

## Cold / Freezer Room Solution

Weblight has been working with a major retailer for several months to seek a solution for their off-sales Cold / Freezer rooms. These areas are known to be particularly hostile environments for lighting with temperatures down to -24°C. Under these operating conditions, standard fluorescent tubes perform badly with their light output dramatically compromised. In addition to the light output, striking / igniting the lamp is problematic so inevitably they are left to run 24/7 irrespective of occupation.

The predominant luminaire in these stores was a twin 58w IP54 with conventional gear contained inside the fixture contributing heat to the environment. This additional heat requires extracting and adds load to the chiller unit keeping the environment cold. In combination, we had twin 58w fittings operating 24/7 at a significantly reduced output with heat contribution from the gear.

The challenge was to find a solution comfortable in very cold environments with the ability to be switched with the control gear external to the main area so all heat is removed.

Recognising the implications of temperature, Weblight produced a solution based around LED's. LED's operate comfortably in very cold temperatures providing a clear, crisp light – consuming significantly lower levels of energy.

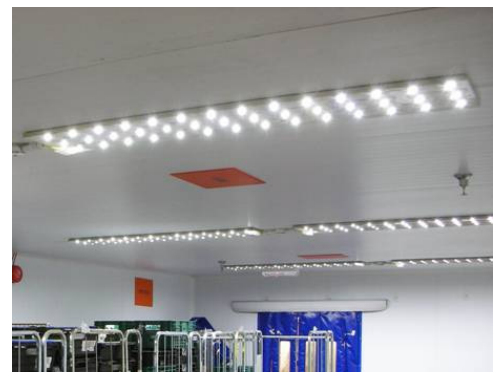
A fitting was designed, produced and testing utilising GE Lumination technology with exceptional results. The 2 x 58w luminaires were replaced on a point for point basis linked to presence detectors and timer switches with a robust slimline LED light source. This principle reduced the burning hours from 24 per day to as little as 4 dependent upon staff movement.

The main driver for LED's is located outside of the store area removing the heat sources thus further contributing the financial payback.

The final solution provided a slimline luminaire mounting a robust LED light source requiring no maintenance for 10 years. This increased light levels and uniformity in the main freezer units and removed all heat elements from the cold store. Switching and movement controls ensured further savings with the scheme / conversions giving a payback in 2 years.



Before – with linear fluorescent tubes



After – with Weblight's LED Solution