

Lighting Layout Calculator

Estimates an initial fixture grid and nominal average illuminance from room dimensions, mounting height, spacing criterion, and fixture lumens.

Generated October 10, 2026

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

Inputs		
Input	Value	Unit
Room length	30	ft
Room width	20	ft
Mounting height	10	ft
Spacing criterion	1.2	x mounting height
Fixture lumens	4000	lm
Results		
Result	Value	Unit
Room area	600	sq ft
Spacing limit	12	ft
Recommended columns	3	columns
Recommended rows	2	rows
Recommended fixture count	6	fixtures
Average lux estimate	430.5564	lux
Calculation details		
Detail	Value	Unit
Calculation basis	Idealized rectangular room layout using ceiling-count spacing and nominal fixture lumens converted over square meters.	
Lighting boundary	No photometric distribution, utilization, light-loss, glare, obstruction, controls, emergency-lighting, energy-code, or project-approval result is made.	

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Formulas

Room area (ft²) = room length x room width

Room area (m²) = room area (ft²) x 0.09290304

Spacing limit = mounting height x spacing criterion

Columns = lceil(room length/spacing limit)rceil

Rows = lceil(room width/spacing limit)rceil

Fixture count = columns x rows

Average lux estimate = (fixture count x fixture lumens/room area (ft²) x 0.09290304)

Warnings and limitations

This lighting layout estimate uses idealized room geometry and entered lumens. It does not model photometric distribution, coefficient of utilization, light-loss factor, glare, obstructions, controls, emergency lighting, or energy-code compliance.