

# Experimenting with External Lighting

Trying to control  
light...or

Where is “THAT” light  
coming from?

# Where to Start?

## **Equipment / Components:**

- Camera – Nikon Z6III
- Lens – Nikon 24 – 120 F4.0
  - Any lens will work
- Flash – Godox Speedlight
- Godox Remote Flash Trigger
- 24” Square Godox Softbox
- “Amazon” Flash Stands
- Miscellaneous diffusion material
  - About 1 stop of light reduction

# Where to start?

## Camera Settings

When using an external light source, what are the 5 settings or things that were adjusted to control exposure?

Hint – Exposure Triangle might be the 1<sup>st</sup> three

- 1)
- 2)
- 3)
- 4)
- 5)



# Where to start?

## Camera Settings

Subject illumination exposure was controlled with 5 settings

Items 1 – 3 are components of the Exposure Triangle

- 1) ISO
- 2) Shutter Speed
- 3) F-Stop

Items 4 and 5 are additional lighting variables –

Using an external flash adds 4<sup>th</sup> and 5<sup>th</sup> components which can be adjusted to achieve the correct exposure

- 4) Was able to control Flash Intensity with the remote flash trigger
  - A. (Did not use any constant lighting source)
- 5) Was able to control the light intensity by changing the distance of flash from subject – Inverse Square Law

# Camera Settings, cont'd

## Camera Mode was set to “Manual”

### Constant settings – settings that were “set and forget”

- 1/200 shutter speed – which is the flash sync speed for the camera
- ISO 100 – also used ISO 200 or ISO 400 which gave similar results

### Variable settings:

- Aperture varied between F4.0 and F 16 –
  - changed for Depth of Field and exposure control
- Flash was set on Manual with ranges between ½ and 1/128 of full power –
  - did not use TTL metering
- Miscellaneous diffusion materials and flash modifiers

# Camera Settings, cont'd

## Notes:

- Using the camera settings with no flash resulted in a black background
  - There was minimal or no lighting contamination from windows and building lighting
- White Balance was set to “Auto”
- Used both “Auto and Manual” focus

## Flash Sinc Speed - revisited

- The fastest speed where the shutter is 100% open.
  - You get the same contribution to exposure from the flash regardless of shutter speed.
  - Only the flash distance, flash intensity, aperture and ISO affect exposure

# Spinning Coins - Single or Composite Image? - Where was the flash placed?





Some of the  
images used  
to create the  
final  
Composite  
image





## Oak Leaf 2

What would be the setup for this image?

Why is the background dark?

Single or Composite image?



- The flash / softbox was placed on the right side of the leaf
- Added some diffusion material to further spread the light
- Which resulted in both minimal rim lighting and backlighting the leaf.





Additional photo of setup  
Shutter release was set for a 5  
second delay



- Used the 2nd image as the background layer in PS
- Added the 1<sup>st</sup> image (Created a stack of 2 photos)
- Added a layer mask and painted over the vice-grip to expose the background layer.

- Composite image –
  - 1<sup>st</sup> image as shown on left
  - 2<sup>nd</sup> image is the background and piece of wood





## **Color Glass**

Simple image of Backlit Glass of red water

24" softbox with a speedlight

Any way to make this photo more interesting?



## **BW Glass**

Where were the flash placed?

Why is the background dark?

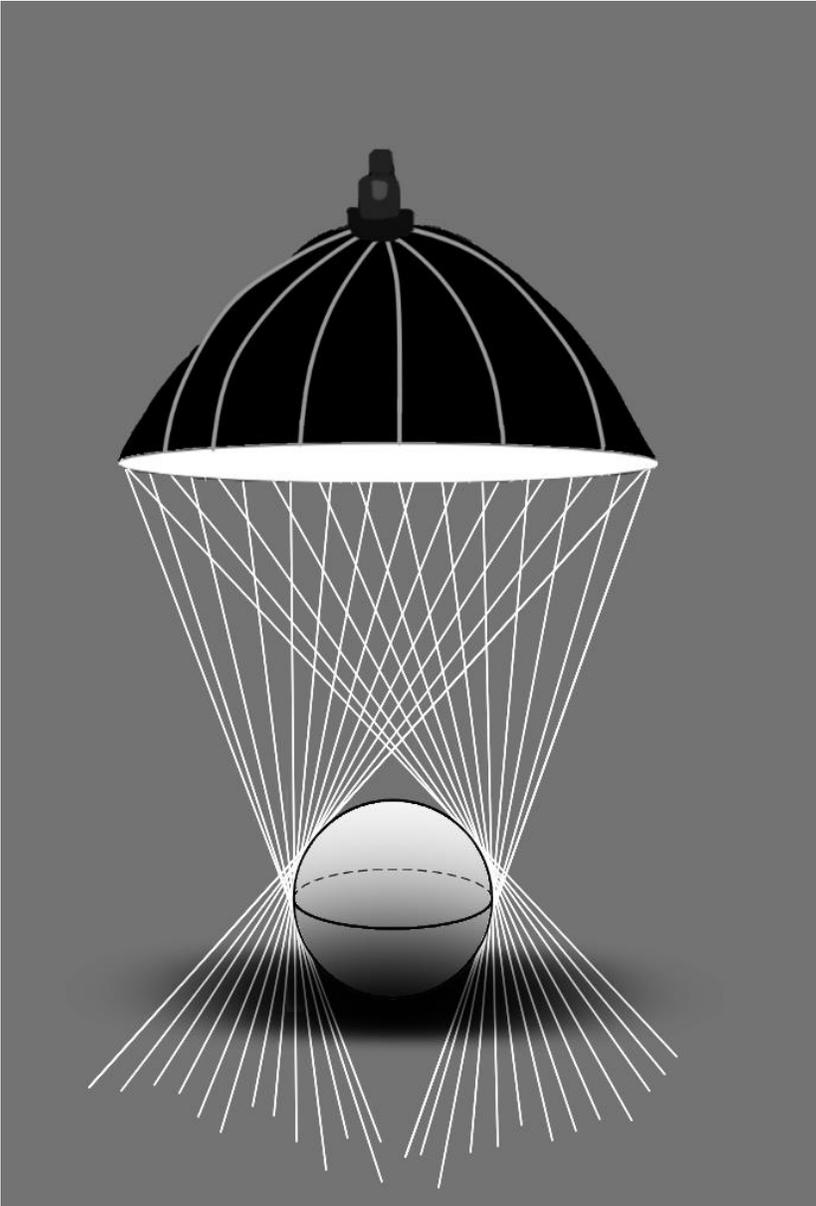
Single or Composite image?



Backlit Glass



Rim Lit Glass



## Rim Lighting

Note how the light source wraps around the subject





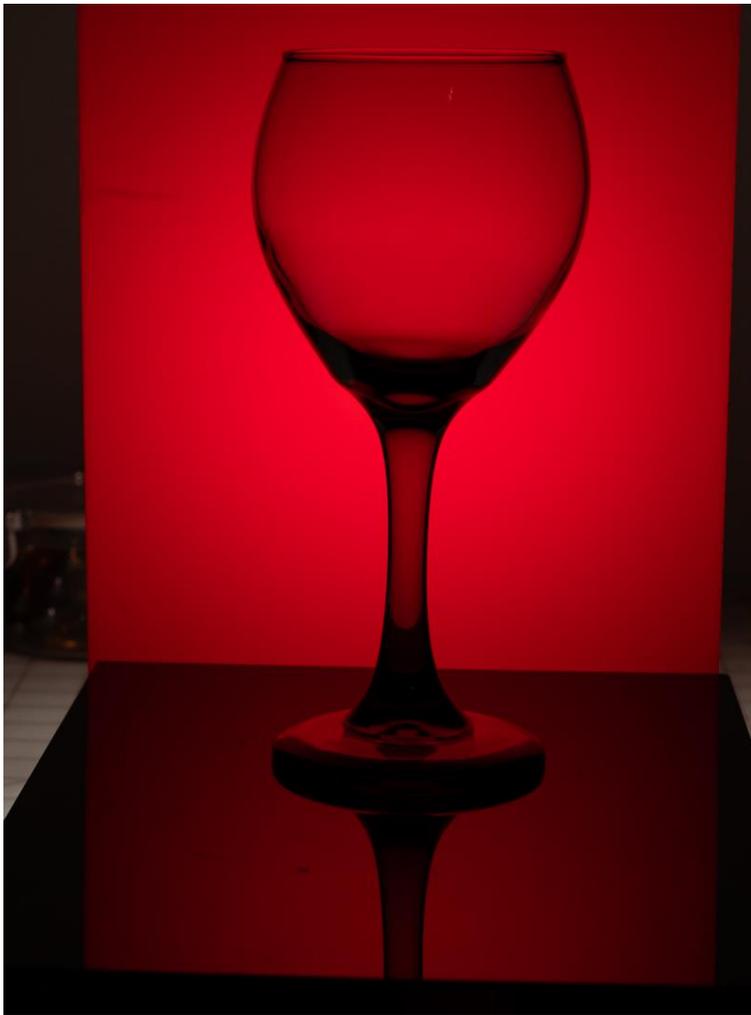
## **Red Green Glass**

This photo has both rim lighting  
and is backlit

Where were the flash placed?

Single or Composite image?

How were the colors made?



Started out with a glass set on a black acrylic sheet  
Add a piece of red acrylic sheet in front of the softbox



Add a green acrylic sheet to get the rim lighting.  
Change the black acrylic sheet to blue - note the blue highlights in the glass



Lower the red sheet and raise the green sheet to get the green rim lighting on the top of the glass





Staying with the /Rim  
Lighting Theme

Started with  
experimenting with  
side lighting a glass  
placed partially behind  
a bottle

Two variations of  
single images edited in  
PS to remove the  
lighting on the RH side  
of the bottle





Single image with the lighting off to the  
LH Side



## 5 Bottles

Single or composite Image



Similar Image to the previous image of the 5 bottles, but this is a single image

The light source is a softbox with diffusion material set on the left side of the subjects

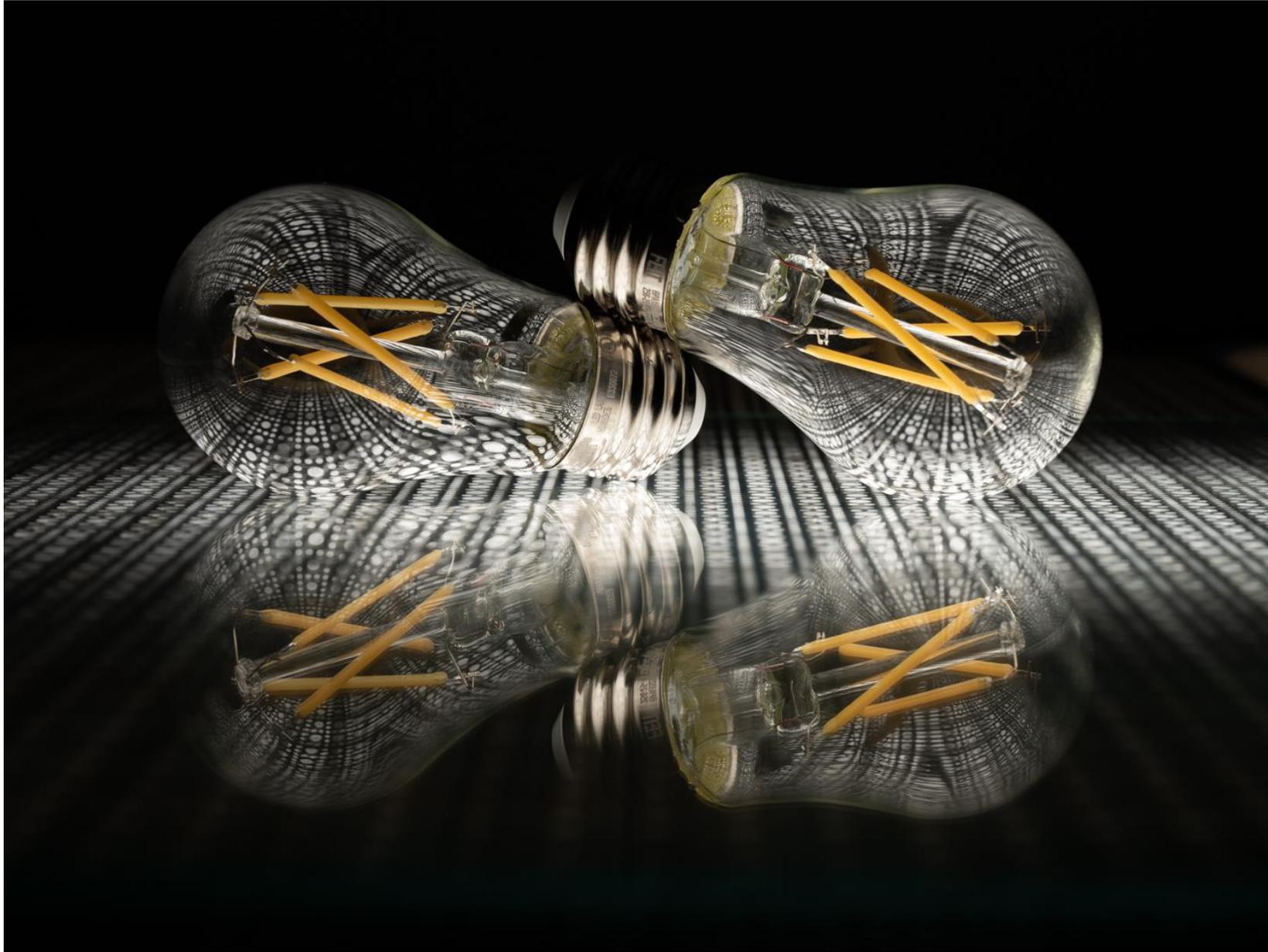
Used a piece of white card to reflect some of the light back to the label on the front bottle



## Refraction

Where was the flash placed?

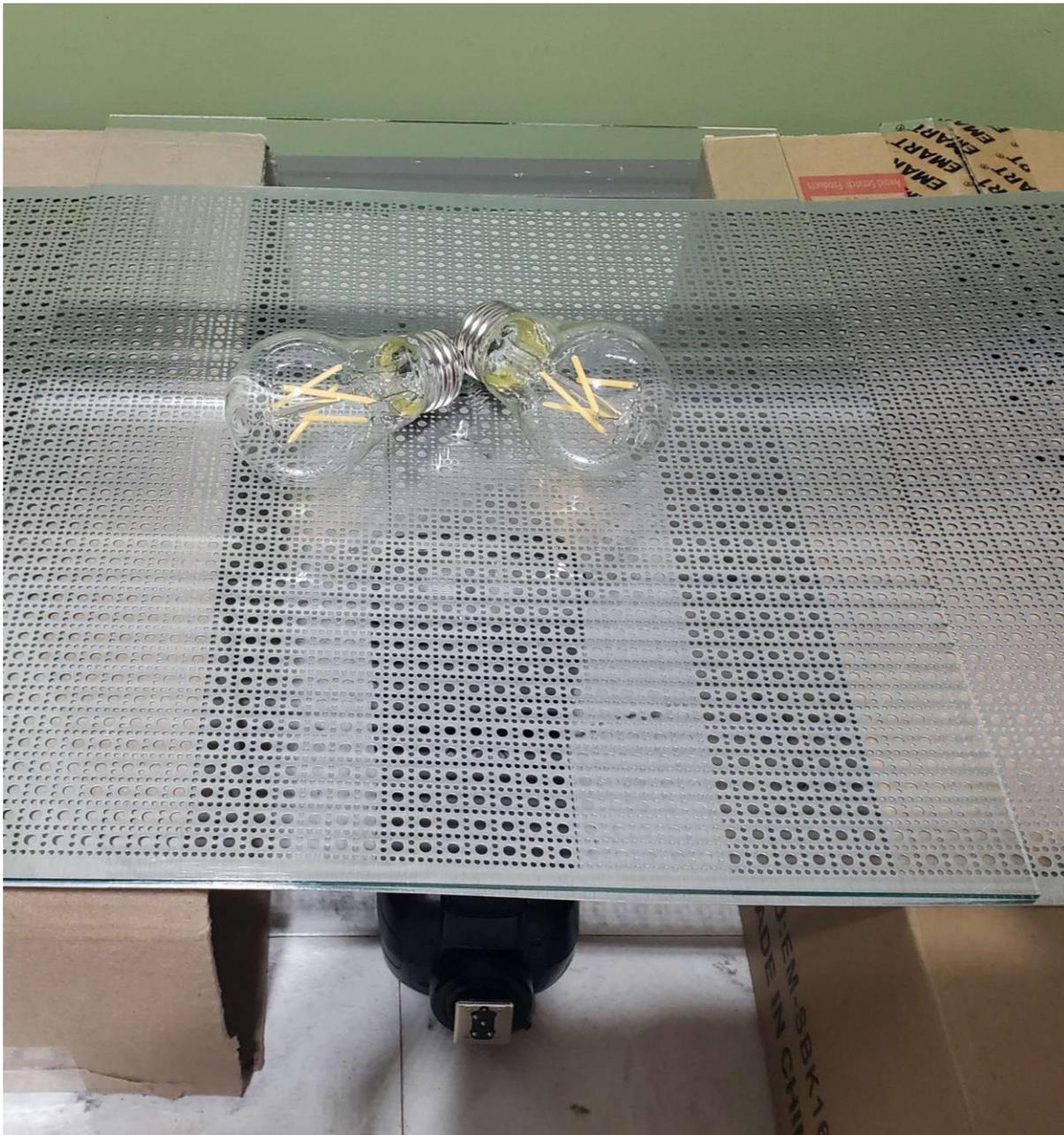
Single or Composite image?



## Reflection

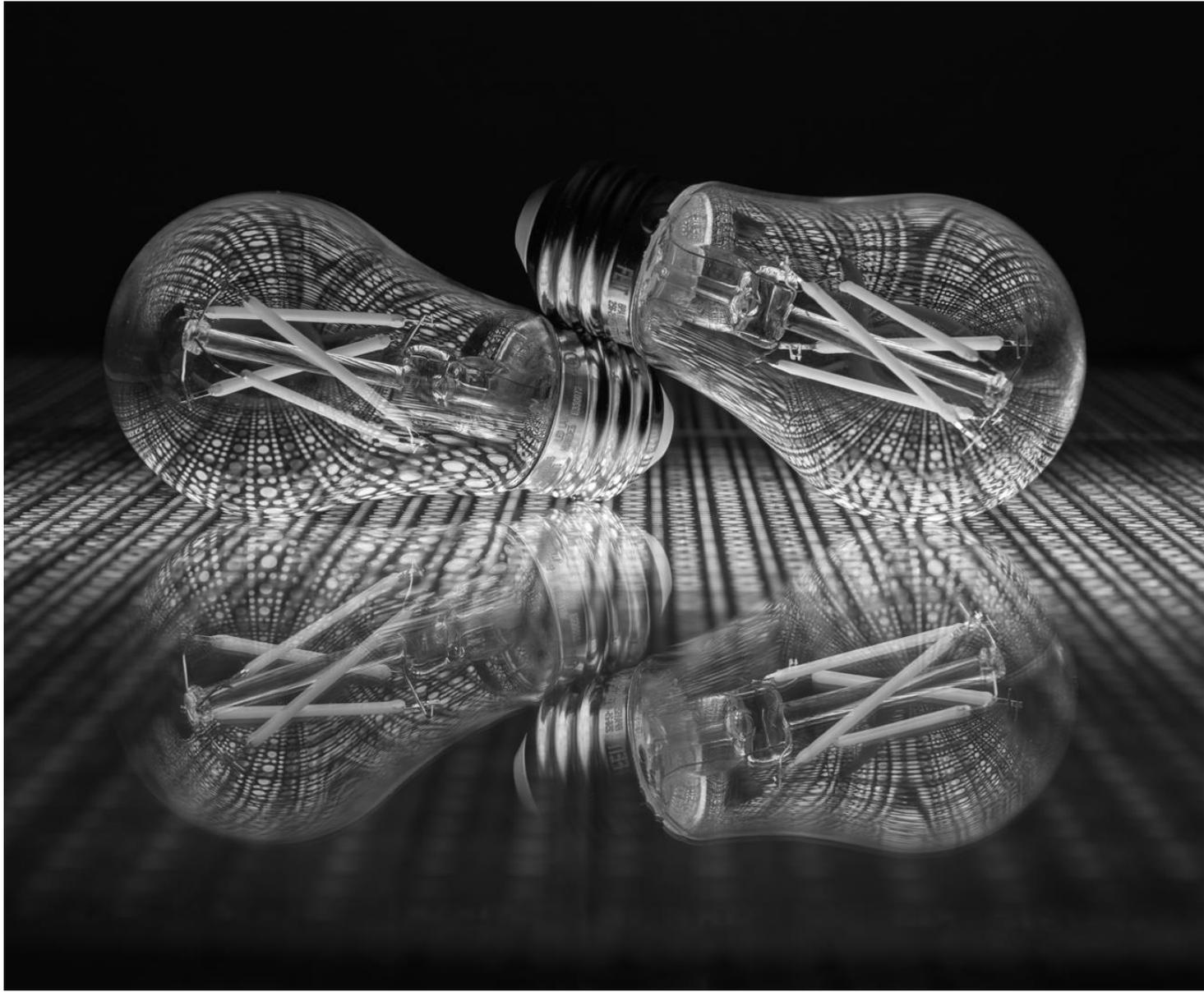
Where was the flash placed?

Single or Composite image?



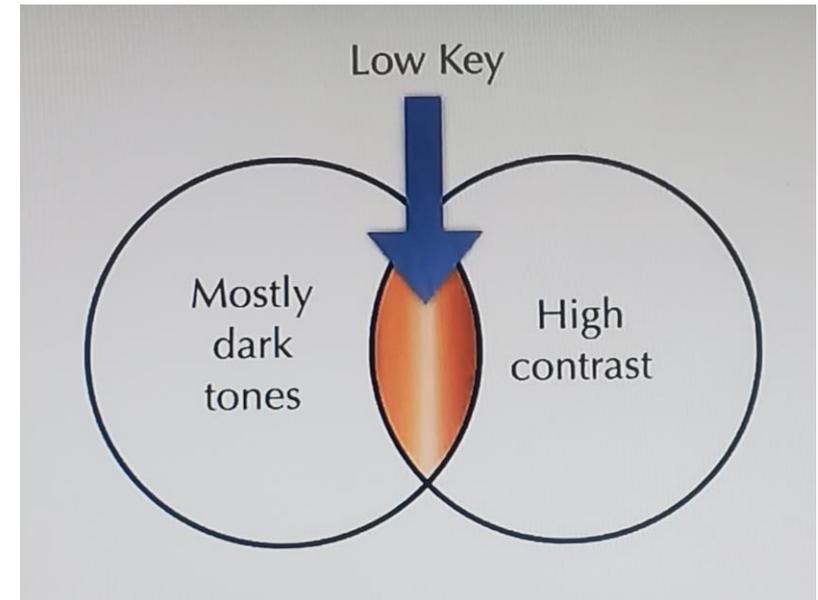
## **Bulb Image Setup**

Bulbs placed on clear glass panel  
On top of a Perforated Alum Sheet  
The lighting was from below the  
subject





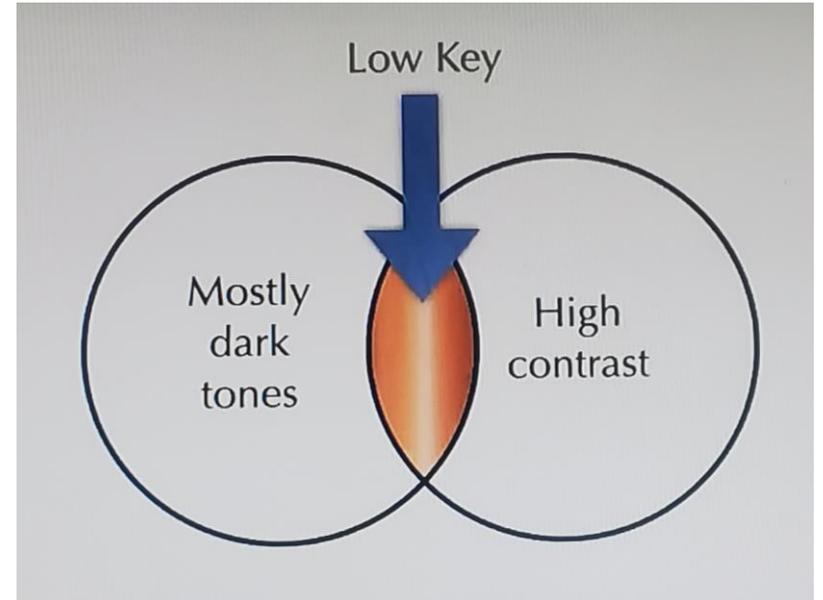
## Experimenting with Low Key Lighting



The light source was placed to highlight the label on the cup and the texture in the hand



Is this a good choice for  
Low Key Lighting?



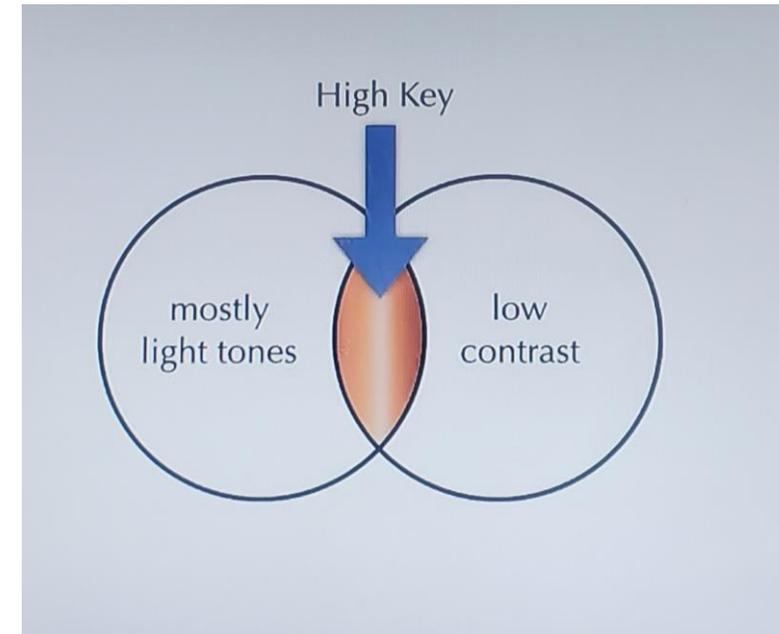
To many Light Tones



Original Image was edited to B&W in PS  
The green slider was then reduced to eliminate the green stem from the image  
The color was adjusted on the flower



Backlighting the subject and it becomes a High Key Image?



Minimal editing in PS to whiten up the flower

# **You Tube Resources**

Camera Club Live

Visual Education