

CALDERONI ROBERT  
Form 4/A  
March 29, 2011

**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, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
CALDERONI ROBERT

2. Issuer Name and Ticker or Trading Symbol  
KLA TENCOR CORP [KLAC]

5. Relationship of Reporting Person(s) to Issuer  
(Check all applicable)

(Last) (First) (Middle)  
C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE  
(Street)

3. Date of Earliest Transaction (Month/Day/Year)  
11/03/2010

Director  10% Owner  
 Officer (give title below)  Other (specify below)

MILPITAS, CA 95035

4. If Amendment, Date Original Filed(Month/Day/Year)  
11/03/2010

6. Individual or Joint/Group Filing(Check Applicable Line)  
 Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

(City) (State) (Zip)

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)
			Code	V	Amount (D) Price		
Common Stock - Restricted Stock Units (1)	11/03/2010		A		2,772 (2)	A	\$ 0 5,920 D
Common Stock					8,417.627 (3)		D

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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SEC 1474 (9-02)

displays a currently valid OMB control number.

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned**  
(e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of Derivative Securities Owned Beneficially (Instr. 5)
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
CALDERONI ROBERT C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035	X			

## Signatures

Brian M. Martin as Attorney-in-Fact for Robert M. Calderoni 03/29/2011

\*\*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) Each restricted stock unit represents a contingent right to receive one share of KLA-Tencor common stock.
  - (2) The restricted stock units will fully vest one year from date of grant and will be deliverable on such date.
- Amount has been revised to include an additional 113.627 shares of KLA-Tencor common stock acquired by Mr. Calderoni prior to the filing date of the original Form 4 pursuant to automatic reinvestments of dividends paid on KLA-Tencor common stock, which shares
- (3) were not included in Mr. Calderoni's common stock holdings reported in the original Form 4. Pursuant to such dividend reinvestments, Mr. Calderoni acquired 41.225 shares of KLA-Tencor common stock on June 1, 2010 at a price of \$30.21 per share, and 72.402 shares of KLA-Tencor common stock on September 1, 2010 at a price of \$28.82 per share.

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.