



## Challenges

Classrooms are multitasking, multi-media environments with specific requirements. Lighting needs to be:

- Adaptable to students' activity levels over the course of a school day: from staying focused while reading and taking tests, to listening to the teachers' presentations, to relaxing during break.
- Uniform and visually comfortable, while avoiding glare
- Designed for flexible table arrangements
- Energy efficient

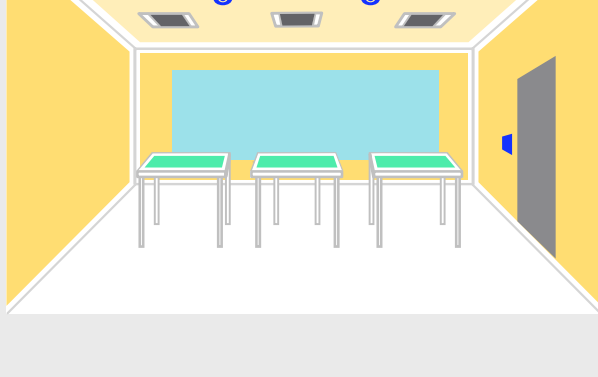
## Our solution

• Illuminate classrooms with general uniform light. This solution is usually based on a grid of recessed or surface-mounted luminaires with limited glare. The most common luminaires in these spaces are panels and light lines.

• Our lighting products contribute to productivity while supporting daytime vitality and alertness with well-designed and well-lit spaces.

• Our smart luminaires and sensors work seamlessly with smart lighting systems such as Interact Pro. This allows users to meet the lighting requirements for different visual tasks, such as different learning modes.

## Lighting design insights



### ■ Glare

Use low-glare luminaires for comfort and to improve the experience of both students and teachers.

### ■ Brightness

Keep the brightness at desks in mind. EN12464-1 requires 500 lux for classrooms.

### ■ Controls

Locate the controls directly above the desks to optimize presence detection. Lights activate instantly when sensors detect movement.

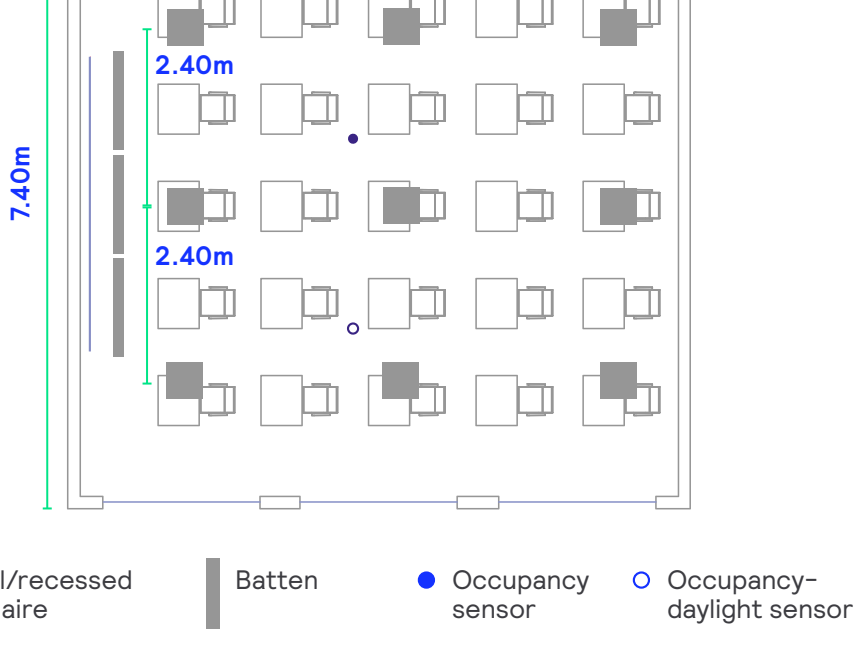
### ■ Board

For better contrast smartboards and projectors need a more dim setting. To simultaneously provide the classroom with sufficient lighting, add smart luminaires and control systems like Interact Pro.

## Standard light plan

### Typical arrangement of luminaires and stand-alone sensors

This floorplan and luminaire placement meet the minimum norm requirements for classroom lighting. Interact Ready luminaires together with smart wireless sensors enable you to access the benefits of our smart lighting system Interact Pro.



- Panel/recessed luminaire
- Batten
- Occupancy sensor
- Occupancy-daylight sensor

## Floorplan layout tips



**Place some recessed or surface-mounted luminaires above the tables.** Maximum distance: 2.4m (=3 empty 60 × 60cm tiles). Lower ceiling heights will need a shorter distance.



**Light up the board.** Place battens in front of it to make it more visible. Keep them in a different circuit, so they can be switched on and off on demand.



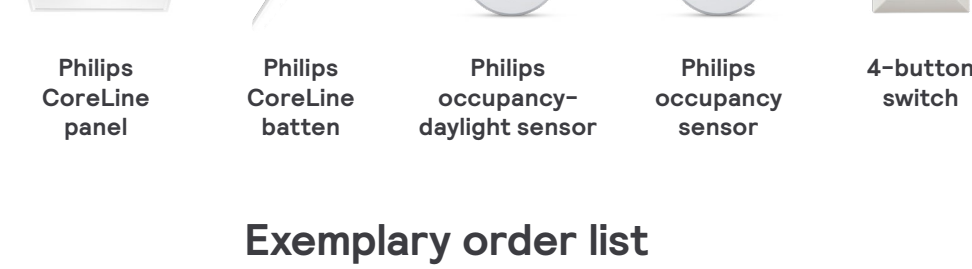
**Place daylight sensors over the tables that are closer to windows for optimal daylight detection.** Luminaires will dim with higher natural light levels leading to greater energy savings. Guidance: One sensor every 4 or 6 luminaires.



**Include some intelligent switches.** These accessories will let you pre-set different scenes (e.g. focus mode, presentation mode...)

## Product recommendations

### PHILIPS



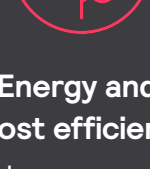
### Exemplary order list

55 m<sup>2</sup> classroom

Product name	Interact ready	Quantity
Philips CoreLine panel RC132V 36S/840 WIA W60L60 OC	interact ready.	9
Philips Coreline batten DN140B LED20S/840 WIA-E-C	interact ready.	3
Philips occupancy-daylight sensor IA CM WH	interact ready.	1
<b>Optional</b>		
Philips occupancy sensor IA CM WH	interact ready.	1
4-button switch	interact ready.	1

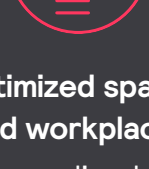
## interact

Philips luminaires and controls that are Interact Ready work seamlessly with our smart lighting system Interact Pro. It can benefit you and your customers in many ways:



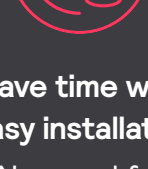
### Energy and cost efficient

Help save up to 80% energy\* with automated lighting, schedules, daylight and motion sensing.



### Optimized spaces and workplaces

Personalized and automated lighting can contribute to more wellbeing and productivity

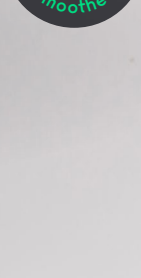


### Save time with easy installation

No need for separate antennas, radio boxes or signal cables.

\* In combination with LED lighting. Source: Building Energy Exchange 2017

Another tool to **win your next project**



Use our handy 6-step-checklist to create a lighting proposal for a classroom, and convince every potential new customer!

[Check it out](#)