Rolando Gomez's

LIGHTING *for*
GLAMOUR PHOTOGRAPHY

Techniques for
Digital Photographers

CONTENTS

ABOUT THE AUTHOR

Rolando Gomez, a Lexar Elite photographer, transitioned from combat photography to glamour and fashion photography in 1999 and still freelances as a photojournalist. Known for his "flamour" (fashion and glamour) style of photography, he's taught over 450 workshops and seminars in Mexico, Canada, Germany, Belgium, the Netherlands, and the United States. He also provides private photography instruction and private glamour photography.

Rolando has had photo assignments in thirty-nine countries. He holds a bachelor's degree in communication from the University of Texas, San Antonio, where he graduated summa cum laude. In 1994, he was named one of the top-five military photographers by the Department of Defense. In 2007, he conducted a three-country European tour for Calumet Photographic.

A former U.S. Army Staff Sergeant, he was the personal photographer for General George A. Joulwan for four years and spent twenty-six months documenting the Latin American drug war in South and Central America, for which he was awarded the Department of Defense Meritorious Service Medal (DMSM) as a buck sergeant.
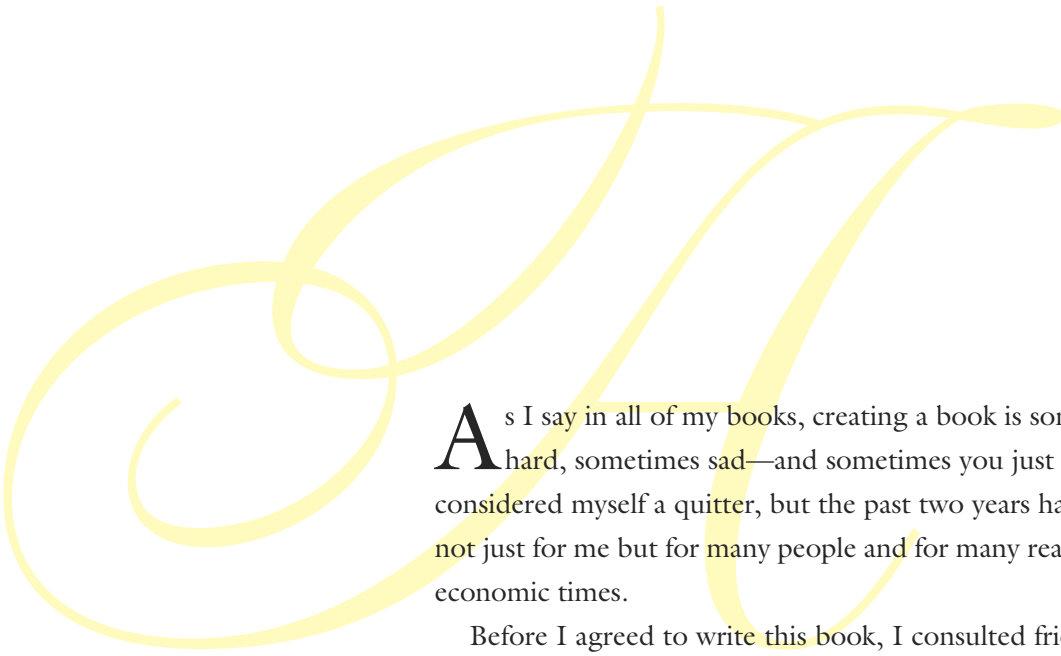
Rolando's work was the subject of a September 2006 *Rangefinder* cover story, "Mysteries of Lighting." He was honored as a lighting master at Photo Plus Expo in 2004, 2005, and 2006. He has written three popular books: *Garage Glamour: Digital Nude and Beauty Photography Made Simple* (Amherst Media, April 2006), *Rolando Gomez's Glamour Photography: Professional Techniques* and Images (Amherst Media, 2007), and *Rolando Gomez's Posing Techniques for Glamour Photography* (Amherst Media, 2008).

In 2009, he lectured at Photo Plus Expo on "Internet Strategies and Guerrilla Marketing." That same year, Rolando released his fifth photography book, *Photographic Therapy: The Power of Photography to Help Build or Rebuild Self-Esteem*. The book is free for download at www.freephotographybooks.com, and in the first three months after its introduction, it was downloaded over 30,000 times.

Rolando lives in San Antonio and is the father of five beautiful children, including four gorgeous daughters and one handsome son. To learn more, please visit him at www.rolandogomez.net.
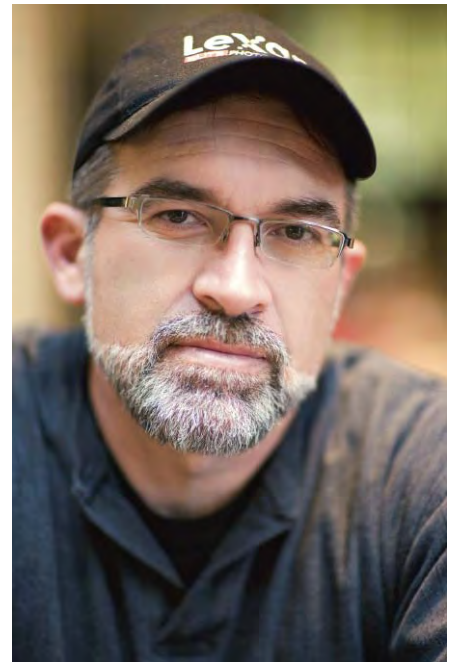
PREFACE

As I say in all of my books, creating a book is sometimes fun, sometimes hard, sometimes sad—and sometimes you just want to quit. I've never considered myself a quitter, but the past two years have been very difficult—not just for me but for many people and for many reasons, not just the tough economic times.

Before I agreed to write this book, I consulted friends and family. Should I do it again? I asked. Most said yes. Some people wondered, do you have time? Still others asked, is it worth it? Obviously, with such a busy schedule, I asked for a bit of help from a good friend, photographer and filmmaker, Tom Suhler.

Authors of how-to photography books stand a better chance of getting hit by lightning than making the *New York Times* Best Seller list. For us, writing books is obviously not about the money. I'm not sure where I find the time to take on the task, but my passion for creating images drives me to spread the gospel of photography and share information to help promote not just glamour photography, but all forms of photography.

There is no substitute for putting what you read into practice.

This book limits me in space (thank goodness!), and it's impossible to put everything about photographic lighting in one book. One of the world's greatest photography schools is Brooks Institute of Photography in Santa Barbara, California; even they spend years teaching their photographers how to become photographers—I can't do it in ten books, much less four. Not to mention, there is no substitute for putting what you read into practice. So get your friends, families, and loved ones in front of your camera and practice. Find a military service member or veteran and offer them free photos for their friends, family, and loved ones. The end

result is, you get to practice to become a better photographer. I've been shooting for over thirty years, and I'm still practicing. We are all students of photography. No one ever graduates from photography; they just have the option to move forward another level with hard work, commitment, and passion for the craft.

A GROWING TREND

This is my fourth book for Amherst Media and my fifth book overall. Obviously, Amherst Media believes in my writing and photographic talents, and during these tough economic times, their ability to take one more chance on me says a lot. Not many in this industry give the genre of glamour photography much respect, but that's changing due to the popularity it has gained through digital photography and the advent of the Internet.

I still remember the days when I would approach a potential sponsor at an annual photography trade show, only to be laughed away. Most of the photo industry executives I'd speak to would tell me how much they loved my work, but they were always concerned about the public's views on sexily photographed women.

I spent years building my name and credibility and have begun to succeed with sponsors, as I've shown them that the genre of glamour photography is here, has always been here, and will always be here. Many subjects enjoy glamour photography as a form of photographic therapy—the art of helping build or rebuild a subject's self-esteem. For more on photographic therapy, download my fifth photography book, *Photographic Therapy: The Power of Photography to Help Build or Rebuild Self-Esteem,* for free at www.freephotographybooks.com.

THE IMPORTANCE OF GOOD LIGHTING

I believe that good lighting is the key to making great images. If an image is not properly lit, then the subject's self-esteem may take a hit. My first sponsor was Dynalite. I spent three-plus years using their products for my personal and commercial photography, and it was my lighting of choice for my photog-

ABOVE AND FACING PAGE—Before breaking out artificial light, I'm always looking at the natural light. If it will suffice, I will use it—especially during the later hours of the day, as in this image of Eleya in the Virgin Islands. I purposely strive for this warmer, natural-light look; notice how the warmth of the rocks adds to the image, matching the similar tones to the model's skin. Asking Eleya to hike up her skirt (facing page) helps add just the right amount of sexiness to the image and also creates action. (**CAMERA:** Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. **SETTINGS:** 85mm effective focal length, $^1/_{200}$ second shutter speed, f/6.3, white balance at 6000K, ISO 100)

raphy workshops. Eventually, I was courted by Hensel lighting, a lighting system comparable to Dynalite in some ways, with higher-end products too. It took me three months to make the switch, and when I finally did, I realized some of the things that I was missing that helped take my photography to the next level. Then came Broncolor and Profoto, asking me to try out their lights, and I began the journey of taking my photography to an even higher level with their help. In these ten-plus years of hosting workshops where sponsors have supplied me with the tools for my attendees, I've learned one thing: lighting makes the ultimate difference. It's not about the make and model of the camera. Rather, it's the quality of the light and the quality of the glass I've used to capture the images with that have helped me throughout my photographic career.

We all start somewhere, and if I could do it all over again, I'd have saved enough money to start with the best lights, like those from Dynalite, Hensel, Profoto, or Broncolor, instead of starting from the bottom and working my way up. I'm sure it would have saved me a lot of heartburn over the years, and my photography would be even better. As photographers, we should always strive to make each image better than the last, and with a great set of lights, it's that much easier.

ACKNOWLEDGMENTS

Some of the photos in this book were taken by Tom, and he also provided input to help me pull this fourth book off.

Tom is a photographer with a filmmaking background from Austin, Texas. His images have appeared in several short films. Stills from a Ku Klux Klan rally were featured in *Conflict in the Hood*, a winning entry in a 2006 contest sponsored by the University of Texas Humanities Institute. His stills and on-site video footage appeared in his short documentary, *At What Cost?*, an official selection at the Sedona International Film Festival and the Blue Planet Film Fest in Los Angeles.
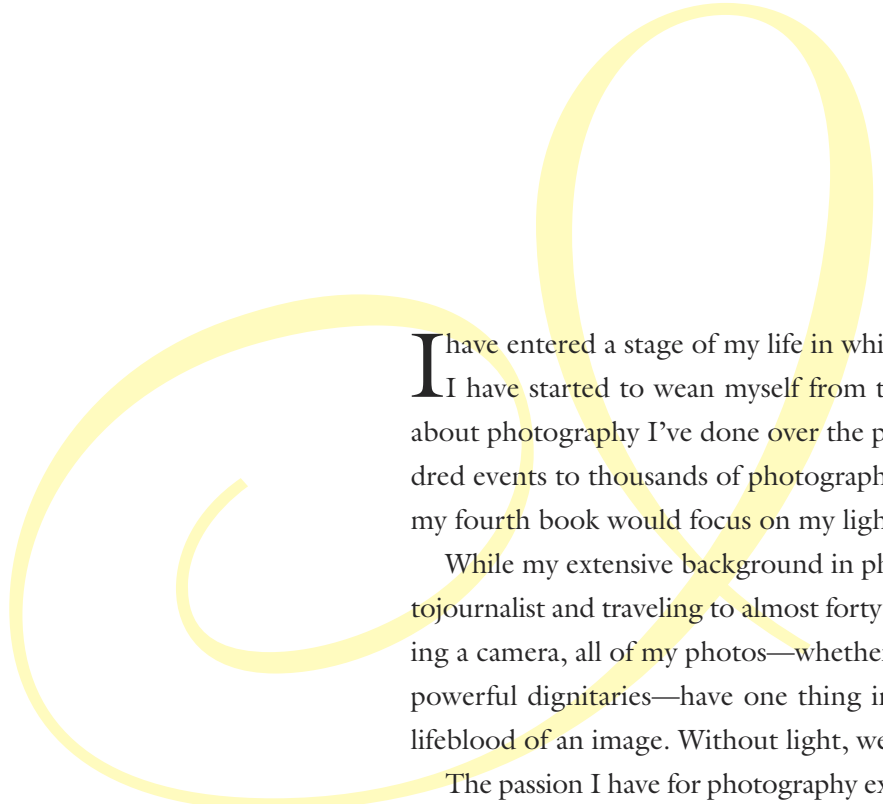
In 2007, Tom's growing interest in lighting techniques led him to glamour photography. His work on several workshop shoots with me provided a conducive environment for collaboration. Tom is currently in the production stages of his first solo photography book, tentatively titled *Emerging from the Shadows*. For more information on Tom Suhler, visit him online at www.tom suhlerfineart.com.

I'd also like to remind everyone to remember the men and women in uniform who defend our country and our right just to own a camera to record our lives. Please thank a veteran when you see them and say prayers for their families and friends. They need that support, just as we all do. Unless you've served in the military, no matter how I write or say it, it's hard to understand the challenges and sacrifices they all endure. So to all veterans, thanks from the bottom of my heart and a special thanks for your sacrifices and service.

Every photographer should have several "working themes." These are helpful in situations where you run out of ideas. One of mine is "Wide Aperture," which challenges me to do photography with the lens set at its widest aperture—as in this image of Elite Agency model Jenni. Here I simply removed the lamp shade in the bedroom and only used the 100-watt household bulb. I'm able to do this type of low-light photography because I'm using the Canon 85mm f/1.2L USM lens. While many photographers fret about purchasing faster lenses, I prefer them for two specific reasons. One, they allow my viewfinder to be much brighter than slower lenses and two, they make it much easier for my camera to focus. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $1/160$ second shutter speed, f/1.2, white balance at 3700K, ISO 800)

INTRODUCTION

I have entered a stage of my life in which creating photographs is my focus. I have started to wean myself from the teaching, speaking, and lecturing about photography I've done over the past ten years, at more than four hundred events to thousands of photographers. In making this switch, I decided my fourth book would focus on my lighting for glamour photography.

While my extensive background in photography comes from being a photojournalist and traveling to almost forty countries in over thirty years of holding a camera, all of my photos—whether the subjects are beautiful models or powerful dignitaries—have one thing in common: lighting. Lighting is the lifeblood of an image. Without light, we have nothing.

The passion I have for photography excites me when I teach, as I love nothing more than spreading the gospel of photography. Over the years, I captured combat photography in the Army and recorded history-making events such as the fall of the Berlin Wall in 1989 and the Rwandan refugee crisis in 1994. All my assignments involved capturing the right moment at the right time. As a photojournalist, you must learn to capture those moments in the existing light or by adding light. When photographing NBA teams in action, I learned to accept the light in my environment and capture the best image I could.

When I am creating glamour, beauty, and nude portraits, I often have more control over the lighting. It's a luxury compared to what I faced as a photojournalist on the go. I've become more spoiled, more picky in the lighting equipment (or lack of equipment) I use. I've become more discriminating in achieving the right lighting—whether that means using a top-of-the-line Broncolor power pack or waiting for the "golden hour" of the sun to arrive. If any-

monolight, 7-inch metal reflector, 10-degree grid

camera level

camera position
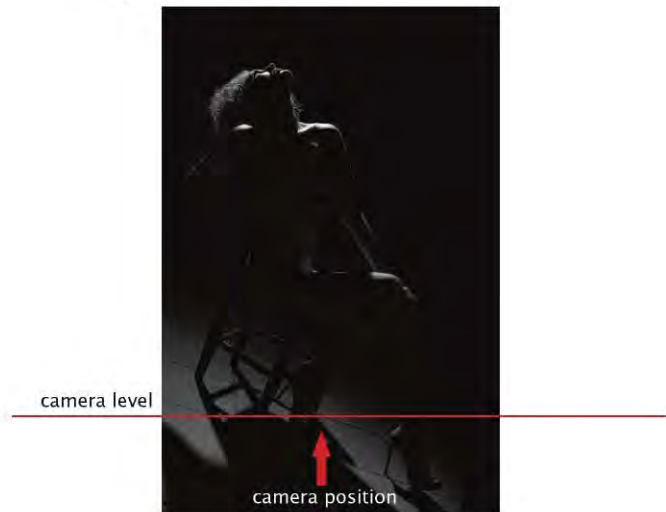
FACING PAGE—This editorial nude photo of Mel is from a working book theme titled "One Light, One Chair." Here, we use one monolight fitted with a 7-inch metal reflector that houses a 10-degree grid. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $1/_{200}$ second shutter speed, f/4.5, white balance at 6000K, ISO 125)

thing, I've become more patient as a photographer, not forcing images, not "spraying and praying," as I've learned to make every shot count.

I've also learned that there are rules of physics that apply to photography—rules that I often took for granted as I acted like a photojournalist fighting for position and fighting the situation to make the light right when all I had to do was make a simple adjustment. I've learned to move a few inches and perhaps even walk around my subject in order to take advantage of the "angle of incidence is equal to the angle of reflection" rule, either by using it to my advantage or breaking the rule for a more advantageous illumination of my subject.

I've learned to appreciate great quality lighting just like great quality lenses—lenses that are fast and can capture the light other lenses fail to see. I've learned the importance of mastering one light and learning what it actually does before adding any more lights into the scene. I've learned to use my modeling lights for their true purpose and even how to trick my camera through creative white balance techniques.

When I wake up with light filtering through my bedroom window, I thank my God that I can still wake up and can still see the light. Light allows me to

For this dramatic image of model Rika, Tom Suhler used three Nikon Speedlights covered with Rosco blue and magenta gels. The main light illuminating her face was a battery-powered Hensel Porty Premium with a portable studio flash head. This was fitted with barn doors, a 7-inch metal reflector, and a 10-degree grid. Two speedlights with magenta gels were placed inside the left of the room facing the brick wall; one was placed to the right of the room with a blue gel, facing the same wall. (CAMERA: Nikon D3 fitted with Nikon 70–200mm f/2.8 lens. SETTINGS: 130mm effective focal length, $1/_{250}$ second shutter speed, f/9, white balance 5880K, ISO 1600).

create images so I may live another day to express my passions. Light keeps me alive, light keeps my images alive. I hope light forgives me for taking advantage of it in my early years while learning to become a photographer. Light is my friend, and when the time comes, I will not be able to take light with me, but I know I will have lived my life because light gave me the energy.

In this book, I share my lighting wisdom, and I hope you'll learn something from it. Light can't be covered in one book alone, but I hope you'll cherish this book's contents and find your appreciation of light.

Enjoy this book and enjoy the light that allows you to read it. Share your passions through your camera and let light engulf you with ideas. Enjoy.
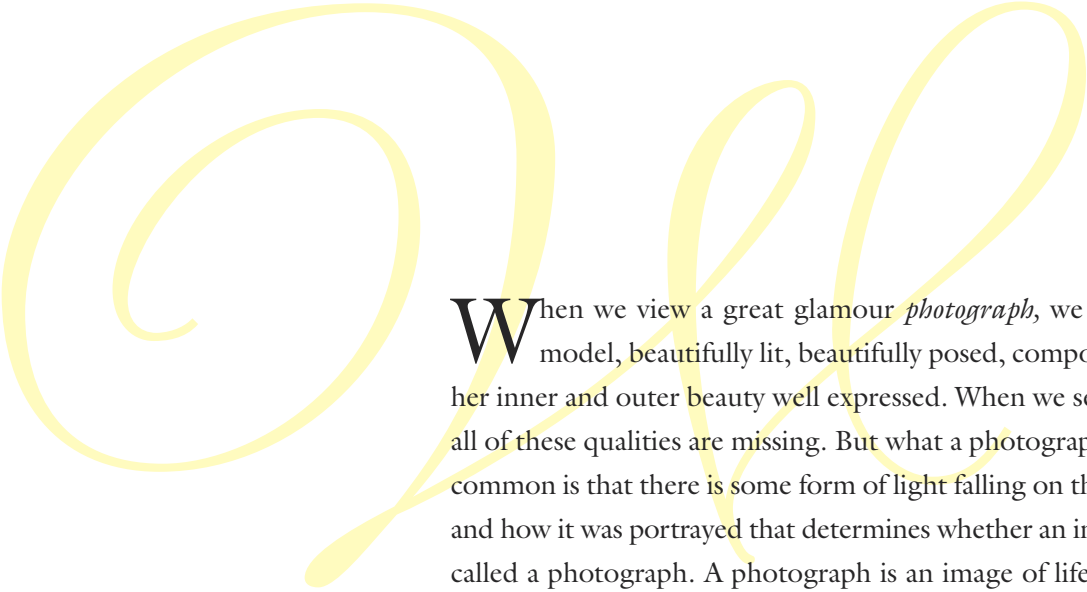
ON LIGHT

Light allows me to create images so I may live another day to express my passions. Light keeps me alive, light keeps my images alive. I hope light forgives me for taking advantage of it in my early years while learning to become a photographer. Light is my friend, and when the time comes, I will not be able to take light with me, but I know I will have lived my life because light gave me the energy.

Playboy model Laura F., photographed by Tom Suhler in an abandoned hotel, was positioned so the natural light struck her dramatically. Notice how her arms are bent to create diagonal lines. (CAMERA: Nikon D3 fitted with Nikon 70–200mm f/2.8 lens. SETTINGS: effective focal length 90mm, $1/250$ second shutter speed, f/10, white balance at 5880, ISO 200).

1. LIGHTING BASICS

When we view a great glamour *photograph,* we usually see a beautiful model, beautifully lit, beautifully posed, composed, and exposed, with her inner and outer beauty well expressed. When we see a *picture,* most if not all of these qualities are missing. But what a photograph and a picture have in common is that there is some form of light falling on the subject. It's this light and how it was portrayed that determines whether an image is worthy of being called a photograph. A photograph is an image of life. A picture is an image too, but it struggles with portraying light in an effective manner.

To create a beautiful photograph, you must understand the quality of the light. You must learn to truly see the light, and you must feel it.

A professional photographer understands you must learn to see the light before you can feel it and is aware that light comes in many forms and can be altered in many ways. A pro has learned that light is pliable and is sometimes not so flexible, that it is forgiving and sometimes unforgiving. A professional shooter is also aware that light is continuous but sometimes intermittent, that it is always available both naturally and artificially, and that light is controllable but not always predictable. Most importantly, a professional photographer knows that without light, you have nothing.

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QUALITIES OF LIGHT

There are many qualities of light, and professional photographers understand how to apply and alter them as necessary. Some of those qualities are direction, intensity, color, distribution, and the contrast of light.

Direction. The direction of light can be controlled by using light modifiers like softboxes, octaboxes, snoots, grids, louvers, flags, cutters, beauty dishes,

To create this photograph, Tom Suhler used a white translucent background illuminated by a Hensel Integra 500 Pro Plus monolight with a 7-inch metal reflector and a 30-degree grid covered with a blue gel. He then placed another Hensel monolight with a snoot to create the irregular shape of white light in the center of the background. Tom then placed two Hensel monolights, one on each side of the models, fitted with medium Chimera Super Pro Plus strips. The strip lights were adjusted to give just a small amount of accent lighting on the models' sides, allowing for deeper shadows. The models (Cal Lilly, Lysa N., and Marie C) were also posed so the white light in the center would fall within the egg shape created by their hands. (CAMERA: Nikon D3 fitted with Nikon 85mm f/1.4 lens. SETTINGS: 85mm focal length, $1/250$ second shutter speed, f/8, white balance at 5880, ISO 200)

and more. The intensity of light is often controllable too, either through power adjustment, in the case of artificial light, or through reduction and diffusion when it comes to natural light.

Intensity. With artificial light, such as studio strobes or on-camera flash, a photographer normally controls intensity by adjusting the power output via a potentiometer. (This is usually a knob, switch, or button that reduces or increases the light output, within the actual limits and capacity of the originating source.) This will allow you to reduce the light intensity in quarters, thirds, halves or, in the case of the more accurate and expensive models, tenths of an f-stop.

When shooting on location, I'm always looking for light, light that adds impact to the image, as in this photo of Playboy Playmate Holley Dorrough. When working in the vast Moab desert, it's often a drive to get from location to location, so you pack lunch, plenty of water and ice, along with good ol' toilet paper; the days are long and dusty and it doesn't make any sense to drive over an hour each way to your hotel. During the middle of the day, when the light is at its harshest, you look for locations that provide shade or relief from the strong sun. In this case, we found an old mine building. When I find locations like this, I look at how the light enters the building. Here, I capitalized on the light streaking in between the boards, along with placing Holley in front of the window for an "overlit background" effect. In Adobe Lightroom, I gave the image a warm tone. (CAMERA: Canon EOS 5D with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 155mm effective focal length, $^1/_{200}$ second shutter speed, f/3.2, white balance at 6000K, ISO 200)

beauty dish level

camera level

monolight,
medium strip box,
Lighttools
40-degree grid

monolight,
22-inch beauty dish

camera position
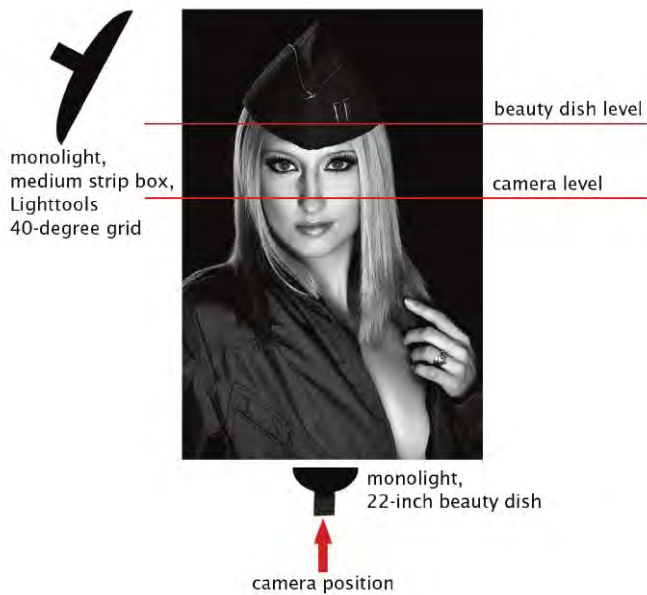
FACING PAGE—This photograph of Heather uses a simple two-light setup. To camera left, I placed an accent light behind the model (a Hensel Integra 500 Pro Plus monolight fitted with a Chimera Super Pro Plus medium strip box and a Lighttools 40-degree grid). The main light (fitted with a 22-inch beauty dish) was placed dead on. I also postproduced this image with the Nik Software's Bleach Bypass filter. (**CAMERA:** Canon EOS 5D Mark II fitted with a Canon 70–200mm f/2.8L IS USM lens. **SETTINGS:** 148mm effective focal length, $^1/_{160}$ second shutter speed, f/5.6, white balance at 6000K, ISO 100)

The more precise and accurate the light source is, the more it will cost the photographer. Many photographers purchase inexpensive lights that feature a slider to reduce or increase the intensity of their light output. They must meter the light, move the slider to increase or reduce strobe output, re-meter the light, slide the slider again, etc. By selecting a high-end unit with a digital readout like those found in brands like Hensel, Profoto, or Broncolor, you can keep the session flowing and devote more of your time to shooting, rather than worrying about whether or not light intensity was reduced or increased appropriately.

If you are working on a tighter budget, try to save a few bucks and then purchase a high-end lighting unit. If that is not an option, select an upper-mid-level or lower-high-end Dynalite unit or a comparable brand. You might also see if your local photography store allows you to rent equipment so you can try it before you buy it. *(Note:* I have industry sponsors and supporters, and I'm sure some will say, "Rolando is pushing his sponsors' equipment." I totally understand why someone would jump to this conclusion, but I do not jeopardize my integrity for anyone. Retail stores only rent out high-quality equipment. If you don't trust my endorsements, call around to a few providers and see what these shops are renting.)

Often I'm hired for private or semiprivate instruction, and find that my clients possess the most expensive makes and models of a specific camera brand but own cheap lights and cheap lenses. The old adage applies here: you get what you pay for. As consumers, we like good values, but as photographers, we must realize that, in the long run, we'll pay twice over time.

In order to create great images it takes great lights, not cheap lights. Can I light a great image with cheap lights? Yes, of course I can. Cheap lights don't make my photography look amateurish because I'm trained and experienced to overcome their faults. Though I could make do with cheap lights, it would just be a bad business decision for me, as they'd do nothing but slow me down. Ultimately I want to work accurately, efficiently, and effectively while utilizing my time wisely.

Here, I captured Holley only with the natural sunlight, taking advantage of the warmer tone close to sunset. The wind added action to the image, thus making it more powerful. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 200mm effective focal length, $1/200$ shutter speed, f/4.5, white balance at 6000K, ISO 100)

In glamour photography, we deal with the human form and psyche. Can you imagine what would go through your models' minds if you were struggling with your lighting gear during a shoot? Perhaps the model will perceive that you're still learning, or worse yet, lose total confidence in your ability to create great images.

Color. Light comes in many colors and can produce colors not often seen by the human eye but captured in its exact spectral color. For example, traditional fluorescent light is white to the naked eye, but when captured on daylight-balanced film or on a digital camera's sensor, it has a green cast. Daylight-balanced (5000 Kelvin) fluorescent lights produce light that is more similar to daylight. Therefore, in this light, colors appear normal.

Incandescent light (e.g., the light emitted from a typical household bulb) appears normal to the human eye, but the digital camera and film see it as a warmer, more red-yellow light, usually the same as tungsten, in

FACING PAGE—Playboy Playmate Maria Eriksson, from the United Kingdom, brought this amazing outfit. Although I had studio flash units with me, I decided to add some romance to the image by photographing Maria with the ambient light produced by the one lamp (with the shade removed) in the room. This hotel room in Las Vegas had many mirrored areas, so the lamp reflected throughout the room. I postproduced the image with Adobe Lightroom for the warm-toned effect. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $^1/_{125}$ second shutter speed, f/1.4, white balance at 3700K, ISO 4000) ABOVE—Here is another image of Maria made with the same single lamp. In this case, I chose to not desaturate the colors, leaving the image as shot. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $^1/_{125}$ second shutter speed, f/1.4, white balance at 3700K, ISO 3200)

the range of 3200 to 3800 Kelvin. The color of light can change simply by placing something in its path, like sunlight changing to a more cooler Kelvin temperature, around 6500 Kelvin and above, in shaded areas. Sunlight also presents itself in different colors during sunrise and sunset, as the sun penetrates earth's atmosphere in a more oblique angle during those time periods.

Distribution. Light originates from a source, whether it be the sun or a studio flash head, and its distribution is altered by modifiers placed in its path. This distribution can cause the quality of light to change from hard to soft, or soft to hard. As an example, on a bright, sunny day, direct overhead light is specular, contrasty, and hard, but the minute a bank of clouds rolls in, the light becomes a lower-contrast, softer light. The softness is caused by the clouds redistributing the sun's rays in various angles, making them less specular and directional.

Similarly, when a studio flash head is fired with no light modifier, its light is harsh and specular. We change the distribution by adding light modifiers like softboxes, beauty dishes, grids, etc. If we were to attach a strip light or strip softbox in front of the studio flash head, the light would soften from the larger softbox size, but because it's a strip, or about half of the width of a regular sized softbox, we can control the light's distribution into a more narrow path, which helps when we want to keep the light away from the background. Distribution of light is also impacted by flags, scrims, gobos, cutters, and anything that can block or shape light.

When I choose a light to illuminate my subject, I take into account the source of light, or primary source, and the modified light as the secondary source. Ultimately, it's usually the secondary source of light, or the modified source, that truly illuminates my subject in the image.

Contrast. Light has contrast, and depending on its source, placement, and distribution, the contrast can vary. Before I start shooting, I will first study my subject and determine how much contrast I want to add to the image. If my subject is young with smooth skin, I will allow the light to introduce more contrast into the image than if my subject is more mature.

Normally you can remove or add contrast based on the size of the light modifier and the distance of that modifier to the subject. A large light modifier, such as a Chimera Octa57 or a large 4x6-foot softbox will provide soft, gentle light. If you want to add contrast to the image, simply move the light back from your subject or change to a medium softbox.

monolight, medium strip box, Lighttools 40-degree grid

camera level

camera position
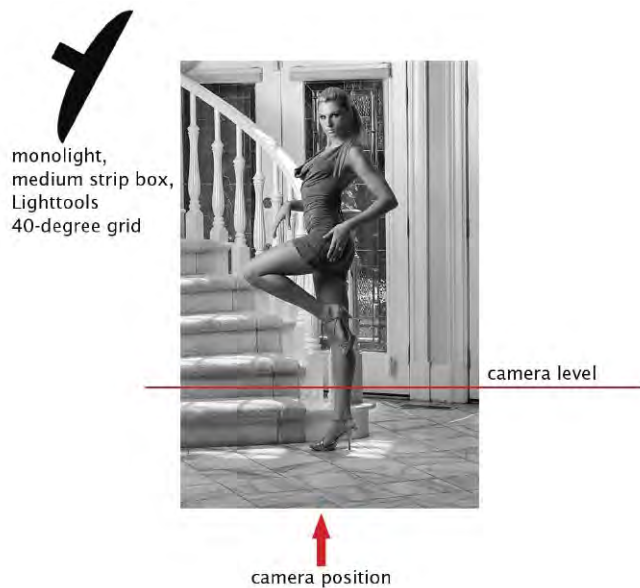
FACING PAGE—Playboy Model Jesse is captured at a mansion in Atlanta near the front door entrance. Staircases provide leading lines toward the model in addition to a comfortable resting place for her hand. I've illuminated Jesse with a studio flash unit outfitted with a Chimera Super Pro Plus strip box. The front of the box has a Lighttools 40-degree grid to direct the light in a more narrow path away from the glass behind Jesse. I wanted to create the impression that the model was actually lit using the natural light in the space, which you see patches of on the floor and staircase. (CAMERA: Leica M8 Digital Rangefinder fitted with a Leica ELMARIT-M 21mm f/2.8 ASPH lens. SETTINGS: 28mm effective focal length, $1/250$ second shutter speed, f/5.6, white balance at 6000K, ISO 160)

Contrast can also be controlled by using softboxes with a white interior for softer light or a silver interior for more contrast. In addition, adding egg crates or grids on the front of the softbox will increase the contrast, as the grids will focus the light tighter.

CONTINUOUS LIGHTS: FLUORESCENT AND TUNGSTEN

Fluorescent and tungsten lights are considered *continuous* light sources. Fluorescent light sources are cooler, softer, and more forgiving than tungsten light sources. Fluorescent lighting is a wonderful light source to utilize when working with older subjects, as it reduces the appearance of blemishes and

Erika was styled in cool colors to contrast with the warmer colors of the car while posing for photographer Tom Suhler during our U.S. Virgin Islands glamour workshop. Tom had an assistant position a Zebra-striped California Sunbounce reflector to put fill light on the subject. (CAMERA: Nikon D3 fitted with Nikon 70–200mm f/2.8 lens, SETTINGS: 90mm effective focal length, $1/500$ second shutter speed, f/8, white balance at 5880, ISO 200)

THE OTHER DEFINITION OF "QUALITY"

The late Dean Collins, a master in photographic lighting, once said that the greatest photographers in the world understood their equipment, were able to communicate properly with their subjects, knew the intended audience of an image, and had a creative eye. There is no denying that understanding your equipment is key to producing great images. However, understanding how to use the best and most dependable lighting gear will help you produce better images than you could produce if you settled for inexpensive, poor quality lights. Light, along with great lenses, are the two things a photographer should never skimp on.

When a new photographer approaches me for advice on how to get started with "X" as his or her budget, I state, "First, buy one great light—a really great light. Learn how to master that light, too. Next, purchase a great lens—the faster (or lower aperture), the better, because the quality of the lens is better with a lens that can be opened up to f/1.2 or f/2.8 versus f/4. Finally, buy a good camera body; an f-stop is an f-stop and $1/125$ second is $1/125$ second." I also add, "Years ago, I bought my first pair of Nike Air Jordans. I still can't dunk a basketball in the NBA, but my legs feel better and I can shoot baskets better. It's about using the right tool for the right result."

wrinkles, especially around the subject's eyes. While most fluorescent light is limited in use due to its lack of portability and intensity, there are some great units made by Rololight and Kino Flo. Though they are more expensive than the poor man's version described on page 30, they provide added benefits, including a more professional appearance and a flicker-free light environment, which is truly important when working with video, as most video cameras in the United States shoot 29.97 frames per second. With digital still cameras, however, we want to use a shutter speed of $1/60$ second when using non-flicker-free lights, as our electricity is 60 cycles per second. Using the $1/60$ second shutter speed reduces the likelihood of ending up with a black image.

Tungsten light sources are hot, harsh, and very unforgiving to glamour photography—hence why later in this book you'll learn how to change studio

> Tungsten light sources are hot, harsh, and very unforgiving to glamour photography.

THE POOR MAN'S LIGHT (OR, HOW TO SAVE $3800.00)

Want to save some money on your lights? My friend and celebrity photographer Jerry Avenaim showed me this trick a while back, and it has really caught on as I've demonstrated it at my various glamour workshops. The instructions for setting up your own lighting system follow. Please note that you may need to hire a carpenter, plumber, electrician, or professional builder to construct this properly and safely.

You may be surprised to learn that the lights used in this setup are fluorescent. However, these bulbs are amazingly forgiving—so much so that they are now commonly used in high-end productions. For example, if you pay close attention to makeup commercials on television, you can sometimes see the catchlights from just this type of light appear in the models' eyes. They use it to help the model's makeup appear soft, smooth, and creamy. This lighting is becoming so popular now that you can't always even identify it from the catchlights anymore (lighting companies are now making these units in different shapes than the one I'm going to describe). Of course, you can make yours any way you like—just hire a professional to construct it for you.

Building the Setup. Here's the basic setup: First, purchase four shop lights (about $15.00 each) from your local hardware store—like Lowes or Home Depot. Select 4-foot lights that hold two 48-inch bulbs. These lights have no front cover; they are the type that hang down from the ceiling and have a pull-string to turn them on. (*Note:* These lights are so popular now that photographers on the Internet forums call them "Home Depot Lights," although they are not made by Home Depot.)

Next, you'll need a frame to support these lights. You can have someone build you a frame out of PVC or even 2x4-foot studs, like a few of my friends have, or you can have a carpenter mount them on a sheet of plywood, creating a 4x4-foot square of lights on the plywood. If you choose this method, make sure your carpenter cuts out at least a 3x3-foot square hole inside the 4x4-foot frame. Mount the plywood on photographic C-stands and shoot through the hole with your subject on the other side. (I've even attached these lights to light stands using duct tape and wire ties for a quick 4x4-foot frame.)

Once you have your frame put together, you'll put two bulbs in each shop light. This is the key to the whole setup. The bulbs you choose can be any brand (I personally prefer the GE Chroma 50s, because they have less flicker, which is more important in video than still photography). Just make sure that the bulbs are stamped and identified as having a 5000K color-temperature rating. Sound familiar? Remember your studio flash units and 12:00pm to 3:00pm daylight? Yep—same color of light, but different quality of light—and that's what makes this setup so unique.

Metering. Now, turn the lights on. Stand in front of the frame, set your light meter at ISO 200, and read the ambient light until you get the settings for $1/60$ second at f/4.0. That is where you put your subject in a chair or on a posing stool to get the proper catchlight. This is a good starting point, but feel free to experiment as you like with other ISOs and camera settings.

Makeup. Your model must have great makeup for this technique to work. A professional makeup artist can create what is called the "dewy" or creamy look. This works best, but don't hesitate to experiment.

Accent Lights. I occasionally like to add a bit of contrast to the image, so I put a hair light behind the model. The simple modeling light from any studio flash provides a nice, warm hair light; it's normally balanced

at 3200K (or tungsten). If I trigger the flash itself, which is at 5400K, I get clear light—the same as the fluorescent lights. Either way, you can freely add accent lights to your image.

This is a great lighting setup for producing beauty and headshots (although not much else) and works especially well with older models, eliminating wrinkles with no fuss. Plus, because it's the same temperature as most photographic light sources, I can keep my camera at a 6000K white-balance setting and still get the added warmth I like in my images.

Kristen was photographed with the "poor man's light." She was posed with her shoulders slightly turned to accent her bustline (as opposed to a straight-on pose). (CAMERA: Olympus E-1 with an Olympus Zuiko 14–54mm wide zoom lens. SETTINGS: 80mm effective focal length, $^{1}/_{60}$ second shutter speed, f/3.5, white balance 6000K, ISO 200)

softboxes or beauty dishes to give you the color of light produced by tungsten but not the harshness, heat, or power consumption that is the domain of traditional tungsten lamps.

Both RoloLight and Kino Flo offer optional "tungsten" (3200K) fluorescent bulbs, though normal still photography requirements can be met with their traditional 5000K bulbs. Please keep color temperature in mind if you build the poor man's light. Do not use standard, cheaper fluorescent bulbs—if you do, you'll get whacky lighting or color casts. Instead, use the bulbs mentioned in the "Poor Man's Light" section. They cost about a dollar more per bulb.

FLASHTUBES

Light is the life of the image. When we can't use natural light, we use artificial light—usually flash, as it too will produce the necessary color, texture, shape, and form. Choosing a flash unit should not be done haphazardly. You are making an investment in something that should serve you for years. Your purchase should be based on making an informed decision, not impulse buying.

Before we purchase any type of light, we must look at the light source itself—not the box that houses it. Lighting varies not only by manufacturer but by lax or tight manufacturing tolerances and the materials from which they are constructed, inside and out.

Lights vary in the color temperature of the light they produce, and even though the Kelvin scale is large in gamut, the main color temperatures all photographers should know is 3200 Kelvin (K) for tungsten lamps and 5400K for the ideal flash output. While some flash units will vary from 5000 to 6000K, 5200 to 5400K is the ideal range (less cold-colored). Well-built

flashtubes usually have a 100 to 200K tolerance, even when voltages vary while units are plugged into a household circuit. Uncoated, less expensive tubes are closer to 5600K or higher.

The temperature variance is rarely noted by manufacturers and is more rampant in non-multivoltage flash units, as the voltage supplying the electricity to the capacitors changes by the second. The voltage supplied to the capacitors in a flash head is more stabilized, or regulated, with higher-end units, especially those that work from 110 to 240 volts, or multivoltage flash units.

The flashtube tolerances and temperatures, as well as temperature variances and durability over time, also depend on where the flash was manufactured. All flashtubes will eventually fail. The average life span of a tube depends on many factors, including the ambient operational temperature relative to the modeling lamp type (wattage), the amount of flash energy used, and how often the flash is triggered in sequence.

I served proudly in the U.S. Army for eight-plus years. I served eight more years as a civil servant in the U.S. Air Force, and I consider myself a true patriot. I do my best to buy American, but I buy and use what I think works best, and sometimes it comes from overseas. *(Note:* Many "manufactured in the U.S.A." flash units are assembled in America from foreign parts. Federal Trade Commission guidelines allow manufacturers to claim that such products are "Manufactured in the U.S.A." This does not mean that the product and all of its component parts were made in the United States. Some manufacturers will skirt the "made" issue by purchasing parts from U.S. distributors, though many internal capacitors and even the flashtubes they drive are not made in the United States. My point here is, don't be swayed into thinking you must buy one brand over the other one to be a patriot, regardless of your ethnic roots and where you live in this world.)

Speaking of manufacturing, the way the tube is sealed will impact the life span of your flash. Some tubes use epoxy, some use a glass-type solder (fused quartz), and some use the glass itself to seal the highly-pressurized gases inside of the tube. Over time, heat and other factors, such as banging your equipment around, can cause these tubes to leak, and you will need to replace them. The old adage, "you get what you pay for" applies here. If you go for the cheaper options, you get cheap tubes.

FACING PAGE—Tom Suhler photographed Playboy model Laura F. in an abandoned hotel in the U.S. Virgin Islands. Notice how Laura's body creates a diagonal line from each corner of the image. (**CAMERA:** Nikon D3 fitted with Nikon 70–200mm f/2.8 lens, **SETTINGS:** 90mm effective focal length 90mm, $1/250$ second shutter speed, f/9, white balance at 5880, ISO 200)

THE ANGLE OF INCIDENCE IS EQUAL TO THE ANGLE OF REFLECTION

In physics, the law of reflection states that angle of incidence is equal to the angle of reflection. This tenet is fundamental to the understanding of light and can be summarized thusly: if light strikes an object at angle A, it will be reflected in the opposite direction, also at angle A, similar to the way a ball bounces off a brick wall. In photography, the law of reflection is rarely discussed; one typically hears more about the Inverse Square Law or that white reflects and black absorbs. While these are indeed important aspects of light, the angle of incidence and the angle of reflection are two components of physics that, once understood, can help photographers improve the images they create in both artificial and natural light.

The easiest way to comprehend this concept is to go into a place that has hard, shiny floors and overhead lighting (grocery stores work great!). Look down while you walk and you'll see hot spots of light on the floor move with you as you walk. These hot spots are the direct reflection of the overhead lighting, and they evidence the law of reflection. These equal angles of incidence and reflection can cause hot spots on your subject too. Understanding the law of reflection will help you avoid hot spots on your subjects, whether you are photographing models, cars, food, or landscapes. In fact, managing these equal angles of reflection in your photographs allows you to add or eliminate texture and color in your images.

The law of reflection is also responsible for the red-eye effect that plagues ring flash users when shooting through the ring. Because the camera's lens is at the same angle to the subject as the flash, the reflection of light against blood vessels in the retina at the rear of the eye produces red-eye. An easy way to eliminate red-eye is to brighten the room; this causes the subject's pupils to contract, thus greatly reducing any reflection. Another method is to take a monolight with a 7-inch,

20-degree grid and point it at your subject's face with only the modeling lamp powered on (not the flash unit itself). Many flash units, including the Broncolor, Hensel, and Profoto brands have separate switches for the modeling lamp and electronic flashtube, allowing them to be powered separately.

In the studio, you can use the monolight red-eye reduction technique described above in a darkened room. This will allow you to show more of your subject's iris and less of their dark pupils. The technique works well with light-colored eyes—especially green and blue. Don't be alarmed by the appearance of harsh shadows on one side of the nose, as the power of the artificial flash will knock this out when it fires.

The law of reflection is especially troublesome when glass or mirrors are present in the image. The equal angles of incidence and reflection cause hot spots in glass and mirrors when using a flash. The simple solution is to move the flash away from the camera so that the angles are not identical.

By moving the camera and light source(s) independently, you can use the law of reflection in your favor, almost like an added layer of makeup to smooth your subject's skin. As you walk around your subject, you will notice that hot and washed out spots will appear and disappear based on the angle of reflection. You may also notice that your model's face appears smoother from one angle and rougher from another angle, as the valleys of the pores are filled in with shadows. Through positioning your camera and light sources independently, you can eliminate hot spots and create the appearance of a smoother skin texture.

You can also use a technique often employed by Playboy photographer Arny Freytag—"over and under" lighting. Basically, in this technique, the photographer will place the main light (usually an octabox) slightly higher than the subject. Another light source, powered down

slightly from the main light and modified with a beauty dish, is placed directly beneath it. In between the two lights will be several feet of separation, allowing the camera (photographer) position to be more eye or belly-button level. The camera will normally have a slightly powered-down ring flash attached to it. The beauty dish will help bring brilliance to the subject's eyes and the ring flash will fill in the shadows in the pores of the face, thus giving a smoother skin look to the subject's face. In this situation, the law of reflection allows soft shadows from the upper and lower lights, and the ring flash utilizes the law of reflection to remove shadows, creating soft shadows that separate the chin and neck and no shadows in the pores of the face.

Because the vast majority of what we see is reflected light (as opposed to incidental light), we as photographers live in an illuminated world. Without light, we would have no images to capture, and humans would see nothing but perpetual blackness. Understanding the law of reflection will allow you to outshine your competitors, as your photographs will take advantage of one of the fundamental laws of the universe and stand out from those created by your peers.

I used one light (a Hensel Integra 500 Pro Plus fitted with a 7-inch metal reflector and a 10-degree grid on the front of it) to create deep shadows for this "nailed" concept. The key to this type of editorial nude image is to walk around your subject; the angle of reflectance rule will give you many possibilities. In addition, it's best to break away from traditional horizontal or vertical framing and turn your camera for interesting angles—here, the models' bodies form a diagonal from opposite corners. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $1/_{200}$ second shutter speed, f/6.3, white balance at 6000K, ISO 100)

monolight,
medium strip box,
Lighttools
40-degree grid

monolight,
medium strip box,
Lighttools
40-degree grid

camera level

camera position
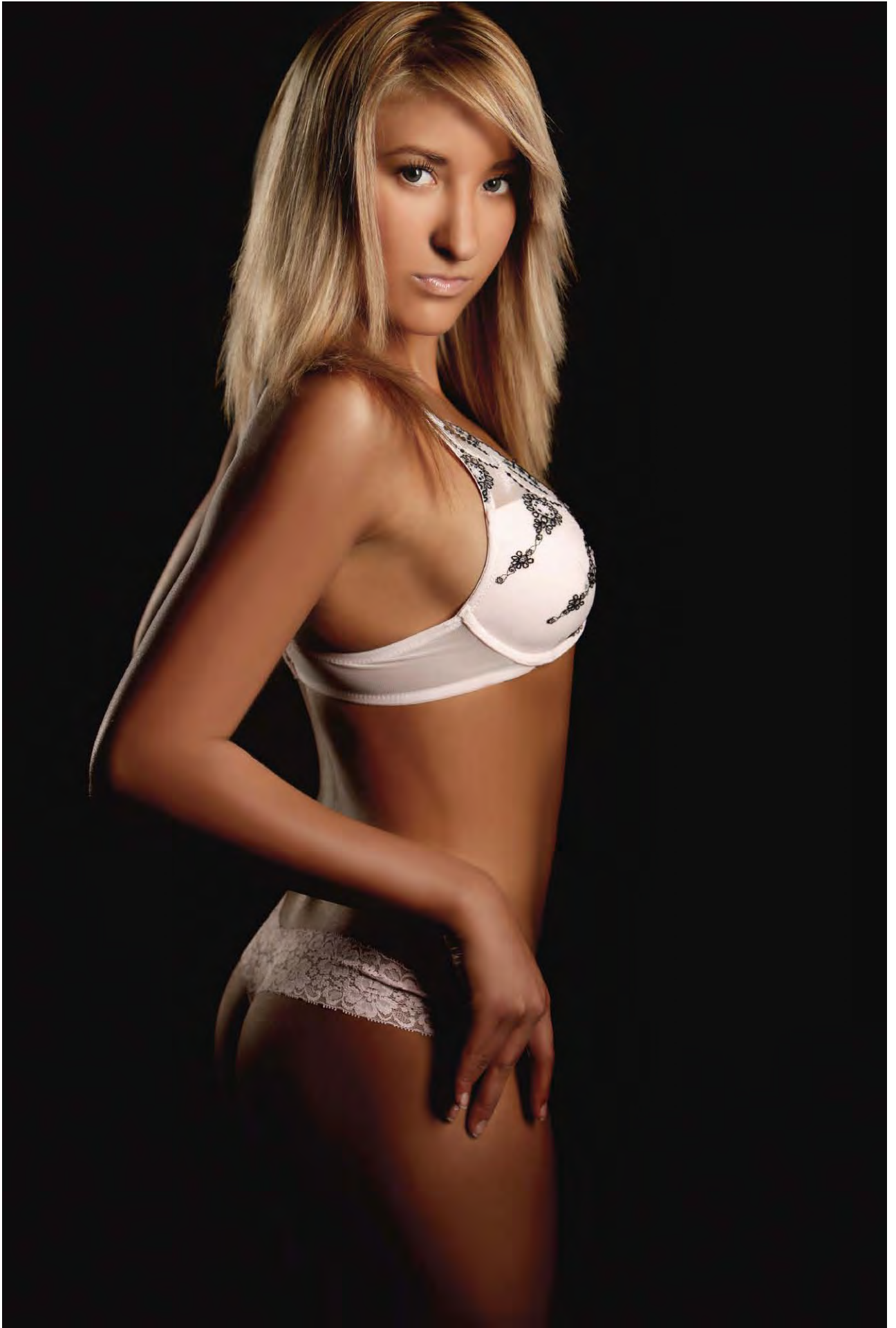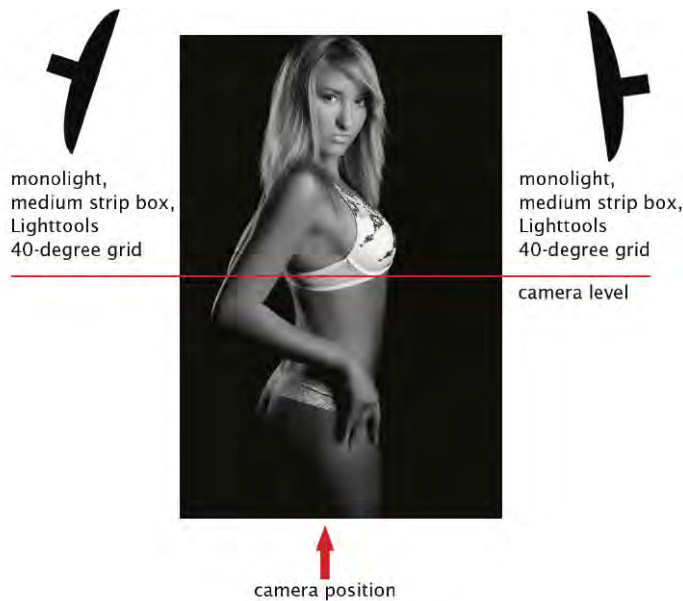
FACING PAGE—Many photographers, myself included, tend to use small metal reflectors on their studio heads for accent lights. Obviously, these smaller lights illuminate a smaller area—so if you want more of the model accent lighted, you will then need to add more lights. There are times, however, when I like to get as much side light as possible with fewer lights; that's when I use a strip light, as in this photo of Mari, to bring more light to the body from the side. Here, I used two Hensel Integra 500 Pro Plus monolights fitted with Chimera Super Pro Plus medium strip boxes and Lighttools 40-degree grids. Basically, one light is aimed at the front of the model and the other from behind the model. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 73mm effective focal length, $^{1}/_{200}$ second shutter speed, f/4.5, white balance at 6000K, ISO 100)

Higher-end units use higher-pressured, thicker quartz tubes for more accurate color temperatures and shorter flash durations. They can handle higher power and deliver more true watt-seconds. These units also have a glass dome over the tube. This is a safety precaution, though it is rare that a high-end tube will explode. Some covers have a UV-coated and/or color temperature tint for warming the color temperature. Inexpensive units use uncoated tubes and cost up to ten times less than better-built tubes. Many semi-pro and amateur photographers are led to believe this is not important. However, that's not the case, especially if you photograph people in clothes. Some synthetic fabrics will change colors and fluoresce with the added UV light produced by uncoated tubes. This will result in various color shifts in the final image, and not even shooting in RAW can correct this phenomena. Additionally, uncoated flashtubes will produce a higher blue in the actual color of the flash due to their colder color temperature of 5600K and higher.

The majority of flashtubes are filled with xenon gas and discharge at their peak once they are ionized and a high voltage is sent across the tube, producing a broad spectrum of light that resembles the color temperature of daylight.

Flashtubes are just one integral part of a flash unit—other internal components, such as capacitors and circuits, also impact the quality of the overall product.

RING FLASH AND NOVELTY RING FLASH UNITS

The ring flash has been around for some time. Its popularity in fashion photography has been cyclical. In glamour photography, with the exception of "over and under" lighting, it was never commonly used until now, due to recent advances in ring flash technology.

Be forewarned: technological advances in ring flashes have given rise to marketing hype and the introduction of wannabe units, which are limited in use and more a novelty item than a ring flash. We will discuss these in a bit.

Most ring flash units are physically attached to the camera with a bracket that ensures the lens is strategically centered in the flash unit's hollow ring. While the quality of light the ring flash produces can easily be utilized like a dead-on beauty light, it can also cause red-eye. This red-eye appears because the lens and flash unit are at the same angle to the subject's eyes, so the light from the flash reflects off the blood vessels in the rear portion of the eye.

Though red-eye can be easily fixed in Photoshop, it's easier to reduce or eliminate it by simply increasing the ambient light in the room, which causes

LEFT—This Elite Agency model was asked to carefully balance herself on the 5-inch wide edge of an infinity pool during one of my glamour photography workshops in the U.S. Virgin Islands. She was illuminated with a 1200-watt-second Hensel Porty Premium battery pack powering a Hensel Ring Flash fitted with a Hensel OctaHaze light modifier. I also placed a Rosco #3411 (three-quarter) CTO inside the OctaHaze and directly over the flash tube, changing the color temperature of the light source from daylight-balanced flash (5400K) to a warmer tungsten light (3200K). I then set my camera white balance to 3700K, basically telling the camera that my light source was more toward the tungsten end of the spectrum. This caused the camera to add blue (similar to an 80A blue glass filter). As my flash went off and illuminated my subject, it didn't illuminate the sky. Therefore, the model is correctly color-balanced—with just a slight warm tinge, since I set my white balance at 500K more than traditional tungsten. This white balance technique is what creates the saturated blue water and sky. This photo was also taken soon after the sunset, thus the low shutter speed and aperture. I might add, I hand-held this camera while standing in the pool of water—not because I'm that steady, but because the short duration of the flash is effectively the shutter speed for exposure of the model. After the flash pop, the shutter remained open to register the light from the sky. This created an interesting camera-shake/ambient-light border around the model. The final image was postprocessed in Adobe Photoshop using the Nik Software Bleach Bypass filter. (**CAMERA:** Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. **SETTINGS:** 85mm effective focal length, $^1/_5$ second shutter speed, f/1.4, white balance at 3700K, ISO 100)

the subject's pupils to get smaller. I'll place a studio monolight head with a 7-inch reflector and a 10-inch grid next to my ring flash with the modeling light turned on at full power and the flash turned off. The idea is not to use the monolight flash portion, but to only add illumination from the modeling lamp to cause the subject's pupils to reduce in size without causing squinting. When the ring flash fires, it will overpower the monolight's shadows and the warmer color produced by the tungsten modeling lamp. The monolight can also be set with the source's control set to Proportional, not Full, so that it can be dimmed down to prevent squinting.

Using the modeling lamp to contract the pupil and reduce red-eye also allows us to show more of the colored area of the eye (the iris) in the portrait. This is especially evident when you are photographing subjects with blue, green, light gray, or hazel eyes. You can use this technique even with beauty dishes, softboxes, and other light modifiers when working in darkened rooms or photography studios.

Another method to avoid red-eye and the much harsher light produced by such a specular source of light from a small ring is to replace the standard clear

glass that protects the ring flash with a frosted glass. The more professional ring flash units provide this option, but if your ring flash doesn't, just place a piece of Rosco Tuff-Spun silk diffuser in front of the unit. Be sure to cut a hole in the center so your lens can have an unobstructed path to the subject if you're going to shoot through the ring.

Some photographers, myself included, use a ring flash in a nontraditional manner—they shoot without mounting the camera in the ring, thus utilizing the ring flash like a powerful off-camera flash. I'm careful when I use this off-center style of shooting, especially with solid and close backgrounds and no light modifier in front of the ring flashtube. This method will cause a rather large shadow to appear on the opposite side of the subject in relation to your shooting angle. If you stand to the left of the ring flash, this unflattering shadow will appear to the right of the subject, and if you stand to the right, the shadow will appear on the left. That is why this "outside the ring" technique is better for the great outdoors or darker backgrounds with your subject positioned as far away from the background as possible. With the off-center technique, only a more powerful ring flash unit will suffice when shooting outdoors, not the novelty units, as these tend to be underpowered.

One of my favorite ring flash units for this technique is the battery-powered Hensel 1200 P-XS ring flash with the optional Octa Sunhaze adapter the company introduced in 2008. I can do this with the 1500 watt-second Hensel (enough to overpower the sun when using outdoors) with a short flash duration of $\frac{1}{1300}$ second or better, which weighs less than four pounds. It allows you to adjust the flash output in $\frac{1}{10}$-stop increments and features a true LED readout with a real decimal point you can see plus audio confirmation.

The Octa Sunhaze attachment for the Hensel 1200 P-XS ring flash runs via the battery-powered Hensel Porty Premium Plus AS/RC. It not only takes advantage of the "angle of incidence is equal to the angle of reflection" rule when the camera lens is placed directly through the center opening in the flash ring, but its unique, multilayered octabox with a built-in, circular metal reflector provides a new quality of light that is portable and lightweight and can be used even without the camera mounted inside the ring. Last, it doesn't create red-eye because the flash is off angle to the camera lens.

The beauty of this unique and patented design is that you can easily slide a full gel sheet right up the light modifier from the front, without taking anything apart. I do this a lot when photographing models at sunset by placing a Rosco Bastard Amber gel directly in the Octa Sunhaze. If you're one of the few people who have attended my "Exotic, International

You can easily slide a full gel sheet right up the light modifier from the front . . .

Placing a model in something as simple as a doorway will help separate your model from the background, as doorways are (obviously) at the exact opposite end from the room's far wall. Here, Elite Agency model Jenni stands in the doorway of a bathroom. Since the bathroom had intense household lighting for the mirror behind her, I chose to drag my shutter

ambient light from bathroom lights in background

monolight, medium strip box, Lighttools 40-degree grid

camera level

camera position

to capture the ambience of this light. With the white balance set for the flash in front of Jenni, the lighting from behind registers in all its tungsten warmth. Basically, this image is a mixture of two types of artificial light: tungsten (3200K) and electronic flash (5400K). (*Note:* For more on light temperature, see chapter 2.) The main studio flash, a Hensel Integra 500 Pro Plus monolight, is outfitted with a Chimera Soft Strip box with a Lighttools 40-degree grid on the front to prevent light from spilling onto the mirrored background. Notice that Jenni's face is also toward the upper third (camera left) following the rule of thirds compositional guideline. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $^1/_{25}$ second shutter speed, f/2.8, white balance at 6000K, ISO 100)
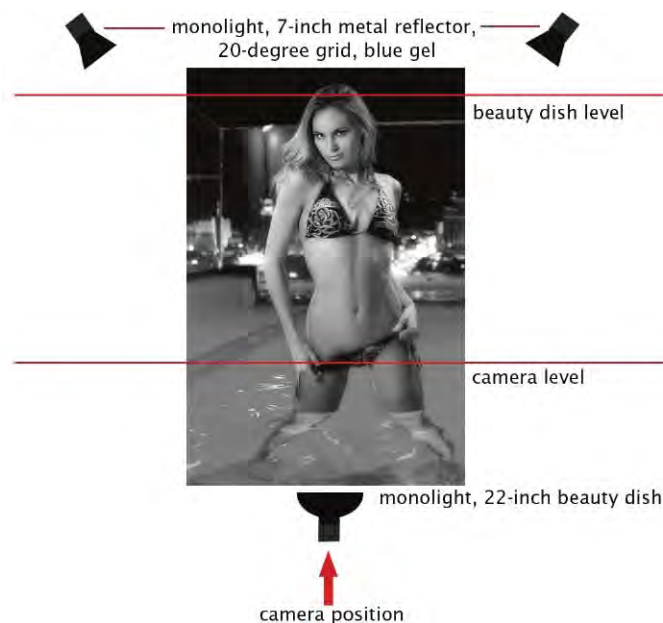
Beauty and the Nude" workshops in the Virgin Islands, you'll see I bring two of these bad-boy Octa Sunhazes with me for all to use, especially for those infinite-edge pool shots at sunset.

Novelty Units. The novelty ring flash units being introduced today are usually built from plastic and can't deliver 1000 "real" watt-seconds or more of power. Beware of the "effective" watt-second claims; it is a marketing ploy that suggests the units pack more power than they do in reality. The manufacturers will have you believing you can get an aperture of f/11 or better outdoors, but they fail to stress that you'll have to place your subject eight feet or less from the unit to achieve these results. Your models will hate you for this punishment as they walk away seeing "white donuts" from the flash unit. Manufacturers also claim that the units feature $1/10$-stop accuracy for adjusting the flash output, but they don't tell you that the "accuracy" is based on your feel and touch—there are no verifiable clicks, audio, LED displays, etc., to prove your accuracy, and $1/10$ of an f-stop needs some type of verification—no human hand can be that accurate with the sliding bar these novelty units incorporate. Always research something before you purchase it and make informed, not impulsive, purchases.

Things to Consider When Purchasing a Ring Flash Unit. *Weight.* If a unit is heavy and you're shooting with the camera attached to it, it will be difficult to ensure steady operation. It's very important that the unit be as lightweight as possible to prevent camera shake and hand fatigue.

Use of a tripod with a camera attached to the ring flash will limit your movements and reduce portability, often at the cost of sacrificed shots. Placing a ring flash on a light stand with the camera unattached is preferred. With lighter units, you can attach the camera to the ring flash camera bracket and move about more freely then when attached to a tripod. This is personal choice. As a photojournalist, I prefer shooting freely to being tied to a tripod.

Don't be fooled by novelty units with easily breakable plastic housings that are usually larger than the more ruggedly built professional units.

monolight, 7-inch metal reflector, 20-degree grid, blue gel

beauty dish level

camera level

monolight, 22-inch beauty dish

camera position

FACING PAGE—While conducting a workshop with Arny Freytag, Playboy's top photographer, Arny suggested we illuminate the hot tub in this penthouse suite with blue gels. We wanted the Las Vegas lights in the background, so we waited until nightfall to photograph model Eleya. I had two Hensel Integra 500 Pro Plus lights fitted with a 7-inch metal reflectors and 20-degree grids, both behind the model and pointed into the water. Each grid was covered with a Rosco blue gel. Due to space restrictions and safety when working around water, the lights were placed high, hence the blue spill light on the model. The main light was a Hensel Integra 500 Pro Plus monolight fitted with a Hensel 22-inch beauty dish. The final image was postproduced using Nik Software's Bleach Bypass and Glamour Glow filters. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 105mm effective focal length, $1/8$ second shutter speed, f/6.3, white balance at 6000K, ISO 400)

I'm often looking for interesting backgrounds. In this case, while in Phoenix, I chose a swimming pool with a waterfall area for the backdrop for Riley, as she posed for one of the first times in front of my camera. She was illuminated with a single Hensel Integra 500 Pro Plus monolight fitted with a Chimera Super Pro Plus strip box with a Lighttools 40-degree grid on the front of it. (**CAMERA:** Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM. **SETTINGS:** 160mm effective focal length, $1/200$ second shutter speed, f/3.2, white balance at 6000K, ISO 100)

Portability. Some ring-flash units have a handle so you can move freely with it while shooting. This allows you to walk, in an arc around the subject (maintaining the camera-to-subject distance), which allows for the use of a consistent aperture without re-metering. The ability to use the ring flash with a battery-powered power pack makes it useful for outdoor shooting.

ABOVE—Playboy model Laura F. stands outside a door while photographed by Tom Suhler at an abandoned hotel in the U.S. Virgin Islands. The door frames Laura and the shutter slats create dramatic lines across the body. Combined with her pose, the door and the slats help create an interesting mood in the image. (CAMERA: Nikon D3 fitted with Nikon 70–200mm f/2.8 lens. SETTINGS: 90mm effective focal length 90mm, $^1/_{250}$ second shutter speed, f/8, white balance 5880, ISO 400)

RIGHT—With a medium telephoto to telephoto lens, the compression of a foliage background combined with the loss of depth of field provides a painterly setting that keeps your attention on the model—here, *American Idol* star Amy Davis. This image was shot indoors using window light and the house's tile floor as a reflector. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $^1/_{250}$ second shutter speed, f/1.2, white balance at 6000K, ISO 125)

Power. The ring flash should have a 1200 watt-second or more power output so you can use it outdoors to overpower the sun at a comfortable distance to your subject. In indoor glamour photography, this same unit will allow you to get a comfortable distance from your subject. This is really important with medium- to long-telephoto lens photography sessions in glamour and fashion photography.

Normally you need a shooting distance of at least ten feet from your subject, and to surpass the Sunny 16 Rule of lighting when working outdoors,
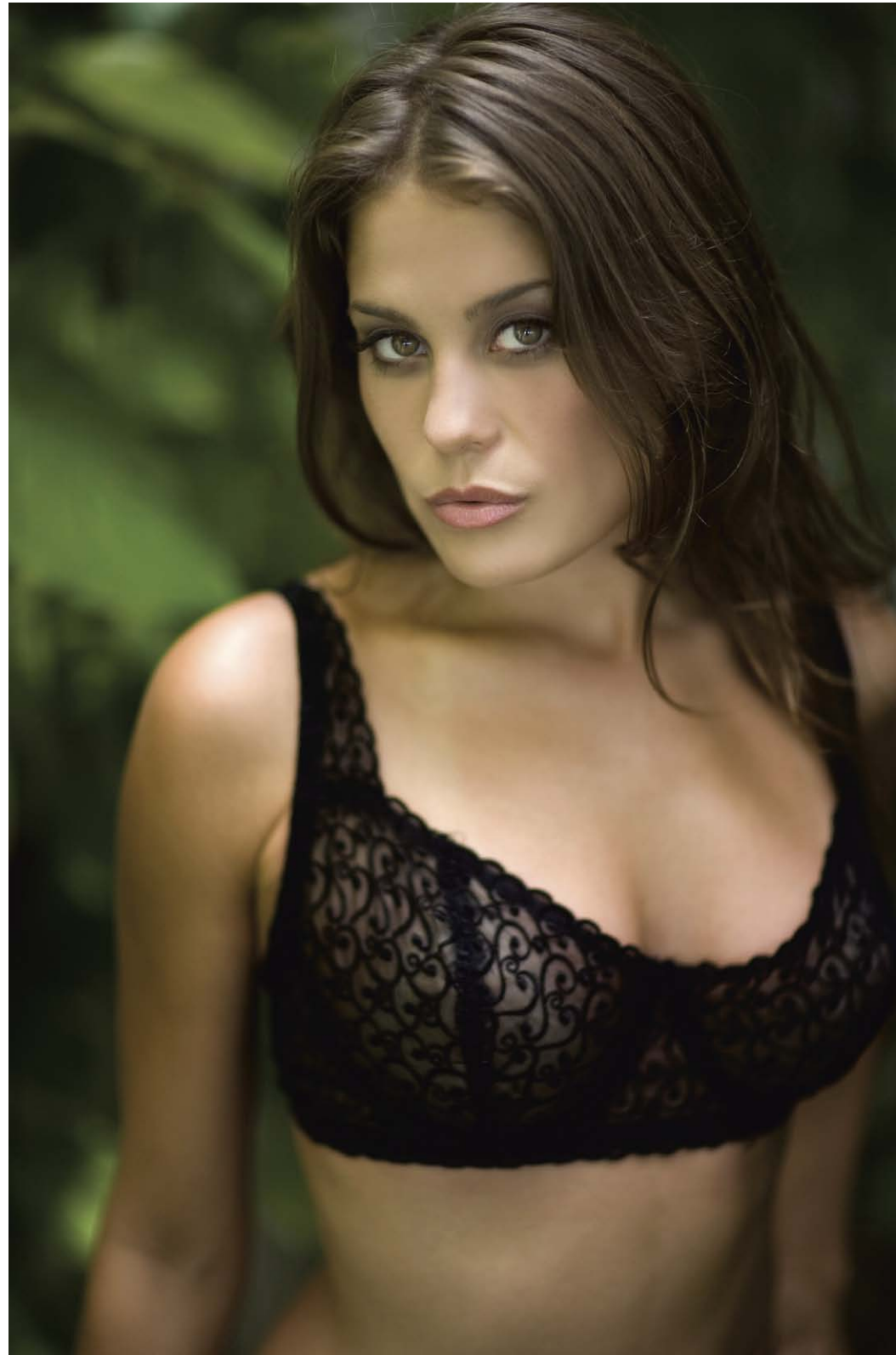
power is very important. If your ring flash cannot provide at least an f/16 at ISO 100 power output at 12 feet or more, you're purchasing a novelty flash or a wannabe ring flash that will wind up in the closet later. Most professionals would never blast their subject with a ring flash from less than ten feet because when the ring fires, the subject will see white donuts for quite some time, and this can damage your subjects' retinas. Also, in glamour photography, the image is very much dependent on the subject's face—and if the subject is being bombarded with white donut flashes, she is bound to look uncomfortable.

As a test, find where your ring flash unit will provide an aperture of f/16, stand in front of your flash, and carefully look right into it when you fire it.

Photographers often struggle to capture the "fire" in fireplaces. Normally, the problem is that their shutter speed is too fast. When I captured the fire here, with model Candice, I used a slow shutter combined with a higher ISO and low aperture. I also positioned myself on the floor for a lower camera angle and found the right focal length for my zoom lens, so the fire would not appear to grow out of her back. I illuminated Candice with a Hensel Integra 500 Pro Plus monolight with a Chimera Super Plus Pro medium strip box fitted with a Lighttools 40-degree grid for the main front light. I then placed another Hensel monolight to the camera right, behind her, fitted with a 7-inch metal reflector and a 10-degree grid to help add light to her hair. Another Hensel monolight, also fitted with a 7-inch metal reflector and a 20-degree grid, was placed behind her and to the camera left to accent her lower curves. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 165mm effective focal length, $\frac{1}{80}$ second shutter speed, f/4.0, white balance at 6000K, ISO 200)

Okay, I'm kidding. I'm not trying to be caustic, but remember, you're planning on having a model in front of that unit. Chances are if you don't like it, your model won't either, and remember, it's always about the face, a happy face. Don't get stung with novelty units; you have to get really close to achieve high f-stops to gain depth of field in in glamour and fashion photography when working outdoors, and your subject won't appreciate the intrusion.

Color Temperature. It's very important in digital photography that your ring flash provide consistent color temperature output, preferably within 100 to 200K tolerance.

While working in the Virgin Islands, Tom Suhler created this photograph of model Rika using a Hensel Porty Premium battery power pack with a studio flash fitted with a 7-inch metal reflector and a 20-degree grid. The main light was feathered using barn doors to direct the light away from the background, which was illuminated with two Nikon speedlights covered with blue and magenta gels. (CAMERA: Nikon D3 fitted with Nikon 70-200mm f/2.8 lens. SETTINGS: 78mm effective focal length, $\frac{1}{250}$ second shutter speed, f/9, white balance at 5880K, ISO 1600)

Flash Duration. The shorter the flash duration, the better. This is very important when shooting outdoors. Durations of $\frac{1}{1300}$ second or more are great. This is important when capturing moving objects or action when utilizing short shutter speeds outdoors, thus providing for a higher dynamic range when intermixing daylight with flash and better flash synchronization. Long flash durations will continue firing while the camera shutter has already closed. This often causes a color shift toward the blue spectrum and also can cause unsharp images.

Variable Output. Variable flash output is important. Can you adjust your ring flash within $\frac{1}{3}$ to $\frac{1}{10}$ of an f-stop without repositioning your subject and light source? There is nothing like $\frac{1}{10}$ of an f-stop accuracy. The Hensel, Profoto, and Broncolor units will not only achieve this accuracy, but with visual verification LED displays, and most can also be adjusted via the radio remote trigger in $\frac{1}{10}$ f-stop increments with audio verification up to five full f-stops! This is great when you shoot out of the ring. Steer clear of those novelty units that claim $\frac{1}{10}$ f-stop adjustments but utilize sliding levers—this accuracy is based on human touch and feel (and some good guessing). Can you adjust the water temperature in your shower to $\frac{1}{10}$ of a degree with the water knobs by touch and feel? Nope. You can't do it with your lights, either.

Marketing Hype. Don't fall victim to marketing hype: when it comes to "effective" watt-seconds versus "true" watt-seconds, the latter is the one that is the industry standard and the one that matters. "True" means "real." "Effective" means "marketing hype."

In a nutshell, shooting through a ring flash, other than when using the over/under lighting technique described earlier in this book, is a fad and tends to be overused, especially when paired with a seamless background in the studio. Be careful and make informed decisions when purchasing a ring flash. Ask yourself, "Do I really need this?" If the answer is yes, then decide how far away you will be from your subject to achieve your desired results—both indoors and outdoors. Novelty units will not suffice when photographing people outdoors. Save the novelty units for photographing bees hovering over a flower in search of nectar. Just don't get stung.

ON-CAMERA FLASH OR SPEEDLIGHTS

On-camera flash, or speedlights, are something I rarely use anymore when it comes to glamour photography. In years past, especially when I did a lot of photojournalism, on-camera flash was a must, but there are reasons why I stay away from it when photographing women: it's specular and harsh.

As a glamour photographer, on-camera flash or speedlights should be your last resort. If I don't have any artificial light sources, such as studio flash units

with great light modifiers, a fluorescent light setup or a great reflector, I'll use the natural light I see before I dig around for an on-camera flash.

Once while at one of my Virgin Islands "Exotic, Glamour, Beauty, and the Nude" workshops, I saw an attendee shooting with an on-camera flash. I simply handed him my clear bottle of water with the label removed and said, "Here, shoot through this." He was like, "Wow!" It not only worked in diffusing the light, probably better out there than the products that are plastic and often cost $50 or more, but it was a $2 bottle of water that quenched my thirst on a hot day while quenching his photograph with beautiful, diffused light. Again, it's all about using the right tool for the job. Save on-camera flash units for the birthday parties and what photojournalists call the "grip and grin" shots.

Before you even think about grabbing that on-camera flash, look around you and see how light is reflected off everything—the walls, your shirt, the re-

I had KT stand facing in the direction of the sun, capitalizing on the warmth found in the natural light. This is an example how side-lighting can be effective for an image. I've also allowed enough blue sky to contrast with the warmth terrain and KT's body. Notice I've positioned the camera to capture the horizon line well below her shoulders for a more appealing look. This image is also effective because of the tonality shifts seen in the background—the lighter sky, the darker middle, and the middle-toned bottom. (CAMERA: Leica M8 Digital Rangefinder fitted with a Leica ELMARIT-M 21mm f/2.8 ASPH lens. SETTINGS: 28mm effective focal length, 1/500 second shutter speed, f/5.6, white balance at 6000K, ISO 160)

In this image of KT, I placed the horizon line low so I could have more sky to contrast with the warmth of her body. I positioned her so the light would come from the side and the shadows created would help accentuate her shape. Also, I paid close attention to the chiaroscuro caused by KT's natural curves and her body's position into the sun. (CAMERA: Leica M8 Digital Rangefinder fitted with a Leica ELMARIT-M 21mm f/2.8 ASPH lens. SETTINGS: 28mm effective focal length, $^1/_{250}$ second shutter speed, f/8.0, white balance at 6000K, ISO 160)

frigerator, the car, the sand, the snow—and if you have to use an on-camera flash, bounce it off a neutral, reflective surface.

Finally, if you're traveling light and you don't have any studio power packs with you, consider using the California Sunbounce Mini to reflect light at your subject. The modifier will make the reflected light much larger and sweeter, and the light on your subject will be much more flattering.

NATURAL LIGHT

Of all the light sources available to photographers, the most forgiving and unforgiving light is natural light—light that comes from the sun. It's a light source that can make your images superior and inferior, sometimes within the same frame of the image. Natural light is native to photography—it exposed images on cellulose film long before studio strobes or on-camera flash were used—and it is ultimately the purest form of light.

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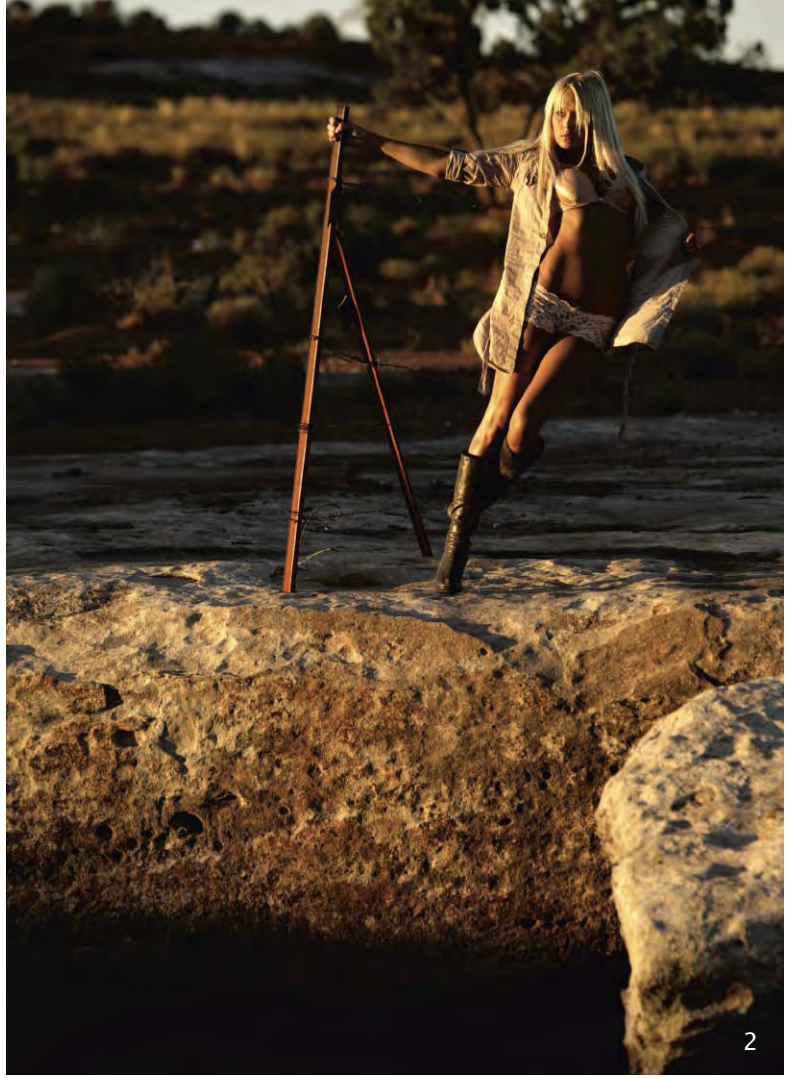
4

On occasion I travel to Moab, Utah, to capture intriguing images—as in the case of these photographs of Playboy Playmate Holley Dorrough. Originally, I carried a generator, monolights, and even battery portable power packs. But eventually, I became frustrated with the flash and recognized the beauty of the "golden hour" in the Moab, so I captured Holley only with the natural sunlight and took advantage of its warmer tone. The wind helped add action to the images, making them more powerful. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS FOR IMAGE 1: 200mm effective focal length, $\frac{1}{250}$ second shutter speed, f/6.3, white balance at 6000K, ISO 100. SETTINGS FOR IMAGES 2 AND 4: 200mm effective focal length, $\frac{1}{200}$ second shutter speed, f/5.0, white balance at 6000K, ISO 100; SETTINGS FOR IMAGE 3: effective focal length 78mm, $\frac{1}{200}$ second shutter speed, f/5.0, white balance at 6000K, ISO 100)

Though the sun is large, its distance from Earth makes it a specular, pinpoint light source. Unfiltered natural light is too harsh for glamour photography. It is best when it's reflected or filtered, whether through clouds, windows, open shade, scrims, or some natural or artificial light modifier.

The rule of lighting in glamour photography is simple: the larger and closer the light source is to your subject, the more forgiving it will be. As an example, 12:00PM to 3:00PM daylight on a bright, cloudless, sunny day is harsh and will bring out every imperfection and pore in your subject's body. But the minute the clouds come rolling in, they make the light softer, much like the diffusion

When you run out of locations or ideas, place a model up against a window and use the natural light coming from the side or behind the subject, as in this case with Elite Agency model Jenni. We were working a glamour photography workshop at the Palms Casino when I noticed the sunlight coming through the master bath of one of the Sky Villa Penthouse suites where we held a workshop late in December. I had just happened to go to the bathroom when I saw the light. That is key into finding great natural lighting locations: look for light, not just the room light. I also thought about my "Wide Aperture" working theme when I saw this filtered light. So I pulled Jenni away for a moment—just long enough to capture this moody image of her. I added more mood to the image by converting it from color to a more warm, desaturated tone in Adobe Lightroom. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $\frac{1}{640}$ second shutter speed, f/1.6, white balance at 6000K, ISO 125)

panel on a softbox. Not only are the clouds closer in distance to us than the sun, but the shadows soften and light becomes more forgiving of any imperfections. Also, when there are clouds in the sky, the contrast drops in the image, making everything appear to blend smoothly.

Open Shade. Working in open shade (*i.e.,* any area away from direct sunlight) is preferable to using an on-camera flash. This works great for all subjects,

though the light quality itself is dependent on how the light arrived there. Basically, in open shade, you can have some directional light as it filters through tree limbs, overhangs, buildings, etc. Ideally, when working in open shade, you could fill in some of the flatness by bouncing light off a reflector, like the California Sunbounce, or from a portable studio flash with an attached beauty dish modifier onto your subject.

Shooting in open shade also necessitates making some adjustments to your white balance. Because the light in open shade areas tends to be cool (*e.g.*, it has a high Kelvin temperature), your subject may appear with a cyan or blue-

One of my favorite places to photograph models is the Atlanta mansion of "Weezie" from the television show *The Jeffersons.* While the actress herself, Isabella Sanford, is no longer with us, her son allows me to do photography at this location. The first floor has white carpet, white drapes and a white piano next to large, clear windows, creating a great atmosphere for ambient light photography during daylight hours. Here, I've captured Kati as she rests comfortably at the end of the piano. The piano itself acts as a soft white reflector. (**CAMERA:** Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. **SETTINGS:** 85mm effective focal length, $^1/_{320}$ second shutter speed, f/1.2, white balance at 5400K, ISO 100)

green cast. If you use a California Sunbounce to fill your subject with a more natural, crisper light, readjust your white balance as the color temperature will be lower (and more flattering).

LIGHTING PATTERNS

There are basically four types of lighting used in glamour portrait photography: Paramount lighting, loop lighting, split lighting, and Rembrandt lighting.

Paramount Lighting. Paramount lighting is a traditionally feminine pattern achieved by placing the main light high and directly in front of the subject. This produces a small, symmetrical, butterfly-shaped shadow under the nose. (Consequently, the lighting pattern is also called butterfly lighting.) The actual shadow should terminate between the upper lip and the nose itself.

Paramount lighting flattens features and reduces textures while giving a broader look to narrow faces. This lighting style is best for women with strong cheekbones and great complexions; it is typically avoided for male subjects.

Playboy Playmate Holley Dorrough was photographed by Tom Suhler. Tom illuminated Holley with one Hensel Integra 500 Pro Plus monolight fitted with a medium Chimera Super Pro Plus softbox. Notice the shadow under the side of Holley's nose, which is characteristic of the loop lighting pattern. When working with blonde haired models and dark backgrounds, an accent light for the hair isn't always necessary. (CAMERA: Nikon D3 fitted with Nikon 70–200mm f/2.8 lens. SETTINGS: 75mm effective focal length, $\frac{1}{250}$ second shutter speed, f/7.1, white balance at 5880, ISO 200)

For this headshot of Elite Agency model Jenni, I chose a horizontal format and used cool colors in the background to offset her natural red hair. Jenni was illuminated with a single Hensel Integra 500 Pro Plus monolight fitted with a Chimera Super Pro Plus soft strip box that had a Lighttools 40-degree grid on its front. I also had the assistant, Ryan, hold a silver reflector underneath the softbox, angled up toward the model's face. This helps bring out her blue eyes, another contrast with her hair. The hair light accents were from a nearby window. Note the highlight on the model's right cheek; this is characteristic of the Rembrandt lighting pattern. (**CAMERA:** Canon EOS 5D Mark II fitted with a Canon 85mm f/1.2L USM lens. **SETTINGS:** 85mm effective focal length, $\frac{1}{200}$ second shutter speed, f/10, white balance at 6000K, ISO 100)

Normally your main light source would be positioned in front of and above the subject at a 45 degree angle, and the fill light would be below and behind the main light.

Loop Lighting. Loop lighting helps broaden the face and works very well with narrow faces and ruddy skin. It can be created with a simple variation of the Paramount setup: the main light is simply moved slightly to the side of the subject. This creates a characteristic oval shadow that extends from the subject's nose toward the corner of the mouth.

Split Lighting. Split lighting occurs when the main light illuminates only half of the subject's face. It is ideal for slimming a wide face. For a very dramatic effect, it can be used with no fill.

Rembrandt Lighting. The Rembrandt lighting pattern is named after the famous Dutch painter who used skylights to illuminate his portrait subjects. This type of lighting emphasizes texture and in portraiture, it is traditionally used for full, rounded faces. In glamour photography, this type of lighting is more commonly used, regardless of the subject's face being narrow or round, as it relies on a very dramatic effect: a triangle of light formed below the eye. As a general rule, the triangle of light should be as long as the nose but no wider than the eye.

The classic Rembrandt lighting pattern is created by placing the main light high and to the side of the subject. The fill light is positioned opposite the main light. When the light is in the correct position, there will be a triangular

or diamond-shaped highlight on the check of the shadow side of the face, just beneath the eye and next to the nose. This highlight will be surrounded by darker tones or shadows, which is where the concept of chiaroscuro (the intermixing of lights and darks in an image to help create the illusion of depth) comes along. This effect also helps add an allure to your subject's eyes—and in glamour photography, this means greater sex appeal and added impact. This technique is my favorite in most of my glamour and portrait photography, and my clients seem to love it.

As luck would have it, Rembrandt lighting is simple to create—even with just one light. I like to work with medium and large softboxes, like the 3x4- or 4x6-foot Chimera Super Pro Plus banks, placed a few feet away from my subject. I have my subject gradually turn her face away from the light source until I see the proper highlight underneath the shadow-side eye. *(Note:* If you're shooting with a continuous light source, this will be no problem. If you're shooting with studio flash, you'll need to use a unit with a modeling light so that you can see the effect as the model turns her head.)

While Rembrandt lighting is easy to create with a softbox, you can also produce it using natural light. Simply place your subject near a window where light filters in, then turn the subject's face gradually away from the window until you see the right pattern. You can also reflect sunlight onto your subject with a California Sunbounce reflector to create a Rembrandt effect.

FIND, SEE, AND FEEL THE LIGHT

New photographers tend to take light for granted, and their images suffer as a result. Still others don't get the results they are after because they start out with cheap lights, only to learn later on in the game that all they needed to get off to a great start was one great light.

Becoming a good photographer takes time. Part of the formula for achieving success lies in recognizing good light. A good photographer will see the light that others ignore.
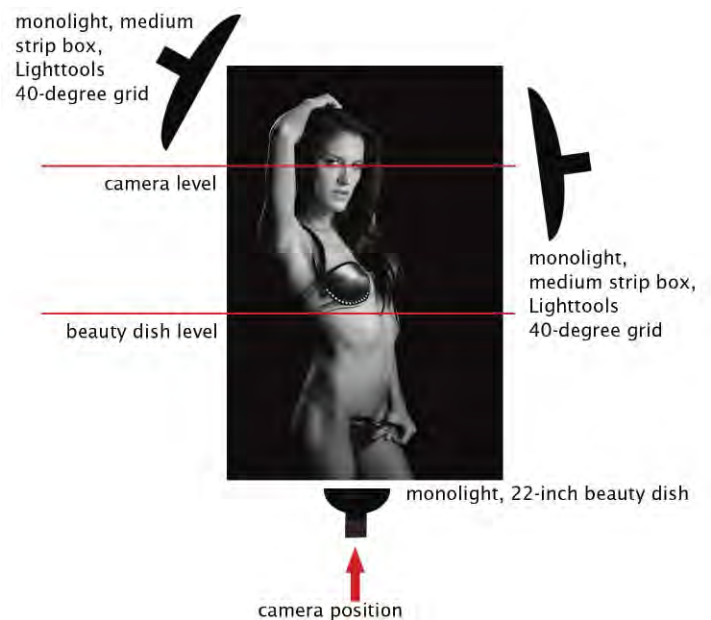
FACING PAGE—Black on black shots can be tricky—especially when the model has black hair, like Candice. Here, I used two Hensel Integra 500 Pro Plus monolights fitted with Chimera Super Pro Plus medium strip boxes and Lighttools 40-degree grids. One light was aimed at the front of the model, the other at the back. I also used a 22-inch beauty dish, placed low next to the main light and I placed my camera between the lights. This beauty dish, one-third stop lower in power than the main strip, helped keep the model's skin smooth. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 70mm effective focal length, $1/200$ second shutter speed, f/5.6, white balance at 6000K, ISO 100)

Great photographers take it a step farther: call it instinct, experience, knowledge, or all the above, but some photographers actually feel the light. These great photographers can naturally sense the correct exposure of the image. They understand the light around their subject.

The ability to feel that light doesn't happen overnight. Rather, it comes with experience and lots of shooting—all while learning to master the fundamental concepts of photography. It's practically impossible to teach someone how to feel light in one book, so my intentions are to help you see the light first.

Practice Makes Perfect. Being able to see great light is a step toward producing consistent and creative results that will help you to develop your unique photographic style. The first step in that journey is to practice finding light. It's not always easy to find, though it's there, as with the absence of light is darkness.

There is no better time than the present to begin this practice, so take a deep breath and look around the room you're sitting in right now. What sources of light do you see? A window, a light above your head, a lamp on your desk—or, if you're extremely lucky, the light from your 150-gallon saltwater aquarium?

If you said yes to a combination of the above, you're an average photographer who probably takes pictures (more like snapshots), not photographs. If you said, "Wait! There's more!" and pointed out the four walls in your room, the floor, the mirror, your monitor, the television, or even your hall light, then you're probably a photographer who takes photographs more often than pictures. Let's not forget, light falls on everything in its path. It's the diffusion and/or reflection of the light that we actually see through obstacles in its path—rarely do we see light in its purest form.

For the next month or two, practice looking for the light in every room you walk into. Challenge yourself to find the light in every corner, and coming off of every wall, floor, or door, as even everyday items like your refrigerator reflect light.

Here's another tip for learning to see light: Use a studio lighting kit that allows you to turn off your modeling lights one by one, preferably via a switch at the back of the light head.

As an example, when I light a subject in the studio, I start with one light source and add lights as needed. I look at the light emitted by the modeling lights—that is what they are there for, to show you how and where the light will fall. You can also learn about the light by using different light modifiers—like changing a softbox out with a 7-inch reflector, straight grid. When you do so, you'll see how the light falls and will notice the harsher quality. Stick your

hand out in front of that softbox. Can you see the soft nature of the light? Now, from the same distance, do it with a 7-inch reflector grid. Can you feel the heat off the grid? Do you feel the harshness?

Quick Reaction Timing. Another method you can use to sharpen your skills and see light is a technique I call Quick Reaction Timing, or QRT. I often teach this technique at my glamour workshops. I introduce it to my attendees to help them improve their hand–eye coordination so they learn to recognize that fraction of time when their subject is at their finest. The exercise was conceptualized to help eliminate shutter-finger hesitation, but in all actuality, it will help you to learn to see the light we often overlook too.

The QRT concept is simple. Allocate at least one day per month for yourself and your photography, and on that day, head to the local zoo. Get there early, fully rested from the night before, so your mind is fresh. The animals are liveliest when they first wake up and it's feeding time. Also, when the day is young, the light constantly changes as the sun rises. Not to mention, the crowd tends to be lightest first thing in the morning.

Your goal is to train your mind to find the funniest things those loveable creatures are doing while you're exercising your heart and lungs. When you look for it, you will find great light in many forms and places. You'll feel the

There are often many natural reflectors for light. Here, with model Rika, the reflectivity of the sand and water allowed me to shoot with just the natural light. The final image was postproduced using Nik Software's Bleach Bypass and Viveza filters. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 105mm effective focal length, $^1/_{1250}$ second shutter speed, f/3.2, white balance at 6000K, ISO 100)

passion when you find those shadows, and you'll feel the exhilaration when you capture that image. The animals will find the light for you, as often they are basking in it for warmth.
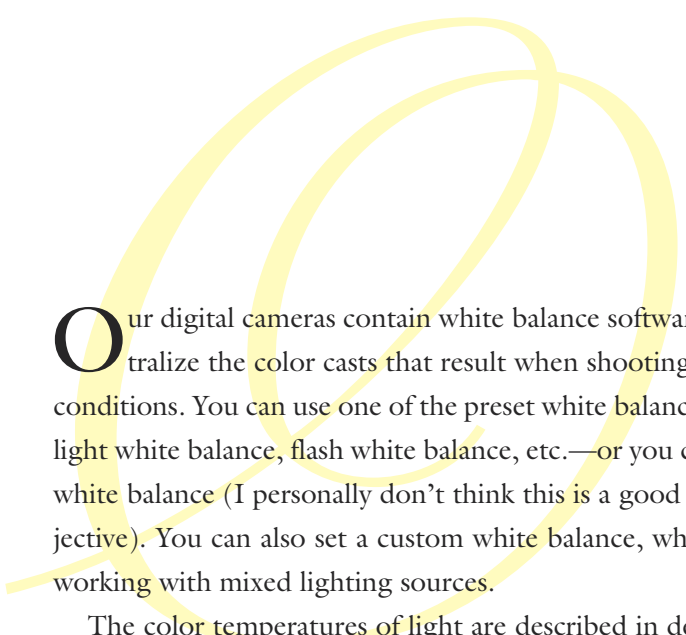
As you walk down the paths at the zoo, look for light bouncing off the water, walls, or even people's clothing as they walk past—it may be as simple as the shiny, silver base of the water fountain as you take a drink to quench your thirst.

Practice this technique several months out of the year. I still do it to keep my mind sharp, and it doesn't hurt to support your local zoo. If you're lucky, they'll buy the images for their brochures or give you free admission in exchange for prints. If not, you might be able to donate the use of your images in return for the by-line that accompanies them in the zoo's newsletter. You might also be able to sell some of the images for stock while improving your shooting techniques.

Tom Suhler waited until darkness set in to photograph Raven on a pathway thickly covered with tropical foliage. Tom took advantage of the darkness and five lights to create shadows and mood in this image. The main light, a Hensel flash head powered by a Hensel Porty Premium battery pack, had a 7-inch metal reflector, a 20-degree grid, and barndoors to help limit the path of the light. The background was colored with four Nikon speedlights, remotely triggered. Each speedlight had either a blue or cyan gel. (CAMERA: Nikon D3 fitted with Nikon 14-24mm f/2.8 lens. SETTINGS: 22mm effective focal length, $^1/_{250}$ second shutter speed, f/8, white balance 5880, ISO 1250)

2. WHITE BALANCE

Our digital cameras contain white balance software that can help us neutralize the color casts that result when shooting under various lighting conditions. You can use one of the preset white balance algorithms—like daylight white balance, flash white balance, etc.—or you can select the automatic white balance (I personally don't think this is a good idea, as color is so subjective). You can also set a custom white balance, which can be useful when working with mixed lighting sources.

The color temperatures of light are described in degrees Kelvin. Basically, the lower the color temperature of the light, the warmer (more yellow or red) the light tends to be. The higher the color temperature of light, the cooler (more blue) it appears.

CUSTOM WHITE BALANCE

To set a custom white balance, the photographer meters a white or 18 percent gray card under the lighting that will be used for the shoot, and the camera uses that data as the standard for ensuring a correct white balance. Some camera manufacturers prefer the use of an 18 percent gray card in obtaining a custom white balance, as 18 percent gray reflects all colors equally. Still other manufacturers prefer to use a white card when creating a custom white balance. The argument here is that white can come in many "forms," hence the more accurate method of obtaining a true white balance is using a 100 IRE (calibrated) white card. In theory, white light is produced by incandescent, tungsten, and even fluorescent light sources, but the wavelengths of all these light sources are different.

A custom white balance can be useful when working with mixed lighting sources.

Playboy Model Laura F., is framed within an archway by photographer Tom Suhler, in the U.S. Virgin Islands. Laura's warm-toned clothing contrasts with the cool-toned building and open-shade background light. (CAMERA: Nikon D3 fitted with Nikon 70–200mm f/2.8 lens. SETTINGS: effective focal length 90mm, $1/_{500}$ second shutter speed, f/7.1, white balance at 5880, ISO 200)

The bottom line is, great still photographers understand that custom or manual white balance can be used to produce results that film photographers used filters and different film emulsions to achieve. Manipulating the white balance can also allow you to create effects that required bulky and complicated lighting equipment in the days of film photography.

WHITE BALANCE TRICKS

Color the Background. Often we take photographs outside, pointing our cameras into the deep-blue sky. The shutter clicks, then we check our LCD screens and find that the sky looks unsaturated in color—clear and colorless, more gray than blue—and even placing a polarizer filter on our lenses doesn't always seem to help.

By applying modified film techniques to our digital captures, we can color the sky as we wish, right in the camera, without relying on glass filters and various film types (emulsions).

In the days of film, professional photographers simply used an 80A (blue) filter over their lenses when they were using daylight-balanced film and working with tungsten lights. The warm light created by the tungsten light source would fall on the subject, and the blue 80A filter would cancel out the

FULL BRIGHTNESS

In still-camera, digital photography, white balance is a technique that allows a camera, often through proprietary software, to ensure that a known white value (100 IRE) will reproduce properly under a given light source.

The term "100 IRE" is used more for video, as it was a system developed by the Institute of Radio Engineers (IRE) to ensure consistent calibration of full brightness (white) before television existed. This is also sometimes called "white level" or "full whiteness," but not white balance. While many professionals still refer to 100 IRE, it eventually changed to IEEE units as an established standard by the Institute for Electrical and Electronic Engineers.

Obviously, as still photographers, the only radio is our Pocket Wizard radio triggers, and instead of television we use monitors to view our results. Don't be fooled, however—new technologies are leading to more video-oriented, high-definition cameras.

KELVIN SCALE

Condition	Kelvin Temperature
Sunrise and sunset	1600K to 4300K
Average candlelight	1800K to 1900K
Sodium mercury vapor street lights	2300K
Average household bulb (incandescent)	2800K to 3200K
Professional tungsten	3200K
One hour after sunrise	3500K
Mid-morning daylight	4300K to 4500K
Daylight at noon	5000K to 6000K; average 5400K
Print viewing lamps and professional fluorescent lighting	5000K
Average electronic flash	5400K
Light overcast day	5800 to 6000K
Heavy overcast day	6500K
Shade	5800 to 10000K, average 8000K
Daylight fluorescent bulb, consumer	6500K

warmth. This balancing of colors worked great for the illuminated subject, but any background or foreground not illuminated by the tungsten light would become blue. This made for a great, saturated, blue sky or background. However, it also meant that you had to compose the image with a dense filter on the lens, making the objects in front of the lens harder to see and focus more difficult to achieve. With digital, we can simply set our white balance to 3200K or tungsten. On some cameras, you can also select an incandescent light white balance setting.

When working digitally, we do not need to contend with the depressed, "blue Monday" feel when we look through the viewfinder, as there is no filter to cut the amount of light entering the lens. We also eliminate the need to purchase a high-quality, multicoated filter. (A lens is only as good as the last piece of glass on the front of it.)

While this sky saturating technique is proven and produces great results, not everyone likes to carry hot lights on location. Not only are tungsten light kits bulky, but they require at least 1000 watts of power. Also, the light emitted is physically hot and can melt the subject's makeup away. Because they are bright, they can make the model squint. Finally, a tungsten bulb is a very specular light source, and the hard light it produces is never flattering to a model's complexion.

FACING PAGE—One of my favorite spots for photography is the Virgin Islands. I have a location that has an infinity pool facing the sunset and in this image of Ashly, I placed a Hensel Integra 500 Pro Plus mono-light behind her. The monolight is fitted with a 7-inch metal reflector with a 20-degree grid covered with a red gel. The main light was a Hensel Porty Premium power pack attached to a Hensel ring flash fitted with a Hensel OctaHaze attachment and a Rosco #02 Bastard Amber gel (placed inside the OctaHaze). (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $^1/_{160}$ second shutter speed, f/8.0, white balance at 5600K, ISO 100)
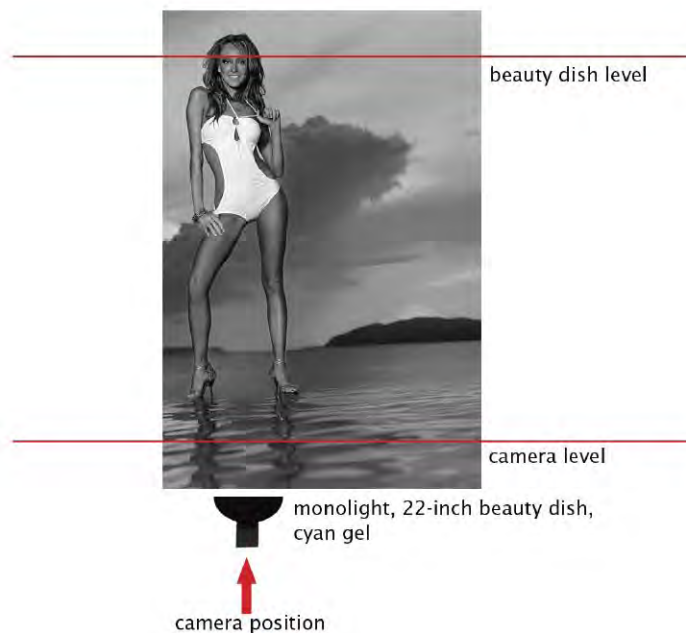
Like most photographers, I don't want to carry more photographic equipment than I have to when I am shooting on location. The solution is simple—I can place a Rosco ¾ CTO (continuous temperature orange) gel over the studio flash or camera flash itself. I would recommend a portable studio flash unit with a 22-inch beauty dish or a medium softbox attached as the final light modifier.

CTOs are commonly used by Hollywood photographers and cinema photographers to create warmth, especially when applying edge, rim, or accent lighting while creating dramatically lit photographs. CTOs come in various fractional strengths, from ⅛ to a whole (also called a "full") CTO. My personal favorites for edge, hair, accent, and rim lighting are the ⅛ and ¼ CTOs, but to get the sky a nice, deep blue, it should be at least a ¾ CTO, or Rosco #3411. This gel costs around $6.00 for a standard full sheet and is also available in longer rolls, which are obviously more expensive. You can order them from Samys.com online or purchase them at your local photo store or theatrical supply house. The ¾ CTO is designed to convert the color temperature of any 5500K light source into a 3200K (tungsten) color temperature light source.

I often tape the gel over the flashtube, then attach my Chimera softboxes or tape the full gel sheet over my 22-inch Hensel beauty dish—it fits perfectly. Chimera makes a ¾ CTO diffusion panel that replaces the standard white diffusion panel on a softbox. Sometimes I prefer using the CTO panel to placing a gel over the flashtube, as it allows me to turn on the modeling lamp on the flash head without the heat of the tungsten modeling bulb melting the gel.

These CTO gels and panels instantly provide the color of tungsten light without the heat and harshness! As a last resort, though not as flattering to the model's skin, I can cut a piece of the CTO gel from a sheet or pull out the sample from the free sample gel books most photographic stores provide to their customers and tape it to the front of a pop-up flash or on-camera flash.

When I have changed the color temperature of my flash to tungsten through the use of a ¾ CTO and have set my white balance to match, what-

beauty dish level

camera level

monolight, 22-inch beauty dish, cyan gel

camera position

FACING PAGE—Here, Kim is illuminated with a studio flash outfitted with a 22-inch beauty dish during one of my Virgin Islands photography workshops. Kim is standing on the ledge of an infinity pool, making it look as though she is standing on water. The beauty dish is covered with a Rosco Cyan gel and the camera is custom white balanced to this blue-green color cast. The custom white balance adds red to remove this color cast, thus Kim appears to have normal skin color, but since the flash does not illuminate the sky, the sky turns red. The red saturation is controlled by the camera's shutter speed. (**CAMERA:** Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. **SETTINGS:** 85mm effective focal length, $1/200$ second shutter speed, f/5.6, custom white balance, ISO 100)

ever area the flash doesn't illuminate will turn some shade of blue, depending on the amount of ambient light. For example, if I place a model outside under open shade, then place a ¾ CTO on my flash and set my white balance to 3200K and depress the shutter button, the flash will fire and illuminate my subject. My subject will look as she should when illuminated by a tungsten source, but the background and sometimes the foreground will turn blue if it's illuminated with daylight or a daylight-balanced light source.

Because I prefer to shoot warmer tones when photographing models, I often "bump up" the warmth by setting my camera between 3700 and 4000K (the amount of the adjustment depends on each model's skin tone) instead of the normal 3200K. With this technique, my camera doesn't know if I'm using flash or a flash covered with a CTO, it only knows what I tell it from the settings I set. In this case, I'm using the 3700–4000K setting to trick the camera into thinking the light source is slightly cooler than tungsten. Therefore, the camera will add more warmth than would be the case if the white balance was set to 3200K.

Now let's pretend I want to make the sky red, not blue. I simply tape a Rosco cyan (opposite of red) gel over my flash, then have my subject hold a white 100 IRE card (some camera manufacturers prefer an 18 percent gray card) while I photograph the card with the cyan-gelled flash. *(Note:* If you don't have a 100 IRE white card available, a white t-shirt or white towel will work.) The key here is to fill the entire frame with the white card or white object, store the image in the camera, and select it as your white balance image—a custom white balance. Most cameras have their own proprietary method for setting a custom white balance, so please refer to your camera manual.

When I photograph my subject with cyan-gelled flash and use the custom white balance I've just set, the subject is illuminated with cyan light, but the camera adds red to ensure a known white will remain white with that light source. In this case, then, the background will turn red and the subject will be rendered with a normal skin tone.

Please keep in mind, the custom white balance method over the manual white balance method is not always an exact science. With the ¾ CTO over a flash unit, you can easily select the exact number (3200–4000K) as the ¾ CTO is an exact science when used in conjunction with on-camera or studio flash (5000–6000K). Unfortunately today, with the more complex gels (cyan, magenta, red, etc.), you must do a custom, not manual, white balance. While most cameras can handle this well, some only come close. When using these colored gels, it's best to capture your images in the RAW (or highest-quality

If you don't have a 100 IRE white card available, a white t-shirt or white towel will work.
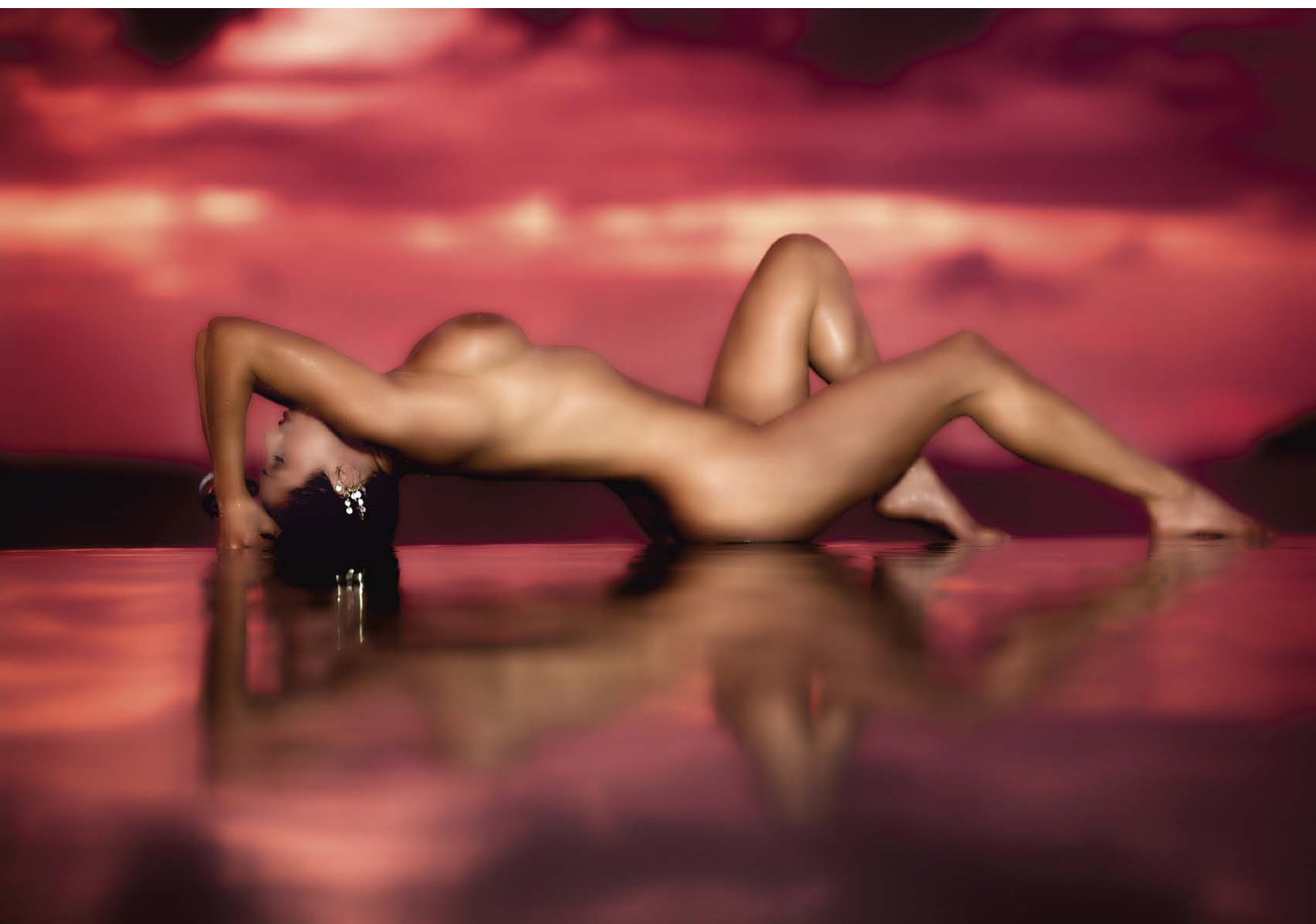
Playboy Model Kelly M. was photographed at an infinity-edge swimming pool, located at one of my favorite locations in the U.S. Virgin Islands. She was illuminated with a 22-inch Hensel beauty dish fitted to a Hensel Integra 500 Pro Plus monolight. The red from the sky comes from the custom white balance before the shoot—as the beauty dish was fitted with a Rosco Cyan gel, the opposite of red. When coloring flash with this technique, you begin by making a custom white balance; the camera will then add the exact *opposite* color to the entire image. Whatever is lit by the flash (here, the sub-ject) will record as neutral—but since the flash doesn't light up the sky, the background will take on the color the camera adds through its white balance setting (in this case, red to balance the cyan flash). The duration of the flash controls the exposure of the model, while the cam-era's shutter speed controls the saturation of the color in the sky. This image was captured toward the end of the sunset, thus the wider aperture and slower shutter speed. The final image was postprocessed in Adobe Photoshop using Nik Software filters; first the Dynamic Skin Softener filter, then two passes with the Bleach Bypass filter. (CAM-ERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $1/30$ second shutter speed, f/1.8, custom white balance, ISO 100)

beauty dish level

camera level

monolight, 22-inch beauty dish, cyan gel

camera position
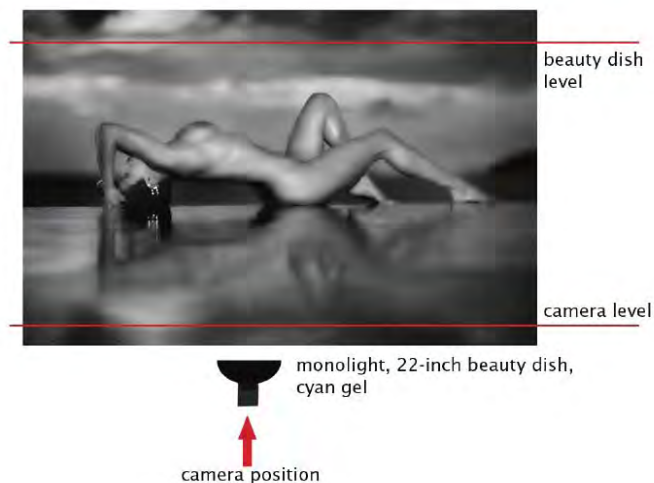
FACING PAGE—When using colored gels on my flash, a custom white balance ensures that the subject will be correctly color-balanced. Since the flash does not illuminate the sky, it will turn the opposite color of the gelled light source. One of the easiest methods to ensure a deep blue sky is to place a Rosco ¾ CTO gel in front of the light source, as in this image of Playboy Playmate Holley Dorrough. This gel will change the color temperature of the flash from daylight (5400K) to tungsten (3200K). The studio flash head here is fitted with a Chimera Super Pro Plus medium softbox fitted with a custom Velcro front gelled panel. The color saturation of the sky is controlled by the camera's shutter speed; the shutter speed for Holley is, effectively, the duration of the flash. (CAMERA: Canon EOS 5D, fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $1/200$ second shutter speed, f/16, white balance at 3400K, ISO 50.) ABOVE—For this image, the white balance is set to daylight and the flash was not triggered. You can see the Velcro CTO front for the medium softbox.

JPEG) mode. In the RAW mode, using the camera's conversion software or image-editing software like Adobe Lightroom, you can tweak the white balance for better accuracy in establishing a natural skin tone on your subject.

This technique of using gels with flash units was used in the old film days too—however, I'd have to shoot through an exact opposite gel or filter and I was limited to using colors with exact opposites. With digital, we have a larger range of color options because we're using custom white balance through the camera's proprietary software, thus it's more accurate without shooting

monolight, 22-inch beauty dish, ³/₄ CTO gel

camera level

camera position
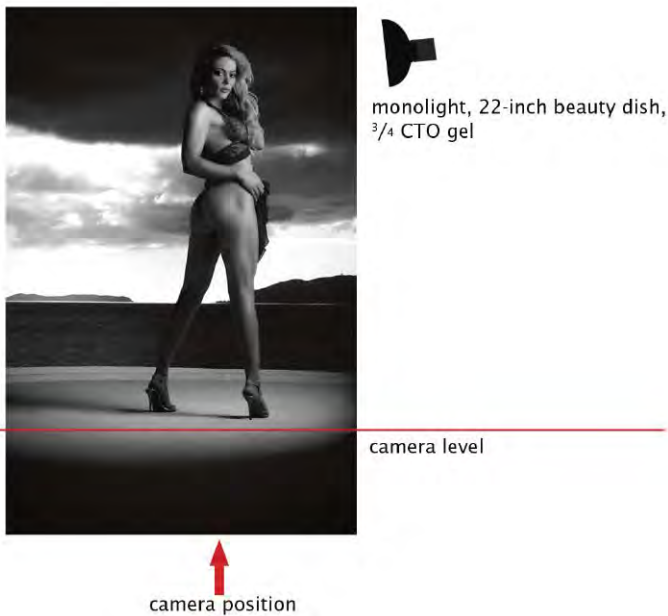
FACING PAGE—The skies in the U.S. Virgin Islands can be dramatic. I like to add color to these sunsets, especially when dark clouds are in the area. This image was shot approximately an hour before the sunset, when the ambient light was still bright but the clouded areas were dark—hence the faster camera shutter sync-speed and the smaller aperture setting. The main light was a 22-inch beauty dish with a ³/₄ CTO (Rosco #3411) gel. I can dial in my white balance to 3700K. The final image was postprocessed in Adobe Photoshop using Nik Software's Dynamic Skin Softener and Bleach Bypass filters. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 78mm effective focal length, ¹/₂₀₀ second shutter speed, f/16, white balance at 3700K, ISO 100)

through a plastic gel or colored filter. One of my favorite effects is placing a green gel in front of the flash so that the sky becomes magenta. All this is done in the camera, not in postproduction.

Some photographers will claim that when shooting in the RAW mode you can white balance during the RAW conversion and avoid having to do a custom white balance during the shoot. I don't recommend this, as you'll get a more accurate and correct skin tone with the correct white balance setting during the shoot, especially when working with strange colors and not the standard red, green, blue, and their exact opposites, cyan, magenta, and yellow. I might add, if you don't do the custom white balance when using colored gels on your flash, your subject will look extremely off-color in the LCD screen, and when your subject wants to view the images during the shoot, they will think you've made a serious lighting mistake. Always do all you can in the camera during the shoot and you'll love yourself for it during postproduction—it saves heartache, heartburn, and time by shaving hours off postproduction.

While these techniques are great for outdoors, don't limit yourself: you can apply this technique indoors too. As an example, if I photograph a model in the studio on a white seamless or a white cyclorama (cyc) wall with the main light covered with a ³/₄ CTO, I'll simply set the white balance on my camera to 3200K or slightly higher, then aim two regular flash units without CTO or gels into the background. Now my background should take on a more blue appearance as it is reflecting "daylight-balanced" flash back into the camera (5500K) and my camera is set to a more tungsten white balance (3200–4000K). You can do this also with other colored gels using the custom white balance technique previously explained for cyan or green gels to create red or magenta backgrounds.

When working at a residence or building with windows that allow daylight to filter in, I'll get the same blue-tinted effect on any light coming through any windows or glass block provided I use a ³/₄ CTO gel on my main light while white balancing to tungsten. Hollywood photographers often use this tech-

nique to create "blue moonlight" or a nighttime effect during the daytime.

I can do just the opposite by white balancing to daylight and using tungsten light sources as accent, rim, hair, or edge lighting and using regular flash without any gels as my main light. As an example, my studio lights have tungsten "modeling" lamps (the light that is always on when your studio or portable studio strobes are turned on). By simply placing a 7-inch reflector on my monolight with a 20- or 30-degree grid behind my subject and aiming it at their back or hair, I'll get a beautiful golden glow created from the white balance mismatch of daylight and tungsten.

The key here is to drag my shutter so the camera will pick up the less intense tungsten light from the modeling bulb. I'll make sure to turn off the flashtube on my studio monolights in order to do this. I won't worry if my shutter speed is $\frac{1}{30}$ or $\frac{1}{10}$ second, as the real shutter speed for my subject is duration of the flash (or my main light), so my subject will be tack-sharp when the shutter button is depressed. Most great flash units like the Hensel, Dynalite, Profoto, or Broncolor lights have short flash durations, thus it gives me a great shutter speed to capture my subject.

One of my favorite places to utilize this technique is when photographing a model while in a master bath area. Most of these rooms have glass block windows that allow ambient light to filter in. By placing a ¾ CTO on the 22-inch Hensel beauty dish that will illuminate my subject and setting the camera's white balance to 3200 to 4000K, the light from the glass blocks will turn blue. I often get some "spill" ambient light that will add a tint of blue in the white tub, foaming bubbles, and the water that contrasts with the warmer tones of the model's skin. The end result is an image with great contrasting colors, not just plain flash or white.

Give Your Subject a Tan. Most models today watch what they eat and have read or heard about melanoma, skin cancer, so many will not bask in the sun's harmful UV rays or go to a tanning salon. Many use spray-on or liquid

beauty dish level

camera level

monolight, 22-inch beauty dish, ³/₄ CTO gel

camera position
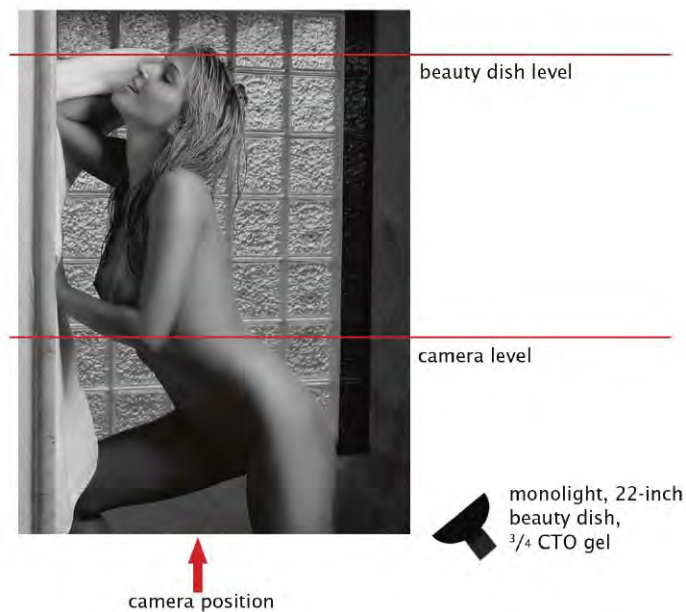
FACING PAGE—Many photographers show models with windows in the background—and often the glass has no color. If we add a gel to the flash (as in this case with Shauna) then set the camera to an opposite white balance, the daylight peering through the glass blocks takes on the exact opposite color of the gelled flash. In this case, I illuminated the model using a Hensel Integra 500 Pro Plus fitted with a 22-inch white Hensel beauty dish. I then fitted it with a Rosco #3411 (three-quarter) CTO gel, which converts the flash from 5400K to 3200K (more orange). To compensate, the camera will add blue—equivalent to an 80A filter. As a result, the daylight will be saturated with the blue color. Postproduction of this image was done in Adobe Photoshop with a Nik Software's Dynamic Skin Softener filter. (CAMERA: Olympus E-500. SETTINGS: 114mm effective focal length, ¹/₆₀ second shutter, f/8, white balance at 3700K, ISO 100)

tanners. The disadvantage to this method is that most models don't do a great job of uniformly applying the liquid tan, thus their body often has streaks or splotches, not to mention their hands will appear dark orange.

I often tell models not to get a tan, real or artificial, as I as don't like tan lines or streaks and splotches. I let the model know I can color their skin any color I want using white balance. My experienced models follow this advice, and they love the hues of yellow, red, and gold I can create on their bodies without fiddling with tanning beds, the hot sun, and liquid applications.

LEFT—While driving around the Moab area in Utah, I noticed this windmill and the direction of the sun. I estimated at what time the sun would light the windmill from behind, then returned with a California Sunbounce Pro. Notice, that the horizon line is well below her shoulders. Photographers often place a horizon line through the model's eyes, neck, or shoulders—a less flattering look. Setting the white balance to 6000K gave the model's skin a warm glow. (CAMERA: Leica M8 Digital Rangefinder fitted with a Leica ELMARIT-M 21mm f/2.8 ASPH lens. SETTINGS: 28mm effective focal length, $1/180$ second shutter speed, f/8.0, white balance at 6000K, ISO 160)

FACING PAGE—One of my favorite things to do when photographing a model is to illuminate her with a glass door or window light, as in this case with Raven. Here, the lighting illuminates the model's robe from behind. The late, great Monte Zucker, a master portrait photographer, emphasized that back or side lighting always adds impact to an image. Setting the white balance to 6000K gave the model's skin a warm glow. (CAMERA: Leica M8 Digital Rangefinder fitted with a Leica ELMARIT-M 21mm f/2.8 ASPH lens. SETTINGS: 28mm effective focal length, $1/500$ second shutter speed, f/5.6, white balance at 6000K, ISO 160)

1

2

I don't always have that luxury of working in a studio, so I look for light first, then make a location work through proper lighting and lens selection. For these two images of Shelby, I simply had her stand near the opening of a patio door. Both images were lit with a Hensel Integra 500 Pro Plus monolight fitted with a Chimera Super Pro Plus medium soft strip box with a Lighttools 40-degree grid on the front. I powered the flash down to ensure I'd be able to use a low aperture to help blur the background. The main difference between the two images is that I positioned Shelby *inside* the doorway on the first image and *outside* the doorway in the second image. I then found the right angle to create impact with the elements in the scene. Because the brick wall in the second image is quite masculine, I moved my light back to give me less output. This resulted in an even lower aperture that would help the background blur even more. I also positioned the camera at an angle to the wall, creating leading lines toward the model's face. Nik Software's Bleach Bypass filter was used in postproduction to give both images greater impact. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 85mm f/1.2L USM lens. SETTINGS FOR IMAGE 1: 85mm effective focal length, $^1/_{25}$ second shutter speed, f/5.6, white balance at 6000K, ISO 100. SETTINGS FOR IMAGE 2: 85mm effective focal length, $^1/_{25}$ second shutter speed, f/4, white balance at 6000K, ISO 100)

By simply setting my white balance to 6000K, I've tricked my camera into believing that my light source is cooler than the traditional flash or daylight Kelvin temperature of 5000K or 5500K. The camera only understands what I tell it through the manual white balance settings, and it will adjust the white balance accordingly. Since 6000K is cool, the camera adds warmth to my subjects. On cameras that don't allow you to manually set your white balance, try the cloudy day or shade setting. This technique helps create that *Maxim* look in your images.

While the practice of white balancing to a cooler light to create warmth came from the digital age of cameras, this technique was done in film by simply

changing film types, or emulsions, like switching from the now discontinued Kodak E100S transparency film to the Kodak E100SW film (the "SW" stood for saturated warm).

This technique is helpful when shooting sunsets too. During the digital revolution, the term "white balance" was new to most photographers, and only those with video backgrounds understood it immediately. Those without a video background would wait for the "golden hour" to capture that warmth of the sun, only to find the warmth had disappeared because their cameras were set to "auto" white balance. In the beginning of the digital photography age, not much was written about white balance and many photographers lost some sweet, golden light to automatic white balance (AWB). AWB is great for pictures at your child's birthday party, but custom or manual white balance is what a professional photographer utilizes to take dramatic photographs.

Instant Sunsets. Another of my favorite white balance tricks is to create sunset "strobe" light so my subject can have the big red ball of sun in the background while appearing to be illuminated from the front by that same ball of light. Unfortunately, during the golden hour, the sun's light is not as intense as it is at high noon, and therefore, not even reflectors can provide the intensity of light needed to light your subject to match the intensity of the sunset light in the background.

> When you use this gel, you'll have some awesome, more natural-looking sunset photos.

Many photographers overcome this lack of intense light by filling their subject's front with flash, but this is boring light. The subject looks like a tourist, lit by flash, standing against a sunset background.

To help curb this "flash picture" effect and make a more natural looking photograph, I place a Rosco (#02) Bastard Amber gel in front of my flash source. The story goes that this gel was created by mistake, hence the "bastard" part of its name, but one thing is for sure: when you use this gel, you'll have some awesome, more natural-looking sunset photos. Most viewers will never realize that it's physically impossible for the sun to illuminate your subject from the front when the sun is actually setting behind your model.

You can also place a Bastard Amber gel in front of your flash to create the desert sunset look without having the natural sunset in the background.

3. LIGHT MODIFIERS

Light modifiers come in many shapes and forms, including snoots, softboxes, strip boxes, beauty dishes, reflectors, grids (both metal and fabric), umbrellas, cutters, flags, gobos, foamcore, fabrics, V-flats, and basically anything placed in the path of direct or reflected light. These various modifiers can change the light's amplification, distribution, reflection, and absorption and can reduce the light and the shape of the light. The key to using light modifiers successfully lies in choosing the right one(s) to achieve the effect you are after.

THE PHYSICS OF LIGHT

Let's look at some simple rules of lighting before we take a look at our modifier options.

1. The smaller the light source, the harsher the light.
2. The larger the light source, the softer and less contrasty the light.
3. A pure black object will absorb 90 percent of the light that hits it.
4. A pure white object will reflect 90 percent of the light that hits it.
5. The Inverse Square Law states that the illumination from a point source falls off inversely to the square of the distance. For example, when a light placed 10 feet from a subject is moved to 20 feet away from the subject, the light source will provide only ¼ of the original intensity.

Remembering these five rules will help us choose the specific light modifier we need to accomplish our glamour photography goals. As an example, if I'm photographing a private glamour client who is forty to sixty years of age, I

Jennifer was illuminated using a medium Chimera Super Pro Plus softbox fitted with a custom panel that masks off most of the softbox except for a 24-inch circular opening. This was powered by a Hensel Integra 500 Pro Plus monolight. A black scarf was placed in front of the lens. (For more on this technique, see my first book, *Garage Glamour: Digital Nude and Beauty Photography Made Simple* (also from Amherst Media). (CAMERA: Nikon D100 fitted with a Nikon 105mm f/2.8 D lens. SETTINGS: 157mm effective focal length, $^1/_{40}$ second shutter speed, f/7.1, white balance at 5850K, ISO 100)

will want to use a sweeter, softer, more forgiving light source like a Chimera OctaPlus 57 or a large Chimera Super Pro Plus softbox. If my subject is a nineteen-year-old model with a clean, smooth complexion, then I could easily use any large or small modifier without any real worries. If my subject is forty-four years old, and the shot calls for contrast, and the location has low ceilings,

then I would utilize a medium Chimera Super Pro Plus softbox, a compromise between a small and large light modifier or final light source.

Having an understanding of light fundamentals will help any photographer choose the appropriate light modifier on the fly. It will help them know what to pack in their equipment cases when traveling to locations or assignments away from the studio. It will also help them to decide what to bring as a backup modifier in case their prime choice modifier will not work as planned.

As an example, if I have to travel to a forty-eight year old's private glamour subject's residence for the shoot, I'll instinctively bring a large, Chimera Super Pro Plus softbox. If I am not familiar with the location, I will also bring a medium Chimera Super Plus Pro softbox as a backup, just in case the location has 8-foot ceilings. As another example, if I arrive at the location and the client wants me to photograph her by the pool (outdoors), I'll bring a portable battery system. I will also consider bringing a beauty dish or small light modifier that provides a smaller footprint, especially on a windy day.

I'll consider how much power output I will lose using a larger softbox over a medium softbox too. Since most softboxes have inner baffles that reduce the power output (the baffles help evenly distribute the light rays and prevent hot spots from the box front itself), I must realize that a large softbox will not help me overpower the sun with flash, so I'll attach a 22-inch beauty dish. Not to mention, I can place a full gel sheet over a 22-inch beauty dish to create dramatic skies using the white balance and gel combinations described in the previous chapter.

Choosing the right light modifiers is not only about finding the tool that will help us create the right look in the overall image, but how the light will impact our subject's skin, such as reproducing smooth skin in an image versus a rough or porous look. Save the smaller light modifiers for photographing male subjects, as the light is harsher when it's more specular. Sometimes we must consider how the working conditions—combined with our subject—will impact our decisions. With a little bit of knowledge and experience, it should be easy to arrive at the right solution for the right lighting.

softbox level
camera level

monolight,
7-inch metal reflector,
10-degree grid

camera position

monolight,
medium softbox
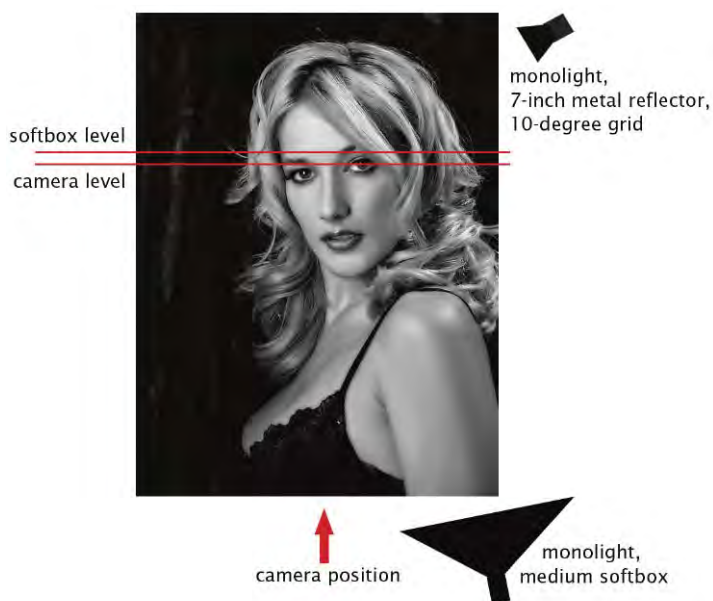
FACING PAGE—Playboy model Laura F. was photographed at one of my workshops in Atlanta. She was illuminated with several studio strobes, including one for the hair, from camera right, that was fitted with a 7-inch metal reflector and a 10-degree grid. The main light was a Chimera Super Pro Plus medium strip box. Postproduction of this image was done with Nik Software's Dynamic Skin Softener filter first, followed by the Bleach Bypass filter. (**CAMERA:** Olympus E-1. **SETTINGS:** 140mm effective focal length, $1/100$ second shutter at f/5.6, white balance at 6000K, ISO 100)

SCRIMS

While photographers often see scrims as an opaque or porous material used to reduce light, usually in fractions of a stop or even a full stop, we can also use scrims to take the edge off hard, directional light—like the direct sunlight from a bright, sunny day. Clouds also act as natural scrims.

Scrims come in various sizes, and most professional photographers utilize at least an 8x8-foot scrim. The best scrims, like those from California Sunbounce, are easily collapsible and built to withstand their natural enemy outdoors, the wind. Plus, they attach more easily to the sturdy C-stands.

While most scrims are made of white or opaque fabric, black scrims can be used to reduce the intensity of light as well. Black scrims tend to look like finely woven nets of black thread and help tone down harsh light. California Sunbounce offers a special scrim they call Le Louche. This scrim is made of two black fine net layers—and photographers can use the device to simulate the lighting effect produced when photographing subjects in open shade under a tree. You can even place fake or real tree leaves between the two mesh fabrics to create shadows that suggest that your subject is posed underneath a tree.

California Sunbounce also manufactures a product they call the Sun Swatter (some people call it an oversized fly swatter, or a scrim on a stick). This small scrim on a pole is highly portable, rugged, and is great for location work. Another plus is that it can be held in one hand on an average day with low to medium winds.

> Black scrims tend to look like finely woven nets of black thread and help tone down harsh light.

WHITE AND BLACK CARDS

White cards (reflectors) can be used to add light in a scene; they reflect 90 percent of the light that strikes them. Black cards can be used to subtract light; they absorb 90 percent of the light rays that strike them. These cards can help us control and sculpt the light and shadows in our images to create the look we seek.

One of the most difficult subjects for a wedding photographer to photograph is the bride—not because she's overwhelmed with wedding planning and has to keep her future mother-in-law in check, but because she's wearing white! White reflects more light than skin does, and if we expose our image for the subject's skin, the white can become washed out. On a bridal dress, this means a great loss of detail, which most brides will not like.

The easy solution for the wedding photographer is to make two V-shaped black foamcore modifiers (this is done by using gaffer's tape to secure two panels together to form a hinge), and place one on either side of the bride.

The color temperature of the light in shaded areas can be quite cool. Therefore, when I placed Elite Agency model Jenni under a gazebo, I illuminated her with a California Sunbounce Pro reflector that was fitted with zebra fabric. This fabric has just enough gold intermixed with silver to help warm up the light it reflects. I combined reflected light with a higher temperature white balance to capture warm/neutral skin tones. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $^1/_{1600}$ second shutter speed, f/2.0, white balance at 6200K, ISO 100)

Placing the modifiers out of the camera frame but close to the bride helps subtract some of the light hitting the bride's dress. The black panels reflect dark light back onto the dress, increasing the apparent detail in the garment.

In glamour photography, using black cards can be really helpful when photographing white on white or when working with models with platinum blond hair and/or wearing white garments. Simply place black cards, out of the camera frame, near the white or highlight areas. If you are photographing a darker-skinned subject or one who is wearing dark colors, of course (especially when near a dark background), you can use white V-flats to add light and bring out more detail in the shadows.

CUTTERS, FLAGS, AND GOBOS

Gobo is a term used more in Hollywood than in still photography, but many still photographers will use the term. (By the way, *gobo* really stands for "GO Before Optics," not "go between," as some photographers would have you

believe.) Traditionally, light would be passed through a gobo, which had a pattern, and this pattern would be projected onto the background or even onto the subject.

Gobos basically control light by blocking, diffusing, or coloring some portion of the light before it's reflected back to the lens.

Photographers often confuse the term *gobo* with *flag*. Flags are traditionally made of a black fabric stretched over a metal frame. They are used to "flag off" light to create shadows more than anything and are usually attached to the heavier light stands known as C-stands.

When shooting outdoors, especially during the hottest and brightest part of the day, I look for areas with overhead obstructions—basically, natural gobos. Here, Tess is sitting on a golf cart. The overhead of the cart, plus the trees it was parked under, created plenty of open shade. Open shade however is cooler, lower-contrast light, so I illuminated Tess with a Hensel Integra 500 Pro Plus monolight fitted with a 22-inch Hensel beauty dish with a white interior. The final image was post-processed using Nik Software's Dynamic Skin Softener and Foliage filters. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 200mm effective focal length, $\frac{1}{500}$ second shutter speed, f/3.5, white balance at 6000K, ISO 200)

Sometimes photographers will take a black foamcore board and attach it to a stand and call this a flag too. Still other photographers like to refer to flags and gobos as *cutters,* which basically do the same thing—block, diffuse, or cut the light in some sense. Choose whatever term you like best, but remember that all three terms refer to placing an object in front of the path of the light before the light hits the subject or is reflected back into the camera lens.

The effect of flags, gobos, and cutters varies as the object is moved closer to or farther from the light source, and the best method to see how they work is to have a subject sit on a chair and start placing a black card between your subject and the light source.

GELS

Gels are usually made of tough, somewhat heat resistant acetate material. They are available in many colors and strengths. I like to use CTOs and sometimes the Rosco #02 Bastard Amber or straw-colored gels to add warmth over my subject or at the edges of my subject's body in the form of accent or rim lighting. You can also use gels to color a background or create dynamic color effects in a shot.

While some gels, such as the ¾ CTO gels, serve specific purposes, like converting the Kelvin color temperature of flash into the color temperature of tungsten, others are used more for personal taste. Some gels help add or subtract contrast too, like diffusion gels. They are normally opaque or white in color and made from strewn fabric threads. Rosco makes several variations, and depending on how the thread is woven, shadows can be slightly shifted from their original axis, and the variable of softening the light also changes from subtle to dynamic.

Here is the lighting set-up for using gels to change the color of the sky (as discussed in chapter 2). In this photo, Ashley is illuminated by a studio strobe fitted with a 22-inch beauty dish. The beauty dish has a Rosco green gel attached via electrical clamps. The photographer, from one of my Virgin Islands glamour photography workshops, has his camera custom white balanced to the now green flash. The camera will then add the opposite color, to remove the green cast, in this case magenta (purple) which will give the sky a magenta color saturation. The amount of magenta saturation is controlled by the shutter speed; the higher the shutter speed, the deeper the saturation of magenta will be for the background sky. The lower the shutter speed, the less magenta color saturation of the sky.

I photographed Tess while working with Cardo Jewlers in the U.S. Virgin Islands. She was illuminated with a Chimera Super Pro Plus, medium softbox attached to a Hensel Integra 500 Pro Plus monolight, placed to the camera right. Tess was placed in open shade to avoid the harsh, mid-day sunlight. Having the model looking off-camera helps keep the attention on the product being advertised (rather than on the model herself). The final image was post-processed in Adobe Photoshop using Nik Software's Dynamic Skin Softener and Bleach Bypass filters. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 200mm effective focal length, $^1/_{200}$ second shutter speed, f/8, white balance at 6000K, ISO 200)

SOFTBOXES

Softboxes come in various sizes, from small to large, and the exact measurements of those options varies from one brand to another. Every glamour and portrait photographer's tool box should include a medium (3x4-foot) softbox, as a minimum. It is a size that not only collapses for easy travel but works at almost every location, no matter how high the ceilings are.

The interiors of most softboxes are white or silver, but there are some on the market with two gold panels and two silver panels. I feel that the latter are

not useful for glamour work. Personally, I like to use white small or medium softboxes. When I need to use a large softbox, I go with one that has a silver interior, as the metallic lining helps to amplify the light. Smaller silver softboxes tend to give off a more contrasty light, while larger sizes help offset the contrast.

I prefer the more controlled light that comes from a softbox to the light from an umbrella, which scatters everywhere. I like to have my lighting under control at all times so I know what it will do for me.

The key to getting great light from a softbox lies in understanding what each box will do for you. The larger the box, the sweeter or more forgiving the light will be to your subject, provided you do not place the softbox too far away from your subject. As a general rule, bring your softbox in to a close but comfortable distance from your subject, ensuring it is outside of the frame of the camera's view.

Metal Grids, Louvers, and Honeycombs. If you are looking for a soft light and soft shadows and want to render your subject's skin as smooth as possible but require more control than a softbox offers, consider modifying your light.

Metal Grids. If you take the softbox out of the equation and add a grid—a metal modifier with intersecting vertical and horizontal strips—on your light source, you will produce more directional light. Most grids come in 7-inch diameters. They are rated in degrees (10, 20, 30, and 40). *(Note:* You can special

Sometimes, I will photograph a model in a more relaxed pose—as here, with Candice in her flannel pajama bottoms and lacy top. She was illuminated using two Hensel Integra 500 Pro Plus moonlights. The main light was a medium Chimera Super Pro Plus softbox. The second light, to her right, was fitted with a 7-inch metal reflector with a 10-degree grid to provide a kiss of light on her black hair. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $^1/_{200}$ second shutter speed, f/5.6, white balance at 6000K, ISO 100)

order 1-, 3-, and 5-degree grids, but they are harder to find and more expensive.) The smaller the number, the more narrow the beam of light that is produced. Also, the smaller the number, the less light and the greater the amount of heat the light unit will give off; for this reason, the high-end studio flash heads tend to be fan-cooled.

The most commonly used grids for glamour photography are the 10- and 20-degree models. These make great accent or hair lights because they allow only a small spread of light. However, don't limit your options, as it is usually most economical to purchase grids in kits that include one of each size. These kits also provide a nice box for transporting the grids—which is important because grids are very fragile. I'd recommend that you buy at least two of these grid kits.

Grid lighting is harsh, but not as harsh as a plain silver, cone-shaped reflector mounted behind a flashtube. With grid lighting, the light source is much smaller than a softbox, so there is no room for light to bounce around and reflect through a larger opening. Because it's so intense, I often place two grids in front of the light, set at about a 90-degree angle to each other. It's still grid lighting, but it's softened just a tad. I call this light "sliced and diced, twice."

Grid lighting is dramatic. I tend to use it more for accent, hair, rim, and edge lighting, and it's great for when I'm photographing editorial style nudes.

Note: You can also use Rosco Cinefoil to make an extension tube for your light and place a grid at the end of the tube.

Louvers. Louvers are an adjustable light modifier that can be attached to the front of your softbox to help feather the edges of the light. They are used to add direction to the light and can be closed to give a barn-door effect to the output of the light. They can also be used to mask off parts of the softbox. For

instance, if you took a 4x6-foot softbox equipped with louvers and closed off ¼ of the left and right sides, you'd be left with a strip opening. Take some black Rosco Cine-foil or Photofoil and equally mask off the top and bottom of the softbox, and you now have a more square beauty light source. This is much better than just using a smaller box, as the studio flash is deeper in the original larger softbox than a smaller one. When the light is fired, it bounces around the softbox and then pours out of this smaller opening. With the size of the source reduced and better directed, the light becomes softer than a box of the original equal size.

Honeycombs. Honeycomb grids (also called egg crates), usually in the 40-degree spectrum, are often used to make the light from a softbox more directional while providing dramatic light falloff at the edges. The grids also slightly increase the image contrast and can add appealing catchlights in the eyes. These are normally used with small and medium softboxes and strip lights.

This image was taken at my Editorial Nude workshop in Atlanta, where I asked Raven to lie on the couch as I illuminated her from behind with a Hensel Integra 500 Pro Plus, fitted with a 7-inch metal reflector and a 10-degree grid. An image like this requires some trust from the model; I assured her we'd have strategic shadows in the proper places. Notice, though, how her hands and the deep shadows add eroticism to the image. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $\frac{1}{100}$ second shutter speed, f/6.3, white balance at 6000K, ISO 100)

While many folks call this honeycomb surface in front of the light a "grid," it's not like metal grids for 7-inch metal reflectors, because the actual light source is still at the back of the larger softbox. While these honeycomb grids for softboxes do focus the light, they are starting with softer light behind them and only add slight contrast, whereas metal grids from small metal reflectors are harsh from the start.

STRIP LIGHTS

A strip light resembles a long, narrow softbox. They are constructed of the same material, sometimes using the same back plates and rods as the full-sized softboxes. Strip lights also come in three standard sizes: small, medium, and large. Fine-art nude photographers commonly use two medium strip lights, one on each side of the model, with 40-degree grids that are manufactured by Lighttools.

The smaller strip box is used a lot for edge lighting around a subject and in many cases above the subject's head for a hair light. The larger strips are

EXERCISING YOUR OPTIONS

To mimic the effect of using a softbox with some of the louver slats closed, you can use a cutout panel. These will allow you to mask off the top, sides, and bottom of the softbox, leaving only a round or square 2x2-foot opening, which will make the softbox act as a beauty light (see page 101 for more on beauty lights).

Another way to achieve this same effect is to place some Rosco Black Cinefoil or Photofoil around the front of the box until you have a similar-sized opening. Rosco Cinefoil is inexpensive and can be purchased from photo stores, theatrical supply houses, or online from many photographic retailers.

Whatever method you use, you'll be making the light source smaller. Yet the quality of the light will still be much softer than the light from the typical, smaller light source, because the light rays emitted come from various angles rather than straight out. This is really useful if your box is a type that is more "hot" in the center. You could mask off the areas around the center to one edge of the softbox and use the remaining edge of the box as your main light source. This is also known as "feathering" the light.

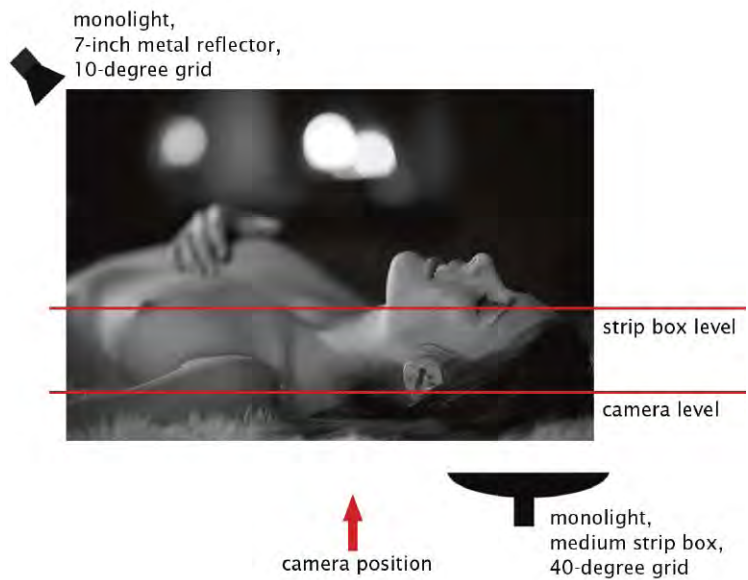great for illuminating cars, motorcycles, and for providing a narrow swath of light where needed.

When working with dark backgrounds, strip lights, especially ones fitted with fabric grids, work best, as you can place one as your main light coming in from the right or left side at a 45-degree angle to your subject then shoot with your camera from the opposite direction. This technique ensures that no spill light from the strip light appears in the background your lens is pointed into, so you can record a pure black or dark background.

Strip lights, rather than 7-inch reflectors with grids, are sometimes used to illuminate the subject from behind to create rim light or edge light. Small strip lights are also great for hair lighting.
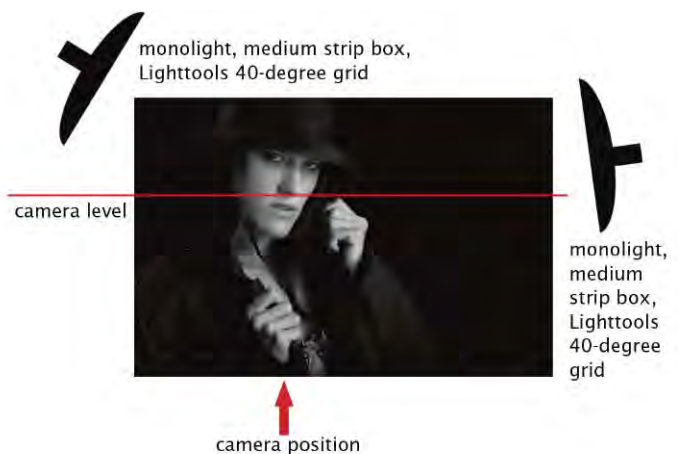
Black on black can be a difficult shot for a photographer. For this image of Candice, I used two Hensel Integra 500 Pro Plus monolights with medium strip boxes and Lighttools 40-degree grids. One illuminated the model from the front and the other illuminated her from the rear. (CAMERA: Canon EOS 5D Mark II fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $1/200$ second shutter speed, f/5.6, white balance at 6000K, ISO 100)

For this image of model Cal Lilly, I used the 300-watt modeling lamps from two Hensel Integra 500 Pro Plus units to illuminate her with tungsten light. The first monolight was outfitted with a 7-inch metal reflector and placed to her right, providing a nice accent light from the side. The second monolight was fitted with a Chimera Super Pro Plus strip box. This was turned horizontally and placed to the model's front (and, again, only the modeling lamp was used to illuminate the subject). The only light on the background is from the fire in the fireplace. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $\frac{1}{60}$ second shutter speed, f/1.2, white balance at 3700K, ISO 100)

monolight, 7-inch metal reflector, 10-degree grid

strip box level

camera level

camera position

monolight, medium strip box, 40-degree grid

OCTABOXES

Octaboxes come in 3-, 5-, and 7-foot versions, although larger octa-shaped modifiers are available for high-end lighting. I like to think of an octabox as an umbrella (scattered light modifier) with a softbox front (directional light modifier): the tool provides the best of both worlds—directional light and octagonal-shaped catchlights in the subject's eyes. My favorite is the Chimera OctaPlus 57, as it can easily be changed to form a 5- or 7-foot wide octabox.

When shooting private glamour photography with older subjects, the 7-foot octabox is the best light modifier. It is a huge source that produces nothing but soft, sweet, directional light. With a light this large, you can even stand in front of it with minimal loss of light, as most of the light will seem to just go around you. It's not uncommon to see the silhouetted shape of the photographer in the octagonal catchlights that a large octabox creates in the subject's eyes.

UMBRELLAS

Though each modifier serves its own purpose, I've found that I use umbrellas infrequently in my work. In my mind, they bring bad luck when opened indoors and are best used to shield yourself from rain when you're working outdoors! Umbrellas scatter light everywhere. As a result, some photographers consider them a fail-safe option for lighting up anything in their vicinity—though not always with the vibrancy found when using modifiers like softboxes, grids, and reflectors, which allow us to produce a more directional light.

Here's an analogy that will help you conceptualize the way umbrellas work: A person uses a "real" umbrella on drab, rainy days. On such days, we have low-contrast light. The drops of rain strike the top of the umbrella, scattering the drops all around haphazardly.

Though no one would ever take a softbox out in the rain for protection against the elements, let's pretend that this is the case. If you were to take a softbox the same size as the theoretical umbrella and place it so that it was open to the rain, the rain would fall into the box and would remain contained.
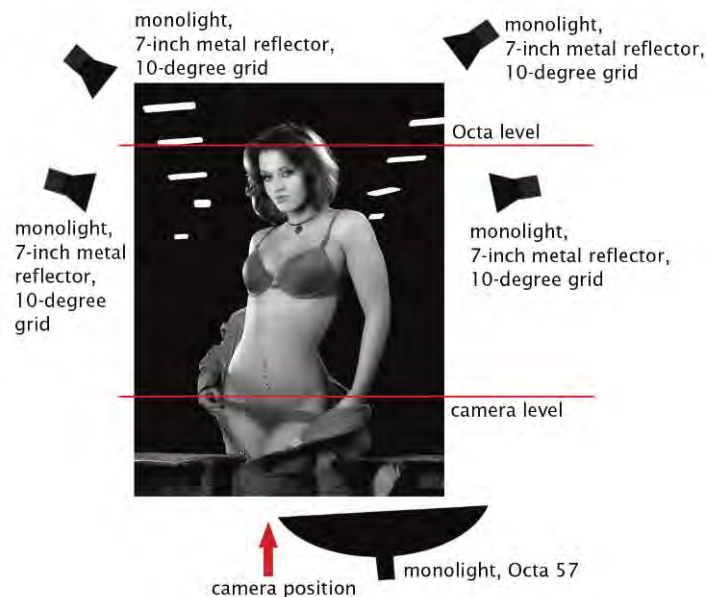
FACING PAGE—I photographed Devon in an industrial manufacturing plant where I noticed the leading lines formed by the overhead lights. By placing my camera position low, I was able to give the model a taller appearance and capture the lights' imaginary diagonals, which act as leading lines toward the model. She was illuminated by several Hensel Integra 500 Pro Plus monolights. The main light was fitted with a Chimera Octa57 Plus octabox. The other lights were placed behind her, one on each side, for accent lights. They were fitted with 7-inch metal reflectors and 10-degree grids. Postproduction of this image was done in Adobe Photoshop with Nik Software's Dynamic Skin Softener filter. (CAMERA: Olympus E-500. SETTINGS: 124mm effective focal length, $1/40$ second shutter at f/8, white balance at 6000K, ISO 100)

There are a couple of other things that a softbox has going for it: its rectangular shape better mimics the shape of the human body than does an umbrella. Also, since the light from a softbox does not spill out everywhere (it is contained), it produces more contrast and is a more controllable light source.

Now, as I mentioned, umbrellas do have their uses. If I wanted to light a studio background to create an image that looked like it was shot outdoors, I would place lights with umbrellas extremely high (like the sun) pointed in the direction of the background and overshooting the subject. The height at which the umbrellas were positioned would allow me to simulate sunlight, which comes, of course, from overhead. It would also allow me to keep any spill light off the subject and, many times, even the foreground.

I'm sure some umbrella shooters will take issue with my bias. That's cool. I'd never encourage anyone to stop using what works best for them. I would, however, recommend that they take a photo with a softbox or other more controlled modifier, then shoot the same scene with an umbrella and compare the two. My guess is that in most cases, the ones that were made with the softbox will take the cake.

Now, there is a product called the Chimera OctaPlus 57 that I find useful. It is an umbrella-shaped modifier with a softbox front that allows you to direct the diffused light. The unit does a couple of great things: First, because it is large, it produces sweet, flattering light. Second, its umbrella shape allows us to add those brilliant catchlights we want to see in our subjects' eyes.

METAL REFLECTORS

New photographers are sometimes confused when they hear a professional shooter say they used a 9-inch reflector when lighting an image. This is because some of them confuse the word "reflector" with a fabric reflector on a frame, or a panel reflector. What the professional photographer is actually referring to are the 7-, 9-, or 12-inch bowl or conical-shaped, metal reflectors that mount to the front of their studio flash heads. These metal reflectors are lipped to support the attachment of metal grids and/or metal barndoors.

The California Sunbounce panels and the metal reflectors basically do the same thing, but in different ways. The Sunbounce reflector is a fabric panel that reflects the light that hits it—whether that light is coming from the sun, a continuous light source, or even light from an on-camera flash or a strobe head (usually outfitted with a metal reflector).

Metal reflectors are actually attached to studio flash units. They are designed to focus the light they reflect toward the intended target. In glamour

The light from a softbox does not spill out everywhere; it is a more controllable light source.

Genevieve was illuminated by the 300-watt modeling lamp of my studio flash (the flash was not fired). The flash was fitted with a 7-inch metal reflector with a 20-degree grid attached to the front. This added light to the image, creating a great addition to my "Wide Aperture" series. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $1/100$ second shutter speed, f/1.2, white balance at 3400K, ISO 320)

photography, these lights are often fitted with 10-, 20-, 30-, or 40-degree grids and are used as a hair light or accent light along the side of the model's body. In some cases, however, they are reflected into a California Sunbounce.

On occasion, especially when photographing men, photographers will light their subjects using light fitted with a 9- or 12-inch reflector as the main light. This is most commonly seen in head-and-shoulders portraits. Since this type of light tends to be more harsh and specular, it's best to reserve its use for photographing male subjects or models with very nice, even complexions. However, the harshness of the light can be reduced by placing several sheets of Rosco Tough Spun Silk in front of the metal reflector. This more diffused light will be more flattering to your subject and will have a faster falloff than light from a panel.

BEAUTY DISH

Beauty dishes are large, shallow, bowl-like modifiers with silver or white interiors that are used to produce diffused light that is slightly more contrasty than that produced by a softbox. The 22-inch models are perhaps the most

commonly used size. Because this size of a beauty dish is smaller than the standard, medium softbox, its quality of light falls between that produced by a larger metal reflector and a medium softbox. Beauty dishes provide more contrast than a softbox but produce softer shadows than a metal reflector.

How It Works. Basically, beauty dishes utilize a Hollywood technique called board to board lighting, where the light hits one board, is reflected onto another board, and then the reflected light hits your subject. Think of it as a laser beam bouncing off mirrors. The studio flash head is mounted on the back of the beauty dish, and directly in front of the flash head is a dome reflector. The light hits the dome when the flash head is fired, then the light bounces into the 22-inch pan where its light quality is affected by the color of that final pan, usually white or silver. The silver provides for more contrast, whereas white beauty dishes are much softer.

One of my all time favorite models is Hillary. In this photo, I decided to capture her beauty in a subtle headshot. I used the Broncolor Verso A2RFS power pack with a Broncolor Picolite head fitted with a 22-inch beauty dish. (CAMERA: Sony A900 fitted with a Sony 135mm f/1.8 Sonnar T Carl Zeiss lens. SETTINGS: 135mm effective focal length, $1/200$ second shutter speed, f/10, white balance 6000K, ISO 100)

To get the most out of lighting with a beauty dish, place the dish close to the subject, but remember that the light will fall off quickly around the subject when used in this manner. Too many photographers have a tendency to place the dish too far away from their subject and, as a result, the light is too harsh and specular.

Most photographers (myself included) avoid photographing models outdoors during the brightest part of the day. In this case, however, I set up a Hensel Integra 500 Pro Plus monolight fitted with a beauty dish to help overpower the sun. I also did my best to position Brittney underneath the shade of a tree; although the tree had sparse foliage, it provided just enough sunlight to bleed through and accent the model's hair. I also used a longer focal length at this location to help compress and blur the background; I knew my aperture would be small, thus creating more depth of field that I normally like. In glamour photography, the background should only accentuate the model and/or help tell the story. The palm trees in this image add tropical flare and their movement helps create some action in the image. (**CAMERA:** Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM. **SETTINGS:** 148mm effective focal length, $1/200$ second shutter speed, f/16, white balance at 6000K, ISO 100)

4. METERING AND EXPOSURE

I've taught over 450 photography workshops from 1999 to this writing, and I've found that the attendees often want to see how I meter for my lighting. While I've owned several light meters over the years, including the proven Minolta and Sekonic flash meters, I rarely use them and instead rely more on histograms, experience, and my knowledge of the 90 percent rule, the angle of incidence/angle of reflection rule, the Inverse Square Law, and the Sunny 16 Rule.

When I am conducting my photography workshops, I'm often asked to elaborate on why I prefer the above-mentioned options, and the first thing I mention is that I've been in almost forty countries, served in the U.S. Army as an active-duty soldier during Desert Storm, the Rwanda Refugee Crisis, the Haiti invasion, etc., and have yet to run into anyone with the skin color of 18 percent gray. Eighteen percent gray is the industry standard for light measurement in camera meters, incident light meters, reflective light meters, flash meters, photofinishing analyzers, and just about anything photographic that measures light.

When I do use a light meter, I consider it a starting point. Then I evaluate the skin tone (reflectance) of my subject and make the proper adjustment. If my subject has a darker skin tone, I will open up my aperture $\frac{1}{3}$ stop to allow for the increased absorption of light for darker skin tones. If my subject has a lighter skin tone, then I stop down $\frac{1}{3}$ stop to decrease the amount of light coming into the camera lens due to the fact my subject's lighter skin will absorb less light while reflecting more light.

These modifications are also based on the fact that the most light meters, specifically flash meters, are based on light falling on your subject (incident

> In almost forty countries, I have yet to run into anyone with the skin color of 18 percent gray.

Sometimes I get into the mood for black & white images made using only low, ambient light—as in this case with Playboy model Ashly. I capture the image in color and convert it into black & white using either Adobe Lightroom and/or Nik Software tools. Photographed in the Virgin Islands during one of my glamour photography workshops, I purposely set the camera ISO to 3200 for a grainy effect. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 105mm effective focal length, $1/_{160}$ second shutter speed, f/2.8, white balance at 4900K, ISO 3200)

light), not the actual light the subject is reflecting (reflective light). Obviously if I'm using a reflective flash meter, like the one found inside a Leica R9 camera, then I would make no adjustments. Of course, most cameras have reflective "existing light" meters and rely on using their own proprietary flash unit with distance calculations to determine exposure. They cannot provide reflective flash-meter readings from studio power packs or monolight systems.

Now, when working with incident flash meters, this technique is great for indoor or outdoor work. However, I also take into account the Inverse Square Law before I pull out a light meter. As an example, if my light is 4 feet from my subject and I have to reduce the light output by a full f-stop—without ad-

justing the power level of the flash—I would move my light back another 1.6 feet so it would be 5.6 feet from my subject. If I needed another f-stop in reduction of light and could only move my light source, I would move it back another 2.4 feet so that it would be a total of 8 feet from my subject.

In film days, this was easy to remember; these measurements were always printed on the lens barrel, or what we called the aperture ring. Unfortunately, lenses used with digital cameras rarely have aperture rings. Instead of seeing an aperture ring on our lenses that clearly instilled the standard f-stop values of 1.4, 1.8, 2.8, 4, 5.6, 8, 11, 16, and 22, we see digital displays in a viewfinder that show those f-stops as well as 6.3, 7.1, 9, 10, 12, 13, 14, etc.—and most photographers don't know that f/6.3 is really f/5.6 "plus ⅓ stop."

While I grew up in the days of the "standard f/stops," the real importance here is how the f-stop, or aperture, is based on the Inverse Square Law, which, once again, simply states that when you double the distance of the light to your subject you've reduced light intensity falling on your subject to ¼ of the original amount. So if you had your light source 4 feet from your subject and moved it to 8 feet from your subject, the flash output falling on your subject would be ¼ of its original value. If your meter provided a value of f/8 at 4

ABOVE AND FACING PAGE—Mirrors are always great for capturing reflections of the model. In these two images, I took a camera position that allowed me to feature either two or three reflections of the model, Jenni. These images are from my "Wide Aperture" theme, and I used the household lighting as my sole light source. This is where fast lenses (lenses with very wide maximum apertures) come in handy. (**CAMERA:** Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. **SETTINGS:** 85mm effective focal length, ¹/₂₀₀ second shutter speed, f/1.2, white balance at 3700K, ISO 100)

feet, then when the flash was moved to 8 feet from your subject (double the distance), the flash meter would measure f/4.0, or ¼ of the light output from the original f/8.

THE 90 PERCENT RULE

If there is one lighting principal that every glamour photographer should know, especially every digital glamour photographer, it's what I call the 90 percent rule. Simply stated, the 90 percent rule says that what is pure black will absorb 90 percent of the light that hits it, while what is pure white will reflect 90 percent of the light that hits it. You must also remember that there is still another 10 percent that is either absorbed or reflected, depending on whether your reflective source is pure white or pure black. The key word here is "pure"; most whites and blacks are not pure.

Now, the real importance of this principal comes into play when you meter your light source in comparison to the subject you will photograph. Almost every meter, flash or in-camera, is based on the old standard of an 18 percent gray middle tone. While many skin tones are reasonably in line with this standard, I have yet, in the thousands of people I've met and photographed, to find someone with 18 percent gray skin—and I keep that in mind when I take a meter reading in relation to my subject. If my subject is darker than 18 percent gray, I will open up my lens aperture (increase my exposure) by ⅓ stop. If my subject is lighter or fair-skinned, I will stop down my aperture (reduce my exposure) by at least ⅓ stop. Remember, a light meter is only a starting point for evaluating our light source and where the light falls.

Clothing Selection. I use this same principal when a model asks me what she should wear for her session. If she has very light skin tones, I don't mind if she wears light-colored clothing. If she has darker or mid-toned skin, I tend to stay away from light-colored clothes, especially white, because in digital photography you will end up with blown-out highlights in the clothing if you expose for your subject's skin tone. As noted previously, though, darker clothing is not a problem, because you can capture more detail in the shadows in digital photography.

Separation. The 90 percent principal is great when the model is wearing white and you have a white background. To create separation, just take two sheets of black foamcore board and place them on each side of the model to reflect black-toned light back onto your subject. You would do the opposite with black on black, employing a white card.

Adding Detail. If your subject is wearing black lace, you can capture more detail on the clothing by placing a white card nearby to throw some light onto the fabric. If, on the other hand, your subject is wearing white or light colors, use a black card to bring out the detail in the texture of her clothes.

Composition. The human eye always goes to the lightest spot in the image, so if you have a white pillow behind the model in a boudoir scene, this will draw attention away from the model. For a better image, just change pillowcases. The same applies to the bed sheets or covers.

ABOVE RIGHT—Juxtaposition is a photojournalism technique where you have at least two elements in an image that help tell the story. In this case, the location and windmill help illustrate that Playboy Playmate Holley Dorrough is more of a country girl than a city gal. Her outfit adds to the story, as does the warmth from the lighting. (**CAMERA:** Leica M8 Digital Rangefinder fitted with a Leica EL-MARIT-M 21mm f/2.8 ASPH lens. **SETTINGS:** 28mm effective focal length, $^1/_{250}$ shutter speed, f/4.0, white balance at 6000K, ISO 160)
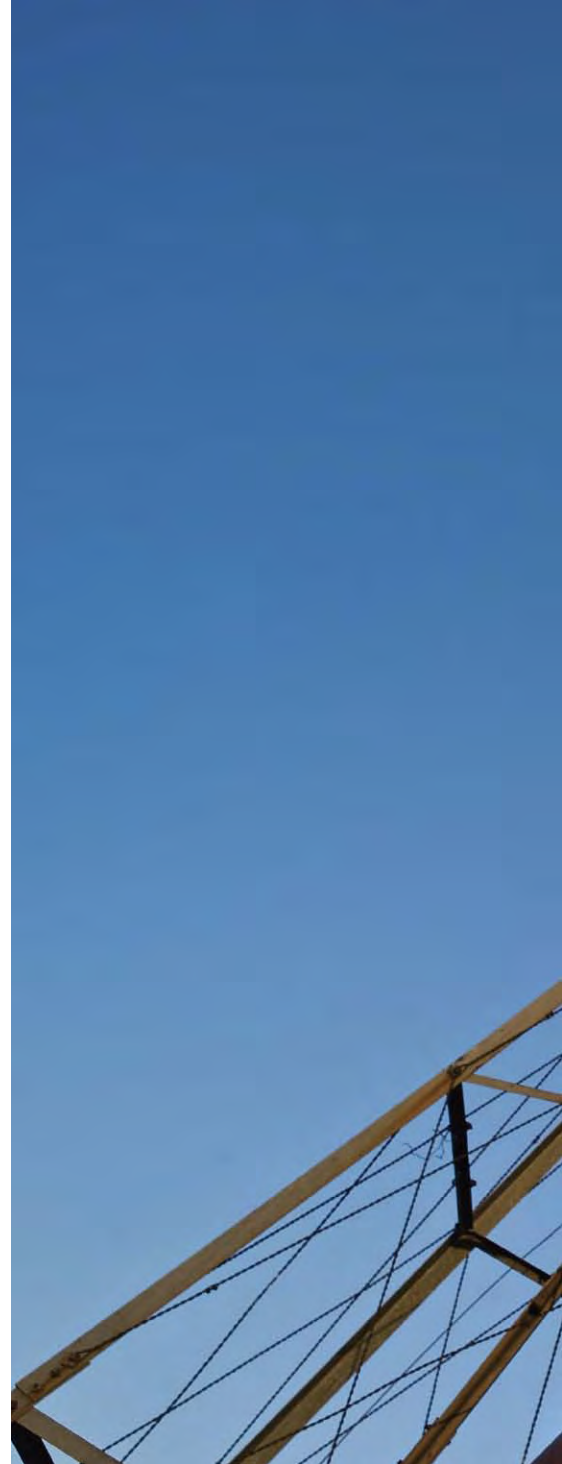
If there is one principal or rule to remember in glamour photography and lighting, the 90 percent rule is it. This rule applies to clothes, the subject's skin, the foreground, the background, and even the props in an image.

THE SUNNY 16 RULE

One other reason why I rarely grab a light meter, besides the fact that I have grown so comfortable with my photographic equipment over the years, is that I can use the Sunny 16 Rule. This rule is simple to use and remember: simply

—I captured Sheila during the afternoon—not really the best time to be doing photography outdoors in the Virgin Islands. This image was possible because I took into account the Sunny 16 Rule and placed Sheila underneath a white awning near the pool. I also purposely shot into a dark background of foliage. This is a helpful trick if you feel your sky will look washed out; just ensure your background has dark foliage. If the sun is hitting the foliage, consider creating an overexposed background—it will only look brighter green, not overexposed. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 135mm effective focal length, $^1/_{200}$ second shutter speed, f/16, white balance at 6000K, ISO 100)

set your shutter speed to match your ISO (film speed or digital camera setting), and on a bright, sunny day, normally during late morning and early afternoon, set your aperture to f/16 and you'll get a great exposure. If the clouds roll in, subtract at least one f/stop (e.g., open your lens to f/11).

There are a few exceptions: water, sand, and snow are natural reflectors that will amplify the light, and you might find yourself stopping your lens down to between f/16 and f/22. If your lens doesn't allow you to go all the way to f/22, then raise your shutter speed one step higher, which reduces the light by 50 percent onto your image capture device or film plane.

Now, if a photographer was armed with a knowledge of the Sunny 16 Rule and wanted to overpower the sun with flash, he would want to ensure that the power pack or studio lighting kit was powerful enough to produce light as strong or stronger than f/16 either by intensity of the light or by moving the light closer to the subject—or both. Sometimes this also involves changing the light modifier to prevent too much light loss. It's not unusual for me to go from a softbox to a beauty dish or just a 7-, 9-, or 12-inch reflector.

The effect from overpowering the sun simply means we're going to introduce enough light intensity from an artificial light source, like a studio flash unit, onto the subject so that when we expose for the subject, the background darkens.

There are times, however, when we can't do this because we can't get our light source close enough to our subject and/or the power unit is just not strong enough, as most power packs or portable studio flash units for this effect normally need to be at least 1000 ("true," not "effective") watt-seconds. When this happens, the quickest solution is to have our subject stand in front of a dark background, such as bushes or trees with dark green leaves, or dark rocks. Basically we still expose for our subject and our background will be overexposed, as our subject is usually illuminated with flash or some type of light reflected upon them, not direct sunlight. This is especially true if your subject is placed in an open-shade setting. The human eye will not normally know that the background is overexposed, as we just see green leaves or dark rocks, and the fact that dark areas absorb more light than lighter areas helps in this scenario. On the other hand, if we are using the sea, sky, or a bright area as our background and put our subject in an open-shade environment but cannot overpower the sun, the background will wash out—and that's not a good thing.

5. SUPPLEMENTARY LIGHTING

RIM, HAIR, AND ACCENT LIGHTING

Rim lighting of your subject is usually accomplished in one of two ways, either through strip boxes or metal reflectors outfitted with grids. When metal grids are used, I normally start with a 10 degree grid, then point the light onto the subject's area I want to outline with a highlighted edge. (Keep in mind that the lights are behind and usually at an angle to the subject in this method.) If I want to see more of the body outlined, I'll switch out the 10-degree grid with a 20- or 30-degree grid. Normally, to give the light some color, I will place a ⅛ or ¼ CTO over the reflector, allowing some looseness around the gel so it can breathe and release some of the heat from the modeling lamp.

I will sometimes change the modeling lamp from full output to proportional output so the light will not get as hot. While you'll often hear that your rim or hair light should be a stop or two brighter than your main light, you'll sometimes hear photographers advocate the opposite. The reason why measuring rim lighting can be confusing is the physics rule, "the angle of incidence is equal to the angle of reflection."

Basically, the light intensity that will be captured by the camera is based on the actual angle of incidence in relation to where the camera is positioned, so it can fluctuate. Your best bet in using a rim light, especially in digital photography, is to set it up, aim it to strike your subject where you want it, test it, and adjust it to your personal tastes. Just be sure that you do not blow out this highlight you've introduced into the image.

When using rim light as a hair light, keep in mind that darker hair will absorb more light and lighter hair will reflect more light. Again, the final results will vary depending on the exact angle of incidence. Normally, placing the

> Just be sure that you do not blow out this highlight you've introduced into the image.

I proudly served active-duty in the U.S. Army for over eight years—and, like most soldiers, have kept my uniforms, including my Army Dress Blues. Some folks will argue that a uniform should not be used in sexy photographs, but as a soldier who served all over the world, I can tell you this: Soldiers, especially male soldiers, love to see sexy models in their uniforms. Here, Tess models in the uniform I wore proudly—and, I assure you, she looks a lot better in it than I did.
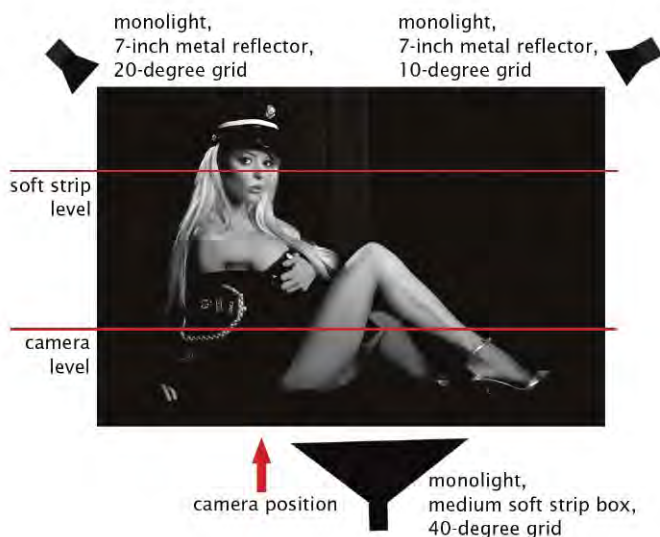
I used three Hensel Integra 500 Pro Plus monolights to illuminate this image. The main light was fitted with a medium Chimera Super Pro Plus soft strip box with a 40-degree Lighttools grid. The accent lights for Tess's body and hair were placed behind her, one to the left and the other to the right. Both were fitted with 7-inch metal reflectors. The one to the camera right had a 20-degree grid, while the one to the camera left had a 10-degree grid on the front of it. The final image was postprocessed in Adobe Photoshop using Nik Software's Dynamic Skin Softener and the Bleach Bypass filters. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $1/200$ second shutter speed, f/3.2, white balance at 6000K, ISO 100)

—While providing private photography instruction to my client Adam, I had the opportunity to photograph Renee in a local motorcycle shop in Virginia. The first thing I noticed, was the garage door opening, which would help provide a light-toned background for the model's dark hair—specifically with a long lens. I was fortunate enough, with Adam's help, to try out Canon's newest lens at the time: their super-fast 200mm telephoto, which was perfect for compressing the background. We also had access to some high-end, Broncolor lighting, which allowed us to add accent lighting on the bike and model. (CAMERA: Canon EOS 5D fitted with a Canon EF 200mm f/2L IS USM. SETTINGS: 200mm effective focal length, $1/200$ second shutter speed, f/4.5, white balance at 6000K, ISO 100)

light high and pointed down onto your subject in the direction of the camera is best.

The idea behind hair and rim lighting is to accent various parts of the body. This is why these lights are sometimes referred to as accent lights. Remember, though, that lights used to draw attention to things like keys, a purse, props in a scene, etc., are also accent lights.

When photographing a model outdoors, you can achieve rim lighting by placing her with her back toward the sun and her front toward the camera. This works best with early-morning or late-evening light, as the qualities of light during that time of day are much softer and, as such, the photographer doesn't need a super powerful studio power pack to overpower the sun with flash or fill the subject with sufficient light to properly expose the image.

My friend, the great photographer Monte Zucker, believed that the best images are the ones lit from the back (and sides) rather than primarily from the front. Zucker was a master of light and understood how light interacts with the subject.

KICKERS

Kicker lights are lights that "kick" in a little extra light around the eyes, under the chin, or other areas of the body without overpowering the original main light. This extra bit of light, usually subtle and soft, is designed to soften the hard shadows created by more dramatic lighting.

My favorite technique is to place a California Sunbounce Mini, white side out, on the legs of the light stand on which the main light source is mounted. Sometimes I'll point a light directly into the reflector or just let the reflector capture the spill light from the softbox or beauty dish and spill right onto my subject. Again, the goal in using a kicker light is to add just a small amount of light in certain areas to help soften the shadows.

LIGHTING THE BACKGROUND

While I'm not a big fan of lighting the background for a glamour shoot like a portrait photographer would, I do utilize the Inverse Square Law to control the darkness and lightness of my background. The idea is that in glamour photography, it's about your subject, not the background or foreground.

Now this technique is meant more for shots in controlled environments, like the studio or another indoor location, but depending on the time of day, it could possibly be used outdoors too. To ensure I maintain a dark background, such as black in a low-key setting, I will keep my subject at least twice as far from the background as they are from the main light. If I want an even
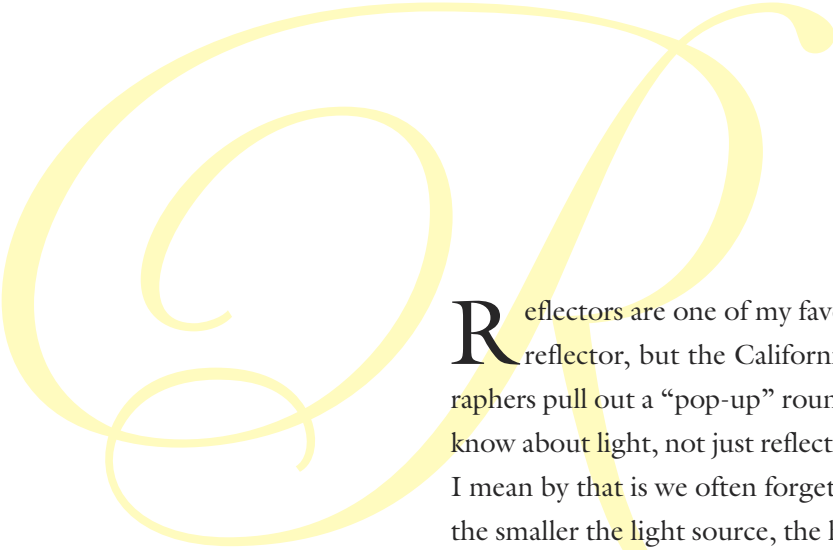
There are times when I want to avoid flash and will use the 300-watt tungsten modeling lamp in my Hensel Integra 500 Pro Plus instead. That was the case in this image of Tess, where I wanted to use a low aperture in order to capture the light from the candles in the background. I also wanted to capture them with the unique halo effect you get when they are out of focus in the background. The main light had a 7-inch metal reflector attached to it with a 10-degree grid placed on its front to direct the tungsten light in a narrow beam. This helped induce dark shadows in the final image. This is a harsh type of light, so in postproduction I used Nik Software's Dynamic Skin Softener filter for a more flattering image. (CAMERA: Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. SETTINGS: 85mm effective focal length, $^1/_{200}$ second shutter speed, f/1.2, white balance at 3700K, ISO 400)

darker background, I will move my light closer to the subject, but because my subject is still maintaining the same distance from the background, at least twice that from the light source, the background will go darker. The key here is that I'm exposing for my subject, not the background.

If I want to lighten my background, I simply move my light farther away from the subject. Sometimes I will move my subject in closer to the background but still far enough away for proper separation and to prevent dark, harsh shadows. When I move my light away from the subject, the subject's distance from the main light is less than twice the distance from the background, and as long as I'm measuring the light falling on my subject, the background will go lighter.

6. THE CALIFORNIA SUNBOUNCE WAY

Reflectors are one of my favorite lighting tools—and not just any kind of reflector, but the California Sunbounce reflectors. I see many photographers pull out a "pop-up" round reflector, and it often shows how little they know about light, not just reflected light, but light properties in general. What I mean by that is we often forget the basic rule of light when using reflectors: the smaller the light source, the harsher (more specular) it will be on our subjects. The larger the light source, the sweeter (more forgiving) it will be on our subjects. This fact of light properties is very important when photographing models, especially glamour subjects—and it is even more important with older models being photographed for private glamour sessions.

Think about that round reflector. In most cases, your assistant must stand ten or more feet from the subject to properly grab the sun with a 24- to 36-inch diameter modifier and reflect light onto the model, especially in full-length shots. This distance alone makes a pop-up reflector smaller than the subject, and the point-source beam of light it produces will blind the model and make her squint. While there are larger sizes available, they are cumbersome to hold, and their size makes it difficult for the assistant to look around the modifier to see where the light is hitting the subject. Another downside to pop-up reflectors is that if you are working without an assistant, you will need to buy a special arm for your light stand so that you can mount the modifier.

California Sunbounce's Pro model, on the other hand, is roughly 4x6 feet in size and mimics natural window light when used properly. Their Mini is like a medium-sized Chimera softbox, 3x4 feet in size. Again, the larger the light source, even with reflectors, the sweeter the light is to your subject. Also,

> California Sunbounce's Pro model mimics natural window light when used properly.

the units have sturdy cross bars that allow you to secure them to a light stand at any angle using the clamps that come with most C-stands. (*Note:* If you don't own C-stands, you can readily purchase the clamp, which will run you less than the arm you'd need to buy to mount your pop-up reflector to a stand.)

The California Sunbounce reflectors are German engineered with light-weight aluminum frames. They can be disassembled almost as quickly as a collapsible reflector and will store compactly. Another benefit over pop-up reflectors? They are rectangular in shape, matching the geometric shape of the human body, thus providing a beautiful, large swath of reflected light.

WHITE, SILVER, GOLD, AND ZEBRA REFLECTORS

Because the frame and the fabric are not all one piece, you can use the frame with a variety of fabrics. The California Sunbounce is designed to provide you two reflective surfaces that switch by merely changing the cross-bars to the other side. Some of the many fabrics available are silver/white, zebra/white and gold/white. While all three of the fabric combinations described are applicable to glamour photography, my favorite is the zebra fabric with white on the reverse side. The white side is perfect for white balancing on location too.

For this image, created in an old mine in the Moab, I had Elite Agency model Jenni sitting in a middle-toned area of the image, while Playboy Playmate Holley Dorrough was positioned in a more highlighted area. I also capitalized on the window to act as a frame for Holley. Jenni's position in the frame leads to Holley for a more balanced composition. I exposed the image with natural light for Holley and had an assistant point a California Sunbounce Pro zebra-fabric reflector toward Jenni. This image was postprocessed in Adobe Lightroom. (CAMERA: Canon EOS 5D fitted with a Canon 70–200mm f/2.8L IS USM lens. SETTINGS: 70mm effective focal length, $1/30$ second shutter speed, f/5.6, white balance at 6000K, ISO 200)

Though I own and use the gold and silver versions too, I primarily use the zebra fabric. This decision is based on several factors: (1) Silver is sometimes too "hot" and adds too much contrast when used for glamour photography. It tends to work better with early-morning or late-evening sun, when the intensity of sunlight is lower and more golden. (2) White is great during the middle of the day when the sun is harsher or when used as a softer fill. I'll often use white in the studio too, by resting the reflector at the base of the light stand at a 30-degree angle to the subject. On that same light stand I'll place a monolight flash head, then attach a Chimera small or medium strip light to the front of the head, then point the strip light into the California Sunbounce reflector, similar to board-to-board lighting, which helps create a kicker light effect on the subject. White is also great when you don't have any foamcore panels in the studio and you're photographing a subject wearing black against a black background. Here you place one California Sunbounce Pro, vertically mounted on a stand, on each side and equidistant from your subject, ensuring that the white side of each is aimed toward the subject. This technique is based on the 90 percent rule (see page 107). (3) The gold reflector was originally invented for photographers to pump light onto their subject when photographing their subject outdoors in open shade. The gold reflector was designed to offset the cool (bluer) light temperature found in shady areas—similar to modern day white balance where you set your white balance on "shade" or "cloudy day." It's safe to say that gold is probably one of the most abused reflectors; many photographers use it not only in open shade but whenever they use a reflector.

> It's safe to say that gold is probably one of the most abused reflectors.

Because a zebra reflector contains both gold and silver panels, we get the benefits of using both silver and gold reflectors. The zebra reflectors adds some contrast to the image, but the result is not as harsh as that created with a full-silver fabric reflector because the gold stripes add warmth to the reflected light. Likewise, the warming effect produced by the gold stripes is slightly

CATCHING SOME RAYS

The crossbars and the unit's rugged construction allow an assistant to easily hold a California Sunbounce reflector overhead, even in windy conditions, to re-create the appearance of natural, overhead light—not light that comes from a car's headlight level. Also, when the light comes from overhead, your model will not be made to squint.

Playboy Playmate Stephanie Larimore is an exceptional model to work with. Here she poses during a private instruction session in Virginia. The lighting was provided by two medium Broncolor softboxes (one for fill and the other for the main) along with an accent light and a California Sunbounce reflector for a small kick of fill. The final image was postproduced with Nik Software's Dynamic Skin Softener filter. (**CAMERA:** Canon EOS 5D fitted with a Canon 85mm f/1.2L USM lens. **SETTINGS:** 85mm effective focal length, $^1/_{200}$ second shutter speed, f/8, white balance at 6000K, ISO 100)

muted by the silver. Because I use the zebra/white fabric on my Sunbounce, I always have a white reflector on hand as well.

If the sky is heavily overcast, thus producing unflattering low-contrast light and I need to shoot with an outdoor background, I can mount the zebra California Sunbounce Pro on a stand and set my Hensel Integra 500 Pro Plus light, fitted with a 7-inch reflector and a 30-degree grid, a couple of feet from the reflector, and still illuminate my subject with gorgeous, flattering, reflected light. Think of the monolight acting like the sun, the source of light that hits the California Sunbounce to be reflected back onto your subject.

FINDING THE LIGHT

When an assistant is holding this reflector, they should first find the light, see where it's being reflected, then turn the reflector to point it at the subject. These reflectors have "peep holes" on the sides that allow the assistant to see how the light is falling onto the subject—something that cannot be easily achieved with a large pop-up reflector.

BLACK REFLECTORS

We discussed only white, gold, silver, and zebra reflectors above, but the truth is, other colors reflect light too—even black. If you recall, the 90 percent rule states that pure black absorbs 90 percent of the light that hits it. It reflects 10 percent of the light that strikes it.

We often use black modifiers (scrims, cutters, flags, etc.) to block or reduce the light that is striking our subject, but in reality they also reflect light. When we use a black reflector, the light being reflected has black tonal qualities. These qualities help to add more detail in highlights like blond hair, white clothes, white walls, etc. Black can be used to create shade outdoors too.

Using a black reflector can also help keep a model from squinting, even if the black panel is placed slightly off camera, just to the side of the photographer and pointed back at the model.

IN SUMMARY
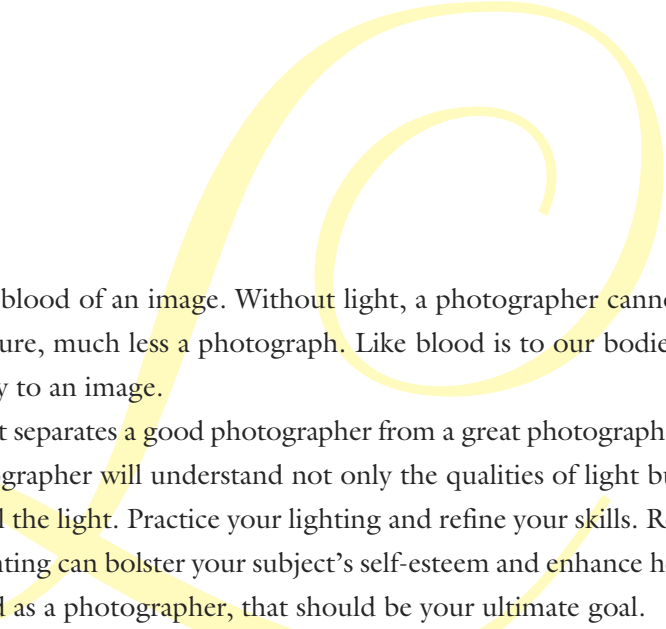
While there are many brands and types of reflectors on the market—and I've probably tried them all—none come close to the performance of the California Sunbounce. I know someone will say, "Well, Rolando, you are recommending them because you are sponsored by them." My response is simple: I don't accept any sponsorships for a product I don't personally use and believe in. The

Finally! A product invented by a top professional photographer.

California Sunbounce was first introduced to me by top bikini-glam photographer Andy Pearlman (www.apstudio.com). When I first saw the results he was achieving (without an assistant), I asked him where to purchase one. Later I would learn the California Sunbounce owner and inventor of the products, Peter Gellar, was a professional photographer with almost 10,000 cover credits to his name and the 1971 World Press International Photographer of the Year. I thought, "Finally! A product invented by a top professional photographer."

My point in writing this chapter was not to sell you a California Sunbounce. Rather, I wanted to show you that while there are many tools available, some allow us to work smarter, more accurately, and more efficiently, separating us from other photographers. I don't like to work hard, I like to work smart, and I can say that the California Sunbounce system has improved my photography when reflectors and scrims are needed. I can easily take them with me on location, and I also use them in the studio for kicker lights and reflected light sources when I combine them with studio flash units.

CONCLUSION
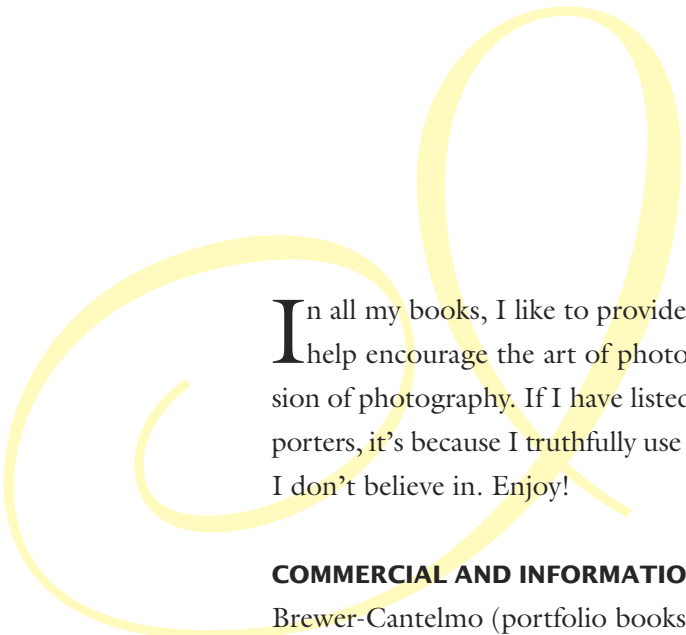
Light is the lifeblood of an image. Without light, a photographer cannot capture a picture, much less a photograph. Like blood is to our bodies, light is fluid energy to an image.

Ultimately, what separates a good photographer from a great photographer is that latter photographer will understand not only the qualities of light but how to see and feel the light. Practice your lighting and refine your skills. Remember, good lighting can bolster your subject's self-esteem and enhance her natural beauty, and as a photographer, that should be your ultimate goal.

Finally, though I've acknowledged people in the front of my books, this time I want to make a special acknowledgment to Jeff Whitted, a photographer and friend who has gone above and beyond the call of duty during some of the most difficult times of my life—more specifically, during the creation of this book.

You have begun your journey by reading this book. Now, put the principles into action. Master one light, then become the master of all your lights.

In all my books, I like to provide the reader with great web sites that I feel help encourage the art of photography while also helping spread the passion of photography. If I have listed a company amongst my sponsors or supporters, it's because I truthfully use their products. I will not endorse anything I don't believe in. Enjoy!

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INDEX

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GARAGE GLAMOUR™
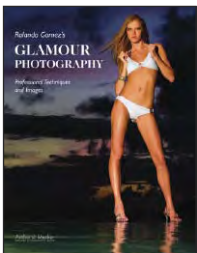DIGITAL NUDE AND BEAUTY PHOTOGRAPHY MADE SIMPLE

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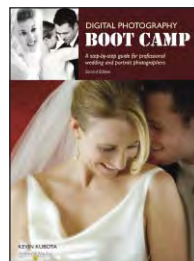### SCULPTING WITH LIGHT

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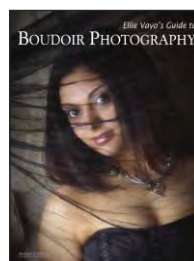### DIGITAL PHOTOGRAPHY BOOT CAMP, 2nd Ed.

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- Understanding the qualities of light and the impact they have on your subject's appearance

- Setting the main, fill, accent, hair, and background lights

- Selecting the right light modifiers for the look you want to achieve

- Metering and exposure techniques for achieving optimal results in the studio, outdoors, or on location

- Combining white balance and colored gels for dramatic lighting effects

- Working with natural light

- Designing stylish high- and low-key images

- Techniques for shooting with studio lights, speedlights, continuous lights, and more

- Strategies for improving your ability to "see" the light

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