

Environmental specifications

Contract release L-290(5) lamps – tubular, CFLs, fluorescent, high pressure sodium, LED, and others

Lamp environmental and product specification

Responders must download, complete, and submit (upload/attach) the Environmental Worksheet **and** the Price Schedule worksheet attached to the Event. The Price Schedule includes product and price offerings. The Environmental Worksheet must describe complete information for all mercury-containing lamps offered.

All products offered in response to the Solicitation must meet all specifications as outlined in the Solicitation and all federal and State safety codes and requirements. The Responder's submission certifies that any offer submitted to participate in the State's Solicitation process is for products that will meet the specification as required.

The Contract Vendor must provide the following product performance parameters and technical information (via catalogs, product sheets, brochures or link to the manufacturer's website) on request to Contract customers.

- Lamp efficiency (lumens/watt)
- Lumen output (initial)
- Correlated color temperature
- Minimum Color Rendering Index (CRI)
- Measured input power

Product restrictions

Responders must disclose and report the maximum mercury content in milligrams for **all mercury-containing lamps offered**, including but not limited to fluorescent, compact fluorescent, high-pressure sodium, metal halide and LED lamps. An **Environmental Worksheet has been provided for reporting purposes**. If reporting a range, Responders must disclose the top of the range. Responders must also disclose presence of lead in glass and/or solder for all lamps offered.

Tubular lamps

All tubular fluorescent lamps sold on this contract must meet the following environmental specifications as detailed below.

1.0: T8 lamps

T8 Lamp Types	Minimum Color Rendering Index (CRI)	Minimum Rated Lamp Life (hours)*	Minimum Warranty (years)	Maximum Mercury Content (mg)	TCLP Compliant
48 inch, linear (including 32-watt and lower-wattage 'energy saving' models).	80	24,000 hours	3 years	3.5 mg	Required
Shorter than 48 inch, linear	80	18,000 hours	3 years	3.5 mg	Required
Longer than 48 inch, linear	80	18,000 hours	2 years	10 mg	Required
U-bend	80	18,000 hours	2 years	8 mg	Required

* Minimum rated lamp life is based on 3 hour/start cycle testing with a 0.9 electronic instant start ballast.

2.0: T5 lamps

T5 Lamp Types	Minimum Color Rendering Index (CRI)	Minimum Rated Lamp Life (hours)*	Minimum Warranty (years)	Maximum Mercury Content (mg)	TCLP Compliant
Standard linear	85	25,000 hours	2 years	3 mg	Required
High Output Linear	85	25,000 hours	2 years	3 mg	Required
Circular	82	12,000 hours	2 years	10 mg	Required

* Minimum rated lamp life is based on 3 hour/start cycle testing on electronic program-start ballast.

Compact fluorescent lamps

All compact fluorescent lamps (cfls) sold on this contract must meet the following environmental specifications as detailed below.

3.0: Compact fluorescent, pin-based lamps (CFL)

CFL Lamp Types	Minimum Color Rendering Index (CRI)	Minimum Rated Lamp Life (hours)	Minimum Warranty (years)	Maximum Mercury Content (mg)	TCLP Compliant
4-pin	82	12,000 hours	1 year	5	Required (when available)

4.0: Compact fluorescent, screw based - self-ballasted (CFL)

All screw based-self ballasted CFLs must be ENERGY STAR rated and be on the ENERGY STAR Certified Light Bulbs list: <http://www.energystar.gov/productfinder/product/certified-light-bulbs/results>.

Electrodeless fluorescents

All electrode less fluorescent lamps sold on this contract must meet the following environmental specifications as detailed below.

5.0: Cold cathode compact fluorescents (CC CFL) and induction lamps

Electrodeless Lamp Types	Minimum Color Rendering Index(CRI)	Minimum Rated Lamp Life (hours)	Maximum Mercury Content (mg)
Self-Ballasted CC CFL	85	15,000	5
Induction	85	100,000	18

High-intensity discharge lamps

All high-intensity discharge (HID) lamps sold on this contract must meet the following environmental specifications as detailed below.

6.0: High pressure sodium (HPS) lamps

HPS Lamp Types	Minimum Rated Lamp Life (hours)	Minimum Warranty (years)	Maximum Mercury Content (mg)	TCLP Compliant
Mogul Base, non-cycling, up to 1,000 watts	30,000	2 years	NA	Required
Mogul Base, cycling, up to 1,000 watts	24,000	1 years	15	Required

Metal halide

All Metal Halide Lamp Types must be TCLP compliant, whenever available, and have a minimum 1-year warranty.

Prohibited HID lamps

The follow HID lamps are prohibited from this contract.

- Mercury Vapor
- Probe-Start Metal Halides
- Low Pressure Sodium

Halogen and other incandescent lamps

All incandescent lamps sold on this contract must meet the following environmental specifications as detailed below.

7.0: Incandescent lamps

Halogen and other incandescent lamps are prohibited from this contract. Responders are asked to promote more energy-efficient and long-lasting replacements for halogen and other incandescent lamps.

Specialty lamps (i.e. rough service, appliance lamps, fan lamps, etc.) are not prohibited from the contract.

Light-emitting diodes

All light-emitting diode (LED) lamps sold on this contract must meet the following environmental specifications as detailed below.

8.0: Light-emitting diode exit sign lamps and retrofit kits

Responders must offer clear, green, and red LED exit sign lamps and retrofit kits from at least one manufacturer. All LED exit sign lamps must be UL 924-listed and ETL-listed, meet current NFPA 101, NEC and OSHA illumination standards and meet or exceed the following requirements.

Description	Watts	Minimum Warranty (years)
Exit Sign LED Retrofit Kits	5 maximum	5 years
Individual LED Exit Sign Replacement Lamps	2 maximum	5 years

9.0: Light-emitting diode bulbs, fixtures, drivers, and luminaires

All LEDs sold under this contract must be either Design Lights Consortium (<https://www.designlights.org/>) or ENERGYSTAR (http://www.energystar.gov/index.cfm?c=lighting.pr_lighting_landing) qualified.

Responders must offer bulbs that meet the following criteria:

- Maintain at least 70% of their initial light output (L70) at 100,000 hours of operation.
- Include a five-year full replacement warranty.
- Power factor correction greater than 0.8.
- Measured percent flicker from LED integrated systems (including driver, LED array, dimming controls, daylight sensor) shall be 10% or less across entire dimming range.