

ISO/IEC 24734 Printing Productivity Report: Office Category

Full Detailed Test Report - LETTER

HP Color LaserJet M155a

Printing device and settings	
Test Start Date and Time	9/3/2019 18:32
Tester	Rachel
Machine name/model	HP Color LaserJet M155a
Colour or B&W	Colour
FW Version	20190819
Temperature and Humidity	79 degF / 26 degC 68.0 %RH
Voltage	220V
Test End Date and Time	9/5/2019 14:10

Item	Value	
Mode and Setting	Driver Version	44.5.2703
	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)	No
	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	24.07	17.27
	Duplex	N/A	N/A
B&W	Simplex	22.25	17.32
	Duplex	N/A	N/A

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	23.87	10.05 (1 set)	14.63 (4 sets)	16.59 (19 sets)	17.27
	Simplex - Word	24.43	9.81 (1 set)	14.51 (4 sets)		17.31
	Simplex - Excel	23.91	10.03 (1 set)	14.61 (4 sets)		17.25
	Simplex - Average	24.07	9.96	14.58	16.59	17.27
	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 <small>(optional for color device)</small>	Simplex - Adobe Reader	21.79	11.00 (1 set)	15.11 (4 sets)	16.71 (19 sets)	17.31
	Simplex - Word	22.82	10.51 (1 set)	14.89 (4 sets)		17.32
	Simplex - Excel	22.12	10.84 (1 set)	15.02 (4 sets)		17.33
	Simplex - Average	22.25	10.78	15.00	16.7	17.32
	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

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
	TCPIIP TCP/IP 10/1000
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 Color LaserJet M155a

Printing device and settings	
Test Start Date and Time	9/3/2019 18:32
Tester	Rachel
Machine name/model	HP Color LaserJet M155a
Colour or B&W	Colour
FW Version	20190819
Temperature and Humidity	79 degF / 26 degC 68.0 %RH
Voltage	220V
Test End Date and Time	9/5/2019 14:10

Item	Value	
Mode and Setting	Driver Version	44.5.2703
	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)
Paper	Duplexing Unit (Yes/No)	No
	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	24.89	16.45
	Duplex	N/A	N/A
B&W	Simplex	23.07	16.46
	Duplex	N/A	N/A

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	24.50	9.79 (1 set)	14.03 (4 sets)	15.83 (18 sets)	16.46
	Simplex - Word	25.64	9.35 (1 set)	13.83 (4 sets)		16.44
	Simplex - Excel	24.51	9.78 (1 set)	13.97 (4 sets)		16.46
	Simplex - Average	24.89	9.64 (1 set)	13.94 (4 sets)	15.83 (18 sets)	16.45
	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	22.66	10.59 (1 set)	14.44 (4 sets)	15.73 (18 sets)	16.48
	Simplex - Word	23.50	10.21 (1 set)	14.20 (4 sets)		16.47
	Simplex - Excel	23.04	10.41 (1 set)	14.35 (4 sets)		16.45
	Simplex - Average	23.1	10.40 (1 set)	14.33 (4 sets)	15.7 (18 sets)	16.46
	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

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 DVDWRV GUD1N
I/O Subsystem	Builtin
USB Subsystem	USB 2.0/3.0
TCPIP	TCP/IP 10/1000
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 Color LaserJet M155a

Printing device and settings	
Test Start Date and Time	9/3/2019 18:32
Tester	Rachel
Machine name/model	HP Color LaserJet M155a
Colour or B&W	Colour
FW Version	20190819
Temperature and Humidity	79 degF / 26 degC 68.0 %RH
Voltage	220V
Test End Date and Time	9/5/2019 14:10

Item	Value	
Mode and Setting	Driver Version	44.5.2703
	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)	No
	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	111%	119%
A5, Portrait Feed, Simplex, Colour	Simplex	69%	34%
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%	167%
A5, Portrait Feed, Simplex, B/W	Simplex	68%	34%
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	39.25	16.47	35.44	19.7	111%	119%
A5, Portrait Feed, Simplex, Colour	39.25	16.47	57.2	5.6	69%	34%
Legal, Simplex, Colour	37.95	17.27				
Legal, Duplex, Colour	37.95	17.27				
A4, 1200 dpi, Simplex, Colour	39.25	16.47				
Letter, 1200 dpi, Simplex, Colour	37.95	17.27				
A4, General Office, Simplex, Colour	39.25	16.47				
Letter, General Office, Simplex, Colour	37.95	17.27				
A5, Landscape Feed, Simplex, B/W	37.3	16.45	26.32	27.5	142%	167%
A5, Portrait Feed, Simplex, B/W	37.3	16.45	55.46	5.6	68%	34%
Legal, Simplex, B/W	35.95	17.26				
Legal, Duplex, B/W	35.95	17.26				
A4, 1200 dpi, Simplex, B/W	37.3	16.45				
Letter, 1200 dpi, Simplex, B/W	35.95	17.26				
A4, General Office, Simplex, B/W	37.3	16.45				
Letter, General Office, Simplex, B/W	35.95	17.26				

- 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 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
TCPIP	TCPIP/10/1000
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 17629 First Print Out Time Report: Office Category

Full Detailed Test Report - LETTER

HP Color LaserJet M155a

Printing device and settings	
Test Start Date and Time	9/3/2019 17:39
Tester	Rachel
Machine name/model	HP Color LaserJet M155a
Colour or B&W	Colour
FW Version	20190819
Configuration (options)	Default
Controller	10100
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	9/3/2019 19:24

Item	Value
Mode and Setting	
PDL and driver version	44.5.2703
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	13.44
	Duplex	
B&W	Simplex	11.60
	Duplex	

Notes

- 1) All printing device and driver settings w ere default mode.
- 2) For the B/W results, the print driver w as set to "print in B/W".
- 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.
- 5) Page counts w ere 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	13.76	13.37	13.17	13.44	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			14.25		61 Minutes
	Recovery Time			1.1		
	FPOT from Off - Simplex			40.29		
	Warm-up Time			27.12		
B&W Mode	FPOT from Ready - Simplex	12.06	11.49	11.22	11.60	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			13.03		61 Minutes
	Recovery Time			1.8		
	FPOT from Off - Simplex			38.70		
	Warm-up Time			27.48		

Notes

- 1) All printing device and driver settings w ere default mode.
- 2) For the B/W results, the print driver w as set to "print in B/W".
- 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.
- 5) Page counts w ere collected after completion of the tests.
- 6) Details for FPOT from Sleep are show n 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	14.25	14.41	14.08	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes) HP/Non ISO Test	14.22	14.20	14.23	N/A	Adobe Reader	16 Minutes
B&W Mode	FPOT from Sleep	13.03	13.04	13.02	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes) HP/Non ISO Test	13.02	12.99	13.05	N/A	Adobe Reader	16 Minutes

Notes

- 1) All printing device and driver settings w ere default mode.
- 2) For the B/W results, the print driver w as 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 Memory	system devices, default system BIOS
	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
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 Color LaserJet M155a

Printing device and settings	
Test Start Date and Time	9/3/2019 17:39
Tester	Rachel
Machine name/model	HP Color LaserJet M155a
Colour or B&W	Colour
FW Version	20190819
Configuration (options)	Default
Controller	10100
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	9/3/2019 19:24

Item	Value
Mode and Setting	
PDL and driver version	44.5.2703
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	13.53
	Duplex	
B&W	Simplex	11.80
	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	14.11	13.19	13.29	13.53	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			14.50		61 Minutes
	Recovery Time			1.2		
	FPOT from Off - Simplex			40.50		
	Warm-up Time			27.21		
B&W Mode	FPOT from Ready - Simplex	12.38	11.67	11.35	11.80	48 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			13.20		61 Minutes
	Recovery Time			1.9		
	FPOT from Off - Simplex			38.94		
	Warm-up Time			27.59		

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	14.50	14.66	14.33	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes)	14.22	14.24	14.20	N/A	Adobe Reader	16 Minutes
	HP/Non ISO Test						
B&W Mode	FPOT from Sleep	13.20	13.16	13.24	N/A	Adobe Reader	61 Minutes
	FPOT from Sleep (15 minutes)	13.22	13.27	13.16	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 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