

Photocell Load Calculator

Estimate connected load, annual kWh, and annual cost from fixture count, duty schedule, operating days, and entered electricity rate.

Generated October 10, 2026

<https://www.elecatrix.com/lighting/photocell-load-calculator/>

Inputs		
Input	Value	Unit
Connected watts per load unit	60	W
Fixture or load count	20	count
Duty hours per day	12	h/day
Operating days per year	365	days/year
Electricity rate	0.15	\$/kWh
Results		
Result	Value	Unit
Connected watts per unit used	60	W
Fixture or load count used	20	count
Total photocell-controlled load	1200	W
Duty hours used	12	h/day
Operating days used	365	days/year
Annual energy	5256	kWh/year
Annual electricity cost	788.4	\$/year
Calculation details		
Detail	Value	Unit
Calculation basis	Total photocell-controlled load equals connected watts per fixture multiplied by count. Annual energy uses the entered duty schedule.	

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Screening boundary

Photocell load and energy arithmetic only; no photocell rating, switching behavior, inrush, controls commissioning, tariff, code, or product approval result is made.

Formulas

$\text{total load } W = \text{connected watts per unit} \times \text{fixture or load count}$

$\text{annual energy kWh} = \text{total load } W \times \text{duty hours/day} \times \text{operating days/year} / 1000$

$\text{annual cost} = \text{annual energy kWh} \times \text{electricity rate}$

Warnings and limitations

This photocell load estimate uses entered connected watts, count, schedule, and electricity rate. It does not approve photocell ratings, switching behavior, control wiring, energy-code compliance, tariffs, or product selection.