

This subclause describes luminance limits for luminaires which can be reflected in DSE for normal viewing directions.

Table 4 gives the limits of the average luminaire luminance at elevation angles of 65° and above from the downward vertical, radially around the luminaires, for work stations where display screens which are vertical or inclined up to 15° tilt angle are used.

Table 4 — Average luminance limits of luminaires, which can be reflected in flat screens

Screen high state luminance	High luminance screen $L > 200 \text{ cd}\cdot\text{m}^{-2}$	Medium luminance screen $L \leq 200 \text{ cd}\cdot\text{m}^{-2}$
Case A (positive polarity and normal requirements concerning colour and details of the shown information, as used in office, education, etc.)	$\leq 3\,000 \text{ cd}\cdot\text{m}^{-2}$	$\leq 1\,500 \text{ cd}\cdot\text{m}^{-2}$
Case B (negative polarity and/or higher requirements concerning colour and details of the shown information, as used for CAD colour inspection, etc.)	$\leq 1\,500 \text{ cd}\cdot\text{m}^{-2}$	$\leq 1\,000 \text{ cd}\cdot\text{m}^{-2}$
NOTE Screen high state luminance (see EN ISO 9241-302) describes the maximum luminance of the white part of the screen and this value is available from the manufacturer of the screen.		

If a high luminance screen is intended to be operated at luminances below $200 \text{ cd}\cdot\text{m}^{-2}$ the conditions specified for a medium luminance screen shall be considered.

Some tasks, activities or display screen technologies, particularly high gloss screens, require different lighting treatment (e.g. lower luminance limits, special shading, individual dimming, etc.).

In areas of industrial activities and crafts screens are sometimes protected by additional front glasses. The unwanted reflections on these protection glasses have to be reduced by suitable methods (such as anti-reflection treatment, tilting of the protection glass or by shutters).

4.10 Maintenance factor

The lighting scheme should be designed with an overall maintenance factor (MF) calculated for the selected lighting equipment, environment and specified maintenance schedule.

The recommended illuminance for each task is given as maintained illuminance. The maintenance factor depends on the maintenance characteristics of the lamp and control gear, the luminaire, the environment and the maintenance programme.

The lighting scheme should be designed with the overall MF for the selected lamp(s), luminaire(s), surface reflectances, environment and specified maintenance schedule.