

**THE EFFECTS OF HORIZONTAL LOUVERS ON SUBJECTIVE
EVALUATION OF WINDOW VIEW**

By

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A Thesis Submitted to the Graduate
Faculty of Rensselaer Polytechnic Institute
in Partial Fulfillment of the
Requirements for the degree of
MASTER OF SCIENCE
Major Subject: LIGHTING

The original of the complete thesis is on file
in the Rensselaer Polytechnic Institute Library

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December 2009

ABSTRACT

Horizontal window louvers are one of many window shading and redirecting devices that help diffuse daylight into a room and control solar heat gain (Lam, 1986; Carmody et al., 2004). Moreover, louvers, depending on orientation, can protect the building from weather hazards and offer visual privacy to building occupants. According to Lam (1986), the size of the louvers has an impact on the quality of view. He recommends using so-called large louvers (i.e., building scale), to frame the view or the smallest scale (i.e., venetian blinds), to appear as a texture. Lam recommends not using what he refers to as medium louvers (i.e., hardware scale), because they appear as a competing pattern and disrupt the view. The main purpose of this study was to evaluate how louver size and occupant viewing position affect the clarity and acceptability of a window equipped with louvers. Twenty subjects evaluated the effects of large, medium and small horizontal louvers and various positions on the clarity and acceptability of view of a computer-simulated outdoor scene. No significant difference was found between the mean clarity and acceptability ratings of the three types of louvers. As expected a window with any kind of louvers was less acceptable than a clear glazed window. However, in the main study the clarity and acceptability ratings for windows with large, medium or small louvers were never less than neutral. Louver size may not be a significant factor on view clarity and acceptability of windows with horizontal louvers. Instead designers, architects and lighting designers should consider other aspects of the different types of horizontal louvers that will complement the goals and requirements of the project, including the material and color of the louver, cost, operating options, maintenance issues, wind resistance and others. In this study all of the window designs were evaluated without direct sunlight. Since one of the benefits of horizontal louvers is the control of direct sunlight admitted into a space, further work in direct sun conditions is recommended.