# E14/LED Because LEDs love the cold





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Industrial luminaires with high protection degree E1, fitted with LEDs, finally provide an energy efficient lighting solution for your cooling and freezing areas. Unlike fluorescent lamps, LEDs are insensitive to the cold.

### Three good reasons for using E1 luminaires with LEDs in extremely low temperature areas:

#### 1. LED luminaires are operationally reliable

The ignition of fluorescent lamps in very cold environments ( $-20^{\circ}$  /  $-40^{\circ}$ ) is anything but reliable. Once they are lit, they can also extinguish spontaneously. LEDs, by contrast, continue to function properly at such low temperatures. If all components are selected carefully, E1 LED luminaires can be used at temperatures as low as  $-40^{\circ}$ C.

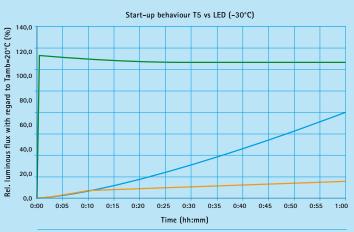
#### 2. LED luminaires are energy efficient

Fluorescent lamps attain their optimal luminous flux at ambient temperatures of 25 to 35°C. The luminous flux rapidly decreases at lower temperatures. At temperatures below  $-20^{\circ}/-25^{\circ}$ C the light output may fall to as low as 10% of its maximum value. In LED luminaires, by contrast, the luminous flux and the lumen to watt ratio remain intact.

#### 3. LED luminaires are perfectly dimmable and switchable

Fluorescent lamps switched on in low temperature areas take a long time before they reach the steady state: up to 20 minutes or more at temperatures of -20°C and lower. For this reason they cannot be switched or dimmed.

E1 luminaires with LEDs, by contrast, reach their maximum light output almost instantly and can therefore readily be dimmed or switched, for example at low occupancy levels: they can be made to burn at full power without any warming up.



E1 WITH LED

E1 FLUORESCENT WITH LAMPS AND BALLAST FOR COOLING AREAS







Belgian Icecream Group, Tielen – Belgium



### E1 with LEDs

The E1 luminaire is equipped with 48 LEDs of 1.2W. Because the current is limited, the LEDs retain their high efficiency and have a lifespan of approximately 50,000 hours. The luminaire has a power consumption of 60W and produces a luminous flux of 4325 lumen (>70lm/W), which is also made possible through the use of HRSilver<sup>™</sup> aluminium reflectors.

The device is eminently suitable for the lighting of cooling and freezing stores with high shelves. The luminaire has protection class IP65, so that moisture is not a problem.

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