

Lighting Power Density Calculator

Reports connected lighting power density from served area and lighting load in both W/sq ft and W/sq m without applying an energy-code limit.

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<https://www.elecatrix.com/lighting/lighting-power-density-calculator/>

Inputs

Input	Value	Unit
Connected lighting load	1200	W
Served area	1000	sq ft

Results

Result	Value	Unit
Lighting power density	1.2	W/sq ft
Lighting power density	12.9167	W/m2
Connected load used	1200	W
Area used	1000	sq ft

Calculation details

Detail	Value	Unit
Calculation basis	Lighting power density equals connected lighting watts divided by served floor area.	
Compliance boundary	Arithmetic density only; no ASHRAE, IECC, COMcheck, utility, occupancy, controls, or jurisdiction-specific limit is applied.	

Formulas

$$LPD_{ft^2} = \frac{P_{lightingA_served}}{A_{served}}$$

$$LPD_{m^2} = LPD_{ft^2} \times 10.7639104167$$

Warnings and limitations

This is an arithmetic density estimate. Code compliance requires the applicable edition, occupancy/use, space classification, controls, allowances, jurisdiction, and review tool such as COMcheck where applicable.