

**HIGHER TECHNICAL INSTITUTE**  
**ELECTRICAL ENGINEERING DEPARTMENT**

**DIPLOMA PROJECT**

**ELECTRICAL INSTALLATION OF**  
**A BLOCK OF FLATS**

*E-1271*

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## 1) ILLUMINATION DESIGN

### 1.1) Introduction

The procedure followed in order to provide the proper amount of light in a certain area, using the proper type of luminaire is called illumination design.

A good illumination ensures comfortable environment, improves the quality of the work to be done in parallel with an increase of production efficiency. Finally it provides safety especially in factories and streets where no good illumination might cause accidents and on the other hand good illumination improves accuracy.

Illumination calculations are necessary to provide proper lighting for each area under consideration. The illuminance required in a certain area depends on the dimension of the room, the wall, ceiling and floor reflectance. Also, the nature of the work to be carried out must be considered and the occupancy of the building. The C.I.B.S. (Chartered Institute of Building Services) gives the standard service illuminance for various kinds of areas.

### 1.2) Methods of illumination calculations

The methods of illumination are:

- a) Point by point method
- b) LUMEN method

In our project we have used the LUMEN method because >

- It is extensively used for general indoors calculations

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