

**Yield Reporting Form:****HP Color LaserJet Enterprise M652/M653 and  
MFP M681/M682 series cartridge models CF450A,  
CF451A, CF452A, CF453A****Declared ISO Yield****Toner cartridge yield:****Average composite CMY cartridge yield 10,500 standard pages<sup>1</sup>****Average K cartridge yield 12,500 standard pages<sup>1</sup>**

Declared yield value in accordance with ISO/IEC 19798 based on continuous printing.

**Calculated test values**

<b>90% lower confidence limit<sup>1</sup></b>	
Cyan (C)	11,216 pages
Magenta (M)	11,150 pages
Yellow (Y)	10,192 pages
Composite CMY	10,832 pages
Black (K)	12,861 pages

	<b>CMY test</b>	<b>K test</b>
Test beginning dates	5/8/2017	8/18/2017
Test ending dates:	5/23/2017	8/24/2017
Number of cartridges used in testing	48	16
Number of cartridges used in calculations	C=16, M=16, Y=16, (Total=48)	C=0, M=0, Y=0, K=16 (Total=16)
Type of cartridge	All-in-one	
Shake procedure used?	No	
Print mode	Continuous	
MPACCO Mode	Off	
Number of engines used in testing	4	
Media	HP Multipurpose	
Paper size	Letter	
Paper feed orientation	Short edge	
Computer model	vSphere Client virtual machine	
Operating system	Microsoft Windows 7 Enterprise with SP1	
Application software	HP Direct Print (EWS)	
Print driver version	HP Direct Print (EWS)	
Connection type	Network	
Test page version	ISO-IEC 24712	
Power on/off every day	No	

Test engines		Test engines firmware versions	
Serial numbers	CMY test	K test	
MX3CK360D1	240329_006039	2403322_00090	
MX3CK360D8			
JPBCK4JOKK	2403302_006076		
JPBCK4JOGV			
JPBCK4JODN		2403322_000089	
JPBCK4J07C			

### Cartridge testing data

CMY test environmental limits:	Temperature	Humidity
	°C	%RH
Max running average	23.0	51
Min running average	23.0	49
Average	23.0	50

K test environmental limits:	Temperature	Humidity
	°C	%RH
Max running average	23.0	54
Min running average	23.0	49
Average	23.0	50

Cyan (CF451A) in HP CLJ Enterprise MFP M681 and HP CLJ Enterprise M653				Magenta (CF453A) in HP CLJ Enterprise MFP M681 and HP CLJ Enterprise M653			
Average:		11,374		Average:		11,242	
Standard Deviation:		361		Standard Deviation:		211	
90% LCB:		11,216		90% LCB:		11,150	
Cartridge#	Lot Code	Engine Ser#	Cartridge Yield	Cartridge#	Lot Code	Engine Ser#	Cartridge Yield
CF451A-01	7B15N2Aa	MX3CK360D1	11,345	CF453A-01	7B16N1Aa	MX3CK360D1	11,070
CF451A-02	7B15N2Aa	MX3CK360D8	11,440	CF453A-02	7B16N1Aa	MX3CK360D8	11,265
CF451A-03	7B15N2Aa	JPBCK4JOKK	11,480	CF453A-03	7B16N1Aa	JPBCK4JOKK	11,490
CF451A-04	7B15N2Aa	JPBCK4JOGV	11,895	CF453A-04	7B16N1Aa	JPBCK4JOGV	11,330
CF451A-05	6L15N1Aa	MX3CK360D1	10,940	CF453A-05	6L15N1Aa	MX3CK360D1	10,895
CF451A-06	6L15N1Aa	MX3CK360D8	10,720	CF453A-06	6L15N1Aa	MX3CK360D8	11,370
CF451A-07	6L15N1Aa	JPBCK4JOKK	11,120	CF453A-07	6L15N1Aa	JPBCK4JOKK	11,340
CF451A-08	6L15N1Aa	JPBCK4JOGV	10,850	CF453A-08	6L15N1Aa	JPBCK4JOGV	11,210
CF451A-09	7B22N2Aa	MX3CK360D1	11,495	CF453A-09	7B22N2Aa	MX3CK360D1	11,290
CF451A-10	7B22N2Aa	MX3CK360D8	11,035	CF453A-10	7B22N2Aa	MX3CK360D8	11,215
CF451A-11	7B22N2Aa	JPBCK4JOKK	11,390	CF453A-11	7B22N2Aa	JPBCK4JOKK	11,435
CF451A-12	7B22N2Aa	JPBCK4JOGV	11,755	CF453A-12	7B22N2Aa	JPBCK4JOGV	11,300
CF451A-13	7B15N2Aa	MX3CK360D1	11,710	CF453A-13	7B16N1Aa	MX3CK360D1	11,300
CF451A-14	6L15N1Aa	MX3CK360D8	11,770	CF453A-14	6L15N1Aa	MX3CK360D8	11,315
CF451A-15	7B15N2Aa	JPBCK4JOKK	11,775	CF453A-15	7B16N1Aa	JPBCK4JOKK	11,395
CF451A-16	6L15N1Aa	JPBCK4JOGV	11,270	CF453A-16	6L15N1Aa	JPBCK4JOGV	10,655

<b>Yellow (CF452A) in HP CLJ Enterprise MFP M681 and HP CLJ Enterprise M653</b>				<b>Black (CF450A) in CLJ Enterprise MFP M681 and HP CLJ Enterprise M653</b>			
Average:		10,359		Average:		12,948	
Standard Deviation:		382		Standard Deviation:		199	
90% LCB:		10,192		90% LCB:		12,861	
<b>Cartridge#</b>	<b>Lot Code</b>	<b>Engine Ser#</b>	<b>Cartridge Yield</b>	<b>Cartridge#</b>	<b>Lot Code</b>	<b>Engine Ser#</b>	<b>Cartridge Yield</b>
CF452A-01	7B16N2Aa	MX3CK360D1	10,430	CF450A-17	7B16N1Aa	MX3CK360D1	12,655
CF452A-02	7B16N2Aa	MX3CK360D8	10,155	CF450A-18	7B16N1Aa	MX3CK360D8	12,615
CF452A-03	7B16N2Aa	JPBCK4JOKK	10,425	CF450A-19	7B16N1Aa	JPBCK4JODN	13,365
CF452A-04	7B16N2Aa	JPBCK4JOGV	10,715	CF450A-20	7B16N1Aa	JPBCK4J07C	13,010
CF452A-05	6L16N1Aa	MX3CK360D1	10,610	CF450A-21	7B22N2Aa	MX3CK360D1	12,860
CF452A-06	6L16N1Aa	MX3CK360D8	10,825	CF450A-22	7B22N2Aa	MX3CK360D8	12,750
CF452A-07	6L16N1Aa	JPBCK4JOKK	10,660	CF450A-23	7B22N2Aa	JPBCK4JODN	13,000
CF452A-08	6L16N1Aa	JPBCK4JOGV	10,380	CF450A-24	7B22N2Aa	JPBCK4J07C	13,020
CF452A-09	7B22N2Aa	MX3CK360D1	10,000	CF450A-25	6L16N1Aa	MX3CK360D1	12,935
CF452A-10	7B22N2Aa	MX3CK360D8	10,005	CF450A-26	6L16N1Aa	MX3CK360D8	12,920
CF452A-11	7B22N2Aa	JPBCK4JOKK	9,315	CF450A-27	6L16N1Aa	JPBCK4JODN	13,250
CF452A-12	7B22N2Aa	JPBCK4JOGV	10,120	CF450A-28	7B22N2Aa	JPBCK4J07C	12,765
CF452A-13	7B16N2Aa	MX3CK360D1	10,320	CF450A-29	7B22N2Aa	MX3CK360D1	13,135
CF452A-14	6L16N1Aa	MX3CK360D8	10,595	CF450A-30	7C10N2Aa	MX3CK360D8	12,990
CF452A-15	7B16N2Aa	JPBCK4JOKK	10,415	CF450A-31	7C10N2Aa	JPBCK4JODN	12,905
CF452A-16	6L16N1Aa	JPBCK4JOGV	10,780	CF450A-32	7C10N2Aa	JPBCK4J07C	12,995

<sup>1</sup> In an ISO report commonly two values are listed: declared ISO yield and calculated test values. Generally, the calculated test values are higher than the declared ISO yield. Actual cartridge yields vary considerably based on content of images printed and other factors. For more information, visit [www.hp.com/go/learnaboutsupplies](http://www.hp.com/go/learnaboutsupplies).