

ISO/IEC 24734 Printing Productivity Report: Office Category

Full Detailed Test Report - LETTER

HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN

Printing device and settings		
Test Start Date and Time	4/19/2019 12:16	
Tester	RM	
Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN	
Colour or B&W	B&W	
FW Version	2407143_039821	
Temperature and Humidity	69 degF / 21 degC, 25.0 %rH	
Voltage	110V	
Test End Date and Time	4/23/2019 14:00	
Item	Value	
Mode and Setting	Driver Version	6.6.5.23510
	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	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)
B&W	Simplex	9.60
	Duplex	13.85
		ESAT (ipm)
B&W	Simplex	45.76
	Duplex	38.86
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://w.w.w.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)	FSOT (secs)	FSOT (secs)	FSOT (secs)	FSOT (secs)
		1 set only (1 set)	1 set only (1 set)	1 set + 30sec (# of sets)	1 set + 4min (# of sets)	1 set + 30sec
Color Mode	Simplex - Adobe Reader		(1 set)			
	Simplex - Word		(1 set)			
	Simplex - Excel		(1 set)			
	Simplex - Average		(1 set)			
	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	9.28	25.87 (1 set)	41.02 (7 sets)	44.92 (48 sets)	45.82
	Simplex - Word	9.90	24.28 (1 set)	40.32 (7 sets)		45.69
	Simplex - Excel	9.61	24.97 (1 set)	40.23 (7 sets)		45.79
	Simplex - Average	9.60	25.04 (1 set)	40.52 (6 sets)	44.9	45.76
	Duplex - Adobe Reader	13.56	17.68 (1 set)	32.24 (6 sets)		38.84
	Duplex - Word	14.06	17.06 (1 set)	31.98 (6 sets)		38.88
	Duplex - Excel	13.91	17.24 (1 set)	32.12 (6 sets)		38.88
	Duplex - Average	13.85	17.32 (1 set)	32.11 (6 sets)		38.86
	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://w.w.w.hp.com/go/printerclaims .					
	4) Port monitor not configured to follow device if the IP address changes.					
	5) Highlighted Printing Device settings FW revision or later required.					

Test System Parameters	
Item	Value
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 iLIDS DVD/CD RW GUD1N
I/O Subsystem	Builtin
USB Subsystem	USB 2.0/3.0
TCP/IP	TCP/IP 10/100
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 Enterprise MFP M528DN & LaserJet Managed MFP E52645DN

Printing device and settings	
Test Start Date and Time	4/19/2019 12:16
Tester	RM
Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN
Colour or B&W	B&W
FW Version	2407143_039821
Temperature and Humidity	69 degF / 21 degC, 25.0 %rH
Voltage	110V
Test End Date and Time	4/23/2019 14:00

Item	Value
Mode and Setting	Driver Version 6.6.5.23510
	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 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	9.87	43.15
	Duplex	13.72	37.16
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://w.w.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 only (1 set)	1 set + 30sec (# of sets)	1 set + 4min (# of sets)	1 set + 30sec
Colour Mode	Simplex - Adobe Reader		(1 set)			
	Simplex - Word		(1 set)			
	Simplex - Excel		(1 set)			
	Simplex - Average		(1 set)			
	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	9.86	24.86 (1 set)	38.92 (7 sets)	42.44 (45 sets)	43.19
	Simplex - Word	9.95	24.13 (1 set)	38.51 (7 sets)		43.09
	Simplex - Excel	9.98	24.04 (1 set)	38.43 (7 sets)		43.19
	Simplex - Average	9.9	24.34 (1 set)	38.62 (6 sets)	42.4	43.15
	Duplex - Adobe Reader	13.30	18.04 (1 set)	31.10 (6 sets)		37.18
	Duplex - Word	14.24	16.84 (1 set)	30.70 (6 sets)		37.10
	Duplex - Excel	13.60	17.64 (1 set)	30.42 (6 sets)		37.20
	Duplex - Average	13.7	17.50 (1 set)	30.74 (6 sets)		37.16

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://w.w.hp.com/go/printerclaims>.
 4) Port monitor not configured to follow device if the IP address changes.
 5) Highlighted Printing Device settings FW revision or later required.

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 iLDS DVD/BD GUD1N
I/O Subsystem	Builtin
USB Subsystem	USB 2.0/3.0
TCP/IP	TCP/IP 10/100
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 Enterprise MFP M528DN & LaserJet Managed MFP E52645DN

Printing device and settings	
Test Start Date and Time	2/19/2020 14:13
Tester	RM
Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN
Colour or B&W	B&W
FW Version	2410035_065348
Temperature and Humidity	69 degF / 21 degC 25.0 %rH
Voltage	110V
Test End Date and Time	3/17/2020 16:08
Item	Value
Mode and Setting	Driver Version 7.0.0.24688
	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 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, 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	140%	152%
A5, Portrait Feed, Simplex, B/W	Simplex		
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	103%	116%
Letter, HP High Speed, Simplex, B/W	Simplex	106%	116%
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) Plot monitor not configured to follow device if the P-address changes.
- 5) Highlighted Printing Device settings FW revision or later required to enable HP High Speed

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)	ESAT (feature)
					FSOT (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	15.76	43.4	11.32	66.0	140%	152%
A5, Portrait Feed, Simplex, B/W	15.76	43.4				
Legal, Simplex, B/W	15.11	45.93				
Legal, Duplex, B/W	15.11	45.93				
A4, 1200 dpi, Simplex, B/W	15.76	43.4				
Letter, 1200 dpi, Simplex, B/W	15.11	45.93				
A4, HP High Speed, Simplex, B/W	15.76	43.4	15.41	50.6	103%	116%
Letter, HP High Speed, Simplex, B/W	15.11	45.93	14.34	53.5	106%	116%
A4, General Office, Simplex, B/W	15.76	43.4				
Letter, General Office, Simplex, B/W	15.11	45.93				

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) Plot monitor not configured to follow device if the P-address changes.
- 5) Highlighted Printing Device settings FW revision or later required to enable HP High Speed

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 DVD/DRW GUD1N
	I/O Subsystem Built-in
	USB Subsystem USB 2.0/3.0
I/O TCP/IP TCP/IP 10/100	
Software	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 LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN

Printing device and settings		
	Test Start Date and Time	4/19/2019 11:21
	Tester	RM
	Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN
	Colour or B&W	B&W
	FW Version	2407143_039821
	Configuration (options)	Default
	Controller	4.11
	Printing device page count	Not Specified
	Printing supplies page count	Not Specified
	Temperature and Humidity	69 degF / 21 degC 25.0 %rH
	Voltage	110V
	Test End Date and Time	4/19/2019 14:15

Item		Value
Mode and Setting	PDL and driver version	6.6.5.23510
	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	5.52
	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	5.58	5.49	5.48	5.52	20 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			9.86		60 Minutes
	Recovery Time			4.4		
	FPOT from Off - Simplex			199.94		
	Warm-up Time			194.46		

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	
	FPOT from Sleep	9.86	9.99	9.73	N/A	Adobe Reader	60 Minutes
B&W Mode	FPOT from Sleep (15 minutes) HP/Non ISO Test	10.73	10.79	10.67	N/A	Adobe Reader	15 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		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 Enterprise MFP M528DN & LaserJet Managed MFP E52645DN

Printing device and settings		
Test Start Date and Time	4/19/2019 11:21	
Tester	RM	
Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN	
Colour or B&W	B&W	
FW Version	2407143_039821	
Configuration (options)	Default	
Controller	4.11	
Printing device page count	Not Specified	
Printing supplies page count	Not Specified	
Temperature and Humidity	69 degF / 21 degC 25.0 %rH	
Voltage	110V	
Test End Date and Time	4/19/2019 14:15	

Item		Value
Mode and Setting	PDL and driver version	6.6.5.23510
	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	5.74
	Duplex	

Notes

- 1) All printing device and driver settings were 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 .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: 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	5.64	5.92	5.66	5.74	20 Seconds
	FPOT from Ready - Duplex					
	FPOT from Sleep - Simplex			11.25		60 Minutes
	Recovery Time			5.6		
	FPOT from Off - Simplex			211.65		
	Warm-up Time			205.99		

Notes

- 1) All printing device and driver settings were 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 .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 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)	N/A	N/A	N/A	N/A	Adobe Reader	
	HP/Non ISO Test						
B&W Mode	FPOT from Sleep	11.25	11.23	11.26	N/A	Adobe Reader	60 Minutes
	FPOT from Sleep (15 minutes)	10.72	10.99	10.44	N/A	Adobe Reader	15 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 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 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

Full Detailed Test Report - LETTER

HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN

Summary Report: Letter		
	sFCOT	sESAT (ipm)
B&W	6.46	45.81
<p>Notes</p> <p>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.</p> <p>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</p>		

Detailed Report: LETTER						
	Target	sFCOT (secs)	sEFTP (ipm)			sESAT (ipm)
			1copy	1copy+30sec	1copy+4minutes	
B&W	A	6.46	9.28	38.25	44.76	45.81
				25 sets	186 sets	
	B					
	C					
	D					
	Average	6.46	9.28	38.25	44.76	45.81
Notes 1) Highlighted Printing Device settings FW revision or later required. 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						

Full Detailed Test Report - A4

Machine Setup Information		
	Test Start Date and Time	4/23/2019 14:41
	Tester	RM
	Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN
	Colour or B&W	B&W
	FW Version	2407143_039821
	Configuration (options)	Not Specified
	Temperature and Humidity	69 degF / 21 degC 25.0 %rH
	Test End Date and Time:	4/24/2019 11:23
	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	6.30	43.17
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	6.30	9.52	34.82	42.22	43.17
				23 sets	174 sets	
	B					
	C					
	D					
	Average	6.30	9.52	34.82	42.22	43.17

Notes
 1) Highlighted Printing Device settings FW revision or later required.
 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

ISO/IEC 29183 Copy Productivity Report

Feature Copy Performance Report

HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN

Machine Setup Information

Test Start Date and Time	2/21/2020 12:43
Tester	RM
Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN
Colour or B&W	B&W
FW Version	2410035_055348
Configuration (options)	Not Specified
Temperature and Humidity	69 degF / 21 degC 25.0 %rH
Test End Date and Time	3/18/2020 11:12

	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

HP/Non ISO Copy Feature Report

Feature Performance Copying Modes		Feature Performance Ratio	
		FSOT (base) FSOT (feature)	ESAT (feature) ESAT (base)
A4, HP High Speed, Simplex, Colour	Simplex		
Letter, HP High Speed, Simplex, Colour	Simplex		
A4, HP High Speed, Simplex, B/W	Simplex	105%	116%
Letter, HP High Speed, Simplex, B/W	Simplex	112%	116%

Notes

1) Highlighted Printing Device settings FW revision or later required to enable HP High Speed

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

HP/Non ISO Copy Feature Report - Full Report

Copying Modes	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)
A4, HP High Speed, Simplex, Colour						
Letter, HP High Speed, Simplex, Colour						
A4, HP High Speed, Simplex, B/W	6.36	43.39	6.08	50.59	105%	116%
Letter, HP High Speed, Simplex, B/W	6.33	45.93	5.69	53.49	112%	116%

Notes

1) Highlighted Printing Device settings FW revision or later required to enable HP High Speed

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

Full Detailed Test Report - LETTER

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	11.58	20.73	38.23	44.48	45.82
				7 sets	47 sets	
	1:2	16.92	14.18	29.86		38.88
				6 sets		
	2:2	17.34	13.82	29.44		38.84
				6 sets		

Notes

1) Highlighted Printing Device settings FW revision or later required.

Reports located: <http://www.hp.com/go/printerclaims>

Full Detailed Test Report - A4

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	12.02	19.97	36.87	42.05	43.23
				7 sets	45 sets	
	1:2	17.42	13.76	28.84		37.18
				6 sets		
	2:2	18.03	13.30	28.32		37.16
				6 sets		

Notes
1) Highlighted Printing Device settings FW revision or later required.
Reports located: <http://www.hp.com/go/printerclaims>

ISO/IEC 24735 Copy Productivity Report

Feature Copy Performance Report

HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN

Machine Setup Information		
	Test Start Date and Time	2/21/2020 10:59
	Tester	RM
	Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN
	Colour or B&W	B&W
	FW Version	2410035_055348
	Configuration (options)	Not Specified
	Temperature and Humidity	69 degF / 21 degC 25.0 %rH
	Test End Date and Time:	3/17/2020 18:10
Pre-set Item		
Mode	Output Resolution	Default
	Output Quality	Default
	Copying Mode	Default
	Auto Density Adjustment	Default
	Collating function	Activated (if not activated in default mode)
Paper	Paper Sending Direction	Default
	Paper Type Setting	Default
Paper Path	Paper Feeding	Standard cassette
	Paper Exit	Standard exit tray
	Face Up Exit	Default
Temporary Stop	Fixing Capability	Default
	Image Quality Stability	Default
	Capacity of Paper	Default
	Others	Default
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 Copy ADF Productivity Report: Feature Performance Test Summary

Copying Modes		Feature Performance Ratio	
		FSOT (base) FSOT (feature)	ESAT (feature) ESAT (base)
A4, HP High Speed, Simplex, Colour	Simplex		
Letter, HP High Speed, Simplex, Colour	Simplex		
A4, HP High Speed, Simplex, B/W	Simplex	112%	116%
Letter, HP High Speed, Simplex, B/W	Simplex	108%	116%

Notes
 1) Highlighted Printing Device settings FW revision or later required to enable HP High Speed
 Reports located: <http://www.hp.com/go/printerclaims>

Feature Performance Full Report - Feature ADF Copying Mode Performance Test

Copying Modes	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)
A4, HP High Speed, Simplex, Colour						
Letter, HP High Speed, Simplex, Colour						
A4, HP High Speed, Simplex, B/W	12.89	43.4	11.54	50.6	112%	116%
Letter, HP High Speed, Simplex, B/W	11.87	45.92	11.05	53.5	108%	116%

Notes
 1) Highlighted Printing Device settings FW revision or later required to enable HP High Speed
 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	4/26/2019 14:43	
Tester	RM	
Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN	
Colour or B&W	B&W	
Configuration (options)	Default	
Temperature and Humidity	69 degF / 21 degC 25.0 %rH	
Voltage	110V	
Test End Date and Time	4/26/2019 16:41	

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: Letter

	Scanning Mode			Measurement result
	File format version	Resolution	Scanning side	scESAT 30secA (ipm)
Colour	PDF 1.4	200	single sided	41.95
			double sided	50.95
B&W	PDF 1.4	200	single sided	46.47
			double sided	53.70

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 1.4	200	single sided	33.28	2.37	7.00
			double sided	38.47	2.98	8.00
B&W	PDF 1.4	200	single sided	38.28	1.26	7.00
			double sided	42.97	1.47	8.00

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 1.4	200	single sided	25.07	37.96	41.95
			double sided	27.10	45.26	50.95
B&W	PDF 1.4	200	single sided	25.51	42.2	46.47
			double sided	26.98	47.96	53.7

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 1.4	200	single sided	19.26	33.28	2.37	7
			double sided	21.10	38.47	2.98	8
B&W	PDF 1.4	200	single sided	20.28	38.28	1.26	7
			double sided	19.62	42.97	1.47	8

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 DVDWRW 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
	Connection 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	4/26/2019 14:43
	Tester	RM
	Machine name/model	HP LaserJet Enterprise MFP M528DN & LaserJet Managed MFP E52645DN
	Colour or B&W	B&W
	Configuration (options)	Default
	Temperature and Humidity	69 degF / 21 degC 25.0 %rH
	Voltage	110V
	Test End Date and Time	4/26/2019 16:41

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)
ADF Paper-path	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: A4

	Scanning Mode			Measurement result
	File format version	Resolution	Scanning side	scESAT 30secA (ipm)
Colour	PDF 1.4	200	single sided	39.90
			double sided	48.97
B&W	PDF 1.4	200	single sided	44.08
			double sided	51.36

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 1.4	200	single sided	32.05	2.42	7.00
			double sided	37.53	2.75	8.00
B&W	PDF 1.4	200	single sided	35.70	1.25	7.00
			double sided	41.17	1.44	8.00

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 1.4	200	single sided	24.28	36.04	39.9
			double sided	25.41	43.52	48.97
B&W	PDF 1.4	200	single sided	25.69	40.05	44.08
			double sided	23.64	45.65	51.36

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 1.4	200	single sided	18.91	32.05	2.42	7
			double sided	19.72	37.53	2.75	8
B&W	PDF 1.4	200	single sided	20.37	35.70	1.25	7
			double sided	18.94	41.17	1.44	8

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
	Computer name	HP Z240 SFF Workstation
System	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	Builitn
	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