



Light Cost Calculation Results

Lamp Data			
Type	Mercury Vapor	LED (PAR/outdoor style)	
Number	1	1	
Hours/year	4170	4170	
Lumens	7400	1300	
Lamp Life	24000	25000	hours
Efficacy	42.3	76.5	
Efficiency	6.19%	11.2%	
Operating Costs			
Electricity per year	\$73.34	\$7.12	
Bulbs per year	< 1	< 1	
Total cost per year	\$76.57	\$12.22	
Energy and Environmental Information			
kWh used per year	730	71	
CO ₂ released/yr.	1,019 (0.51)	99 (0.05)	pounds (tons)
SO ₂ released/yr.	12	1	pounds
NO _x released/yr.	7	1	pounds
Mercury released/yr.	7	1	ounces
Coal used	343 lbs.	33 lbs.	
Emissions Equivalents			
Same as driving	831	81	miles
Trees needed	2	1	

[Calculate again.](#)

Sources / Notes

- CO₂ released per kWh used: 1.397 lb/kWh from www.americanforests.org/resources/ccc/assumptions.php
- SO₂ released per kWh used: 0.01582 lb/kWh from icole.home.att.net/
- NO_x released per kWh used: 0.00965 lb/kWh from icole.home.att.net/
- Mercury (Hg) released per kWh used: 0.0006 lb/kWh from icole.home.att.net/
- CO₂ from coal/oil/natural gas: 35.8/42.6/21.7 % from www.iaea.org/inisnkm/nkm/aws/eedrb/data/US.html
- Miles driven equivalents: 1.22666 mi/kWh @ 20 MPG from www.fueleconomy.gov
- Trees required: 0.00225 trees/kWh from www.americanforests.org/resources/ccc/assumptions.php
- Lamp data (wattage, lumens, life, etc.) from product packaging, bulbs.com, and manufacturer web sites.
(Totals might not match due to decimal rounding errors)

The Dark Sky Society (DSS) is based on Long Island, NY. Membership is free and open to anyone interested in preserving the natural star-filled night sky and fighting the intrusion of light pollution.