FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

OMB APPROVAL
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

(Print or Ty	pe Response	s)		I										
1. Name and Address of Reporting Person* Kirloskar Virendra A				2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]						5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner				
(Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE				3. Date of Earliest Transaction (Month/Day/Year) 08/06/2015						Director				
(Street)				4. If Amendment, Date Original Filed(Month/Day/Year)						6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting Person				
MILPITA (City	AS, CA 95	(State)	(Zip)	_										
		(3.000)		2A. Deemed			1		_			Beneficially	Owned 6.	7. Nature
1.Title of Security (Instr. 3) 2. Transaction Date (Month/Day/Ye			Execution Date, if any	f Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		of (D)	Beneficially Owned Following Reported Transaction(s)		Ownership Form:	of Indirect Beneficial		
				(Month/Day/Year)	Code	V	Amount	(A) or (D)	Price	(Instr. 3 and 4)			Direct (D) or Indirect (I) (Instr. 4)	Ownership (Instr. 4)
Commor	Stock		08/06/2015		М		4,000	Δ	\$ 0 (1)	4,297			D	
Common Stock 08		08/06/2015		F		1,504 (2)		\$ 51.95	2,793	93		D		
Common Stock		08/06/2015		M		1,013		\$ 0 (<u>3</u>)	3,806	,806		D		
Common Stock 08		08/06/2015		F		381 (4		\$ 51.95	3,425			D		
Common Stock - Restricted Stock Units (5)		08/06/2015		A		4,400 (6)	A	\$ 0	18,399	(7)		D		
Reminder:	Report on a	separate line fo	or each class of secur Table II - I	ities beneficially ov		Pers cont the f	ons wh ained ir form dis	o respo this fo plays a	rm are currer	not requally valid		formation spond unle trol numbe	ess	1474 (9-02)
1 77'41 . C	l _a	2 75 /	,	e.g., puts, calls, wa						.1 1	0 D : C	0.31 1	6 10	11. 37.
	2. Conversion or Exercise Price of Derivative Security	(Month/Day/Year) any		te, if Transaction Code (ear) (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	and (Mo	ate Exerc Expiratio nth/Day/	n Date	Amo Undo Secu	tle and ount of erlying trities r. 3 and	Derivative Security (Instr. 5)	9. Number Derivative Securities Beneficiall Owned Following Reported Transaction (Instr. 4)	Owners Form o Derivat Security Direct (or Indir	Beneficia Ownersh (Instr. 4)
				Code V	(A) (D)	Date		Expiratio Date	n Title	Amount or Number of Shares				

Reporting Owners

	Relationships						
	Director	10% Owner	Officer	Other			
Reporting Owner Name / Address							

Kirloskar Virendra A			
C/O KLA-TENCOR CORPORATION		SVP & Chief Accounting Officer	
ONE TECHNOLOGY DRIVE		SVI & Chief Accounting Officer	
MILPITAS, CA 95035			

Signatures

Brian M. Martin as Attorney-in-Fact for Virendra A. Kirloskar	08/10/2015
**Signature of Reporting Person	Date

Explanation of Responses:

- * If the form is filed by more than one reporting person, see Instruction 4(b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) On August 6, 2013, the Reporting Person received a grant of restricted stock units ("RSUs") covering 8,000 shares of KLA-Tencor common stock. On August 6, 2015, the Reporting Person vested in fifty percent (50%) of such RSUs.
 - Pursuant to the terms of the August 6, 2013 RSU grant, 1,504 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax
- (2) withholding. The fair market value of KLA-Tencor common stock used for purposes of calculating the number of shares to be withheld was the closing price of KLA-Tencor common stock as reported on the NASDAQ Stock Market on such vesting date.
- (3) On August 6, 2013, the Reporting Person received a grant of RSUs covering 4,050 shares of KLA-Tencor common stock. On August 6, 2015, the Reporting Person vested in twenty-five percent (25%) of such RSUs.
- Pursuant to such terms of the August 6, 2013 RSU grant, 381 shares of KLA-Tencor common stock were automatically withheld at vesting to cover required tax withholding.
- (4) The fair market value of KLA-Tencor common stock used for purposes of calculating the number of shares to be withheld was the closing price of KLA-Tencor common stock as reported on the NASDAQ Stock Market on such vesting date.
- (5) Each RSU represents a contingent right to receive one share of KLA-Tencor common stock.
 - Represents a grant of RSUs subject only to service-vesting requirements. The Reporting person will vest in twenty-five percent (25%) of the RSUs on the one-year
- anniversary of the grant date (August 6, 2016) and an additional twenty-five percent (25%) on each annual anniversary of the grant date thereafter through August 6, 2019, in each case subject to the Reporting Person continuing as a service provider to KLA-Tencor through the applicable vesting date. The shares of common stock will be issued as the RSUs yest.
- (7) Does not include performance-based RSUs, if any, held by the Reporting Person for which an assessment has not yet been made regarding the achievement of the applicable performance goals. Any such holdings will be reported on a Form 4 within two business days of the date such assessment is made.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.