Lighting

Three-Point Lighting

Three lights
- key light (lights key side)
- fill light (lights dark areas)
- back light (halo)

Key Light

Fireplug by Christophe Bouffartigue
Key Light

- main light
- dominant angle
- darkest shadow
- creates specular highlights

Fill Light

- extend illumination
- soften light
- simulates ambient (reflected, secondary) light
**Fill Light**

- test fill lights and key lights separately
- can use false colors
- use multiple fill lights

**Multiple Fill Lights**

**Just Fill Lights**
Back Light

- defining edge, halo effect
- distance objects from background

Jeremy Bfm. Tutorial on 3point light
(http://www.3drender.com/light/3point.html)

All Lights
Just Back Lights

Another Example

Positioning of Key Light

- spot light
- 15-45 degree to side
- 15-45 degree above camera
Positioning of Key Light

Jeremy Birn. Tutorial on 3point light (http://www.3drender.com/light/3point.html)

Positioning of Fill Light

- opposite of key light (wrt camera)
- lower than key light
- at most 50% of key-light (add up lights)

Jeremy Birn. Tutorial on 3point light (http://www.3drender.com/light/3point.html)
Positioning of Back Light

- behind the subject
- above camera
- lower than key light
- at most 50% of key-light (add up lights)

Positioning of Lights

- light behind subject will not create halo (unless subject has fuzzy edges)
- might have to use multiple lights, not entirely behind subject
I was very much aware of the superiority of the photography in American movies to that of the British films. At eighteen I was studying photography, just as a hobby. I had noticed, for instance, that the American always tried to separate the image from the background with backlights, whereas in the British films the image melted into the background. There was no separation no relief.

Alfred Hitchcock in interview with François Truffaut
Low-angle Key Light

Cat and the Canary

Low-angle Key Light

Dr. Caligari

Side Light

Dr. Caligari
High-Angle Lighting

Key-to-Fill Ratio

Ratio
intensity key light : intensity fill light

Key-to-Fill Ratio $\infty:1$
Key-to-Fill Ratio 4:1

- Interiors with high ambient light (reflective surfaces such as tiles, etc.)
- Lack of strong sunlight (overcast days, scattered light)
- Creates cheerful mood

Key-to-Fill Ratio 2:1

Low Key-to-Fill Ratio

- Interiors with high ambient light (reflective surfaces such as tiles, etc.)
- Lack of strong sunlight (overcast days, scattered light)
- Creates cheerful mood
High Key-to-Fill Ratio

- dramatic
- night-scenes

Jeremy Birn. (digital) Lighting & Rendering

High Key-to-Fill Ratio

Maltese Falcon

High Key-to-Fill Ratio

Maltese Falcon
Shadows

- can hit at world outside the scene
- add atmosphere
**Gobos and Cookies**

- masks between light and scene
- throw interesting shadows

http://www.lighttrader.com/rosco_gobos.htm
Gobos and Cookies

Shadows
- indoor scene
- light through window

Exercise