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LIGHTING IN EXHIBITION SPACES

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ABSTRACT

In this dissertation the types of lighting and the uses of it in different exhibition spaces are going to be covered. This dissertation also includes light protection and management techniques. The perception of spaces is directly connected to the way light integrates with it. What we see, what we experience and how we interpret the elements is affected by how light interacts with us and with the environment. It is important to study the effects and types of lighting in exhibition spaces to develop interest and increases its glory. It helps to protect and preserve the object to be placed in the exhibition areas by treating direct, indirect etc kind of lighting system. This dissertation report will help and provide facile way to study.

1 INTRODUCTION

Lights play an important role to exhibits something in exhibition spaces. Without light a great part of visual aesthetics would become null and void. To understand the forms. Functions, interiors; and landscape of the exhibition areas and showroom lighting system play a vital role in it. For the designer light is one of the most versatile tools. What we see, what we experience is affected by how light integrator with it Artificial illumination is necessary during the nights and when natural lighting is poor.

2. LITERATURE STUDY

2.1 TYPES OF LIGHTING

The luminaries can be divided into four categories based on how they are supported:

1. Recessed:- they are mounted above the finished ceiling, are entirely hidden from view, and have opening at the ceiling plane to allow light to pass through.

2.Surface mounted:-They are mounted to the surface of the ceiling, wall, or in rare case a floor.

3. Pendant mounted:-They make use of a recessed or surface mounted junction box located at the ceiling for electrical supply connection, but the luminaries is separated from the ceiling surface by a pendant such as chain or chord.

4. Track mounted:-A recessed, surface mounted or pendant mounted lighting track provides both physical support and electrical connection through an adapter on the luminaries.

Lights are also classified as per their light distribution patterns, they are:-

1) Direct:-When a luminaries directs 90% or more of its light output downward, it is called a direct luminaries.

2) Semi direct:-Luminaries distribute 60-90% of their light downward and 10-30% of their light upward.

3) General diffuse:-When the downward and upward components of light distribution from a luminaries are approximately equal(40-60% downward and 60- 40% upward) the luminaries is called general diffuse.

4) Direct indirect:-Luminaries is a special case of a general diffuse luminaries, in which the light is directed evenly upward or downward but very little light is emitted along angles near the horizontal

3. PURPOSE OF LIGHTING

Lighting is an important need because the light source has the ability to provide the required degree of contrast and the variety of technique to modify the direction and distribution of that light source. The perception of space is directly connected to the way light integrates with it. What we see, what we experience and how we interpret the elements is affected by how light interacts with us and with the environment. Regarding architecture, in whatever dimension it can be analyzed, either as space, as material or as color, it is dependent on the lighting situation that involves both the object and the observer.

3.1 SHOWCASE LIGHTING:-

Showcases are miniature exhibition rooms and the exhibits they contain need to be illuminated accordingly - with diffuse or directional light. In some cases, illuminating and accentuating light may also be mixed in glass display cabinets.

3.2 LIMITING REFLECTION:-

Limiting reflected glare is an important consideration whatever kind of lighting is installed for showcases with horizontal and vertical glass surfaces. Effective bright internal lighting thus present a lower risk. Reflections can also be caused by windows (daylight). Appropriate positioning of showcases or daylight screening- e.g. with vertical blinds-prevents this kind of reflected glare.

3.3 REVOLVING EXHIBITIONS:-

Exhibits which are not on permanent display or which go on tour are presented in for revolving exhibitions. Each new show is an added attraction and draws new visitors to see the permanent exhibition. To cater for regular change-over of exhibits, lighting systems need to be adaptable So very flexible lighting is required. It should be noted, however, that absolute flexibility-enabling the lighting to be as finely tuned for every temporary presentation as for a permanent exhibition is an unattainable goal.

3.4 FLEXIBLE LIGHTING:-

The general-diffuse-lighting takes little account of the positioning of exhibits, The flexibility of the system depends on the directional lighting. Particularly suitable solutions here are furnished by power track systems, in which swivel able, rotatable spots can be snap-mounted at any point. Part of the power track installed should be mounted along the walls to permit gallery-style wall lighting, in the rest of the room, rectangular or square arrangements of power track make for greater flexibility than an arrangement in just one direction. An alternative to power track are stationary gimbalmounted spots. These can also be set at any angle and servomotors can be used for re-angling and focusing. Gimbals spotlights are not quite as flexible as spots on power track but they permit a ceiling that makes a much more tranquil design statement than one with power track.

3.5 REALIGNING LUMINAIRES:-

The luminaries of a flexible lighting system need to be realigned for each new revolving exhibition- if necessary by experimenting and repositioning exhibits. This in variable calls for the use of ladders and steps. For inaccessible locations, remote control spots are the right answer.

3.6 MOBILE SPOTS:-

Where mobile partitions are used for presentations, mobile spots fastened to the partitions by clamps or screw mountings are an alternative to spotlights on power track. So that power cables to spots do not present a tripping hazard, rooms for revolving exhibitions should be provided with power points in the floor.

3.7 SALES LIGHTING:-

Capturing the attention of todays visually spoilt consumer calls for cleverly designed sales presentations. The spectrum of customized solutions is as wide as the r range of modern lamps, luminaries and spots. For a museum shop, the design challenge is to achieve optimal harmony between the structure and furnishings of the room and lighting systems designed to suit the merchandise on sale.

3.8 OUTDOOR EXHIBITS:-

Whether sculptures or installations, some works of art are intended to be exhibited outdoors while others may become candidates for outdoor display because of their size. For the majority of such objects, an inner courtyard or small patch of garden is normally enough.

3.9 OPEN AIR MUSEUMS:-

Open air museums are a showcase for historical buildings and complexes, either in their original state or reconstructed. They close when it is dark, so artificial lighting is generally installed only inside the buildings

- if possible without spoiling the impression of a time before the advent of electricity. Where an open air museum stays open after dark, path lighting is also required.

4 LIGHTING MANAGEMENT IN MUSEUMS

There are numerous ways in which lighting management can be used in a museum:

1. Lighting management systems can activate and deactivate or dim the artificial lighting in response to changes in available daylight.

2. They can be used to provide daylight-dependent control for sun-screens and anti-glare on skylights or windows.

3. Lighting management systems facilitate lighting productions: stage lighting or dynamic effects can easily be programmed.

4. Lighting management can be used to set different luminance levels in different zones: individual luminaries are simply dimmed. This is useful for casting an exhibition in a dramatic light or as a light protection measure for individual exhibits.

5. Lighting management facilitates simple multifunctional use of individual interiors.

5 ANALYSIS

Analysis came from all the study about lights in exhibition spices are as follows

- All the art work should receive minimum lighting expert so that its beauty and value will remains
- Rather than installing a direct or indirect light, combination of both the lights should be placed
- Movable shutters of lights should be placed instead of a fixed fixture to increase the paintings life.
- Instead of using other lamps, LED bulbs should use which are energy efficient and will give uniform intensity of light.
- From all the case studies analysis came about the lighting system is that- track lighting system will give the better effects and more convenient as compare to any other lighting arrangement for automobile showroom. Track lights are classified according to its length, voltage; flexible or straight, system installed directly to or can be suspended to ceiling. Any layout is possible according to spaces and designs.

Track lighting system is a versatile lighting solution that can be used to power spotlights, floodlights, pendant lights or any other fixtures.

Track lighting is very practical because you can divide the light output by the fittings in different directions. A showroom is all about vehicles nicely presented. As a general rule, you want to focus 80% of the light on the displays while the remaining 20% is for walkways.

This gives the products the majority of the illummation, which in turn will bring them the most attention.

6 CONCLUSION

- Careful planning of the brightness of light and color patterns within the working area and the surrounding so that the attention is drawn naturally to the important area, detail is seen quickly and accurately and the room is free from any sense of gloom.

- Controlling direct and reflected glare from light to eliminate visual discomfort.

- Installing emergency lighting systems wherever necessary.

- Using the directional lighting wherever appropriate to assist the perception of task detail and to give good modeling.

7 REFERENCE

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