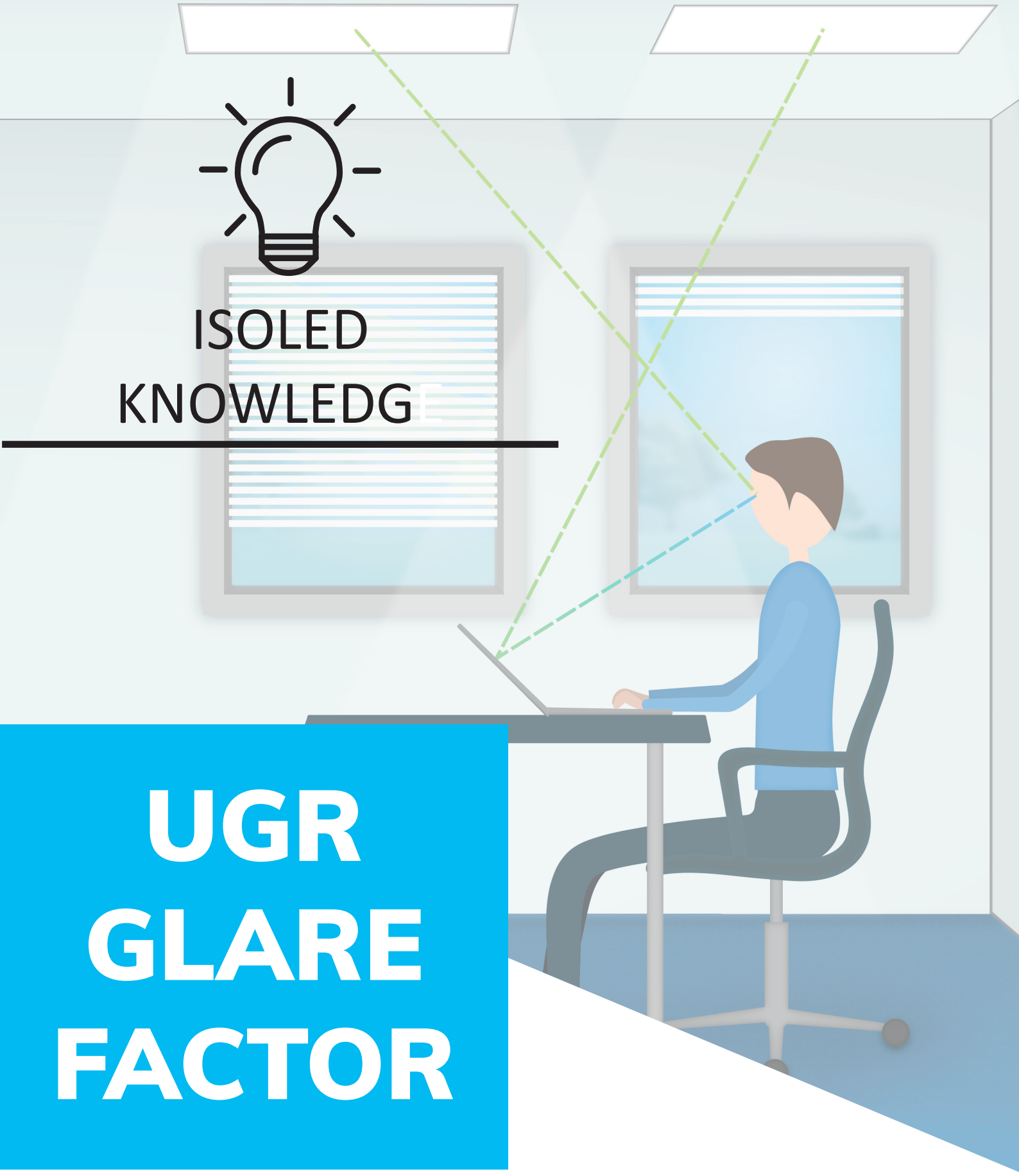
ISOLED KNOWLEDGE

# UGR GLARE FACTOR



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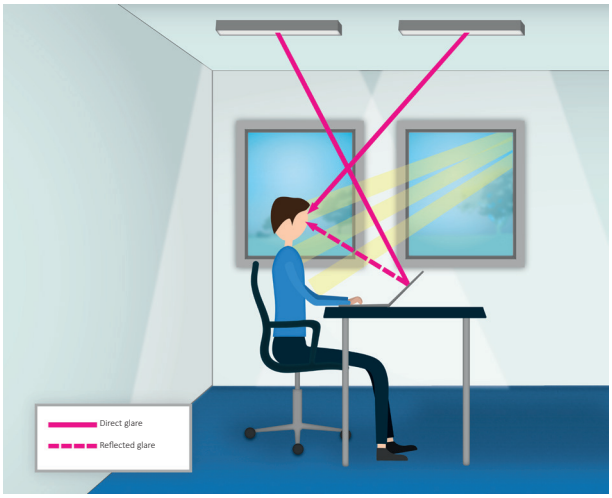
# UGR GLARE FACTOR

The international unified UGR method (Unifi ed Glare Rating) seeks the uniform evaluation of discomfort glare by lighting systems, natural light and light sources by reflecting surfaces at the workplace. The European standard EN 12464 describes the UGR limits to be observed for certain visual tasks in different work areas.

When calculating the UGR value, both direct glare and indirect or reflected glare must be considered. Direct glare arises from natural and artificial light sources; however, indirect glare is the reflection of light on e.g., monitors, large walls, ceilings, glass surfaces, furniture etc. and, therefore, also contributes to the glare sensation.

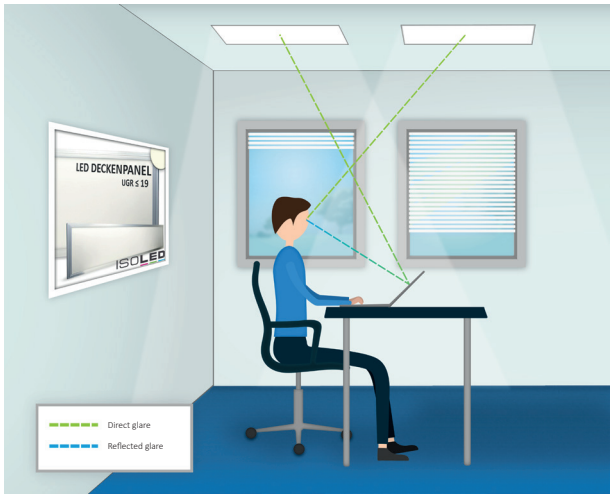
| UGR LIMITS (UGR)<br>(A COMPLETE LIST OF UGR LIMITS FOR ACTIVITIES AND VISUAL TASKS IS PROVIDED BY THE STANDARD EN 12464) | |
|---|---|
| Technical drawing | ≤ 16 |
| Work on the PC, reading and writing | ≤ 19 |
| Craft and industry | ≤ 22 |
| Indoor swimming pool | ≤ 28 |

**Affected by direct and indirect glare**




**Direct glare arising from non-glare-free lighting and unobstructed sunlight strain vision and lead to fatigue. As a result, concentration lapses and the risk of making mistakes Increase. For physical work, this leads to increased risk of accidents. For this reason, we must use lights with appropriate glare ratio, install sunshades on windows, and redesign the workspace arrangement appropriately.**

**Supports UGR-optimised lighting**




**Indirect lighting, matt fixtures with low light reflection, workspace division adapted to light sources, and the elimination of specular surfaces avoid burdensome reflected glare. Thus, concentration is maintained for longer periods, which leads to higher productivity.**