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1 **Evaluating daylight performance of light shelves combined with external blinds**
2 **in south-facing classrooms in Athens, Greece**

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8 **ABSTRACT**

9 The contribution of daylight to energy efficient building design and to the creation
10 of a pleasant environment that provides visual comfort to its users has been a subject
11 of study for years. This paper addresses the way in which daylight can be efficiently
12 used in a typical classroom in Athens, Greece, by improving its distribution in the
13 space and providing shade.

14 Based on the conclusions drawn from the literature review, the system that is
15 chosen for study consists of a light shelf (for shading and light redirection) and semi-
16 transparent movable external blinds (for more shading, adjusted to the occupants'
17 needs), which are mounted on the glazing of a south-facing classroom.

18 The experimental study consists of six stages, all performed in Radiance software.
19 The individual results and conclusions lead to the definition of the optimum
20 characteristics of the system, including the light shelf's width, mounting height,
21 inclination and reflection index, which upgrade the daylight performance in the space
22 under study.
23

24 **Keywords:** Daylight; Classrooms; Light shelf; Shading devices; Visual comfort;
25 Greece

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29 **Highlights of the submitted paper entitled “*Evaluating daylight***
30 ***performance of light shelves combined with shading blinds in south-***
31 ***facing classrooms in Athens, Greece*”:**

32

- 33 • The way in which daylight can be efficiently used in a typical classroom in
34 Athens, Greece, is investigated.

- 35 • Uniformity of daylight distribution and provision of shade are taken into
36 consideration.

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