

Simulation of natural lighting contribution to the illuminance of the milker's visual task area

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Milking parlours are often **poorly lit** compared to other farm areas and this can affect the efficiency and effectiveness of the milking routine. Various researchers (Rajaniemi et al., 2015; Clarke and House, 2016) recommend parlour lighting levels of **200-250 lx**. The American Society of Agricultural and Biological Engineers (ASABE) advises **500 lx!!!**

The contribution of natural light to the illuminance of the milker's visual task areas in both parlours was simulated using **DIALux EVO 12.1 lighting design software** (DIAL GmbH, Lüdenscheid, Germany).

The **aim of the study** was to **simulate the contribution of natural light to the illuminance of the milker's visual task areas in two milking parlours** within the MungiLUX project funded by Regione Lombardia (FEASR - Rural Development Programme 2014-2020).

Illuminance (lx) of the milker's visual horizontal task areas by natural light ranged from 2 to 136 lx.

Changing the start of milking by two hours guarantees on average a **60% contribution of natural light to the illuminance** of the milker's visual task areas over the year.

