

Pitt Streetlight Report

Comparison of light-emitting diode (LED) streetlights to high-pressure sodium (HPS), metal halide, and induction lamps

| Light Technology: | LED | HPS | Metal halide | Induction |
|---|-------------|-------|--------------|-----------|
| % of U.S. streetlamps: (total: 131 million) | Less than 1 | 39 | 27 | 6 |
| Cost per bulb (USD): | 9 to 322 | 12 | 27 | 280 |
| Wattage: | 105 | 150 | 162.9 | 109 |
| Bulbs per 100,000 hrs.: (vs. one induction) | 1.7 | 4.17 | 8.28 | 1 |
| CO₂ per 100,000 hrs.: (million kg) | 300 | 450 | 500 | 320 |
| NO_x per 100,000 hrs.: (million kg) | 1.1 | 1.6 | 1.7 | 1.15 |
| CFCs per 100,000 hrs.: (kg) | 4.5 | 6.4 | 6.8 | 4.7 |
| Ecotoxicity: (million kg of 2,4-D/100,000 hrs.)* | 175 | 240 | 260 | 180 |
| Respiration Impact: (thousand kg of PM2.5/100,000 hrs.)** | 90 | 100 | 110 | 95 |
| Color temperature, brightness: (degrees Kelvin) | 5,000 | 2,000 | 3,000-4,000 | 5,000 |

* Ecotoxicity was expressed in kilograms of 2,4-Dichlorophenoxyacetic (2,4-D), a common herbicide.

**Respiratory impact was expressed in kilograms of particulates designated as "fine," or less than 2.5 microns in diameter (PM2.5).

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