

Project:

Zvole Multi-functional House Prague, Czech Republic

Building Type: Multipurpose, Education & Municipal

The Zvole house is a multi-functional building designed for servicing the needs of the youth in the Zvole community. It can function as a concert hall for Kindergarten students, a library, theater, exhibit hall, as well as a municipal office. The development can hold up to 60 children and provide pediatric and general practitioner services for the children. The building can serve the community by providing meeting spaces for seniors as well as gathering halls for various community interest groups. The project designers contacted WT-Windows Tomorrow to increase the amount of interior daylight.

Objective

The objective was to increase levels of natural daylight to meet the Czech technical standards for natural daylight illumination. WT-Windows used DIALux 4.12 to determine the number of Solatube® Daylighting Systems required to meet the minimum daylighting factor. The daylight modeling included all factors of the installation, including the dome, effect lens, diffuser, 1.5 meters of tubing, the 45° angle adapter, and the 99.7% specular reflectivity of the Spectralight® Infinity Tubing. All these factors were taken into account for the accuracy of the daylighting calculation.

Solution

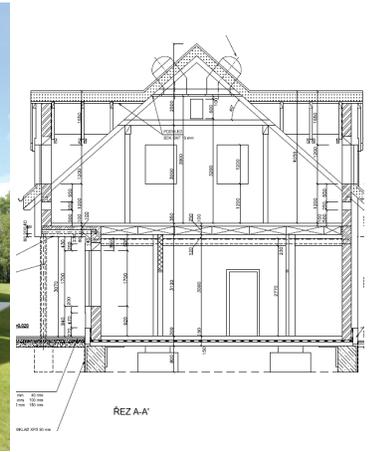
This solution determined that six units of the Solatube SolaMaster® 750 DS-OC (530 mm open ceiling) were required to meet the Czech daylighting standards. Use of the Solatube optical outer domes and prismatic diffuser lens contribute to a more balanced distribution of the light over the course of an entire day. And as a result of the Raybender® Technology dome, there is a significant improvement in the level of natural daylight. Due to the reflectivity of the Spectralight Infinity tubing, there is also no shift in color as the light is transmitted, delivering the purest color rendition possible.

Products Used

- 6 Solatube 750 DS-OC units (21 in/530 mm Daylighting System)

Testimonial

Upon completion, it was determined through direct measurement of the daylight factor, that the design requirements were met. The measurements indicate that the space complies with the Czech standards and hygienic requirements. "Solatube products contribute to improved visual comfort and show a positive impact on the health of occupants exposed to daylight. The resulting light conditions of the interior space are qualitatively good and the building also has decreased overall energy costs as a result of the installation." - **Radomír Kucera**, WT-Windows Tomorrow



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