

Notes on the different light fixtures and why we need them

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This is a quick summary of the video for your reference. Let's start with the simplest and work our way up:

Tungsten filament

- 360° light.
- Not very efficient or rugged.
- Being replaced/banned in most countries.
- Cheap!

Tungsten halogen

- The inert gas is a halogen gas.
- It can take higher wattages, over 20 KW, in a small form factor.
- It comes in different shapes and different connectors.
- Very mature system, highly reliable. This is why it's used exclusively in the film industry.

Work or shop lights

- These are rugged, often designed to withstand dust and water.
- Has a protective glass surface.
- Has a yoke so you can use adapters to fit it to a light stand for use. You can also tilt it, though it won't stay put easily.
- Can't attach barn doors or gels without DIY.
- Not that cheap now that we have alternatives.

Open face lights (Ianiro Redhead or the Arrilite 750 Plus)

- These are the same as shop lights but designed specifically for film use.
- You can attach gels and scrims on them. The Arrilite has a speedring so you can directly fit a softbox to it.
- The yoke is designed so you can lock the light in any angle you want.
- The reflector is optimized for softness and an even spread of light.
- It's only a flood light, so when you cut it with barn doors, the edges are diffused.
- Typical wattage is 750 or 800 Watts. These were the standard lights for documentary filmmakers, including Roger Deakins!

Tungsten fresnels

- Add a Fresnel lens and the light beam can be focused and more diffused. The quality of light changes as well.
- You can spot or flood the light.
- The light is bigger than a typical redhead, but with way more features.
- The standard lighting fixture for feature films.

PARs

- A PAR (parabolic reflector) is a special reflector that throws light further than any other reflector design.
- HMIs come in fresnel and PAR fixtures. Use the latter for maximum punch.
- Cheap alternative: Par cans, which are used for stage lighting.

Special lenses

- Allows for the finest focus of light.
- Expensive to engineer and construct, so these tend to be more expensive.
- Dedolights are used for short throw work
- ETC Source Fours are used for long throw work, and are cheaper (but heavier and larger).

- Both of these can be fitted with gobos (attachments to produce shadow patterns). Due to the parallel nature of the light beam, the edges are sharp.

Kino Flos

- Kino Flos have started manufacturing LED fixtures as well, but they are the standard for fluorescent banks.
- Kino Flos are tough, and can take attachments like grids, barn doors, gels, etc.
- I'm not sure how much of a future fluorescent lights have, now that LEDs can do pretty much everything and more.

LEDs

- Cool to touch (on the front only!)
- Life expectancy is out of this world.
- Excellent power efficiency, similar to HMIs and Kino Flos.
- Can program any color you want.
- The two major weaknesses of LEDs are size and weight, or the need for fans; and color accuracy. The latter is getting better by the month, but is still nowhere near what tungsten can deliver. The only thing better than tungsten is daylight.