

POLITECNICO DI TORINO
FIRST SCHOOL OF ARCHITECTURE
Master of Science in Architecture (Construction)
Honors theses

Lighting Design. An American Lighting Design experience

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Lighting can be used as a special tool to define the space around us, making it magical, mysterious and dramatic all at the same time: it is an architecture's prerogative that allows architecture to be "wise, rigorous and magnificent combination of volumes in light".



The Twin Towers reproduced by two light beams, World Trade Center, New York City

“To express light one must be able to feel light: someone who does not truly feel something has no hope of expressing it”. Karou Mende

During my six month internship at Focus Lighting in New York City, I had the ability to see and play with all the tools used for the lighting design project: mock-ups, fixtures, drawings and writings.

Starting with a concept, I moved on to develop mock-ups and drawings, and then at last, creating the final project, all the while examining the whole “projecting iter” of the lighting designer.

The lighting designer is responsible for showing and bringing out a place by the use of light: this role was created and developed during the '80s, and within the art and architecture fields. Initially, the lighting designer was restricted to being placed behind theatrical scenes and movie cameras, yet nowadays he is the one that mixes all the duties from the director, the architect, the engineer and the showman: he is an expert that the architect looks to for guidance and direction during the whole project.

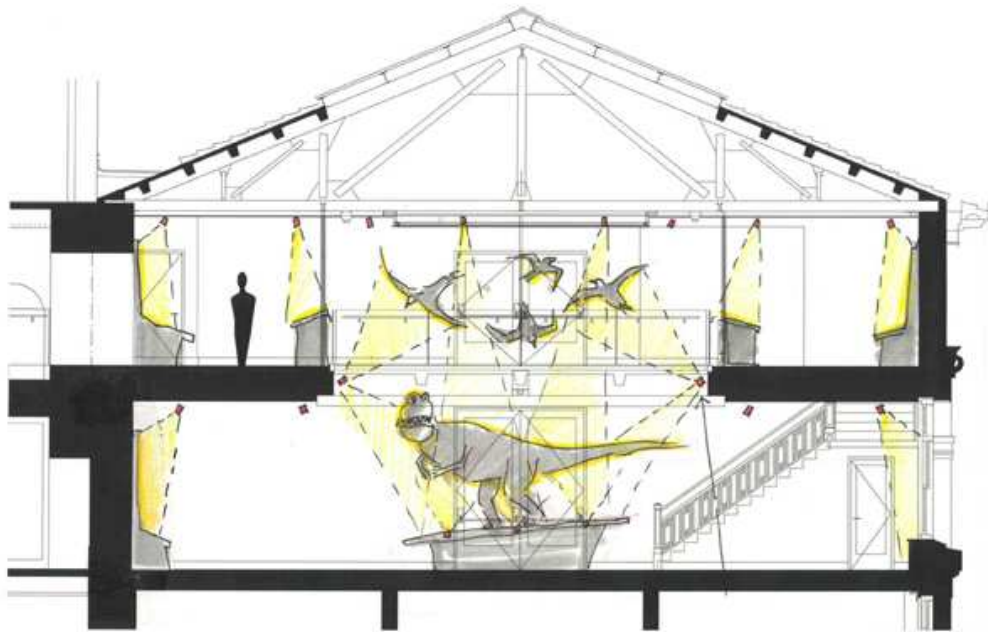
During the concept and the construction phases, the lighting designer is accustomed to working with several instruments to communicate his lighting intent. One of the most important tools used are from the studies during the mock-up, including the chance to simulate the lighting scenes and to measure the photometrical data. It is during this time that the lighting designer decides which lamps, fixtures and lighting system he is going to use.

In this thesis, I will demonstrate how the lighting drawings are made: we will talk about the plan and the RCP (reflected ceiling plan), as well as show how and where all the fixtures are drawn. Attached to these drawings we will find texts describing the quality, the quantity and the cost of the fixtures used in the project. The words we will use and describe are the “*fixture list*” the “*channel schedule*” and the “*riser diagram*”.

The American and the Italian way of doing things are a bit different and this is the reason why my thesis ends with a comparison between those two ideas. I had a few meetings where I interviewed some Italian lighting designer with whom I discussed the following topics:

- What is the best education that a lighting designer can receive?
- What kind of tools and instruments are needed by lighting designers for the lighting design project?
- In what ways do you think that the project you created can be defined as “well done”?

This thesis has not been read, it is just a story of an amusing experience, however, it does provoke some thoughts and questions concerning the mysterious and maybe not yet well known nature of the lighting design field.



First lighting concept for the main exhibition room at the Natural History Museum, Los Angeles



Testing lights on the studio mock-up (1 to 4 pictures) and on the real one(5 to 6 pictures). Starting from the left corner the dinosaurs are lit as: downlight with metal halide lamp and generic ambient light; accent-light with spot LED light; accent-light with two spots LED lights; accent-light with metal halide spot lamp. In the two last pictures the same test was made on the real dinosaur mockup in Los Angeles

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