Brighter schools

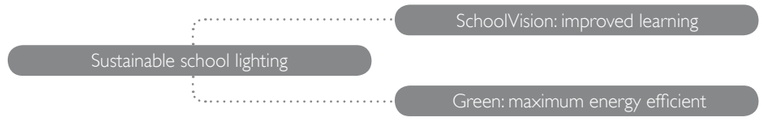
Lighting a sustainable future for education

PHILIPS

asimpleswitch.com

Brighter schools

We all want the young generation to get the best possible start in life. School plays an important part in that, providing children with the knowledge, skills and confidence to shape their own futures – and the future of our planet. So to make sure they get the most out of every lesson, it's important to provide good quality lighting. Our sustainable lighting solutions are proven to do just that, enhancing young lives, optimising the learning environment and delivering incredible results.



Feel good, learn better

Our children are growing up in a world of information overload from television, internet games, mobile phones and sms, potentially leading to restlessness, stress and poor concentration at school. Creating a stimulating learning environment can help them feel at ease and concentrate more easily, so they get the most out of every school day. Lighting plays a positive part in that, keeping young minds alert and eager to take part.

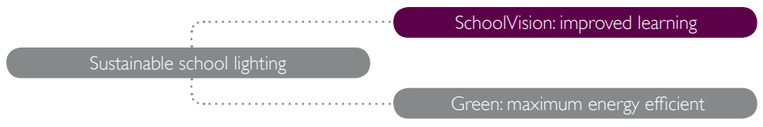
A lesson in energy saving

Rising energy prices and the pressure to reduce CO_2 are high on the curriculum for many schools. Lighting is an attractive way to save energy as older, inefficient lighting technology accounts for 50 to 70% of the electricity bill in the vast majority of school buildings. Our green switch alternatives reduce running costs and provide a better quality of light. And when combined with our daylight and presence detectors, the savings potential increases even more. Switching off lights when the classroom is empty can switch on savings of up to 80%.

When it comes to lighting a green school that optimises the learning environment for our children, we can all learn a valuable lesson. Our state-of-the-art professional lighting solutions enable you to present your school in the best possible light.

Feel good, learn better with SchoolVision

SchoolVision is a new classroom lighting solution that helps to improve learning conditions by bringing the dynamics of daylight into the classroom. It keeps young minds alert, concentrated, relaxed and eager to take part, optimising learning results for teachers and pupils.



Every lesson is different

SchoolVision allows the teacher to control the classroom atmosphere to create exactly the right ambience and mood - whatever the time of day, whatever the lesson. The system features four dedicated classroom scenes that can be selected via a touchpad to tailor the lighting ambience to the task in hand.

How does it work?

The rhythm of activity in the classroom is supported with changing patterns of warm light and daylight white. Light to relax and calm or engage and stimulate. The teacher selects one of four dedicated classroom scenes – Energy, Focus, Calm or Normal – via a touchpad. Each lighting scene offers visual comfort, with no shadows or glare.

Four lighting scenarios

In the Normal scene standard light levels helps pupils to pay attention and listen to the teacher making it suitable for regular classroom activities. When pupils need to be more active in the early morning or after lunch, the cool fresh light in the Energy scene helps to invigorate them.
For more challenging tasks, tests or exams the teacher can switch to the fresh, bright light in the Focus scene to aid concentration. And finally, the warm light in the Calm scene brings a relaxing ambience to individual work or quiet time.

What are the benefits?

By bringing the dynamics of daylight indoors, SchoolVision creates an outstanding learning environment that gives pupils the very best start in school. Not only does the high quality light comply with all relevant norms, it's also energy efficient. Daylight sensors dim the lights when there is enough natural daylight and presence detectors turn the lights off when the classroom is empty. The SchoolVision solution consumes slightly more energy than the maximum energy-efficient solution for schools. Compared to old, inefficient lighting solutions installed before the 1980s, it could result in energy savings of up to 57%. No wonder the idea is spreading right around the globe!

Energy

What: Higher intensity level, very cool colour tone

When: Supports a fresh start of the day (morning) or afternoon (after lunch)

Normal

What: Standard intensity level, standard colour tone

When: Normal class lesson

Calm

What: Standard intensity level, warm colour tone

When: Supports to calm a class that is too hyperactive

Focus

What: Highest intensity level, cool colour tone

When: Supports concentration for a test

The results are clear

The pioneering SchoolVision solution was independently tested by the Universitätsklinikum Hamburg-Eppendorf as part of a year-long scientific experiment in schools across Hamburg, Germany. A total of 166 schoolchildren aged between 8 and 16 took part, along with 18 teachers. The study covered a range of classes in different types of schools. Prior to the study, the existing lighting in each classroom was replaced with the innovative SchoolVision solution.

Astonishing improvements

The scientists were astonished with the results. Attention span, concentration and the behaviour of pupils all improved significantly when the dynamics of daylight were brought into the classroom. Not only did their performance improve, they read faster and made fewer mistakes.

The figures speak for themselves

Reading speed increased by almost 35% in the SchoolVision experiment. The pupils also read an average of 1,051 words in a set period, compared with 780 in the baseline measurement. And the results of the concentration test were even clearer. Here the frequency of errors dropped by almost 45% from an average of 17.45 errors to an average of just 9.

SchoolVision and hyperactivity

The study also examined the effects of dynamic SchoolVision light on aggression and hyperactivity. Although the perceived reduction in aggression was not found to be within significant limits, video evidence showed a distinct change in levels of hyperactivity. In fact, observed hyperactivity dropped by up to 76% when pupils were given a mathematical problem to solve under the 'calm' lighting conditions, a figure that the baseline measurement and control group did not even come close to.

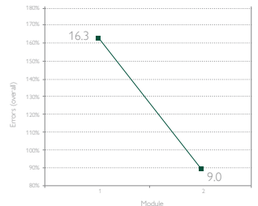
Full marks from teachers and pupils

Making the classroom more comfortable for each activity has a positive benefit for both teachers and pupils. In fact, School-Vision is so popular that research shows in some instances children even asked for a specific light setting themselves.

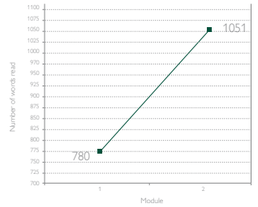
Results from the study in Hamburg

Study at 166 students (8-16 years)

- Concentration: 45% fewer errors made
- Reading: 35% more words read
- Restlessness: 77% decrease

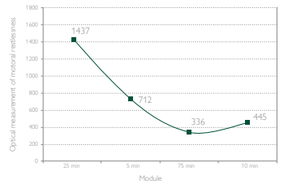


Errors relating to concentration -44.9%



Reading performance +34.8%

Universitätsklinikum Hamburg-Eppendorf



Restlessness -76.6%

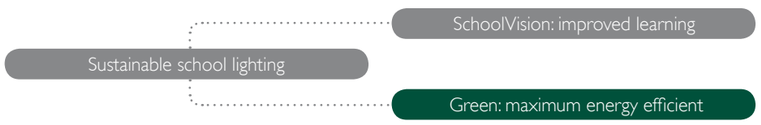
Source: "Wirksamkeit von dynamischen Licht in Hamburger Schulklassen", May 2009
Universitätsklinikum Hamburg-Eppendorf, Klinik und Poliklinik für Kinder- und Jugendpsychosomatik, Michael Schulte-Marktwort, Claus Barkmann & Nino Wessolowski
http://www.uke.de/kliniken/kinderpsychosomatik/index_53560.php

"I helped my school save costs and the environment." By simply re-lamping hallways and classrooms with Philips MASTER TL-D Eco lamps we saved more than 10% energy and reduced our CO_2 emissions. So, choosing responsible lighting has never been easier. It's a simple switch."

Mr. Hans Verbraak (Director of primary school De Sponder, The Netherlands)

Green: a lesson in energy saving

Good lighting doesn't just enhance learning; it can improve your school's green credentials too. Lighting consumes a large proportion (more than 70%) of the electricity used in schools, yet almost all schools still have old, inefficient systems that drain energy and school finances. It's time to switch to our green alternatives and save up to 80% energy.



Additional savings can be achieved by applying Lighting controls.

Switch to green

Today's energy saving lighting solutions provide significant benefits in the learning environment and have the potential to deliver huge savings. Not only do our green solutions produce a better quality of light that respects all relevant norms, they also cost less to run thanks to their reduced energy consumption. And that means fewer CO2 emissions as well. A solution to overburdened school finances that helps to save the environment too.

So how can you make the switch for your school?

Philips offers a number of ways to switch over to energy-efficient lighting for your school. The simplest solution is to upgrade your standard TL fluorescent lamps with electromagnetic ballasts to TL5 fluorescent lamps with electronic gear. Energy savings of 30% are possible from the moment you make the switch. Go one step further by adding lighting controls such as ActiLume with presence detection and daylight dimming and you could save even more.

Alternatively you could upgrade your luminaires. Innovative solutions such as the EFix TL5 luminaire range offer significant energy savings with high efficiency and maximum comfort. Apply ActiLume in this scenario and the combination of upgraded luminaire and lighting controls could save you up to 80% of the energy used by older, fluorescent lighting systems.

It's time to switch

Climate change and the effect that CO_2 emissions are having on our planet are high on everyone's agenda, so it's natural to want to save energy. But with more and more legislation being introduced that concerns the use of lighting in schools, you need to make the green switch fast. We can help you get full marks by updating you on European environmental legislation.

Light and legislation

The EU has set a target to reduce total energy consumption by 20% before 2020. In order to reach this target the EU developed legislative directives. One of them is the EuP Directive to reduce the environmental impact of energy-using products. Measures have been put in place to determine the minimal energy efficiency requirements of lighting, which automatically means that some products will be phased out according to the timetable shown here.

Future-proof lighting

Philips is prepared for the changeover. Our lighting solutions for schools provide a complete range of alternatives, all of which comply with the latest legislation. What's more, we're making sure you stay well ahead by phasing out conventional fluorescent gear and switching to highly efficient electronic gear. A move that goes well beyond the legislation, which doesn't require that until 2017. So you can make a green switch that offers a lower cost of ownership compared to conventional solutions and enjoy even more lighting possibilities for your school.

Timetable for discontinuation of inefficient lamps

Every year per September	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Frosted Incandescent lamps	Not permitted								
Clear Incandescent lamps 100W	Not permitted								
Clear Incandescent lamps 75W	Permitted	Not permitted							
Clear Incandescent lamps 60W	Permitted		Not permitted						
Clear Incandescent lamps 15W, 25W, 40W	Permitted			Not permitted					
Every year per April	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
TL-D standard lamps (/33, /54)	Permitted	Not permitted							
T12 lamps	Permitted			Not permitted					
Mercury vapour lamps	Permitted						Not permitted		

For more information, visit www.philips.com/lighting

School overview

\\ 01 . Classroom SchoolVision

\\ 02 . Classroom Green

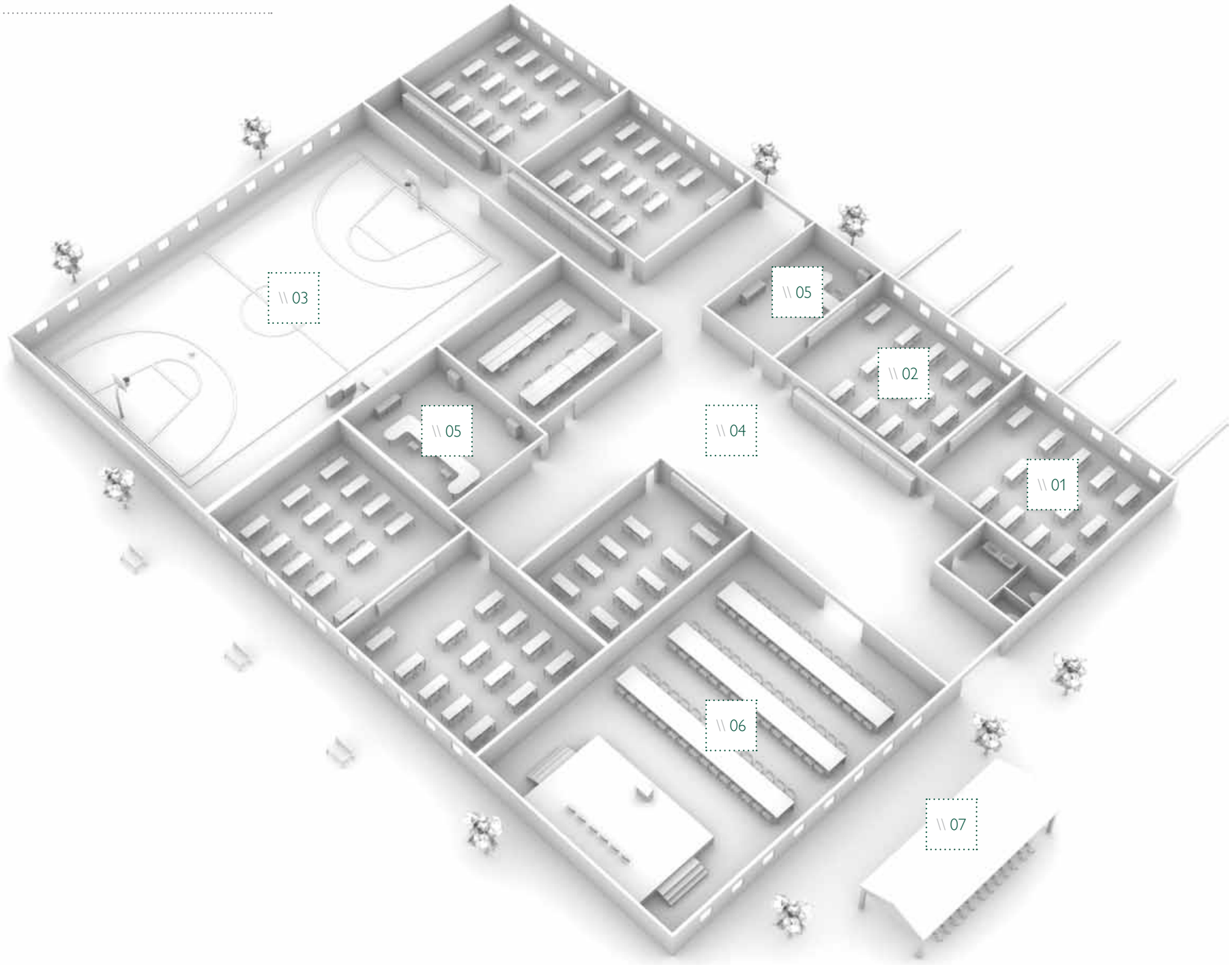
\\ 03 . Gym

\\ 04 . Corridors

\\ 05 . Offices

\\ 06 . Auditorium

\\ 07 . Outdoors



\\01 . Classroom SchoolVision

Light can create a healthy, stimulating environment that helps pupils to get the most out of each day. The SchoolVision concept is an energy-efficient system that helps to improve learning conditions by bringing the dynamics of daylight into the classroom. It keeps young minds alert, concentrated and eager to take part - whatever the time of day, whatever the lesson.

Veldvest primary school, Wintelre, the Netherlands

	Reference situation 8 x TCS097 2 x TL-D 58W/640 opal diffuser; conventional ballast Schoolboard 2x TL-D 58W, conventional ballast	New solution, example SchoolVision: 8 x SchoolVision TCS477 1 x TL5 49W/827, 2 x TL5 49W/452 MLO ND, HF ballast LRM2095 OccuPlus SchoolVision 2 x SchoolVision Schoolboard lighting TCS477 49W A
Surface (m^2)	62,64	62,64
Burning hours (per year)	2,000	2,000
Used W/m^2	21.2	9.4
kWh/year	2,600	1,100
Energy saving		**57%**
CO_2 reduction (kg) over lifetime (15 yr.)		9,000
Energy cost saving over lifetime (15 years)		**€ 2,700.00**

A typical example based on the most common scenario (energy price € 0.12 kWh, 0.42 kg CO_2/kWh))

A

\\ 01 . SchoolVision Surface mounted TCS477

- Enhances well-being and performance
- Controls environments by adapting light to task and mood
- Lights flexible spaces for different purposes, people and times

B

\\ 02 . LRM2095 OccuPlus SchoolVision

- Save up to 55% energy with occupancy control and daylight regulation
- Scene specific dimming
- Easy and quick installation

C

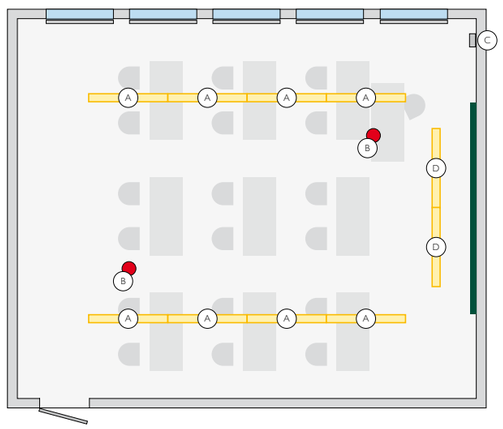
\\ 04 . UID2096 TP SchoolVision Advanced

- An intuitive control panel that offers feedback on the active lighting scene using LEDs.
- Suited for recessed mounting
- Also available in a basic version

D

\\ 05 . SchoolVision School-board lighting TCS477

- The assymetric beam only lights the school board
- High quality luminaire
- Energy-efficient



\\ Fast Facts

Client
In der Alten Forst Schule
Project
Classroom lighting
Location
Hamburg, Germany
Light sources / Luminaires
Philips SchoolVision with Dynamic Lighting
More info
www.philips.com/schoolvision

In der Alten Forst, Hamburg, Germany

"In der Alten Forst" is an innovative primary school in Hamburg, Germany. To discover what effect light could have on learning, the school took part in a scientific research conducted by Universitätsklinikum Hamburg-Eppendorf. Scientifically proven standard tests were used to measure the pupils' levels of attention and concentration with dynamic lighting compared with those of a baseline measurement.

How did they do it?

The existing lighting in each classroom was replaced with the Philips SchoolVision lighting solution. Four dedicated lighting scenes were available for the teacher to select via a touchpad. By varying the balance between light intensity and colour tone/temperature the scenes create a particular ambience to suit the task or time of day.

What were the results?

The results showed just how effective the SchoolVision solution can be. Reading speed increased by 35%, errors were reduced by 45% and hyperactive behaviour dropped by up to 76% under the new lighting conditions. SchoolVision has created an outstanding learning environment that gives pupils at In der Alten Forst the very best start in school.

Source: "Wirksamkeit von dynamischen Licht in Hamburger Schulklassen", May 2009
Universitätsklinikum Hamburg-Eppendorf, Klinik und Poliklinik für Kinder- und Jugendpsychosomatik, Michael Schulte-Markwort, Claus Barkmann & Nino Wessolowski
www.uke.de/kliniken/kinderspychosomatik/index_53560.php

"We saw for ourselves and the results confirmed that the specific application of light really can have a positive effect on learning and the learning environment."

Andreas Wiedemann, School Director

\\ Fast Facts

Client
Veldvest primary school
Project
Classroom lighting
Location
Wintelre, the Netherlands
Light sources / Luminaires
SchoolVision solution
More info
www.philips.com/schoolvision

Veldvest primary school, Wintelre, the Netherlands

The Veldvest primary school is a school that takes the individual talents of the pupils as a starting point, the school recognises that environmental factors can play an important role in how children learn. Light can also have a positive influence on mood. Not only can it add to the feeling of well-being, it also influences attention and concentration.

How did they do it?

The existing lighting in two classrooms was replaced with the Philips SchoolVision lighting solution. Four dedicated lighting scenes were available for the teacher to select via a touchpad. By varying the balance between light intensity and colour tone/temperature the scenes create a particular ambience to suit the task or time of day.

What were the results?

Teachers and pupils find it enjoyable to work in the SchoolVision classrooms. Preliminary results show that immediately after installation of the SchoolVision solution, the pupils scored average 8.7% higher on a concentration test. After one month, this score was even increased to 13.6% compared to the previous situation, without the SchoolVision solution. In the longer term the results will even be better!

"With SchoolVision it's easier for pupils to concentrate so that they can achieve better learning results."

Tamara Voorjans, teacher, Veldvest primary school

\\02 . Classroom Green

Education budgets are stretched more than ever before. That's why our sustainable solutions are also designed to help with school finances. Clever features adjust the lighting to provide comfortable, constant levels throughout the day. And switch the lights off when the classroom is empty. Energy-efficient lighting solutions that deliver great results for everyone.

	Reference situation 8 x TCS097 2 x TL-D 58W/640 opal diffuser; conventional ballast Schoolboard 2x TL-D 58W, conventional ballast	New solution, example 8 x EFix TCS260 1 x TL5 35W/840 D6 optic, HF ballast Occuplus Schoolboard 2 x EFix TCS260 80W A
Surface (m^2)	62,64	62,64
Burning hours (per year)	2,000	2,000
Used W/m^2	21.2	4.4
kWh/year	2,600	500
Energy saving		**80%**
CO_2 reduction (kg) over lifetime (15 yr.)		12,000
Energy cost saving over lifetime (15 years)		**€ 3,900.00**

A typical example based on the most common scenario (energy price € 0.12 kWh, 0.42 kg CO_2/kWh))

save up to 30% (A)

\\ 01 . EFix

- Simple mounting
- Optimised for general lighting in open plan spaces
- Designed for a wide range of ceiling types

save up to 55% (B)

\\ 02 . OccuPlus

- Save up to 55% energy with occupancy control and daylight regulation
- Versatile and reliable, works with any luminaire or lamp
- Easy and quick installation

save up to 10% (C)

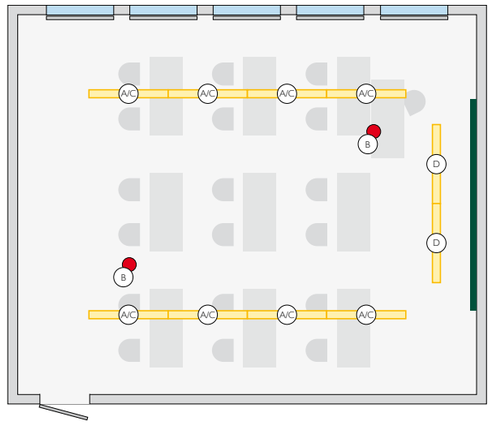
\\ 03 . MASTER TL5/TL-D Eco

- Most energy-efficient, one year payback time
- Simple lamp switch solution, no disruption
- No compromise on light quality

save up to 15% (D)

\\ 04 . EFix Schoolboard lighting TCS260

- The assymetric beam only lights the school board
- High quality luminaire
- Energy-efficient



\\ Fast Facts

Client
Elouge primary school
Project
Classroom lighting
Location
Dour, Belgium
Light sources / Luminaires
Philips Extendolight TCS398 TL5 49wM6, ActiLume-sensor
More info
www.philips.com/school-lighting

Elouges primary school, Hainaut Province, Belgium

The Elouge primary school in Belgium's Hainaut Province was looking to upgrade their lighting with a solution that would provide a brighter, more eco-friendly learning experience to support their sustainable enterprise philosophy. Lighting represents 70% of the school's energy consumption so it was vital that the solution was as energy-efficient as possible without compromising on the quality of light.

How did they do it?

The new automated lighting system with intelligent technology monitors the intensity of natural light to optimise the output of classroom lighting throughout the day. To maintain complete control over energy use, the motion detection sensors switch off when the classroom is empty.

What were the results?

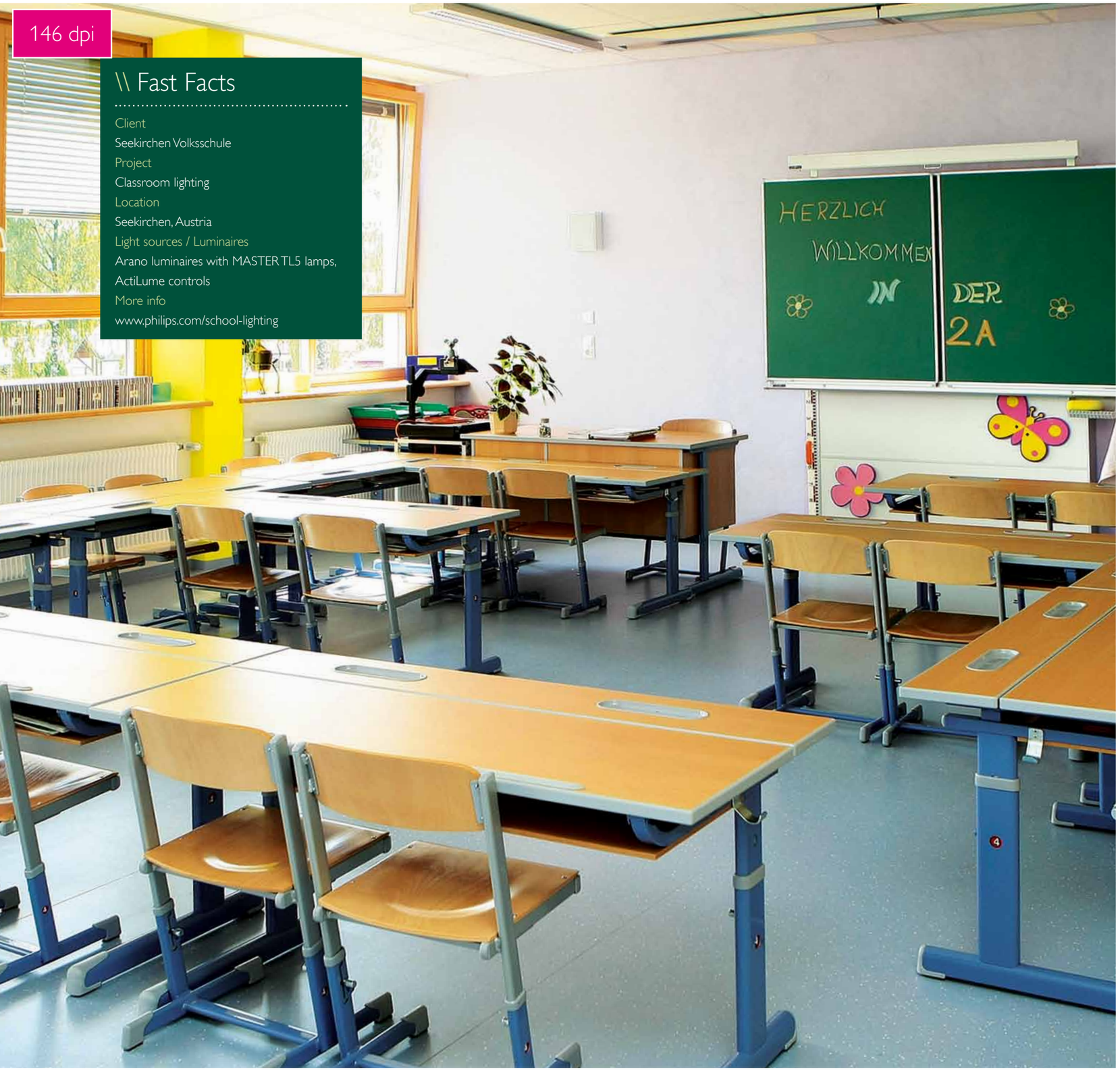
Combined with the latest low-energy lighting the complete system now saves up to 80% of the electricity used by the old system.

save 80%

"At the school 70% of our energy use is due to lighting. The new system really helps us to save energy, particularly when the classrooms are not in use, and the resulting savings add up to €2.226 per year."

Claudine Coolsaet, Education Officer, Municipality of Dour

146 dpi



\\ Fast Facts

Client
Seekirchen Volksschule
Project
Classroom lighting
Location
Seekirchen, Austria
Light sources / Luminaires
Arano luminaires with MASTER TL5 lamps, ActiLume controls
More info
www.philips.com/school-lighting

Volksschule, Seekirchen am Wallersee, Austria

The elementary school in Seerkirchen wanted to undertake an extensive programme of renovation to improve the learning environment in their school building. The school's main concern was to create a positive atmosphere with the high quality lighting that is so important for effective teaching. But like every school they also wanted to improve their energy efficiency to bring down lighting costs.

How did they do it?

The existing tub lighting and wall washers were replaced with new Arano luminaires for classroom and table lighting. Equipped with silver-coated optics they provide brighter light levels with no glare. Combined with modern MASTER TL5 lamps and the integrated ActiLume lighting control system, the new system ensures the classroom has high-quality light.

What were the results?

And thanks to daylight regulation and presence detection, the school now uses up to 58% less energy. A brighter solution that proves saving energy is as easy as child's play.

save
58%

\\03 . Gym

Lighting solutions that last longer and maintain their brightness can drastically reduce maintenance costs in high ceiling installations like gymnasiums. But in a space where children are active and need to run around freely, we know you'll have concerns about safety too. Our solutions come with all the reassurance you need.

	Reference situation 16 x TBH375 3 x MASTER TL-D 58W/640 conventional ballast	New solution, example 16 x TBH375 2 x MASTER TL-D 58W/840 HF ballast, daylight linking
Surface (m^2)	252	252
Burning hours (per year)	2,000	2,000
Used W/m^2	12.7	5.7
kWh/year	6,300	2,800
Energy saving		**55%**
CO_2 reduction (kg) over lifetime (15 yr.)		22,500
Energy cost saving over lifetime (15 years)		**€ 6,300.00**

A typical example based on the most common scenario (energy price € 0.12 kWh, 0.42 kg CO_2/kWh))

\\ 01 . TBH375

- Specially designed for multi-purpose sports halls
- Strong housing construction protects lamps against ball impact
- Lamellae prevent players from seeing directly into the lamps

\\ 02 . Pacific

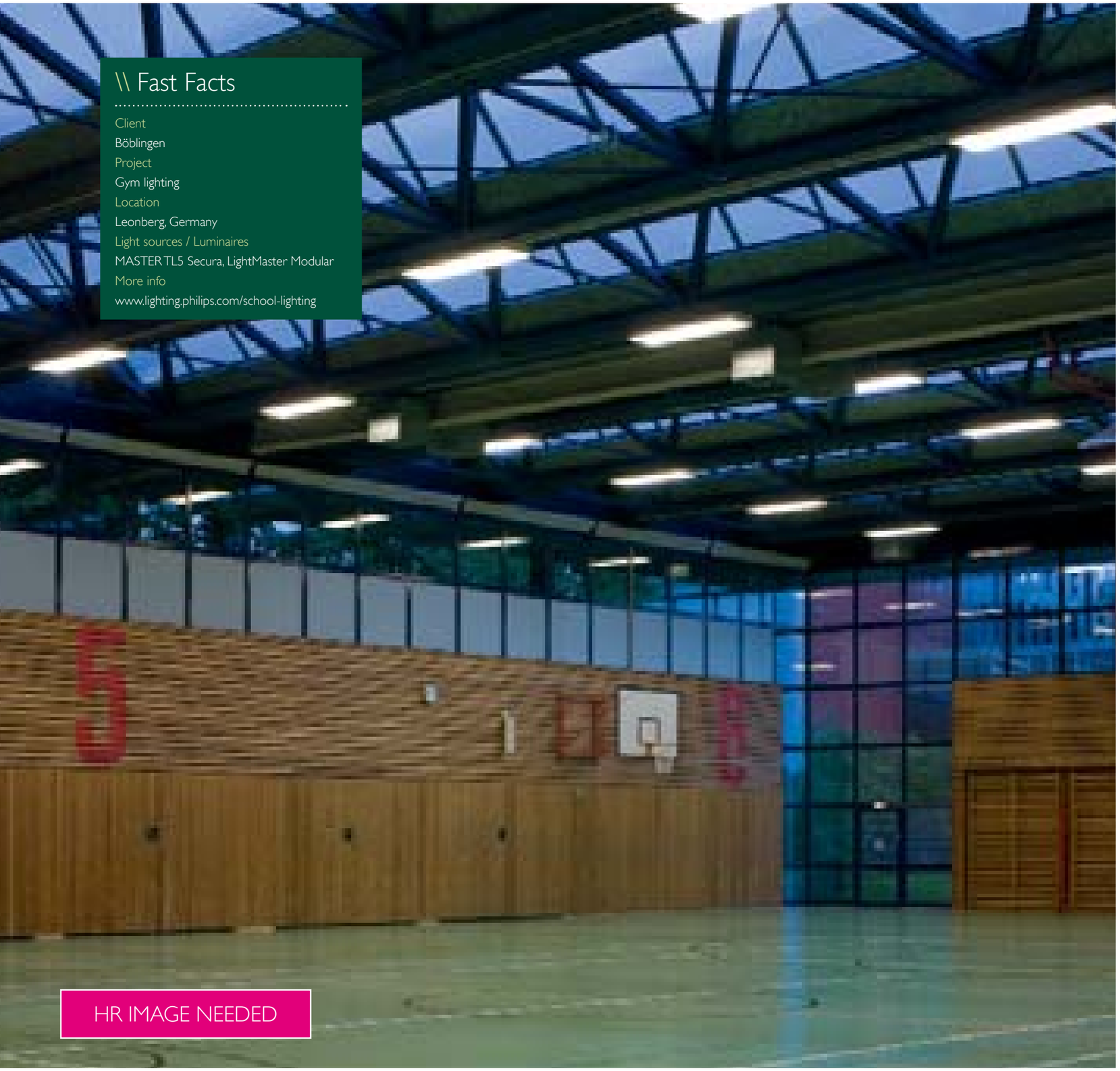
- Shock, dust and waterproof
- Flexible for individual or in-line mounting
- Easy installation - just a simple 'click'

\\ 03 . Master TL-D Secura

- Most energy-efficient, one year payback time
- Simple lamp switch solution, no disruption
- No compromise on light quality

\\ 04 . Master TL5 HE

- Allows system miniaturisation and maximum luminaire design freedom
- Lamp lengths enable easy fitting into ceiling module systems
- Offers higher efficiencies and energy savings



\\ Fast Facts

Client
Böblingen
Project
Gym lighting
Location
Leonberg, Germany
Light sources / Luminaires
MASTER TL5 Secura, LightMaster Modular
More info
www.lighting.philips.com/school-lighting

HR IMAGE NEEDED

Sporthalle Böblingen, Germany

The Leonberg school in the county of Böblingen offers students a wide variety of training and physical training activities. To ensure that students were provided with a safe and well lit environment in its sports hall, the school installed a new lighting installation in 2008.

How did they do it?

The school chose MASTER TL5 Secura lamps with adjustable electronic ballasts. Not only are they impact resistant and highly efficient, coupled with intelligent daylight control and presence detection, they significantly reduce energy costs. When daylight levels are high, the lights are dimmed, reducing energy use. What's more, when the sports hall is not in use, the lights are automatically switched off.

What were the results?

The result is incredible energy savings of 60%. In fact, the installation is so successful, Leonberg is sure to become the lighting standard for other schools in the Böblingen region to follow.

save 60%

\\04 . Corridors

School corridors and stairways often have little or no natural daylight. The right lighting solutions can turn them into safer spaces that feel more pleasant and help to guide pupils to their next lesson. And because energy costs are a key priority, our presence detection solutions switch off lighting when it's not needed, so you can switch on the savings.

	Reference situation 9 x Fugato Compact FBS261 2 x PL-L 18 W/840 conventional ballast	New solution, example 9 x LuxSpace BBS480 LED 4000 K OccuSwitch
Surface (m^2)	32	32
Burning hours (per year)	2,000	2,000
Used W/m^2	9.5	3.1
kWh/year	600	100
Energy saving		**75%**
CO_2 reduction (kg) over lifetime (15 yr.)		3,000
Energy cost saving over lifetime (15 years)		**€ 900.00**

A typical example based on the most common scenario (energy price € 0.12 kWh, 0.42 kg CO_2/kWh))

save up to 50%

\\ 01 . LuxSpace

- Highly energy-efficient, sustainable solution
- LED technology for consistent light output
- Fit and forget, easy installation, long lifetime

save up to 20%

\\ 01 . CoreView

- For general illumination
- An affordable LED luminaire that provides a great combination of energy saving and good quality lighting

save up to 30%

\\ 03 . Efix

- Simple mounting
- Optimised for general lighting in open plan offices
- Designed for a wide range of ceiling types

save up to 30%

\\ 04 . OccuSwitch

- Save 30% energy with automatic switch off when no one is around
- Versatile and reliable, works with any luminaire or lamp
- Easy and quick installation

save up to 10%

\\ 05 . MASTER TL-D/TL5 Eco

- Most energy-efficient, one year payback time
- Simple lamp switch solution, no disruption
- No compromise on light quality

De Sponder primary school, The Netherlands

When Philips Lighting in Roosendaal decided to celebrate their 60th anniversary in a sustainable way, it proved to be a great lesson for all the primary schools in the area. De Sponder, a school for special primary education with 380 pupils, was the first to benefit from the initiative of free energy-efficient and energy-saving replacement lamps for their entire school.

How did they do it?

Philips was keen for their employees to undertake sustainable actions and demonstrate their concern for the environment. A team of Philips employees, teachers and pupils' parents replaced all the old lamps at the school with 650 MASTER TL-D Eco lamps.

What were the results?

Compared to the old lamps, the MASTER TL-D Eco lamps are expected to save the school 10% in energy usage, a figure that translates into hundreds of euro per year.

\\ Fast Facts

Client
De Sponder primary school
Project
Corridor lighting
Location
Roosendaal, The Netherlands
Light sources / Luminaires
650 MASTER TL-D Eco lamps (51W)
More info
www.lighting.philips.com/school-lighting

"This we can of course invest in other activities that benefit the children of our school. Moreover, we are teaching the children that with responsible electricity us, we also contribute to a better environment"

Hans Verbaak, Director of primary school De Sponder

save 10%

\\05 . Offices

Cell offices and internal staff rooms provide welcome peace and for teachers and school officials. But they often lack natural daylight which can lead to wasted energy if lights are left on after they're no longer needed. Our occupancy controls and programmable settings will ensure you switch on the maximum savings.

	Reference situation 4 x TBS330 1 x MASTER TL-D 58W/840 L1 optic, conventional ballast	New solution, example 4 x Smartform TBS460 1 X MASTER TL5 49W/840 D8 optic, HF ballast ActiLume
Surface (m^2)	19.44	19.44
Burning hours (per year)	2,500	2,500
Used W/m^2	13.7	5.4
kWh/year	600	200
Energy saving		**50%**
CO_2 reduction (kg) over lifetime (15 yr.)		3,000
Energy cost saving over lifetime (15 years)		**€ 600.00**

A typical example based on the most common scenario (energy price € 0.12 kWh, 0.42 kg CO_2/kWh))

save up to 70%

\\ 01 . SmartForm + Actilume

- Creates a comfortable 'light surface'
- Designed for a wide range of ceiling types
- Great design with an excellent finish

save up to 70%

\\ 02 . SmartForm + ActiLume

- Energy-efficient, combination of highly efficient optics, gear, lamps and intelligent controls
- Achieves a high level of visual discreteness through its perceived thinness, simplicity and clean shape.

save up to 30%

\\ 03 . EFix

- Simple mounting
- Optimised for general lighting in open plan spaces
- Designed for a wide range of ceiling types

save up to 55%

\\ 04 . OccuPlus

- Save up to 55% energy with occupancy control and daylight regulation
- Versatile and reliable, works with any luminaire or lamp
- Easy and quick installation

save up to 10%

\\ 05 . MASTER TL5 Eco

- Most energy-efficient, one year payback time
- Simple lamp switch solution, no disruption
- No compromise on light quality

\\ 05 . ToBeTouched

- Easy to use and programme light settings
- Stylish design with a glow ring that lights up on approach
- Easy installation

\\06 . Auditorium

The school auditorium is a place where students and teachers gather together for a wide variety of activities. The right lighting can help create the right atmosphere for everything from a fresh start to the day at morning assembly. To creating a fresh, clean and appetizing setting for lunchtime dining. To creating memorable moments and light effects for school plays. Combined with presence detection to switch lights off when the hall is empty, schools will welcome the savings too.

\\ 01 . LuxSpace

- Highly energy-efficient, sustainable solution
- LED technology for consistent light output
- Fit and forget, easy installation, long lifetime

\\ 02 . CoreView

- For general illumination
- An affordable LED luminaire that provides a great combination of energy saving and good quality lighting

\\ 03 . OccuPlus

- Save up to 55% energy with occupancy control and daylight regulation
- Versatile and reliable, works with any luminaire or lamp
- Easy and quick installation

\\ 04 . Pacific Profile spotlight

- Our popular Pacific profile spotlights with their large insulated handles are ideal for student users
- Focus is smooth and controls are easy to operate

\\ 05 . Wallrack dimmer cabinet

- Designed for school applications where rugged performance is needed
- Microprocessor controls require no set up or maintenance

\\ 06 . 200 Console

- Easy to use and operate
- Intuitive interface with built in special effects
- Rugged construction in a portable use anywhere package

\\06 . Outdoors

The car park and school playground creates the first impression of your schools for pupils, parents and visitors. Make it feel safe and welcoming on dark mornings and afternoons with bright white, LED light. Green switch solutions that get full marks for energy-efficiency.

save up to 80%

\\ 01 . Mini Iridium LED & Mini MileWide LED

- Most advanced green innovation and best possible TCO
- Future proof LED technology for highly energy-efficient lighting
- Less maintenance cost and long lifetime

save up to 70%

\\ 02 . CitySpirit LED

- LED technology for highly energy-efficient lighting
- Integrates perfectly into urban architecture
- Provides excellent lighting performance

\\ 03 . Koffer^2 LED & Residium LED

- Energy-efficient solution, upgradable LED module
- Constant light output, smooth light perception
- Optimum distribution with minimal light pollution

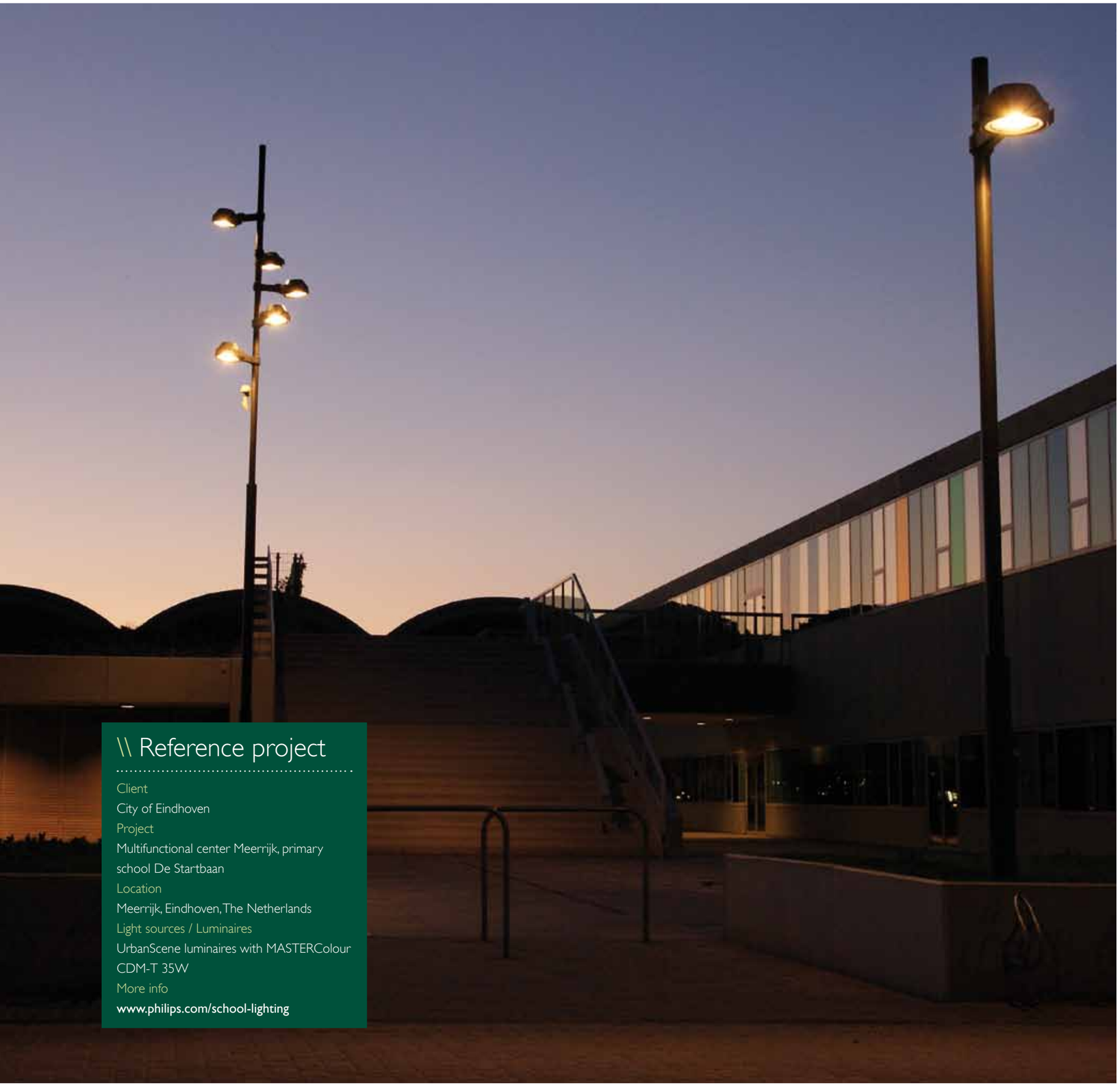
\\ 04 . UrbanScene

- All a school needs, a total solution for outdoor areas
- Create an open urban environment
- Energy saving with highly efficient lamps, gear and LED

save up to 35%

\\ 05 . Pacific

- Good quality IP66 waterproof luminaire
- Suitable for many applications
- Easy installation with Waterproof Electrical Connector connector and flexible mounting clips



\\ Reference project

Client
City of Eindhoven
Project
Multifunctional center Meerrijk, primary school De Startbaan
Location
Meerrijk, Eindhoven, The Netherlands
Light sources / Luminaires
UrbanScene luminaires with MASTERColour CDM-T 35W
More info
www.philips.com/school-lighting

De Startbaan primary school, Eindhoven, the Netherlands

Meerrijk is a multifunctional centre that forms part of the Meerhoven area in Eindhoven. The centre houses De Startbaan primary school, a day care centre, and after school care for kids, a clinic for baby care plus other organisations. Meerhoven is renowned for its scenic qualities and location. The lighting installation at Meerrijk and De Startbaan primary school is a good example of how the right lighting solution can enhance the urban environment.

How did they do it?

UrbanScene luminaires provide a complete solution with masts of different heights and sizes. This has enabled the designer to adapt the lighting at Meerrijk to different atmospheres throughout the course of the day.

What were the results?

UrbanScene has helped created a cohesive urban environment at the Meerrijk centre that is more effective at meeting the different needs and demands of the residents who use it every day.

"Any investment in our children's education is an investment in our future. Lighting can help you create outstanding learning environments in which pupils can develop and thrive. Our intelligent solutions are designed to make the switch to sustainable, energy-saving lighting as easy as possible. So saving money is child's play."

Find out more at: www.philips.com/school-lighting

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