## 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)                                  |                       |  |  |        |   |                       |   |   |                        | •   |                                      |   |  |                                      |
|--|---|-------------------------------------|-----------------------|--|--|--------|---|-----------------------|---|---|------------------------|---|--------------------------------------|---|--|--------------------------------------|
| 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)  X Director 10% Owner |                                      |   |  |                                      |
| (Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE |   |                                     |                       |  | 3. Date of Earliest Transaction (Month/Day/Year) 05/02/2017        |        |   |                       |   |   | Office                 | r (give title belo  | ow)                                  | Other (specify b  | elow)  |                                      |
| (Street) MILPITAS, CA 95035  |   |                                     |                       | 4. If Amendment, Date Original Filed(Month/Day/Year) |  |        |   |                       |   | 6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting PersonForm filed by More than One Reporting Person |                        |   |                                      |   |  |                                      |
| (City  | )   | (State)                             | (Zip)                 |  | 1  | able I | - Noi   | n-De                  | rivative  | Securit   | ies Acq                | uired, Disp   | osed of, or I                        | Beneficially  | Owned  |                                      |
| (Instr. 3) Date<br>(Month/Day/Year)                                      |   |                                     |                       | Code<br>(Instr. 8)                                   |  | tion   | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |                       |   | 5. Amount of Securities<br>Beneficially Owned Following<br>Reported Transaction(s)  |                        |   | Ownership of Form:                   | Beneficial  |  |                                      |
|  |   |                                     | (Month/Day/Year)      |  |  | ode    | V   | V Amount (A) or Price |   | (Instr. 3 and 4)  |                        |   |                                      | Ownership<br>(Instr. 4)   |  |                                      |
| Common Stock   |   | 05/02/2017                          |                       |  | Ş  | S      |   |                       | \$<br>98.811                                      | 1 4,292.5   | 292.527 <sup>(2)</sup> |   | D                                    |   |  |                                      |
| Common Stock - Restricted<br>Stock Units (3)                             |   |                                     |                       |  |  |        |   |                       |   |   | 2,141                  |   | D                                    |   |  |                                      |
| Reminder:  | Report on a s   | eparate line f                      | or each class of secu |  | •  |        |   | Per<br>con<br>the     | sons whatained in<br>form dis                     | no resp<br>n this<br>splays   | form an                | e not requently valid   |                                      | ormation<br>spond unle<br>trol numbe  | SS   | 1474 (9-02)                          |
|  |   |                                     |                       |  | ive Securi<br>ts, calls, v   |        |   |                       |   |   |                        | illy Owned  |                                      |   |  | _                                    |
| Security   | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transactic<br>Date<br>(Month/Day | Year) Execution Da    | ate, if T  | Code of Deri Secu Acque (A) of Disp of (I (Instr. 8)               |        | Number and  |                       | Date Exercisable I Expiration Date onth/Day/Year) |   | An<br>Un<br>Sec        | Fitle and nount of derlying purities str. 3 and   | Derivative<br>Security<br>(Instr. 5) | 9. Number of<br>Derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s<br>(Instr. 4) | Ownership<br>Form of<br>Derivative<br>Security:<br>Direct (D)<br>or Indirect | Beneficial<br>Ownershi<br>(Instr. 4) |
|  |   |                                     |                       |  | Code V   | (A)    | (D)   | Dat<br>Exe            | -   | Expira<br>Date  | tion Tit               | or<br>Number<br>of<br>Shares  |                                      |   |  |                                      |

#### **Reporting Owners**

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

#### **Signatures**

| Teri A. Little as Attorney-in-Fact for Robert M. Calderoni |
|--|
|--|

| **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) Represents the weighted average sales price for the shares. The sales prices ranged from \$98.47 to \$99.085. The reporting person will provide upon request full information regarding the number of shares sold at each separate price.
- (2) Includes 2,394 shares of Common Stock issued upon the vesting of RSUs on November 4, 2016.
- (3) Each restricted stock unit ("RSU") represents a contingent right to receive one share of KLA-Tencor common stock.

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.