Measuring Light

Use a reflected light meter to measure the light reflecting off your subject. The easiest way to ensure consistent results is to use a gray card.

1) Position the gray card at your subject and make sure that it catches the light that will illuminate your subject.
2) Stand at the camera position and take your reading off the gray card
3) If your scene contains a wide range of contrast between highlights and shadows, you may want to take a variety of readings, by standing at the camera position and moving your gray card around the area to measure the light in the highlights as well as in the shadows.
4) Determine your exposure based on the purpose of the shot. If you want to see into the shadows, you may want to increase the exposure a bit. If you do not want to have the highlights overexpose, you may want to reduce the exposure slightly.

You can also use a reflected light meter to read light emanating from a light source, or passing through a translucent subject such as stained glass or liquid. Remember that the meter reading suggests the exposure that will render your subject as middle gray and you will need to take that into consideration as you determine the exposure that will serve your intentions.

Use an incident light meter to measure the light that is incident to the subject. That is light that falls onto a subject. Incident light meters measure light in units known as foot candles. (*the metric unit is lux*) One foot candle is the amount of light that falls on an object one foot from a point source of light of one candle power (one candela). Some meters read directly in foot candles, some automatically convert the light readings to a suggested aperture given the sensitivity of the film stock and the shutter speed used. Others give you the option of reading in foot candles or f stops.

There are various ways to use an incident meter. The easiest and most direct way is:

1) With the hemisphere diffuser attached, stand at your subject and point the hemisphere toward the camera position. This works particularly well when shooting outdoors. The hemisphere approximates the three dimensional shape of the human head and so takes into consideration the highlight and shadow areas of the subject. When working in daylight conditions it is easiest set your meter to read in f stops. But remember, the recommended aperture is based on an assumed “normal” exposure. You may want to modify this based on your experience and pre-visualized design to achieve the desired results.

Another way to use your incident light meter is:

2) Stand at your subject’s position and shading the hemisphere or flat diffuser from other light sources, read each light source individually. This method works best when you want to exercise maximum control to achieve a very high level of consistency from shot to shot. In this scenario I prefer to take my light measurements in foot candles rather than in f stops.

*(*When using your incident meter, be careful not to allow additional light to affect your meter reading. Wearing a white shirt can cause bounced light to trick your meter into thinking that the incident light is brighter than it is. Be careful to shade the diffuser on your meter so that you only measure the light intended.)*

With either method, you will need to consider the story, mood and intent of the image as well as the specific content within the frame in order to determine the proper exposure. Under most circumstances you will want to take multiple readings to evaluate the highlights, shadows and mid-tones. You will also want to evaluate the foreground and background of each shot.

There is no substitute for experience when it comes to judging lighting and exposure.

And remember, your meter is only a measuring tool. It is your eye tempered by experience that must make the final determination about light levels and exposure. Trust in your instincts and do not come to rely too heavily on your meter as a crutch.