

LIGHTS BY  
**LINEA**

EST. 1990

DESIGN & TECHNICAL CERTAINTY

**101 ON LIGHTING**

# 101 ON LIGHTING

Establish the style and budget of the project so that you have an idea of which products you will use.

Always ensure that you have all the necessary drawings: Plans, Sections, Elevations etc.

Make sure you understand the above mentioned drawings. Enough ceiling depth to accommodate the fittings you wish to use etc.

Have a good idea how much light is required in the different spaces and where dimming is required. Always ask the question regarding how the lights will be controlled; for example, if the client will be using a dimming control system.

If so, its important to make sure that the specified lights/power supplies are tested and are compatible with the system being used.

The confirmation of the testing of each light should be sent on a report from dimming control company for your record.



Start with the smaller areas first...

Bathrooms Store Rooms, Garages, Pantries etc

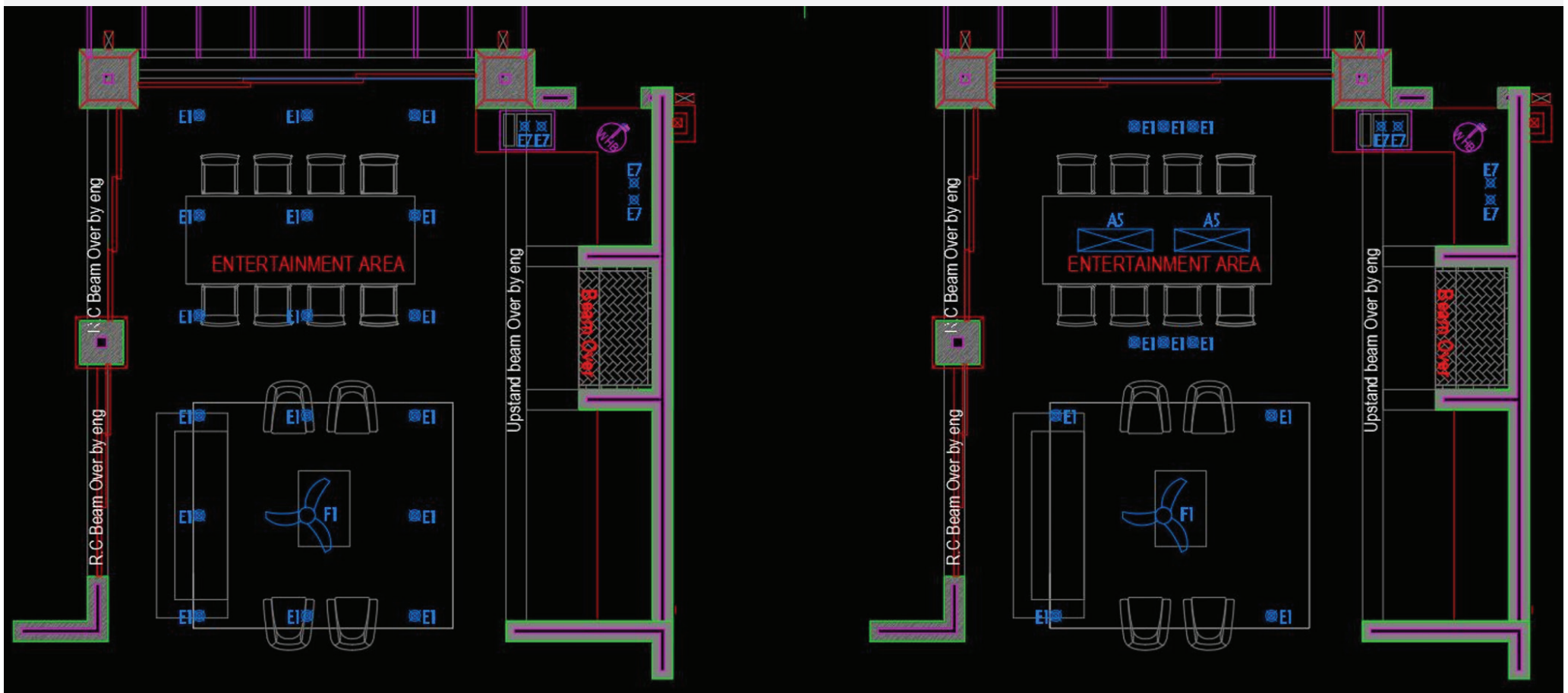
Downlights:

500mm – 700mm from walls 1500mm – 2000mm centers

Grouping of downlights depending on the style of light one can work on a 250mm-300mm centre grouping

Be creative with the layout of your downlights, try refrain from placing downlights in linear rows creating a runway effect rather try groupings of two or three downlights together.

Grouping of downlights can also be a great way to demarcate areas in a home, keeping in mind that the lights must still line up, this might take a bit longer when doing a design but makes a world of difference. (as seen below)





Try never put a downlight above a bed or toilet or bath.

External wall lights ideal mounting height at 1850mm – 1900mm AFFL.

Footlights at 350mm AFFL.

Bathroom mirror lights 2000mm – 2100mm AFFL.

Bedrooms: Consider wall lights and bedside pendants  
NOTE: Separate switches for these.

Utilise bulkheads for recessed lighting as a source of indirect light.

Commercial \ Offices: 600x600 LED panels 2.4m apart.

Use oversized pendants \ chandeliers in double volumes to accentuate height.

Use LED strips to highlight architectural details \ wooden panels \ level changes \ floating stairs \ ceiling height changes.

Identify the textures you want to highlight  
eg. cladded walls \ wall paper \ mosaics.

Kitchens – make sure work surfaces are lit properly.

Dressing rooms – over light, rather than under light.

Use freestanding lamps to compliment fixed lighting.

Use walls for indirect lighting: wall washers etc.

Always specify anti-glare where possible.

Consider aesthetic vs function: what does each space require in terms of lighting – have you allowed for this?

#### REMEMBER:

You want the lighting to be an experience no matter what the space is.

Good lighting enhances the mood and desirability of these spaces.

It contributes greatly to people's sense of well-being.



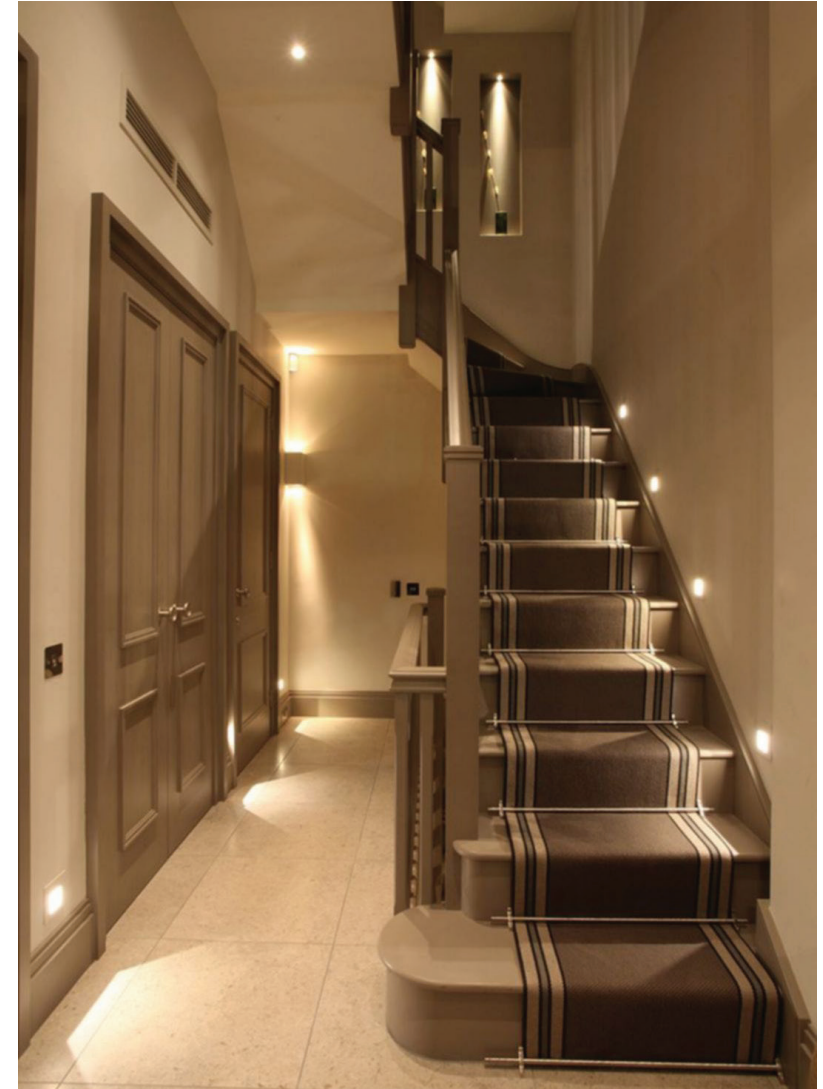
When considering staircase lighting, the design of the staircase, construction and desired effects are the key elements to consider, along with finish and texture.

A staircase is the central spine of your home, linking spaces and people together. It should be functional and sculptural, and staircase lighting can make a real difference.

In most cases, lighting on staircases isn't purely a decorative theme, it also serves a very real function in terms of safety.

Glare should be avoided and maintenance considered, whilst using interior lighting to enhance the form can add beauty and softness.

*Staircase Lighting*



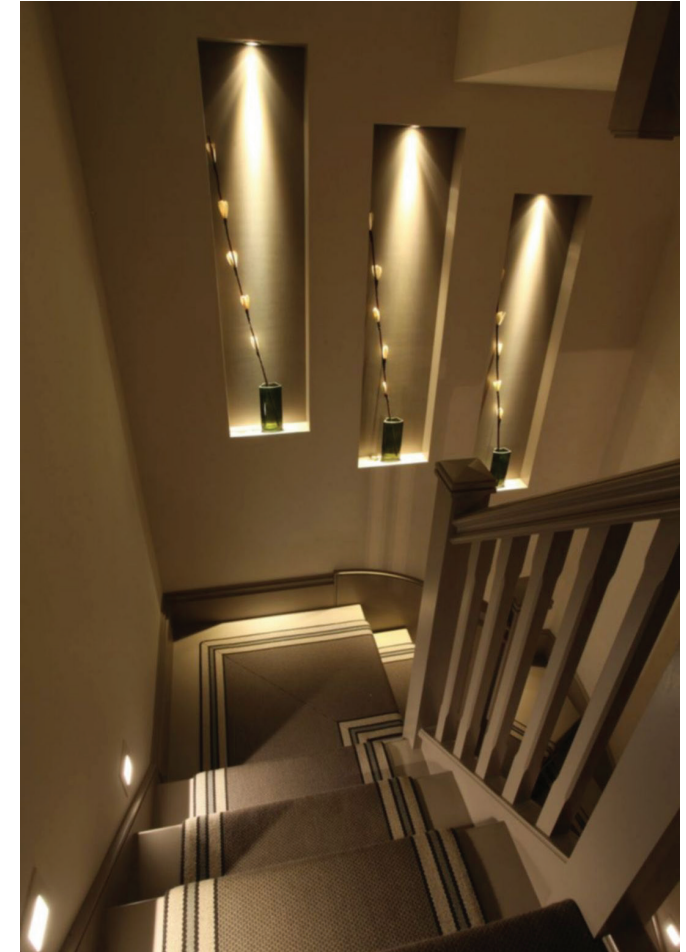
My first staircase lighting idea would be to add wall recessed stair lights. This can add a real wow-factor whether in stone stairs or more classic stairs with runners. Here they are set higher for a wash of light over the stairs.



Here you can see miniature wall recessed footlight have been used every other tread to wash light over the tread. Here they are placed closer to the steps for more of a skimming effect across the tread. Slide alongside is optional!



Using decorative wall lights on stairway landings can be functional and work well if there is enough room. If space is tight, up/downlights can be located in the corners such as the metal squares. This stair lighting effect works particularly well when used on half landings.



A great effect with plenty of impact instead of a wall light would be to create a niche or series of niches as shown here. These can be lit with miniature 1W to add drama. Combine these with 3W steplights.

*Staircase Lighting*



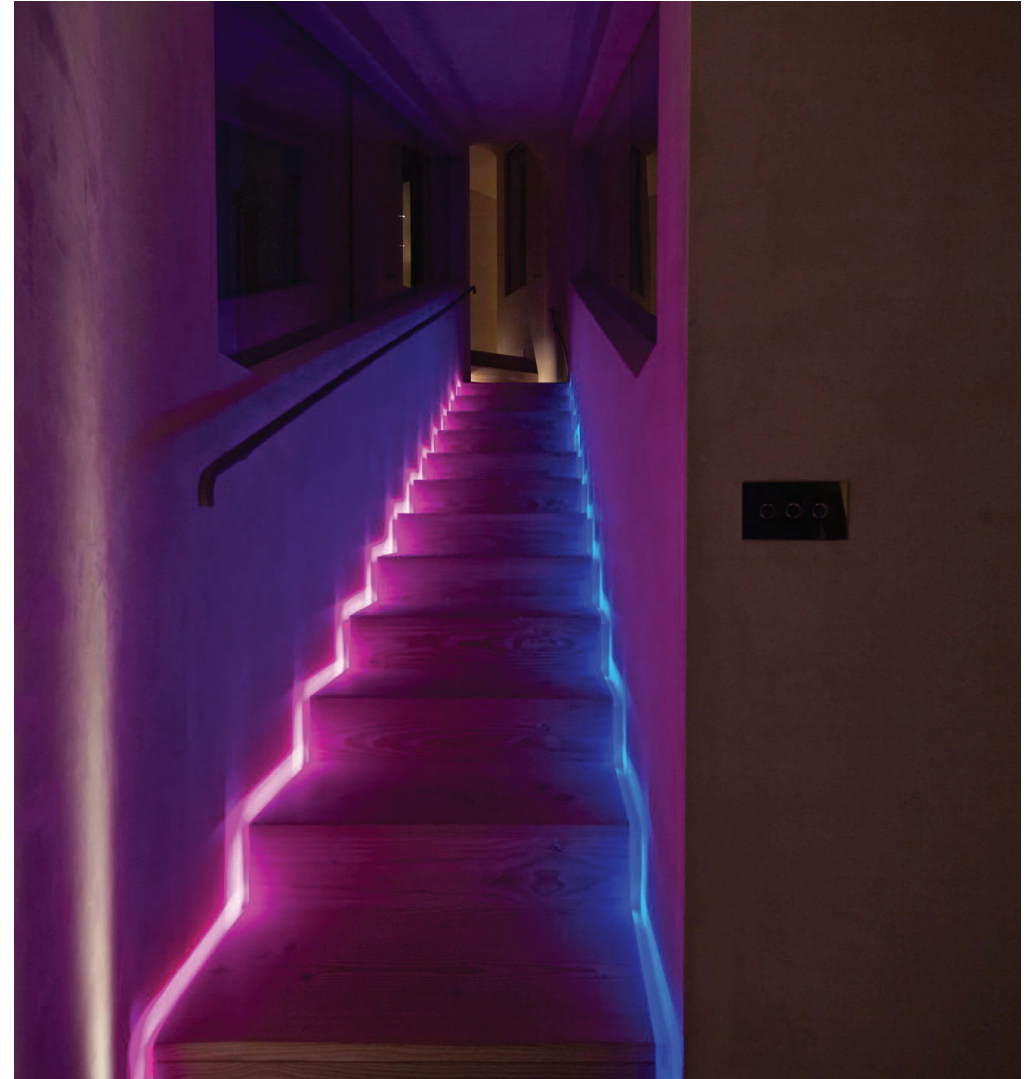
For more contemporary staircases, consider using the washer. This creates a stronger architectural feature. The underside of staircases are often dark forgotten spaces. Another good stair lighting tip is to add lighting under the stairs too. Here 1W uplights add drama to the textured wall.



For open riser staircases, the light source can be hidden from view under each tread. When not illuminated the LED strip recessed into the underside of the step is invisible. When lit it creates a beautifully soft floating effect. This lights the tread below as well as casting wonderful shadows under the staircase.

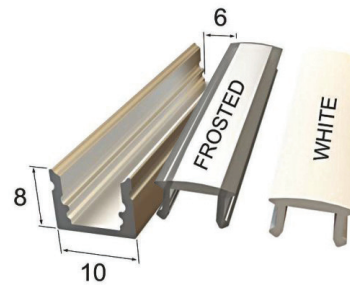
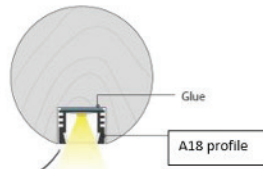
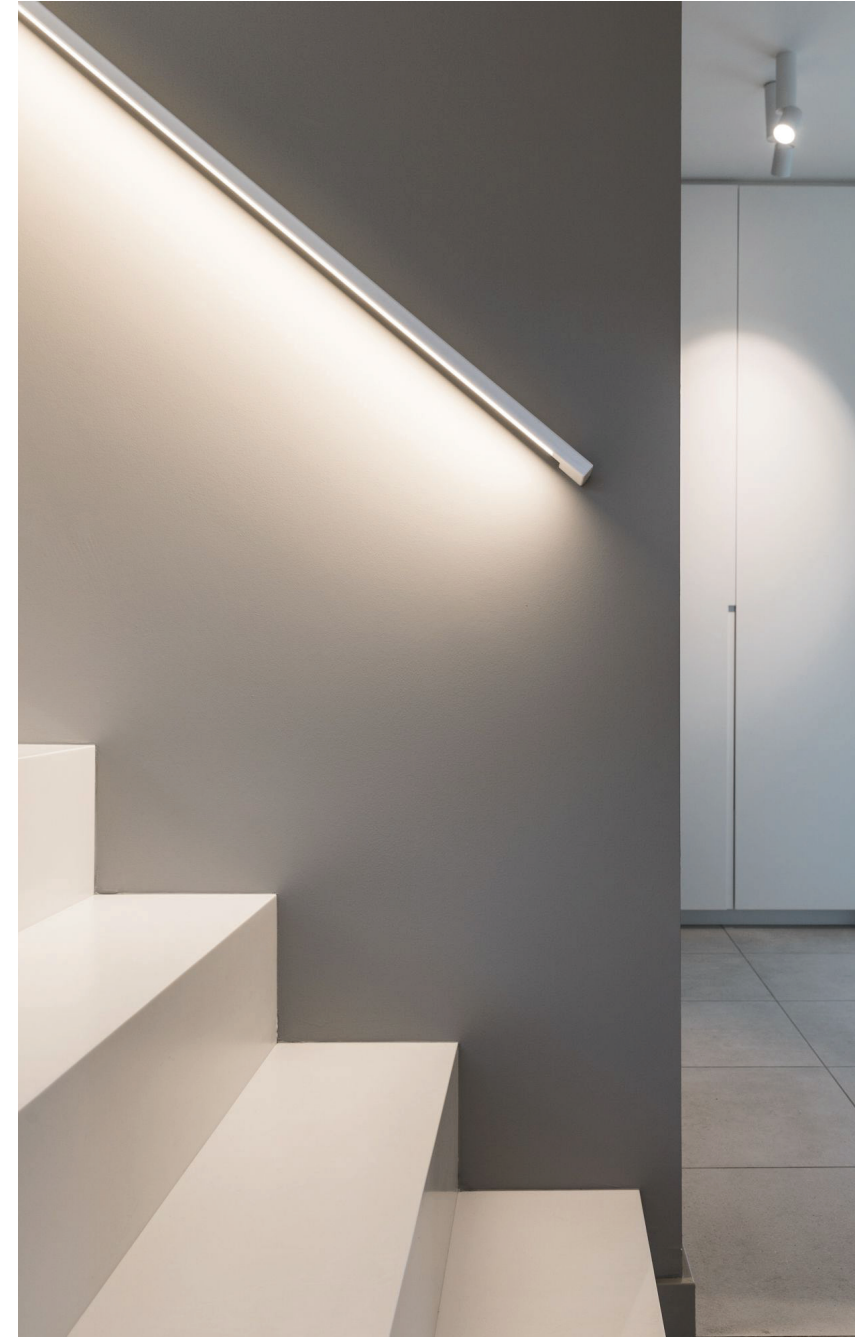


For the ultimate dramatic effect, conceal Contour LED strip either side of the staircase to lead your way step by step up the stairs.



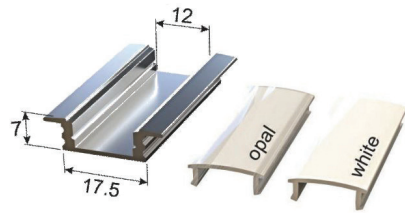
For fun, add a colour changing option using our RGB-Strip. Select a multitude of colour to fill the space.

*Staircase Lighting*

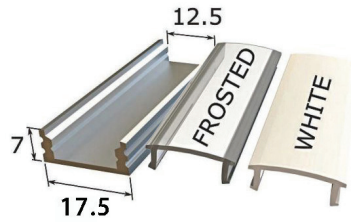


LBLEXTA18 PROFILE

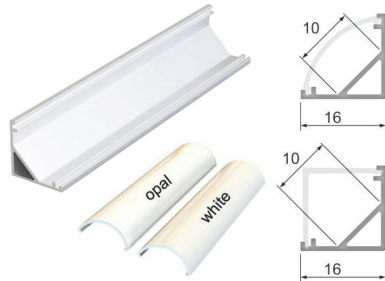
*Recessed Handrail Lighting*



A4 PROFILE

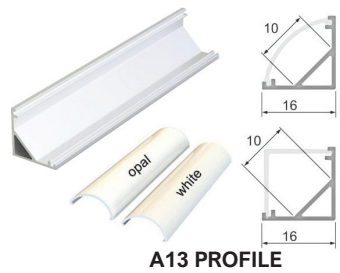


A6 PROFILE

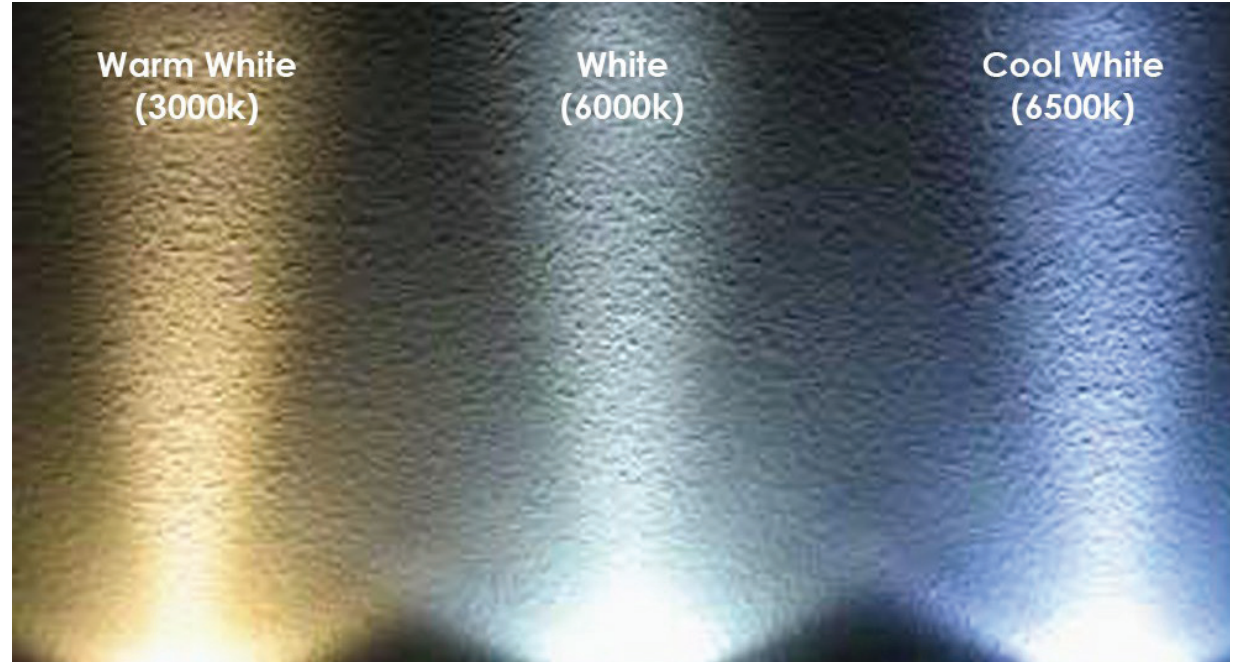


A13 PROFILE

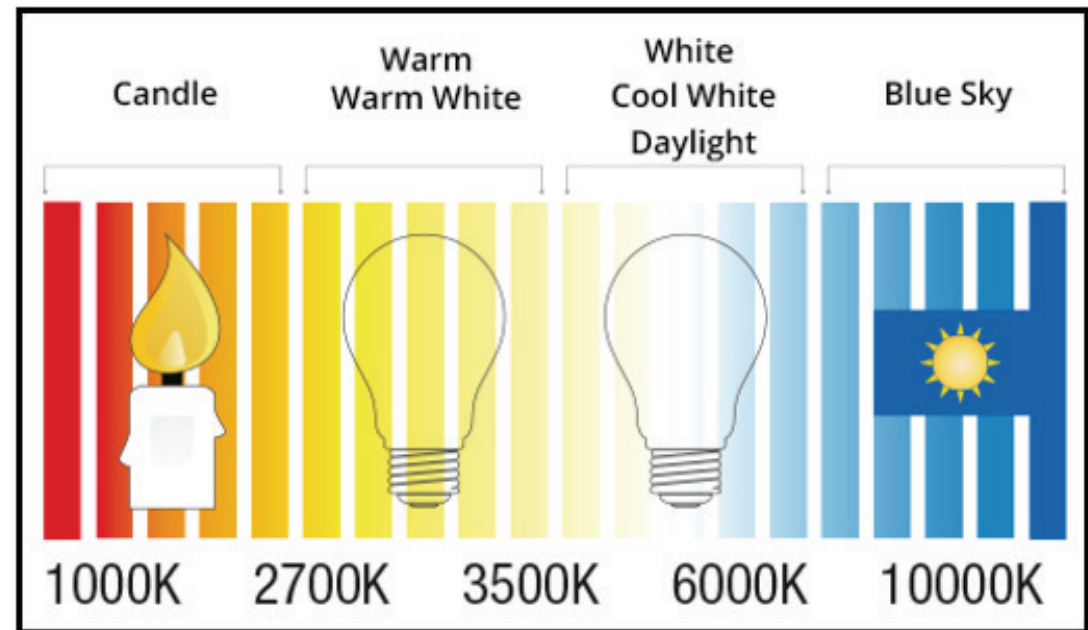




*Application Details*



Cool White is mostly preferred in industrial and commercial settings whereas Warm White is usually found in homes and leisure areas.



In general, lighting for artwork should be three times brighter than the rest of the room's lighting.

This can be achieved by using the appropriate intensity or ambiance.

To ensure the artwork's colors are portrayed accurately, seek out high CRI (Color Rendering Index) percentages in your lights.

The closer they are to 100 percent, the more vibrant the colors will appear. Consider the following options when lighting artwork.

**LED:** LEDs boast a long lifespan and give off little ultraviolet radiation and heat. They are a good option if there is little space available between the art and the light source. They are available in warm and cool color temperatures.



Lighting should be angled at 30 degrees to reduce glare.

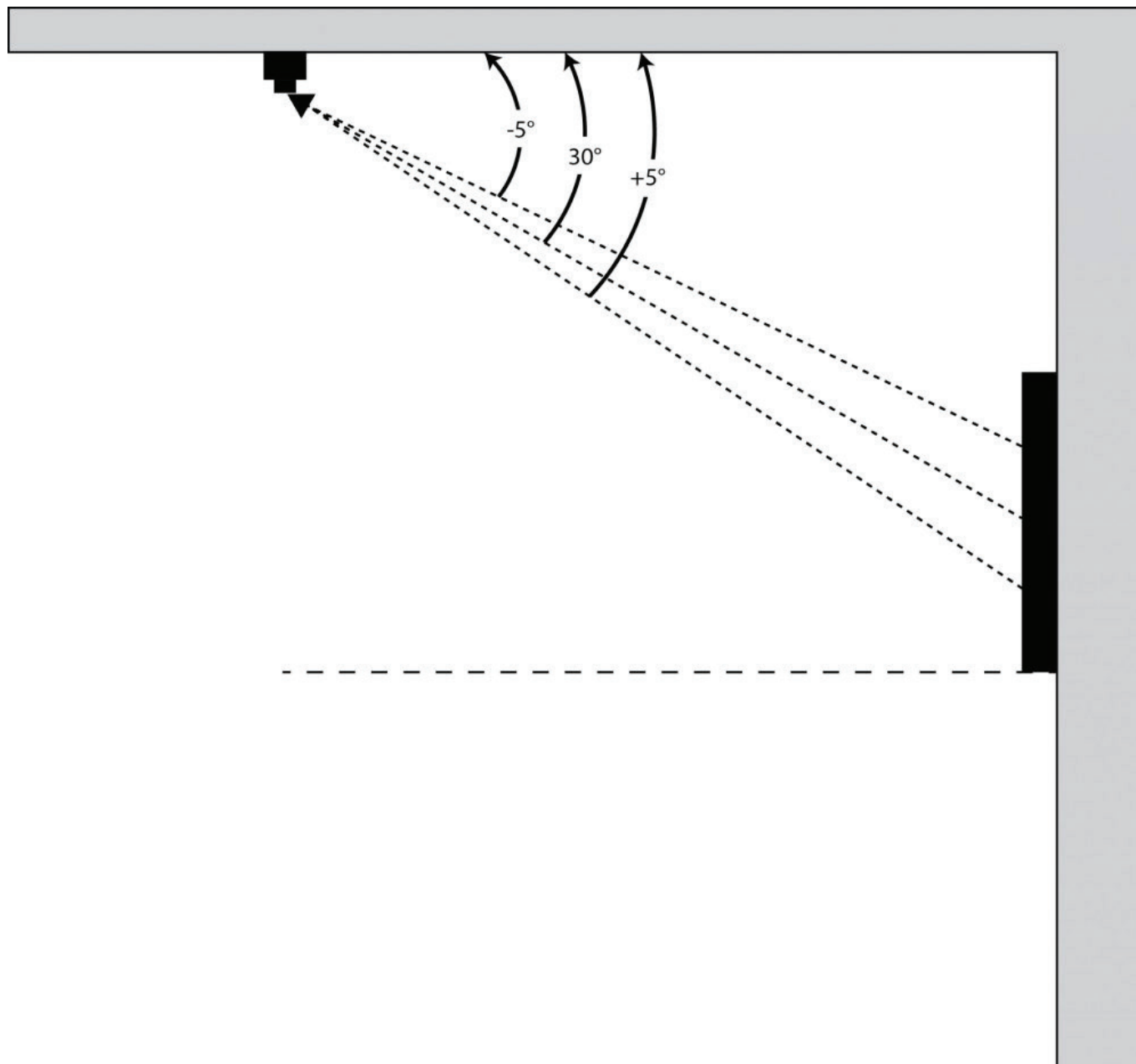
Add 5 degrees for larger frames and subtract 5 degrees to highlight textures.

When lighting artwork, the suggested angle for the light is 30 degrees.

This will reduce any glare or reflectance and cover the artwork in sufficient light.

To avoid casting shadows with a larger frame, add 5 degrees to the angle.

To accent the texture of a painting, subtract 5 degrees.



*Specific Lighting Requirements*



Adjusting the angle of a light affects how the details of a painting with texture are illuminated.

Oil paintings are typically textured, especially those created with a heavy impasto technique.

Using direct lighting can cause different shadows or highlights to appear.

If this effect isn't desired, lighting oil paintings with a broad light ensures all details are evenly illuminated.



Placing lights at a 30-degree angle reduces the glare on artwork under glass.

Watercolors, serigraphs, lithographs, and other graphic media under reflective glass can result in glare.

Use the 30-degree angle techniques mentioned above to reduce this occurrence.

*Specific Lighting Requirements*



Notice how the difference in lighting can improve the details shown on the image above.

Sculptures should be well-lit by three diffused light sources to highlight all details.

In general, avoid lighting sculptures from directly below, but use your discretion in deciding the angles.

At the end of the day, much like art itself, aesthetic lighting is subject to the discretion and taste of each collector.

*Lighting Sculptures*



## Include These Three Types

Make sure to incorporate the three basic types of lighting: ambient, task, and accent.

Ambient lighting can be achieved through hanging lights, post lights, and wall lights.

Task lighting includes pathway lights, plus deck and security lights. And you can get accent outdoor lighting with landscape kits and spotlights.

For a small patio and a modest budget, consider string lights, solar spotlights, or LED candles.

## Calculate

Before you start designing, you'll need to figure out exactly how much lighting you need; to determine how much light a space requires.

## Plan Ahead When Choosing Fixtures

Observe your space and take measurements so you don't choose fixtures that are too large-scale.

Check the size and position of a fixture before you buy using a simple piece of paper. Use a paper template to determine exact placement to review the size before buying.

For either the front porch or the back patio, the size of an outdoor wall light should be approximately one-third the height of the door.





You'll also want to make sure you're choosing sturdy lighting, one that's made of high-quality and weather-resistant materials.

### **Use LEDs**

They use far less energy than halogen or incandescent bulbs, plus, they are almost maintenance-free, so you won't have to change bulbs.

### **Take a Look From Inside Your Home**

This can help you decide on which lighting to choose and how place it around your yard.

Consider how patio spaces, gardens, and pathways look like from inside your home.

Lighting gardens or shrubbery that can be seen from living or dining rooms give a room-expanding view to the outside at night.

Think path lighting for garden areas.

### **Use Subtle Light for Entertaining**

Your dinner guests won't want a bright spotlight on them while they're enjoying their outdoor meal, so stick with lighting that gives a soft glow.

Outdoor rooms, especially dining areas, benefit from subtle, indirect lighting that helps create a restful mood.

*External Lighting*



## Think About Security

Outdoor lighting not only provides ambiance, but it can also secure your home.

Make sure all entry points of the home are well lit, outside the garage, mount a wall lantern on each side of the garage door or install a single fixture above.

For added security, illuminate any side of the house in the shadows with spotlights installed on your eaves or use wall lanterns at side doors, windows, and garages.

*External Lighting*

The Three Types of Lighting You Need to Know About: Ambient, Task and Accent

### Ambient (1 and 2)

This will be your main source of light, whether in addition to natural light or to fill in for lack of it. You want to cast as much of it as evenly as possible from your ceiling. You can do so with a combination of (but not limited to) chandeliers, pendant lights, recessed lighting, and flushmounts.

### Task (3)





While ambient lighting is used to enable you to navigate throughout the kitchen, it often leaves shadows in areas that require more focus. With the help of task lighting, work surfaces, and cabinetry are properly illuminated so you can safely prepare meals, read recipes, and easily spot ingredients on a shelf. Common kitchen task lighting options include strip lights and puck lights.

### Accent (2)

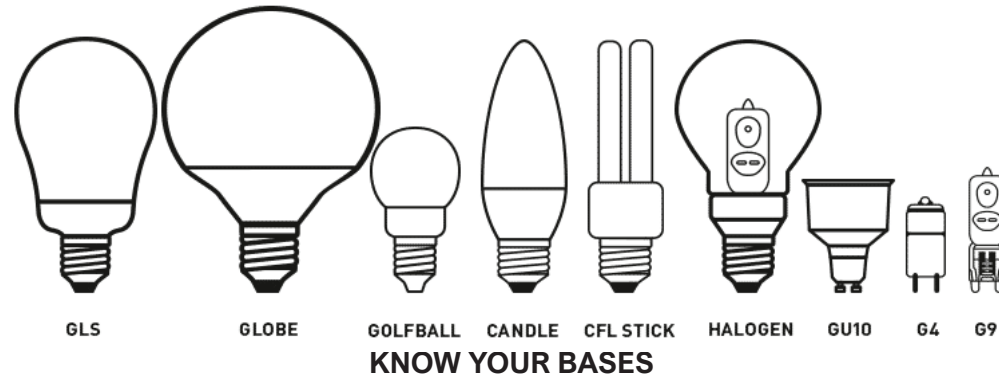
Consider these flourishes the cherry on top of your well-designed kitchen: toe kick lights, cabinet lights, and any other light that might accentuate your favorite elements. They also might cross over into ambient and task lighting as well.



### LIGHT BULB COMPARISON

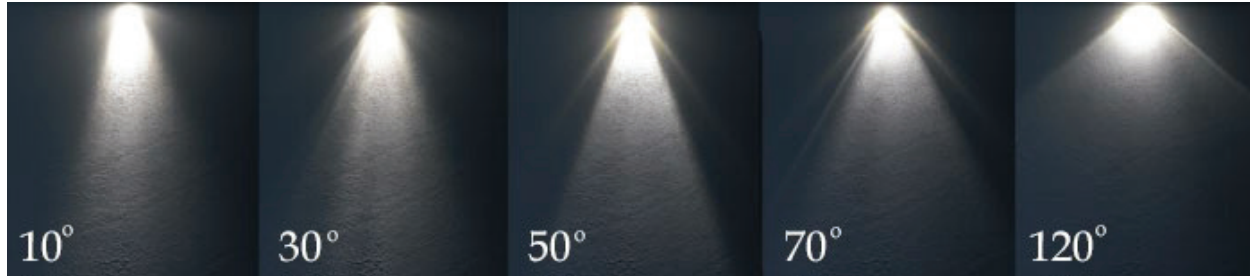
Incandescent	Halogen	CFL	LED
			

LIGHT BULBS

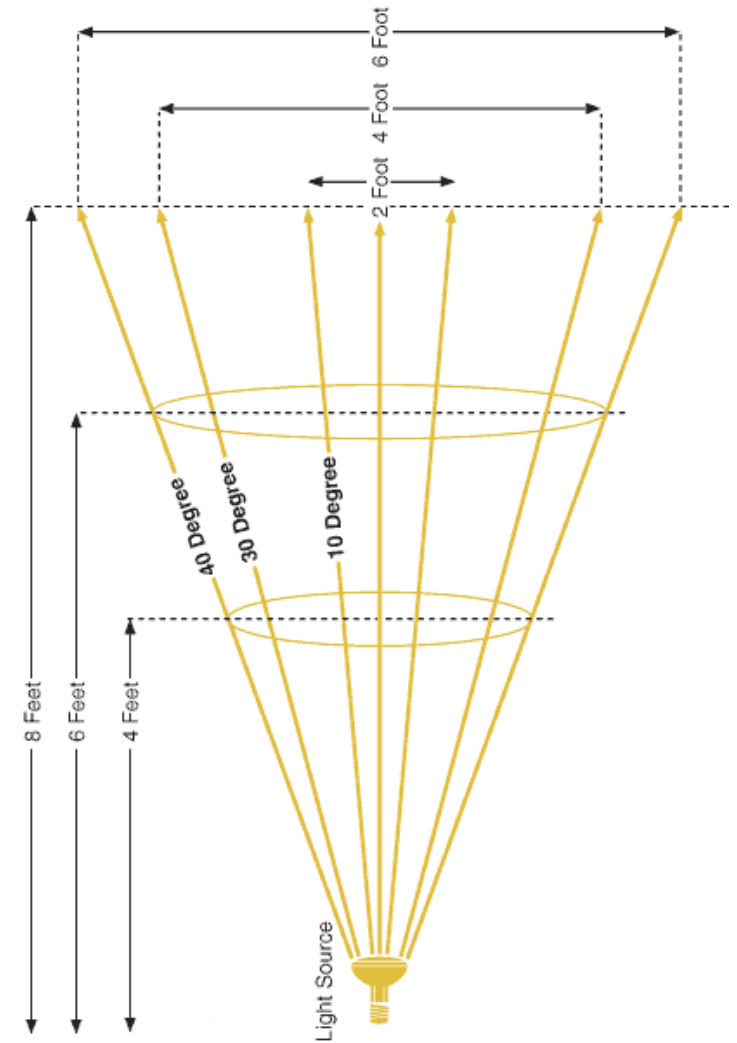
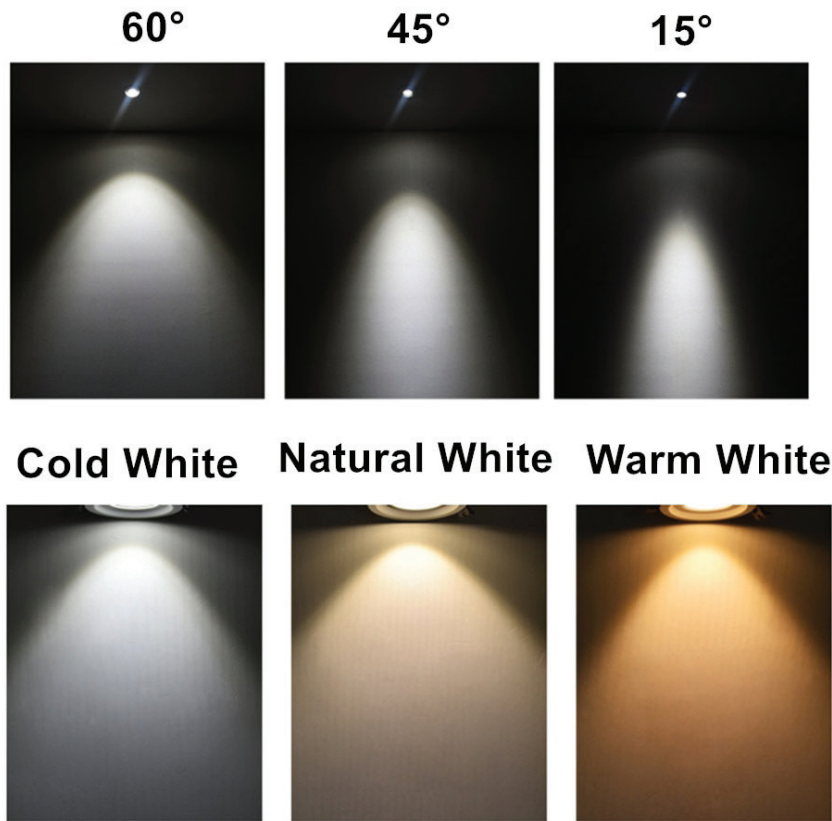


LIGHT BULB TYPES





### Beam Angle



DIFFERENT BEAM ANGLES

*Beam Spread*

# DESIGN & TECHNICAL CERTAINTY