THE EFFECT OF WALL COLORS ON INDOOR ILLUMINANCE DUE TO LIGHT PIPE.

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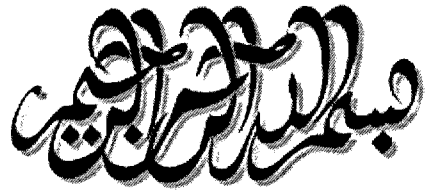

In the Name of Allah, the Most Compassionate, the Most Merciful, Praise be to Allah, Lord of the Universe

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ABSTRACT

Natural light is an important element in visual comforts. Daylighting is the practice of using natural light to provide illumination which includes direct, reflected and diffused light. Daylighting can be transmitted into the interior space of a building by using light pipe, window, lightshelf, skylight etc. In this project, the light pipe was used to transmitted the light into the interior space. Light pipe is a simple structure that allows transmission of daylight from outside to the inside of the room by means of reflection. However, the indoor illuminance is also affected by the colors of the interior walls due to the fact that different colors have different surface reflectance. In this study, the effect of the wall colors has quantified based on the real experiment under the real sky condition. The results should be a significant contribution as additional input data to studies related to energy effeciencies in buildings. This study presents the results of the effect of wall colors on indoor illuminance due to light pipe. Four interior colors were chosen in this experiment i.e white, black,