### Glazing Design

![Glazing Design Diagram]

### Sound Transmission Loss

#### Acoustics Simulated Values

- $R_w(C;Ctr) = 31(-2;-5)$ dB

#### Manufacturing Sizes

- **Nominal Thickness:** 28.0 mm
- **Weight:** 30.0 kg/m²

#### Luminous Factors (EN410-2011) : (D65 2°)

- **Transmittance:** 61%
- **Outdoor Reflectance:** 16%
- **Indoor Reflectance:** 18%

#### Energy Factors (EN410-2011)

- **Transmittance:** 32%
- **Outdoor Reflectance:** 37%
- **Indoor Reflectance:** 41%
- **Absorptance A1:** 30%
- **Absorptance A2:** 1%

#### Solar Factors (EN410-2011)

- $g = 0.34$
- **Shading Coefficient:** 0.39

### Thermal Transmission (EN673-2011) - 0° Related to Vertical Position

- **$U_g$:** 1.0 W/(m².K)

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**Excel Ref:** Hettich

**Sound Transmission Loss**

**Calumen® II** is a simulation software to calculate key performance of glass such as light transmission, solar factor or thermal insulation coefficient. Computed values are indicative and subject to change. They can not be used to guarantee performance of the products. These values are calculated according to EN410-2011 and EN673-2011 standards. Tolerances are defined according to EN 1096-4 or ISO 9050-2003 standards. Nevertheless, user must check the feasibility of the associated products, in particular in terms of thickness and colour. Furthermore, it is the responsibility to check that the resulting combination of glazing meets regulatory requirements at national, local or regional level. Computed values with NFRC-2010 standards are indicative. Please use NFRC certified software for certified values.

Calculation rules and functional output of Calumen II have been validated by TÜV Rheinland Quality Report 11923R-11-33705.