## FORM 4

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

| OMB APPR           | OVAL   |     |
|--------------------|--------|-----|
| OMB Number:        | 3235-0 | 287 |
| Estimated average  | burden |     |
| nours per response | e      | 0.5 |

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 Kesponse   | s)                                     |  |   |            |   |             |  |  |  |                        |   |  |                                       |                   |             |
|--|---|--|--|---|------------|---|-------------|--|--|--|------------------------|---|--|---------------------------------------|-------------------|-------------|
| 1. Name and Address of Reporting Person* Wang David C                    |   |  | 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) 11/03/2011   |            |   |             |  |  |  |                        | Office  | r (give title belo   | ow)                                   | Other (specify b  | pelow)      |
| (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  | AS, CA 95   | 035                                    |  |   |            |   |             |  |  |  |                        |   |  | one responding                        | . 015011          |             |
| (City  | )   | (State)                                | (Zip)  |   | T          | able I  | - Non       | -Deriv                                 | ative S  | ecurities .  | Acqui                  | ired, Dispo   | osed of, or I  | Beneficially                          | Owned             |             |
| 1.Title of Security (Instr. 3)  2. Transaction Date (Month/Day/Year)     |   | Execution Date, if Code                |  |   |            | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |             | of                                     | 5. Amount of Securities<br>Beneficially Owned Following<br>Reported Transaction(s)<br>(Instr. 3 and 4) |  | ollowing               | Ownership Form: Direct (D)  | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4)        |                                       |                   |             |
|  |   |  |  |   |            | C   | Code        | V                                      | Amoun  | (A) or (D)   | Price                  |   |  |                                       | (I)<br>(Instr. 4) |             |
| Common<br>Stock Un   | Stock - R   | estricted                              | 11/03/2011   |   |            |   | A           |  | 2,539<br>( <u>2)</u>   | A  | \$ 0                   | 2,539   |  |                                       | D                 |             |
| Common   | Stock   |  |  |   |            |   |             |  |  |  |                        | 14,720  |  |                                       | D                 |             |
| reminer  | report on a :   | separate fine for                      | r each class of secur  | Derivativ   | e Securit  | ties Ac   | f<br>d<br>t | Person<br>contai<br>the for<br>d, Disp | ns who   | o respon<br>this form<br>plays a co  | m are<br>currer        | not requesting ntly valid   |  | formation<br>spond unle<br>trol numbe | ss                | 1474 (9-02) |
| 4 5711 0   | I.  |  |  | <u> </u>  | , calls, w |   |             |  |  | ible secur   | T                      |   | 0.71.0   |                                       | 2 40              | 44.37       |
| Security   | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security | 3. Transaction<br>Date<br>(Month/Day/Y | Execution Data   | Year)  4. Transaction Code Year)  (Instr. 8)  5. Number of Derivativ Securitie Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) |            | vative rities pired or cosed                                      |             |  | 7. Title and<br>Amount of<br>Underlying<br>Securities<br>(Instr. 3 and<br>4)                           |  | 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) | Ownershi<br>Form of<br>Derivativ<br>Security:<br>Direct (D<br>or Indirec | Beneficia<br>Ownersh<br>(Instr. 4)    |                   |             |
|  |   |  |  | C   | ode V      | (A)   |             | Date<br>Exerci                         |  | Expiration<br>Date   | Title                  | Amount<br>or<br>Number<br>of<br>Shares  |  |                                       |                   |             |

### **Reporting Owners**

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

### **Signatures**

| Brian M. Martin as Attorney-in-Fact for David C. Wang | 11/04/2011 |
|---|------------|
| -*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 ("RSU") 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.

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.