ChromIQ

Measurement Report - Verification of Profile - CP1500-600p-verify

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Report type: Full colour check · Judged against: Quick check

This report judges the profile built in CP1500-600p, run 1. It was verified by printing a chart through that profile, measuring it, and comparing the measurements with the chart's own aim values. The measurements it covers are listed under Report Scope.

Report Scope

The following verification run is included:

- CP1500-600p-verify, Instrument: X-Rite i1 Pro 3 · Measurements: 1

No. of Measurements:

1

Date range:

2026-10-23 – 2026-10-23

How to read this report

This report compares what the instrument measured against the chart's design colours (the reference values the chart was built from). Most numbers are colour differences in ΔE00: 0 is a perfect match, 1–2 is barely visible, and 10 or more is clearly different. The others name their own unit: ΔCh for a colour cast, ΔL* for a lightness difference, L* for a lightness.

- Average ΔCh, grey balance of the grey ramp: How neutral the greys of the printed test chart are on average: how far each step of the grey ramp sits from having no colour cast at all. Lightness is ignored, only the cast is counted.
- Maximum ΔCh, grey balance of the grey ramp: The worst single step of the grey ramp. One step with a cast is visible in a photograph even when the average looks healthy.
- Average ΔE00, all patches: The average colour error over the whole chart. The headline number, and the one to watch over time.
- Average ΔE00, lowest 95 %: The average over the lowest 95 % of the patches, with the highest 5 % left out, so a handful of very hard colours cannot hide an otherwise good result.
- Average ΔE00, highest 5 %: How bad the hardest colours are: the average over the highest 5 % alone. This is the row that answers what happens at the edge of what the printer can do.
- Maximum ΔE00, all patches: The single worst patch on the sheet. Useful for finding a misread or a damaged patch as well as a real error.
- Maximum ΔE00, lowest 95 % (95th percentile): The maximum difference within the lowest 95 %, which is the 95th percentile: the error 95 % of the chart stays under, counted by rank rather than by fitting a curve.
- Maximum ΔE00, repeat patches on one sheet: How far apart the patches of one colour landed where that colour appears more than once on one sheet of the test chart used. No profile and no aim value is in this number: the patches were asked for the same thing, so what separates them is the printer and the instrument together.
- Maximum ΔE00, the same chart measured again: Whether the same file prints the same colour on another sheet and on another day. This is the question behind asking whether a printer is steady, and it is answered by measuring the same chart more than once.
- Maximum ΔE00, between two of the nine sheet areas: Evenness checks whether the printed sheet shows the same colour everywhere. It has two metrics, “Maximum ΔE00, between two of the nine sheet areas” and “Maximum ΔE00, one sheet area against the whole sheet”. This one is the largest difference between any two of the nine areas. A gradual change from one side of the sheet to the other shows here first, because the two far sides differ most. An uneven sheet usually has one of these causes: banding from the printer, a partly blocked or misaligned print head, paper that is not flat or not the same all over, or, on an instrument that reads whole strips, the instrument changing while it reads. The strips are read one after another, so such a change during the reading shows as a difference across the strips rather than down them. If a difference runs steadily from the first strip read to the last, measure the sheet again in the opposite order: a difference that turns round with the reading may come from the instrument.
- Maximum ΔE00, one sheet area against the whole sheet: Evenness checks whether the printed sheet shows the same colour everywhere. It has two metrics, “Maximum ΔE00, between two of the nine sheet areas” and “Maximum ΔE00, one sheet area against the whole sheet”. This one is the largest difference between one area and the average of all nine. A single area that is off, a blotch, shows here first; a gradual change from one side to the other shows first in the row above. An uneven sheet usually has one of these causes: banding from the printer, a partly blocked or misaligned print head, paper that is not flat or not the same all over, or, on an instrument that reads whole strips, the instrument changing while it reads. The strips are read one after another, so such a change during the reading shows as a difference across the strips rather than down them. If a difference runs steadily from the first strip read to the last, measure the sheet again in the opposite order: a difference that turns round with the reading may come from the instrument.

The four verdict words. A limit set is one column of the limits table: the numbers a report is judged against. Every row of the results ends in one of four verdict words.

- PASS: the measured value is within the limit for that row.
- FAIL: the measured value is over the limit for that row.
- INFO: the number is shown for information only and nothing was judged from it. That happens when the sheet is a profiling measurement, which is never graded, and when the row needs something about the print that was not recorded; the note under the results names the rows in that last case.
- N-A (not applicable): the value could not be worked out from the measured chart. A raised number beside it points to the note under the results that names what is missing.

A column marked “printed raw” under “Judged against” is a sheet printed without the profile. Its paper and solid colour rows are judged against the profile where the limit set has a limit for them; its values that compare the print with the chart's design colours read INFO, with a numbered note that says so. A column's Overall word is PASS when every row that could be checked passed; a row the test chart used could not answer is not counted as a failure, and the sentence under the word says how many there were.

What the numbers mean depends on how the chart was printed:

- A profiling chart is printed WITHOUT colour management (the raw print that is measured to build a profile). It is not expected to match the design closely, so the ΔE can look large, and that is normal. Here it is the CHANGE between dated reports that matters, not a single value.
- A verification chart is printed THROUGH the finished profile, with the printer's colour management off. It SHOULD match the design closely, so low ΔE and passes mean the profile is still accurate; numbers rising over time mean that the profile describes the printer less well than it did. (Printed raw instead, the same sheet is a check of the printer itself, and the report says which way each sheet was printed.)

The ΔE figures measure a whole chain in one number: the profile's conversion of each colour to printer values, the printer's behaviour on the day, and the instrument's own small uncertainty. A rising number means something in that chain has moved; by itself it does not say which part.

These figures show how one profile holds up over time. They are not a fair measure for ranking papers or printers against each other: where a sheet is split by the profile's gamut, the averages cover only the colours each profile can print, and that set differs with every paper. A glossy paper keeps more of the difficult, saturated colours than a matte one, so its average can look worse while it is printing better.

Because the design reference never changes, comparing dated reports of the same chart on the same printer is a clean, reliable signal of change: ageing inks, a wandering printer, or an instrument going off. Screen and print colours here are approximate; the numbers come from the measurement file and are exact.

Report Results

The following results are extracted from the detailed Colour accuracy data shown below for each measurement.

Metric	2026-10-23
Average ΔCh, grey balance of the grey ramp	**PASS**
Maximum ΔCh, grey balance of the grey ramp	**PASS**
Average ΔE00, all patches	**PASS**
Average ΔE00, lowest 95 %	**PASS**
Average ΔE00, highest 5 %	**PASS**
Maximum ΔE00, all patches	**PASS**
Maximum ΔE00, lowest 95 % (95th percentile)	**PASS**
Maximum ΔE00, repeat patches on one sheet	N-A [1)]
Maximum ΔE00, the same chart measured again	N-A [2)]
Maximum ΔE00, between two of the nine sheet areas	N-A [3)]
Maximum ΔE00, one sheet area against the whole sheet	N-A [3)]
Overall	**PASS**
Judged against	Quick check

Notes on the verdicts above:

1) Maximum ΔE00, repeat patches on one sheet: the measured chart never asks for the same colour twice, so there is nothing on the sheet to compare with itself

2) Maximum ΔE00, the same chart measured again: this is the first measurement of the measured chart, so there is nothing to compare it with

3) Maximum ΔE00, between two of the nine sheet areas; Maximum ΔE00, one sheet area against the whole sheet: the patches on pages 1, 2, 3, 4 of the measured chart cover at most 55.8 % of their page; at least 60 % is needed

A row that could not be worked out says nothing about the printer and is not counted as a failure; each note above says why.

Detailed data per measurement

Measurement of 2026-10-23T18:33:51, 576 patches

Profile name: CP1500-600p-verify

How this verification was produced

What this measured	how accurate this profile is — this chart was built only from colours the profile promised it can print, and every figure compares a patch with that promise
Printed	as it is (Raw) — the profile is already inside this chart from the moment it was made, so printing it unchanged is exactly right; nothing was skipped
Colour management at the printer	off
Readings belong to this chart	verified — every patch holds the colour the chart asked for
How the colours were judged	as measured — no white adjustment: every difference counts, the paper's own tone included. (This is a way of comparing, not a rendering intent — a raw print has no intent at all.)
Reference for the ΔE figures	the profile's own colorimetric targets · PROVISIONAL-r2 · 4904 of 16608 master colours in this profile's gamut

Colour accuracy (ΔE00 against the chart's design)

Metric	Measured ΔE00	Limit	Result
Average ΔCh, grey balance of the grey ramp	**1.26**	3.00	**PASS**
Maximum ΔCh, grey balance of the grey ramp	**2.15**	7.00	**PASS**
Average ΔE00, all patches	**1.37**	4.00	**PASS**
Average ΔE00, lowest 95 %	**1.28**	4.00	**PASS**
Average ΔE00, highest 5 %	**3.11**	4.00	**PASS**
Maximum ΔE00, all patches	**4.68**	6.00	**PASS**
Maximum ΔE00, lowest 95 % (95th percentile)	**2.60**	6.00	**PASS**
Maximum ΔE00, repeat patches on one sheet	—	4.00	N-A [1)]
Maximum ΔE00, the same chart measured again	—	6.00	N-A [2)]
Maximum ΔE00, between two of the nine sheet areas	—	2.50	N-A [3)]
Maximum ΔE00, one sheet area against the whole sheet	—	1.70	N-A [3)]
For information (no limit applies)			
Standard deviation ΔE00, all patches	**0.67**	—	—

Notes on the verdicts above:

1) Maximum ΔE00, repeat patches on one sheet: the measured chart never asks for the same colour twice, so there is nothing on the sheet to compare with itself

2) Maximum ΔE00, the same chart measured again: this is the first measurement of the measured chart, so there is nothing to compare it with

3) Maximum ΔE00, between two of the nine sheet areas; Maximum ΔE00, one sheet area against the whole sheet: the patches on pages 1, 2, 3, 4 of the measured chart cover at most 55.8 % of their page; at least 60 % is needed

This verdict was recorded against the limit set Quick check when the report was made.

For information (no limit applies)

Paper white and darkest black (L*)

White (32L) - L* 94.6, a* 0.7, b* -2.5

Black (35I) - L* 9.2, a* -3.6, b* -8.5

Cube corners (ΔE00)

Corner	Expected	Measured	ΔE00
White (32L)			**0.58**
Black (35I)			**9.90**
Red (14I)			**12.49**
Green (33C)			**34.51**
Blue (48E)			**17.10**
Cyan (8J)			**33.51**
Magenta (17K)			**27.08**
Yellow (6A)			**7.81**

Worst patches

Patch	Expected	Measured	ΔE00	Patch	Expected	Measured	ΔE00
22L			**4.68**	18J			**3.13**
17J			**4.27**	39H			**3.13**
7B			**4.07**	18B			**3.10**
29B			**3.63**	29A			**3.10**
18H			**3.52**	11E			**3.07**
29D			**3.31**	2H			**3.00**
18L			**3.22**	14J			**2.88**
20J			**3.14**	13E			**2.88**