cProfiler

USER GUIDE

gwbcolourcard.uk

This guide provides a complete overview of cProfiler.
From installation, workflow, and best practices for creating accurate ICC and DCP profiles.

Profiling made simple in 5 easy steps.

Contents

Download, Installation & First Run

MacOS:

Download the ZIP file and extract it. Open the extracted folder, then drag cProfiler onto the Applications alias.

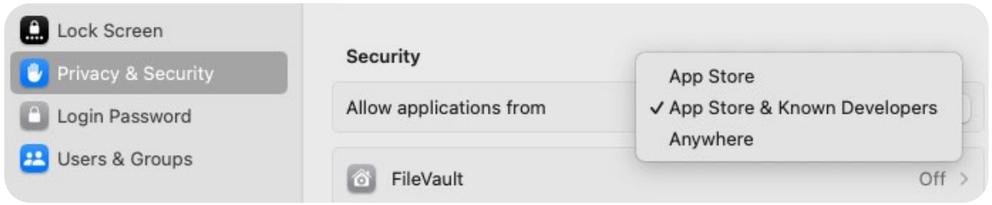
First Launch

Open the app to launch.

cProfiler is signed and notarised for Mac through the Apple Developer Program. macOS allows apps from the App Store and identified developers by default, so the application should run normally.

If a message appears check it hasn't been set to the App Store only:

Go to System Settings – Privacy & Security, then click Open Anyway.



You'll only need to do this once

cProfiler download macOS- Intel

cProfiler download macOS- Silicon

Windows:

Download the ZIP file and extract it. Open the extracted folder and run the installer. Follow the on-screen instructions to complete installation. Once installed, launch cProfiler from the Start Menu or desktop shortcut.

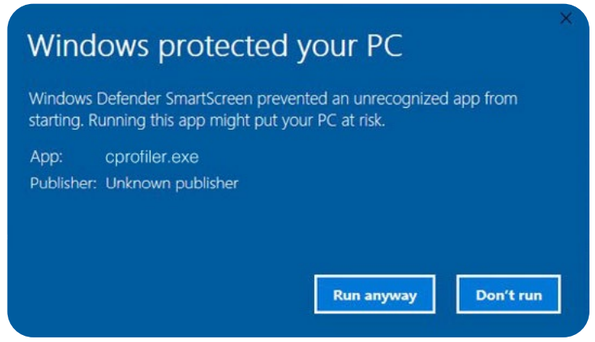
First Launch

Open the app to launch.

The application has been scanned and verified as clean and free from malware before being made available on the hosting site.

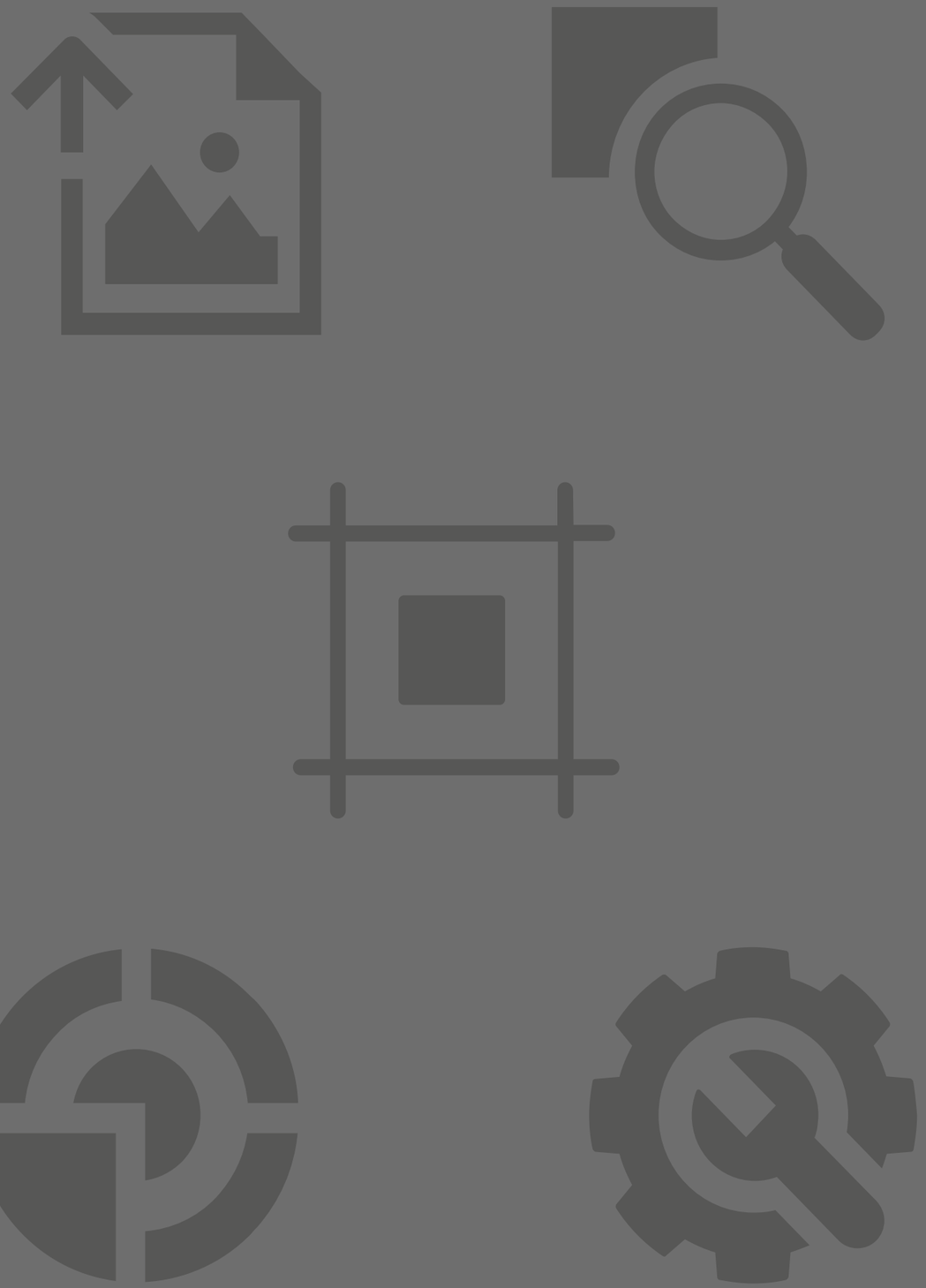
Windows may show a security prompt when opening apps downloaded from the internet. This is normal.

If a message appears: Click More info, then click Run anyway.



cProfiler download Windows

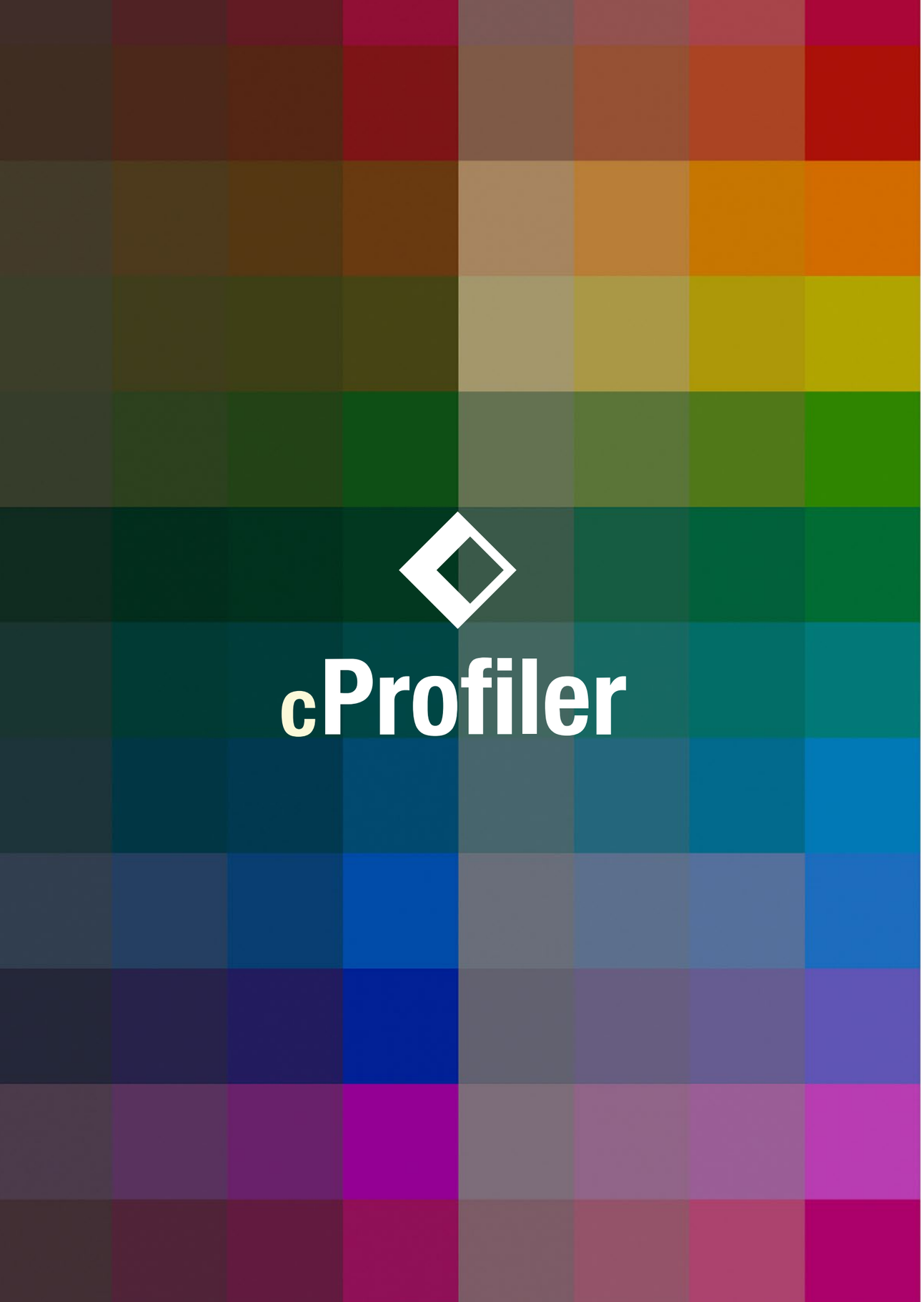
You'll only need to do this once



Simple Workflow (5 Steps)

1. Load your image
2. Select the correct chart
3. Click Identify
4. Choose ICC or DCP
5. Click Create

Your profile will be created and installed automatically.



Overview

Welcome to cProfiler

cProfiler is designed to simplify professional colour profiling while maintaining the accuracy of industry-standard tools. Built on the proven ArgyllCMS colour engine and enhanced with an intuitive visual interface, it removes the need for command-line workflows and complex setup.

With cProfiler, you can create both ICC and DCP profiles quickly and reliably using standard or custom calibration targets. Profiles are generated using established colour science, ensuring accurate and repeatable results across different workflows.

cProfiler creates ICC profiles for scanners and colour-managed workflows, and DCP profiles for Adobe Camera Raw and Lightroom. Profiles are automatically installed to the correct system locations, removing manual steps and reducing errors.

ICC profiles include a quality report with peak and average ΔE values, allowing you to measure accuracy. The software supports a wide range of calibration targets, including IT8, custom reference targets, slide and transparency targets, and is optimised for use with GWB Colour Cards.

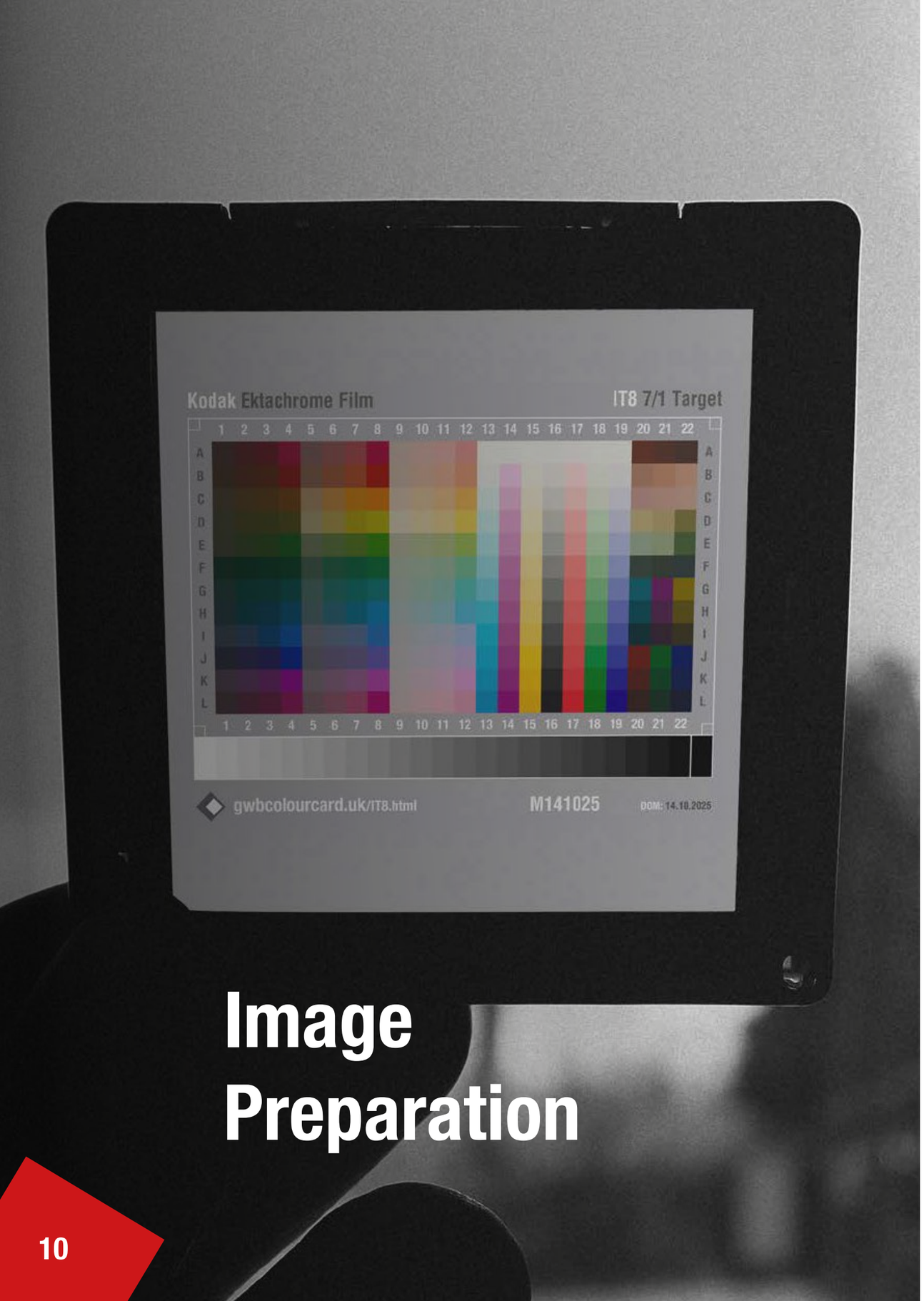


Image Preparation

Image Preparation

Image preparation is the most critical step and the main cause of errors. Results depend on clean, unaltered input and correct capture conditions.

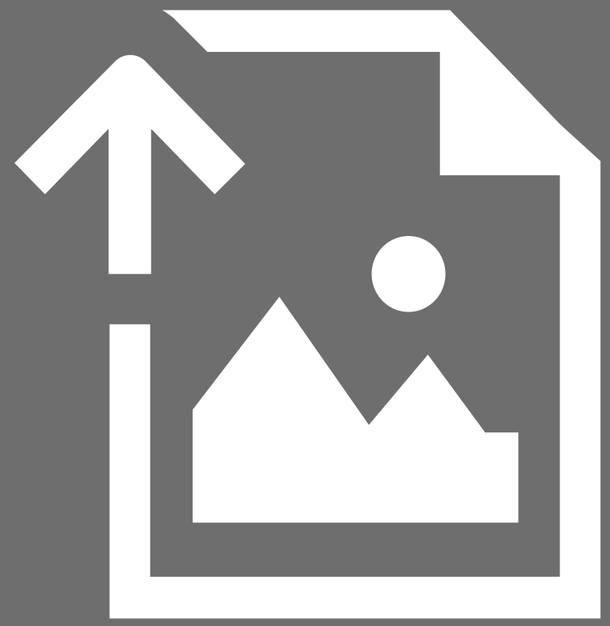
Scanner workflow:

Scans must be completely neutral and unprocessed. Disable all automatic adjustments including exposure correction, colour correction, contrast, sharpening, dust removal (ICE), and grain reduction. Scan in RGB at 24-bit or higher. Do not embed or apply profiles. Ensure the target is fully visible, evenly lit, and correctly aligned. Avoid reflections, colour casts, and uneven illumination. Resolution should be between 1500 and 3000 pixels on the longest side.

Camera workflow:

Capture in RAW. Convert to DNG or TIFF if required without applying corrections. Do not use JPEG. Ensure even lighting with no mixed sources. Keep the camera parallel to the target to avoid distortion.

The target must be flat, fully visible, and properly exposed with no clipped highlights or shadows. Avoid edits or colour adjustments before profiling.



upload

Step1: Upload

Load your image into cProfiler. Supported formats include TIFF, JPEG, and DNG, as well as RAW-converted files saved as TIFF or DNG. For best results, use high-quality, uncompressed or minimally compressed images.

The image must contain the full calibration target, with all patches clearly visible. Do not crop into the chart or remove edges, as this can prevent accurate detection.

Ensure the image is sharp, evenly exposed, and free from motion blur. Avoid heavy compression or prior editing, as this can affect profiling accuracy.

For scanner workflows, use a clean, unprocessed scan with all automatic corrections disabled. For camera workflows, use a properly exposed capture with no clipping in highlights or shadows.

Correct image preparation at this stage is essential, as it directly affects detection accuracy and the quality of the final profile.

Select Chart

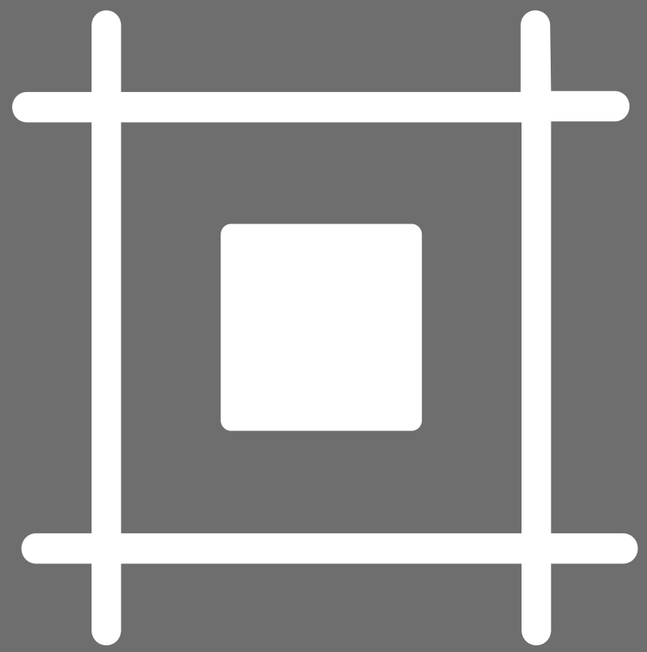
Step2: Select Chart

Select the chart that matches your target.

For custom targets, you must upload the corresponding reference file. This contains the known colour values required for accurate profiling.

IT8 reference files can be downloaded from our website.

IT8 reference files



Identify

Step3: Identify

Click Identify to detect and align the chart automatically. A preview window will open with a grid overlay.

The overlay must align precisely with the colour patches. If it does not, check that the target is fully visible, correctly oriented, not distorted, and within a suitable resolution range.

If alignment is correct, the resulting profile will be reliable. If not, adjust the image and run Identify again.

Profile Mode

Step4: Profile Mode

Select the required profile type:

ICC — for scanner profiling and colour-managed workflows

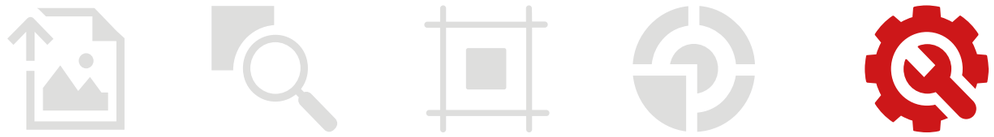
DCP — for camera profiling in Adobe Camera Raw and Lightroom

Choose the mode based on your workflow and output requirements.

When creating a DCP profile, the camera name is important. It must match the make and model of the camera used to capture the target image.

If the camera name does not match, the profile may not appear in Adobe Camera Raw or Lightroom.

Create and Install



Step5: Create and Install

Click Create and Install to generate your profile. Once complete, the profile is installed automatically. ICC profiles include a ΔE report, providing peak and average error values to help evaluate accuracy.

File Locations

Profiles are automatically installed to the correct system locations:

ICC profiles — System colour directory

DCP profiles — Camera Raw profiles folder

All generated files are also saved in the Documents/cProfiler/profiles directory for easy access and backup. This folder will open automatically.

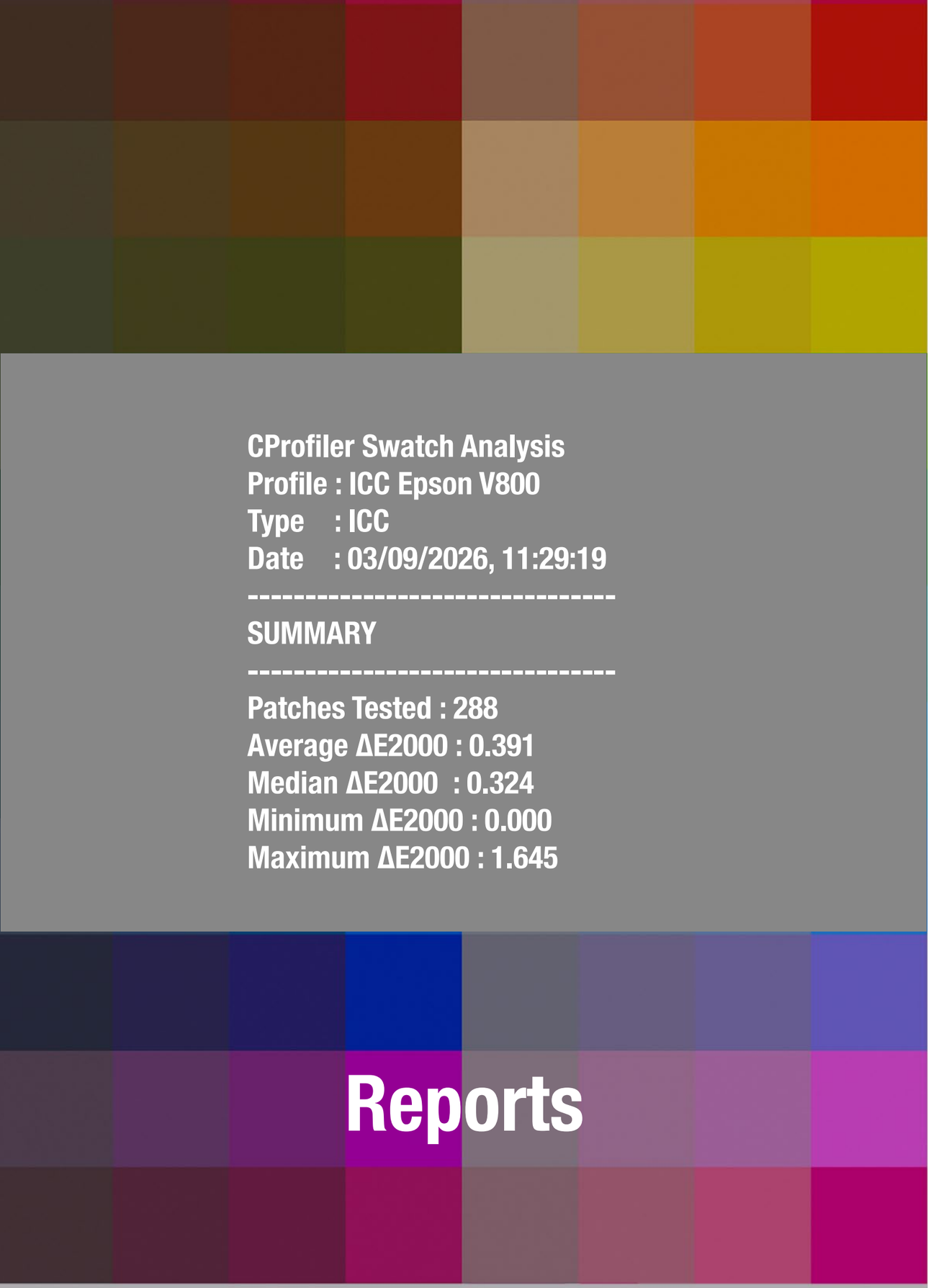
Profile Names

cProfiler will automatically overwrite profiles with the same name. To avoid replacing existing profiles, use a consistent naming convention and back up your Profiles folder regularly. Example: MyProfile_05_05_26

Output and Profiles Folder

cProfiler creates and manages the output and profiles folders, which contain your generated profiles and report files.

Do not move, rename, or delete these folders. They are required for correct operation and profile installation



Understanding ΔE ICC Reports

ICC verification reports show the overall colour accuracy and individual patch performance. Average ΔE2000 indicates the overall colour error across all measured patches, while Maximum ΔE2000 shows the largest individual colour deviation.

The report lists the 10 patches with the highest ΔE2000, the 10 patches with the lowest ΔE2000, and provides a complete list of all patches ranked from highest to lowest ΔE2000. This makes it easy to identify problem patches and assess the overall consistency of the profile.

Lower values indicate better results.

As a guide:

Below 1 — excellent

1 to 2 — very good

2 to 3 — good

Above 3 — may indicate scan or target condition issues.

DCP Reports

DCP reports provide a record of the profile creation and installation process. The report confirms that the DCP profile was created successfully, identifies the profile and creation date, and confirms that it has been installed in the correct system location.

The report also provides the manual installation locations for macOS and Windows, allowing the profile to be installed on another computer if required.

DCP profiles are intended for use within the post-production workflow, where the resulting colour can be evaluated and adjusted as part of the image-processing process.

Troubleshooting

cProfiler includes built-in troubleshooting.
Here are some common issues and how to resolve them.

Detection fails:

Check alignment, ensure full target is visible, reduce excessive resolution, and confirm image quality.

High ΔE values:

Usually caused by processed images, poor lighting, incorrect reference files, or clipped exposure.

Profile not appearing:

Restart your software and confirm installation paths.

Best Practices for ICC and DCP creation

For ICC profiles, scan a clean IT8 target under consistent scanner conditions. Disable automatic corrections that may alter the scan data, and keep the target free from dust, fingerprints, reflections, or damage. The resulting ICC profile can be verified using ΔE values to assess colour accuracy.

For DCP profiles, photograph the colour target in the same lighting environment in which the photographs will be taken. Lighting can vary significantly between locations and environments, so a new target should be photographed whenever the lighting conditions change. Keep camera settings consistent and avoid automatic exposure, white balance, or other colour corrections that could alter the captured target data.

Appendix

ArgyllCMS

An industry-standard colour management engine used to generate ICC profiles.

Batch Profiling

Creating profiles for multiple images or scans under consistent conditions. Profiles can often be reused if conditions remain unchanged.

Clipping

Loss of detail in highlights or shadows where values exceed the recordable range, often leading to inaccurate profiling results.

Colour Cast

An unwanted tint affecting the overall colour balance of an image, often caused by lighting or incorrect settings.

DCP Profile

A camera profile used in Adobe Camera Raw and Lightroom. It defines how RAW data is converted into colour.

ΔE (Delta E)

A numerical measure of colour difference. Lower values indicate higher accuracy. As a guide: below 1 is excellent, 1–2 is very good, above 3 may indicate issues.

Gamut

The range of colours that a device can capture or reproduce. Different devices have different gamuts.

ICC Profile

Defines how colours are interpreted in a colour-managed workflow. Used for scanners, displays, and output devices.

IT8 Target

A standardised colour calibration chart used for scanner profiling. Each target has a corresponding reference file containing known colour values.

Profiling

The process of measuring and correcting colour reproduction to ensure accurate and consistent results.

Reference File

A file containing the measured colour values for a specific target. Required for accurate profiling and must match the target used.

White Balance

The adjustment of colour temperature to ensure neutral tones appear correct. For profiling, it should not be heavily altered before processing.

gwbcolourcard.uk