2.2

Tuesday, January 2, 2018 5:02 PM

Radiance = Intensity

Shading is used to infer properties of the information in the image.

-	This requires good radiometric calibration.

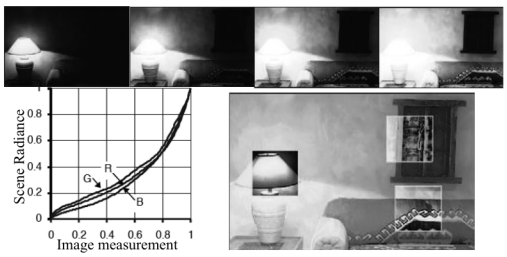
$$Reciprocity = E\Delta t$$

Is a part of radiometric calibration. Real scenes often have higher intensities than cameras can cope with. This formula ensures that very dark and very bright patches are caught and are not saturated.

Radiometric calibration: Determining the films response. Requires more than one image of a scene at different exposure settings/positions.
High dynamic range image: Recovering an image from different positions to recover radiance over a large dynamic range.

$$I_{ij}^{(k)} = f(E_{ij}\Delta t_k).$$

From Wiki. Showing the effect of a long exposure time. The longer exposure time the more light or radiance to allowed inside the camera lens.



Top row shows images with different exposure or shutter time on the camera. The darker image shows more detail of the light area as opposed to the bright image where the darker area shows more detail. This is a result of the non-linearities in the camera response. Bottom right picture shows the composite of these images or high dynamic range image.