



**PHILIPS**

Lighting Controls

SpaceWise Wireless



**Saving  
energy**  
wirelessly.



Designed for comfort & simplicity



# Why choose an LED luminaire with **SpaceWise Technology?**

Traditionally, controls systems have required complicated design, expensive commissioning, and additional material costs on top of an already expensive building project. The long time frame for payback made these systems a challenge to specify. With SpaceWise, you can have a solution with embedded sensors and wireless controls, without extra wiring between luminaires or to the compatible wireless switches.

- **Easy to Specify:** Out of the box solution
- **Easy to Appreciate:** Light where you need it, when you need it
- **Easy to Configure:** Wireless grouping
- **Easy to Justify:** Deep energy Savings

Forget expensive commissioning. Dimming behaviors for the typical office spaces are pre-set in the factory so only fine-tuning needs to be done on-site to take advantage of the smart dimming behaviors.

Philips is committed to the balance between energy efficiency, quality lighting, and the end-user experience. SpaceWise delivers on all three.

# Out-of-the-box solutions

## wise about your needs

Philips systems engineers calculated the optimum value features for standard office applications and pre-programmed them for you in SpaceWise. This allows us to offer you pre-packaged out-of-the-box application solutions, while also giving you the technical flexibility to tune the room light levels in the field for your desired conditions.

SpaceWise Technology is strategically designed for achieving sustainable objectives and brings you controls behaviors for the entire office suite. The 2nd generation has been designed with application modes for open plan offices, private offices, meeting rooms, corridors and emergency egress.

The dimming technology provides controls that maximize the energy savings by providing automated granular dimming in response to both occupancy sensing and daylight harvesting. Philips compatible Wireless Wall Switches (battery-free) and Scene Controllers comply with the ASHRAE/IES Standard 90.1 and California Title 24 code requirements.

### SpaceWise is:

- An ideal replacement luminaire for typical retrofit projects
- Suitable for new-build projects with compatible wireless switches
- A system with simple plug & play installation—no re-circuiting or new control wiring required

SpaceWise is currently offered in DualLED Recessed Luminaires as well as EvoKit LED Luminaire Retrofit Kits, with more options on the way.





# Save energy

## without compromise

Combined system savings from wattage & controls of

**60-75%\***

Philips LED luminaires with SpaceWise Technology offers what building owners and managers really want, deep and scalable energy savings without sacrifice. Traditionally, energy savings has come at the cost of light levels or increased glare. SpaceWise Technology delivers aggressive, ongoing savings by augmenting wattage reduction with smart granular dimming and no visual compromise.

- Light when you need it, where you need it.
- Typical estimated combined system savings from wattage and controls is 60-75%.\*
- Tested with occupants to ensure satisfaction.\*\*

\* Against a comparison baseline of 3-lamp T8 2x4' troffers on 8x10' centers, without dimming controls.

\*\* Based on before and after occupant surveys using a third party independent lighting satisfaction survey tool.

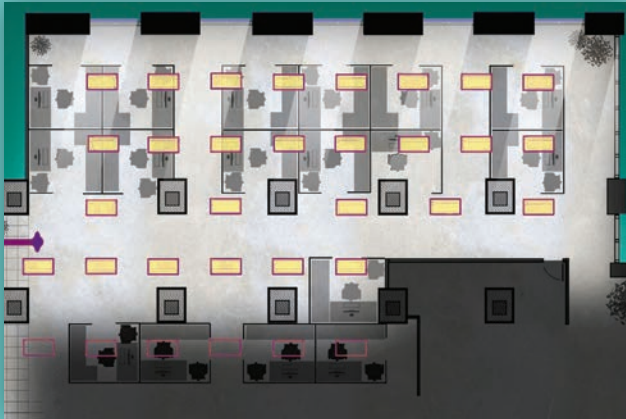
### How does it work in Open Plan?

In open plan areas, the system protects the aesthetic of the space by maintaining a background light level and will not turn off individual luminaires until the entire wireless zone is unoccupied. The dimming behaviors are gentle and unobtrusive.

Full light output is delivered only to workstations that are actually occupied so energy is not wasted on full output for transition presence. Remarkably, the background setting typically dims down to 1/3 of the output, but the visual appearance is so subtle that the difference is almost indiscernible.

# How does it work?

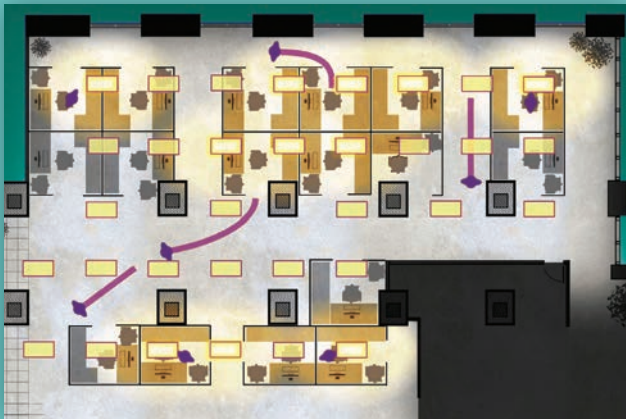
When the first occupant enters, the lighting zone brightens up gently to a background level.



As each occupant arrives at their workstation, luminaires in the immediate area brighten up to full illumination.



When people leave their workstations the luminaires gently dim to background level.



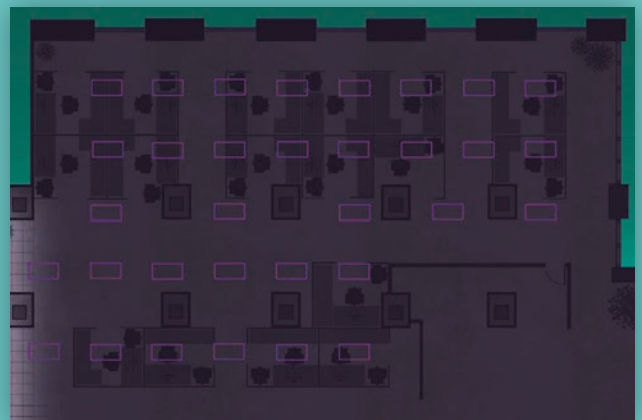
When people leave for meetings or lunch significant energy is saved.



Daylight harvesting occurs automatically, saving even more energy throughout the day.



The lighting zone turns off after the last person leaves.



# Wireless

## for easy installation

Luminaires with SpaceWise technology solutions are simple to install.

- Plug and play with easy grouping
- Stand alone system—no network, computer, or light meter required
- Auto calibration, no manual daylight commissioning

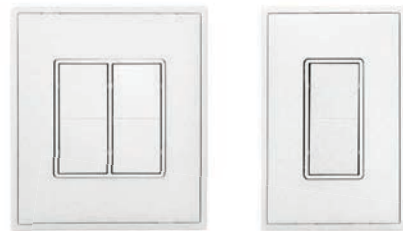
In open plan, light level preferences are ensured by allowing users to fine-tune light levels per group, to one of four settings—high, medium, low and minimum. This allows field adjustment within a typical range of 30-50 footcandles for partition height, reflectances and task requirements. Within the defined group the lights dim or brighten individually based on each luminaire's occupancy and daylight sensing coverage.

In private offices, the wireless switch supports individual dimming preferences. In meeting rooms, different scenes are available to accommodate presentations, preset dim levels, or daylight sensing.

Daylighting is truly no-hassle—there is no need to create daylighting zones or calibrate set points. Auto calibration is initiated at auto-on, which is typically once per day, and ensures the proper delivered light levels even after space re-design or churn.



Embedded controls in each luminaire combine presence detection and daylight dimming to save energy







The SpaceWise Remote is used to choose the proper room mode within the space. This initiates the dimming behaviors and operation of the wireless, battery free, kinetic switches. In an open plan space, luminaires are grouped into standalone networks\* of up to 50 luminaires. Light level preferences are then chosen per group. In private offices and meeting rooms, use the SpaceWise remote to connect the wireless wall switch or scene controller to the luminaire.

SpaceWise technology does the thinking for you. Create smarter, more comfortable and less expensive spaces.

*\* SpaceWise uses Zigbee protocol to create a standalone mesh network per group. The groups do not communicate to each other or the BMS.*



# Aggressive energy savings

SpaceWise Technology offers aggressive energy savings without compromising quality by using LED luminaire efficiency in combination with powerful dimming algorithms.

The table below depicts the range of energy savings options using an example of an indoor luminaire with SpaceWise technology.\* The input wattage is shown for each of the four user configured power settings.

In open plan office spaces, workers are in and out of their workstations frequently. During absences, the lighting will automatically dim down to the background level. This reduction ranges between 27% and 49% depending on which power setting was chosen by the user.

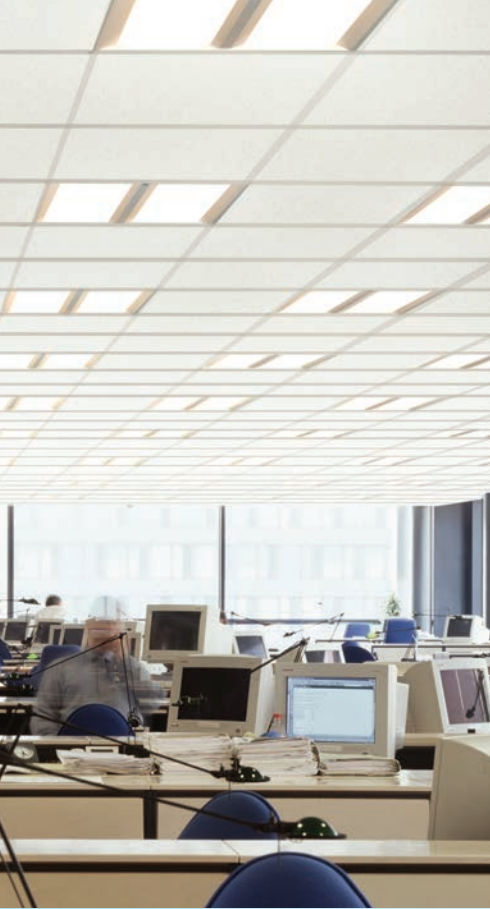
To determine energy savings, multiply the watts saved times the unoccupied hours. Typical estimated combined system savings from wattage and controls is 60-75%.\*\*

| Example Luminaire* | High Power Setting                       |                        | Medium Power Setting***                          |                        | Low Power Setting                                |                        | Minimum Power Setting                            |                        | Input Power Background Output |
|--------------------|--|------------------------|--|------------------------|--|------------------------|--|------------------------|-------------------------------|
|                    | Initial Delivered Lumens at 25°C Ambient | Input Power Max Output | Approx. Initial Delivered Lumens at 25°C Ambient | Input Power Max Output | Approx. Initial Delivered Lumens at 25°C Ambient | Input Power Max Output | Approx. Initial Delivered Lumens at 25°C Ambient | Input Power Max Output |                               |
| 2x4, 4300 Lumens   | 4,292                                    | 41W                    | 3,777  | 38W                    | 3,305  | 34W                    | 2,833  | 29W                    | 15W                           |
| 2x4, 4900 Lumens   | 4,936                                    | 48W                    | 4,344  | 44W                    | 3,801  | 39W                    | 3,258  | 34W                    | 15W                           |
| 2x2, 4400 Lumens   | 4,229                                    | 45W                    | 3,722  | 41W                    | 3,256  | 36W                    | 2,791  | 31W                    | 13W                           |
| 2x2, 3800 Lumens   | 3,731                                    | 39W                    | 3,283  | 36W                    | 2,873  | 31W                    | 2,462  | 27W                    | 13W                           |

\* Information is provided using an example luminaire, for illustrative purposes. Lumen output, efficiencies, and input wattage will vary for different luminaires. Contact your Philips representative for information about SpaceWise technology with specific luminaires.

\*\* Against a comparison baseline of 3-lamp T8 2x4' troffers on 8x10' centers, without dimming controls.

\*\*\* Medium power is the default setting. Users can change to high or low power using remote control when luminaires are grouped.



# Success Story

In a recent Chicago installation in the GSA-operated Metcalfe Federal Building, DualLED with SpaceWise was shown to save 75% of the energy consumption as compared to the designed baseline of 1.09 Watts per square foot. The annual Energy Use Intensity (EUI) of the retrofitted area was reduced from a design baseline of 3.96 kWh/ft<sup>2</sup>/yr to 0.98 kWh/ft<sup>2</sup>/year.\* Energy codes, standards and utility incentive programs are moving towards the EUI metric as a way to properly measure actual energy consumption rather than connected load (Watts per square foot).

*\* The project was installed under the GSA Green Proving Ground Program. Final results are anticipated for publication in early 2015.*



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