

Quality Of Light

The Importance Of Quality In Lighting

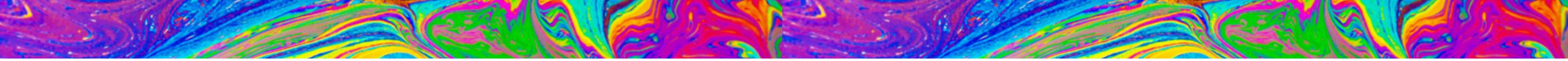
Lighting is a crucial aspect of interior and exterior design, not only does it enhance aesthetic appeal but lighting also creates a safe and comfortable environment for any space. Good lighting can literally make or break any design plan, it is futile to renovate or construct your home with the best architectural features and furnishings if the lighting they are paired with is not first class. There are a few major aspects involved to make sure your lighting is of the highest quality, these are: Colour Rendering Index, Colour Temperature, Colour Stability and Colour Consistency.

This document will go into detail of each of these points and really illustrate the importance of the quality of light and colour.

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CRI

Colour Rendering Index

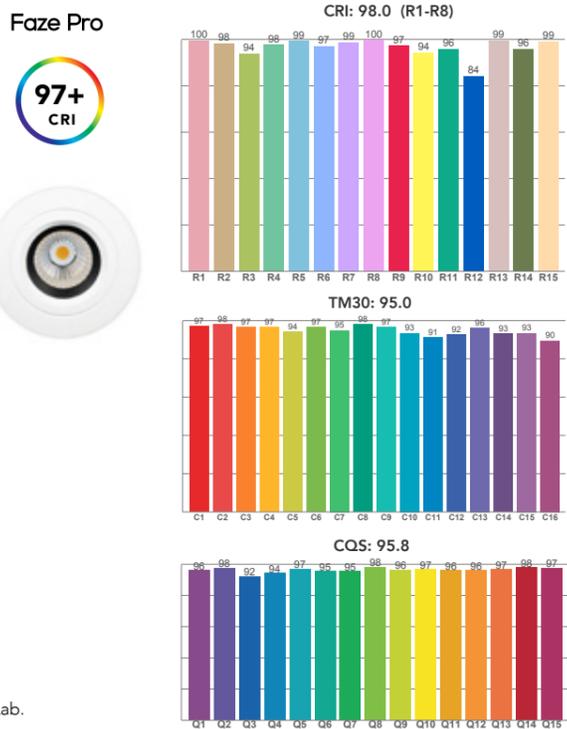
CRI (or Colour Rendering Index) is the accurate measurement of the capability of a light source to exhibit, in high grade, the true colour of various objects. The metric scale of CRI is from 1 - 100, (with 100 being the closest to natural light) therefore the higher the CRI, the better the light source is at rendering colours accurately.



Pictured Above: A depiction of the colour difference between each CRI.

How do we compare?

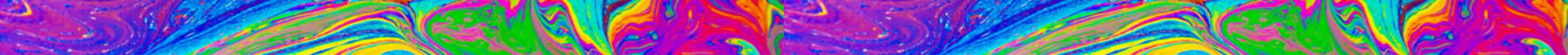
A high CRI is crucial when designing any lighting plan, from residential to commercial, as it will make sure that all of the architectural features and materials in your space are enhanced exceptionally. The high CRI of all FAZE products are a perfect example of this, as they will magnify the details in stone countertops, the rich colouring of hardwood floors and everything in between.



Pictured Right: Faze Pro Test Results. Recorded from our Faze Lab.

Pictured Far Right: A comparison between low and high CRI ratings.

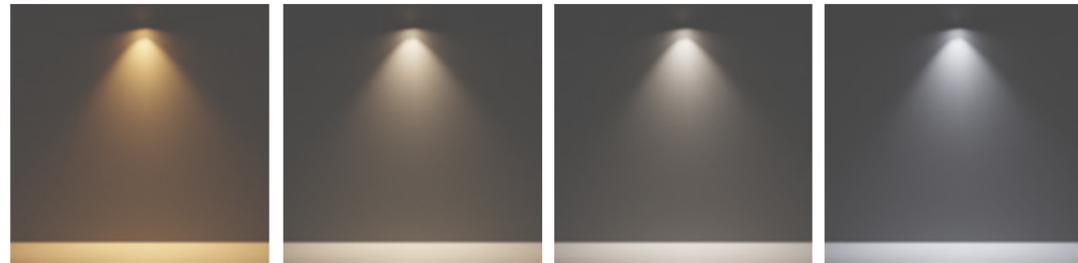




CCT

Correlated Colour Temperature

CCT (or Correlated Colour Temperature) is a number, expressed in degrees Kelvin, which represents the colour of a light source. It is measured on a scale of 1,000K to 10,000K and indicates the warmth or coolness of the light. Light sources with low CCT provide light that appears warm, while light sources with high CCT values provide light that appears cool.



2700K

3000K

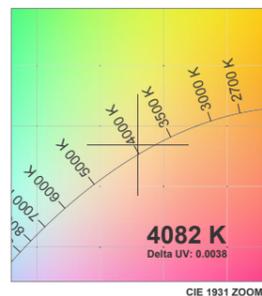
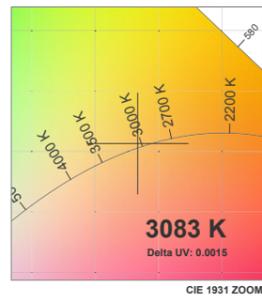
4000K

6500K

Pictured Above: Colour Temperature variations, depicted using the Faze Vita IES, colours manually adjusted for depiction.

Pictured Below: Test results for the Faze Pro 13W in 3000K and 4000K, displaying their CCT rating.

Faze Pro



How do we compare?

Unlike CRI, there isn't a right or wrong when choosing your CCT, it is more about personal preference.

However, it is worthwhile noting that warm lighting is not always suitable for rooms where you would like to be calm and have a relaxing glow, whereas cool lighting is perfect for task lighting and rooms where you would like to enhance concentration.

All of our FAZE products come with a colour temperature of either 3000K or 4000K, as well as 2700K for some fittings, the choice is all yours!

Pictured Right Above: 3000K Lighting

Pictured Right Below: 4000K Lighting



Colour Consistency

Colour quality in numbers

Colour consistency refers to the average amount of variation in the quality of colour among a batch of identical lighting products. Put simply, if you were to install 4x downlights of exactly the same kind in a living room, you would expect them to produce exactly the same light, right? However, colour consistency can vary based on the product, the manufacturing and the standards for quality processes that the manufacturer follows. Colour Consistency is measured in a metric of steps with Step 1 being the best. The lower the Step (or SDCM) the harder it is to perceive the difference in colours. A SDCM of 3 or lower is not visible to the human eye.

Pictured Right: 2 Diagrams explaining the SDCM Measurement.

In the upper right diagram is an example of a 3200K target colour range.

In the below right diagram is that ellipse closest to the 3200K target with examples of luminaires attempting to match that target value.

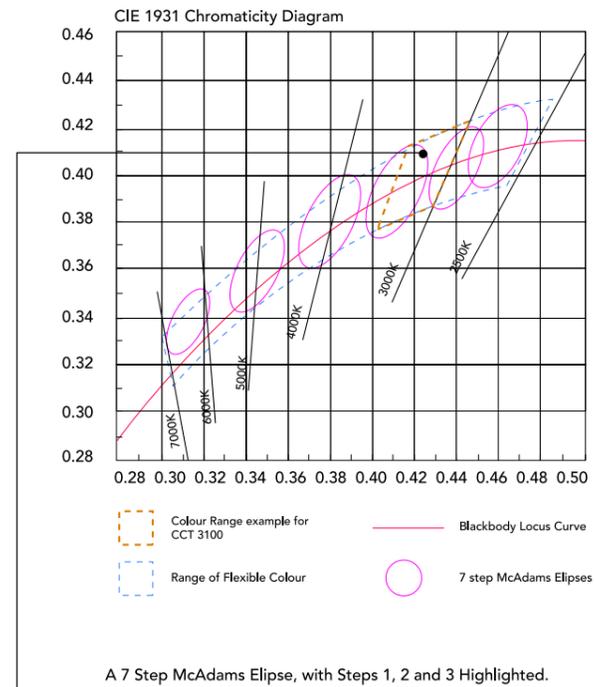
Note: In this example A and B are each 1 Step from the Target Value, but 2 Steps from each other.

C and D are each 2 Steps from the Target Value, but 4 Steps from each other.

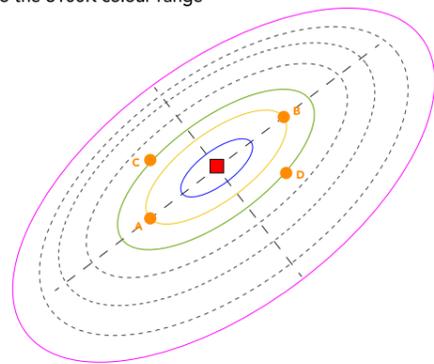
How do we compare?

The majority of our FAZE downlights have an SDCM rating of 1.5, making them some of the best rated in the lighting industry.

Pictured Below: The various colour changes in lights based on their Step measurement. By Step 4 the colour change is highly noticeable.



The McAdams Ellipse closest to the 3100K colour range

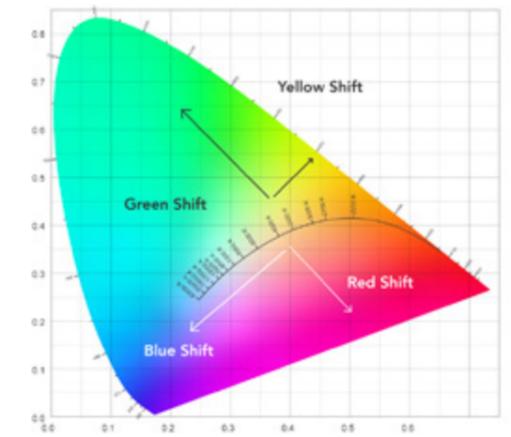


- 1 Step (SDCM1)
 - 2 Step (SDCM2)
 - 3 Step (SDCM3)
 - - - 4 Step to 6 Step (SDCM4 - SDCM6)
 - 7 Step (SDCM7)
- Target Value
 - Luminaire Chromaticities attempting to match the Target Value

Colour Stability

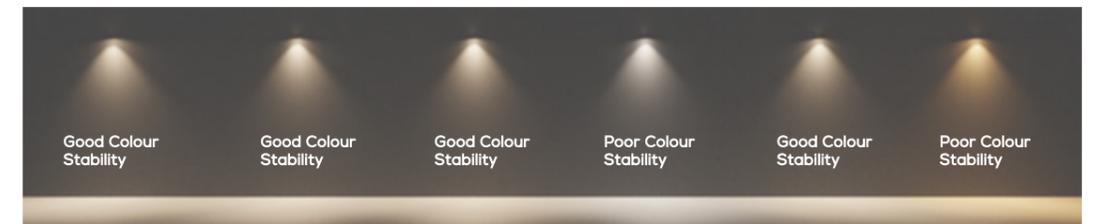
Lifetime

It is possible for the colour output of luminaires to change during their lifetime, even if they are all the same colour temperature. Colour stability is the power to maintain the original colour output over time. Colour shift is the opposite, this is when there is an obvious change in the colour output of a light source, resulting in a change in the temperature and colour rendering properties. Colour shifts can occur due to things like the construction of the product, quality of materials and the application it has (i.e. where it has been installed and the environmental factors). The primary factor that contributes to LED colour performance is the operating temperature; superior thermal management significantly slows down the degradation of LEDs, which in turn means that the intensity and colour properties remain stable and consistent over time.



Pictured Above: The colour shift directions for LEDs.

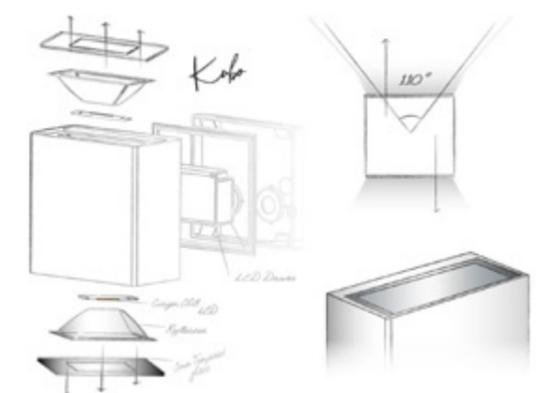
Pictured Below: An example of poor colour stability in a series of lights.



How do we compare?

Our FAZE luminaires are all created with high quality LEDs and materials and every FAZE luminaire is manufactured with the upmost care.

Our class leading heat dissipation results in longer lifetimes and colour stability across the board.



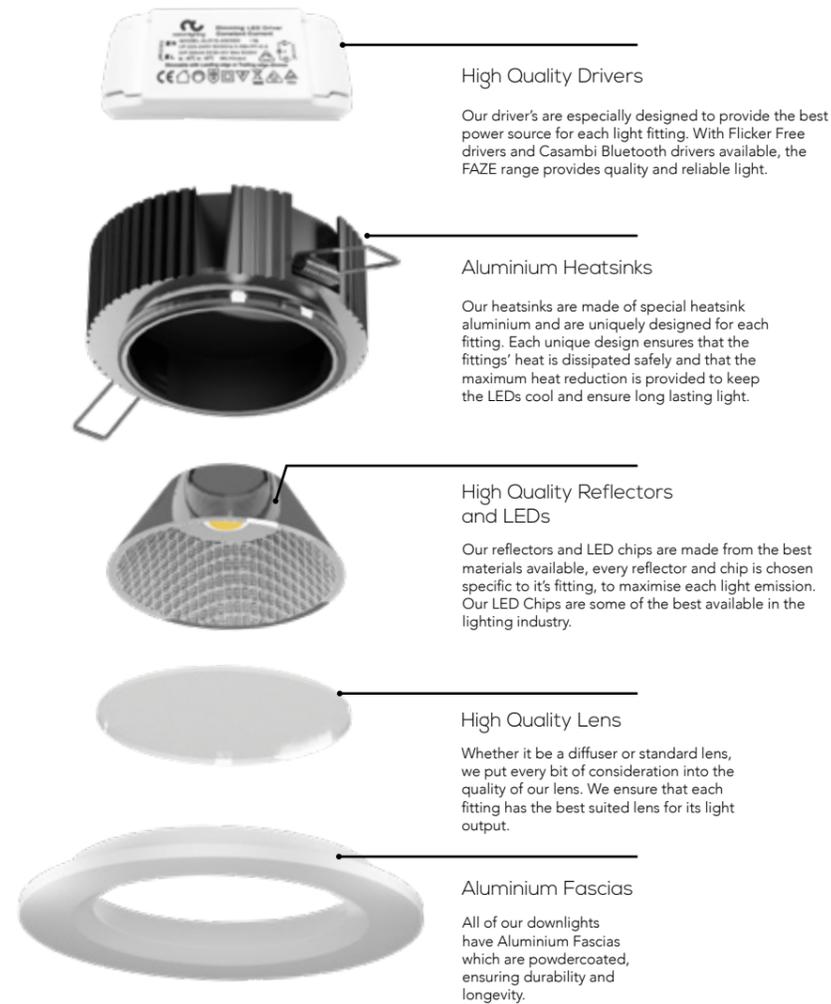
Pictured Right: The Faze Kubo design process, showing the components and ideas for functionality.

Product Quality

Pictured Below: A breakdown of the Faze Lite, depicting each component and the relevant overview.



Downlights with lifetimes of up to >100,000Hrs



Our other fitting types such as wall mounted and surface mounted fittings are all made out of the best materials available. This includes aluminium bodies, various polycarbonate parts and superior LED Chips.



Pictured Right: The Faze Vita, part of the Faze surface mounted collection.

So Why Choose FAZE?

The importance of good lighting cannot be stressed enough, therefore each of these aspects discussed have to be front of mind when choosing luminaires for any space. Here at Faze, we make sure that not only the highest quality components are used, but the research and design behind each and every product is extensive; ensuring that the end result for every project is of the highest calibre both at the time of installation and for years to come.



Designed To Last



Quality of Light

1300 438 609

Radiant Lighting
10 Gibberd Road
Balcatta W.A 6021



www.faze.com.au