

# Accepted Manuscript

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PII: S0360-1323(16)30335-3

DOI: [10.1016/j.buildenv.2016.08.033](https://doi.org/10.1016/j.buildenv.2016.08.033)

Reference: BAE 4617

To appear in: *Building and Environment*

Received Date: 27 May 2016

Revised Date: 27 July 2016

Accepted Date: 31 August 2016

Please cite this article as: Bodart M, Cauwerts C, Assessing daylight luminance values and daylight glare probability in scale models, *Building and Environment* (2016), doi: 10.1016/j.buildenv.2016.08.033.

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ASSESSING DAYLIGHT LUMINANCE VALUES AND DAYLIGHT GLARE PROBABILITY IN SCALE  
MODELS

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**Abstract**

This paper presents a research about the possibility to use a scaled model of a room to assess the luminances in the visual field of the room's user, and consequently its risk of glare.

Measurements of luminance values by the HDR technique were done simultaneously in a room and its 1/6 scale model, with identical measurement material. The room was lit by a lateral window either unprotected from direct sun radiation, or fitted with a white or black screen.

Measurements show that luminance values obtained in the scale model are overestimated and that the relative differences between values in the scale model and in the mock-up vary between 10 and 50% for the situation without shading device, between 45 and 80% for the window equipped with the white screen and between 0 and 45 % with the black screen.

Yet, the evolution of luminances is very similar for both rooms, and a high level of correlation is observed between glare index DGP values calculated on these respective luminance values, despite a very slight over-evaluation of the DGP in the scale model.

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