

What are Light Reflectance Values (LRV)?

Light reflective values are a scale that is a measure of the amount of visible and usable light that is reflected from a surface when illuminated by a light source. This scale is used in architecture and interior design in aid of determining how much light a colour reflects or absorbs. LRV is measured on a scale ranging from 0 (Completely absorbing black that reflects no light, to 100 (Being completely reflecting white that reflects all light. Reflective value is a proportion of the light reflected off the surface, rather than the amount of light that falls on it, typically the sharpest of whites will have an LRV of 85 points and the black at its darkest will have an LRV of 5 points.

LRV's and their importance:

The Equality Act 2010 Requires that all new and refurbished public buildings have accessibility for all regardless of an individual's disability, age, or gender, ensuring safe entry, access, and travel through a building.

British Standards code of practice (BS 8300-2:2018) states that adequate visual contrast between building surfaces and their surrounding areas is necessary to meet the access needs of disabled people.

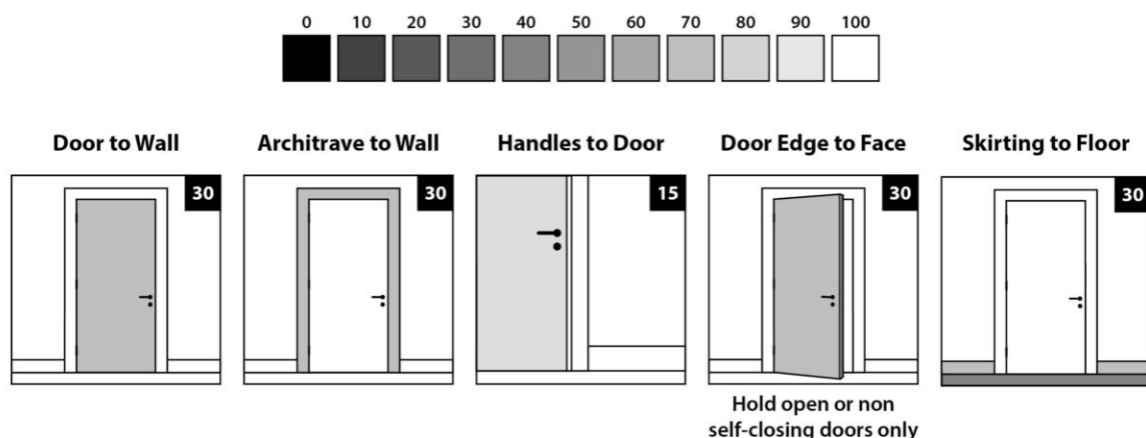
The required contrast between light reflectance values –

The British Standard recommends an LRV contrast of at least 30 points, 20 being acceptable if illuminance on surfaces is 200 Lux (Unit of measurement of light level intensity) or more. If the doors furniture projects beyond the face of the door and creates a significant differentiation in shade, the LRV contrast must be a minimum of 15 points.

Fire doors:

LRV when it comes to fire doors (as well as doors un-fire rated) must consider the contrast between the door facing and ironmongery as well as those stated below, to comply with BS 8300:2018 requirements.

See below how different component will affect the end LRV:





American Black Walnut (crown cut)
Average LRV: **14.72**



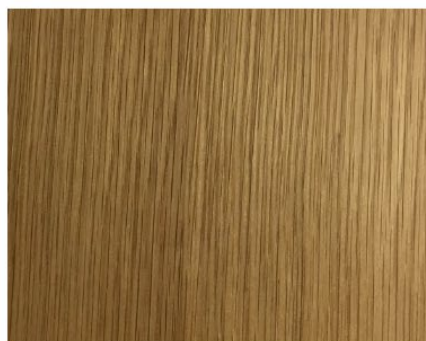
American Cherry (crown cut)
Average LRV: **23.79**



American Cherry (quarter cut)
Average LRV: **23.39**



American White Oak (crown cut)
Average LRV: **31.80**



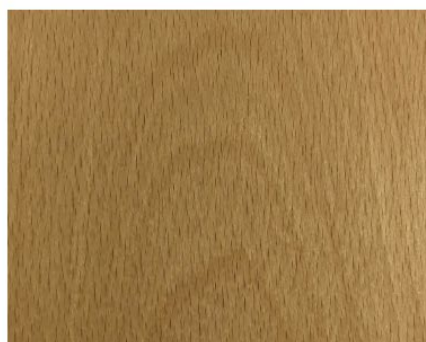
American White Oak (quarter cut)
Average LRV: **35.42**



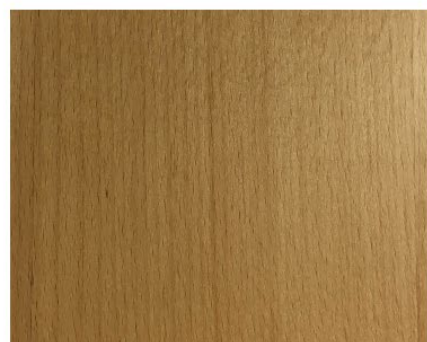
Ash (crown cut)
Average LRV: **51.48**



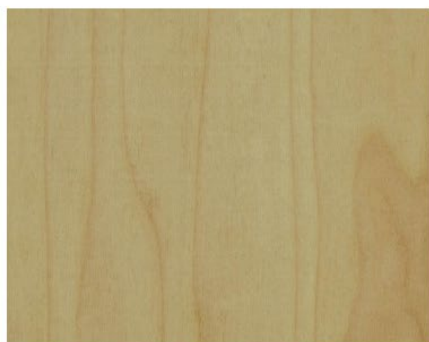
Ash (quarter cut)
Average LRV: **55.94**



Beech (crown cut)
Average LRV: **35.79**



Beech (quarter cut)
Average LRV: **36.05**



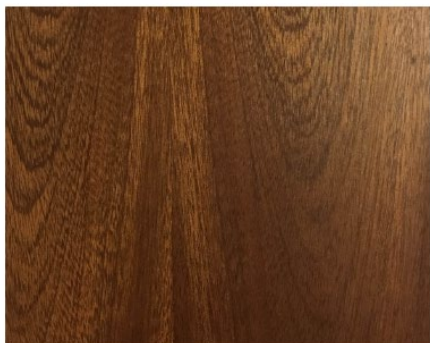
Maple (crown cut)
Average LRV: **54.28**



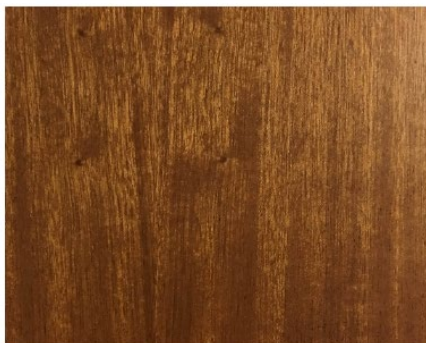
Maple (quarter cut)
Average LRV: **57.73**



Rosewood
Average LRV: **11.95**



Sapele (crown cut)
Average LRV: **15.72**



Sapele (quarter cut)
Average LRV: **17.19**

RAL Chart – LRV –

The RAL chart is very extensive each with their own LRV. Combining these colours is where we have to monitor the contrast.

Ex: Evolution very often use both American White Oak (Crown Cut – LRV 31.80) alongside Anthracite Grey for our frames (LRV 5). The combination of these colours and well as the ironmongery differentiation creates an LRV value of 27.80 which sits within the standardization of BS 830 0-2:2018.

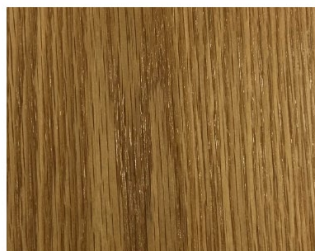


RAL 7016

Anthracite grey

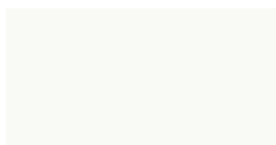
RAL Classic

Approx. LRV: 5



American White Oak (crown cut)

Average LRV: **31.80**



FB 2005

All white

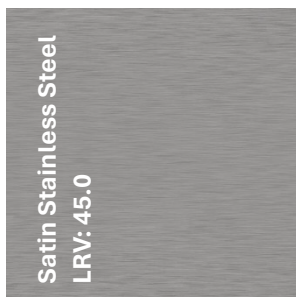
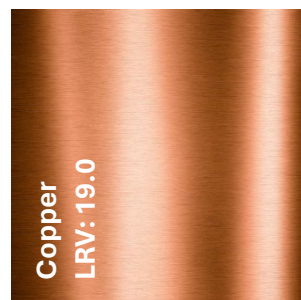
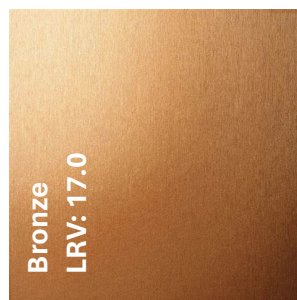
Farrow and Ball

Approx. LRV: 94

American White Oak (Crown Cut) Fire Door FD60, Anthracite Grey
Frame & Architrave, Satin Stainless steel Finish Kick & Push Plates



Ironmongery:



Ironmongery is composed of items such as:

- Handles
- Locking systems
- Kick & Push Plates
- Signage

Light reflective values of each component work together to create the total LRV of the door set. This including the doors furniture. See below a visual representation of the standard recommended contrast difference (30 Points) lighter and darker than the LRV value to pair with.

