



LIGHTING SOLUTION
SCHOOL
MODERN LIGHT IN

OS



CONCEPT
BENEFITS
FUNCTIONALITY
CONTROL SYSTEM
HUMAN CENTRIC
LUMINAIRES

MODERN LIGHT IN SCHOOL

LIGHTING SOLUTION

At OMS we have created a solution having the well-being of the young generation in mind. From now on schools will benefit from the most comfortable, energy-conscious lighting of the latest technology every day.

By old classroom lighting equipped with inefficient T8 luminaires, our children are daily exposed to visual discomfort, and, due to the unbalanced distribution of brightness, they are even in danger of long-term vision damage. On the other hand, inefficient lighting technology accounts for 50 to 70% of the electricity bill in school buildings.

Improve the learning environment with modern school lighting that was designed specifically for classrooms, fully complies with standards, and at the same time minimizes power consumption and CO₂ emission. The long-lifetime luminaires guarantee low maintenance costs and the light management system provides automatic control. Choose to luminaire with extraordinary efficacy, great light quality, and both direct and indirect light distribution for ultimate comfort.

Welcome to Modern Light in Schools by OMS.

CONCEPT

100%
EXPERTISE

LIGHT DISTRIBUTION

The bright and uniform illumination of both horizontal and vertical surfaces in the classroom is the basis for optimal learning conditions. This facilitates the adaptation process of the eye between the task area and the environment. Ambient light aimed towards the ceiling helps in increasing alertness and improving performance as well. Our solution provides excellent light quality, while the suspended luminaires distribute the light efficiently without glare.



Evening: direct and indirect light aids the ability to concentrate when there is no daylight

ENERGY SAVING

The LED solution combined with presence and daylight detectors increases the savings potential to the maximum.



Morning: sensors dim the lighting to utilise daylight and save energy



Break time: switching off lights automatically when the classroom is empty can reach up to 50% savings

“ An attractive way to save energy

BENEFITS

100%
EFFECTIVE

MOTIVATION AND PRODUCTIVITY

Suspended LED luminaires provide great visual comfort for task areas. With both direct and indirect light distribution, the solution enlarges and brightens the classroom space, thus eliminating the so-called cave effect. The result is an improved learning environment that has a positive effect on motivation and performance.

The illuminance of surrounding areas and the ceiling ensures adequate and uniform luminance distribution in the field of vision both for the teacher and the pupils.











ASYMMETRIC BLACKBOARD LIGHTING

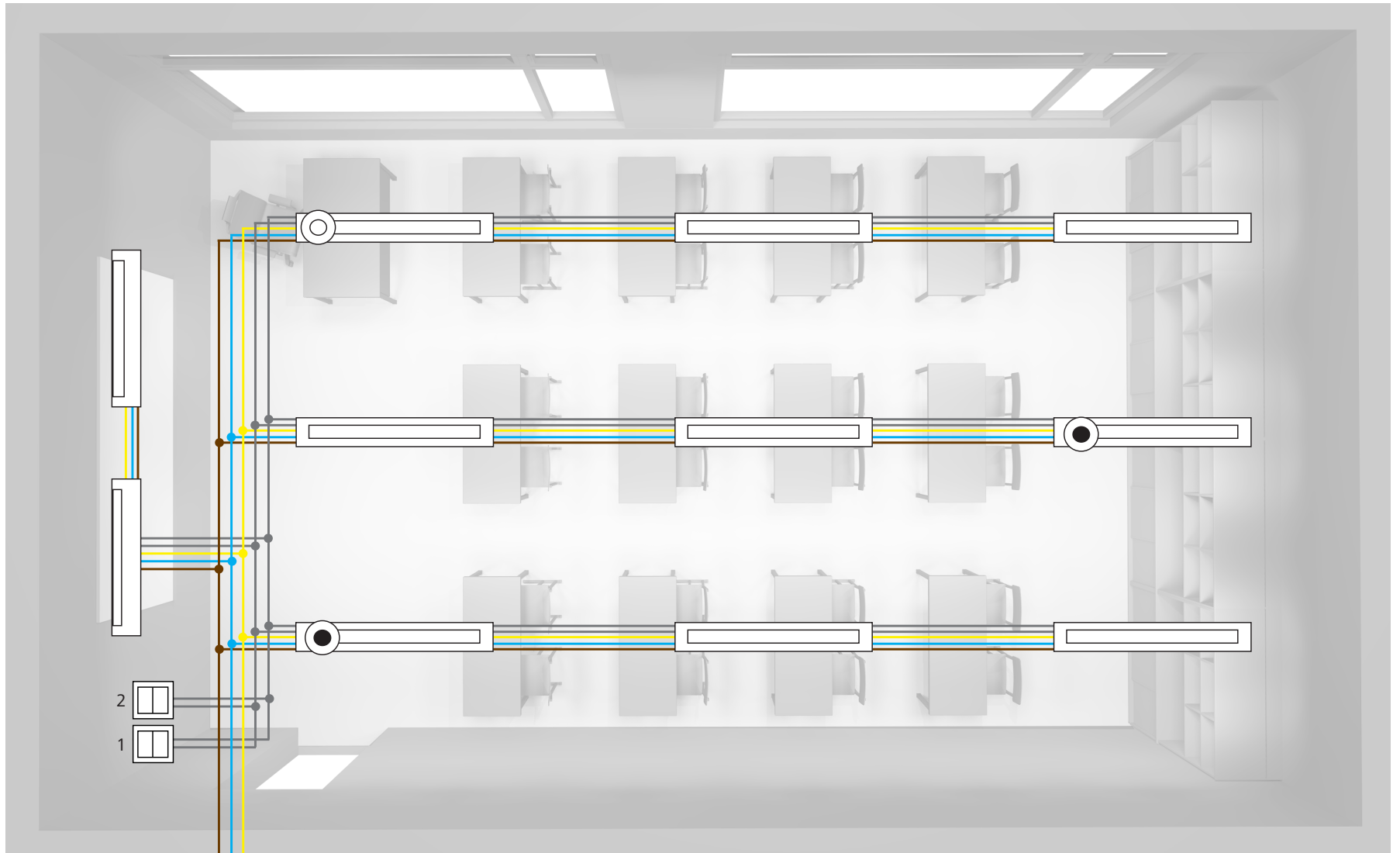
The blackboard area utilizes asymmetric LED lighting for good vertical illumination. To provide maximum uniformity, luminaires specifically developed for lighting vertical surfaces are implemented along the board with an optimal light level of 500 lux. Push button enables the comfortable control of the board lighting.



“ Create an inspiring learning space

FUNCTIONALITY

-  Master luminaire (Multi-sensor)
-  Slave luminaire (Movement sensor)
-  LED luminaire DALI
-  LED luminaire DALI for blackboard
-  1 Push button for general lighting
-  2 Push button for blackboard lighting
-  230V
-  DALI





“Benefit from the absolute adaptability of the system”

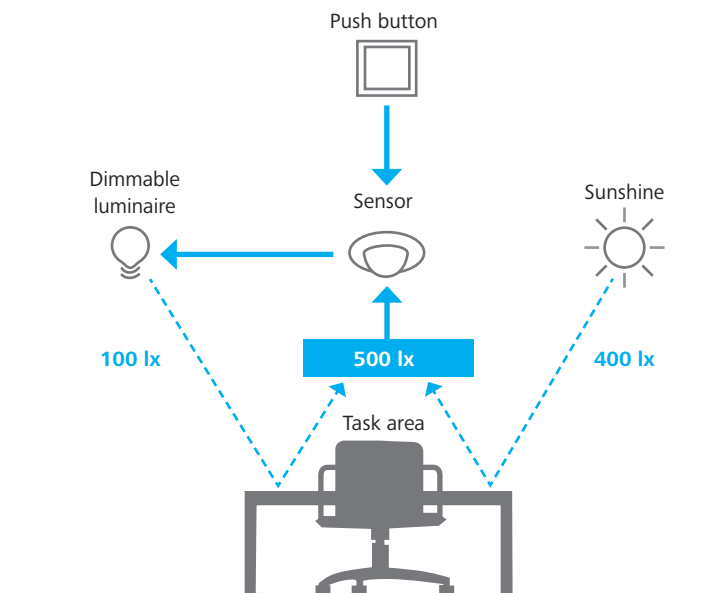
CONTROL SYSTEM

SYSTEM FUNCTIONALITY

To maximize efficiency, sensors are implemented in the solution by including a master luminaire in each lighting line. Thanks to the built-in presence detectors the system automatically turns on when someone enters the room and, to eliminate unnecessary lighting hours, the system switches off automatically when there is no movement for a certain period. The light intensity sensor sets up the optimal light level, adjusting it by the available natural light.

100%
INDEPENDENT

A fully automatic control system is implemented that ensures the 500 lux constant illumination level. The control unit manages a DALI-based plug-and-play control system. Push button enables turning the lights on and off when needed.





HUMAN CENTRIC

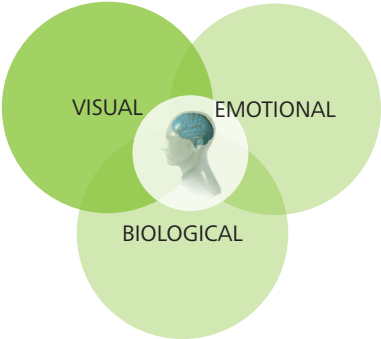
100%
SCIENTIFIC

TARGET OF THE LIGHTING

The primary objective of lighting in any the building is to provide suitable levels of illumination to enable the performance of visual tasks and promote feelings of comfort and well-being.

However, it is important that lighting also make aspace visually interesting and stimulating but not distracting or deterring. Research into the biological effects of light have made it possible to implement new ideas and technologies into the illumination of educational spaces to improve mood, performance, alertness and engagement.

For example, studies show that the incidence of mistakes can be reduced by as much as 30 % and work speed by the same amount when task areas are illuminated by with a neutral light of 4000 K and peripheral areas such as walls with a cool light of around 6500 K. Appropriate lighting can even increase reading speed.



Every school lighting system must take into account for the three essential building blocks needed to create a healthy and effective learning environment

“ Better conditions for education



HUMAN CENTRIC

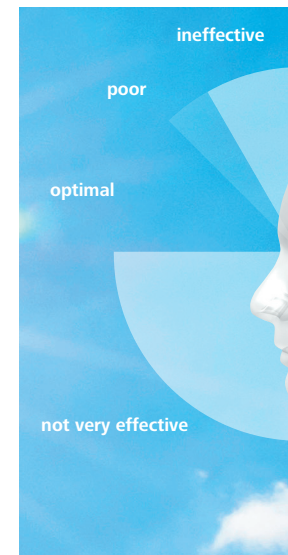
DAYLIGHT SIMULATION

It is possible to use artificial lighting in such a way as to mimic certain properties of natural light. The use of warm white accent lighting that looks like sun beams makes a space feel vibrant as well as useful to draw attention to items placed on walls such as maps or charts. The illumination of walls and ceilings will help to promote wellbeing by copying the light distribution of daylight outdoors, where light is all around and not only directed downwards, something which can be achieved by using luminaires that emit light in both a direct and indirect manner. Furthermore, the use of different illumination levels and color

100%
HEALTHILY

temperatures can have a physiological impact on the body, affecting not only the circadian rhythm but also blood pressure, heart rate and temperature.

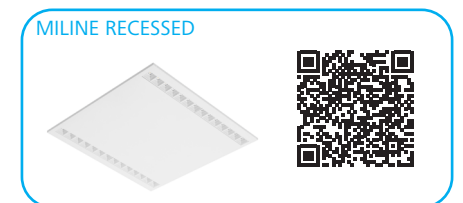
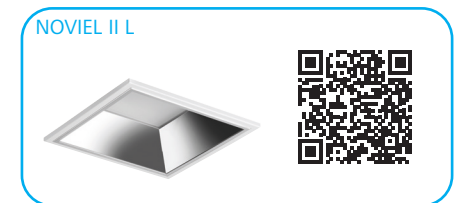
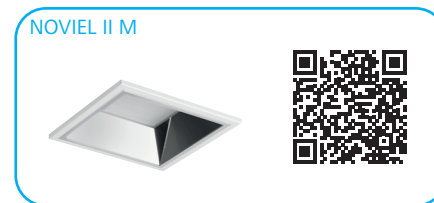
This highlights the benefit of using lighting in school environments that allow for both the easy adaptation of lighting to need as well as the creation of lighting sequences that mimic the natural changes in daylight to affect both the physiological and psychological state of students and teachers.



“ Bring daylight into indoor

availability of daylight vertical uniformity
 Soft cut-off color rendering index Long Life Service
 dynamic lighting 5-stepMacAdam E > 750 lux
 No shadow + no yellow
 lighting uniformity Constant Light Colour
 3-stepMacAdam Long Life Service B2L ready
 Very low ripple current: <= 3% at 100hz task area
 U₀ > 0,6 color rendering index CRI80 and CRI90 types (R9>0)
 presence and daylight sensor presence and daylight sensor
 harmonious distribution of brightness E > 150 lux
 WE E > 350 lux Constant Light Colour
 U₀ > 0,3
 No shadow + no yellow
 task area vertical uniformity
 No shadow + no yellow
 Soft cut-off E > 750 lux B2L ready
 vertical uniformity
 color rendering index 3-stepMacAdam
 E > 350 lux color rendering index B2L ready
 uniformity lighting uniformity
 task area
 U₀ > 0,6
 UND
 ERS
 TAND...

LUMINAIRES

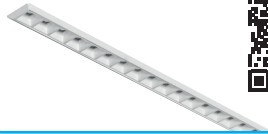


LUMINAIRES

GACRUX XTP



MILINE UNO RECESSED



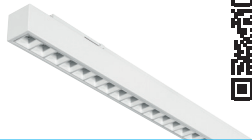
PRESTIGE LS II



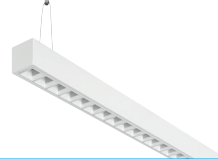
PRESTIGE LSP II



MILINE UNO SURFACED



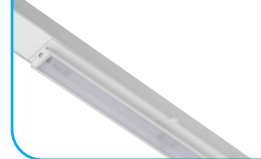
MILINE UNO SUSPENDED



PRESTIGE ONE



PRESTIGE N II



LAMBDA SURFACED



LAMBDA SUSPENDED



EMERGENCY 2930



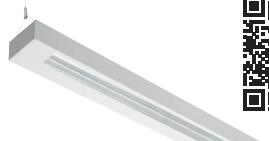
EMERGENCY 2600



LAMBDA D-I



LAMBDA LED ASYM



EMERGENCY 2900



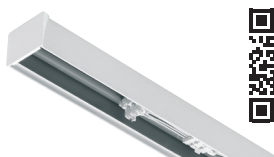
EMERGENCY 2910



PLAST H LED



PRESTIGE



EMERGENCY 2990



EMERGENCY 3100



$$O = 4a$$

$$P = a^2$$

$$O = 2a +$$

$$P = a \cdot b$$

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