

DOCUMENT 26 51 13

INTERIOR LIGHTING FIXTURES, LAMPS, AND BALLASTS

PRODUCT MINIMUM REQUIREMENTS

Equipment must meet the requirements listed below. Equipment must be installed in a manner that delivers the expected savings while maintaining the appropriate lighting levels.

Linear Fluorescent Electronic Ballasts

Standard output ballasts must have a ballast factor of 0.87 - 0.89.

Reduced output ballasts must have a ballast factor of 0.77 - 0.78.

Catalog or reference output must have a ballast factor of 0.95 - 1.05.

High output ballasts must have a ballast factor of 1.15 - 1.20.

Linear fluorescent retrofit measures with T8 lamps must have “extra-efficient” ballasts from the following list of manufacturers and brand names:

- Advance Optanium **instant** start

Linear Fluorescent Lamps

1. All new 2-foot fluorescent lamps used in fixtures shall be F17T8 (when required).

3. All new 4-foot fluorescent lamps used in fixtures shall be F32T8 (Preferred).

Linear fluorescent lamps must be “premium” quality, meaning that they must have the following characteristics

- A minimum rated life (at 3-hour start rating) of 24,000 hours with instant start ballasts.
- Lamps must have a CRI between 80 and 86.
- Lamps must have color temperature **5000K**
- 4-foot Lamps must have an initial (catalog) lumen output ≥ 3000 lumens.
- Lamps must carry a three-year parts warranty.
- Lamps shall be designated as “low mercury content,” with < 6 mg of mercury per 4-foot lamp.

4. Model numbers for the T-8 lamps shall be as follows:

<u>Material</u>	<u>Product</u>
2 foot T-8 Lamps (when required)	Philips F17T8/ADV850/ALTO
3 foot T-8 Lamps (by acceptance only)	Philips F25T8/ADV850/ALTO

4 foot T-8 Lamps (Preferred) Philips Advantage – F32T8/ADV850/ALTO

New Recessed Troffer Fixture

New 2' X 4' recessed troffer fixture should feature two lamps Direct/Indirect and be Lithonia model Avante (Model # 2AV-G-S-32-MDR-MVOLT-GEB101S.) Specify fixture with **5000K** lamps (see above). One or three lamp fixtures are acceptable if needed, based on lighting levels required. The County's acceptable desktop light level for workspaces is above 30 Foot-candles (maintained). All new fixtures need to include quick disconnects to meet current NEC codes.

High Bay Fluorescent Fixtures

New indoor high bay Fluorescent fixtures should be Precision Fluorescent model OHEE-PC-6-6L32-UL2-HP-PS-M4-C8 or equivalent

New outdoor high bay Fluorescent fixtures should be Precision Fluorescent model GCR-6-6L32-UL2-HP-IS-M4-CA or equivalent

New Hooded Industrial Fixture

New 4-foot hooded industrial fixture should be Precision Fluorescent model STI-1-1X4-2L32-UL1-IS-HP-WA or equivalent.

New 8-foot hooded industrial fixture should be Precision Fluorescent model STI-1-1X8-4L32-UL1-IS-HP-PC or equivalent.

New Strip Fixture for Parking Garages

New strip fixtures should have a wire cage and be Precision Fluorescent Model STS-2-1X8-4L32-UL1-IS-LP-WG-WA or equivalent.

New Seal-tite Fixture

New seal-tite fixture should be Precision Fluorescent model VPT-2-1X8-4L32-UL1-STD-WA or equivalent.

New Wrap Fixture

New 2-foot wrap fixtures should be Precision Fluorescent model SWR-2-1X2-2L17-UL1-STD-IS-WA or equivalent.

New 4-foot wrap fixtures should be Precision Fluorescent model SWR-2-1X4-2L32-UL1-LP-IS-WA or equivalent.

New 8-foot wrap should be Precision Fluorescent model STS-2-1X8-4L32-UL1-IS-LP-WG-WA or equivalent

Strip Kits

8 foot strip kits should be Precision Fluorescent model UTM-BC-1-1X8-2L32-UL1-HP-IS-WA or equivalent

3 foot strip kits should be Precision Fluorescent model UTM-BC-1-1X3-2L25-UL1-LP-IS-WA or equivalent

Lenses

Lenses shall be made from clear prismatic, acrylic material of 0.125" thickness (A12). Wrap-around lenses must be sized and contoured to be similar to factory-supplied lenses in appearance. Flat lenses must be cut evenly and sized properly so they can be installed in a secure manner.

Reflectors

Retrofit reflectors and reflector kits must be constructed of steel or aluminum and white powder coat finish with a total reflectivity $\geq 91\%$.

Unacceptable Indoor Fixtures

U-tube fixtures, two-pin compact fluorescent lamps, 3-foot fluorescent lamps, parabolic lenses, incandescent lamps, HID lamps, and 8' fluorescent lamps are not acceptable in interior spaces at County facilities.