

Lighting and the future of physical retail

Covid-19 has accelerated the shift from physical to online retail and the future of brick-and-mortar stores is under pressure

In order to have a long-term future physical retailers should focus on offering customers a shopping experience which cannot be replicated by online retailers. It's a case of being truly innovative to attract customers in the store time and again. An important element to make this happen is lighting, including the latest lighting controls.

In a distant past, retail lighting was considered a cost-factor, its role was mainly providing enough lighting for customers and employees to move around the shop and find the merchandise. In the last decades of the 20th century a shift took place and lighting became an investment as the right lighting proved to be able to increase store sales.

One of the ways lighting manages to increase sales was optimising the presentation of certain goods in a store by slightly adjusting the spectrum of the light (by using special light sources or by adding filters to luminaires).



Picture courtesy Regent Lighting Solutions



With the conversion to LED lighting, the fine-tuning of the lighting spectrum to attract customers and enabling sales has been made easier and nowadays many LED based solutions are available for both food and fashion. For the food sector, dedicated LED's illuminate red meat, fish, bread, pastries, and fruit showing those food categories in a highly appetising way.

For fashion outlets, LED solutions are available creating lighting perfection via generating brilliant colours with pleasant warm tones and high saturation, as well as intensive and friendly white tones.

Combining LED technology and lighting controls allows the lighting to be dynamic. This enables anyone to see clothing under different light conditions in a fitting room. Traditionally this is the worst lit space in a fashion outlet, which is remarkable as many buying decisions are taken in this small space. Upgrading the lighting in a fitting room using tuneable white technology allows the customer to see a dress as it would appear on both a lunch outing or an evening event. These are the kind of unique experiences offered by physical stores which are difficult to replicate online.

The same tuneable white technology can be used across the store allowing a different look and feel for the various seasons or between sections in the store.

With LED's being a digital technology, the LED lighting installed in a store can be used for other purposes than lighting up the space, it can be used for communication purposes. Technology



Picture courtesy Megalite

embedded in LED luminaires allows the implementation of an indoor navigation system. For example, this opens the door in hyper markets and DIY stores for aisle-side promotions, and shopper assistance requests. Store lay-outs can be optimised, based on collected use data from both shoppers and staff. Li-Fi is a light-based alternative to Wi-Fi which uses light instead of radio waves to transmit data, with the potential to

be up to 100 times faster than Wi-Fi.

Another example, where lighting enables an unique proposition by physical retail, is 'grow chambers' placed in grocery stores in full view of the customers. LED-based horticultural lighting implemented in those grow chambers help in the production of super fresh organic produce with no transportation cost and no carbon emissions attributable to transportation.



Reduce your energy bills

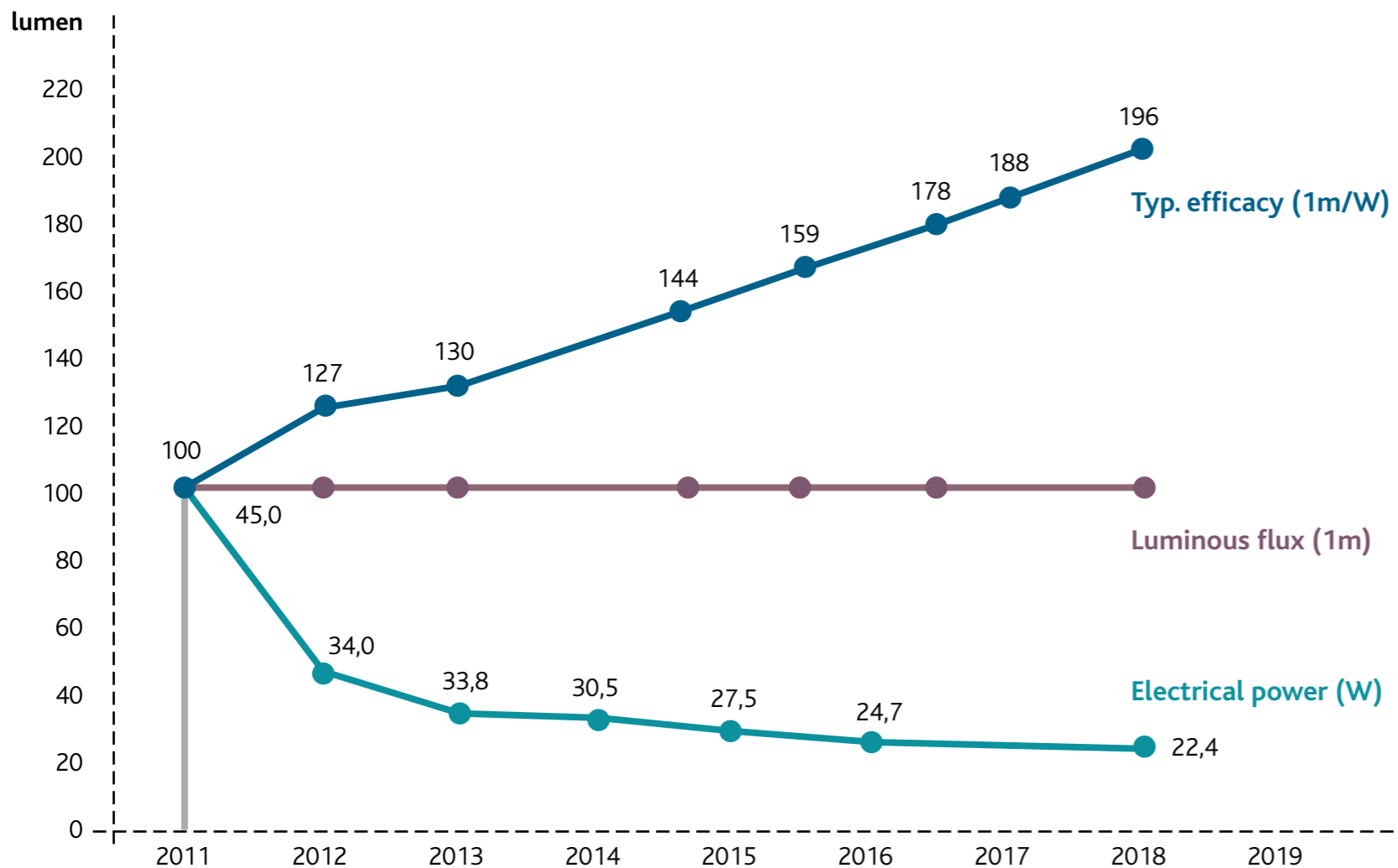
LED-based solutions, in combination with lighting controls, do not only offer exciting new possibilities, but they can also drastically reduce energy bills. LED efficacies double that of conventional lamps. They can, coupled with the directionality of LED's (meaning no light is lost in reflectors), reduce the lighting part of a stores electricity bill by 60%. A further reduction can be achieved by adding lighting controls. Additional savings on climate control are possible due to the lower heat generation offered by LED's.

LED's: combining miniaturisation and dynamics

Miniaturised, unobtrusive lighting is a major trend in retail lighting.



The increased efficacy of LED's has greatly contributed to the realisation of the miniaturisation of lighting systems. Take track-lighting: in the past this called for large spots due to the size of the conventional light source and the control gear needed to operate the lamp. Using highly efficient LED's operated by state-of-the-art electronics, allows for a high degree of miniaturisation. The electronics can be made almost invisible by 'hiding' them inside the track. The latest innovation even allows incorporating Bluetooth based wireless communication capabilities into the electronics, facilitating that other important trend – dynamic lighting solutions. **SR**



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