PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and install lighting system as described in Contract Documents, complete with lamps.

B. Related Sections:
   1. Section 26 0501: Common Electrical Requirements.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. Lighting Fixtures:
   1. Type One Acceptable Products:
      a. See Fixture Schedule on Drawings for acceptable manufacturers and models.
      b. Equals as approved by Architect before bidding. See Section 01 6000.

B. Fluorescent Ballasts:
      a. Instant start.
      b. Parallel circuit type.
      c. Minimum power factor of 95 percent.
      d. Maximum total harmonic distortion of 10 percent.
      e. Operation of lamps in compliance with Lamp Manufacturer's recommendations.
      f. Minimum starting temperature 0 deg F for T8 lamps.
      g. Class A sound rating.
      h. Transient protection in accordance with IEEE / ANSI C62.41-1984, Category A.
      j. Ballast factor of 0.78.
      k. Maximum crest factor of 1.7.
      l. Five year full replacement warranty including labor allowance for replacement.
      m. Input voltage to match system voltage.
      n. Category Four Approved Manufacturers. See Section 01 6000 for definitions of Categories.
         1) ROP-LWSC or VOP-LWSC by Advance.
         2) GE-MAX-L/ULTRA by General Electric.
         3) B-IUNVEL-A by Universal Lighting Technologies.
         4) QHE-UNV-ISL-SC by Osram / Sylvania.

C. Lamps:
   1. Category Four Approved Manufacturers. See Section 01 6000 for definitions of Categories.
      a. General Electric.
      c. Osram / Sylvania.

2.2 MANUFACTURERS

A. Fixtures: When several lighting fixtures are specified by name for one use on Drawings, select any one of those specified. Do not mix fixtures from different manufacturers specified for one use.
B. Specification Items:

2.3 SOURCE QUALITY CONTROL

A. Fixtures shall be fully assembled complete with necessary wiring, sockets, lamps, reflectors, ballasts, auxiliaries, plaster frames, recessing boxes, hangers, supports, lenses, diffusers, and other accessories essential for complete working installation.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Interface With Other Work:
1. Coordinate with Sections under 09 5000 heading to obtain symmetrical arrangement of fixtures in acoustic tile ceiling.
2. Coordinate with Sections under 09 9000 to ensure that light coves are properly painted before installation of light fixtures.
3. In mechanical equipment rooms, coordinate locations of light fixtures with equipment locations to provide proper room illumination without obstruction. Suspend fixtures that must be mounted below pipes, ducts, etc, with chains or other Architect approved method.

B. Securely mount fixtures. Support fixtures weighing 50 lbs 23 kg or more from building framing or structural members.

C. Fasten lay-in fluorescent fixtures to ceiling suspension system on each side with bolts, screws, rivets, or clips. In addition, connect lay-in fixtures weighing less than 50 lbs 23 kg with two-wire hangers minimum to building framing or structural members. Connect wires to opposing corners of fixture and may be slightly slack. Make final conduit connections to lay-in fluorescent fixtures with specified flexible conduit or flexible fixture whips.

D. Where fluorescent fixtures are shown installed end to end, provide suitable connectors or collars to connect adjoining units to appear as a continuous unit.

E. Where recessed fixtures are to be installed, provide openings, plaster rings, etc, of exact dimensions for such fixtures to be properly installed. Coordinate fixture installation with ceiling type and thickness. Terminate circuits for recessed fixtures in an extension outlet box near fixture and connect with specified flexible conduit.

F. Verify operation of track lighting system in Cultural Center, then remove and store track lighting fixtures as directed.

G. Do not locate incandescent fixtures in closet or storage areas within 18 inches 450 mm and fluorescent fixtures within 6 inches 150 mm of shelves.

3.2 ADJUSTMENT

A. Repair scratches or nicks on exposed surfaces of fixtures to match original undamaged conditions.

END OF SECTION