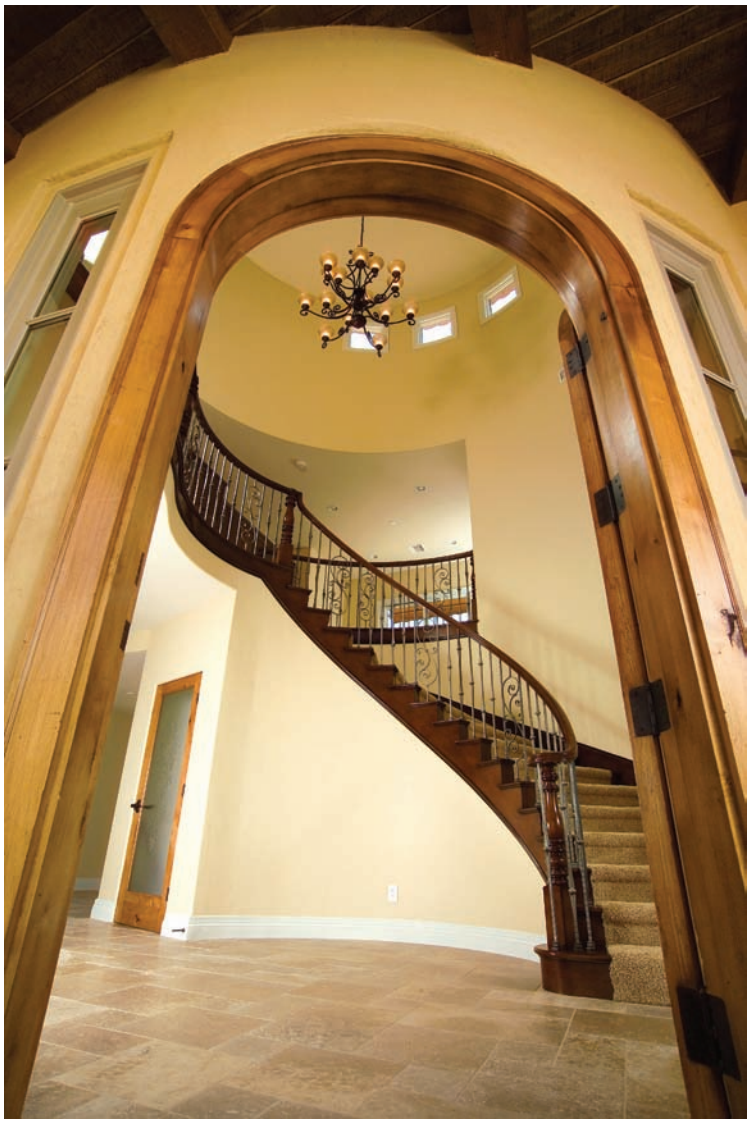
An Approach to Interior Lighting

John Siskin



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I used six strobes for this shot. The 750 watt-second monolight was just inside the door on the left There was a Norman 200B near the camera to give light to the outside of the door, as it was in shadow. The rest of the lights, also the battery powered Normans, were in the hallway on camera left, at the landing on the second floor, and a final light on camera right.

Please understand I am not offering rules, but an approach to architectural lighting.

First examine the room for existing light sources, everything from lamps to windows. Then classify those resources, something like *friend* or *foe*. So a window that throws diffused light into a room is a friend, and a mercury vapor lamp is a foe. Fluorescent lamps are generally foes, but they can be used under some circumstances, especially with digital.

This understanding of the lighting of the room will give you the information you need to choose the dominant color spectrum you can use in your shot. If you have a lot of daylight, then you would certainly light with daylight balanced lights, but if your light is mostly from tungsten sources, traditional bulbs and halogen lights, you will want to work with a color balance of 3200ºK, as this is closer to the color of the bulbs. While I would use strobes for any architectural lighting situation, I would balance the strobes to a spectrum similar to the room, using a variety of gels. One of the advantages to filtering strobes is that these lights will definitely not be included in your picture, which means that you don't have to hide the filters. When I first examine a room I am more interested in the choice of color spectrum than the details of how I will work in that spectrum. Color spectrum is somewhat similar to the key of a piece of music; it tells you what will fit easily and what will be dissonant. You really have three choices: daylight, tungsten and fluorescent. Fluorescent is the most difficult spectrum to work in because the bulbs can be wildly different.

Next consider light placement where you can place a light and keep it out of the frame. Generally there are only a few places you could possibly put a light. Lights outside of the frame are easy to make look natural; a light from either side can always look like a window. A light inside the frame must be subtle. You can put a light on the far side of a kitchen island as a fill. Another important source is bounce light off the ceiling, providing it is white and not part of the image.

Finally, look at the room in terms of the best camera positions. Circumstances, such as important characteristics of the room and the client's requirements, will come into play here. Of course, I will integrate these considerations into the decisions about light and camera, but the first action is to place the camera.

Shadows and reflections are only important from the camera's point of view. Camera position needs

to be designed to show the key characteristics of a room, so if you are trying to show size, you don't want to back up and use a normal lens. Rather, you would use a wide-angle lens to emphasize size. The height of the camera can also affect the feel of a room, so be aware that eye level is not always the best position.

Architectural photography is a very detail oriented specialty. To be sure I get everything right, I will tether the camera to a laptop computer whenever possible. You may want to take a quick capture of the shot, which can be done on auto exposure, but it will be the last automatic shot that you'll take. The first test involves ambient room light. Examine the shot for angle and any particular problems.

Lighting is the trick. In almost all circumstances, I will set up my first light as near to the camera as practical and as high as possible. I use a 750 watt-second monolight for this. I will bounce this light off the inside of a 60-inch umbrella; I would use a larger umbrella if I had one. A large light source lights a subject from more angles, so the shadows have a softer transition, and it creates more bounce light that will fill in all the shadows. Most of my umbrellas have a white satin interior with a removable black back, as this facilitates bouncing light and shooting through the umbrella. I have a couple of silver umbrellas for cases where I want a little harder light or where I need the extra light of this kind of umbrella. Often I need one or more strobes with umbrellas at the far sides of a shot in order to keep the light even. Since light is reduced the further you are from a light source, it makes sense to add lights to the sides of a wide shot.

The purpose of this light is to open up any shadows from the existing light sources, which brings down the contrast. The large umbrella softens the light and makes any shadows from this light source smaller and lighter. Since the light is above the camera, shadows will fall behind objects and reflections may not go toward the lens.

Next, try to bring the light into the same spectrum. If you are shooting daylight spectrum with strobes, you don't need to do anything, but if you are shooting in tungsten, you will want to put a Rosco 3407 CTO, or equivalent, filter over your strobe. This will make the light about 3000°K, which is a movie light spectrum. You may need additional filtration, but you won't know until you shoot a test exposure. If I am trying to balance to fluorescent tubes, I will probably use the Rosco 3315, which is the 1/2 Plusgreen. It has worked better for me than the Fullgreen.

You can change the color of the light sources in your shot, but this is not always necessary. If you control the exposure so that the light source has a very bright value but doesn't add much light to the surroundings you may not need to worry about

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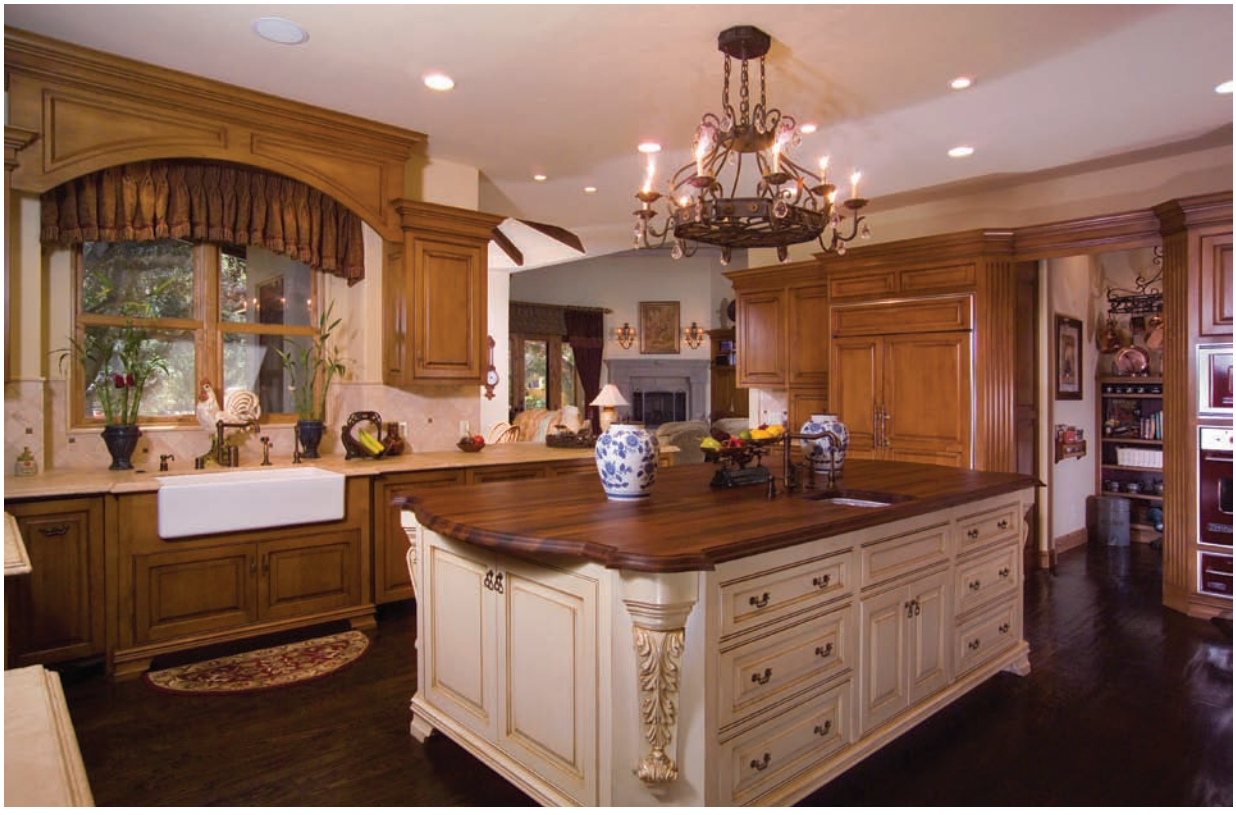
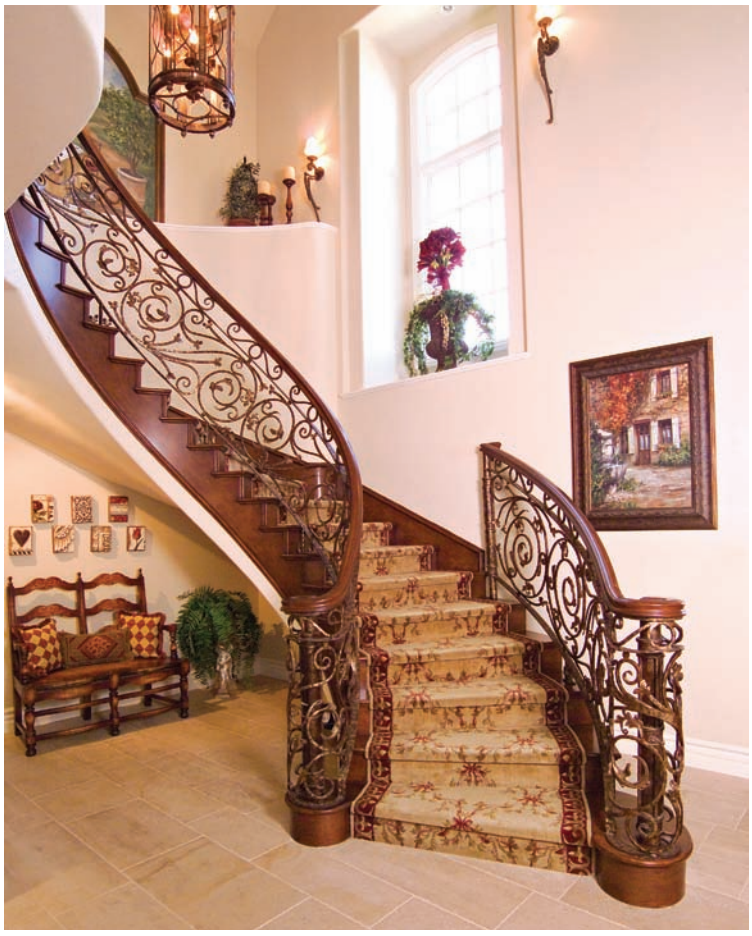
This is a very complex shot to light. In addition to lighting the kitchen, there are lights in the living room and pantry. The 750 watt-second Calumet Travelite is in a doorway to the left of the camera. There is another light on the right of the camera near the end of the shot and one behing the island. Since there were so many light sources in the shot, including the daylight and tungsten lights, the light was very difficult to balance.





Above

I used one light, a Calumet Travelite 750. Working quickly, I also used a 60-inch umbrella to make the shot. The light is placed just to the left of the camera. I also needed to allow a lot of light from the window to light the back of the shot.

Right

The biggest problem with this shot was the stainless steel appliances. The light for them comes from a doorway on camera left and from behind the island in the kitchen. Battery powered strobes are really helpful because you can hide them without running cords. There is a big monolight to the right of the camera with a large umbrella, and a smaller light set low to the left of the camera. I did a shot without the lights so that I could digitally fix the reflections in the windows in post processing.

color. So if the lamp is bright but the light doesn't fall on anything, you are probably ok. If the lamps are critical, you can replace a tungsten bulb with a photoflood BCA bulb. This runs at almost 5000°K, similar to daylight. It is also MUCH hotter than a normal bulb; only turn it on when you are actually exposing. You can use a Britek or similar strobe with an Edison base, but these do not spread light like a bulb and don't always look natural. Additionally, you can put a Rosco 3202 CTB Fullblue over a light bulb, but this will substantially reduce the bulb's output. You can also use a Rosco 3308 Minusgreen filter over a fluorescent light source, but because fluorescent tubes are so unreliable, this doesn't always work. The colors of various tubes are very different. It is also annoying when tubes may have been replaced at different times with different tubes.

If you want to change a window to tungsten balance, you can do this, too. The Rosco filters are available in rolls, so you can attach the filter to the outside of the window. I would suggest the 1/2 CTO 3408, which is the Halforange, rather than the Fullorange, as the additional blue will make the color feel a little more natural. The filter material can be reused, which is good because it is expensive. You can certainly do much of this color control after the shot in Photoshop. There are good reasons for doing so, including the fact that you don't need to buy filters or bring them with you. However, I think it is always advantageous to reduce post-production so you can deliver images to your client sooner.

As long as you are within the flash sync shutter speeds for your particular camera, adjusting the shutter speed is another way of controlling lighting. Changing shutter speeds can effectively change the continuous light sources in your shot without changing the light from the strobes. For instance, if you have too little light from the windows, but everything else looks good, you can just increase the shutter speed and the strobes won't change. Alternatively, if your light fixtures are too bright in a shot, just decrease the shutter speed; the lighting from the strobes won't change, but the lamps will. This property, and the capability to change the power of the strobes, gives you a lot of control over exposure.

If the contrast is too great, I would try increasing the power of the strobe. If the windows are too dark, you need to increase the shutter speed. If a single lamp is too bright, you could put metal window screen over the bulb to reduce the light from that lamp or put a smaller bulb in the lamp. Metal window screen is also helpful at reducing the light from a strobe. You will also need to examine the color and look for problems with the strobe placement. Of course, this is also a good time to look for reflections or problem shadows.

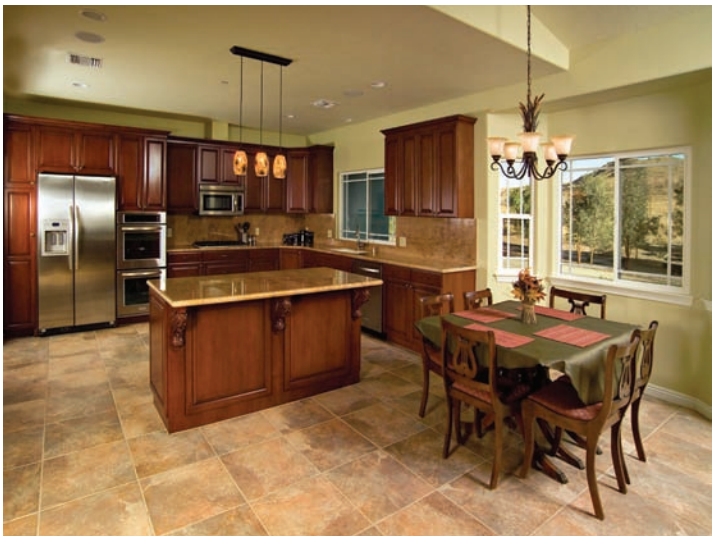
I also use lights with just a reflector much of the time. This delivers more light to a specific part of the shot. In addition, a light with just a reflector will add contrast to the area illuminated. This can help identify some part of the shot as a focal point for the image. I almost always use a barn door attachment when I use hard light in a shot. This lets me control what part of the shot gets the light. I also take along some cine foil, which is a kind of heavy-duty black aluminum foil that is incredibly useful for controlling light. It won't burn, but you can certainly make it smoke, so you might not want to put it on top of a tungsten light source. A small amount of hard light on top of a softer light from an umbrella can add a sense of three-dimensionality to an image. So I will sometimes use hard light from a similar angle to an umbrella.

The tools in Photoshop that I find most useful are perspective control and lens correction. I usually use perspective control with the cropping tool,

which makes my workflow a little faster. While I have a perspective control lens, I prefer the perspective of a lens wider than 28mm, so I need Photoshop for this. I have noticed that my lens has some barrel distortion. Straight lines bow outwards a little, so I really like lens correction. You'll find this tool in filters under the Distort menu.

Photoshop also allows you to fix a number of problems with an architectural image, especially reflections. If there is a reflection of one of my lights in a window, I will make a second capture of the shot with my lights turned off. In Photoshop, I can then use the image without the reflection to fix the image with all the lights working. While I would like to be able to fix everything while I'm shooting, I can't always get my lights to cooperate.

Of course it requires some patience when you try to make everything work together. I often find that I am working with half a dozen lights, so sometimes I don't know where the problem is. An effective technique is to turn off each light individually to help you locate the problem. I emphasize working tethered to a laptop, which will save you hours of grief. It is also important to remember that musicians like Eric Clapton and Luciano Pavarotti practiced so that they could play.



John Siskin is a commercial and fine art photographer who specializes in making architectural images, as well as macro, portraiture and product photographs. He has taught photography for more than 20 years and is currently teaching photographic lighting at BetterPhoto.com online. His web site is www.siskinphoto.com. His first book, Understanding and Controlling Strobe Lighting, A Guide for Digital Photographers, *will be published in the fall of 2010 by Amherst Media.*

To ask a question or comment on this article, visit our online Forum: www.phototechforum.com

Product Resources

Camera: Kodak DCS Pro 14n; Lense: Nikon 18-35mm; Lighting: Calumet 750 Travelite, Norman 200B strobes, Norman 900 series strobes (including LH2400 heads and P1250D and P2000D power packs), Umbrellas (60 inch and 45 inch white satin with removable back and 30 inch shoot through umbrellas) Computer: Mac G4 Laptop