Calibrite PROFILER 3 — Camera Profiling with Lightroom Classic

A Complete Step-by-Step Guide for Mac (M1/M2/M3) & Windows 11

Overview

This guide covers the complete workflow for creating a custom DNG camera profile using **Calibrite PROFILER 3.1** and the **ColorChecker Passport,** and getting it to appear correctly in Lightroom Classic's **Profile Browser**. On a Mac with Apple Silicon (M1/M2/M3). On a Windows PC using Windows 11 it will be the similar in most areas, I have included parts where I know it is different.

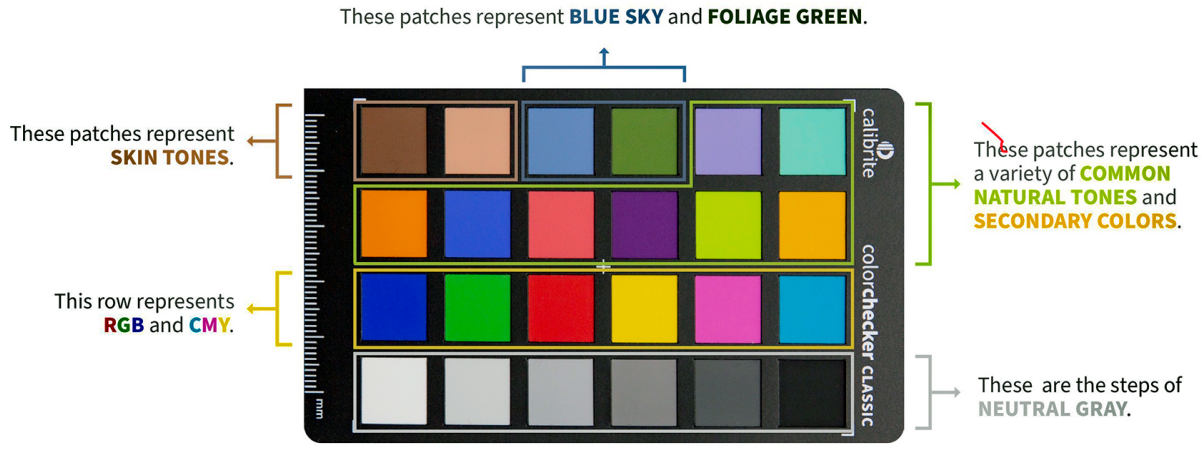
Important distinction before you start:

- A **camera profile** (what we're making here) is a `.dcp` file that tells Lightroom how to interpret your camera's RAW colour data. It appears in the **Profile Browser** at the top of the **Basic** panel in the **Develop** module.
- A **Lightroom preset** is a different thing entirely — it stores develop slider settings. Camera profiles do **not** appear in the **Presets** panel. If your profile isn't showing up in the Presets panel, that's expected — you're looking in the wrong place.

What You Will Need

- ColorChecker Passport (24-patch Classic target) **See Fig1 below**
- Calibrite PROFILER 3.1.0 (installed on your MacBook Pro M1)
- Lightroom Classic (latest version)
- A RAW file (not JPEG) of your ColorChecker Passport, shot under the lighting conditions you want to profile.

DESCRIPTION OF THE COLORCHECKER CLASSIC PATCHES



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Part 1: Shooting the Target — Getting it Right

The quality of your profile depends almost entirely on how well you photograph the target. Errors here cannot be corrected in software

Step 1 — Set up your shot

- Place the ColorChecker Passport flat, facing directly toward the camera. Avoid angles greater than about 15° — angled shots cause uneven patch illumination.
- The target should fill at least 10% of the image width for the software to auto-detect it. Larger is better — filling roughly a third of the frame is ideal.
- Light the target as evenly as possible. If shooting with studio flash, use two lights at 45° to minimise hotspots and shadows across the patches.
- See Fig 2 Below for an example of the relative size of the chart in relation to the full image.

Fig 2,



Step 2 — White balance

- Set your camera white balance to a fixed preset (Daylight, Cloudy, Flash, or Tungsten — whichever matches your light source). Do **not** use Auto White Balance (AWB).
- This white balance setting must stay consistent. You will use the same white balance on all images in the shoot that will use this profile.
- Write down the Kelvin value or preset you used.

Step 3 — Exposure check (critical)

The white patch (bottom-left corner of the ColorChecker Classic) must fall within a specific exposure range:

- White patch RGB values: 180–242 (ideally 235), with no more than ±3 variation between the R, G, and B channels
- The neutral grey patch (bottom row, second from right) should read approximately 128/128/128 RGB (±20), again with channels within ±3 of each other

To check this: import your test shot into Lightroom or open in Adobe Camera Raw. Hover the cursor over each patch and read the RGB values in the histogram area. If the white patch is clipping (over 242) reduce exposure. If it's below 180, increase exposure.

Note: This step is worth taking seriously. If the white patch is blown out or poorly exposed, Calibrite PROFILER will still generate a profile — but it will be inaccurate. A one-stop bracket either side of your test exposure is good practice.

Typical photo that works: It finds patches better if it is this size in frame and same orientation, **see Fig 2 Above**

Step 4 — Shoot two orientations (recommended)

Calibrite recommends rotating the ColorChecker 180° and shooting a second frame. This helps verify that your lighting is even and the white values on both shots should agree within ±3. You only need one shot to create the profile, but both shots together confirm your lighting is reliable.

Part 2: Preparing the RAW File as a DNG

Calibrite PROFILER 3 requires the target image to be in DNG format. You have two ways to do this:

Method A — Via the Lightroom Plug-in (simplest)

This is the recommended method for Lightroom Classic users. The plug-in handles the DNG conversion automatically. Skip to Part 3, Method A below.

Method B — Via Calibrite PROFILER Standalone (manual DNG)

If you prefer to use the standalone PROFILER app directly:

1. Open your RAW target image in Adobe Camera Raw (open it via Bridge, or drag the raw file onto Photoshop)
2. In Camera Raw, do not make any adjustments — check exposure only
3. Click the Save Image button (the floppy disk / save icon in the upper right of the ACR window)
4. In the Save Options dialogue, set Format to Digital Negative (DNG)
5. Make sure Image Compression is NOT selected (uncompressed DNG is required)
6. Save the DNG file to a known location (your Desktop is fine)

You now have a DNG file ready for PROFILER. Continue to Part 3, Method B.

Part 3: Creating the Profile

Method A — Using the Lightroom Classic Plug-in

This is the most streamlined approach.

1. Import your RAW target shot into Lightroom Classic as normal
2. Select the image in the Library module
3. Go to File > Export with Preset > ColorChecker Camera Calibration
> If you don't see this option in the Export with Preset submenu, the plug-in has not installed correctly. See the Troubleshooting section at the end of this guide.

1. The Calibrite camera calibration window will open. It will automatically detect the ColorChecker patches in your image.
2. Name your profile— use a descriptive name that includes:
- Your camera model (e.g. Canon R5, Nikon Z8, Sony A7IV)
- The light source or shoot context (e.g. Daylight 5500K, Studio Flash, Window Light)
- Example: `Canon R5 — Studio Flash`

3. Click **Create Profile** (or equivalent button in PROFILER 3.1 UI)
4. A progress bar shows the profile being built. The RAW file is processed to DNG internally, the 24 patches are detected, and a `.dcp` profile is generated.
5. When complete, the software will confirm the profile has been saved.

Now quit and restart Lightroom Classic. Profiles created while Lightroom is open will not appear until it is restarted — this is an Adobe limitation, not a Calibrite bug.

Method B — Using Calibrite PROFILER Standalone

1. Open Calibrite PROFILER 3
2. Select the Camera workflow
3. Choose DNG Profile
4. Click the folder icon to load your DNG file prepared in Part 2
5. The software will auto-detect the ColorChecker patches. If it cannot detect automatically, click the corner handles to manually align the four corners to the chart corners
6. Enter a descriptive profile name (same naming advice as Method A above)
7. Click, Save Profile

By default PROFILER 3 saves to the Adobe Camera Raw folder:

On Mac,
/Users/[your username]/Library/Application Support/Adobe/Camera Raw/Camera Profiles/
Important: The **app data** folder is hidden by default see Troubleshooting Problem 1.

On Windows
C:/Users/[your username]/App data/Roaming/Adobe/Camera raw/Camera Profiles.

Important: The **app data** folder is hidden by default. If you are navigating manually you must go to the **View** tab in **File Explorer** and check **Hidden Items** to see it

Note the profile is saved as a `.dcp` file (DNG Camera Profile).

Important: Quit and restart Lightroom Classic before looking for the profile.

Part 4: Finding the Profile in Lightroom Classic

This is where most confusion occurs. Camera profiles are not presets and will not appear in the Presets panel. Here is exactly where to find them:

1. Open a RAW image in the **Develop** module — it must be a **RAW** file shot on the same camera you profiled
2. In the right-hand panel, look at the top of the **Basic** panel
3. You will see a **Profile** field showing the currently active profile (e.g. **Adobe Color**)

4. Click the four-squares icon to the right of the profile name — this opens the Profile Browser
5. Scroll down in the Profile Browser. Your custom profile will appear under the Profiles category (sometimes labelled “Camera Matching Profiles” in earlier Lightroom versions)
6. Click your profile to apply it
7. You can hover over any profile to see what it does to your photo.

Note
If the profile does not appear here, see the **Troubleshooting** section below.

Part 5: Applying the Profile to Your Shoot

Once the profile is working, here is the correct workflow to apply it across an entire shoot:

1. Open the first image from the shoot in the **Develop module**
2. Select your custom camera profile in the **Profile Browser**
3. Also set your White Balance to match the setting you used when photographing the target (use the same Kelvin value or preset)
4. In the **Library module**, select all images from the shoot (Ctrl+A / Cmd+A within the folder)
5. Make sure the image with the profile applied is the most-selected image (it will have the brightest highlight)
6. Click **Sync Settings** (bottom right of Library module) or use **Develop > Sync Settings**
7. In the Sync Settings dialogue, check **Process Version**, **Profile**, and **White Balance**
8. Click **Synchronize**

All images from the shoot now have the same colour baseline applied.

Troubleshooting — Common Problems.

Problem 1: On Mac, Profile not appearing in the Lightroom Profile Browser after restart

This is the most common issue and almost always has one of these causes:

Cause A: Profile is saved to the **system Library**, not your **user Library**

macOS has two `Library` folders — the system-wide one at the root level, and your personal one inside your user folder. Calibrite PROFILER must save to your **user Library**. These are the two paths:

✓ **Correct:** `/Users/[your username]/Library/Application Support/Adobe/Camera Raw/Camera Profiles/`
✗ **Wrong:** `/Library/Application Support/Adobe/Camera Raw/Camera Profiles/`

The user Library folder is hidden by default on macOS. To access it:

1. In Finder, hold **Option** and click the **Go** menu — you’ll see **Library** appear
2. Navigate to `Application Support > Adobe > Camera Raw > Camera Profiles`
3. Check whether your `.dcp` file is there

If it’s in the wrong (system) Library, copy it to the correct user Library path above.`

Cause B: The user Library folder doesn't exist yet

If you have never installed a camera profile before, the `Camera Profiles` folder may not exist. Create it manually:

1. Navigate to `/Users/[your username]/Library/Application Support/Adobe/Camera Raw/`
2. Create a new folder called exactly `Camera Profiles` (capital C, capital P)
3. Copy your `.dcp` file into it
4. Restart Lightroom Classic

Cause C: Lightroom was not fully restarted

Quit Lightroom Classic completely (Cmd+Q, not just closing windows), then relaunch. Profiles loaded while Lightroom is running cannot be seen until restart.

Cause D: You are viewing an image from a different camera

Camera profiles are camera-specific. A profile built from your Canon R5 RAW file will only appear when you are viewing a RAW file shot on a Canon R5. If you open an image from a different camera body, the profile will not appear in the browser. This is by design — it prevents incompatible profiles from being applied.

To confirm this is the issue: look at the `.dcp` file in Finder. The filename should correspond to your camera model. Alternatively, use PROFILER's **Profile Manager** utility (within the app) to verify which camera model the profile is locked to.

Problem 2: The Lightroom plug-in option is missing from File > Export with Preset

The plug-in installs automatically when Calibrite PROFILER is installed, but it can fail if Lightroom Classic was not running at installation time, or if you have updated Lightroom since installing PROFILER.

Fix:

1. Quit Lightroom Classic
2. Open a Finder window and navigate to:
   `/Users/[your username]/Library/Application Support/Adobe/Lightroom/Export Presets/`
3. Check whether a folder called `ColorChecker Camera Calibration` exists here
4. If it's missing, reinstall Calibrite PROFILER 3 (download the latest from calibrite.com/software-downloads)
5. During installation, make sure Lightroom Classic is **closed**
6. After reinstall, launch Lightroom Classic and check File > Export with Preset again

Problem 3: Software cannot auto-detect the ColorChecker patches

This is almost always a shooting problem rather than a software problem.

- The target fills less than 10% of the frame — move closer or use a longer focal length
- Extreme angle on the target — reshoot with the target facing the camera squarely
- Uneven lighting casting shadows across patches — relight the scene

- The image is significantly over or underexposed — check the exposure guidance in Part 1 above

If auto-detection still fails, PROFILER allows you to manually click the four corner patches to define the target position. The profile quality will be the same.

Problem 4: Profile appears but makes colours look wrong

The profile was built from a poorly exposed target — see exposure requirements in Part 1
You are applying a daylight profile to images shot under tungsten (or vice versa) — profiles are lighting-specific; always match the profile to the light source under which it was created
White balance is inconsistent between the profile shot and the images you're applying it to — set white balance to the same Kelvin value used when shooting the target

Quick Reference
Profile Save Location on Mac
/Users/[your username]/Library/Application Support/Adobe/Camera Raw/Camera Profiles/
To reveal this folder in Finder:
Hold Option + Click 'Go' in menu. /Library/Application Support/Adobe/Camera Raw/Camera Profiles

Profile Save Location on Windows PC
C:/Users/[your username]/App data/Roaming/Adobe/Camera raw/Camera Profiles.
Important: The **app data** folder is hidden by default. If you are navigating manually you must go to the **View** tab in **File Explorer** and check **Hidden Items** to see it

Quick Reference — Where to Find your Camera Profile in Lightroom Classic

Develop module
→ Basic panel (right-hand side, top)
→ Profile field
→ Click the four-squares icon
→ Profile Browser opens
→ Scroll to find your profile under "Profiles"

The profile will **only appear** when viewing a RAW image shot on the camera the profile was built for.

Summary Checklist

Shooting the target

- Fixed white balance set (not AWB) — note the Kelvin value
- Target fills at least 10% of frame
- Target faces camera squarely
- White patch reads 180–242 RGB, channels within ±3
- Neutral grey reads ~128/128/128, channels within ±3

Creating the profile

- Used Lightroom plug-in (File > Export with Preset > ColorChecker Camera Calibration) or PROFILER standalone with DNG
- Profile given a descriptive name (camera model + light source)
- Profile saved to user Library (not system Library)
- Lightroom Classic fully quit and restarted after profile creation

Applying the profile

- Working in Develop module on a RAW file from the profiled camera
- Profile found in Basic panel > Profile Browser (not in Presets panel)
- White balance set to match the value used when shooting the target
- Profile and WB synced across the rest of the shoot

Calibrite support: calibrite.com/support | Raise a support case: calibrite.com/raise-a-support-case

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