Digital Press Certification Application Data Sheet

EFI Fiery E-41A for Ricoh Pro C751 / C751EX / C651EX

Note: Certification is in accordance with IDEAlliance Digital Press Certification Program v2.2

The IDEAlliance Print Properties Digital Print Working Group has established a certification process for digital production presses (xerographic/inkjet). The following information is intended to assist printers and customers in understanding the printing conditions and how they were achieved and/or to replicate these results on a similar system.

I. Manufacturer

Electronics for Imaging
303 Velocity Way
Foster City, CA 94404

II. Product Name

Ricoh Pro C751 / EFI Fiery E-41A / System 9R2 / EFI Laser Proof Paper XF130
Ricoh Pro C751EX / EFI Fiery E-41A / System 9R2 / EFI Laser Proof Paper XF130
Ricoh Pro C651EX / EFI Fiery E-41A / System 9R2 / EFI Laser Proof Paper XF130

III. Overview

Flexible and scalable Fiery servers integrate into any print environment, deliver high performance, image with industry standard precision, and produce accurate color for all environments.
• Deliver professional color and consistency from anyone.
• Color Profiler Suite option provides tools and features to match press standards and monitor colorimetric conformance.
• Decreases set-up time, reduces errors, and costly reprints dramatically.
• Provides high return of investment with a flexible, scalable product line.
• Integrates into all print environments because of its open platform technology.
• Supports variable data printing.

IV. System Components and Printing Procedure

DFE: EFI Fiery E-41A
Software: Fiery Command WorkStation
Fiery Color Profiler Suite
X-Rite ColorPort
Measurement: EFI ES-1000 Spectrophotometer
Eye-one iSis XL
Printer: Ricoh Pro C751
Paper: EFI Laser Proof Paper XF130 Semimatt 130 gsm

Create a new calibration set and higher density calibration target
In order to accurately calibrate the printer and achieve the largest available gamut, a new calibration set should be created. From the Fiery Calibrator choose "Manage…" on the Calibration Set pull down. Fill out the Recommended Paper field with your media (EFI Laser Proof Paper XF130 Semimatt) and set the Halftone Mode pull down to "175 Line + Fine Text (1200dpi)". Save the new calibration set with a descriptive name ("EFI XF130 175Line" for example), and choose "Fiery Pro C751- C651 Coated-Glossy v1RF" as the Output Profile. A new calibration set and output profile will be created, "Fiery Pro C751-C651 Coated-Glossy v1RF (<new calibration set name>)".

From CommandWorkstation : Device Center : Resources : Profiles : Output Profiles select the newly created profile, and click the Edit : Color Editor… button. Edit the % Density : D-Max values to the following: C = 1.75, M = 1.50, Y = 1.01, K = 1.80. Save the edited output profile with a descriptive name ("EFI FX130SM 175Line Edited Goal" for example).

Set the edited output profiles as the default in Command WorkStation : Device Center : Color Setup : Color Management : Expert Settings… : Output : Default output profile. Additionally, be sure that "Use media defined profiles if available" is turned off (unchecked).

Warm-up printer and calibrate
The printer should first be in a warmed-up state before proceeding with calibration and characterization. Print, measure, and apply, calibration for the newly created "EFI XF130 175Line" calibration set, utilizing the Fiery Calibrator. It is recommended to use the EFI Spectrometer ES-1000 method, choosing the 34 Sorted Patches page type. Printing 5 or more number of copies, selecting the last for measurement.

Measurements can be inspected in the Fiery Calibrator, by pressing the View… button, with the "Measurement vs. Target" option selected. If the D-max values of the target are not being achieved, it may be necessary to access "Adjustment Settings for Skilled Operators" through the Pro C751's LCD control panel. Increasing the values in function #0203 "Adjust Maximum Image Density" or #0205 "Adjust Density Difference Across Feed Direction" can have a positive effect on the D-max printed (measured in the Calibrator). It is important to open and close the main panel door on the Pro C751 after adjustment, and to rerun Fiery calibration, checking that target densities have been achieved or exceeded.

Create an output profile

Utilizing Fiery Color Profiler Suite print profiling patches. Be sure in Calibration Setup that "Use current calibration" is selected. Instrument EFI ES-1000 or EFI ES-1000 with iO table can be used. The Page Layout : 1617 random (CGATS IT8.7/4) is recommended. Alternatively, the "Digital Press Form 1" can be printed with the following settings, and measured with an Eye-one Sis XL, utilizing ColorPort. Save the measurements in the CGATS format, conversion none.

Note: While Fiery Color Profiler Suite recognizes this measurement file format, the line with "DEVCALSTD XRGA" present in certain measurement file headers should be commented out or deleted. This allows the ColorPort measurement file to conform to the CGATS file specification and successfully read by Fiery Color Profiler Suite.

The following print properties are used to capture the printer's calibrated state for creating an ICC profile. Any other settings should be set to the server's factory defaults with the exception of media tray settings.

• Media : Media Type : Coated-Glossy
• Media : Media Weight : Paper Weight 4 (105.1 – 163.0 gsm)
• Color : Expert Settings : Color Input : CMYK/Grayscale : Bypass conversion
• Color : Expert Settings : Gray & Black Processing: Gray : CMYK : Off
• Color : Expert Settings : Gray & Black Processing : Black : Black text and graphics : Normal
• Color : Expert Settings : Output : *"EFI XF130SM 175Line Edited Goal"*
• Image: Halftone Mode : 175 Line + Fine Text (1200 dpi)

Once measurements are made, select "Generic CMYK setting" in Fiery Printer Profiler, and edit the black controls to have black start at 5% and black generation at 90%. Save the new output profile to the server or as a local file to import later. Associate newly created output profile with the previously created calibration set "EFI XF130 175Line" when importing into Command WorkStation. It is important that the edited calibration goal profile is set as default ("EFI FX130SM 175Line Edited Goal") when you upload the new profile, for this is where the new profile will get it's calibration goal.

Print the Digital Press Forms

Use the following set of print properties as a baseline for printing the press forms. There are individual exceptions for some of the press forms that will be noted.

• Media : Media Type : Coated-Glossy
• Media : Media Weight : Paper Weight 4 (105.1 – 163.0 gsm)
• Color : Expert Settings : Color Input : CMYK/Grayscale : GRACoL2006 Coated1 (EFI)
• Color : Expert Settings : Color Input : CMYK/Grayscale : Processing method : Full (Output GCR)
• Color : Expert Settings : Color Input : CMYK/Grayscale : Paper simulation : On
• Color : Expert Settings : Gray & Black Processing: Gray : CMYK : Off
• Color : Expert Settings : Gray & Black Processing : Black : Black text and graphics : Normal
• Color : Expert Settings : Output : [newly created output profile]
• Image: Halftone Mode : 175 Line + Fine Text (1200 dpi)

For Digital Press Form 2 and 4 there are some gradient ramps on the page. Some instability in the highlights may develop for some printers, resulting in bands of objectionable color in these ramps. These bands can be addressed by making a small edit with the Device Center : Resources : Profiles : Output Profiles : Edit : Color Editor… Add the spine point Input = 1 : Output = 0, in the channel where banding is apparent. Some additional points need to be added to keep the rest of the curve unchanged (3 : 3, 7 : 7, 10 : 10, 28 : 28, 50 : 50).

For Digital Press Form 4 (Section 2.6) make these changes to the image options.
• Color : Expert Settings : Gray & Black Processing : Black : Black text and graphics : Pure Black On
• Color : Expert Settings : Gray & Black Processing : Black : Black overprint (for pure black) : Text/Graphics
• Image: Text/Graphic Quality : Best

For Digital Press Form 6 (Section 2.8, 2.9, 2.10) turn off color processing.
• Color : Expert Settings : Color Input : CMYK/Grayscale : ColorWise OFF

For Digital Press Form 3 (Section 2.5), the repeatability test, it is recommended for best results to perform Fiery Calibration prior to making the evaluation prints. It is recommended to always use the same device and page type as the initial calibration.

V. Finishing Procedures (Optional)

VI. Additional Data (Optional)

Device Linker "Match to a Standard" iterative profile enhancement can be used to refine color match precision if desired.