

ISO/IEC 24734 Printing Productivity Report: Office Category

Full Detailed Test Report - LETTER

HP LaserJet Pro M148dw

Printing device and settings	
Test Start Date and Time	8/30/2018 11:11
Tester	Wing
Machine name/model	HP LaserJet Pro M148dw
Colour or B&W	B&W
FW Version	20180726
Temperature and Humidity	75 degF / 24 degC 25.0 %rH
Voltage	220V
Test End Date and Time	2/15/2019 17:00

Item	Value	
Mode and Setting	Driver Version	44.3.2667
	Media/Quality Setting	Default / Default
	Simplex B&W Settings	default
	Duplex B&W Settings	default
	Setting N set count	Application
Paper Path	Collating function	Activated (application)
	Paper Sending Direction	Default
	Paper Size Setting	Default
	Paper Feeding	Tray 2
	Paper Exit	Standard Exit Tray
	Output Orientation	Default (face down)
Paper	Duplexing Unit (Yes/No)	Yes
	Paper Manufacturer	HP / Xerox
	Paper Weight	20lb / 75 g/m2
	Paper Size	Letter / A4
	Paper type/name	HP Multipurpose Ultra White / HP Office

Summary Report: Letter

Office Category Test for B&W Device		FSOT (seconds)	ESAT (ipm)
B&W	Simplex	12.83	30.20
	Duplex	18.58	18.77

Notes

- 1) All printing device and driver settings were default mode.
- 2) For the B/W results, the print driver was set to "print in B/W".
- 3) For more information see <http://www.hp.com/go/printerclaims>.
- 4) Port monitor not configured to follow device if the IP address changes.

Detailed Report: LETTER

Office Category Test	FSOT (secs)	EFTP (ipm)			ESAT (ipm)	
		1 set only (1 set)	1 set + 30sec (# of sets)	1 set + 4min (# of sets)		
Color Mode	Simplex - Adobe Reader	(1 set)				
	Simplex - Word	(1 set)				
	Simplex - Excel	(1 set)				
	Simplex - Average					
	Duplex - Adobe Reader	N/A	N/A	N/A	N/A	
	Duplex - Word	N/A	N/A	N/A	N/A	
	Duplex - Excel	N/A	N/A	N/A	N/A	
	Duplex - Average	N/A	N/A	N/A	N/A	
B&W mode (optional for color device)	Simplex - Adobe Reader	12.45	19.28 (1 set)	27.11 (5 sets)	28.11 (32 sets)	30.19
	Simplex - Word	13.19	18.19 (1 set)	26.66 (5 sets)		30.20
	Simplex - Excel	12.85	18.68 (1 set)	26.89 (5 sets)		30.21
	Simplex - Average	12.83	18.71 (1 set)	26.88 (5 sets)	28.1	30.20
	Duplex - Adobe Reader	17.91	13.40 (1 set)	17.02 (4 sets)		18.76
	Duplex - Word	18.87	12.70 (1 set)	16.78 (4 sets)		18.80
	Duplex - Excel	18.94	12.66 (1 set)	16.72 (4 sets)		18.76
	Duplex - Average	18.58	12.92 (1 set)	16.84 (4 sets)		18.77

Notes

- 1) All printing device and driver settings were default mode.
- 2) For the B/W results, the print driver was set to "print in B/W".
- 3) For more information see <http://www.hp.com/go/printerclaims>.
- 4) Port monitor not configured to follow device if the IP address changes.

Test System Parameters

Item	Value
Computer	HP Z240 SFF Workstation
Processor	Intel Core i7 -6770, 3.4 GHz
System Chip Set	Intel SKL/KBL Mobile/Desktop
System Board	system devices, default system BIOS
System Memory	8 GB
Hard Drive Subsystem	Turbo Drive G2 256GB PCIe SSD
Video Subsystem	Microsoft Basic Display Adaptor
Optical Drive	HP HLDS DVD+RW GUD1N
I/O Subsystem	Builtin
USB Subsystem	USB 2.0/3.0
TCP/IP	10.10.10.0
Operating System	Win 10 Enterprise 64 Bit (10240)
Printing Applications	Microsoft Office Word 2016
	Acrobat Reader DC
	Microsoft Office Excel 2016
Print Driver	Not Specified
Test files and location	Office category files, hard drive

ISO/IEC 24734 Printing Productivity Report: Office Category

Full Detailed Test Report - A4
HP LaserJet Pro M148dw

Printing device and settings	
Test Start Date and Time	8/30/2018 11:11
Tester	Wing
Machine name/model	HP LaserJet Pro M148dw
Colour or B&W	B&W
FW Version	20180726
Temperature and Humidity	75 degF / 24 degC 25.0 %rH
Voltage	220V
Test End Date and Time	2/15/2019 17:00

Item	Value	
Mode and Setting	Driver Version	44.3.2667
	Media/Quality Setting	Default / Default
	Simplex B&W Settings	default
	Duplex B&W Settings	default
	Setting N set count	Application
Collating function		Activated (application)
Paper Path	Paper Sending Direction	Default
	Paper Size Setting	Default
	Paper Feeding	Tray 2
	Paper Exit	Standard Exit Tray
	Output Orientation	Default (face down)
	Duplexing Unit (Yes/No)	Yes
Paper	Paper Manufacturer	HP / Xerox
	Paper Weight	20lb / 75 g/m2
	Paper Size	Letter / A4
	Paper type/name	HP Multipurpose Ultra White / HP Office

Summary Report: A4			
Office Category Test for B&W Device		FSOT (seconds)	ESAT (ipm)
B&W	Simplex	13.36	28.69
	Duplex	19.03	18.15
Notes			
1) All printing device and driver settings were default mode.			
2) For the B/W results, the print driver was set to "print in B/W".			
3) For more information see http://www.hp.com/go/printerclaims .			
4) Port monitor not configured to follow device if the IP address changes.			

Detailed Report: A4						
Office Category Test	FSOT (secs)	EFTP (ipm)			ESAT (ipm)	
		1 set only (1 set)	1 set + 30sec (# of sets)	1 set + 4min (# of sets)		
Colour Mode	Simplex - Adobe Reader		(1 set)			
	Simplex - Word		(1 set)			
	Simplex - Excel		(1 set)			
	Simplex - Average					
	Duplex - Adobe Reader	N/A	N/A	N/A	N/A	
	Duplex - Word	N/A	N/A	N/A	N/A	
	Duplex - Excel	N/A	N/A	N/A	N/A	
	Duplex - Average	N/A	N/A	N/A	N/A	
B&W mode (optional for color device)	Simplex - Adobe Reader	12.91	18.59 (1 set)	25.87 (5 sets)	28.17 (30 sets)	28.68
	Simplex - Word	13.81	17.37 (1 set)	25.38 (5 sets)		28.71
	Simplex - Excel	13.36	17.96 (1 set)	25.61 (5 sets)		28.70
	Simplex - Average	13.4	17.97 (1 set)	25.62 (5 sets)	28.2	28.69
	Duplex - Adobe Reader	18.26	13.14 (1 set)	16.52 (4 sets)		18.16
	Duplex - Word	19.44	12.32 (1 set)	16.22 (4 sets)		18.14
	Duplex - Excel	19.37	12.38 (1 set)	16.28 (4 sets)		18.16
	Duplex - Average	19.0	12.61 (1 set)	16.34 (4 sets)		18.15

Notes
1) All printing device and driver settings were default mode.
2) For the B/W results, the print driver was set to "print in B/W".
3) For more information see <http://www.hp.com/go/printerclaims>.
4) Port monitor not configured to follow device if the IP address changes.

Test System Parameters	
Item	Value
Computer	HP Z240 SFF Workstation
Processor	Intel Core i7 -6770, 3.4 GHz
System Chip Set	Intel SKL/KBL Mobile/Desktop
System Board	system devices, default system BIOS
System Memory	8 GB
Hard Drive Subsystem	Turbo Drive G2 256GB PCIe SSD
Video Subsystem	Microsoft Basic Display Adaptor
Optical Drive	HP HLDS DVD+RW GUD1N
I/O Subsystem	Builtin
USB Subsystem	USB 2.0/3.0
TCP/IP	10.10.10.0
Operating System	Win 10 Enterprise 64 Bit (10240)
Printing Applications	Microsoft Office Word 2016
	Acrobat Reader DC
	Microsoft Office Excel 2016
Print Driver	Not Specified
Test files and location	Office category files, hard drive

ISO/IEC 24734 Printing Productivity Report: Office Category

Feature Performance Full Report - Office Feature Performance Test

HP LaserJet Pro M148dw

Printing device and settings	
Test Start Date and Time	8/30/2018 11:11
Tester	Wing
Machine name/model	HP LaserJet Pro M148dw
Colour or B&W	B&W
FW Version	20180726
Temperature and Humidity	75 degF / 24 degC 25.0 %rH
Voltage	220V
Test End Date and Time	2/15/2019 17:00

Item	Value	
Mode and Setting	Driver Version	44.3.2667
	Media/Quality Setting	Default / Default
	Simplex B&W Settings	default
	Duplex B&W Settings	default
	Setting N set count	Application
Paper Path	Collating function	Activated (application)
	Paper Sending Direction	Default
	Paper Size Setting	Default
	Paper Feeding	Tray 2
	Paper Exit	Standard Exit Tray
	Output Orientation	Default (face down)
	Duplexing Unit (Yes/No)	Yes
Paper	Paper Manufacturer	HP / Xerox
	Paper Weight	20lb / 75 g/m2
	Paper Size	Letter / A4
	Paper type/name	HP Multipurpose Ultra White / HP Office

ISO Print Productivity Report: Feature Performance Test Summary

Printing Modes (Feature Adobe Reader - Office test file)		Feature Performance Ratio	
		FSOT (base) FSOT (feature)	ESAT (feature) ESAT (base)
A5, Landscape Feed, Simplex, Colour	Simplex		
A5, Portrait Feed, Simplex, Colour	Simplex		
Legal, Simplex, Colour	Simplex		
Legal, Duplex, Colour	Duplex		
A4, 1200 dpi, Simplex, Colour	Simplex		
Letter, 1200 dpi, Simplex, Colour	Simplex		
A4, General Office, Simplex, Colour	Simplex		
Letter, General Office, Simplex, Colour	Simplex		
A5, Landscape Feed, Simplex, B/W	Simplex	145%	173%
A5, Portrait Feed, Simplex, B/W	Simplex	27%	21%
Legal, Simplex, B/W	Simplex		
Legal, Duplex, B/W	Duplex		
A4, 1200 dpi, Simplex, B/W	Simplex		
Letter, 1200 dpi, Simplex, B/W	Simplex		
A4, General Office, Simplex, B/W	Simplex		
Letter, General Office, Simplex, B/W	Simplex		

- Notes
- 1) All printing device and driver settings were default mode.
 - 2) Test conducted with 8-paper Office Feature Performance file.
 - 3) For more information see <http://w.w.w.hp.com/go/printerclaims>.
 - 4) Port monitor not configured to follow device if the IP address changes.

Feature Performance Full Report - Feature Printing Mode: 'Office' Feature Performance Test

Printing Modes Feature Adobe Reader - Office test file (8-page)	Base Printing Mode		Feature Performance			
	FSOT Base	ESAT Base	1 set FSOT (secs)	1 set + 30 sec ESAT (ipm)	FSOT (base) FSOT (feature)	ESAT (feature) ESAT (base)
A5, Landscape Feed, Simplex, Colour						
A5, Portrait Feed, Simplex, Colour						
Legal, Simplex, Colour						
Legal, Duplex, Colour						
A4, 1200 dpi, Simplex, Colour						
Letter, 1200 dpi, Simplex, Colour						
A4, General Office, Simplex, Colour						
Letter, General Office, Simplex, Colour						
A5, Landscape Feed, Simplex, B/W	20.86	28.68	14.42	49.6	145%	173%
A5, Portrait Feed, Simplex, B/W	20.86	28.68	79	6.1	27%	21%
Legal, Simplex, B/W	20.65	30.22				
Legal, Duplex, B/W	20.65	30.22				
A4, 1200 dpi, Simplex, B/W	20.86	28.68				
Letter, 1200 dpi, Simplex, B/W	20.65	30.22				
A4, General Office, Simplex, B/W	20.86	28.68				
Letter, General Office, Simplex, B/W	20.65	30.22				

- Notes
- 1) All printing device and driver settings were default mode.
 - 2) Test conducted with 8-paper Office Feature Performance file.
 - 3) For more information see <http://w.w.w.hp.com/go/printerclaims>.
 - 4) Port monitor not configured to follow device if the IP address changes.

Test System Parameters

Item	Value	
Test System	Computer	HP Z240 SFF Workstation
	Processor	Intel Core i7 -6770, 3.4 GHz
	System Chip Set	Intel SKL/KBL Mobile/Desktop
	System Board	system devices, default system BIOS
	System Memory	8 GB
	Hard Drive Subsystem	Turbo Drive G2 256GB PCIe SSD
	Video Subsystem	Microsoft Basic Display Adaptor
	Optical Drive	HP HLDS DVDRW GUD1N
	IO Subsystem	Builtin
	USB Subsystem	USB 2.0/3.0
I/O	TCP/IP	
Software	Operating System	Win 10 Enterprise 64 Bit (10240)
	Printing Applications	Microsoft Office Word 2016
		Acrobat Reader DC
	Print Driver	Microsoft Office Excel 2016
	Test files and location	Not Specified
	Office category files, hard drive	

ISO/IEC 17629 First Print Out Time Report: Office Category

Full Detailed Test Report - LETTER

HP LaserJet Pro M148dw

Printing device and settings		
Test Start Date and Time	8/30/2018 11:11	
Tester	Wing	
Machine name/model	HP LaserJet Pro M148dw	
Colour or B&W	B&W	
FW Version	20180726	
Configuration (options)	Default	
Controller	12500	
Printing device page count	Not Specified	
Printing supplies page count	Not Specified	
Temperature and Humidity	75 degF / 24 degC 25.0 %rH	
Voltage	220V	
Test End Date and Time	2/15/2019 17:00	

Item	Value	
Mode and Setting	PDL and driver version	44.3.2667
	Print Quality mode	default
	B&W settings	default
	Paper feed orientation	Short Edge
Paper	Paper type setting	default
	Paper feeding	Standard cassette
	Paper exit	Standard exit tray
Paper Path	Output orientation	default (face up or face down)

ISO First Page Out Time Summary Report: Office Category

Summary Report: Letter

FPOT from Ready (seconds)		
B&W	Simplex	6.62
	Duplex	

Notes
 1) All printing device and driver settings were default mode.
 2) For the B/W results, the print driver was set to "print in B/W".
 3) For more information see <http://www.hp.com/go/printerclaims>.
 4) Port monitor not configured to follow device if the IP address changes.
 5) Page counts were collected after completion of the tests.

ISO First Page Out Time Report: Office Category

Detailed Report: LETTER

		Word (seconds)	Excel (seconds)	Adobe Reader (seconds)	Average (seconds)	Delay Time
Color Mode	FPOT from Ready - Simplex					
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			N/A		
	Recovery Time					
	FPOT from Off - Simplex					
	Warm-up Time					
B&W Mode	FPOT from Ready - Simplex	7.00	6.57	6.29	6.62	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			6.70		61 Minutes
	Recovery Time			0.4		
	FPOT from Off - Simplex			61.08		
	Warm-up Time			54.79		

Notes
 1) All printing device and driver settings were default mode.
 2) For the B/W results, the print driver was set to "print in B/W".
 3) For more information see <http://www.hp.com/go/printerclaims>.
 4) Port monitor not configured to follow device if the IP address changes.
 5) Page counts were collected after completion of the tests.
 6) Details for FPOT from Sleep are shown below.

HP Data Table

Detailed Report: LETTER

		FPOT Avg (secs)	FPOT (secs) Iteration 1	FPOT (secs) Iteration 2	FPOT (secs) Iteration 3	Application	Delay Time
Color Mode	FPOT from Sleep	N/A	N/A	N/A	N/A	Adobe Reader	
	FPOT from Sleep (15 minutes) HP/Non ISO Test	N/A	N/A	N/A	N/A	Adobe Reader	
B&W Mode	FPOT from Sleep	6.70	6.69	6.71	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes) HP/Non ISO Test	6.70	6.68	6.72	N/A	Adobe Reader	16 Minutes

Notes
 1) All printing device and driver settings were default mode.
 2) For the B/W results, the print driver was set to "print in B/W".
 3) DLP includes detailed iterations as data measurements may vary run to run.

Test System Parameters

Item	Value	
Test System	Computer	HP Z240 SFF Workstation
	Processor	Intel Core i7 -6770, 3.4 GHz
	System Chip Set	Intel SKL/KBL Mobile/Desktop
	System Board	system devices, default system BIOS
	System Memory	8 GB
	Hard Drive Subsystem	Turbo Drive G2 256GB PCIe SSD
	Video Subsystem	Microsoft Basic Display Adaptor
	Optical Drive	HP HLDS DVDRW GUD1N
	I/O Subsystem	Builtin
	USB Subsystem	USB 2.0/3.0
Printing Device Connection	TCP/IP	10/1000
Software	Operating System	Win 10 Enterprise 64 Bit (10240)
	Printing Applications	Microsoft Word 2016
		Microsoft Excel 2016
		Adobe Reader DC

ISO/IEC 17629 First Print Out Time Report: Office Category

Full Detailed Test Report - A4

HP LaserJet Pro M148dw

Printing device and settings		
Test Start Date and Time	8/30/2018 11:11	
Tester	Wing	
Machine name/model	HP LaserJet Pro M148dw	
Colour or B&W	B&W	
FW Version	20180726	
Configuration (options)	Default	
Controller	12500	
Printing device page count	Not Specified	
Printing supplies page count	Not Specified	
Temperature and Humidity	75 degF / 24 degC 25.0 %rH	
Voltage	220V	
Test End Date and Time	2/15/2019 17:00	

Item	Value	
Mode and Setting	PDL and driver version	44.3.2667
	Print Quality mode	default
	B&W settings	default
	Paper feed orientation	Short Edge
Paper	Paper type setting	default
	Paper feeding	Standard cassette
	Paper exit	Standard exit tray
Paper Path	Output orientation	default (face up or face down)

ISO First Page Out Time Summary Report: Office Category

Summary Report: A4

FPOT from Ready (seconds)		
B&W	Simplex	6.86
	Duplex	

Notes

- 1) All printing device and driver settings were default mode.
- 2) For the B/W results, the print driver was set to "print in B/W".
- 3) For more information see <http://www.hp.com/go/printerclaims>.
- 4) Port monitor not configured to follow device if the IP address changes.
- 5) Page counts were collected after completion of the tests.

ISO First Page Out Time Report: Office Category

Detailed Report: A4						
		Word (seconds)	Excel (seconds)	Adobe Reader (seconds)	Average (seconds)	Delay Time
Color Mode	FPOT from Ready - Simplex					
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			N/A		
	Recovery Time					
	FPOT from Off - Simplex					
	Warm-up Time					
B&W Mode	FPOT from Ready - Simplex	7.40	6.74	6.42	6.86	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			6.79		61 Minutes
	Recovery Time			0.4		
	FPOT from Off - Simplex			61.55		
	Warm-up Time			55.13		

Notes

- 1) All printing device and driver settings were default mode.
- 2) For the B/W results, the print driver was set to "print in B/W".
- 3) For more information see <http://www.hp.com/go/printerclaims>.
- 4) Port monitor not configured to follow device if the IP address changes.
- 5) Page counts were collected after completion of the tests.
- 6) Details for FPOT from Sleep are shown below.

HP Data Table

Detailed Report: A4

		FPOT Avg (secs)	FPOT (secs) Iteration 1	FPOT (secs) Iteration 2	FPOT (secs) Iteration 3	Application	Delay Time
Color Mode	FPOT from Sleep	N/A	N/A	N/A	N/A	Adobe Reader	
	FPOT from Sleep (15 minutes) HP/Non ISO Test	N/A	N/A	N/A	N/A	Adobe Reader	
	FPOT from Sleep	6.79	6.79	6.78	N/A	Adobe Reader	61 Minutes
B&W Mode	FPOT from Sleep (15 minutes) HP/Non ISO Test	6.86	6.85	6.86	N/A	Adobe Reader	16 Minutes

Notes

- 1) All printing device and driver settings were default mode.
- 2) For the B/W results, the print driver was set to "print in B/W".
- 3) DLP includes detailed iterations as data measurements may vary run to run.

Test System Parameters		
Item	Value	
Test System	Computer	HP Z240 SFF Workstation
	Processor	Intel Core i7 -6770, 3.4 GHz
	System Chip Set	Intel SKL/KBL Mobile/Desktop
	System Board	system devices, default system BIOS
	System Memory	8 GB
	Hard Drive Subsystem	Turbo Drive G2 256GB PCIe SSD
	Video Subsystem	Microsoft Basic Display Adaptor
	Optical Drive	HP HLDS DVDRW GUD1N
	I/O Subsystem	Builtin
	USB Subsystem	USB 2.0/3.0
Printing Device Connection	TCP/IP	10/1000
Software	Operating System	Win 10 Enterprise 64 Bit (10240)
	Printing Applications	Microsoft Word 2016
		Microsoft Excel 2016
		Adobe Reader DC

ISO/IEC 29183 Copy Productivity Report

Full Detailed Test Report - LETTER

HP LaserJet Pro M148dw

Machine Setup Information	
Test Start Date and Time	8/30/2018 16:14
Tester	Wing
Machine name/model	HP LaserJet Pro M148dw
Colour or B&W	B&W
FW Version	20180726
Configuration (options)	Not Specified
Temperature and Humidity	75 degF / 24 degC 25.0 %rH
Test End Date and Time:	1/20/2019 10:30

	Pre-set Item	Pre-set Value
Mode	Output Resolution	Default
	Output Quality	Default
	Copying Mode	Colour for Colour and B&W for B&W
	Auto Density Adjustment	Default
	Collating function	Set in Control Panel
Paper	Paper Sending Direction	Default
	Paper Type Setting	Default
Paper Path	Paper Feeding	Tray 2
	Paper Exit	Default
	Face Up Exit	Default (face down)
Temporary Stop	Fixing Capability	Default
	Image Quality Stability	Default
	Capacity of Paper	Default
	Others	None

Paper	Paper Manufacturer	HP / Xerox
	Paper Weight	20lb / 75 g/m2
	Paper Size	Letter / A4
	Paper type/name	HP Multipurpose Ultra White / HP Office

Summary Report: Letter		
	sFCOT	sESAT (ipm)
B&W	6.24	30.11

Notes
 First Copy Out and Copy Speed measured using ISO/IEC 29183, excludes first set of test documents. For more information see <http://www.hp.com/go/printerclaims>. Exact speed varies depending on the system configuration and document.
 Only Target A was used, all test documents have the same Saturated throughput. Reference ISO/IEC29183:2010 Clause 5, Sections 5.3.1 and 5.3.2

Detailed Report: LETTER						
	Target	sFCOT (secs)	sEFTP (ipm)			sESAT (ipm)
			1copy	1copy+30sec	1copy+4minutes	
B&W	A	6.24	9.62	26.85 17 sets	29.56 99 sets	30.11
	B					
	C					
	D					
	Average	6.24	9.62	26.85	29.56	30.11

Notes
 First Copy Out and Copy Speed measured using ISO/IEC 29183, excludes first set of test documents. For more information see <http://www.hp.com/go/printerclaims>. Exact speed varies depending on the system configuration and document.
 Only Target A was used, all test documents have the same Saturated throughput. Control Panel copy limitations is 99. The 4 minute test was ran with 99 copies. Reference ISO/IEC29183:2010 Clause 5, Sections 5.3.1 and 5.3.2

ISO/IEC 29183 Copy Productivity Report

Full Detailed Test Report - A4

HP LaserJet Pro M148dw

Machine Setup Information	
Test Start Date and Time	8/30/2018 16:14
Tester	Wing
Machine name/model	HP LaserJet Pro M148dw
Colour or B&W	B&W
FW Version	20180726
Configuration (options)	Not Specified
Temperature and Humidity	75 degF / 24 degC 25.0 %rH
Test End Date and Time:	1/20/2019 10:30

	Pre-set Item	Pre-set Value
Mode	Output Resolution	Default
	Output Quality	Default
	Copying Mode	Colour for Colour and B&W for B&W
	Auto Density Adjustment	Default
	Collating function	Set in Control Panel
Paper	Paper Sending Direction	Default
	Paper Type Setting	Default
Paper Path	Paper Feeding	Tray 2
	Paper Exit	Default
	Face Up Exit	Default (face down)
Temporary Stop	Fixing Capability	Default
	Image Quality Stability	Default
	Capacity of Paper	Default
	Others	None

Paper	Paper Manufacturer	HP / Xerox
	Paper Weight	20lb / 75 g/m2
	Paper Size	Letter / A4
	Paper type/name	HP Multipurpose Ultra White / HP Office

Summary Report: A4		
	sFCOT	sESAT (ipm)
B&W	6.29	28.59

Notes
 First Copy Out and Copy Speed measured using ISO/IEC 29183, excludes first set of test documents. For more information see <http://www.hp.com/go/printerclaims>. Exact speed varies depending on the system configuration and document.
 Only Target A was used, all test documents have the same Saturated throughput. Reference ISO/IEC29183:2010 Clause 5, Sections 5.3.1 and 5.3.2

Detailed Report: A4						
	Target	sFCOT (secs)	sEFTP (ipm)			sESAT (ipm)
			1copy	1copy+30sec	1copy+4minutes	
B&W	A	6.29	9.54	25.54 17 sets	28.09 99 sets	28.59
	B					
	C					
	D					
	Average	6.29	9.54	25.54	28.09	28.59

Notes
 First Copy Out and Copy Speed measured using ISO/IEC 29183, excludes first set of test documents. For more information see <http://www.hp.com/go/printerclaims>. Exact speed varies depending on the system configuration and document.
 Only Target A was used, all test documents have the same Saturated throughput. Control Panel copy limitations is 99. The 4 minute test was ran with 99 copies. Reference ISO/IEC29183:2010 Clause 5, Sections 5.3.1 and 5.3.2

ISO/IEC 24735 Copy Productivity Report

Full Detailed Test Report - LETTER

Machine Setup Information	
Test Start Date and Time	8/30/2018 16:56
Tester	Wing
Machine name/model	HP LaserJet Pro M148dw
Colour or B&W	B&W
FW Version	20180726
Configuration (options)	Not Specified
Temperature and Humidity	75 degF / 24 degC 25.0 %rH
Test End Date and Time:	1/20/2019 13:27
Pre-set Item	
Pre-set Value	
Output Resolution	Default
Output Quality	Default
Copying Mode	Default
Auto Density Adjustment	Default
Collating function	Activated (if not activated in default mode)
Paper Sending Direction	Default
Paper Type Setting	Default
Paper Feeding	Standard cassette
Paper Exit	Standard exit tray
Face Up Exit	Default
Fixing Capability	Default
Image Quality Stability	Default
Capacity of Paper	Default
Others	Default
Paper Manufacturer	HP / Xerox
Paper Weight	20lb / 75 g/m2
Paper Size	Letter / A4

ISO/IEC 24735 Copy Productivity Report						
Detailed Report: LETTER						
	Copying Mode	FSOT (secs)	EFTP (ipm)			ESAT (ipm)
		1 set only	1 set only	1 set + 30sec	1 set + 4min	1 set + 30sec
Color Mode	1:1		(1 set)			
	1:2		(1 set)			
	2:2		(1 set)			
B&W mode	1:1	22.23	10.79	22.22 5 sets	27.17 32 sets	30.20
	1:2	26.62	9.00	14.74 4 sets		18.72
	2:2					
Notes						
Reports located: http://www.hp.com/go/printerclaims						

ISO/IEC 24735 Copy Productivity Report

Full Detailed Test Report - A4

Machine Setup Information	
Test Start Date and Time	8/30/2018 16:56
Tester	Wing
Machine name/model	HP LaserJet Pro M148dw
Colour or B&W	B&W
FW Version	20180726
Configuration (options)	Not Specified
Temperature and Humidity	75 degF / 24 degC 25.0 %rH
Test End Date and Time:	1/20/2019 13:27
Pre-set Item	
Pre-set Value	
Output Resolution	Default
Output Quality	Default
Copying Mode	Default
Auto Density Adjustment	Default
Collating function	Activated (if not activated in default mode)
Paper Sending Direction	Default
Paper Type Setting	Default
Paper Feeding	Standard cassette
Paper Exit	Standard exit tray
Face Up Exit	Default
Fixing Capability	Default
Image Quality Stability	Default
Capacity of Paper	Default
Others	Default
Paper Manufacturer	HP / Xerox
Paper Weight	20lb / 75 g/m2
Paper Size	Letter / A4

ISO/IEC 24735 Copy Productivity Report						
Detailed Report: A4						
	Copying Mode	FSOT (secs)	EFTP (ipm)			ESAT (ipm)
		1 set only	1 set only	1 set + 30sec	1 set + 4min	1 set + 30sec
Colour Mode	1:1		(1 set)			
	1:2		(1 set)			
	2:2		(1 set)			
B&W mode	1:1	22.87	10.49	21.35 5 sets	27.20 31 sets	28.72
	1:2	27.96	8.56	14.26 4 sets		18.16
	2:2					
Notes						
Reports located: http://www.hp.com/go/printerclaims						

ISO/IEC 17991 Scanning Productivity Report

Full Detailed Test Report - LETTER

Machine Setup Information		
Test Start Date and Time	11/7/2018 17:09	
Tester	Wing	
Machine name/model	HP LaserJet Pro M148dw	
Colour or B&W	B&W	
Configuration (options)	Default	
Temperature and Humidity	75 degF / 24 degC 25.0 %rH	
Voltage	220V	
Test End Date and Time	11/8/2018 10:28	

Mode and Setting	Preset Item	Preset Value
	ADF Paper-path	Scanning resolution
Colour or grey scale/B&W		default (colour)
Duplex / simplex		default (simplex)
Original page size		default (A4)
Paper feed orientation		default (long edge)
Scan destination		default (shared network)
Storing File Type		default (PDF-multi)
Auto scan quality adjustment		default (factory preset default setting)
Paper feed direction		default (long edge)
Output orientation		default
Scanning unit	default (duplex ADF)	

ISO/IEC 17991 - Scan Summary Report: ADF Productivity Measurement

Summary Report: Letter

	Scanning Mode			Measurement result
	File format version	Resolution	Scanning side	scESAT 30secA (ipm)
Colour	PDF 1.7	200	single sided	9.01
			double sided	0.00
B&W	PDF 1.7	200	single sided	16.07
			double sided	0.00

Notes
 1) For more information see <http://www.hp.com/go/printerclaims>.
 2) For the B/W results, the device scan setting is set to "Scan in B/W".

ISO/IEC 17991 - Scan Summary Report: Network Folder Productivity Measurement

Summary Report: Letter

	Scanning Mode			Measurement result		
	File format version	Resolution	Scanning side	scEFTP 30secF (ipm)	File size 30secF (Mbyte)	Number of Sets (30secF)
Colour	PDF 1.7	200	single sided	7.25	3.89	3.00
			double sided	0.00		
B&W	PDF 1.7	200	single sided	11.40	4.76	4.00
			double sided	0.00		

Notes
 1) For more information see <http://www.hp.com/go/printerclaims>.
 2) For the B/W results, the device scan setting is set to "Scan in B/W".

ISO/IEC 17991 - Scan Full Report: ADF Productivity Measurement

Summary Report: Letter

	Scanning Mode			Measurement result		
	File format version	Resolution	Scanning side	scEFTP 1setA (ipm)	scEFTP 30secA (ipm)	scESAT 30secA (ipm)
Colour	PDF 1.7	200	single sided	7.71	8.53	9.01
			double sided	0.00	0	0
B&W	PDF 1.7	200	single sided	12.25	14.98	16.07
			double sided	0.00	0	0

Notes
 1) For more information see <http://www.hp.com/go/printerclaims>.
 2) For the B/W results, the device scan setting is set to "Scan in B/W".

ISO/IEC 17991 - Scan Full Report: Network Folder Productivity Measurement

Summary Report: Letter

	Scanning Mode			Measurement result			
	File format version	Resolution	Scanning side	scEFTP 1setF (ipm)	scEFTP 30secF (ipm)	File size 30secF (Mbyte)	Number of Sets (30secF)
Colour	PDF 1.7	200	single sided	4.52	7.25	3.89	3
			double sided	0.00	0.00		
B&W	PDF 1.7	200	single sided	5.25	11.40	4.76	4
			double sided	0.00	0.00		

Notes
 1) For more information see <http://www.hp.com/go/printerclaims>.
 2) For the B/W results, the device scan setting is set to "Scan in B/W".

Test System Parameters			
	Item	Value	
System	Computer name	HP Z240 SFF Workstation	
	Processor	Intel Core i7 -6770, 3.4 GHz	
	System Chip Set	Intel SKL/KBL Mobile/Desktop	
	System Board	system devices, default system BIOS	
	System Memory	8 GB	
	Hard Drive Subsystem	Turbo Drive G2 256GB PCIe SSD	
	Video Subsystem	Microsoft Basic Display Adaptor	
	Optical Drive	HP HLDS DVDRW GUD1N	
	I/O Subsystem	Builtin	
	USB Subsystem	USB 2.0/3.0	
	Operating System	Win 10 Enterprise 64 Bit (10240)	
	Scanning Device Connection	Location of network folder	PC
		Internet Protocol	IPv4
Transfer Protocol		SMB	
Hub		Trendnet Router and Gbit Switch	
Network Speed		TCP 10/1000 Mbit Ethernet	
Connction Cable		Cat6 Straight cable	
Wireless router		No use	
Others		No use	

ISO/IEC 17991 Scanning Productivity Report

Full Detailed Test Report - A4

Machine Setup Information		
Test Start Date and Time	11/7/2018 17:09	
Tester	Wing	
Machine name/model	HP LaserJet Pro M148dw	
Colour or B&W	B&W	
Configuration (options)	Default	
Temperature and Humidity	75 degF / 24 degC 25.0 %rH	
Voltage	220V	
Test End Date and Time	11/8/2018 10:28	

Mode and Setting	Preset Item	Preset Value
	Scanning resolution	default (200 dpi)
Colour or grey scale/B&W	default (colour)	
Duplex / simplex	default (simplex)	
Original page size	default (A4)	
Paper feed orientation	default (long edge)	
Scan destination	default (shared network)	
Storing File Type	default (PDF-multi)	
Auto scan quality adjustment	default (factory preset default setting)	
ADF Paper-path	Paper feed direction	default (long edge)
	Output orientation	default
	Scanning unit	default (duplex ADF)

ISO/IEC 17991 - Scan Summary Report: ADF Productivity Measurement

Summary Report: A4

	Scanning Mode			Measurement result
	File format version	Resolution	Scanning side	scESAT 30secA (ipm)
Colour	PDF 1.7	200	single sided	8.64
			double sided	0.00
B&W	PDF 1.7	200	single sided	15.65
			double sided	0.00

Notes

- 1) For more information see <http://www.hp.com/go/printerclaims>.
- 2) For the B/W results, the device scan setting is set to "Scan in B/W".

ISO/IEC 17991 - Scan Summary Report: Network Folder Productivity Measurement

Summary Report: A4

	Scanning Mode			Measurement result		
	File format version	Resolution	Scanning side	scEFTP 30secF (ipm)	File size 30secF (Mbyte)	Number of Sets (30secF)
Colour	PDF 1.7	200	single sided	6.78	3.12	3.00
			double sided	0.00		
B&W	PDF 1.7	200	single sided	10.21	3.11	3.00
			double sided	0.00		

Notes

- 1) For more information see <http://www.hp.com/go/printerclaims>.
- 2) For the B/W results, the device scan setting is set to "Scan in B/W".

ISO/IEC 17991 - Scan Full Report: ADF Productivity Measurement

Summary Report: A4

	Scanning Mode			Measurement result		
	File format version	Resolution	Scanning side	scEFTP 1setA (ipm)	scEFTP 30secA (ipm)	scESAT 30secA (ipm)
Colour	PDF 1.7	200	single sided	7.43	8.18	8.64
			double sided	0.00	0	0
B&W	PDF 1.7	200	single sided	11.84	14.1	15.65
			double sided	0.00	0	0

Notes

- 1) For more information see <http://www.hp.com/go/printerclaims>.
- 2) For the B/W results, the device scan setting is set to "Scan in B/W".

ISO/IEC 17991 - Scan Full Report: Network Folder Productivity Measurement

Summary Report: A4

	Scanning Mode			Measurement result			
	File format version	Resolution	Scanning side	scEFTP 1setF (ipm)	scEFTP 30secF (ipm)	File size 30secF (Mbyte)	Number of Sets (30secF)
Colour	PDF 1.7	200	single sided	5.09	6.78	3.12	3
			double sided	0.00	0.00		
B&W	PDF 1.7	200	single sided	7.46	10.21	3.11	3
			double sided	0.00	0.00		

Notes

- 1) For more information see <http://www.hp.com/go/printerclaims>.
- 2) For the B/W results, the device scan setting is set to "Scan in B/W".

Test System Parameters		
	Item	Value
System	Computer name	HP Z240 SFF Workstation
	Processor	Intel Core i7 -6770, 3.4 GHz
	System Chip Set	Intel SKL/KBL Mobile/Desktop
	System Board	system devices, default system BIOS
	System Memory	8 GB
	Hard Drive Subsystem	Turbo Drive G2 256GB PCIe SSD
	Video Subsystem	Microsoft Basic Display Adaptor
	Optical Drive	HP HLDS DVDRW GUD1N
	I/O Subsystem	Builtin
	USB Subsystem	USB 2.0/3.0
	Operating System	Win 10 Enterprise 64 Bit (10240)
Scanning Device Connection	Location of network folder	PC
	Internet Protocol	IPv4
	Transfer Protocol	SMB
	Hub	Trendnet Router and Gbit Switch
	Network Speed	TCP 10/1000 Mbit Ethernet
	Connction Cable	Cat6 Straight cable
	Wireless router	No use
	Others	No use