

Cove Lighting:

I am often asked what my favourite light fitting is, which is always hard to explain and often disappointing to those asking me. The answer I can share with you is not the latest and greatest LED downlight, or a beautifully crafted piece of product design. It is in fact not a luminaire at all but the humble cove, the ultimate synergy of architecture and artificial light.

Why, you may ask? Well, coves can take many forms: coffers, wall slots, perimeter slots, pelmets and so forth, but all styles have several things in common.

The eye is always drawn to the brightest point in a room, consequently discreetly concealing the light source provides visual emphasis on the illuminated surface rather than a distracting luminaire. This approach creates higher luminance values on the illuminated surface than on surrounding ones, providing good contrast, drama and visual interest.

The discreet mounting of sources within these details enables us to utilise fairly ugly, low-energy lamp sources providing creative and aesthetically pleasing low-energy lighting solutions.

Perhaps most importantly cove lighting requires proper planning, careful consideration and a high level of detailing, which ensures that the lighting is considered early on in the life of any project rather than as an afterthought. Blurring the boundary between lighting and architecture is a technique used by some of the most successful architects and designers.

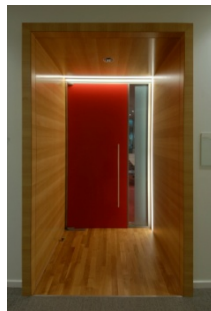
We know that light heavily affects the way in which we perceive a space. A well-planned lighting design should be subordinate to the architecture... It should quietly go about its business enhancing the space, the surface and the finish and what better way to do it than with a cove?

Unfortunately it is all too easy to get it wrong and I have witnessed some poor examples. Often the design aspiration is fine but the project suffers in the execution. Common mistakes are visible lamps, hot-spots or shadows, incorrect dimensions that make them difficult to maintain or the wrong light source used in the wrong location.

Thankfully, there are also many successful projects that demonstrate this technique. United Kingdom House, near London's Oxford Street utilises a simple 'dropped' ceiling raft and concealed vertical coves to illuminate the walls, providing feature and ambient illumination.

Vertical coves were used at the headquarters of law firm Norton Rose where, integrated into the door frame they provide visual interest and emphasis on the entrance doors.

At BP's Britannic House, cove lighting is located to the rear of banquet seating pulling the eye down into the space to create warmth and conviviality, whilst at high level, coves fitted with cool lamps create an artificial skylight, replicating natural light entering the space.

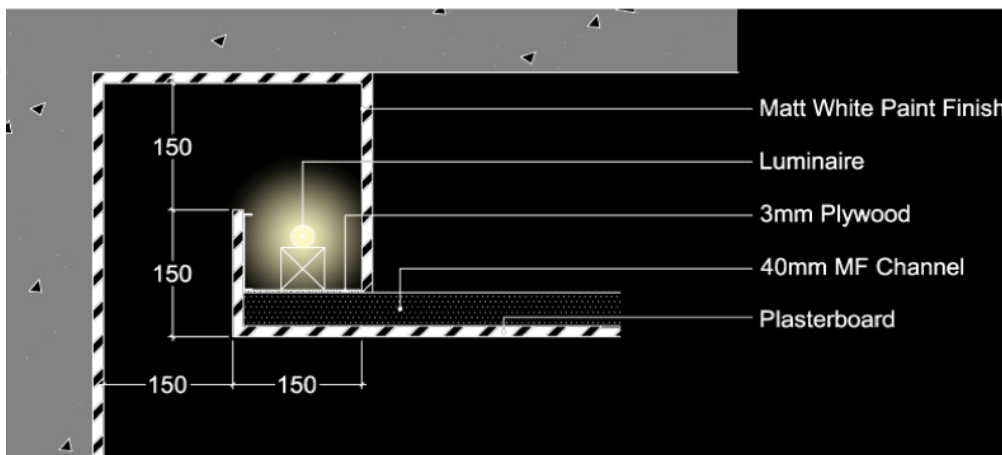


These three projects demonstrate that with careful planning and co-ordination lighting and architecture can inform each other fusing the boundary and creating visually interesting spaces without compromising the need for low energy and sustainable lighting solutions.

The 150mm Rule:

We are often asked what the optimum dimensions for a cove are. Cove dimensions are often governed not by the illuminated effect or the lamp size but by the need to access and maintain the light source. If in doubt then it is always worth starting with the “150mm rule” and tweaking the dimensions backward from there.

The “150mm rule” is a simple rule of thumb that says if every dimension associated with the cove is 150mm the cove detail will be easy to maintain and enable light to escape whilst ensuring lamp sources are not visible.



Cove Lighting Top Tips:

- Painting the internal surfaces of the cove matt white creates a good reflective surface that scatters the light softly avoiding the need for reflectors.
- Glass Reinforced Gypsum (GRG) details, when constructed, can leave the interior of the cove messy and uneven. Instead, specifying a plywood insert provides an even surface for the light source to sit on providing a neat illuminated effect.
- Avoid hot-spots caused by ceiling support MF channel by specifying an internal skin of plywood / plasterboard.
- Cove details can be designed to allow return air – but ensure you do not lose too much light through opening into ceiling voids.
- Utilising the cove for supply air can cause problems with air dumping onto the lamp, hence over-cooling it. This shortens the lamp life and can significantly reduce the light output.
- Removing the up-stand that conceals the lamp to create a ‘shelf detail’ enables more light to escape the cove – great for washing walls but be sure to check viewing angles into the cove. Particularly at corners if, for example you are wrapping the cove around a core wall.
- Chamfering the cove can create a lightweight edge that becomes illuminated by reflected light. This is great for ceiling slots but not as good for wall washing as the light source is further from the wall.



NULTY+

Light Sources:



Linear Fluorescent

Tried and tested and easy to maintain fluorescent lamps are a good solution for cove lighting. However, lamps will require overlapping to create a uniform illumination without hot / cold spots. The set lengths of lamps necessitate careful planning and co-ordination of cove / coffer lengths.

New advances are bringing fluorescent lamps to market that now have turn back electrodes like cold cathode to enable seamless putting up of lamps, although availability of different colour temperatures is limited.



Cold Cathode

My favourite source of cove lighting, cold cathode lamps come in a wide variety of colour temperatures and as they are made to order can fit into any length cove.

Energy efficient and long life (approx. 40,000 hours) – a common misconception is that cold cathode is expensive to purchase. Most cold cathode manufacturers include installation within their quotes and when this is taken into account cold cathode often works out as competitive as linear fluorescent lamps.



Low Voltage Festoon

With a beautiful quality of full spectrum warm light these can look stunning, but the small lamps are energy hungry and can fail at an alarming rate requiring regular maintenance. Careful consideration should be given to where these fittings are used.

LEDs

The new kid on the block as far as cove lighting is concerned, LEDs are still fraught with issues. Some LEDs only come in set lengths so the luminaire may dictate the cove / coffer dimensions.



The poor colour consistency associated with white LEDs means you need to provide space for the light to blend together. However, colour consistency is getting better and new advances are seeing some compact fittings that can be mounted into very discreet joinery details.

High capital outlay.

