PRACTICAL GUIDE

Contrast ratio

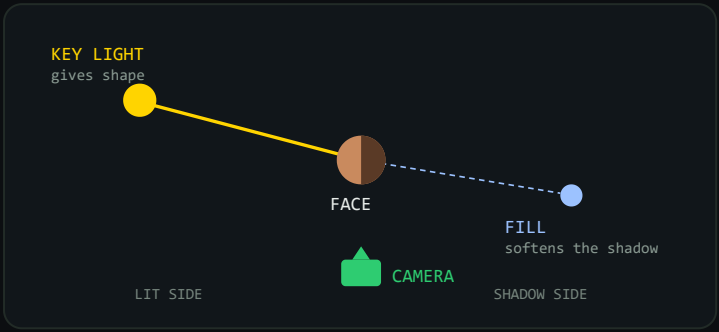
The lighting decision that sets the tone of your story: key light, fill light and what the colorist does



by Luis Taveras · Colorist

Two lights rule a face

The **key light** is the one that shapes the face. The **fill light** softens the opposite side. The **contrast ratio** is the difference between the lit side and the shadow side, and it is counted in stops: each stop is double the light.



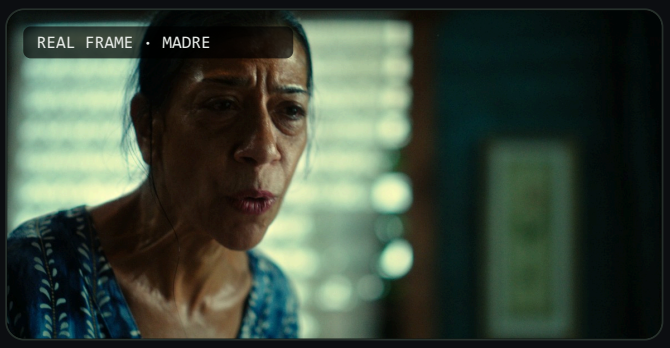
- **Lit side:** receives the key light and also the fill.
- **Shadow side:** receives only the fill.
- **Ratio:** lit side against shadow side. A one-stop difference is 2:1; two stops, 4:1; three stops, 8:1.
- **It's decided** by the cinematographer with the story in mind.

Same camera, a different emotion

The difference between a warm scene and a tense scene is often not in the camera or in the color: it's in how much shadow you leave on the face.



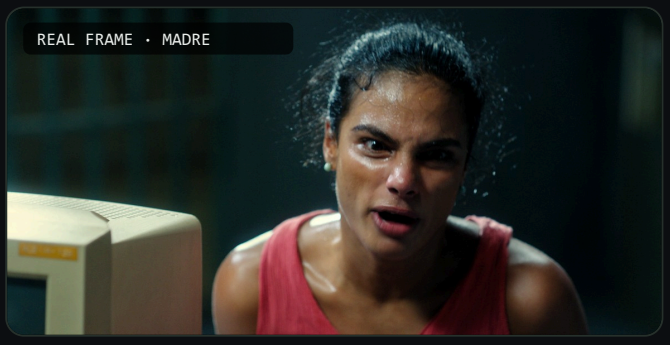
Low ratio: soft, even light, a bright comedy.



High ratio: half the face in shadow, drama.



Soft shadow that shapes without harshness.



The shadow side falls hard: tension.

Frames from Madre and The Wedding Factory, color graded by Luis Taveras.

The most used ratios

RATIO	STOPS	HOW IT LOOKS	EMOTION · TYPICAL USE
1:1	0	Even face, no shadow	Beauty, news, very bright comedy. Overused, it looks flat.
2:1	1	Soft shadow	Comedy, commercials, bright stories, interviews.
3:1	≈ 1⅔	Clear shape, no harshness	Classic portrait, light drama.
4:1	2	Half the face clearly in shadow	Drama.
8:1	3	Almost black shadow, but with detail	Suspense, film noir, horror.

The ratio is 2 to the power of the number of stops: 2 stops = 2 × 2 = 4:1; 3 stops = 2 × 2 × 2 = 8:1; 3:1 is about 1.6 stops. The American Society of Cinematographers (ASC) defines it as (key + fill) : fill, that is, lit side against shadow side.
Some books compare the key alone against the fill; that's why the safest way to talk in stops. Uses by genre are conventions, not rules.



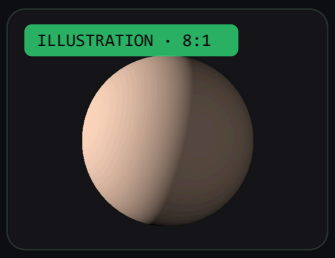
Even light: no shape.



1 stop: soft shadow.



2 stops: drama.



3 stops: suspense.

Calculated illustration: the same key light from the left; only the fill changes. The lit side is always at the same level.

Each stop is double the light

That's why an 8:1 ratio is not "a little more" than 4:1: the shadow side gets half the light. Small changes in the fill change the emotion a lot.

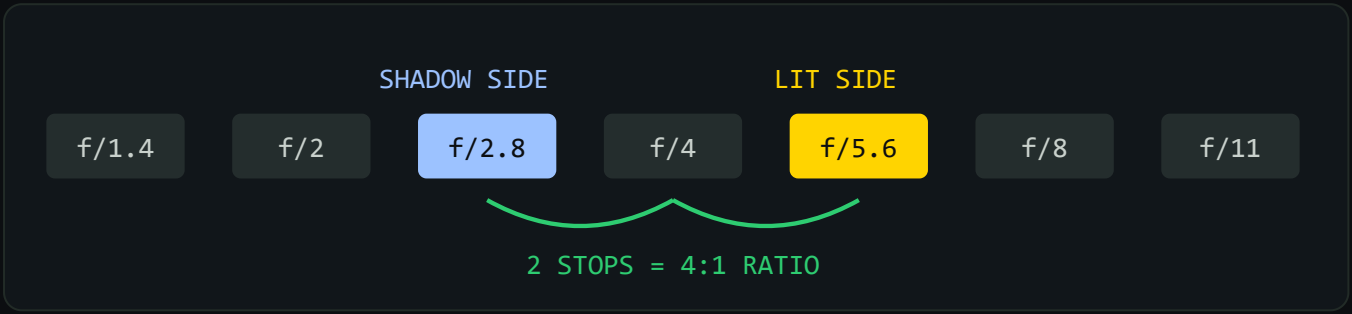
How to choose it

- [ ] **By the story:** what the audience has to feel in that scene, not what looks "pretty".
- [ ] **By the character:** more shadow for someone hiding something; less for someone opening up.
- [ ] **Consistent across the scene:** if the ratio changes from shot to shot, it shows in the cut, and the colorist has to match it zone by zone.
- [ ] **Against the background:** the ratio on the face reads better if the background doesn't compete with it.

Frames from Madre and The Wedding Factory, color graded by Luis Taveras.

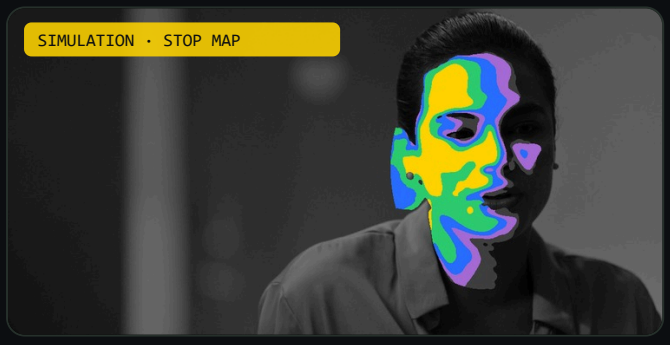
How to measure it with a light meter

1. **Incident light meter** at the position of the face, with the dome pointing at the camera.
2. **Lit side:** measure with the key and the fill on. Note the f-stop (for example, f/5.6).
3. **Shadow side:** block the key with your hand or a flag and measure only the fill (for example, f/2.8).
4. **Count the stops** between the two readings: f/2.8 → f/4 → f/5.6 is 2 stops, a 4:1 ratio.

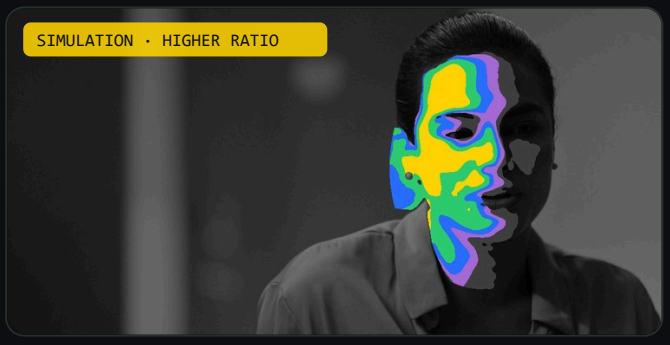


With false color or the waveform

On the monitor, compare the cheek on the lit side with the one on the shadow side. In false color each color is an exposure range: count how many ranges there are between one side and the other, and check that the shadow side doesn't fall into the color your camera uses for "black with no detail". On the waveform, the vertical distance between the two sides tells you the same.



The face measured in stops: the lit side in yellow.



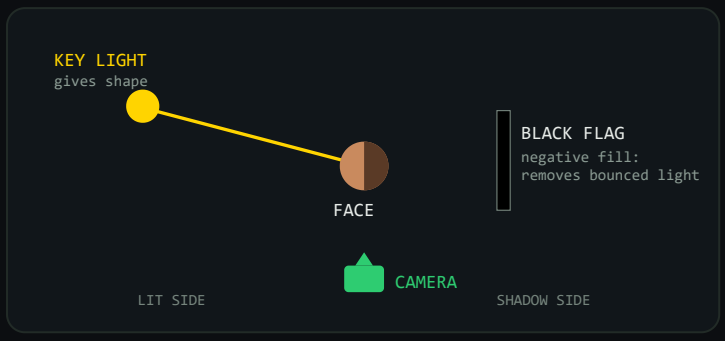
The same face with the shadow side lower: more blue and purple.

0 · lit side −1 stop −2 stops −3 stops −4 or more

Illustrative scale made for this guide, not a camera's false color. Every camera and every monitor has its own scale: check yours.

Frames from Madre and The Wedding Factory, color graded by Luis Taveras. Educational simulations made on real frames, marked as such.

How to control it on set



- [ ] **More fill** (closer, brighter, a bounce board): lower ratio, softer image.
- [ ] **Less fill** (farther, dimmer): higher ratio.
- [ ] **Negative fill:** a black flag on the shadow side removes the light bouncing off walls and ceiling.
- [ ] **Move the key:** more to the side gives more shadow; more to the front, less.

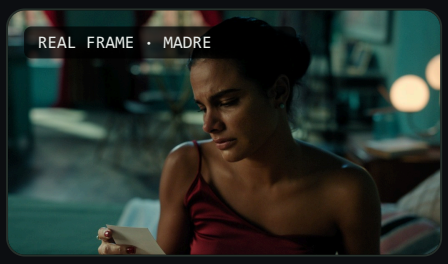
In log, the dark side with information

Even if the shadow side looks dark, it has to hold detail. If in false color or on the waveform it falls to pure black, there is nothing left to work with in the grade.

Decide it with the story in mind

The contrast ratio is chosen on set. If the scene is a bright comedy, a low ratio; if it's a drama or a thriller, a higher ratio. The colorist can push it later, but starts from what was shot.

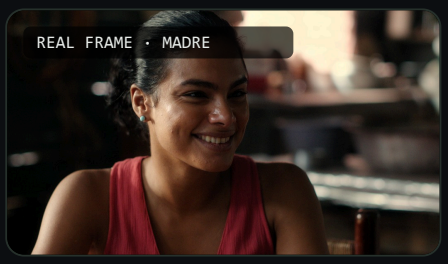
REAL FILM · SHADOWS WITH DETAIL



One side of the face falls into shadow.



High ratio in a dialogue.

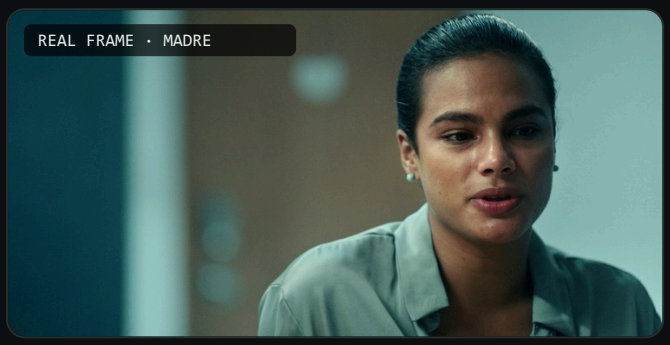


Soft shadow on the skin.

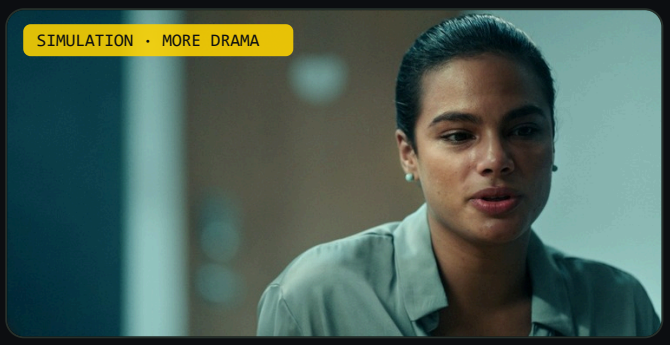
Frames from Madre and The Wedding Factory, color graded by Luis Taveras.

What the colorist does

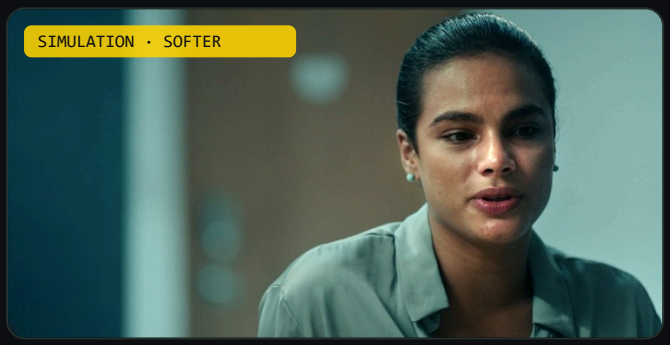
The colorist can raise or lower the overall contrast, but that's not the same as changing the ratio on the face. For that, **the colorist lights by zones**: with windows and masks, darkens the shadow side for more drama, or opens it up to soften it, and **separates the face from the background** so the eye goes where it needs to go. It's like moving the fill after the shoot.



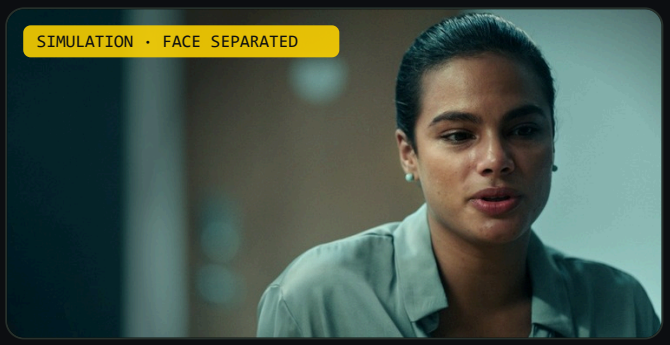
The frame from the film.



Window on the shadow side, lowered: the ratio goes up.



The same window, raised: the ratio goes down.



Darker background and face apart: the eye goes to the face.

- [ ] **Light by zones:** a soft window on the shadow side of the face, not on the whole image.
- [ ] **Isolate the skin** and protect it, so when the shadow comes down it doesn't turn gray or dirty.
- [ ] **Separate the face from the background:** lower or change the background color so the face stands out.
- [ ] **Follow the movement:** the window tracks the face for the whole shot.

Frames from Madre and The Wedding Factory, color graded by Luis Taveras. Educational simulations made on real frames, marked as such.

The limits

- [ ] **If it was shot flat**, with the face lit the same on both sides, the colorist can suggest shape, but can't invent a shadow that never existed without it showing.
- [ ] **If it was shot with a very high ratio** and the dark side has no information, lifting it brings out noise and the skin breaks apart.



Shadow side shot too dark and lifted: color noise.



The same change on a shadow with information: clean.

Before you shoot: quick checklist

- [ ] **Decide the ratio** with the director, thinking of the story: 2:1 soft, 4:1 drama, 8:1 suspense.
- [ ] **Measure it** with a light meter, false color or the waveform; don't guess it on a small screen.
- [ ] **Control the fill:** closer or farther, bounce board or black flag.
- [ ] **Capture the dark side with information, even if it looks dark.**
- [ ] **Don't shoot it flat** if the story needs shape: the colorist can't invent the shadow.
- [ ] **Talk to the colorist** before the shoot about how much drama each scene carries.

What your project gains

When light and color work together, contrast stops being a number: it becomes emotion. The colorist gets an image with shape and has room to push it toward more drama or more softness, zone by zone, without breaking it.

Frames from Madre and The Wedding Factory, color graded by Luis Taveras. Educational simulations made on real frames, marked as such.

ABOUT THE AUTHOR



Luis Taveras

COLORIST

Luis Taveras is a colorist and a member of the Colorist Society International, with five feature films and more than 500 music videos. His credits include Madre: a dos centímetros de ti, winner of five awards at the New York Dominican Film Festival 2025, and The Wedding Factory, premiered at the United Palace in New York. For him, color is the last place where a film can still change its emotion, and skin always has to feel true.

5	500+	10
feature films	music videos	years in the craft

What I do

- Color grading for film
- Music videos
- Commercials and brands
- Mastering and delivery for cinema (DCP)

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#contrastratio #lighting #colorist #colorgrading #cinematography #luistaverascolorist