


Event:  
Date:  
Place:

**ENERGY in BUILDINGS 2017**  
Saturday October 21, 2017  
Athens, Hellas



<b>#</b>	<p><b>Thanos Balafoutis</b> Architect, Lighting Designer MA, PhD Candidate</p>	
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Presentation Title:	<b>Lighting Design Simulation Programs Comparison</b>	
<p>The need for architects and lighting designers to attain optimal lighting solutions is solved by using lighting simulation software. This paper evaluates the performance of lighting design simulation applications and inter-compares the results of specific tasks in order to determine the accuracy of the output results. It outlines the qualities and capabilities of each program and how each one, performs in different tasks. While some comparative studies have been made between purely lighting design software, no research exists that evaluates results between lighting design calculation software such as Relux and Dialux, compared to visual simulation programs such as 3D Studio Max. The later is optimized mainly on three-dimensional design but secondarily feature lighting calculation processes.</p> <p>The scope of the comparison is to investigate to what extent the results of the programs that are mainly used for visualization purposes can accurately calculate lighting, and what is the correlation to the verified output of software solely used for lighting calculations.</p> <p>The process of comparison is common to each simulation application and begins with the modeling of specific architectural elements that can be lit through different lighting setups, such as downlighting, uplighting, grazing, floodlighting etc. The lighting that falls on each surface is then simulated with different luminaires and types of luminaires so as to produce the lighting calculation results. The variety of luminaires will be based on luminaires that are widely available on the market and they differentiate upon their shape and size (spot lights, linear lights etc.)</p> <p>Preliminary results show considerable differences concerning illuminance levels between the two sets of computer applications. The differences vary according to the type of luminaire used resulting in a more complex comparison matrix.</p>		

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CV:

Thanos Balafoutis graduated the School of Architecture of the University "Federico II" of Naples - Italy in 2007 (gained a three-time-partial scholarship) and the Master of Arts program "Lighting Design" of the Hellenic Open University, Patras - Greece. Currently he is a Researcher and a PhD candidate of the Hellenic Open University.

He has participated in architectural competitions, exhibitions, certified environmental planning and natural-artificial lighting design seminars. He has been a member of several study groups for the restoration, enhancement and use of buildings and areas, including research teams to study the urban planning.

He also deals with the scenography and lighting design in artistic productions and theatrical plays. He has attended painting and sculpture classes, as well as art groups, competitions and exhibitions at local and nationwide level.

In 2014 he co-founded "Krama architects", a firm providing architectural, industrial and lighting design. The practice has been awarded with Silver and Bronze Award, for "sedi\_ale" and "konis table" respectively, at the A' Design Awards 2015 (Milan, Italy) and Silver Award, for "Agili", at the A' Design Awards 2016 (Milan, Italy).

He is a member of the Technical Chamber of Greece, National Union of Architects, International Association of Designers - I.A.D. and International Design Club - I.D.C.