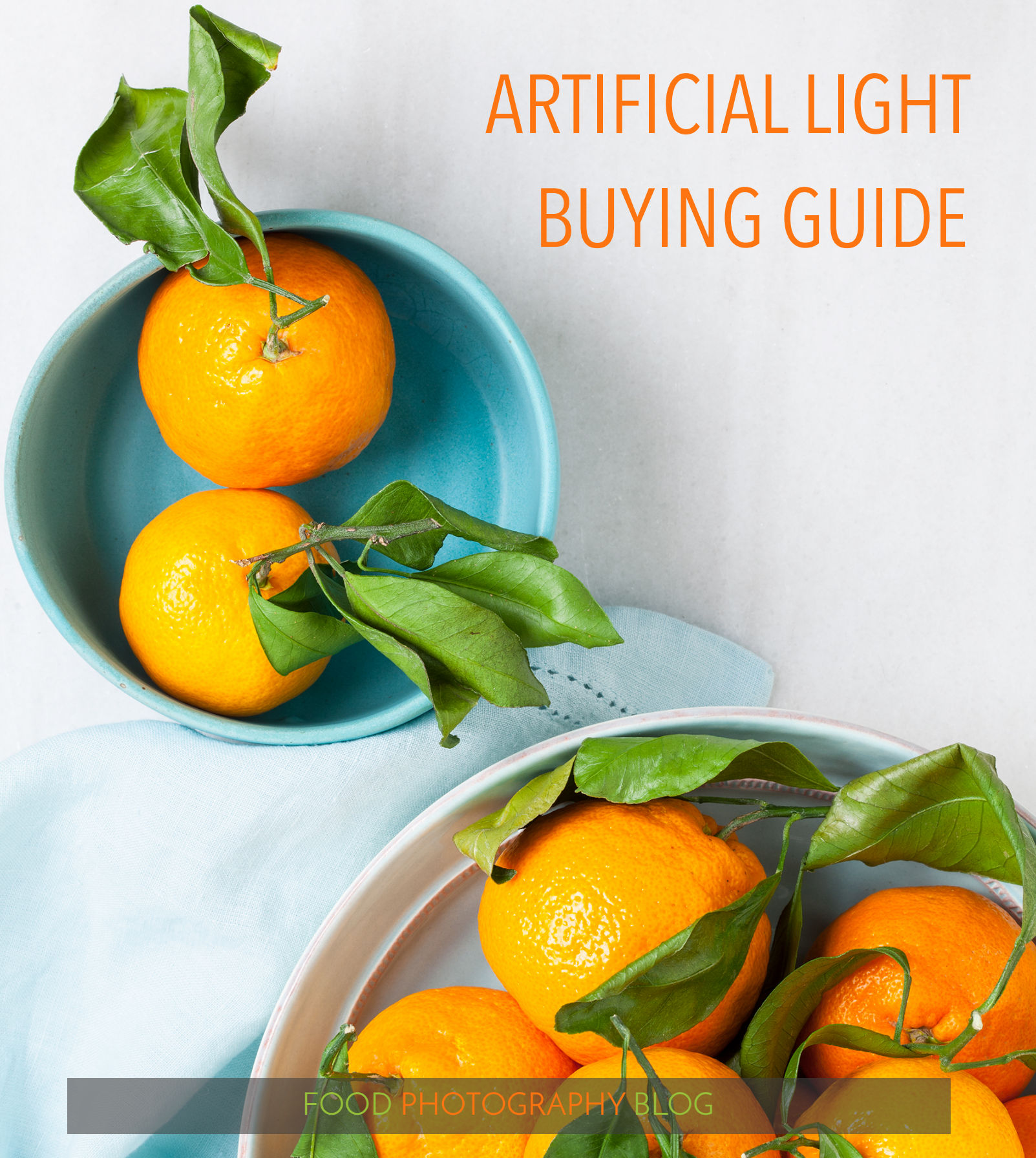


# THE FOOD PHOTOGRAPHER'S

## ARTIFICIAL LIGHT BUYING GUIDE



FOOD PHOTOGRAPHY BLOG



You know the drill. You look up and realize, “OMG, it’s starting to get dark outside!” You panic. You have that sinking feeling that even if you scramble, you’re not going to get the food photos you need today.

You’re chasing the sun all over your house.

You lost your light. You lost the sun.

Now what?

You’re going to have to use that artificial light that’s been stashed in the closet, collecting dust, that you just aren’t all that sure how to use.

Or maybe you don’t have an artificial light yet, but in the back of your head you’re thinking that if you had one, you could get the food photos you needed, tonight!



My name is Christina Peters and I’ve been a commercial food photographer for the last 25 years. I’d say that 95% of the jobs I do are with artificial light.

Don’t get me wrong, I love natural light, but to grow as a photographer, you need lighting options and you **MUST** learn how to use artificial lights so that when you don’t have natural light, you can still shoot.

Stop letting the sun control your food photography life! Stop chasing the sun! Enough is enough!

With this guide, we’re going to talk about light and I’m going to walk you through the four options that you have for artificial lights. I’ll also show you a couple of easy set ups

that will teach you how to get started right away.

Many of you who are reading this helped me to make this guide for you. I sent an email out to my list asking them what their biggest challenge was with artificial light. The answers to that email helped make this guide. Enjoy!

# *Stop chasing the sun!*

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# PRINCIPALS OF ARTIFICIAL LIGHT



As with any light for food photography, you need to make your artificial light source soft. This will come from lighting modifiers like softboxes, and the use of additional diffusion materials.

You generally don't want to use direct light sources on food because you will get heavy shadows and specular highlights, which can make your food look greasy. Specular highlights are distracting and take attention away from your food.

Even if you are using a softbox to modify your light, that might not be enough to soften the light for your photo.

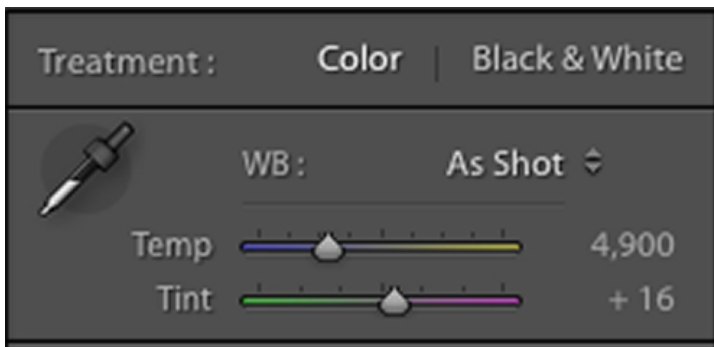
You might need to use a photo diffusion gel on top of your softbox, which I do all the time, in order to get that light soft enough for your food. Sometimes I'll stack two or three diffusion gels on top of the softbox.

So, if you have a softbox and feel it's just too harsh, add more diffusion to it! Every softbox is different – you gotta diffuse the crap out of your light.

You also want to imply that there is one light source. When you use more than one light, you have to be very careful that you don't get double shadows, or cross shadows. This looks unnatural. The goal is to make your artificial light look like it's window light - one source.

So the simplest set up is just with one light, and one fill card. That's it. I'll show you some lighting set ups later with one light source.

# QUALITY OF LIGHT- PLEASE READ



Before we start talking about the different types of artificial lights, it's important for you to understand how different lights vary in quality.

There are two measurements we use in photography when talking about our light. One is the white balance or color temperature (same thing), and the other is called the

tint of the light.

White balance and color temperature are measured in Kelvin, and for our purposes have a range of about 2700 Kelvin up to 10,000 Kelvin. The image above has a Kelvin setting of 4900. This range represents yellow on the low end of the scale, and blue on higher end of the scale.

If your light bulb is called daylight balanced, then that would be around 4000 Kelvin on the low end, but usually would measure 5000-5600 Kelvin. This is considered a light that is more blue in color.

If your light is rated at 3000-3400 Kelvin, this is considered a warm white light or tungsten equivalent – this is a warmer yellow light.

The next aspect of each light that is extremely important is the tint. This is a range of magenta to green.

The way you can tell the tint of a bulb is by the CRI index – the manufacturer should know this number. This stands for color rendering index. I can't stress how important this is. Basically, you need to buy lights that have a high CRI. This means anything with a CRI over 90.

The cheap lights usually have a CRI of about 85 or less, and this makes for a very green light. They will not mention their CRI in their ad for the light because it's such a low number. When they have a high CRI, they brag about it. The light will also be more expensive because of this.

The low CRI bulbs can be corrected with your camera, but it means that you can't have ANY daylight coming into your set up at all. Daylight is a very clean light. It's a pure light and will not be green. If daylight sneaks into your shot while you are using these types of bulbs, you'll see a magenta cast in the images where daylight is showing.

Many manufacturers from China and Korea say all their lights are "pure" light – when they are not. Make sure to find out what the CRI is on the bulbs you are looking to buy.

# TYPES OF ARTIFICIAL LIGHT



Now that we've talked about the quality of lights, let's talk about the options you have to choose from.

We have two types of artificial light – constant light sources and strobe lights.

Constant light sources are always on, just like the lights in your home.

Strobe lights are only on for fractions of a second when triggered to do so by the camera, or by a separate triggering device. We'll talk about strobes later.

In this first section, we are going to talk about constant light sources.

The easiest artificial lights to learn are constant light sources. These will be incandescent lights (aka tungsten lights and hot lights), CFL's (compact fluorescent lights), and the newer LED lights (light emitting-diode).



In this guide we will be talking about:

- Tungsten Lights
- LED Lights
- CFL's
- Strobes



# TUNGSTEN LIGHTS



The oldest light source around is the tungsten, incandescent light bulb. They have a wire filament inside that produces the light. They are rated at 2700 – 3400 Kelvin (warm, yellow light). This is a very clean light – not green at all. The lower wattage bulbs have a fitting that is a standard light bulb fitting called an Edison base (E26) pictured left.

There are many large specialty tungsten bulbs that are still used heavily for the film industry and can be as bright as 24,000 watts! There are only a few countries that still allow the use of tungsten bulbs – the US is one of them. It's a lovely light that I still like using.

To the right is a tungsten bulb that is 500 watts in a softbox (diffusion panel removed). When these bulbs are on, they run very hot so you have to be very careful how you use these lights, and where you put them if you are shooting in your house. You must make sure you are using them in a softbox that is on a heavy, stable light stand that won't fall over. There are lots of cheap light stands out there that can't support the weight of the actual light you put on them.

These bulbs are inexpensive, but they usually don't last very long compared to the LED's or CFL's. Typically they last for 3000 hours – just a few months with constant use.



Pictured to the left is the Arri Tungsten 650 watt light. I actually use these kinds of hot lights often. They have a very clean light and have a lot of power, but they are not cheap. I use their 300 watt lights, 650 watt lights, 1000 watt lights, and the 2000 watt lights. They run extremely hot so you have to use gloves when moving them when they are on. I bounce them off of walls or white cards. They do make soft boxes for them that can handle the heat (won't catch on fire). The funny looking bulbs on the left in the top image are the type of tungsten bulbs you use in these Arri lights.

# LED LIGHTS



If you are in a country that no longer allows tungsten lights, you'll have two options. One is the newer LED light bulb. LED's are much more efficient than traditional incandescent light bulbs. They have much lower wattage with a bright light. They don't use much electricity. So when buying LED's, you won't find one that is 500 watts, but you can get several that are 100

watt equivalent and use an adapter to put them in your light.

To the right is a quad adapter that you can use to put 4 LED's, or 4 CFL bulbs into your softbox.

You just have to make sure that the combined wattage of the 4 bulbs you put into this light source is not more than what the light head is rated for.

The cheaper LED light bulbs have a very green tint to them, so you can't mix them with daylight. Always look for an LED bulb that has a CRI index of at least 90. LED's last a very long time. They are more money, but will last for years.



This light to the left is a panel LED light. This one is called a bi-color LED. It actually has several little bulbs that are daylight balanced, AND tungsten balanced so you can dial in the WB that you need - the only caveat is that you need to have a color meter to measure this properly. The light has alternating rows of each type of bulb. Our eyeballs are so good that they are constantly color correcting the light that we see, so we need a color meter to measure this.



# CFL LIGHTS



CFL's or Compact Fluorescent Light bulbs are another popular bulb to use. I have several issues with these lights.

The first issue is that they are very expensive when they have a high CRI – about 5x's the price of the same with a low CRI!

The second issue I have is the size. They are massive so you must

have a softbox that can accommodate this bulb and a light stand that can support the weight.

The third issue is that each bulb actually contains mercury, a toxic heavy metal that is very damaging to your health. If you break one of these bulbs, you have a major hazmat situation to clean it up. This is no joking matter.

So all that aside, if this is all you have access to in your area, they can be a nice soft light source.

If you get a CFL with a low CRI, then you can't have ANY daylight around you when shooting, and you have to set your camera's white balance to Auto and hope it can color correct as needed. If your camera doesn't do such a good job, you'll have to manually correct for this in your editing, which can be very difficult when you are just starting out.



# STROBE LIGHTS



Now we are moving into the next level of artificial lights, the strobe lights.

Strobes lights have been around since the 1930's and are a very pure light source. They are usually around 5000-5500 Kelvin, daylight balanced.

They allow us to get more light into our scene with a very compact light bulb. These light bulbs are actually an explosion of light that is contained within the light head.

As with constant light sources, we need to use light modifiers to control this explosion of light, and soften it for our food photos.

Strobes are measured in watt seconds - ws. Basically, the more watt seconds they have, the more money they are.

Each brand has their own adapters to attach modifiers to. There are many companies that make all kinds of fun modifiers for strobe heads.



To the left, you can see this strobe head is attached to a speed ring that is fitted to a softbox.

This is the most common set up for strobes, and works great with food. You can actually put additional diffusion gels into the softbox to make this light as soft as you need. I will do this often.



# STROBE LIGHTS



To the left is a type of strobe called a monolight. These are the easiest to learn with when starting to use strobes. They are a self-contained unit. This means the strobe head contains the power capacitor inside it, so you just plug the head directly into the wall.

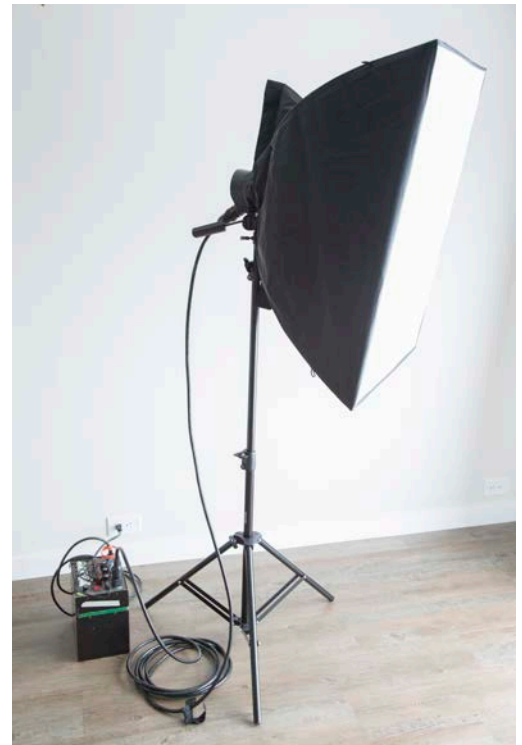
For those starting to learn strobes, a very popular brand of monoheads loved by my students in the US are made by [Paul C. Buff Inc.](#) They have several monoheads to choose from. The common ones are the Einsteins and the Alienbees. They have a power ranging from 160ws to 640ws.

Monolights don't have as much power as strobes with a separate strobe power pack. So if you need to take a picture where everything is in focus (an f/stop around 16), you'll need a lot of light to do that with strobes. When doing advertising work, often times your client will want everything in focus. For your own work, for your blog, however, moonlights could be great to use.

To the right are the lights I use. This is a strobe light with a softbox attached to it. There is a strobe head that uses a large cable that plugs into a 1200 ws strobe pack.

This strobe pack is actually a capacitor. The capacitor pulls power from your outlet and stores it, waiting for the signal to fire the strobe head, then it dumps all its power when the strobe head is triggered (the flash), and then pulls power again waiting for the next flash.

The brand I use is Speedotron. They've been around for a long time and are a workhorse. Some of my packs are more than 25 years old. There are many excellent brands. Broncolor, Profoto, and Dynalite just to name a few.





# EASTY LIGHTING SET UPS



When starting out, make your lighting very simple. Use one light and one fill card. That's it.

If you were to look at your set from overhead, I would suggest putting your light at about 10:00. So it's not completely side lit, but coming from a  $\frac{3}{4}$  angle from the back left side.

For overhead shots, emulate the same thing using one light, and a fill card. If you were to look at the set from overhead, it's set at about 10:00 on clock dial with the fill card at the opposite side.

You want your light to look natural, so if you start adding several lights, you'll also have several shadows from different directions, which can be very distracting.

Here is the other thing that will make your world 10 times easier - **USE A TRIPOD!** If you are using a constant light source, you **MUST** use a tripod because the light just isn't bright enough for you to be hand holding your camera.



# YOUR QUESTIONS ANSWERED

As I mentioned earlier, this guide came about by asking my readers of the blog and the members of my Facebook Food Photography Club group what their biggest challenge was with using artificial lights.

There were several common themes that came up from hundreds of responses that I wanted to make sure that I address here.

**1. The biggest complaint was how to make artificial lights look natural.** The main thing to do is to make sure that your light is VERY diffused. I mean REALLY diffused - people diffuse the crap out of your light! If the softbox isn't soft enough, slap several photo diffusion gels on it or put a heavy diffusion disc in front of it. You can even drape a white sheet over it. Diffuse, diffuse, diffuse - are you picking up what I'm laying down here? Soft light emulates soft window light. Then you must fill in your shadows - which takes me to #2.

**2. Many of you are struggling with shadows.** If you are using two lights, you have got to make sure that one is brighter than the other so that one is your main light and the other is just a fill light. If you see two shadows crossing each other on your set- that's not good and it's telling everyone you are not using natural light. So either use one light and a large fill card or balance your lights properly. If you are using one light and a fill card, bring that card in as close as you can without it getting into the shot. This will fill the shadows as much as you can, which looks more natural.

**3. For those of you struggling with weird color temperature issues** - this is because you are using cheap LED lights or cheap CFL lights that have a green tint. As I mentioned earlier, the cheap lights have a low CRI - which means they are green and if you are mixing those with daylight or have any daylight coming in you have created a lighting scenario that cannot be color corrected so your image will look slightly magenta or slightly green OR worse, you'll see both green AND magenta colored light in your shots. This cannot be corrected later.

Many of you wanted "cheap artificial lights". Good quality lights are NOT cheap. Sorry. You've chosen an expensive hobby or profession to get into and I'm not gonna lie to you. Photography is expensive.

**4. Several people are saying when they use artificial lights, their images are too dark.** This means you are not properly exposing your images to get enough light into your shot. I am always talking about how you have to shoot on a tripod, yet many of you just refuse to do this. When you don't shoot on a tripod you are really limiting what you can do with your light and your only option will be to shoot at an extremely high ISO (which makes for digital noise in your pictures) or you must use strobes.

When you are using a constant light source your shutter speeds are going to be very slow so you must use a tripod to use that light to get a proper exposure without digital noise in your file.

**5. I had a few folks ask about mixing light sources.** The key with mixing any light source is that your color temperatures must all be the same. So you can have one light on the background, one light as your main light and a third light as your fill - they must all be the same color temperature. Don't mix light bulbs - get the same brand, same bulbs so you know they are the same color. So no tungsten light bulb mixed with daylight balanced CFL. That won't work.

**6. Now, let's talk about mixing your artificial lights with daylight.** This is an advanced lighting technique that I do all the time. Same rules applies as above - you must have the same color temperature artificial light as your daylight. So I'll mix strobes with daylight a lot. I think I'll be doing a blog post about this one as it's more involved that I can go into detail here but basically, remember this. The shutter speed controls the exposure of the daylight and your F-stop controls the exposure of the flash. The light that you want to be dominant or your main light, needs to be brighter than the other one.



Hopefully that gave you some insight and some ideas on how you can stop chasing the sun, and use artificial lights at home.

If you liked this guide, and want more info about food photography, please check out my blog at [www.foodphotographyblog.com](http://www.foodphotographyblog.com).

To really take your food photography to the next level, join the Food Photography Club. This is my membership site where I teach all things food photography. From complete beginner, all the way to being a seasoned pro, there are courses for people at every level of food photography.

If you've been wanting to make money from your food photos, or actually make a career out of food photography, the Food Photography Club is your first step in making that a reality. Not only are there several courses available for you to watch right away, you get my support along the way.

[www.foodphotographyclub.com](http://www.foodphotographyclub.com)

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