

ISO/IEC 24734 Printing Productivity Report: Office Category

Full Detailed Test Report - LETTER

HP Color LaserJet Pro M454dw

Printing device and settings	
Test Start Date and Time	1/22/2019 15:34
Tester	RM
Machine name/model	HP Color LaserJet Pro M454dw
Colour or B&W	Colour
FW Version	1903A
Temperature and Humidity	17 degF / 25 degC 29.7 %RH
Voltage	220V
Test End Date and Time	2/7/2019 9:43

Item	Value	
Mode and Setting	Driver Version	48.0.4229
	Media/Quality Setting	Default / Default
	Simplex B&W Settings	black only
	Duplex B&W Settings	black only
	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 Color Device		FSOT (seconds)	ESAT (ipm)
Color	Simplex	17.39	28.74
	Duplex	23.57	26.06
B&W	Simplex	15.80	28.75
	Duplex	23.31	26.06

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	17.11	14.02 (1 set) 23.76 (5 sets) 27.20 (30 sets)	28.74		
	Simplex - Word	17.94	13.37 (1 set) 23.29 (5 sets)	28.75		
	Simplex - Excel	17.12	14.03 (1 set) 23.61 (5 sets)	28.75		
	Simplex - Average	17.39	13.80 (1 set) 23.55 (5 sets) 27.20 (30 sets)	28.74		
	Duplex - Adobe Reader	23.25	10.32 (1 set) 19.50 (5 sets)	26.06		
	Duplex - Word	24.03	9.98 (1 set) 19.58 (5 sets)	26.06		
	Duplex - Excel	23.41	10.24 (1 set) 19.82 (5 sets)	26.06		
	Duplex - Average	23.57	10.18 (1 set) 19.63 (5 sets) 27.23 (31 sets)	26.06		
B&W mode (optional for color device)	Simplex - Adobe Reader	15.24	15.74 (1 set) 24.62 (5 sets) 27.23 (31 sets)	28.73		
	Simplex - Word	16.35	14.67 (1 set) 24.13 (5 sets)	28.75		
	Simplex - Excel	15.80	15.19 (1 set) 24.32 (5 sets)	28.77		
	Simplex - Average	15.80	15.20 (1 set) 24.35 (5 sets) 27.2 (31 sets)	28.75		
	Duplex - Adobe Reader	22.87	10.48 (1 set) 19.98 (5 sets)	26.06		
	Duplex - Word	23.75	10.10 (1 set) 19.74 (5 sets)	26.06		
	Duplex - Excel	23.30	10.28 (1 set) 19.88 (5 sets)	26.06		
	Duplex - Average	23.31	10.28 (1 set) 19.86 (5 sets)	26.06		

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 Compaq Elite 8300 Small Form Factor
Processor	Intel Core i7 -3770, 3.4 GHz
System Chip Set	Intel C216 Chipset Family SMBus Host Controller
System Board	system devices, default system BIOS
System Memory	4 GB
Hard Drive Subsystem	Standard disk drive (Seagate)
Video Subsystem	AMD Radeon HD 6350
Optical Drive	HP DVD A DH16aCSHR ATA
I/O Subsystem	Builitin
USB Subsystem	USB 2.0/3.0
	TCPIP
	ICSP/HP 10/1000
Operating System	Windows 7 64 Bit
Printing Applications	Microsoft Office 2010
Microsoft Office	Office 2010
Adobe Reader	10
Test files and location	Office category files, hard drive

ISO/IEC 24734 Printing Productivity Report: Office Category

Full Detailed Test Report - A4

HP Color LaserJet Pro M454dw

Printing device and settings	
Test Start Date and Time	1/22/2019 15:34
Tester	RM
Machine name/model	HP Color LaserJet Pro M454dw
Colour or B&W	Colour
FW Version	1903A
Temperature and Humidity	17 degF / 25 degC 29.7 %rH
Voltage	220V
Test End Date and Time	2/7/2019 9:43

Item	Value	
Mode and Setting	Driver Version	48.0.4229
	Media/Quality Setting	Default / Default
	Simplex B&W Settings	black only
	Duplex B&W Settings	black only
	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 Color Device		FSOT (seconds)	ESAT (ipm)
Colour	Simplex	17.92	27.19
	Duplex	24.34	24.78
B&W	Simplex	16.21	27.19
	Duplex	24.11	24.78

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	17.48	13.72 (1 set)	22.59 (5 sets)	25.80 (29 sets)	27.19
	Simplex - Word	18.71	12.83 (1 set)	22.16 (5 sets)		27.20
	Simplex - Excel	17.57	13.66 (1 set)	22.70 (5 sets)		27.19
	Simplex - Average	17.92	13.40	22.48	25.80	27.19
	Duplex - Adobe Reader	23.94	10.00 (1 set)	18.94 (5 sets)		24.80
	Duplex - Word	24.96	9.62 (1 set)	18.72 (5 sets)		24.78
	Duplex - Excel	24.12	9.94 (1 set)	18.98 (5 sets)		24.78
	Duplex - Average	24.3	9.85	18.88		24.78
B&W mode (optional for color device)	Simplex - Adobe Reader	15.65	15.33 (1 set)	23.48 (5 sets)	25.91 (29 sets)	27.19
	Simplex - Word	16.90	14.19 (1 set)	22.90 (5 sets)		27.18
	Simplex - Excel	16.07	14.93 (1 set)	23.39 (5 sets)		27.21
	Simplex - Average	16.2	14.81	23.25	25.9	27.19
	Duplex - Adobe Reader	23.59	10.16 (1 set)	19.14 (5 sets)		24.78
	Duplex - Word	24.69	9.70 (1 set)	18.82 (5 sets)		24.78
	Duplex - Excel	24.03	9.98 (1 set)	19.04 (5 sets)		24.78
	Duplex - Average	24.1	9.94	19.00		24.78

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 Compaq Elite 8300 Small Form Factor
Processor	Intel Core i7 -3770, 3.4 GHz
System Chip Set	Intel C216 Chipset Family SMBus Host Controller
System Board	system devices, default system BIOS
System Memory	4 GB
Hard Drive Subsystem	Standard disk drive (Seagate)
Video Subsystem	AMD Radeon HD 6350
Optical Drive	HP DVD A DH16aCSHR ATA
I/O Subsystem	Builitin
USB Subsystem	USB 2.0/3.0
TCPIP	TCP/IP 10.10.0.0
Operating System	Windows 7 64 Bit
Printing Applications	Microsoft Office 2010
Microsoft Office	Office 2010
Adobe Reader	10
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 Color LaserJet Pro M454dw

Printing device and settings	
Test Start Date and Time	1/22/2019 15:34
Tester	RM
Machine name/model	HP Color LaserJet Pro M454dw
Colour or B&W	Colour
FW Version	1903A
Temperature and Humidity	77 degF / 25 degC 29.7 %RH
Voltage	220V
Test End Date and Time	2/7/2019 9:43

Item	Value	
Mode and Setting	Driver Version	48.0.4229
	Media/Quality Setting	Default / Default
	Simplex B&W Settings	black only
	Duplex B&W Settings	black only
	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

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	142%	183%
A5, Portrait Feed, Simplex, Colour	Simplex	103%	29%
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	142%	183%
A5, Portrait Feed, Simplex, B/W	Simplex	100%	42%
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.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	26.52	27.21	18.69	49.9	142%	183%
A5, Portrait Feed, Simplex, Colour	26.52	27.21	25.96	8.1	103%	29%
Legal, Simplex, Colour	25.57	28.76				
Legal, Duplex, Colour	25.57	28.76				
A4, 1200 dpi, Simplex, Colour	26.52	27.21				
Letter, 1200 dpi, Simplex, Colour	25.57	28.76				
A4, General Office, Simplex, Colour	26.52	27.21				
Letter, General Office, Simplex, Colour	25.57	28.76				
A5, Landscape Feed, Simplex, B/W	24.62	27.19	17.41	50.0	142%	183%
A5, Portrait Feed, Simplex, B/W	24.62	27.19	24.71	11.5	100%	42%
Legal, Simplex, B/W	23.84	28.75				
Legal, Duplex, B/W	23.84	28.75				
A4, 1200 dpi, Simplex, B/W	24.62	27.19				
Letter, 1200 dpi, Simplex, B/W	23.84	28.75				
A4, General Office, Simplex, B/W	24.62	27.19				
Letter, General Office, Simplex, B/W	23.84	28.75				

- 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.hp.com/go/printerclaims>.
 4) Port monitor not configured to follow device if the IP address changes.

Test System Parameters

Item	Value
Computer	HP Compaq Elite 8300 Small Form Factor
Processor	Intel Core i7 -3770, 3.4 GHz
System Chip Set	Intel C216 Chipset Family SMBus Host Controller
System Board	system devices, default system BIOS
System Memory	4 GB
Hard Drive Subsystem	Standard disk drive (Seagate)
Video Subsystem	AMD Radeon HD 6350
Optical Drive	HP DVD A DH16aCSHR ATA
I/O Subsystem	Builtin
USB Subsystem	USB 2.0/3.0
TCPI/PP	TCPI/PP 10/1000
Operating System	Windows 7 64 Bit
Printing Applications	Microsoft Office 2010
Microsoft Office	Office 2010
Adobe Reader	10
Test files and location	Office category files, hard drive

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

Full Detailed Test Report - LETTER

HP Color LaserJet Pro M454dw

Printing device and settings	
Test Start Date and Time	1/22/2019 13:31
Tester	RM
Machine name/model	HP Color LaserJet Pro M454dw
Colour or B&W	Colour
FW Version	1903A
Configuration (options)	Default
Controller	11501
Printing device page count	Not Specified
Printing supplies page count	Not Specified
Temperature and Humidity	77 degF / 25 degC 29.7 %rH
Voltage	220V
Test End Date and Time	1/24/2019 11:10

Item	Value
Mode and Setting	
PDL and driver version	48.0.4229
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)
Color	Simplex	10.68
	Duplex	
B&W	Simplex	8.99
	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	11.27	10.35	10.39	10.68	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			11.98		61 Minutes
	Recovery Time			1.6		
	FPOT from Off - Simplex			39.71		
	Warm-up Time			0.00		
B&W Mode	FPOT from Ready - Simplex	9.55	8.79	8.61	8.99	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			11.76		61 Minutes
	Recovery Time			3.1		
	FPOT from Off - Simplex			36.00		
	Warm-up Time			0.00		

- 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	11.98	11.99	11.97	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes) HP/Non ISO Test	12.28	12.07	12.49	N/A	Adobe Reader	16 Minutes
B&W Mode	FPOT from Sleep	11.76	11.76	11.75	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes) HP/Non ISO Test	10.69	10.67	10.71	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 Compaq Elite 8300 Small Form Factor
	Processor	Intel Core i7 -3770, 3.4 GHz
	System Chip Set	Intel C216 Chipset Family SMBus Host Controller
	System Board	System devices, default system BIOS
	System Memory	4 GB
	Hard Drive Subsystem	Standard disk drive (Seagate)
	Video Subsystem	AMD Radeon HD 6350
	Optical Drive	HP DVD A DH16aC5HR ATA
	I/O Subsystem	Builtin
	USB Subsystem	USB 2.0/3.0
Printing Device Connection	TCP/IP	10/1000
Software	Operating System	Windows 7 Business/Ultimate, 64 bit, Build 7601, SP 1
	Printing Applications	Microsoft Office 2010 SP2 Adobe Reader 10.1.4
	Print Driver	48.0.4229

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

Full Detailed Test Report - A4

HP Color LaserJet Pro M454dw

Printing device and settings	
Test Start Date and Time	1/22/2019 13:31
Tester	RM
Machine name/model	HP Color LaserJet Pro M454dw
Colour or B&W	Colour
FW Version	1903A
Configuration (options)	Default
Controller	11501
Printing device page count	Not Specified
Printing supplies page count	Not Specified
Temperature and Humidity	77 degF / 25 degC 29.7 %rH
Voltage	220V
Test End Date and Time	1/24/2019 11:10

Item	Value
Mode and Setting	
PDL and driver version	48.0.4229
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)
Colour	Simplex	10.87
	Duplex	
B&W	Simplex	9.19
	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	11.58	10.49	10.53	10.87	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			12.09		61 Minutes
	Recovery Time			1.6		
	FPOT from Off - Simplex			39.16		
	Warm-up Time			0.00		
B&W Mode	FPOT from Ready - Simplex	9.88	8.97	8.70	9.19	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			11.82		61 Minutes
	Recovery Time			3.1		
	FPOT from Off - Simplex			37.78		
	Warm-up Time			0.00		

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	12.09	12.09	12.08	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes)	11.54	12.02	11.05	N/A	Adobe Reader	16 Minutes
	HP/Non ISO Test						
B&W Mode	FPOT from Sleep	11.82	11.82	11.82	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes)	10.78	10.78	10.77	N/A	Adobe Reader	16 Minutes
	HP/Non ISO Test						

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 Compaq Elite 8300 Small Form Factor
	Processor	Intel Core i7 -3770, 3.4 GHz
	System Chip Set	Intel C216 Chipset Family SMBus Host Controller
	System Board	system devices, default system BIOS
	System Memory	4 GB
	Hard Drive Subsystem	Standard disk drive (Seagate)
	Video Subsystem	AMD Radeon HD 6350
	Optical Drive	HP DVD A DH16aC5HR ATA
	I/O Subsystem	Builtin
	USB Subsystem	USB 2.0/3.0
Printing Device Connection		
TCP/IP	10/1000	
Software		
Operating System	Windows 7 Business/Ultimate, 64 bit, Build 7601, SP 1	
Printing Applications	Microsoft Office 2010 SP2	
Print Driver	Adobe Reader 10.1.4	
	48.0.4229	