

CASE STUDY



CLIENT: Total Belgium NV

LOCATION: A58 Total Vliedberg, 's-Heer Arendskerke, The Netherlands

PROJECT: Installation Luci LED Downlights



The result of this installation is a safer and a far better look of the station at night.



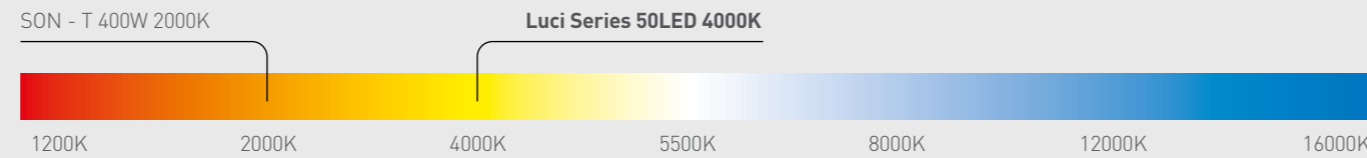
LED PILOT

At the beginning of 2014, Total Belgium NV took their first steps in the process of exploring the field of energy efficient LED lighting to support their cost reduction efforts. Total wanted to replace the SON-T 400W fittings at the TOTAL Vliedberg petrol station site. The 20 SON light fittings have a CRI of 25 / CCT of 2000K, and radiate an orange light which is old-fashioned and not up to the current market standards. Bever Innovations proposed the smart Luci Series LED Under Canopy Illumination, which is specifically designed for use at petrol filling stations, to be installed at the 24/7 highway station, Total Vliedberg.

THE INSTALLATION

The installation company was Tokheim Netherlands B.V. who won the installation tender for retrofitting different Total sites. They replaced the old canopy lights at the Total Vliedberg site, by using the smart LED under canopy illumination from Bever Innovations.

Before the installation of the Luci series, Tokheim installed a kWh& hour meter to measure the power consumption of the complete lighting system before and after (SON-T vs. Luci Smart LED). The outcome of the measured results was surprising. The SON-T lamps used 8,12 kWh per hour versus a tiny 0,7 kWh per hour for the Luci Series LED fixture, which means a saving of > 91%!



LIGHT LEVELS

Before the installation Bever measured the light levels of the old SON-T 400W fixtures on fixed defined positions. During this gauging process we concluded that the old conventional lamps were not mounted in an optimal position. (Represented by the blue line in the chart below). This also explains the wayward light image. Based on Total specifications, Bever Innovations generated an optimized Dialux light plan with enhanced positions for the 105W-50LED Luci Series Luminaires which are represented in the red line.

After the installation of the 20 Luci Series 50LED luminaires, the green line gives us the outcome of the light levels on the same spots a previously measured in the red line.

The graphic chart concludes that the light levels of the Dialux study and the light levels of the real installation are virtually the same. The outcome and uniformity of the light levels are very much enhanced.

INTELLIGENT LIGHTNING

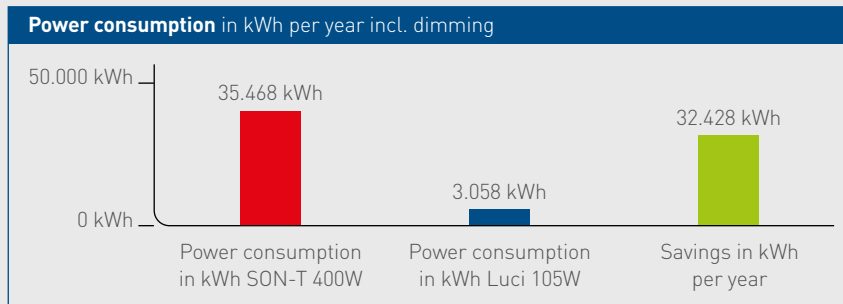
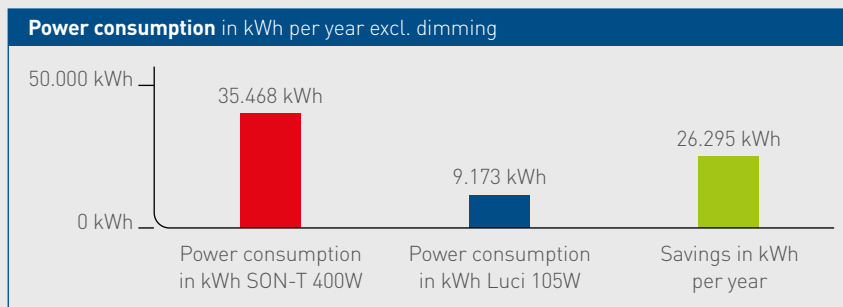
Besides the easy installation qualities with the “click & lock” mounting accessories and the high energy savings of the Luci Series, Total also wanted to experience the flexibility of the LED fixture. A crucial factor was the quality of the white light and the extra safety that comes with the high CRI level, of 85+. Due to the built-in EOS technology, light is always present when needed. The Lumen output of every fixture can be individually adjusted to meet all of the special lighting requirements of a retail petrol forecourt.

CASE STUDY

Every Luci Series has a status indicator, showing the actual status of the fixture. The light normalizer takes care of the lumen maintenance, so there is no Lumen drop during lifetime (specified @ 100.000 hours). There is a built-in daylight sensor that can be activated; the Luci Series 50LED will automatically switch on by dusk and off when it is dawn. The Light intelligent protection system (LIPS) automatically monitors 24/7 the status, temperature, voltage of the fixture. Power peaks or voltage fluctuations will be filtered-out, which keeps the fixtures in perfect shape.

Conclusion: Great looks, big savings! The result of this installation is a safer and a far better look of the station at night. By replacing the old 2000K, orange light luminaires, the site is far more visually appealing to customers. The clear white light of the Luci Series creates a welcome, clean and safe environment to the customers. After the installation of the 20 Luci Series in this Total site the energy use was reduced by a stunning > 91% equal to 26.313 kWh per year.

These graphs show the power consumption including- and excluding dimming.



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