

STANDARDS, NORMS + REGULATIONS

EN 60598-1	Luminaires - General requirements and tests
EN 60598-2-1	Fixed general purpose luminaires. Particular requirements
EN 60598-2-2	Recessed luminaires. Particular requirements
EN 60598-2-13	Ground recessed luminaires. Particular requirements
EN 62031	LED modules for general lighting
EN 62471	Photobiological safety of lamps and lamp systems
EN 12464-1	Lighting of work places. Indoor work places
EN 50102	Test to determine the degree of enveloping protection

VERIFICATION OF LIGHT LEVELS

The light levels below indicate those issued. Verification is listed in the adjacent columns and are taken from the existing standards to date, and the source is listed adjacent to each group.

The information contained will also seek to include a separate reference for updated changes where we are informed these are in consultation. The following are abridged recommendations taken from the existing standards. To avoid confusion, the designer must refer to the standards directly.

EDUCATIONAL LUX LEVELS

Guidance from CIBSE LG4 BSEN12464-1 2011; SLL Lighting Handbook 2018

EDUCATIONAL BUILDINGS LIGHTING LEVEL GUIDE

Nursery School , Play School

Location	LUX	UGR	Uo	Notes
Play Room	300	22	0.4	Sec 5.35.1 Use Low Luminance
Nursery	300	22	0.4	Sec 5.35.2 Use Low Luminance
Handicraft Room	300	19	0.6	Sec 5.35.3

Educational Buildings

Location	LUX	UGR	Uo	Notes
Classrooms, Tutorial Rooms	300	19	0.6	With Dimming
Classrooms for Evening & Adult Education	500	19	0.6	With Dimming
Auditorium, Lecture Halls	500	19	0.6	With Dimming
Blackboards	500	19	0.7	Vertical Illuminance include presenter
Demonstration Table	500 / (750 in Lecture Hall)	19	0.7	
Art Rooms	500	19	0.6	Use ART Grade LED
Art Rooms in Art School	500	19	0.7	Use ART Grade LED
Technical Drawing Room	750	16	0.7	
Teaching Workshop	500	19	0.6	
Music Practise Rooms	300	19	0.6	
IT Rooms	300	19	0.6	Special Conditions
Language Laboratory	300	19	0.6	
Prep Rooms & Workshops	500	22	0.6	
Entrance Halls	200	22	0.4	
Circulation Areas, Corridors	100	25	0.4	
Stairs	150	25	0.4	
Student Common Rooms & Assembly Halls	200	22	0.4	
Staff Room/Office	300	19	0.6	
Library: Bookshelves	200	19	0.6	Vertical Illumination
Library: Reading Areas	500	19	0.6	
Sports Halls, Gyms, Swimming pools	300			LG4 and association requirements
Canteens	200	22	0.4	
Kitchen	500	22	0.6	
Practical Rooms & Laboratories	500	19	0.6	

* The information above is included to serve solely as a point of reference for convenience and is liable to change. Please consult the latest CIBSE guide for comprehensive recommendations and SLL Lighting Handbook.

HEALTHCARE LUX LEVELS

Guidance from CIBSE LG2 :2008; BSEN 21464-1 :2011; SLL Lighting Handbook

HEALTHCARE LIGHTING LEVEL GUIDE

Public Areas

Location	LUX	LUX Emax	UGR	Uo	Notes
Entrance	200		22		At floor level. Section 3.3 should include drama as in commercial buildings
Reception	300	520	19		At Floor Level
Enquiry Desk	500		22		Task Area with facial recognition
Hospital Streets & Corridors	200	350	19	0.7	At Floor Level. Specific corridors may have specific other night criteria
Stairs	150		25		On Landing and treads. Specific Emergency Escape requirements
Changing Rooms/WC's	100 - 150		22	0.4	Lower level for small areas only
Dining Areas	200				At Floor allow atmospheric lighting
	300	520	22		At working plane
Floor	50		22		Allow for cleaning, security and maintenance levels

Wards

Location	LUX	LUX Emax	UGR	Notes
Bed Areas	300	520	19	At bed level
	300	520	19	At bed level
	100	170	19	At floor
Ward Corridors	200	350	19	At floor
	50	75	19	At floor
Nurses Station	300	520	19	At working plane
	30 - 200	250	22	At working plane using general and/or task lighting
Day Rooms	200		22	Apply a comfortable but non clinical feel

Clinical Areas

Location	LUX	LUX Emax	UGR	Notes
Operating Theatre	10,000 - 100,000		Refer to standard	At table level. Use Art Level LEDs Conformity to BSEN 60601-2-41
Scrub Room	500	860	19	At sink top
Recovery Rooms	500	860	19	At sink top
Transfers	300	520	19	
Minor Operations	15,000 - 30,000		Refer to standard	Use Art Level LEDs Conformity to BSEN 60601-2-41
Examination Rooms	500	850	19	At working plane.

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OFFICE LUX LEVELS

Guidance from CIBSE LG2 :2008; BSEN 21464-1 :2011; SLL Lighting Handbook

OFFICE BUILDING LIGHTING LEVEL GUIDE

General

Location	Eave LUX	EC Modelling Ratio	UGR	Uo	Notes
Open Plan Offices	300	30-60%	19		0.6 Uo if the task area unknown
	500	30-60%	19		Task Area
Deep Plan Offices	see notes	30-60%	19		500 or 750 Day & 300 or 500 Dusk onwards
Cellular Offices	300	30-60%	19		Task area
	500	30-60%	19		Task area
Graphics Work Station	300	30-60%	19		Task area
Executive Offices	300 - 500	30-60%	19		Task area
Meeting Rooms	300	30-60%	19		Task area
	500	30-60%	19		Task area
Conference Rooms	300	30-60%	19		Task area
	500	30-60%	19		Task area
Board Room	300	30-60%	19		Task area
	500	30-60%	19		Task area
Training Rooms	300	30-60%	19		Task area
	500	30-60%	19		Task area
Libraries	200		19	0.4	Ev Vertical to Bottom Shelf
	300		19	0.4	To Working Plane
	500	30-60%	19		Task Area
Refreshment Points/Rest Rooms	200	30-60%	22		
	300	30-60%	22		Task Area
Canteens/Restaurants	200	30-60%	22		Task Area
	300	30-60%	22		Task Area
	500	30-60%	22		Task Area
Entrance Halls/Reception	200	30-60%	22		Task Area
	300	30-60%	22		Task Area
	300	30-60%	22		Task Area
Corridors	100	30-60%	25		At Floor level. 150Lux if vehicles are used. Use transition zones
Plant Rooms	200	by assessment	25	0.4	At Working plane, On the vertical for control panels and Emergency use
Store	100 & 200 Vertical		25	0.4	At Working plane, For shelving vertical performance levels
	300 & 200 Vertical		25	0.6	For vertical rack, Uo 0.4

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RESIDENTIAL LUX LEVELS

Performance standards Guidance LG9, BSEN 12464-1 and HSG38

COMMUNAL RESIDENTIAL BUILDING LIGHTING LEVEL GUIDE

General

Location	LUX	LUX Emin	UGR	Uo	Notes
Entrance	200				Apply modelling ratio 30-60% under HSG38 Risk Guidance for facial intent
Corridors - Day	100		28	0.4	It's a cleaners workplace hence BSEN 12464-1
Corridors - Night	20	5			
Stairs	100		25	0.4	Performance on treads see also LG16 Guidance
Toilets	100		25	0.4	It's a cleaners workplace hence BSEN 12464-1
Bathrooms	150		25	0.4	It's a cleaners workplace hence BSEN 12464-1
Lounge	100-200		22	0.4	Higher levels if elderly opr visually impaired. 200Lux Task lighting for reading (5.28.3)
TV Lounge	50				
Lift Lobbies	100		25	0.4	Highlight lift doors to 200Lux (5.1.3)
Kitchens	200		22	0.4	(5.2.1)
Dining Area	150				
Galleys	150				
Utility Rooms & Laudrettes	200				

Bedrooms

Location	LUX	UGR	Uo	Notes
General	100			
Desk	250	N/A	N/A	Task Area
Bedhead	100			Task Area

Exterior

Location	LUX	UGR	Uo	Notes
Pathway	10	50	0.25	EN12464-2 Sec 5.4 Table 5.1.1
Car Park	10			Refer to section on car parks See Car Park Levels

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LEISURE CENTRE LUX LEVELS

Guidance from BSEN 12564-1 :2011 ; BSEN 12193:2018

LEISURE CENTRE LIGHTING LEVEL GUIDE

General

Location	LUX	UGR	Uo	Notes
Entrance Halls / Reception	200	22	0.4	
	300	22	0.6	
Corridors	100	28	0.4	
WCs	200	24	0.4	Other references -SLL lighting guide 2018 100Lux at Floor Uo 0.40; Other measurements at 0.6m for toilet cubical
Changing Room	100	22	0.4	
Boiler / Plant Room	200	25	0.4	
Store	100	25	0.4	Open floor areas
	200	25	0.4	If continuously occupied and /or Vertically across shelving / filing systems

Indoor

Location	LUX	UGR	Uo
Badminton	300	N/A	0.7
Squash			
Basketball	200	N/A	0.7
5-a-side Football			
Netball			
Volleyball			
Aerobics	200	N/A	0.6
Gymnastics			
Gym Work	300	N/A	0.5-0.7
Tennis			
Swimming			
Boxing	500	N/A	0.5-0.8

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CAR PARK LUX LEVELS

CAR PARK LIGHTING LEVEL GUIDE

Light Traffic

Location	Outdoor Parking			Indoor Parking			Notes
	LUX	GR	Uo	LUX	UGR	Uo	
E.g. Parking areas of shops, terraced houses and apartments, cycle parks	5	By Risk G4, G5 or G6 class and ≤ 55	0.25	75	<25	0.4	Indoor - BSEN 12464-1 Sec 5.34.4. Ramps and traffic lanes have further requirements. Use method from BS5489-1. Outdoor - By Risk Assessment comprising G4, G5 and G6 classes from BS5489-2:2015 Section A3

Medium Traffic

Location	Outdoor Parking			Indoor Parking			Notes
	LUX	GR	Uo	LUX	UGR	Uo	
E.g. Parking areas of department stores, office buildings, plants, sports and multi-purpose building complexes	10	By Risk G4, G5 or G6 class and ≤ 50	0.25	75	<25	0.4	

Heavy Traffic

Location	Outdoor Parking			Indoor Parking			Notes
	LUX	wGR	Uo	LUX	UGR	Uo	
E.g. Parking areas of schools, churches, major shopping centres, major sports and multi-purpose building complexes	20	By Risk G4, G5 or G6 class and ≤ 50	0.25	75	<25	0.4	
Ticket Office		N/A		300	19	0.6	

Ramp IN/OUT

Location	Outdoor Parking			Indoor Parking			Notes
	Eav LUX	GR	Emin LUX	LUX	UGR	Uo	
Open to sunlight - Ramp in/out day							
Open to sunlight - Ramp in/out night	30	50	15				From BS5489-1 :2013 Sec 7.4.7.1 Table 4
Enclosed from sunlight - Ramp in/out day	350	50	150	300	<25	0.4	At floor level From BS5489-1 :2013 Sec 7.4.7.1 Table 5
Enclosed from sunlight - Ramp in/out night	100	50	50	75	<25	0.4	At floor level From BS5489-1 :2013 Sec 7.4.7.1 Table 6

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