Investigation of Architectural Strategies in Relation to Daylight and Integrated Design - DTU Orbit (30/09/2019)

Investigation of Architectural Strategies in Relation to Daylight and Integrated Design: A Case Study of Three Libraries in Denmark

This paper investigates the use of daylight in three architecturally successful buildings. The aim is to discuss the challenges and opportunities of architectural daylight strategies in relation to integrated design. All these buildings were designed with the focus on a strategy of using daylight to create well-lit, exciting spaces and spatial sequences. The original ideas, thoughts, and decisions behind the designs and daylight strategy are compared with answers in questionnaires from test subjects who have experienced the space and lighting conditions created. The results indicate that the architectural daylight strategies formulated by the architects and engineers at the beginning of the design process are actually experienced by the “users” in the existing buildings. The architectural daylight strategy was different in each of the three libraries, and analysis of the results shows that daylight strategies that include spatial considerations received more positive evaluations. Furthermore, the study showed that designs aimed at achieving an even distribution of daylight with an illuminance target of 200 lx did not result in higher evaluation of the daylight design.

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