

## DEVELOPMENT OF A SOFTWARE FOR THE NUMERICAL LIGHTING ANALYSIS

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### Abstract

The lighting is an essential future in different places such as houses, schools, hospitals, workplaces, factories etc. A suitable lighting may serve to decrease industrial accident and increase the efficiency. Electrically driven lamps are used extensively in the present day. These lamps, according to their technology, convert electrical energy into light in different ratios. It is requested to calculate how many lamps are necessary in terms of the environment types and dimensions, the lamp types and powers in the lighting projects before the installations.

In this study, a software has been designed for the numerical interior lighting analysis. Using the software, users or the related students submit a few variables such as the lighting environment type and its dimensions, the reflection coefficients, the lamp type and power and the maintenance factor. For the necessary lamp counts, the software calculates and presents the related variables and values step by step to the user or the related students. For the instructors and the students whose departments in which their curriculums involved the lighting analysis, educational software has been developed.

**Keywords:** Educational software, lighting, lamp.