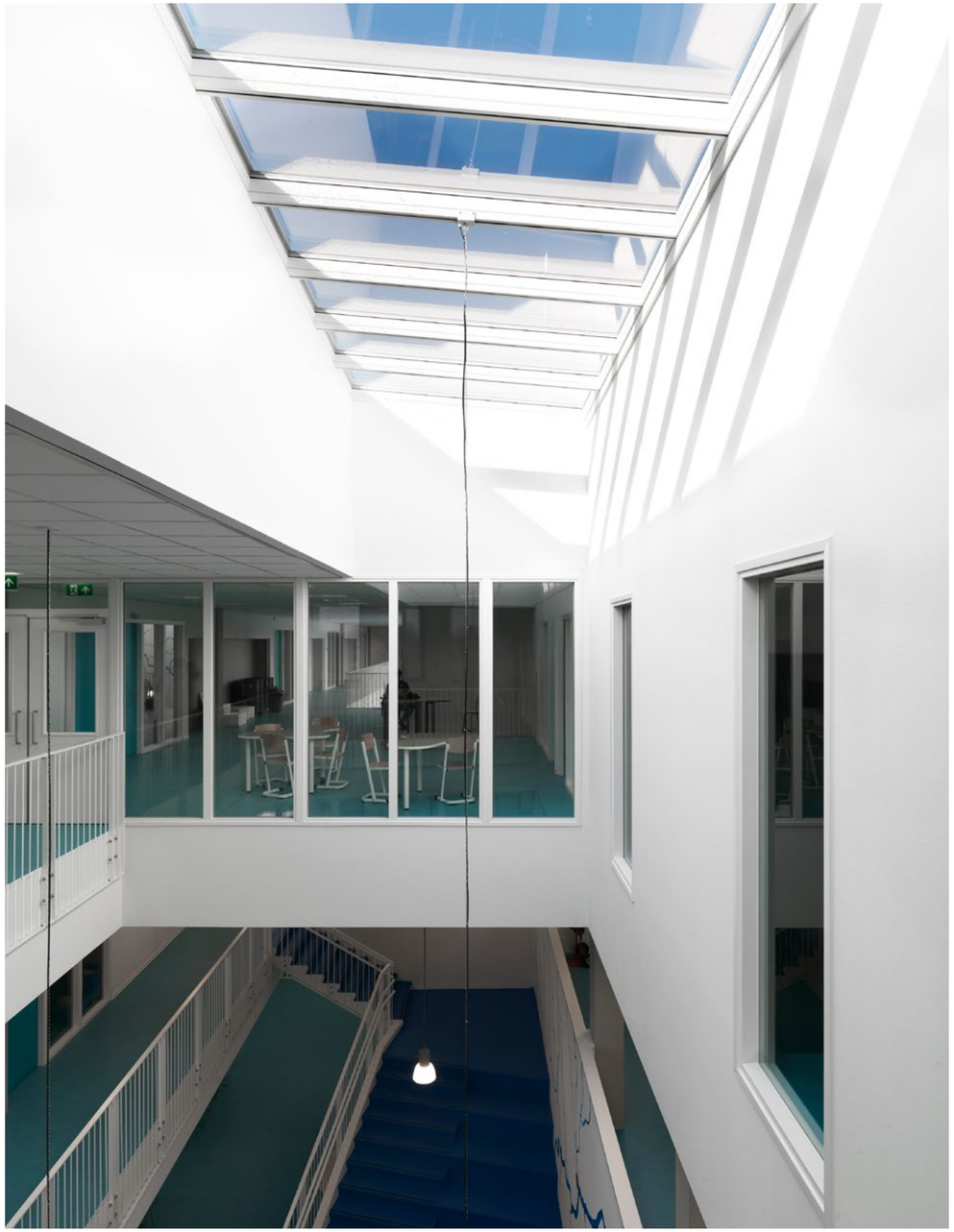
CONTRACTOR
Aannemingsmaatschappij Hegeman B.V.

PRODUCT SOLUTION
Type of skylight: Two longlights with a 5° pitch
Number of modules: 23 fixed modules
Size of modules: 900 mm x 2600 mm and 1000 mm x 2600 mm

STREETS OF LIGHT

Central hallways run the length of the building and open out from top to bottom, providing a large amount of daylight to most of the building from just one central strip of skylights.

"Streets of light" run through the building, tying different areas together, connecting indoors with outdoors, and acting as a well of light all the way to the ground floor.



ROSKILDE KATEDRALSKOLE

Roskilde (DK)

INSTALLATION
Spring 2012; installation took 2 days

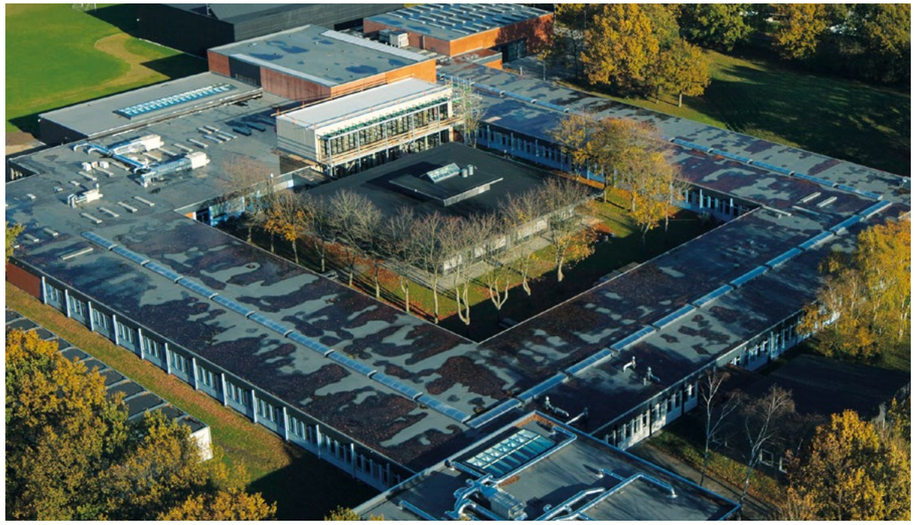
ARCHITECTS
Sweco Architects

CONTRACTOR
Elindco Construction Company

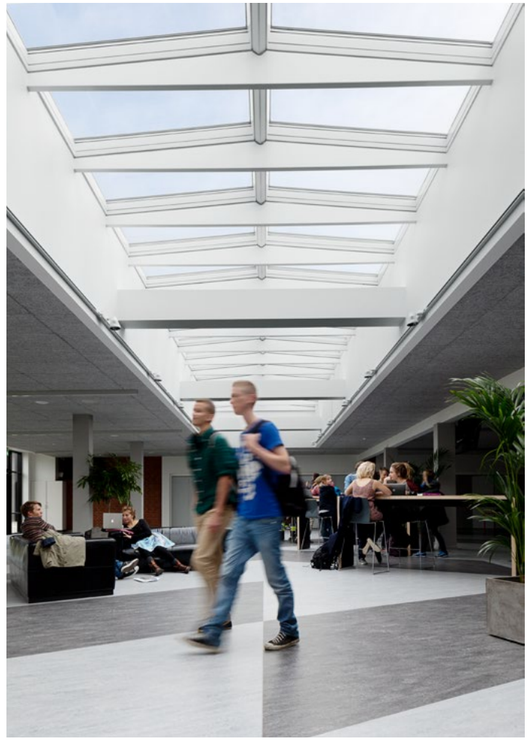
PRODUCT SOLUTION
Type of skylight: Two ridgelights with a 5° pitch
Number of modules: 36 and 14 modules respectively, of which 16 and 8 are venting
Size of modules: 1000 x 1800 mm
The ridgelights in the teaching section are fitted with grey sunscreens.

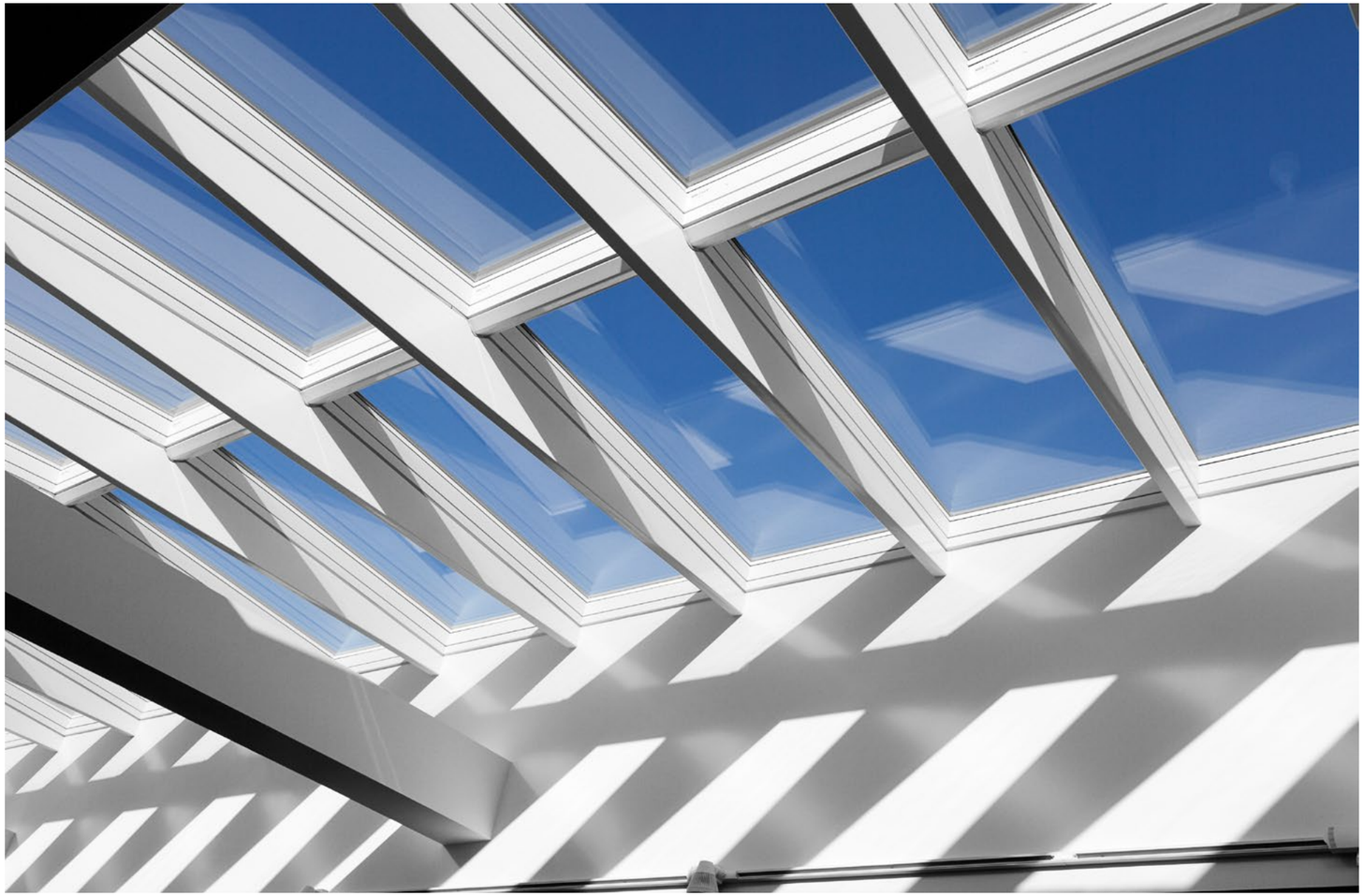
A PEEK TO THE HEAVENS ABOVE

Being a cathedral school, it is only fitting that the school should have a direct view to the skies. One ridgelight is installed in the canteen and the other one in the teaching section. This area has been created for presentations and lectures, and the students will also be able to use it for project work.



The two ridgelights look as impressive from above as from below. But despite the scope of the project, installation took just two days thanks to the easy-to-fit skylight modules.





DRØMMEBAKKEN KINDERGARTEN

Aarup (DK)

INSTALLATION
November 2011

ARCHITECTS
CASA Architects

INSTALLER
Lebæk A/S

PRODUCT SOLUTION
Type of skylight: 11 longlights with a 5° pitch
Number of modules: 49 modules, 19 fixed and 30 venting
Size of modules: 900 mm x 2400 mm

SMALL CHILDREN ARE LEARNERS TOO

Nursery schools and kindergartens can be overlooked when considering learning environments. During those formative early years, children may not learn algebra and Latin, but the social and creative skills they establish are just as important. All the more reason, then, to make daylight and fresh air a top design priority to promote attentive and inquisitive minds.

VELUX Modular Skylights work in unison with floor-to-ceiling panoramic façade windows to illuminate the play areas in what was once a dreary 1960s municipal office building. With remote-operated blinds, the rooms can be quickly darkened at nap time.

HESSENWALD-SCHULE

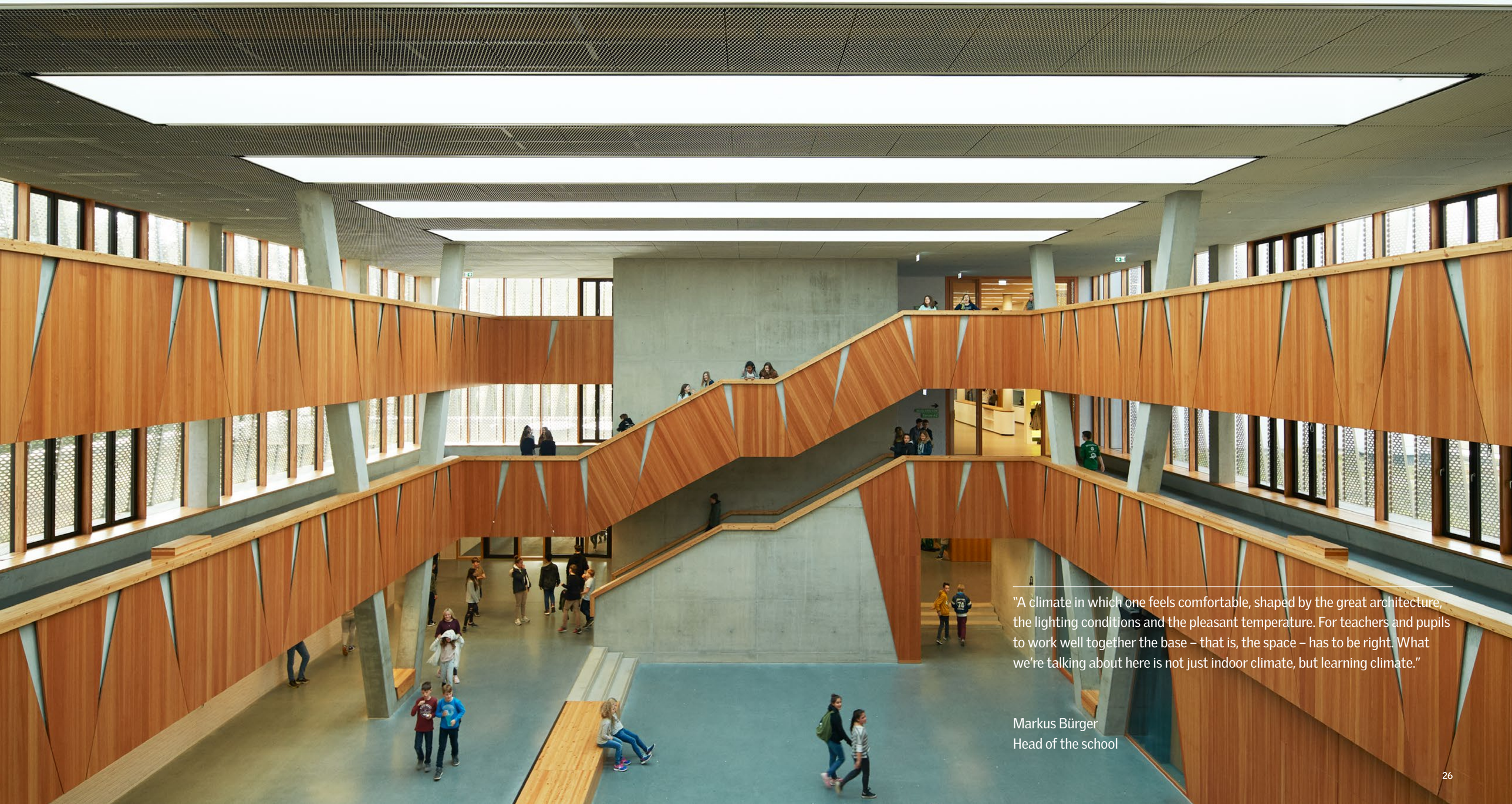
Weiterstadt (GE)

INSTALLATION
November-December 2014

ARCHITECTS
wulf architekten

HEAD OF CONSTRUCTION
ATP Architekten Ingenieure

PRODUCT SOLUTION
Type of skylight: Longlight with a 7° pitch
Number of modules: 84 modules, 74 fixed and 10 venting
Size of modules: 900 mm x 1600 mm and 1000 mm x 1600 mm



"A climate in which one feels comfortable, shaped by the great architecture, the lighting conditions and the pleasant temperature. For teachers and pupils to work well together the base – that is, the space – has to be right. What we're talking about here is not just indoor climate, but learning climate."

Markus Bürger
Head of the school

"The best thing that you can do to make people feel healthy is to use materials and lots of light to create good spaces."

Alexander Vohl,
Partner at wulf architekten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