ISO/IEC 24734 Printing Productivity Report: Office Category

Full Detailed Test Report - LETTER

Ricoh SP 4510DN

Printing device and settings

	Test Start Date and Time	12/8/2015 13:11
	Tester	BG
	Machine name/model	Ricoh SP 4510DN
	Colour or B&W	B&W
	FW Version	Printer[1.08 / M1585756D]
	Temperature and Humidity	76 degF / 25 degC, 29 %rH
	Voltage	110V
	Test End Date and Time	1/18/2016 15:11

	Item	Value
Mode and Setting	Driver Version	32
	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	Xerox / HP
	Paper Weight	20lb / 80 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	10.3	42.3
	Duplex	18.2	37.6

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 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					
	Duplex - Adobe Reader	N/A	N/A N/A	N/A N/A		N/A
	Duplex - Word	N/A	N/A N/A	N/A N/A		N/A
	Duplex - Excel	N/A	N/A 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	10.07	23.82 (1 set)	37.58 (7 sets)	40.73 (46 sets)	42.30
	Simplex - Word	10.18	23.57 (1 set)	37.98 (7 sets)		42.31
	Simplex - Excel	10.43	23.01 (1 set)	37.78 (7 sets)		42.31
	Simplex - Average	10.3	23.4	37.7	40.7	42.3
	Duplex - Adobe Reader	17.80	13.48 (1 set)	26.62 (6 sets)		37.62
	Duplex - Word	18.29	13.10 (1 set)	31.42 (6 sets)		37.64
	Duplex - Excel	18.26	13.12 (1 set)	26.18 (6 sets)		37.62
	Duplex - Average	18.2	13.2	28.0		37.6

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	Builtin
USB Subsystem	USB 2.0/3.0
TCP/IP	TCP/IP 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

Ricoh SP 4510DN		

Printing device and settings

	Test Start Date and Time	12/8/2015 13:11
	Tester	BG
	Machine name/model	Ricoh SP 4510DN
	Colour or B&W	B&W
	FW Version	Printer[1.08 / M1585756D]
	Temperature and Humidity	76 degF / 25 degC, 29 %rH
	Voltage	110V
	Test End Date and Time	1/18/2016 15:11

	Item	Value
Mode and Setting	Driver Version	32
	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	Xerox / HP
	Paper Weight	20lb / 80 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	14.9	42.2
	Duplex	19.3	37.6

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) 1 set only (1 set)	EFTP (ipm) 1 set only (1 set)	EFTP (ipm) 1 set + 30sec (# of sets)	EFTP (ipm) 1 set + 4min (# of sets)	ESAT (ipm) 1 set + 30sec
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 N/A		N/A
	Duplex - Word	N/A	N/A N/A	N/A N/A		N/A
	Duplex - Excel	N/A	N/A 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	10.39	23.10 (1 set)	37.73 (7 sets)	39.46 (46 sets)	42.31
	Simplex - Word	15.55	15.43 (1 set)	33.67 (7 sets)		42.07
	Simplex - Excel	18.54	12.94 (1 set)	31.32 (7 sets)		42.23
	Simplex - Average	14.9	17.1	34.2	39.4	42.2
	Duplex - Adobe Reader	18.23	13.16 (1 set)	24.50 (6 sets)		37.54
	Duplex - Word	20.79	11.54 (1 set)	29.06 (7 sets)		37.76
	Duplex - Excel	18.66	12.86 (1 set)	28.32 (6 sets)		37.58
	Duplex - Average	19.3	12.5	27.2		37.6

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	Builtin
USB Subsystem	USB 2.0/3.0
TCP/IP	TCP/IP 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

Ricoh SP 4510DN

	Printing device and settings	
	Test Start Date and Time	12/9/2015 5:54
	Tester	BG
	Machine name/model	Ricoh SP 4510DN
	Colour or B&W	B&W
	FW Version	Printer[1.08 / M1585756D]
	Configuration (options)	Default
	Controller	
	Printing device page count	Not Specified
	Printing supplies page count	Not Specified
	Temperature and Humidity	76 degF / 24 degC 24.63 %rH
	Voltage	110V
	Test End Date and Time	1/25/2016 11:28

	Item	Value
Mode and Setting	PDL and driver version	32
	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	6.11
	Duplex	10.42

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	5.74	6.22	6.36	6.11	21 Seconds
	FPOT from Ready - Duplex	10.32	10.68	10.25	10.42	21 Seconds
	FPOT from Sleep - Simplex			22.06		61 Minutes
	Recovery Time			15.7		
	FPOT from Off - Simplex			33.09		
	Warm-up Time			26.73		

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 (60 minutes) HP/Non ISO Test	N/A	N/A	N/A	N/A	Adobe Reader	
B&W Mode	FPOT from Sleep	22.06	25.68	20.18	20.32	Adobe Reader	61 Minutes
	FPOT from Sleep (60 minutes) HP/Non ISO Test	22.06	25.68	20.18	20.32	Adobe Reader	61 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 DH16aCSHR 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	32

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

Full Detailed Test Report - A4

Ricoh SP 4510DN	

	Printing device and settings	
	Test Start Date and Time	12/9/2015 5:54
	Tester	BG
	Machine name/model	Ricoh SP 4510DN
	Colour or B&W	B&W
	FW Version	Printer[1.08 / M1585756D]
	Configuration (options)	Default
	Controller	
	Printing device page count	Not Specified
	Printing supplies page count	Not Specified
	Temperature and Humidity	76 degF / 24 degC 24.63 %rH
	Voltage	110V
	Test End Date and Time	1/25/2016 11:28

	Item	Value
Mode and Setting	PDL and driver version	32
	Print Quality mode	default
	B&W settings	default
	Paper feed orientation	Short Edge
Paper	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		
		FPOT from Ready (seconds)
B&W	Simplex	5.91
	Duplex	10.73

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		5.96	6.15	5.61	5.91	21 Seconds
	FPOT from Ready - Duplex		10.84	10.92	10.43	10.73	21 Seconds
	FPOT from Sleep - Simplex				20.74		61 Minutes
	Recovery Time				15.1		
	FPOT from Off - Simplex				36.89		
	Warm-up Time				31.28		

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 (60 minutes) HP/Non ISO Test	N/A	N/A	N/A	N/A	Adobe Reader	
B&W Mode	FPOT from Sleep	20.74	20.78	20.51	20.94	Adobe Reader	61 Minutes
	FPOT from Sleep (60 minutes) HP/Non ISO Test	20.74	20.78	20.51	20.94	Adobe Reader	61 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 DH16aCSHR 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	32