

**ISO/IEC 24734 Printing Productivity Report: Office Category**

Full Detailed Test Report - LETTER  
HP LaserJet Pro M404dn

Printing device and settings	
Test Start Date and Time	12/23/2019 14:02
Tester	Wing
Machine name/model	HP LaserJet Pro M404dn
Colour or B&W	B&W
FW Version	002.1948B
Temperature and Humidity	79 degF / 26 degC 68.0 %RH
Voltage	220V
Test End Date and Time	12/27/2019 14:14

Item	Value
Driver Version	48.4.4578
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 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 Manufacturer	HP / Xerox
Paper Weight	208 / 75 g/m <sup>2</sup>
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 (ppm)	
Simplex	10.62	40.40	
Duplex	14.22	36.17	

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/printer/claims>.  
4) Port monitor not configured to follow device if the IP address changes.

Detailed Report: LETTER						
Color Mode	Office Category Test	FSOT (secs)		EFTP (ppm)		ESAT (ppm)
		1 set only (1 set)	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	10.19	23.56 ( 1 set )	36.55 ( 7 sets )	39.61 ( 42 sets )	40.40
	Simplex - Word	10.99	21.84 ( 1 set )	35.89 ( 7 sets )		40.41
	Simplex - Excel	10.68	22.47 ( 1 set )	36.18 ( 7 sets )		40.40
	Simplex - Average	10.62	22.62	36.20	39.6	40.40
	Duplex - Adobe Reader	13.75	17.44 ( 1 set )	30.36 ( 6 sets )		36.18
	Duplex - Word	14.57	16.46 ( 1 set )	29.85 ( 6 sets )		36.16
	Duplex - Excel	14.32	16.76 ( 1 set )	30.00 ( 6 sets )		36.18
	Duplex - Average	14.22	16.88	30.07		36.17

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/printer/claims>.  
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/CD RW GUD1N
I/O Subsystem	Builton
USB Subsystem	USB 2.0/3.0
PC/Printer	USB 2.0
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 M404dn

Printing device and settings	
Test Start Date and Time	12/23/2019 14:02
Tester	Wing
Machine name/model	HP LaserJet Pro M404dn
Colour or B&W	B&W
FW Version	002.1948B
Temperature and Humidity	79 degF / 26 degC 68.0 %RH
Voltage	220V
Test End Date and Time	12/27/2019 14:14

Item	Value
Driver Version	48.4.4578
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 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 Manufacturer	HP / Xerox
Paper Weight	208 / 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 (ppm)	
B&W	Simplex	10.97	38.37
	Duplex	14.62	34.63

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/printer/claims>.  
 4) Port monitor not configured to follow device if the IP address changes.

Detailed Report: A4						
Colour Mode	Office Category Test	FSOT (secs)		EFTP (ppm)		ESAT (ppm)
		1 set only (1 set)	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	10.45	22.97 ( 1 set )	34.40 ( 6 sets )	37.69 ( 40 sets )	38.40
	Simplex - Word	11.51	20.85 ( 1 set )	33.57 ( 6 sets )		38.36
	Simplex - Excel	10.95	21.93 ( 1 set )	34.03 ( 6 sets )		38.36
	Simplex - Average	11.0	21.91 ( 1 set )	34.00 ( 6 sets )		38.37
	Duplex - Adobe Reader	14.17	16.92 ( 1 set )	29.10 ( 6 sets )		34.58
	Duplex - Word	15.02	15.96 ( 1 set )	29.60 ( 6 sets )		34.72
	Duplex - Excel	14.65	16.36 ( 1 set )	28.82 ( 6 sets )		34.60
	Duplex - Average	14.6	16.41 ( 1 set )	28.84 ( 6 sets )		34.63

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/printer/claims>.  
 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/BD RW GUD1N
I/O Subsystem	Builton
USB Subsystem	USB 2.0/3.0
CP/PP	USB 2.0
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 M404dn

Printing device and settings	
Test Start Date and Time	12/23/2019 14:02
Tester	Wing
Machine name/model	HP LaserJet Pro M404dn
Colour or B&W	B&W
FW Version	002.1948B
Temperature and Humidity	79 degF / 26 degC 68.0 %RH
Voltage	220V
Test End Date and Time	12/27/2019 14:14

Item	Value	
Mode and Setting	Driver Version	48.4.4578
	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
Paper	Output Orientation	Default (face down)
	Duplexing Unit (Yes/No)	Yes
	Paper Manufacturer	HP / Xerox
	Paper Weight	200 / 75 g/m <sup>2</sup>
	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, HP High Speed, Simplex, Colour	Simplex		
Letter, HP High Speed, Simplex, Colour	Simplex		
A4, General Office, Simplex, Colour	Simplex		
Letter, General Office, Simplex, Colour	Simplex		
A5, Landscape Feed, Simplex, B/W	Simplex	143%	166%
A5, Portrait Feed, Simplex, B/W	Simplex	59%	49%
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, HP High Speed, Simplex, B/W	Simplex	100%	105%
Letter, HP High Speed, Simplex, B/W	Simplex	100%	105%
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://www.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, HP High Speed, Simplex, Colour						
Letter, HP High Speed, Simplex, Colour						
A4, General Office, Simplex, Colour						
Letter, General Office, Simplex, Colour						
A5, Landscape Feed, Simplex, B/W	16.93	38.35	11.89	63.9	143%	166%
A5, Portrait Feed, Simplex, B/W	16.93	38.35	28.78	18.9	59%	49%
Legal, Simplex, B/W	16.34	40.4				
Legal, Duplex, B/W	16.34	40.4				
A4, 1200 dpi, Simplex, B/W	16.93	38.35				
Letter, 1200 dpi, Simplex, B/W	16.34	40.4				
A4, HP High Speed, Simplex, B/W	16.93	38.35	17.07	40.3	100%	105%
Letter, HP High Speed, Simplex, B/W	16.34	40.4	16.48	42.5	100%	105%
A4, General Office, Simplex, B/W	16.93	38.35				
Letter, General Office, Simplex, B/W	16.34	40.4				

- 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://www.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 i7-4770, 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/DRW GU/D1N
	IO Subsystem	Builtin
	USB Subsystem	USB 2.0/3.0
I/O	TCPIP	USB 2.0
	Operating System	Win 10 Enterprise 64 Bit (10240)
	Printing Applications	Microsoft Office Word 2016
	Print Driver	Acrobat Reader DC Microsoft Office Excel 2016
	Test files and location	Not Specified

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

Full Detailed Test Report - LETTER

HP LaserJet Pro M404dn

Printing device and settings	
Test Start Date and Time	12/23/2019 13:48
Tester	Wing
Machine name/model	HP LaserJet Pro M404dn
Colour or B&W	B&W
FW Version	002.1948B
Configuration (options)	Default
Controller	12600
Printing device page count	Not Specified
Printing supplies page count	Not Specified
Temperature and Humidity	79 degF / 26 degC 68.0 %rH
Voltage	220V
Test End Date and Time	12/25/2019 10:52

Item	Value
<b>Mode and Setting</b>	
PDL and driver version	48.4.4578
Print Quality mode	default
B&W settings	default
Paper feed orientation	Short Edge
<b>Paper</b>	
Paper type setting	default
Paper feeding	Standard cassette
Paper exit	Standard exit tray
<b>Paper Path</b>	
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>B&amp;W</b>	Simplex	5.86
	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: LETTER		Word (seconds)	Excel (seconds)	Adobe Reader (seconds)	Average (seconds)	Delay Time
<b>Color Mode</b>	FPOT from Ready - Simplex					
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			N/A		
	Recovery Time					
	FPOT from Off - Simplex					
	Warm-up Time					
<b>B&amp;W Mode</b>	FPOT from Ready - Simplex	6.40	5.62	5.56	5.86	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			7.96		61 Minutes
	Recovery Time			2.4		
	FPOT from Off - Simplex			28.71		
	Warm-up Time			23.15		

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.
- 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
<b>Color Mode</b>	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 Ready, HP High Speed HP/Non ISO Test	N/A	N/A	N/A	N/A	Adobe Reader	
<b>B&amp;W Mode</b>	FPOT from Sleep	7.96	7.90	8.02	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes) HP/Non ISO Test	7.48	7.47	7.48	N/A	Adobe Reader	16 Minutes

Test System Parameters	
<b>Test System</b>	
Computer	HP Z240 SFF Workstation
Processor	Intel Core i7-6770, 3.4 GHz
System Chip Set	Intel SKU/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/DRW GUD1N
I/O Subsystem	Builtin
USB Subsystem	USB 2.0/3.0
<b>Printing Device Connection</b>	
TCP/IP	10/1000
<b>Software</b>	
Operating System	Win 10 Enterprise 64 Bit (10240)
Printing Applications	Microsoft Office 2016
Print Driver	Adobe Reader DC
	48.4.4578

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

Full Detailed Test Report - A4

HP LaserJet Pro M404dn

Printing device and settings	
Test Start Date and Time	12/23/2019 13:48
Tester	Wing
Machine name/model	HP LaserJet Pro M404dn
Colour or B&W	B&W
FW Version	002.1948B
Configuration (options)	Default
Controller	12600
Printing device page count	Not Specified
Printing supplies page count	Not Specified
Temperature and Humidity	79 degF / 26 degC 68.0 %rH
Voltage	220V
Test End Date and Time	12/25/2019 10:52

Item	Value	
Mode and Setting	PDL and driver version	48.4.4578
	Print Quality mode	default
	B&W settings	default
Paper	Paper feed orientation	Short Edge
	Paper type setting	default
	Paper feeding	Standard cassette
Paper Path	Paper exit	Standard exit tray
	Output orientation	default (face up or face down)

**ISO First Page Out Time Summary Report: Office Category**

Summary Report: A4		F POT from Ready (seconds)
B&W	Simplex	6.00
	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	6.65	5.71	5.63	6.00	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			8.04		61 Minutes
	Recovery Time			2.4		
	FPOT from Off - Simplex			28.92		
	Warm-up Time			23.29		

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 Ready, HP High Speed HP/Non ISO Test	N/A	N/A	N/A	N/A	Adobe Reader	
B&W Mode	FPOT from Sleep	8.04	7.99	8.09	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes) HP/Non ISO Test	7.79	7.53	8.05	N/A	Adobe Reader	16 Minutes

Test System Parameters		
Item	Value	
Test System	Computer	HP Z240 SFF Workstation
	Processor	Intel Core i7-6770, 3.4 GHz
	System Chip Set	Intel SKU/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/DRW 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 Office 2016
	Print Driver	Adobe Reader DC 48.4.4578