



Metering & Histograms

How Cameras Think About Light



How Cameras Think About Light

01

Metering

The camera measures the light in the scene. This is its prediction — its best guess at a balanced exposure.



02

Histogram

The camera shows you the result of that measurement. This is your verification — the honest truth about the exposure.

Prediction, then verification. This simple pairing is the foundation of every exposure.

Prediction and verification

*The camera makes a suggestion. **You judge it.***

METERING TELLS THE CAMERA

Where to look

It points the measurement at part of the scene.



THE HISTOGRAM TELLS YOU

Whether it was right

It reveals whether the exposure actually worked.

This is the moment when you finally understand why some photos come out too dark or too bright.

Exposure is the bedrock of photography

Get exposure wrong, and nothing else works — not colour, not detail, not sharpness.

Metering and histograms make exposure deliberate instead of accidental.

01

Colour

Tones shift and casts creep in when exposure drifts.

02

Detail

Crushed shadows and blown highlights are gone for good.

03

Sharpness

Under-exposure forces noise and muddies fine edges.

SECTION 01

Metering

The camera's guess at the light

The Mid-Grey Assumption

The camera samples brightness and tries to create a balanced exposure using mid-grey. Sensible for most scenes, but it falls apart with extremes.



Snow, black dogs, bright skies — the meter treats them all as if they should be mid-grey. This is exactly why exposure compensation exists.

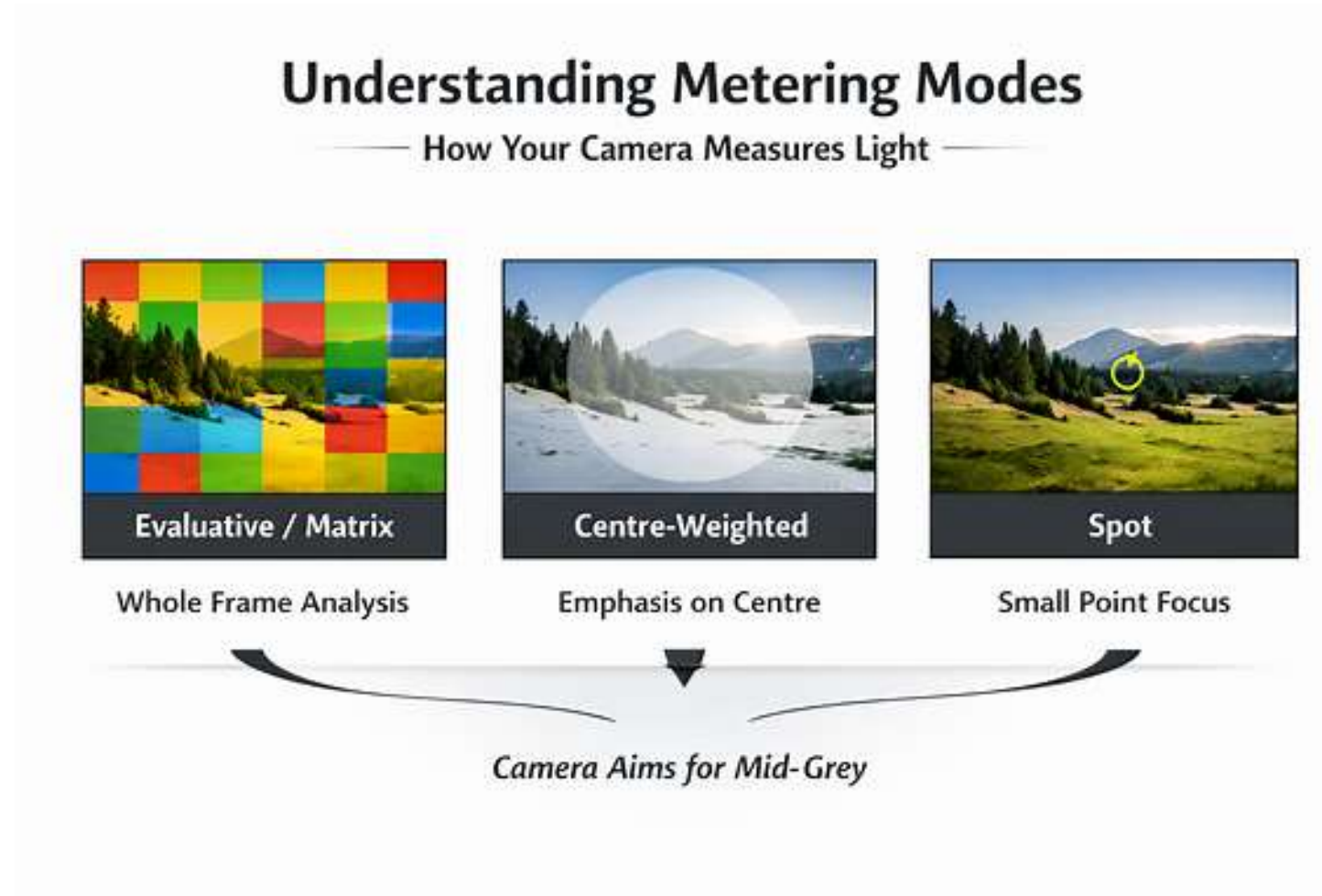
Mid-Grey: The Camera's Assumption

- Camera assumes the world averages to mid-grey (18% reflectance)
- Bright scenes → darkened to grey
- Dark scenes → brightened to grey
- Backlit subjects → underexposed
- Dim scenes → overexposed



The Three Metering Modes

- **Evaluative / Matrix** — whole-frame analysis
- **Centre-Weighted** — emphasis on centre
- **Spot** — small-point focus



Evaluative / Matrix Mode

Looks at the whole frame

- Great for general shooting.
- It tries to balance everything.



Evaluative / Matrix

Landscape with bright sky

Camera balances zones;
protects highlights but
may darken foreground

“Evaluative looks
everywhere — smart, but
sometimes cautious.”

Centre-Weighted Mode

Prioritises the centre of the frame

Ideal for portraits or simple compositions.



Centre-Weighted

Indoor portrait with bright background

Exposure favours the centre; background fades slightly

“Centre-Weighted assumes the subject is central — reliable for portraits.”

Spot Metering

Measures a tiny point

Perfect for backlight, stage light, wildlife, or any situation where one area matters more than the rest.



Spot Metering

Bird against bright sky

Camera exposes for the tiny spot; background blows out

“Spot gives precision — expose for what matters most.”

Why metering gets it wrong

Three classic examples of the mid-grey assumption at work — the meter isn't malfunctioning; it just needs your help.



Snow becomes grey

Bright white is pulled down to mid-grey and looks dull.

→ *grey*

Black dogs become grey

Deep black is lifted to mid-grey and looks washed out.

→ *too dark*

Bright skies go dark

The meter protects the highlights and the scene underexposes.

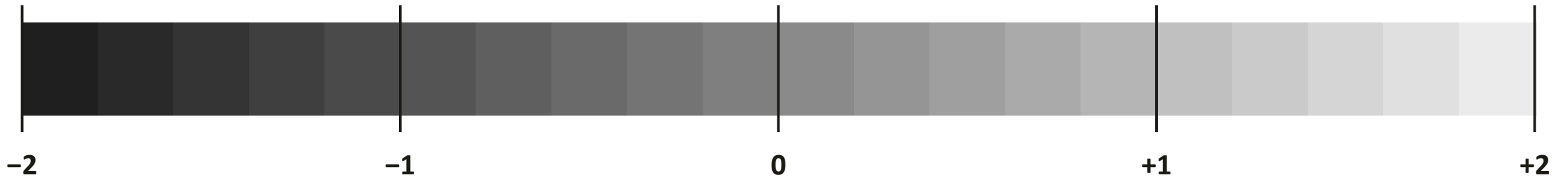
Exposure compensation

Your brightness dial, is how you correct the camera's guess — quietly saying: “Close, but not quite. Let me help.”



-EV darkens

+EV brightens



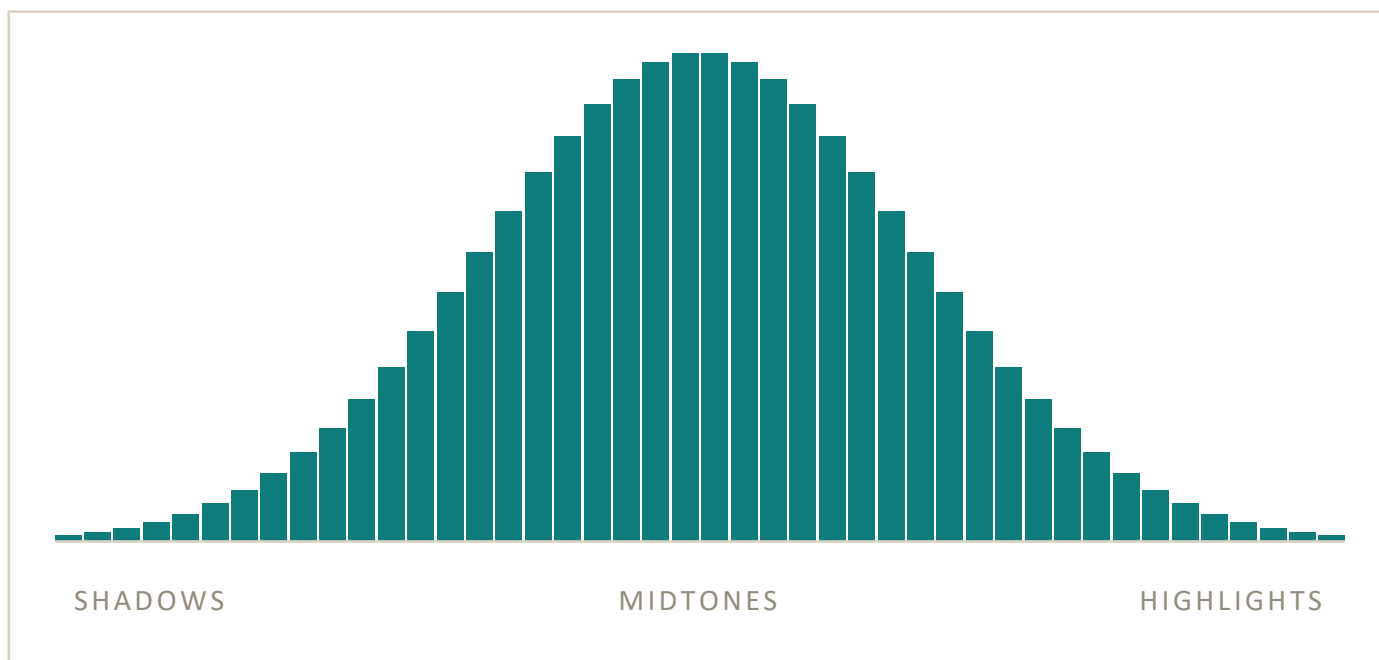
SECTION 02

Histograms

The most honest exposure tool you have

What a histogram shows

A histogram is simply a graph of brightness — a visual way to read exposure without trusting the screen.



Left

Dark tones — the shadows

Middle

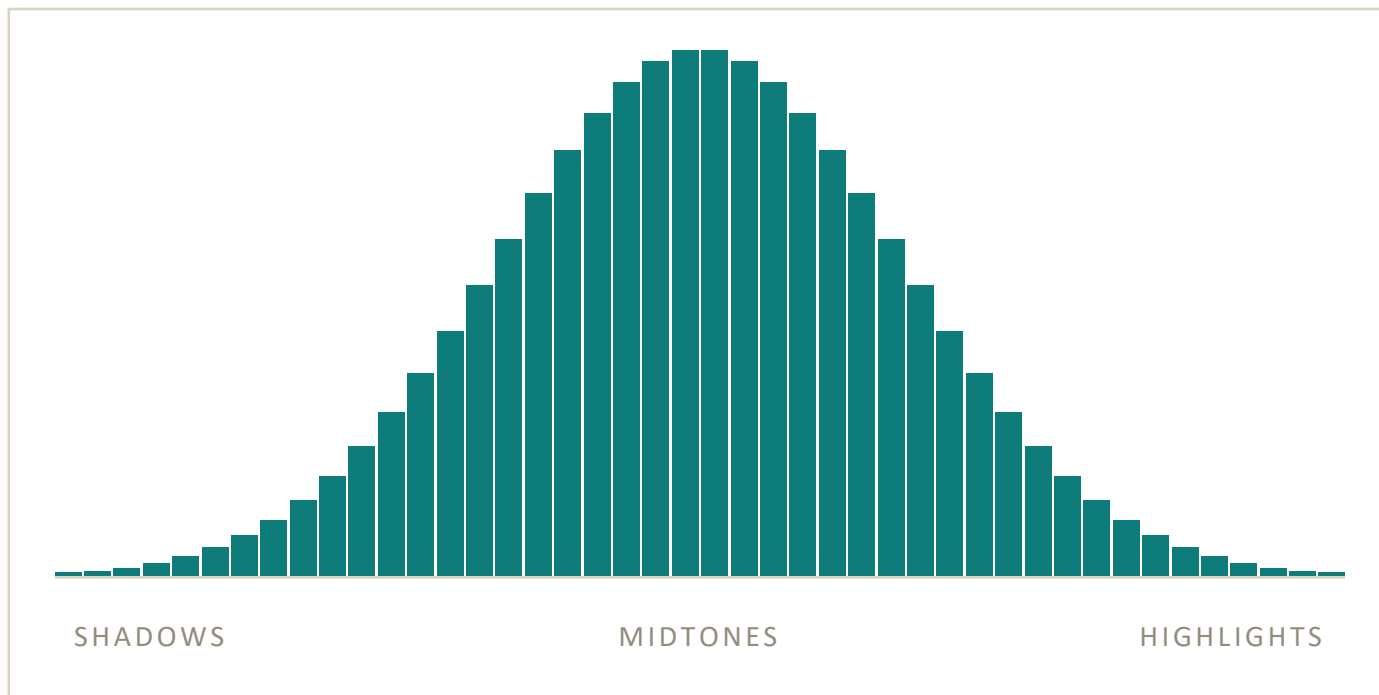
Midtones — the mid-greys

Right

Bright tones — the highlights

READING THE GRAPH

Balanced exposure



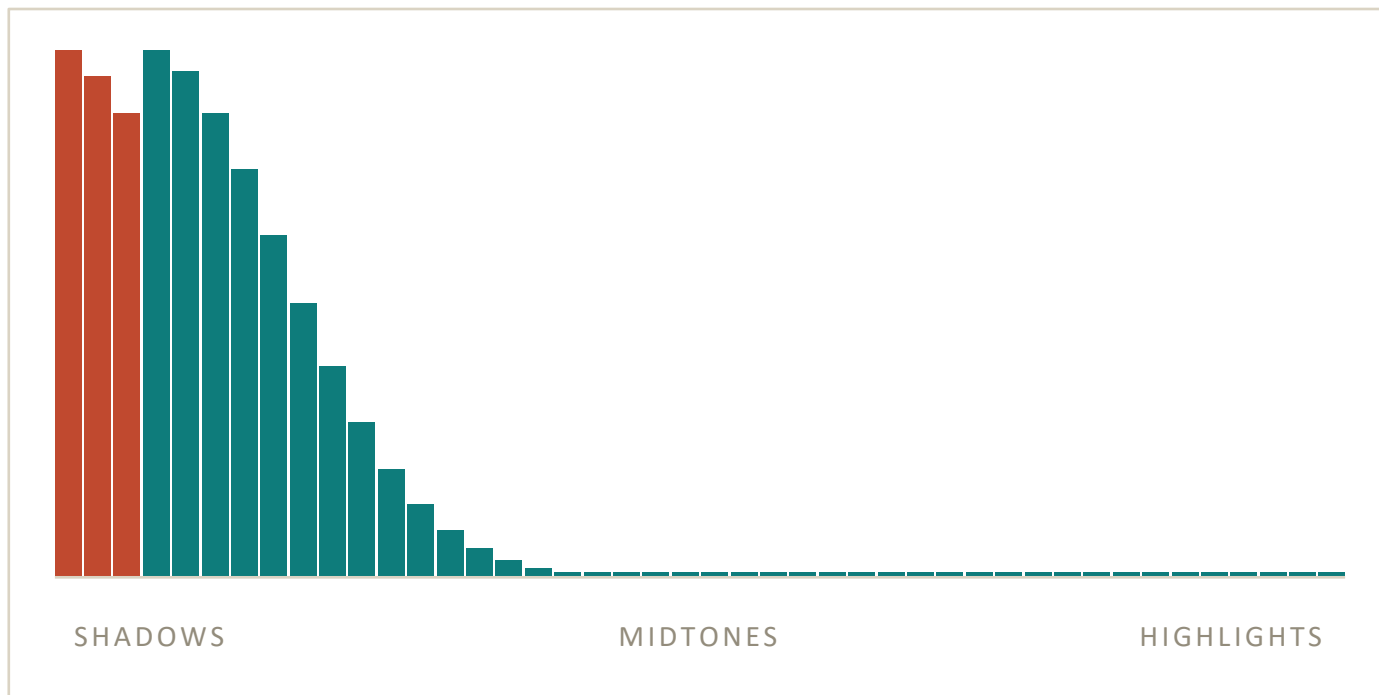
WHAT TO AIM FOR

The graph sits comfortably inside the edges.

No crushing against the left. No crushing against the right. This is the target most of the time.

READING THE GRAPH

Clipped shadows



PROBLEM

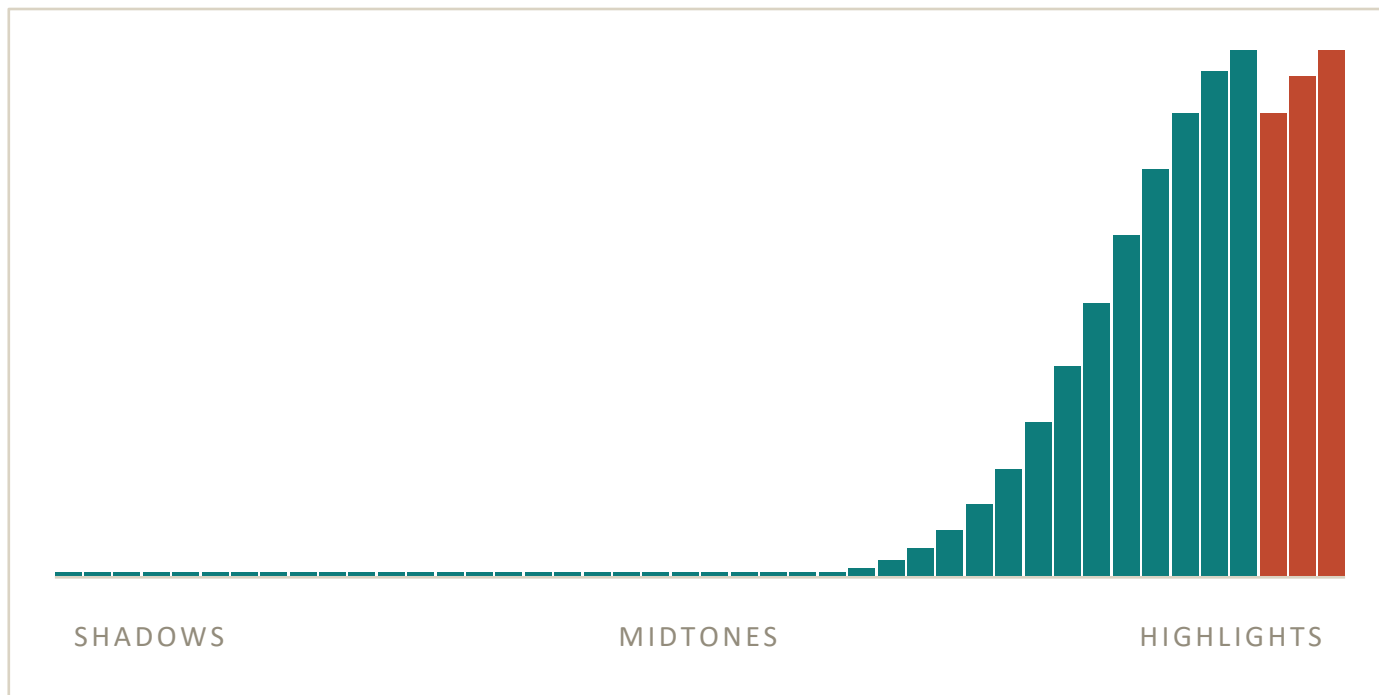
Graph crushed against the left — detail lost in darkness.

THE FIX

Add +EV, widen the aperture, or slow the shutter.

READING THE GRAPH

Clipped highlights



PROBLEM

Graph crushed against the right — detail lost in bright areas.

THE FIX

Use -EV or a faster shutter to pull highlights back.

Why histograms matter

They show the truth.

THE SCREEN

Lies

LCD brightness varies — especially outdoors in daylight. What looks perfect on screen may be badly exposed.

THE HISTOGRAM

Doesn't

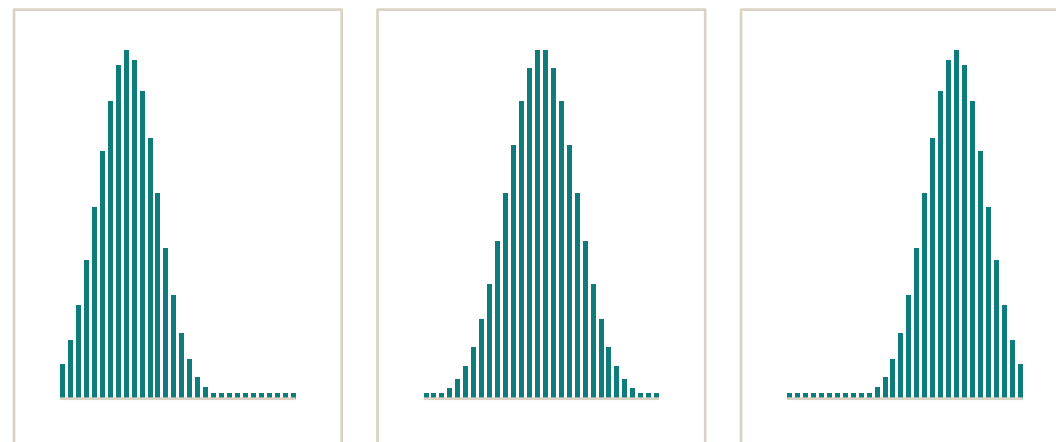
It gives a reliable, objective view of exposure that never changes with the viewing conditions.

YOUR BEST LEARNING TOOL

The live histogram

A live histogram updates in real time. As you adjust exposure, the graph moves — instant, honest feedback.

It is the fastest way to learn how exposure actually behaves.



adjust → graph moves → verify

SECTION 03

Metering + Histogram

Prediction and verification, working together

THE HEART OF IT The combined logic

METERING

Predicts

Points the camera at the light and makes its best guess.



HISTOGRAM

Verifies

Shows the truth so you can judge and correct.

Use both together and exposure becomes deliberate instead of accidental.

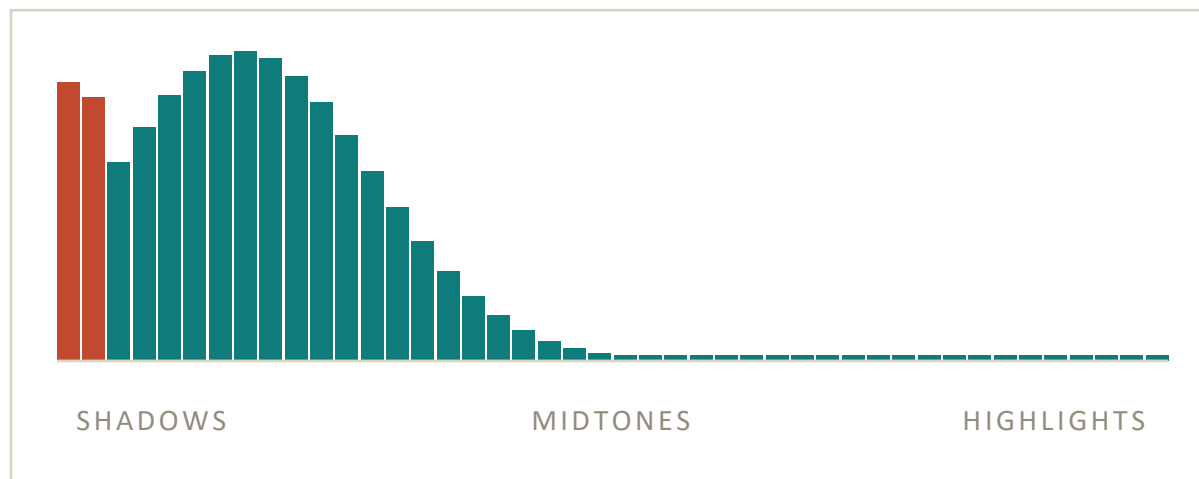


SCENARIO 01

Backlit portrait

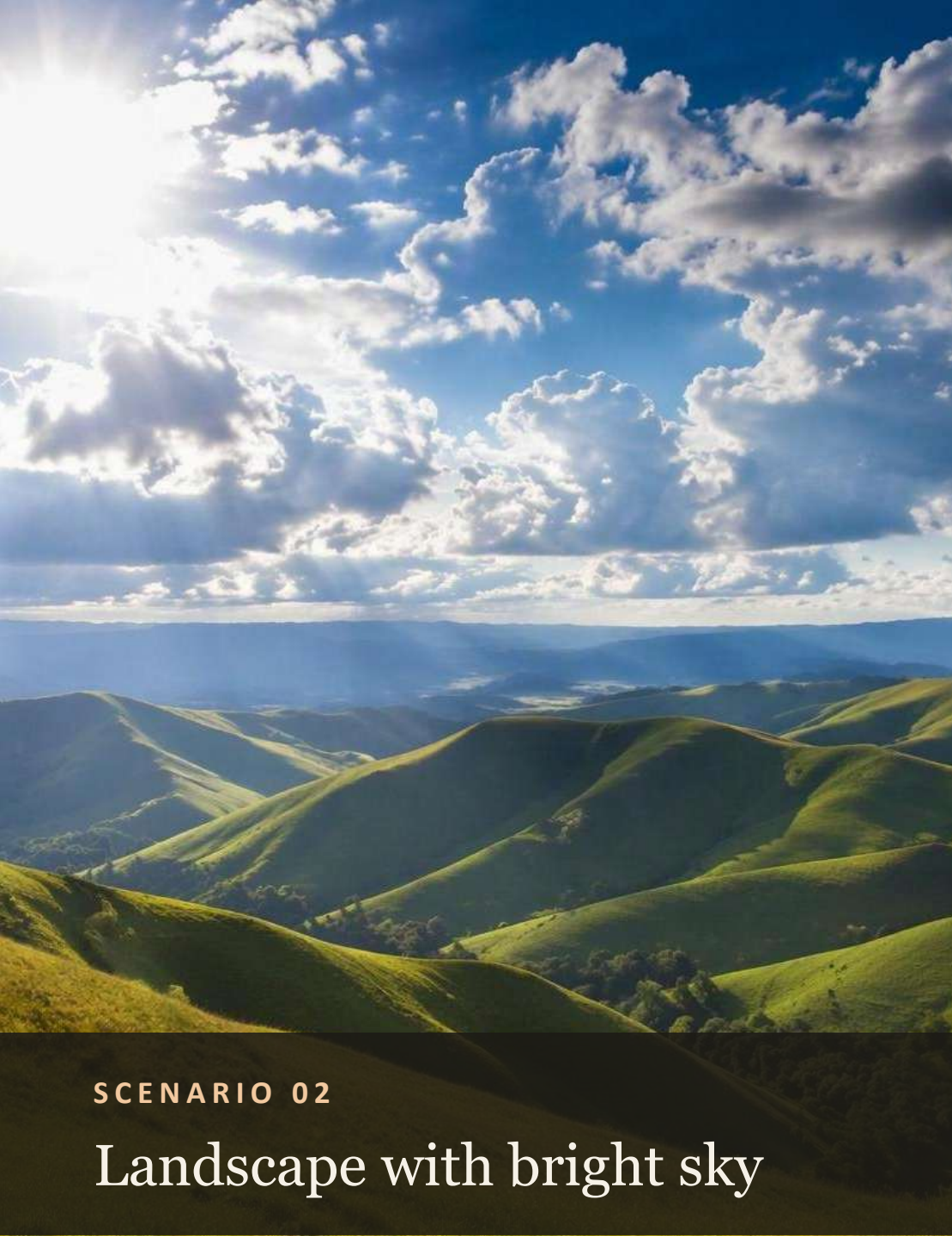
THE PROBLEM

The meter sees the bright background and underexposes the face. The histogram bunches to the left.



SOLUTION

Spot-meter the face and add +1 EV.

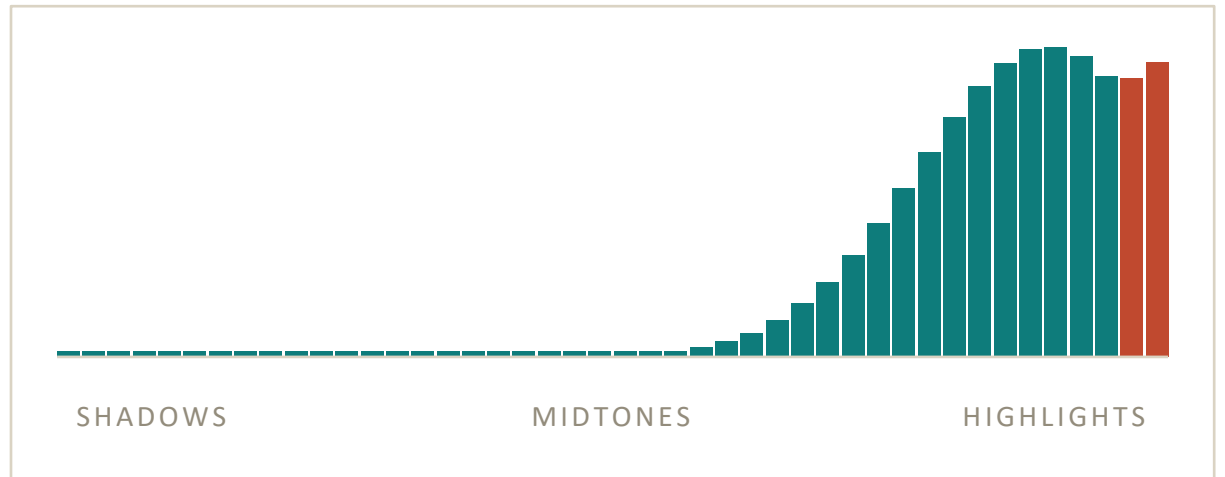


SCENARIO 02

Landscape with bright sky

THE PROBLEM

The meter balances sky and land, and the sky blows out.
The histogram crushes to the right.



SOLUTION

Use Evaluative and add -1 EV.



SCENARIO 03

Bird against the sky

THE PROBLEM

The meter sees the bright sky and turns the bird into a silhouette. The histogram shows deep left clipping.



SOLUTION

Spot-meter the bird and add +1 EV.

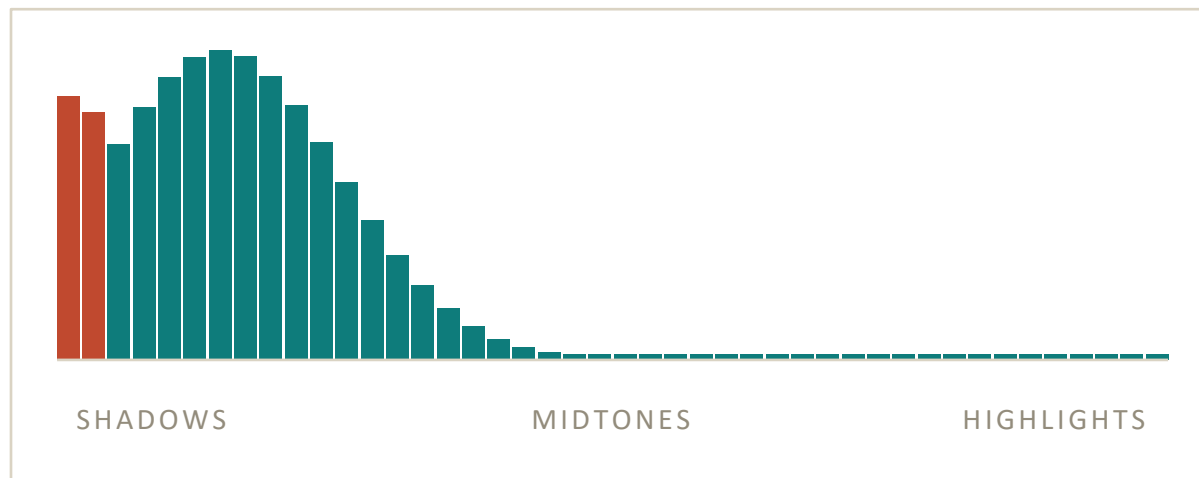


SCENARIO 04

Indoor scene

THE PROBLEM

Metering may be fine, yet the histogram shows crushed shadows the meter can't see.



SOLUTION

Raise the ISO or open the aperture.

A practical workflow

This four-step loop works everywhere — it turns exposure into a deliberate process.

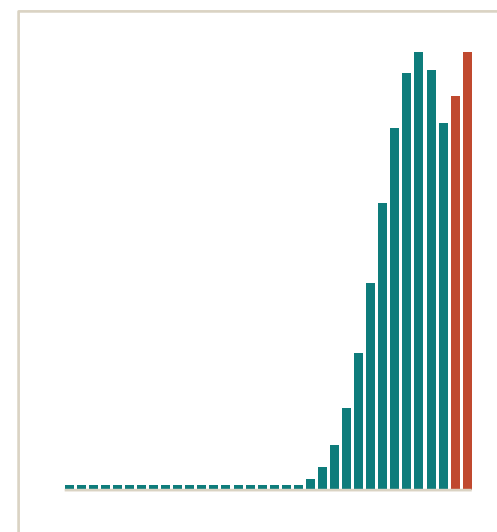


PRECISION, NOT GUESSWORK

Exposure compensation + histogram

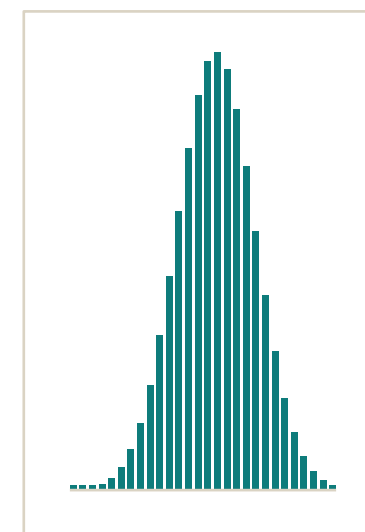
Use the histogram to judge exactly how much EV to add or subtract. Instead of guessing, watch the graph move.

It is precise, repeatable and reliable.



clipped highlights

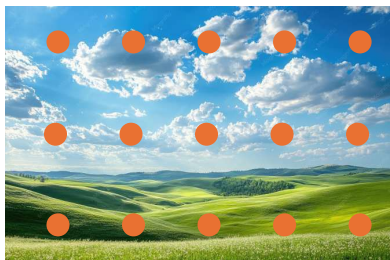
-EV



recovered

When to change metering mode

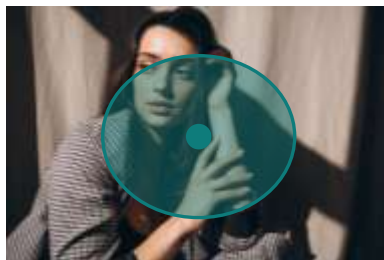
Change mode when the subject changes — this keeps exposure predictable.



GENERAL SCENES



Evaluative



CENTRAL SUBJECTS



Centre-Weighted



PRECISE SUBJECTS



Spot

WHEN TO TRUST THE HISTOGRAM

Always.

The histogram is the truth — the most reliable exposure tool you have.

SECTION 04

Three Simple rules

Three ideas that make it stick

Three simple rules

01

Metering tells the camera where to look

Location-based exposure.

02

The histogram tells you whether it got it right

Verification — your safety net.

03

Exposure compensation fixes the mistakes

Your correction tool.

IN CLOSING

Metering is the guess.

The Histogram is the truth.

Exposure compensation is how you fix the difference.

Understand these three, and exposure becomes simple, predictable and enjoyable.

Film Presents

*Digipics
Productions*

A FILM BY

Graham Evans