

## Thirteen kilometres of light for science: the new editions luminaire FREELINE

The latest addition to the FHNW Campus MuttENZ in Switzerland is certainly impressive: a cube-shaped building with an edge length of almost 65 metres that rises up to catch the eye from far and wide. Designed by pool Architekten, this is a simple and yet simultaneously monumental construction. And one that is purely devoted to education and research. Zumtobel joined forces with lighting designers from Reflexion to engineer a new luminaire for this extraordinary building: the FREELINE. Now more than 13 kilometres of this clever solution have been delicately woven into the imposing architecture.

*Dornbirn, 14. February 2019* – It is a real powerhouse. A striking new building created by the Swiss [pool Architekten](#) studio for the [University of Applied Sciences](#) (FH Nordwestschweiz) in MuttENZ in Switzerland. Flanked by a tree-lined park and with an extensive forecourt, the 65-metre-tall cube looms over the neighbouring railway tracks. The copper-coloured façade shines invitingly in the sun. And inside, two spectacular atriums offer stunning views up to the sky – all framed by a potent yet uncomplicated style of architecture. There is hustle and bustle everywhere, but that is no real surprise: Around 4000 students and 840 employees come here every day to study. Or to teach. Or to carry out research. Zumtobel has developed the [FREELINE](#) luminaire with the Swiss lighting design agency [Reflexion](#) und pool Architekten for this bastion of knowledge and understanding – a solution that has now become part of our special collection known as [the editions](#).

“The architecture of the new building is extremely rigorous and has a strong graphic quality,” reported Thomas Mika, Managing Director of Reflexion and the person responsible for the lighting concept of the university building. “So we opted to integrate all the luminaires as far as possible into the existing elements.” This move emphasises the simplicity of the monumental construction, in which a visible concrete support structure and, in stark contrast, the use of warming wood combine to set the overall tone of the project. Diverse daylight situations generate varied atmospheres and spatial impressions. The foyer on the ground floor offers an ideal space to arrive and linger a while, while there is also room for an auditorium, a cafeteria and the “Cube” campus restaurant. Ramp-like staircases with a width of almost three metres form an architectural focal point. They traverse the atrium and stretch up to the two auditorium levels on the first and second floors. Almost like sculptures. Further highlights include the library on the third floor, where a wide band of windows adds structure to the façade, and a roof garden on the 12<sup>th</sup> floor, where users can enjoy a pleasant green oasis. And it is not just all about the building itself: The unique views of the surrounding area from the office and seminar rooms never fail to make an impression.

“For a project of this size, the lighting concept needs a main layer that connects the different rooms across the entire building and weaves itself into the architecture,” explained Mika. The ribbed concrete ceilings define the office, seminar and laboratory rooms, along with the corridors of the new university building, from the third to the twelfth floor. Reflexion opted to insert a linear luminaire between each of the ribs, enabling the spaces to be characterised by uniformity in terms of both light density and lighting design. Rather than just a simple two-dimensional band of light, the planners wanted to use contoured three-dimensional illumination to accentuate the architecture and, at the same time, light up the workspaces. Reflexion came to Zumtobel with this request and worked with experts from our Atelier of Light to develop a special luminaire: the FREELINE.

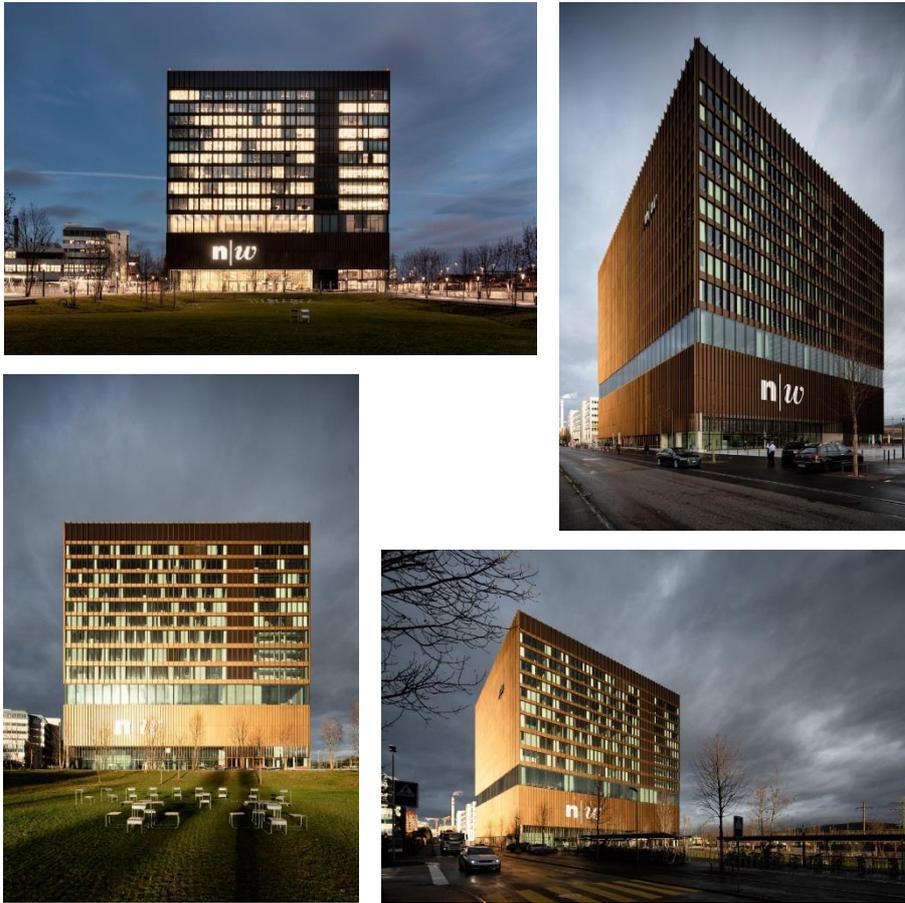
FREELINE really impresses with its simple elegance. The shape of the luminaire is determined by nothing more than a slim aluminium U-profile and a PMMA diffuser, with the control gear stored remotely to enable a truly miniaturised design. “A three-dimensional light-emitting surface is needed to create light with a real physical presence,” pointed out Mika. “However, lateral light-emitting surfaces are especially problematic in office applications, as people want to work in a glare-free environment.” The FREELINE features a primary and secondary optic to solve this tricky issue. The primary optic consists of a high-performance lens, which pools the light from the LED band, and a diffuser, which precisely directs the light to the emission surface at the bottom of the aluminium profile. The secondary micro-prismatic optic (MPO) guarantees the kind of accurate light control required in office applications and thereby helps make sure that FREELINE meets the requirements for UGR19. Thomas Mika from Reflexion was very positive about the whole design process: “The cooperation with Zumtobel was both a creative and a technical triumph. And that is what really sets Zumtobel apart: the ideas and plans of the client are implemented accurately and with great sensitivity.”

Two models of FREELINE have been created. Same appearance, different optics – and therefore different applications. While the MPO’s precise light control makes one version ideal for office and school projects, the lenticular optics of the second variant delivers an asymmetric light distribution that beautifully picks out architectural features. This fitting can be used for wallwashing or blackboard illumination, like in the seminar rooms at the FHNW Campus Muttensz.

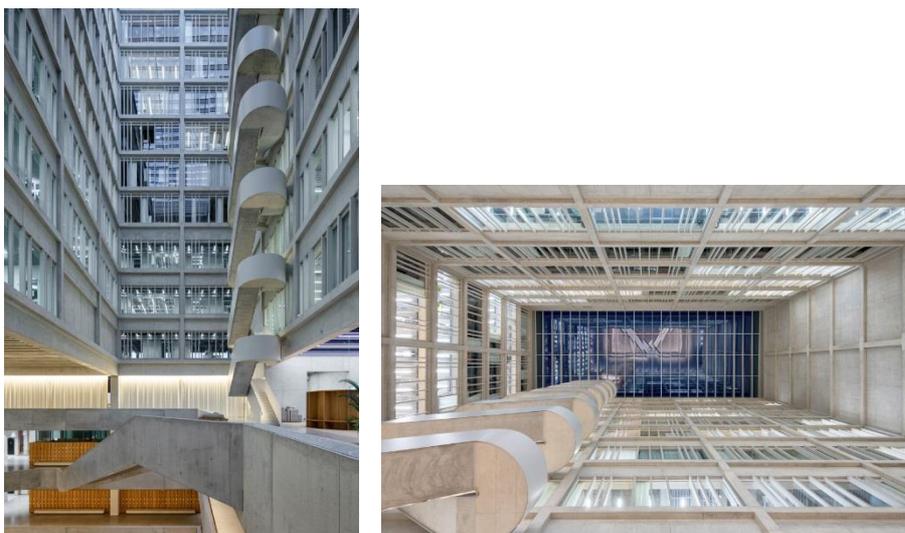
The FREELINE definitely lives up to its name at the University of Applied Sciences, where more than 13 kilometres of the solution stretch through the new building. Yet it was not just the elegant design and flexible usability that pleased the client. The FREELINE also reduces the need for specially trained personnel on site, as it can simply be mounted directly onto a low-voltage rail. Minor effort, major plus – especially in Muttensz, as the university was keen to move into the premises before the start of the 2018/19 winter semester. Quick and easy installation was therefore just as important as the large quantities that Zumtobel were able to provide in the shortest development and production time possible.

**Photo captions:**

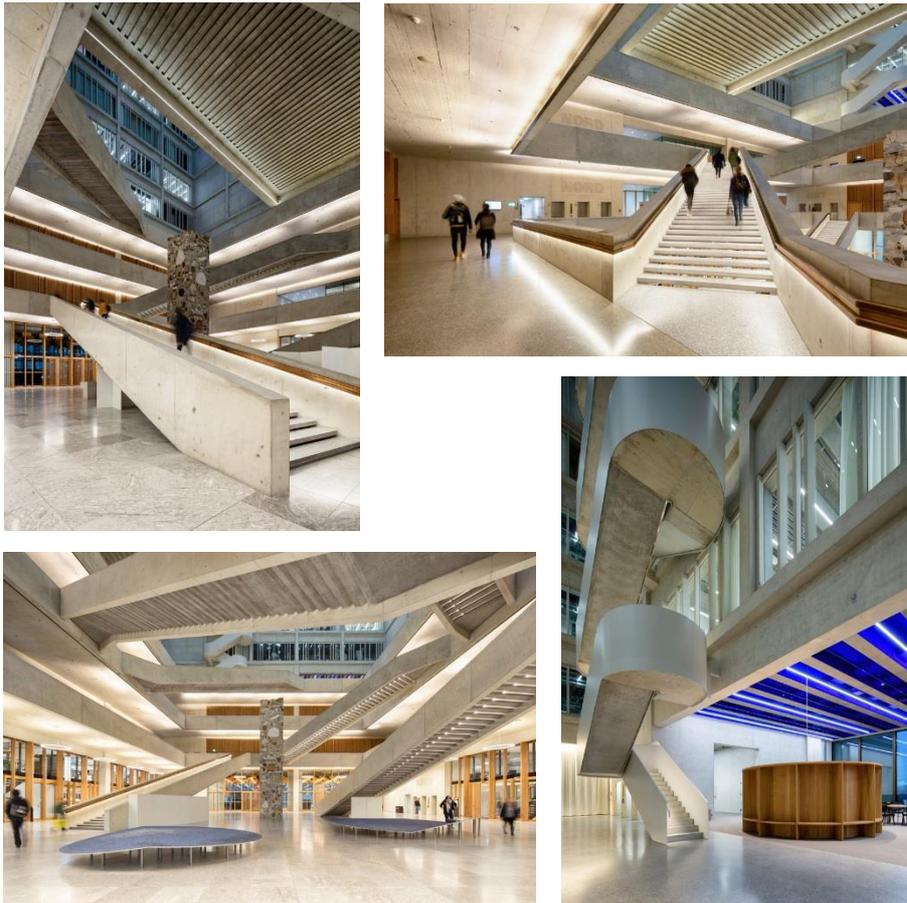
(Photo credits: Zumtobel)



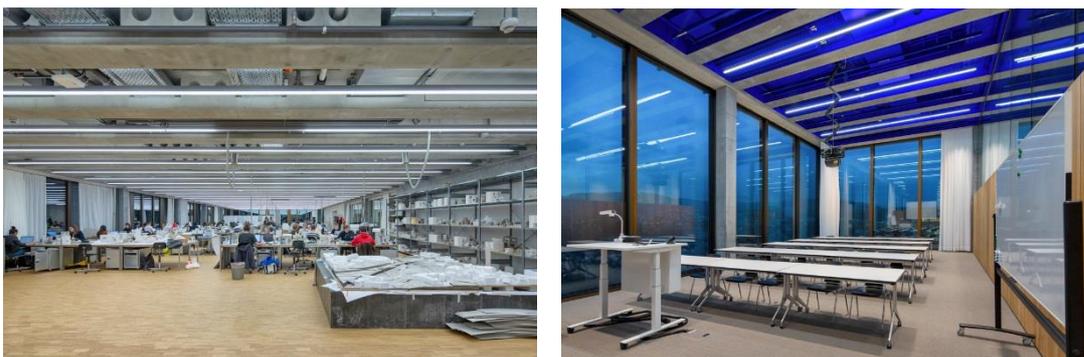
**Fig. 1:** Flanked by a tree-lined park and with an extensive forecourt, the 65-metre-tall cube looms over the neighbouring railway tracks. The copper-coloured façade shines invitingly in the sun.



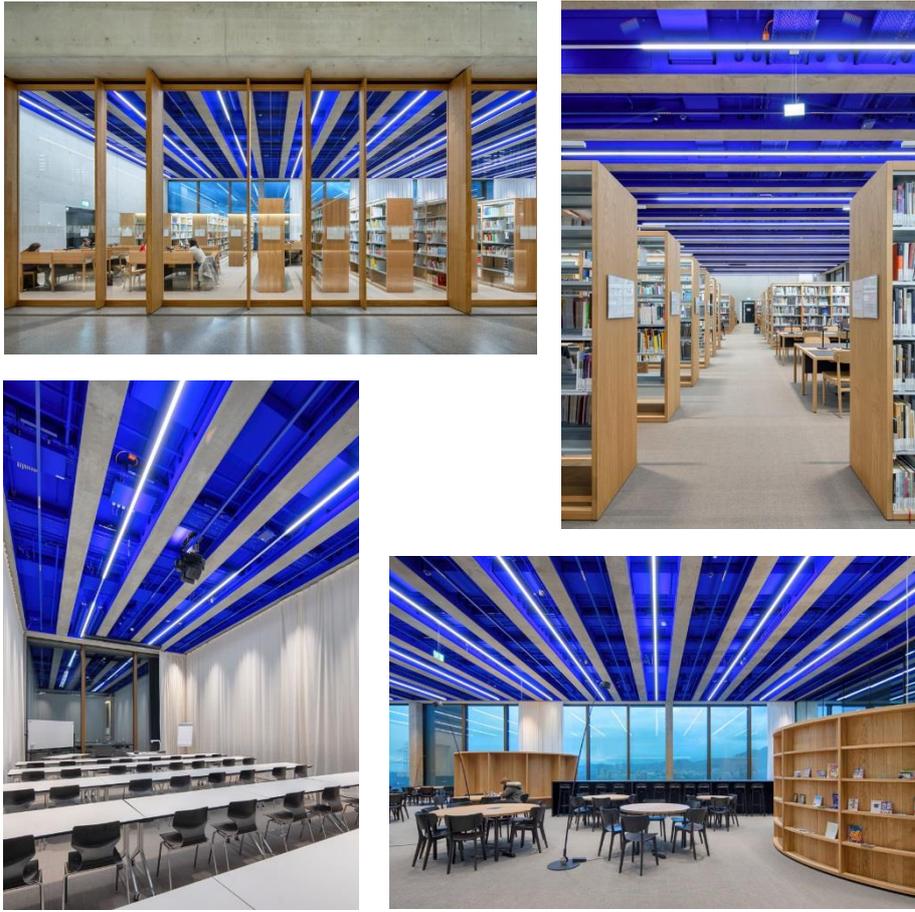
**Fig. 2:** Inside, two spectacular atriums offer stunning views up to the sky – all framed by a potent yet uncomplicated style of architecture.



**Fig. 3:** Ramp-like staircases with a width of almost three metres form an architectural focal point. They traverse the atrium and stretch up to the two auditorium levels. Almost like sculptures.



**Fig. 4:** Two models of FREELINE have been created. Same appearance, different optics – and therefore different applications. While the MPO's precise light control makes one version ideal for office and school projects, the lenticular optics of the second variant delivers an asymmetric light distribution that beautifully picks out architectural features. This fitting can be used for wallwashing or blackboard illumination.



**Fig. 5:** Further highlights include the library on the third floor, where a wide band of windows adds structure to the façade. And it is not just all about the building itself: The unique views of the surrounding area from the office and seminar rooms never fail to make an impression.



**Fig. 6:** Rather than just a simple two-dimensional band of light, the planners wanted to use contoured three-dimensional illumination to accentuate the architecture and, at the same time, light up the workspaces. Reflexion came to Zumtobel with this request and worked with experts from our Atelier of Light to develop a special luminaire: the FREELINE.

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**About Zumtobel**

We are passionate about designing and producing the highest quality of light. Our work is driven by the knowledge that the right light can create the right environment for people to thrive when tailored to their individual needs. Guided by a unique design approach, we continuously push our boundaries in search for perfection through unique and timeless design. As we develop the next generation of lighting, we build on our family heritage to refine the aesthetics of light and shape the lighting of tomorrow. With a special blend of passion, grace and avant-garde ideas, we turn light in to an experience and remain committed to the goal of improving the quality of life through light. Zumtobel is a brand of the Zumtobel Group AG with its headquarters in Dornbirn, Vorarlberg (Austria).

**Zumtobel. The Light.**