

RECOMMENDATIONS FOR INTERIOR LIGHTING - EN 12464-1 REGULATION

Legenda: **EN** = average working illuminance (lux). **G** = quality degree for glare reduction. **RA** = group of colour rendering.
 1. 1m above finished floor level (FFL); 2. 700mm above FFL (Corridors/Stairs/Circulation areas/Waiting rooms)

Ref.	Type of inside, task, activity	EN	G	RA
1	Internal general transit areas			
1.1.	Transit areas			
1.1.1.	Transit areas and corridors	100	E	3
1.1.2.	Stairs (landings), elevators, escalators	150	D	3
1.1.3.	Flight of stairs, sidings	150	D	3
1.2.	Infirmary and First aid station			
1.2.1.	Cafeteria	200	C	1B
1.2.2.	Resting areas	100	C	1B
1.2.3.	Sport facilities	300	C	1B
1.2.4.	Cloakrooms, toilettes	200	D	1B
1.2.5.	Infermary	500	C	1B
1.2.6.	Waiting rooms	500	B	1A
1.3.	Control rooms			
1.3.1.	Fixtures rooms	200	D	2
1.3.2.	Telex and Mail areas, Control rooms	500	B	1B
1.4.	Warehouses / refrigerator areas			
1.4.1.	Warehouses, Stock areas	100	D	2
1.4.2.	Packing, shipping areas	300	D	2
1.5.	Warehouses with shelves			
1.5.1.	Transit areas	20		3
1.5.2.	Transit areas of the staff	200	C	2
1.5.3.	Control areas	200	C	2
2	Industrial and craft activities			
2.1.	Agriculture			
2.1.1.	Loading and management of goods, use of equipments and machines	200	D	1B
2.1.2.	Cattlesheds	50	D	3
2.1.3.	Areas for sick cattle, Calving cells	200	D	2
2.1.4.	Areas for feed preparation, for tools washing	200	D	2
2.2.	Furnace and bakery			
2.2.1.	Baking			
2.2.2.	Finishing decoration			
2.3.	Products in cement, concrete, bricks			
2.3.1.	Drying			
2.3.2.	Preparation of materials, baked or blended			
2.3.3.	General works at machines	300	D	1B
2.3.4.	Initial general works	300	D	1B
2.4.	Pottery, tiles, glass			
2.4.1.	Drying	50	E	4
2.4.2.	Preparation and genral works at machines	300	D	1B
2.4.3.	Enamelling, lamination, pressing, assembly glass-blowing	300	D	1B
2.4.4.	Engraving, glass-polishing, working of precision working of tools in glass	750	D	1B
2.4.5.	Gringing of optical glass, crystal, working on products non of precision	750	A	1B
2.4.6.	Working of precison, decorative engraving, painting	1000	A	1A
2.4.7.	Working on synthetic precious stones	1500	A	1A
2.5.	Industual chemistry, of plactic and rubber			
2.5.1.	Process system controlled at distance	50		3
2.5.2.	Process system with limited manual intervention	150	E	3
2.5.3.	Areas of process installation with continous presence of the staff	300	D	1B
2.5.4.	Laboratories	500	B	1B
2.5.5.	Pharmacology production	500	D	1B
2.5.6.	Production of pneumatics	500	D	1B

2.5.7.	Colour sampling	1000	B	1A
2.5.8.	Cutting, finishing, examination	750	B	1A
2.6.	Cutting, finishing, examination			
2.6.1.	Production of conductors	300	D	1B
2.6.2.	Winding:			
	- coil of big dimensions	300	D	1B
	- coil of medium dimensions	500	D	1B
	- coil of small dimensions	750	B	1B
2.6.3.	- coil of small dimensions	300	D	1B
2.6.4.	Galvanization	300	D	1B
2.6.5.	Assembling:			
	- coarse (big transformers)	300	D	1B
	- medium (Switchboard)	500	D	1B
	- fine (phones)	750	B	1B
	- of precision (measuring instruments)	1000	B	1B
2.6.6.	Production of electronic materials, testing adjustment	1500	A	1B
2.7.	Food industry			
2.7.1.	working areas in production of beer, fermentation of malt, washing, filling of barrels, sifting production of chocolate, sugar fermentation and drying of tobacco cells of fermentation	200	D	1B
2.7.2.	Selection and washing of products, grinding, mixing packing	300	D	1B
2.7.3.	Butchery, dairy, mills, filtering in sugar refinery sugar refinery	500	E	1B
2.7.4.	Butchery, dairy, mills, filtering in sugar refinery sugar refinery	300	D	1B
2.7.5.	Gastronomic production, of cigarettes, cigars	500	D	1B
2.7.6.	Control of products, inspection of glasses and bottles garnishing, decoration	500	D	1B
2.7.7.	Laboratoires	500	B	1B
2.7.8.	Colour sampling	1000	B	1A
2.8.	Foundry			
2.8.1.	Areas of maintenance, cellars	50		4
2.8.2.	Platforms	100	D	3
2.8.3.	Preparation of sands	200	D	1B
2.8.4.	Dressing-rooms	200	D	1B
2.8.5.	Working areas at mixer	200	D	1B
2.8.6.	Casting spaces	200	D	1B
2.8.7.	Automatic modelling	200	D	1B
2.8.8.	Manual modelling	300	D	1B
2.8.9.	Pressure diecasting	500	D	1B
2.8.10.	Models department	500	D	1B
2.9.	Hairdressers	500	B	1A
2.10.	Jewels production	500	B	1A
2.10.1.	Working of gems	1500	A	1A
2.10.2.	Jewels production	1000	B	1A
2.10.3.	Construction of clocks (manual)	1500	A	1A
2.10.4.	Construction of clocks (automatic)	500	B	1A
2.11.	Laundries and dyeworks			
2.11.1.	Assembly of clothing, marking and clearing	300	D	1B
2.11.2.	Washing and dry-cleaning	300	D	1B
2.11.3.	Ironing	300	D	1B
2.11.4.	Examination and repairing	750	B	1B
2.12.	Leather clothing			
2.12.1.	Working in tanks	200	D	3
2.12.2.	Fleshing,rounding off, stamping of the hides	300	D	1B
2.12.3.	Manufacture of shoes, sewing, polishing cutting, piercing	500	D	1B
2.12.4.	Selection	500	D	1B
2.12.5.	Dyeing of leather	500		
2.12.6.	Quality control	1000	C	1B
2.12.7.	Colour sampling	1000	B	1A
2.12.8.	Production of shoes	500	D	1B
2.12.9.	Production of gloves	500	D	1B
2.13	Working and treatment of metals			
2.13.1	Free forging	200	D	2
2.13.2	Drop-forging	300	D	2
2.13.3	Welding	300	D	2
2.13.4	Coarse or medium working (tolerance \geq 0,1 mm)	300	C	2
2.13.5	Fine working (tolerance $<$ 0,1 mm)	500	B	2
2.13.6	Tracing, inspection	750	B	2
2.13.7	Laboratoires, wirings, conduits, cold moulding	300	D	2
2.13.8	Working of rolleds (thickness \geq 5 mm)	200	D	2
2.13.9	Working sheets (thickness $<$ 5 mm)	300	C	2

2.13.10	Preparation of tools and cutting fittings	750	B	2
2.13.11	Assembly:			:
	- rough	200	D	1B
	- medium	300	D	1B
	- fine	500	D	1B
	- of precision	750	B	1B
2.13.12	Galvanization	300	D	1B
2.13.13	Preparation of surfaces and painting	750	E	1B
2.13.14	Tolls, preparation of shapes, mechanics of precision micromechanics	1000	C	1B
2.14	Paper and objects in paper			
2.14.1	Preparation of mixture and refining	200	D	1B
2.14.2	Paper making and tranformation, machines for paper and carton making	300	D	1B
2.14.3	Binding works (i.e. bendings, shunting gluing, cutting, pinting..)	500	D	1B
2.15	Power stations			
2.15.1	Fuel supply fixture	50		
2.15.2	Boiler room	100	E	3
2.15.3	Turbine room	200	D	1B
2.15.4	Pump room, condenser room,internal control rooms	200	D	2
2.15.5	Control room	500	A	1B
2.15.6	External control devices	20		
2.16	Printing			
2.16.1	Cutting, relief printing,engraving, working on stone printing machines, construction of	500	B	1B
2.16.2	Selection of sheets and hand printing	500	B	1B
2.16.3	Assembly characters, lithografy	1000	C	1B
2.16.4	Colour sampling in polichrome prints	1500	A	1A
2.16.5	Engraving on steel and copper	2000	C	
2.17	Rolling-mills, working on iron and steel			
2.17.1	Systems of production without manual intervention	50		4
2.17.2	Systems of production with occasional manual intervention	150	E	3
2.17.3	Systems of production with continous manual intervention	200	D	2
2.17.4	Warehouses of sheets	50		4
2.17.5	Furnace	200	D	4
2.17.6	Winding, cutting line	300	D	3
2.17.7	Control room	300	C	1B
2.17.8	Test, measure and check	500	D	1B
2.17.9	Maintenance areas, cellars	50		4
2.18	Textile working and manufacturing			
2.18.1	Working areas, swilling tanks	200	D	2
2.18.2	Carding, washing, ironing, drawing, gluing, punching of cartons	300	C	1B
2.18.3	Spinning, winding	500	D	1B
2.18.4	Weaving, knitting	500	D	1B
2.18.5	Sewing, darning	750	D	1B
2.18.6	Hand drawing, weft drawing	750	D	1A
2.18.7	Finishing, dyeing	500	D	1B
2.18.8	Drying room	100	E	2
2.18.9	Automatic pressing	500	E	1A
2.18.10	Knotting, weft insertion	1000	B	1B
2.18.11	Colour control, manufacture checking	1000	B	1A
2.18.12	Invisible darning	1500	C	1A
2.18.13	Hats manufacturing	500	D	1B
2.19	Vehicles construction			
2.19.1	Body, assembly	500	D	1B
2.19.2	Painting, spraying, polishing	750	D	1B
2.19.3	Retouching, inspection	1000	B	1A
2.19.4	Coverings production	1000	C	1B
2.19.5	Final control	1000	C	1B
2.2	Wood working and manufacturing			
2.20.1	Automatic processes	50	E	3
2.20.2	Steam rooms	150	E	3
2.20.3	Saw	300	D	2
2.20.4	Joinery,gluing, assembly	300	D	1B
2.20.5	Polishing, painting, joinery	500	D	1B
2.20.6	Working on machine-tolls: i.e. turning grooving, roughscaping, cutting sawing	500	B	1B
2.20.7	Wood selection for veneering	750	D	1A
2.20.8	Cutting	750	D	1A
2.20.9	Quality control	1000	B	1A

3.1	Recording,copying, transit areas	300	B	1B
3.2	Writing, typewriting, datas elaboration	500	B	1B
3.3	Writing, typewriting, datas elaboration	750	A	1B
3.4	CAD positions	500	B	1B
3.5	Conference and meeting rooms	500	B	1B
3.6	Reception	300	C	1B
3.7	Archives	200	D	1B
4	Retail sales			
4.1	Sale areas	300	C	1B
4.2	Cashes	500	B	1B
4.3	Packing table	500	B	1B
5	Areas of public interest			
5.1	General areas			
5.1.1	Entries and Halls	100	C	1B
5.1.2	Cloackroom	200	D	1B
5.1.3	Ticket office	300	C	1B
5.2	Restaurant and hotel			
5.2.1	Reception, porter	300	C	1B
5.2.2	Kitchen	500	C	1B
5.2.3	Restaurant, lunch room, reception room			
5.2.4	Self service restaurant	200	C	1B
5.2.5	Buffet	300	C	1B
5.2.6	Conferences room	500	C	1B
5.2.7	Corridors	100	D	1B
5.3	Theatres, Concert hall, cinemas			
5.3.1	Testing rooms, cloakrooms	300	C	1B
5.4	Fairs and expository pavillions			
5.4.1	General Lighting	300	C	1B
5.5	Museums			
5.5.1	Materials insensitive to light			
5.5.2	Materials sensitive to light			
5.6	Libraries			
5.6.1	Shelves	200	B	1B
5.6.2	Reading rooms	500	B	1B
5.6.3	Desks	500	B	1B
5.7	Public parking (at cover areas)			
5.7.1	Entry / exit ramps (daytime)	300	D	4
5.7.2	Entry / exit ramps (night time)	75	D	4
5.7.3	Lanes	75	D	4
5.7.4	Parking areas	75	D	4
5.7.5	Ticket offices	300	B	1B
6	School buildings			
6.1	Kindergartens, nurseries			
6.1.1	Playing rooms	300	B	1B
6.1.2	Creche	300	B	1B
6.1.3	Manual labour rooms	300	B	1B
6.2	School buildings			
6.2.1	School rooms	300	B	1B
6.2.2	Rooms for evening schools, for adults	500	B	1B
6.2.3	Reading rooms	500	B	1B
6.2.4	Black board	500	B	1B
6.2.5	Table for demonstrations	500	B	1B
6.2.6	Art educational room	500	B	1B
6.2.7	Art educational rooms in art school	750	B	1A
6.2.8	Rooms for technical drawing	750	B	1B
6.2.9	Rooms for technique education and laboratoires	500	B	1B
6.2.10	Craftmade workings	500	B	1B
6.2.11	Teaching laboratories	500	B	1B
6.2.12	Music rooms	300	B	1B
6.2.13	Computers rooms	500	B	1B
6.2.14	Linguistic rooms	300	B	1B
6.2.15	Workshops	500	D	1B
6.2.16	Entries	200	C	1B
6.2.17	Transit areas and corridors	100	D	1B
6.2.18	Stairs	150	D	1B

6.2.19	Common rooms and Hall	200	C	1B
6.2.20	Teachers' rooms	300	C	1B
6.2.21	Library, shelves	200	B	1B
6.2.22	Library: reading areas	500	B	1B
6.2.23	Warehouses dactic material	100	D	1B
6.2.24	Gymnasiums, swimming pools	300	C	1B
6.2.25	Table / canteen	200	C	1B
6.2.26	Kitchen	500	C	1B
7	Nursing buildings			
7.1	Areas of general use			
7.1.1	Waiting rooms	200	C	1B
7.1.2	Corridors (day)	200	C	1B
7.1.3	Corridors (night)	50	D	1B
7.1.4	Day roomk	200	C	1B
7.2	Staff rooms			
7.2.1	Staff offices	500	B	1B
7.2.2	Staff rooms	300	B	1B
7.3	Maternity ward			
7.3.1	General lighting	100	B	1B
7.3.2	Reading rooms	300	B	1B
7.3.3	Simple (medical)examination	300	B	1B
7.3.4	Examination and treatment	1000	B	1A
7.3.5	Night light, light for the observation	5		1B
7.3.6	Patients' bathrooms and toilettes	200	C	1B
7.4	Diagnostics areas			
7.4.1	General lighting	500	B	1A
7.4.2	Examination and treatment	1000	B	1A
7.5	Romms for oculistics examinations			
7.5.1	General lighting	300	B	1B
7.5.2	External examination of eye	1000		1A
7.5.3	Reading and colour vision tests	500	A	1A
7.6	Rooms for othorinolaryngologist examination			
7.6.1	General lighting	300	B	1B
7.6.2	Examination of ear	1000		1A
7.7	Analysis rooms			
7.7.1	General lighting	300	B	1B
7.7.2	Analysis with images amplifier and TV systems	50	B	1B
7.8	Delivery room			
7.8.1	General lighting	300	B	1B
7.8.2	Examination and treatment	750	B	1B
7.9	Nursing houses			
7.9.1	Dialysis	300	B	1B
7.9.2	Dermathology	500	B	1A
7.9.3	Endoscopy	300	B	1B
7.9.4	Plastering	500	B	1B
7.9.5	Medicasl baths	300	B	1B
7.9.6	Massage and radiotherapy	300	B	1B
7.1	Operating areas			
7.10.1	Operating rooms	500	B	1A
7.10.2	Operating rooms	1000	B	1A
7.10.3	Operating area			
7.11	Reanimation, intensive treatment			
7.11.1	General lighting	100	B	1A
7.11.2	Simple medical examination	300	B	1A
7.11.3	Examination and treatment	1000	B	1A
7.11.4	Night observation	20	B	1A
7.12	Odontology			
7.12.1	General lighting	500	B	1A
7.12.2	On the patient	1000		1A
7.12.3	Operating area	5000		1A
7.12.4	White teeth matching	5000		1A
7.13	Laboratory and chemist's			
7.13.1	General lighting	500	B	1A
7.13.2	Colour control	1000	B	1A
7.14	Decontamination rooms			
7.14.1	Sterilization rooms	300	C	1B
7.14.2	Disinfection rooms	300	C	1B

7.15	Autopsy rooms			
7.15.1	General lighting	750	B	1A
7.15.2	Table for autopsy and dissection	5000		1A
8	Areas for transport means			
8.1	Airports			
8.1.1	Arrival / departure hall, luggages areas	200	C	1B
8.1.2	Link areas, stairs	200	C	1B
8.1.3	Information office and reception	500	B	1B
8.1.4	Customs office and passports checking	500	B	1B
8.1.5	Waiting rooms	200	C	1B
8.1.6	Luggages deposit	200	D	1B
8.1.7	Safety control areas	300	A	1B
8.1.8	Control tower of aerial traffic	500	A	1B
8.1.9	Aerial traffic halls	500	A	1B
8.1.10	Aircrafts parking areas	20		4
8.1.11	Other parking areas	10		4
8.1.12	Hangar for repairs and controls	500	C	1B
8.1.13	Motor checking areas	500	C	1B
8.1.14	Areas of measure inside the hangar	500	C	1B
8.2	Railway installations			
8.2.1	Quays and subways for passengers	100	E	3
8.2.2	Hall	200	E	3
8.2.3	Ticket office, left luggage room, cash	300	B	1B
8.2.4	Waiting rooms	200	C	1B