Epson WorkForce Pro WF-R5690DTWF
20 PPM Inkjet Printer • Scanner • Copier • Fax

**BUYERS LABORATORY
2015
BLI
HIGHLY RECOMMENDED
LAB TESTED**

Reliability	Excellent
Ease of Use	Very Good
Print Drivers	Very Good
Scan Functions	Good
Multitasking	Good
Feedback	Very Good
Colour Print Productivity	Very Good
Black Print Productivity	Very Good
Colour Copy Productivity	Very Good
Black Copy Productivity	Very Good
Colour Print Quality	Good
Black Print Quality	Good
Setup	Good
Utilities	Fair
Specifications	Very Good
Toner/Ink Yield	Excellent

BLI RECOMMENDATION

Equipped with Epson's Replaceable Ink Pack System, which offers yields of 75,000 pages in black and 50,000 pages in colour, the Epson WorkForce Pro WF-R5690 is ideal for MPS (Managed Print Services) installations where a paramount concern is keeping downtime and cost per page to a minimum. Proving to be a robust, productive and easy-to-use device for mid-size workgroups, the Epson WorkForce Pro WF-R5690 DTWF delivered a strong overall performance in BLI's rigorous lab evaluation. This A4-size colour all-in-one inkjet experienced no misfeeds and required no service calls during its 22,500-impression durability test. With standard automatic duplex and wireless print capabilities, mobile printing is another strength—the unit supports Email Print (which allows users to print email and file attachments), Epson iPrint, Apple AirPrint and Google Cloud Print. In addition, WiFi Direct connectivity creates a secure peer-to-peer connection between mobile devices and the MFP, and helps to minimize the security risk of unauthorised access to the corporate network. The unit's scan functionality is good overall. Users can scan to a variety of destinations including cloud repositories, USB drives, network folders and to email; while its OCR features enable digitized content to be easily searchable and editable. Furthermore, colour scan compression worked very well, with the document file size greatly reduced, which can help attachments stay within corporate email limits and prevent delivery failure. In tests designed to be key indicators of real-world performance, the Epson WorkForce Pro WF-R5690 outpaced most inkjet and laser competitors, registering fast first-print times from overnight sleep and for all three test files from ready mode, fast speeds when printing and copying sets in all modes and fast first-copy times. Boosting user productivity, an Interrupt hard key lets walk-up users halt a current job to output a quick copy job without the need to wait for jobs in the queue to finish. Image

Rating scale: Excellent, Very Good, Good, Fair and Poor.

Test duration: Two months, including a 22,500-impression durability test completed in BLI's product testing facilities.

About BLI: Buyers Laboratory LLC (BLI) is the world's leading independent provider of analytical information and testing services to the document imaging industry. Since 1961, buyers have relied on BLI to help them differentiate products' strengths and weaknesses and make the best purchasing decisions.

This lab test report summary is summarised from BLI's Lab Test Report. More information on the Epson WorkForce Pro WF-R5690DTWF is available through bliQ (www.buyerslab.com/bliQ).

quality for print output was very good overall, with crisp dark fonts, distinct fine lines and natural skin tones in photographic output. In copy mode, it was judged good overall, plus users can select best mode to improve copy quality. Ease of use is a key trait with this model. The WorkForce Pro WF-R5690's colour touchscreen control panel is easy to use and offers added functionality for walk-up users, including the ability to turn on eco settings, check consumables status and configure network settings; another handy feature is that users are able to save settings for regular jobs in the driver. In addition to its super-high-yield cartridge system, its perfect reliability and simple routine maintenance procedures will keep downtime to a minimum. Given its very good overall performance, BLI highly recommends this device in the mid-size workgroup category.

STRENGTHS

- Highly reliable—flawless durability performance
- Exceptionally high average tested yields for all colours; average tested yields for black, cyan and yellow far exceeded their rated yields
- Broad greyscale range, crisp fonts and dark solids in print mode; natural flesh tones in photographic print output; negligible ink transfer when water was dripped across black output; no ink transfer when two types of highlighters were used
- Fast first-print times for all three test files printed from ready mode and when coming out of overnight sleep versus inkjet and the laser devices; fast simplex and duplex running speeds when printing sets in versus inkjet devices; fast simplex running speeds when printing sets versus the laser models
- Fast first-copy times from the platen and document feeder in both modes versus inkjet and laser devices; fast running speeds when copying sets in colour and black 1:1 and 1:2 modes versus inkjet devices
- OCR functionality enables users to create editable, searchable digital files; compression in colour mode worked very well
- Control panel integration with Epson's Document Capture Pro helps simplify capture/routing workflows; unusual for this class, an interrupt key on the panel lets walk-up users stop the current job to make a copy
- Mobile print support offered via Email Print (which allows users to print email and file attachments) and, for Wi-Fi-enabled configurations, Epson iPrint, Apple AirPrint and Google Cloud Print
- Standard automatic duplexing reduces paper waste; printing in economy mode helps extend the life of the cartridges
- Easy-to-use print driver has preprogrammed job settings and allows users to save their own one-click selections; Job Arranger Lite lets users insert blank pages and reorganize, rotate or delete pages in a document
- Simple setup and routine maintenance procedures; quick and easy replacement of cartridge bags keeps downtime to a minimum

WEAKNESSES

- Saturation not bright enough in business graphics in print and copy modes using default settings
- Slow running speeds versus laser models when printing BLI's job stream in colour and black modes and when copying sets in all modes
- Slow scan speeds in all modes versus inkjet and laser models

RELIABILITY

Products are tested for two months, three weeks of which consists of a durability test during which the product is run at half of its manufacturer-rated maximum monthly duty cycle.

Test Period Duration	22,500 Impressions
Total Misfeeds/Misfeed Rate	0
Service Calls	0
PMs	0
Total Service Calls (incl. PMs)	0

BLI's daily test usage is designed to replicate real-world use over an eight-hour workday, and as such includes a mix of various-size documents, simplex and duplex modes, and a mix of short, moderate and long run lengths, and on/off cycles, throughout the day. The durability evaluation also includes testing of the document feeder/scanner for an additional 10 percent of the monthly maximum volume, evenly divided over the course of the test.

PRODUCTIVITY AND EFFICIENCY

Productivity is a measure of the speed at which copy, print and scan jobs are completed. Efficiency is the percentage of the device's advertised speed at which it runs in testing. BLI's experienced test technicians complete a comprehensive series of speed-related tests to simulate real-world conditions. The tested speed and efficiency in the copy and print speed tables below represent the average for all run lengths tested.

Copy Mode

		Black		Full Colour	
Manufacturer's Rated Speed		19.0 CPM		19.0 CPM	
	# of Sets	CPM	Efficiency	CPM	Efficiency
1:1 Simplex Mode	1	6.8	35.7%	4.3	22.7%
	5	14.3	75.5%	11.5	60.4%
	Average	10.6	55.6%	7.9	41.6%
1:2 Duplex Mode	1	5.0	26.3%	3.6	19.1%
	5	8.3	43.8%	7.4	38.8%
	Average	6.7	35.1%	5.5	29.0%
2:2 Duplex Mode	1	4.1	21.6%	3.1	16.1%
	5	7.8	41.1%	6.9	36.1%
	Average	6.0	31.4%	5	26.1%
Document Feeder First-Copy-Out Time		10.82 Seconds		13.82 Seconds	

Print Mode

		Black		Full Colour	
Manufacturer's Rated Speed		20.0 PPM		20.0 PPM	
	# of Sets	PPM	Efficiency	PPM	Efficiency
1:1 Simplex Mode	1	17.4	86.9%	17.2	86.0%
	5	19.5	97.3%	18.5	92.6%
	Average	18.5	92.1%	17.9	89.3%
1:2 Duplex Mode	1	9.5	47.5%	10.0	49.9%
	5	10.5	52.5%	10.6	52.8%
	Average	10	50%	10.3	51.4%
Job Stream Speed		9.1 PPM		8.7 PPM	
Job Stream Efficiency		45.7 %		43.4 %	

Scan Mode	Black	Full Colour
Scan to E-Mail Speed Single-Sided Originals	6.0 IPM	5.7 IPM
Scan to E-Mail Speed Two-Sided Originals	4.6 IPM	4.4 IPM

First-Page Times

Windows XP	Word	PowerPoint	Acrobat
File Type	Black Text	Colour Graphic/Text	Black Graphic/Text
File Extension	DOC	PPT	PDF
First-Print Time (Seconds)	8.09	8.06	7.84

Key

Manufacturer's Rated Speed:	The manufacturer's advertised speed (copies per minute [cpm] or pages per minute [ppm]) for the device.
Document Feeder First-Copy-Out Time:	The time it takes in seconds for a copy to completely exit the device when a copy is made from an original placed in the document feeder.
Job Stream Speed:	The speed at which the device runs at when completing BLI's job stream test.
Copy Modes:	1:1 Simplex Mode: Single-sided original to single-sided copy
	1:2 Duplex Mode: Single-sided original to two-sided copy
	2:2 Duplex Mode: Two-sided original to two-sided copy
Print Modes:	1:1 Simplex Mode: Single-sided print
	1:2 Duplex Mode: Two-sided print
CPM / IPM / PPM:	Copies per minute / Images per minute / Prints per minute. Entries under this heading indicate the speed at which the device operated when completing the test.

INA:	Information not available. Test was not performed on the device.
"--":	Not applicable

Copier productivity tests are based on tests performed by BLI using a variation of ASTM Standard Test Method F1318.
BLI tests a unit's copy productivity by making multiple sets (the number of sets depends on the rated speed of the device) of BLI's 10-page two-sided test original in three copy modes (1:1, 1:2 and 2:2).
BLI tests a unit's print productivity by printing multiple sets (the number of sets depends on the rated speed of the device) of BLI's 10-page Word document test file.
BLI's job stream includes Word documents, Outlook e-mail messages, Excel spreadsheets, PowerPoint, HTML and Acrobat PDF files. This test simulates the type of traffic a typical device might experience in a real-world, multi-user environment.
BLI tests a device's scan speed by sending BLI's 10-page two-sided test original to an e-mail address as a 300-dpi PDF file. Scan speed is determined by measuring the time it takes for BLI's 10-two-sided test original to feed through the document feeder.
Additional information on productivity and BLI's test methodology is available in the Help section on bliQ. See Glossary of Terms in the Table of Contents.

IMAGE QUALITY

BLI evaluates image quality using a combination of industry-recognized copy and print documents plus BLI proprietary test charts. A wide variety of factors are assessed using a combination of BLI technicians' expert visual opinion in addition to scientific measurements using densitometry and colour spectrophotometry equipment.

	Print Quality	Copy Quality
Text	Very Good	Very Good
Line Art	Good	Good
Halftone Pattern/Fill	Good	Good
Halftone Range	Excellent	Excellent
Solids	Good	Good
Colour Business Graphics	Good	Good
Colour Photographic Images	Good	Good

LAB TESTING OVERVIEW

Test Environment: This product was tested in BLI's environmentally controlled US or UK test lab, which replicates typical office conditions.

Test Equipment: BLI's dedicated test network, consisting of Windows 2008 and Microsoft Exchange servers, Windows 7 workstations and 10/100/1000BaseTX network switches.

Test Procedures: BLI's lab testing includes both BLI proprietary and industry-standard test procedures and documents. In addition to a visual image quality evaluation, optical density of primary colour (CMYK) solid fill output is measured using a densitometer, and colour gamut and consistency are evaluated using a colour spectrophotometer. The reliability test is conducted using Georgia Pacific Spectrum and Boise Cascade paper in the US and UPM, Data Copy and Mondi paper in the UK. In both cases, 30 percent of the paper is recycled paper The media used for image quality testing is Georgia-Pacific Printing Paper (24 lb., 96 brightness) in the US and UPM Future ImageTech 100gsm paper in the UK.