POLARIS LIGHT



FREE GUIDE FOR UK SITES

UK lux levels guide

Recommended light levels from BS EN 12464-1:2021 for warehouses, workshops, offices and indoor car parks, and how to measure them

Written for maintenance, warehouse, facilities and HSE managers who need to check or plan the lighting in their building.

Edition 1, November 2026

What a lux level is, and where the UK figures come from

Lux (lx) is the unit of illuminance: the amount of light falling on a surface, measured as lumens per square metre. You measure it with a lux meter.

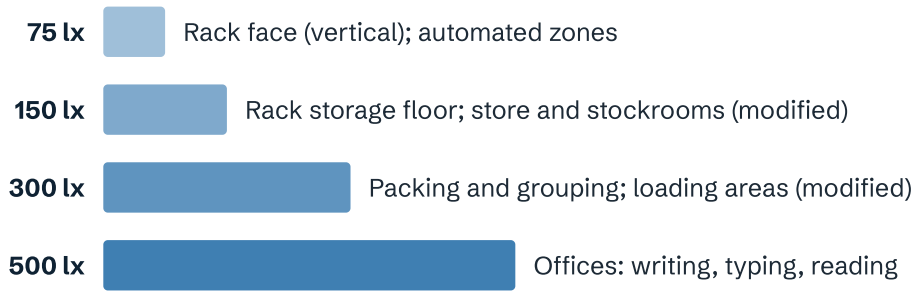
In the UK, recommended light levels for indoor workplaces come from **BS EN 12464-1:2021**, Light and lighting. Lighting of work places. Part 1: Indoor work places. For each area or task it gives a **maintained illuminance (Em)**: the average light level that must not be fallen below over the life of the installation. The design therefore has to allow for fittings ageing and getting dirty, not only the level on day one.

Required and modified values

The 2021 edition gives two values for each area. The **required** value is the minimum. The **modified** value is the level to plan for when common context modifiers apply, and it is not an upper limit. The standard lists these modifiers:

- visual work is critical;
- errors are costly to rectify;
- accuracy, higher productivity or increased concentration is of great importance;
- task details are of unusually small size or low contrast;
- the task is undertaken for an unusually long time;
- the area has a low daylight provision;
- the visual capacity of the worker is below normal.

A sense of scale



Em required from BS EN 12464-1:2021, refs 13.6, 13.8, 13.5, 13.2 and 34.2. Store and stockrooms and loading areas are shown at their modified values (refs 12.1, 13.1).

The other columns in the tables

- **UGR limit:** the Unified Glare Rating limit. Lower is stricter.
- **Ra:** the minimum colour rendering index.
- **Ref.:** the reference number in BS EN 12464-1:2021, so you can check the full entry.

The standard also sets uniformity, cylindrical, wall and ceiling values that a full lighting design should meet.

Logistics, warehouses and stores

From BS EN 12464-1:2021, Table 13 (Logistics and warehouses) and Table 12 (Store rooms).

Area or task	Ref.	Em required (lux)	Em modified (lux)	UGR limit	Ra
Loading and unloading areas	13.1	200	300	25	80
Packing and grouping areas	13.2	300	500	25	80
Open goods storage	13.4	200	300	25	80
Rack storage, floor between racks At floor level	13.5	150	200	25	80
Rack storage, rack face Vertical, on the aisle rack face	13.6	75	100	None	80
Central logistics corridor (heavy traffic)	13.7	300	500	25	80
Automated zones (unmanned)	13.8	75	100	25	80
Store and stockrooms 200 lux if continuously occupied	12.1	100	150	25	80



LED high bays over an open warehouse floor on a Polaris Light project.

Workshops, offices and indoor car parks

From BS EN 12464-1:2021, Table 26 (Metal working and processing), Table 34 (Offices) and Table 42 (Car parks, indoor).

Metal working and assembly

Area or task	Ref.	Em required (lux)	Em modified (lux)	UGR limit	Ra
Welding	26.3	300	500	25	80
Rough and average machining	26.4	300	500	22	80
Precision machining and grinding	26.5	500	750	19	80
Assembly, rough	26.11.1	200	300	25	60
Assembly, medium	26.11.2	300	500	25	80
Assembly, fine	26.11.3	500	750	22	80

Offices and indoor car parks

Area or task	Ref.	Em required (lux)	Em modified (lux)	UGR limit	Ra
Offices: writing, typing, reading, data processing	34.2	500	1,000	19	80
Indoor car park: traffic lanes, ramps and pedestrian paths At floor level	42.3	75	100	25	40
Indoor car park: parking areas not open to the public At floor level	42.4	75	100	None	40
Indoor car park: parking areas open to the public At floor level	42.5	150	200	None	40



An industrial workshop on a Polaris Light project.

How to measure lux levels

A lux meter tells you whether your building meets the values in the tables. To get a reading you can compare:

- [ ] **Measure on the right surface.** At floor level for rack storage floors, corridors and car parks; on the rack face for rack face values; at working height for desks and benches.
- [ ] **Use a grid of points** across the area rather than one spot, and work out the average.
- [ ] **Do not shade the meter** with your body, and keep the sensor flat for horizontal readings and against the face for vertical readings.
- [ ] **Note the conditions:** time of day, how much daylight comes in and whether all fittings are working.
- [ ] **Compare the average with the maintained value** for that area. A new installation should read above it, because light output falls as fittings age.
- [ ] **Record dark spots, glare and flicker** as well as the figures.

> ### Racking changes the result
>
> Once racking and stock are in, shadows and less light reflected from walls and goods lower the levels on the floor and the rack faces. Measure, and design, for the space as it is used, not as an empty hall.

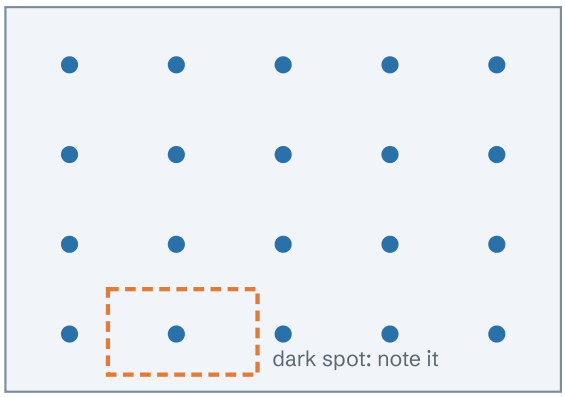


Getting the light right

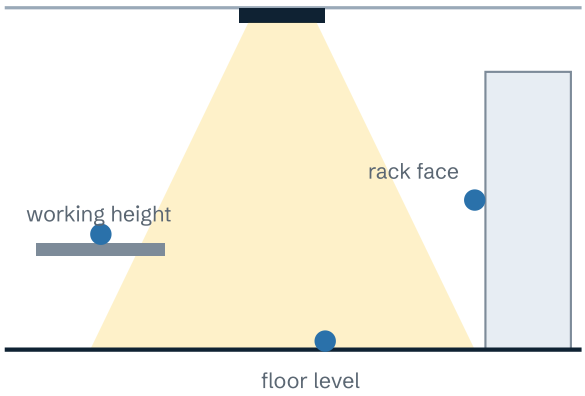
- [ ] **Each area on its own terms.** Set a target for every zone rather than one figure for the whole building.
- [ ] **Uniformity and glare.** Even light matters as much as the average. Layout, mounting height and beam angle decide how evenly light reaches the floor and rack faces.
- [ ] **Controls.** Presence and daylight sensors dim or switch off fittings in empty or daylit zones without lowering the light where people work.
- [ ] **Maintenance.** Design for the maintained level and plan regular cleaning and checks.

Where and how to measure

Plan: measure on a grid, then average



Side view: the reference surface



Outdoor areas

Yards, external car parks and other outdoor work areas are covered by a separate standard, BS EN 12464-2, Lighting of work places. Part 2: Outdoor work places. Check that standard for external areas.

Health and safety

HSE guidance HSG38, Lighting at work, covers the health and safety side of workplace lighting, such as avoiding glare and dangerous shadows. It is a useful companion to BS EN 12464-1.

A lighting design before you order

Before any project we offer a DIALux 3D simulation that calculates the maintained lux levels our fittings will give in each zone of your building. We adjust beam angle and power to reach the values in this guide. Our **PS-UFO-MAX** high bay delivers 200 lm/W, and every Polaris product carries a 5-year warranty.

NEXT STEP

Book a free lighting survey



Free lighting survey and lighting design plan

Tell us about your site. We survey it, record the mounting heights, layout and existing fittings, design the lighting to BS EN 12464-1 for each zone and send you a proposal with the fittings, the light levels and the energy saving, with no obligation.

Every Polaris product carries a 5-year warranty.

CALL US

+44 (0)20 8133 2554

EMAIL

hello@polarislight.com

REQUEST A SURVEY ONLINE

polarislight.com/warehouse-lighting

Sources

- BS EN 12464-1:2021, Light and lighting. Lighting of work places. Part 1: Indoor work places (BSI). Clause 5.3.3 and Tables 12, 13, 26, 34 and 42.
- BS EN 12464-2, Light and lighting. Lighting of work places. Part 2: Outdoor work places (BSI).
- HSE, HSG38 Lighting at work.
- Polaris Light product data: PS-UFO-MAX, November 2026.

© 2026 Polaris Light Ltd. Registered office: 71-75 Shelton Street, London, WC2H 9JQ. Registered in England, company no. 09763338. This guide is general information, not a lighting design or legal advice for any particular site. Always check the current edition of the standard.