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Five Top Lighting Design Tips

Lighting is one of the most powerful interior design tools. It can change the mood and atmosphere of interiors and landscapes at the touch of a button to literally decorate with light. With LEDs now lasting longer than before, it is more important than ever to consider the lighting design and the fittings you choose carefully as your clients will live with them for longer.

We've all been to a restaurant and found the lighting to be inadequate for reading the menu, or in the bathrooms there is a spot light directly above the basins leading to a very unflattering and uncomfortable effect onto the face. To avoid these situations, lighting needs to be carefully considered and planned in conjunction with the interiors and architecture of the building. The very best lighting schemes are those which go unnoticed. When entering a space, your attention should be drawn to the various features within the room such as the artwork, furniture and architectural elements, not to the source of the light. Of course, the decorative lighting needs to create a statement and should be selected to complement the interior style, but the functional lighting should remain largely anonymous.

Key Learning outcomes

- Read key pointers when planning lighting layouts
- Learn the importance of layering light and what it brings to a scheme
- Understand what to look for when selecting LEDs
- Think about creating different zones in larger spaces
- And finally understand the difference good lighting control brings to a scheme

1.0 Planning the lighting layouts

The one rule in lighting is to steer clear of the classic grid of downlights on the ceiling. This throws an even blanket of light over the room, resulting in a very flat and lifeless effect. Always think of both light and shadow when designing a scheme; both are equally important. If everything was lit with a blanket illumination there would be no depth and texture to the space - shadow allows the elements which are lit to stand out with intensity and become the focus of attention. The two main factors to consider when planning the layouts are; 1) the room and its various intricacies, and 2) the people who will be using the space (the end user). Good design should be a bespoke solution centrally focussed on these two elements. For perfect results, the client needs to be heavily involved or consulted as part of the design process. If this doesn't happen, you will end up with a lighting scheme that just doesn't work for how they live and the lighting can become a frustration.

Furniture layouts are really important so a lighting designer can design the right scheme. If one doesn't know where the dining table will be positioned, there is a chance that someone could end up with a downlight directly above their head while seated and no one would appreciate this!. A more considered way of lighting would be to focus light onto a vase of flowers in the centre of the table instead. Some clients struggle to visualise how they will use a space before the house is built but it is best to get positions confirmed then you can ensure the lighting really works to transform the space. For key pieces of art, locations should be confirmed so that it can be specifically lit and highlighted. Wall, floor and joinery finishes can all influence the design. Light colours will reflect light back into the room whereas the darker finishes will absorb more of the light. It seems simple but it can make a big difference to the final design.

With every light that is added to the design, try to justify why it is there? What is its purpose? To provide task lighting / accent light to a feature? If you do not have a good reason for why a light is on the layout then, is it really needed?



Avoid grids of downlights. Instead position them carefully to light your artwork, wash light down curtains or pinspot the centre of a coffee table.

2.0 The Importance of Layering Light

By steering clear of the grid of downlights and positioning lighting around the room's features a huge improvement will be made to the appearance of the space. However, if the whole space is lit just using downlights it can still seem fairly one dimensional. This is because most of the light will be applied to the room from a single plane or layer. Just as interior designer plays with colour and texture, the lighting designer plays with light. How it is layered and the fittings selected will depend on the room. Think about adding depth to the lighting design by using multiple layers of light. This could include both a mixture of ambient, task and accent lighting and also high, mid and low-level lighting. This gives our eyes visual stimulation across the entirety of the room.

The layering and grouping of the lighting will also give flexibility to the room and allow for the homeowner to adapt the lighting to suit different activities within that space. Our desire for open plan living spaces demands this flexibility. A kitchen is not just a functional space, it is more often than not a part of the dining and living area. The kitchen lighting needs to give excellent task light to work surfaces but it also needs to blend in to the other areas and offer a more relaxed setting when dining or entertaining. A low-level lighting effect under the kitchen island bar would be a perfect addition to the task lighting. In the evening the downlights can be dimmed right down and the low-level lighting kept at a bright setting to create a moody and dramatic effect.



Layered lighting adds depth and drama in this kitchen. A floating effect is created under the island, light grazes up the wall, the art is lit and the exterior beyond.

3.0 How to Zone your Lighting

In larger spaces like the open plan kitchens so popular today, it is essential to create different lighting zones to make the room work as a whole.

Think about initially dividing the room into the different areas eg dining area, sitting area, kitchen area and then design the individual light scenes for each considering the task in each area.

The circuiting becomes all important in these rooms. The central focuses of each need to be kept separate so that the emphasis can be changed as each part becomes the part you are in. Artwork can be kept on the same circuit throughout to cut down on the number of circuits required.

For a more seamless integration between the different areas, use a preset lighting system. At the touch of a button you can have different scenes with the right level of light set up to suit your activity eg one scene bright, another for relaxing, another for a drink before dinner and another for dining.



By creating different zones with your lighting, you add flexibility to the space and allow each area to be used both as a whole and separately.

4.0 Careful Product Selection

LED has been a viable method of illumination for over ten years now. Changes to legislation and a move to energy efficiency has led to LED becoming the preferred technology. The challenge you have in selecting LEDs is to choose the best LED solution for each application and create consistency throughout your project. Here are a few tips to what to look out for when selecting fittings:-

1.

Colour Quality

Colour quality, referred as colour rendering, is where to start when choosing the appropriate LED with Colour Rendering Index (CRI) being the current metric. CRI refers to the light sources ability to accurately render colour compared to a pre-defined control source i.e. its fidelity. This method references 8 colours with each colour being given a rating between 1 and 100. The average of which is stated as a Ra value i.e. 80 Ra. Always select LEDs with a minimum of 80 CRI for general use and when lighting artwork, this goes up to 95+ CRI.

2. Colour Consistency

With LED it is important to consider colour consistency. This is because an LED is essentially grown and the colour of the chip can vary. The colour consistency is measured by an index relating to a light sources range of variation in chromaticity (colour) that can be picked up by the human eye. Colour difference is defined by a steps of MacAdam ellipse. The scale is set by ANSI Chromaticity Standard. In short though the smaller the ellipse value (size) the smaller the colour difference.

3.

Thermal Management

Another factor to consider is thermal management. A common misconception is that LEDs do not generate heat. Although the beam emitted is cool, they do convert power into heat. Lifetime of the LED Chip is directly linked to its operating temperature. Poor thermal management where the LED is operating above manufacture guidelines can also lead to colour shift. There are various methods of thermal management. A competent manufacturer will use the body of the luminaire to draw heat away from the LED chip. They should fully test their luminaires and be able to offer their clients information such as maximum ambient temperature. Information such as this will ensure the client can be assured of life time and colour consistency of their investment in our lighting.



Colour consistency of fittings is key when you have a series in a row. A high CRI is essential to ensure you see the true colours when lighting art.

5.0 The Importance of Lighting Control

The final point you need to consider at the start is how you are going to control your lighting. Good lighting control gives your client not only great flexibility with their lighting but also allows them to create the mood and atmosphere in their home.

You should always give yourself the option to dim your lighting. You will be amazed how much difference dimming a light can do to transform the atmosphere in a room. The most basic form of dimming is with a simple rotary dimmer. If you have less than four circuits, this is an easy solution.

If however you have more than four scenes, then a step up from dimming is scene setting. A simple or more sophisticated lighting control system can provide the option of preset scene control in a room. Typically, 4 scenes are set in each area which are a combination of all the different circuits in the room at different dimmed levels to create certain "moods". These moods can then be recalled at the touch of a button. This set up is perfect for an open plan area or for the whole house.



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