

## **The lighting methods used to show the aesthetics of the architectural style of the palaces Historic used as museums**

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### **Research Summary:**

The process of lighting design inside historical palaces or lighting architectural spaces in general is not only a mathematical process. The goal of lighting is not only illuminating the interior spaces for vision, but the lighting function extends further than that, where lighting is an artistic element that must be taken into account, as lighting has a physical effect that affects the appearance of things around us and makes us see them differently, and through the good distribution of lighting, it can highlight the aesthetics of the architectural style, and the viewer achieves artistic pleasure and fascination and inspires contemplation of what he/she sees, in addition to realizing its artistic and historical values. Through this research, we will talk about the lighting methods used to show aesthetics of the architectural style of the historical palaces as museums, by presenting some of the meanings and concepts of showing aesthetics of the architectural formation and elements of feeling the beauty of the architectural style and artifacts, then the research moves to displaying the methods and techniques of lighting that are being used at historical palaces, then the research demonstrates lighting units and methods of using them, then identifying the effect of light sources on surfaces, materials and their psychological effects, in addition to physiology of lighting on humans, then the research moves to talk about lighting damage and how to preserve surfaces, exhibits and collectibles from damage, and then at the end of the research we talk about methods of showing the aesthetics of architectural style and artwork using lighting.

### **- Research problem:**

How does artificial lighting affect the aesthetics of style, architectural elements, and exhibits without harmful effects on exhibits and antiques?

### **- Research importance:**

Lighting is of paramount importance in historical palaces, in defining the goal and function that will occupy the palace, and in showing the formation and architectural style that distinguishes the palace, furniture and antiques, to make it eye-catching, and show the fragrant history of it.

### **- Research aims:**

- 1- The necessity of showing the furniture, antiques and architectural details as clearly as possible and providing sufficient intensity of illumination on the exhibits to accommodate the details by the visitor.
- 2- The necessity of preserving the exhibits that quickly become damaged thanks to the light.
- 3- Creating spaces that achieve benefit and artistic pleasure within the framework of a lighting system that emphasizes the aesthetics of the formation of the site and contents.

**- Research Methodology:**

The research depends on the descriptive analytical method by describing and analyzing different lighting methods to show the aesthetics of the architectural formation and the exhibits inside the historical palaces used as museums.

**- Research hypotheses:**

Industrial lighting is closely related to the spatial study through the design of light sources and their impact on showing the features of the historical architectural space and the exhibits of furniture and antiques.

**- Search limits:**

Time limits: The research studies the lighting methods used at the present time (21<sup>st</sup> century) to show the aesthetics of the architectural style.

- Spatial limits: The research presents some local experiences of historical palaces that have been converted into museums in Egypt, such as Aisha Fahmy Palace (Arts Complex) - Zamalek / Giza, and Baron Palace - Heliopolis / Cairo.

**- Results:**

Lighting has a great impact on showing things around us, and good use of it shows the aesthetics of those things and makes us see them well and differently.

- Achieving artistic pleasure and fascination inside museums and historical palaces, and forcing the viewer to fully understand what he/she sees, as one of the basic elements to feel the beauty of the architectural style and the exhibits, and this is achieved by the good use of lighting.

**Recommendations:**

- 1- Taking into account that the lighting used is appropriate and does not negatively affect the architectural formation and the antique furniture inside the palace.
- 2- It is preferable to use lighting during the necessary time to accommodate the visitor only.
- 3- The use of lighting experts specialized in the design process of lighting inside the historical palaces.
- 4- The designer must be aware of the patterns of lighting units and how they are used inside palaces and historical buildings.

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