

EN 12464-1 indoor lighting quick reference

Maintained illuminance (Em), glare limit (UGR), uniformity (Uo) and colour rendering (Ra) for common indoor task areas. Values follow EN 12464-1:2021 tables; always confirm against the current national adoption (DIN EN / NF EN / NEN-EN / UNI EN / UNE-EN) and the project specification. Compiled by XHLWX Lighting, Shenzhen - free to reuse with a link to led-project-light.com.

Building type	Task or activity area	Em (lx)	UGR	Uo	Ra	Clause	Notes
Office	Filing, copying, circulation inside the office	300	19	0.40	80	6.2 Table 6.2	
Office	Writing, typing, reading, data processing	500	19	0.60	80	6.2 Table 6.2	Add 750 lx for open-plan desks used by older occupants
Office	Technical drawing by hand	750	16	0.70	80	6.2 Table 6.2	
Office	CAD workstations	500	19	0.60	80	6.2 Table 6.2	Limit screen-reflected luminance to 200-1500 cd/m2
Office	Conference and meeting rooms	500	19	0.60	80	6.2 Table 6.2	Dimmable to 200 lx for projection
Office	Reception desk	300	22	0.60	80	6.2 Table 6.2	
Office	Archives	200	25	0.40	80	6.2 Table 6.2	
Office	Coworking / flexible desking	500	19	0.60	80	6.2 Table 6.2	Zone controls per desk cluster
Education	Classroom, general teaching	300	19	0.60	80	6.3 Table 6.3	
Education	Classroom for evening classes and adult education	500	19	0.60	80	6.3 Table 6.3	
Education	Lecture hall	500	19	0.60	80	6.3 Table 6.3	Dimmable, separate front-of-room circuit
Education	Blackboard / whiteboard	500	19	0.70	80	6.3 Table 6.3	Asymmetric wallwasher, avoid specular reflection
Education	Demonstration table	500	19	0.70	80	6.3 Table 6.3	
Education	Art rooms	500	19	0.60	80	6.3 Table 6.3	
Education	Art rooms in art schools	750	19	0.70	90	6.3 Table 6.3	Ra 90+ and 5000 K for colour judgement
Education	Technical drawing rooms	750	16	0.70	80	6.3 Table 6.3	
Education	Practical rooms and laboratories	500	19	0.60	80	6.3 Table 6.3	
Education	Handicraft and teaching workshops	500	19	0.60	80	6.3 Table 6.3	
Education	Music practice rooms	300	19	0.60	80	6.3 Table 6.3	
Education	Computer practice rooms	300	19	0.60	80	6.3 Table 6.3	
Education	Preparation rooms and workshops	500	22	0.60	80	6.3 Table 6.3	
Education	Entrance halls	200	22	0.40	80	6.3 Table 6.3	
Education	Circulation areas and corridors	100	25	0.40	80	6.3 Table 6.3	
Education	Stairs	150	25	0.40	80	6.3 Table 6.3	Vertical illuminance on treads is the design driver
Education	Student common rooms and assembly halls	200	22	0.40	80	6.3 Table 6.3	
Education	Teachers rooms	300	19	0.60	80	6.3 Table 6.3	
Education	Library: bookshelves	200	19	0.60	80	6.3 Table 6.3	Vertical illuminance on shelf face
Education	Library: reading areas	500	19	0.60	80	6.3 Table 6.3	
Education	Kindergarten play room	300	19	0.60	80	6.3 Table 6.3	

Building type	Task or activity area	Em (lx)	UGR	Uo	Ra	Clause	Notes
Education	Kindergarten nursery / craft room	300	19	0.60	80	6.3 Table 6.3	
Healthcare	Waiting rooms	200	22	0.40	80	6.4 Table 6.4	
Healthcare	Corridors: daytime	200	22	0.40	80	6.4 Table 6.4	
Healthcare	Corridors: night	50	22	0.40	80	6.4 Table 6.4	Night circuit with low glare and warm CCT
Healthcare	Ward: general lighting	100	19	0.40	80	6.4 Table 6.4	
Healthcare	Ward: reading light	300	19	0.60	80	6.4 Table 6.4	
Healthcare	Ward: simple examination	300	19	0.60	80	6.4 Table 6.4	
Healthcare	Examination and treatment	1000	19	0.70	90	6.4 Table 6.4	Ra 90+ for tissue colour assessment
Healthcare	Night watch / observation	5			80	6.4 Table 6.4	
Healthcare	Consulting room	500	19	0.60	90	6.4 Table 6.4	
Healthcare	Dental treatment area (general)	1000	19	0.70	90	6.4 Table 6.4	Task light excluded from the general value
Healthcare	Pharmacy dispensing and prescription area	500	19	0.60	90	6.4 Table 6.4	
Healthcare	Senior care living room	300	19	0.60	90	6.4 Table 6.4	Consider 500 lx and higher uniformity for residents 65+
Retail	Sales area	300	22	0.40	80	6.6 Table 6.6	Accent lighting is additional to the maintained task value
Retail	Till area	500	19	0.60	80	6.6 Table 6.6	
Retail	Wrapper table	500	19	0.60	80	6.6 Table 6.6	
Retail	Supermarket general sales floor	500	22	0.60	80	6.6 Table 6.6	Fresh food zones typically Ra 90+ with dedicated CCT
Retail	Fashion fitting rooms	300	19	0.60	90	6.6 Table 6.6	Vertical and cylindrical illuminance dominate
Retail	Jewellery display case	500	19	0.60	90	6.6 Table 6.6	Sparkle needs narrow beam accent, not higher ambient
Retail	Shopping mall common circulation	200	22	0.40	80	6.6 Table 6.6	
Hospitality	Hotel reception / cashier / porters desk	300	22	0.60	80	6.5 Table 6.5	
Hospitality	Hotel kitchen	500	22	0.60	80	6.5 Table 6.5	
Hospitality	Restaurant buffet	300	22	0.60	80	6.5 Table 6.5	Dining room itself is a design task, not a fixed value
Hospitality	Self-service restaurant	200	22	0.40	80	6.5 Table 6.5	
Hospitality	Conference and multipurpose rooms	500	19	0.60	80	6.5 Table 6.5	
Hospitality	Hotel corridors and stairs	100	25	0.40	80	6.5 Table 6.5	
Industry	Assembly: rough work	200	25	0.40	80	6.10 Table 6.10	
Industry	Assembly: medium work	300	25	0.60	80	6.10 Table 6.10	
Industry	Assembly: fine work	500	22	0.60	80	6.10 Table 6.10	
Industry	Assembly: precision work	750	19	0.70	80	6.10 Table 6.10	
Industry	Inspection and testing	500	19	0.60	80	6.10 Table 6.10	
Industry	Colour inspection / colour matching	1000	16	0.70	90	6.10 Table 6.10	D65 or 5000 K, Ra 90+, TM-30 Rf/Rg reported

Building type	Task or activity area	Em (lx)	UGR	Uo	Ra	Clause	Notes
Industry	SMT / electronics cleanroom bench	750	19	0.70	80	6.10 Table 6.10	IP54 and sealed housings typical
Industry	Pharmaceutical GMP production	500	22	0.60	80	6.10 Table 6.10	Flush, cleanable, IP65 recessed luminaires
Industry	Packing and dispatch	300	25	0.60	80	6.10 Table 6.10	
Storage	Store rooms and stock rooms	100	25	0.40	60	6.10 Table 6.10	
Storage	Aisles with traffic (unoccupied racking)	150	22	0.40	60	6.10 Table 6.10	Vertical illuminance on rack face governs picking
Storage	Cold storage	150	25	0.40	60	6.10 Table 6.10	Rated for -30 C ambient, instant restrike
Transport	Airport / rail concourse and ticket hall	200	22	0.40	80	6.8 Table 6.8	
Transport	Check-in and ticket desks	300	22	0.60	80	6.8 Table 6.8	
Transport	Metro concourse	200	22	0.40	80	6.8 Table 6.8	
Transport	Covered platforms	100		0.40	60	6.8 Table 6.8	
Transport	Escalators and travelators	150	25	0.40	80	6.8 Table 6.8	
Transport	Indoor car park: traffic lanes	75	25	0.40	60	6.8 Table 6.8	
Transport	Indoor car park: parking areas	75		0.40	60	6.8 Table 6.8	
Transport	Indoor car park: entrance ramp, daytime	300	25	0.40	60	6.8 Table 6.8	Transition zone to avoid adaptation glare
Sport	Sports hall: training and recreation	300	22	0.60	80	6.7 Table 6.7	
Sport	Sports hall: competition	500	22	0.70	80	6.7 Table 6.7	Broadcast levels are set by the sport federation, not EN 12464-1
Sport	Indoor swimming pool	300	22	0.60	80	6.7 Table 6.7	IP65, corrosion resistant, low veiling reflection on water
Sport	Fitness and yoga studio	300	22	0.60	80	6.7 Table 6.7	
Technical	Control rooms	500	19	0.60	80	6.9 Table 6.9	
Technical	Plant rooms, switch rooms, cable rooms	200	25	0.40	60	6.9 Table 6.9	
Technical	Data centre white space aisles	300	22	0.60	80	6.9 Table 6.9	Vertical illuminance on rack face is the real task
Public	Entrance halls and lobbies	100	22	0.40	80	6.1 Table 6.1	
Public	Circulation areas and corridors	100	28	0.40	40	6.1 Table 6.1	
Public	Stairs, escalators	100	25	0.40	40	6.1 Table 6.1	
Public	Canteens and pantries	200	22	0.40	80	6.1 Table 6.1	
Public	Rest and first aid rooms	200	22	0.40	80	6.1 Table 6.1	
Public	Sanitary rooms and washrooms	200	25	0.40	80	6.1 Table 6.1	
Public	Courthouse courtroom	300	22	0.60	80	6.1 Table 6.1	500 lx on the bench and evidence table
Public	Museum and gallery: light-sensitive exhibits	50	19	0.60	90	6.6 / CIE 157	Annual exposure limit governs; 50 lx and UV/IR free

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