# FORM 4

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

| OMB APPR           | ROVAL     |
|--------------------|-----------|
| OMB Number:        | 3235-0287 |
| Estimated average  | burden    |
| houre per reenonee | 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

|  | e Responses   | ,   |  |   |  |   |   |   |                     |   |   |                        |   |   |  |
|--|---|---|--|---|--|---|---|---|---------------------|---|---|------------------------|---|---|--|
| 1. Name and Address of Reporting Person * TOMPKINS JON D   |   |   | 2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC] |   |  |   |   |   |                     | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)XDirector10% Owner   |   |                        |   |   |  |
| (Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES                                     |   |   | 3. Date of Earliest Transaction (Month/Day/Year) 08/02/2005        |   |  |   |   |   | 0                   | fficer (give t  | itle below)                               | Oth                    | er (specify bel   | ow)   |  |
| (Street) SAN JOSE, CA 95130  |   |   | 4. If Amendment, Date Original Filed(Month/Day/Year) 08/03/2005    |   |  |   |   |   | _X_ For             | 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)   |   |   | (Zip)  | Table I - Non-Derivative Securities Acqui   |  |   |   |   |                     | uired, D  | dired, Disposed of, or Beneficially Owned |                        |   |   |  |
| (Instr. 3) Date  |   | 2. Transaction<br>Date<br>(Month/Day/Year | r) any   | med<br>on Date, if<br>Day/Year)   | (Instr. 8)   |   | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |   | 5. Amount of Sec    |   | curities Beneficially                     |                        | 6.<br>Ownership<br>Form:<br>Direct (D)  | Beneficial  |  |
|  |   |   |  | (ivionity)  | 2 ay, 1 car)   |   | Code V A  | (A) or (D)  | Price               |   | , <b>u.i.u</b> 1)                         |                        |   | or Indirect (I) (Instr. 4)                                  |  |
| 1. Title of Derivative Security (Instr. 3)  2. Conversion Date (Month/Day Price of Derivative Security |   |   | Table II   | (e.g., puts, calls, v  4. 5. Nur Transaction of Deriv. Olde Secur Acqui (A) or Dispo of (D) |  | a cure curities Acquired, Dis, warrants, options, Number 6. Date Exe Expiration (Month/Dacquiries equired ) or sposed (D) |   | rently valid OMB of sposed of, or Benefic convertible securition recisable and Date |                     | control number.   |   | 8. Price of            | Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction(s             | ys  |  |
| Derivative<br>Security   | Conversion<br>or Exercise<br>Price of<br>Derivative |   | 3A. Deemed<br>Execution Date, if<br>any<br>(Month/Day/Year)        | 4.<br>Transactio  | 5. Num<br>of<br>Derivat<br>Securit<br>Acquir<br>(A) or<br>Dispos<br>of (D) | tive<br>ies<br>ed   | 6. Date Exerci<br>Expiration Da<br>(Month/Day/Y                   | sable and<br>te   | 7. of<br>Sec        | Underlyii<br>curities   | ng  | Derivative<br>Security | Derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported<br>Transaction | Owner<br>Form of<br>Derivate<br>Securi<br>Direct<br>or Indi | Benefic<br>Owners<br>y: (Instr. 4          |
| Derivative<br>Security   | Conversion<br>or Exercise<br>Price of<br>Derivative | Date                                      | Execution Date, if any   | 4.<br>Transactic<br>Code<br>(Instr. 8)  | 5. Num<br>of<br>Derivat<br>Securit<br>Acquir<br>(A) or<br>Dispose          | tive<br>ies<br>ed   | 6. Date Exerci<br>Expiration Da                                   | sable and<br>te   | 7. of<br>Sec<br>(In | Underlying curities str. 3 and  | ng  | Derivative<br>Security | Derivative<br>Securities<br>Beneficially<br>Owned<br>Following<br>Reported                | Owner<br>Form of<br>Deriva<br>Securi<br>Direct<br>or Indi   | of India<br>Benefic<br>Owners<br>(Instr. 4 |

### **Reporting Owners**

|  | Relationships |              |         |       |  |  |  |
|--|---------------|--------------|---------|-------|--|--|--|
| Reporting Owner Name / Address   | Director      | 10%<br>Owner | Officer | Other |  |  |  |
| TOMPKINS JON D<br>C/O KLA-TENCOR CORPORATION<br>160 RIO ROBLES<br>SAN JOSE, CA 95130 | X             |              |         |       |  |  |  |

## **Signatures**

| By: Stuart J. Nichols For: Jon D. Tompkins | 08/15/2005 |
|--|------------|
| **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) Option expiration date was reported incorrectly on the original Form 4.

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.