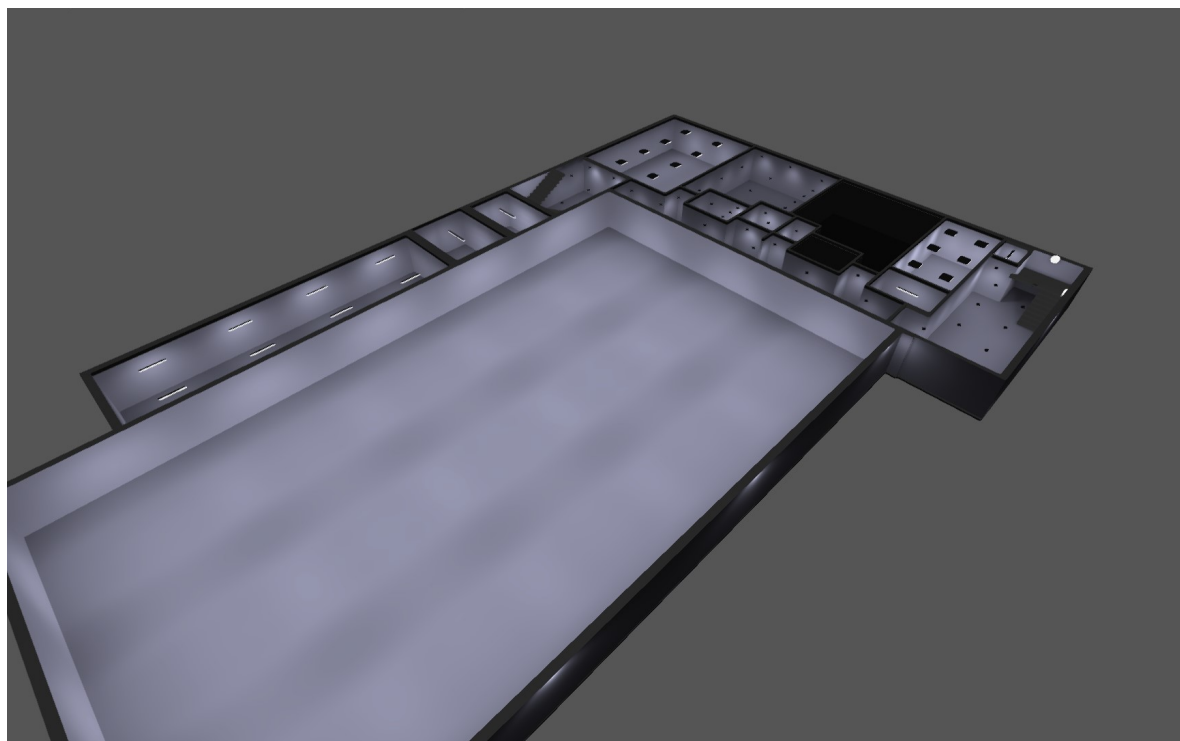
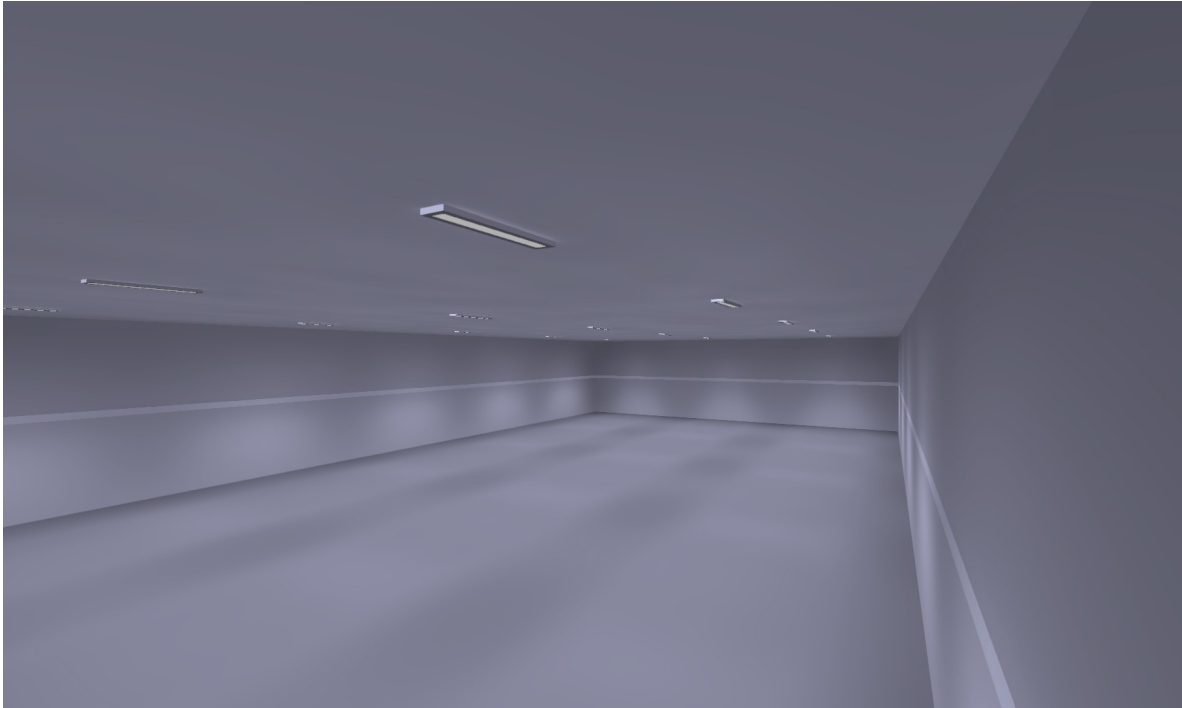




573500 - Redmoor Academy Sports Hall



Description

Job Number: 573500
Job Name: Redmoor Academy Sports Hall

Point to Point

Luminaires Used:

Visio Sport

Dot LED

Hi-Style LG7

Kanby EVO

G3 LED

Realta

Starbeam ECO

Passway

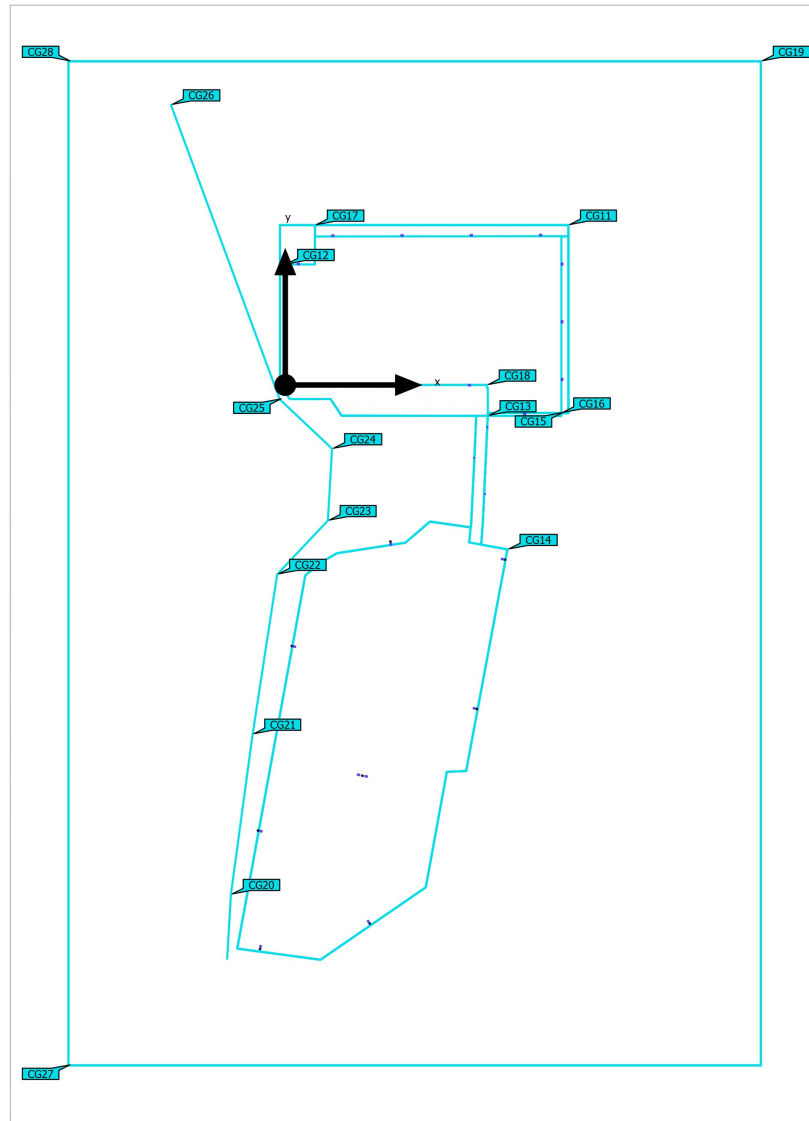
Lighting Engineer
Prajohns Menachery

Thorlux Lighting
Merse Road
Moons Moat North Industrial
Estate
Redditch B98 9HH

T 01527 583299
ldsouthern@thorlux.co.uk

Horizontal calculation surface added at 0m, 1m, 4m and Vertical calculation surface added across site boundary. The Iso-lines indicates the amount of light spillage around the site.

Site 1 (Light scene 1)

Calculation objects

Site 1 (Light scene 1)

Calculation objects

Calculation surfaces

Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_0 (g_1)$	g_2	Index
Walkway 4 Perpendicular illuminance Height: 0.000 m	14.9 lx	6.88 lx	27.0 lx	0.46	0.25	CG11
Walkway 2 Perpendicular illuminance Height: 0.000 m	16.5 lx	4.11 lx	27.3 lx	0.25	0.15	CG12
Walkway from Parking to Main Entrance Perpendicular illuminance Height: 0.000 m	16.7 lx	7.95 lx	30.2 lx	0.48	0.26	CG13
Parking Area Perpendicular illuminance Height: 0.000 m	11.6 lx	5.38 lx	32.6 lx	0.46	0.17	CG14
Walkway 5 Perpendicular illuminance Height: 0.003 m	16.9 lx	4.07 lx	28.5 lx	0.24	0.14	CG15
Walkway 6 Perpendicular illuminance Height: 0.000 m	13.5 lx	2.99 lx	27.7 lx	0.22	0.11	CG16
Walkway 3 Perpendicular illuminance Height: 0.000 m	10.8 lx	2.49 lx	26.7 lx	0.23	0.093	CG17
Walkway 1 Perpendicular illuminance Height: 0.000 m	12.0 lx	2.97 lx	27.5 lx	0.25	0.11	CG18
Entire Site 0m Perpendicular illuminance Height: 0.000 m	0.92 lx	0.010 lx	16.7 lx	0.011	0.001	CG19
Site boundary 7 Perpendicular illuminance Height: 4.000 m	8.47 lx	0.28 lx	29.3 lx	0.033	0.010	CG20
Site boundary 6 Perpendicular illuminance Height: 4.000 m	4.32 lx	0.41 lx	17.3 lx	0.095	0.024	CG21

Site 1 (Light scene 1)

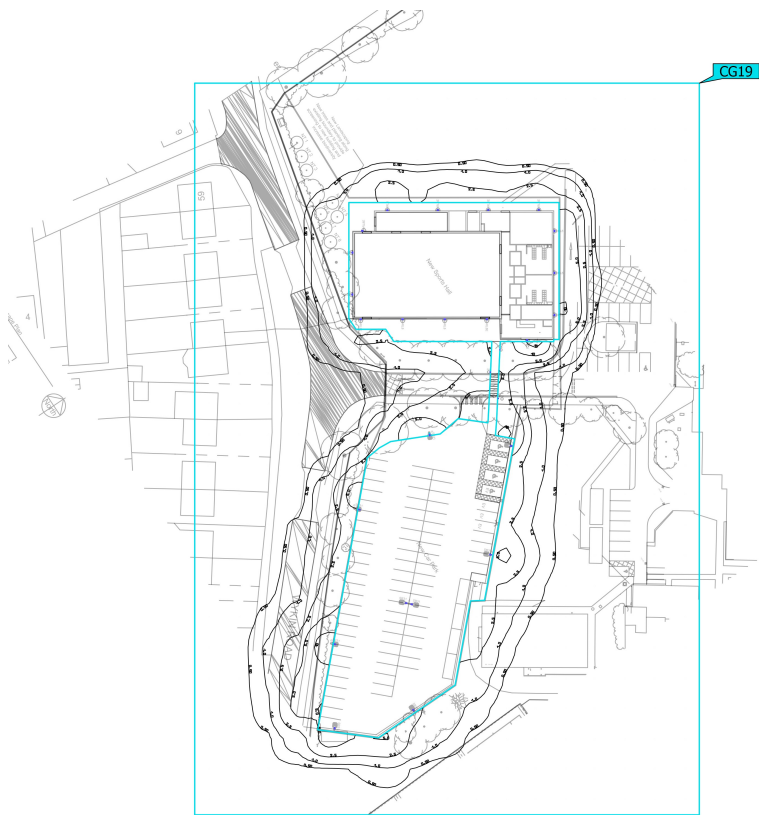
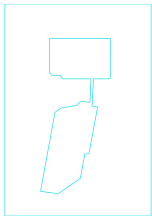
Calculation objects

Site boundary 5 Perpendicular illuminance Height: 4.000 m	2.52 lx	0.36 lx	9.29 lx	0.14	0.039	CG22
Site boundary 4 Perpendicular illuminance Height: 4.000 m	0.99 lx	0.33 lx	2.70 lx	0.33	0.12	CG23
Site boundary 3 Perpendicular illuminance Height: 4.000 m	1.06 lx	0.31 lx	2.66 lx	0.29	0.12	CG24
Site boundary 2 Perpendicular illuminance Height: 4.000 m	2.49 lx	0.39 lx	13.7 lx	0.16	0.028	CG25
Site boundary 1 Perpendicular illuminance Height: 4.000 m	1.54 lx	0.075 lx	28.1 lx	0.049	0.003	CG26
Entire Site 1m height Perpendicular illuminance Height: 1.000 m	0.78 lx	0.007 lx	29.8 lx	0.009	0.000	CG27
Entire Site 4m height Perpendicular illuminance Height: 4.000 m	0.44 lx	0.000 lx	57.5 lx	0.00	0.00	CG28

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Site 1 (Light scene 1)

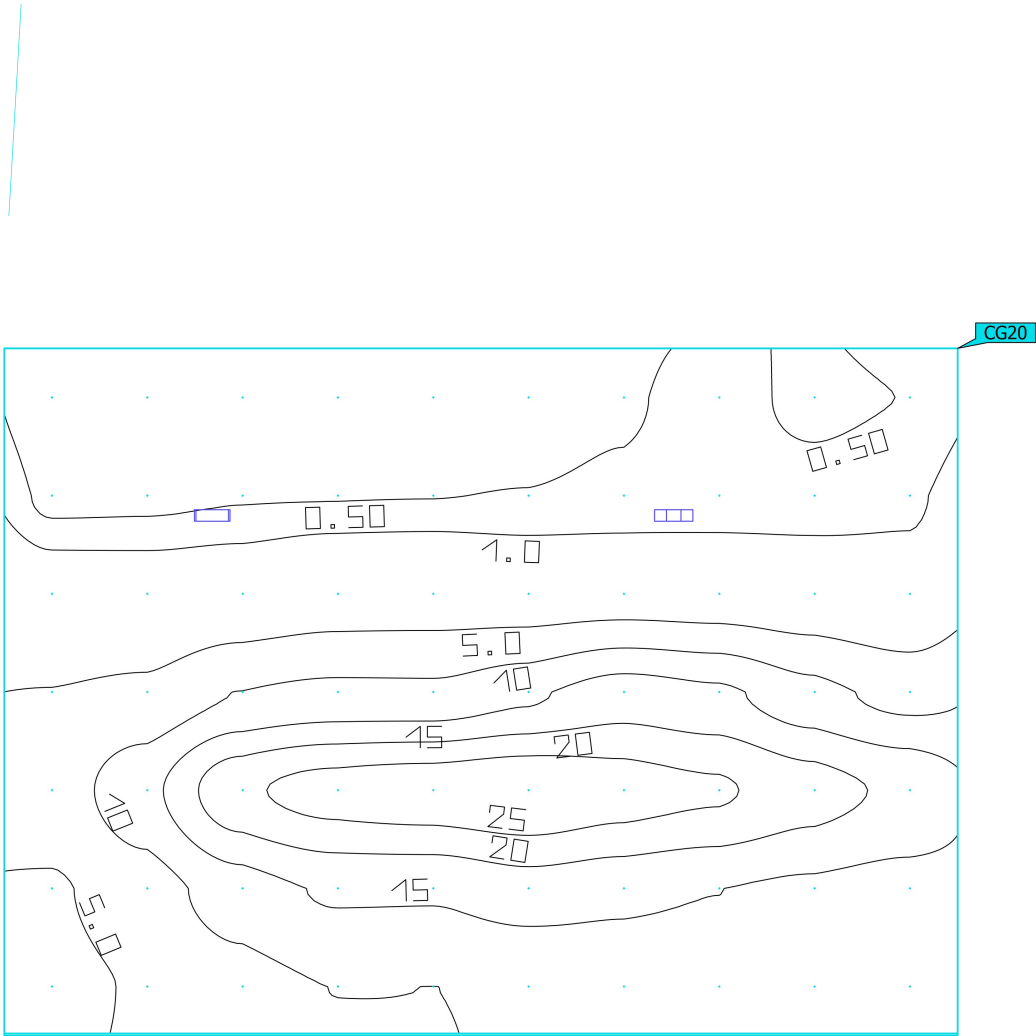
Entire Site 0m



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Entire Site 0m Perpendicular illuminance Height: 0.000 m	0.92 lx	0.010 lx	16.7 lx	0.011	0.001	CG19

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

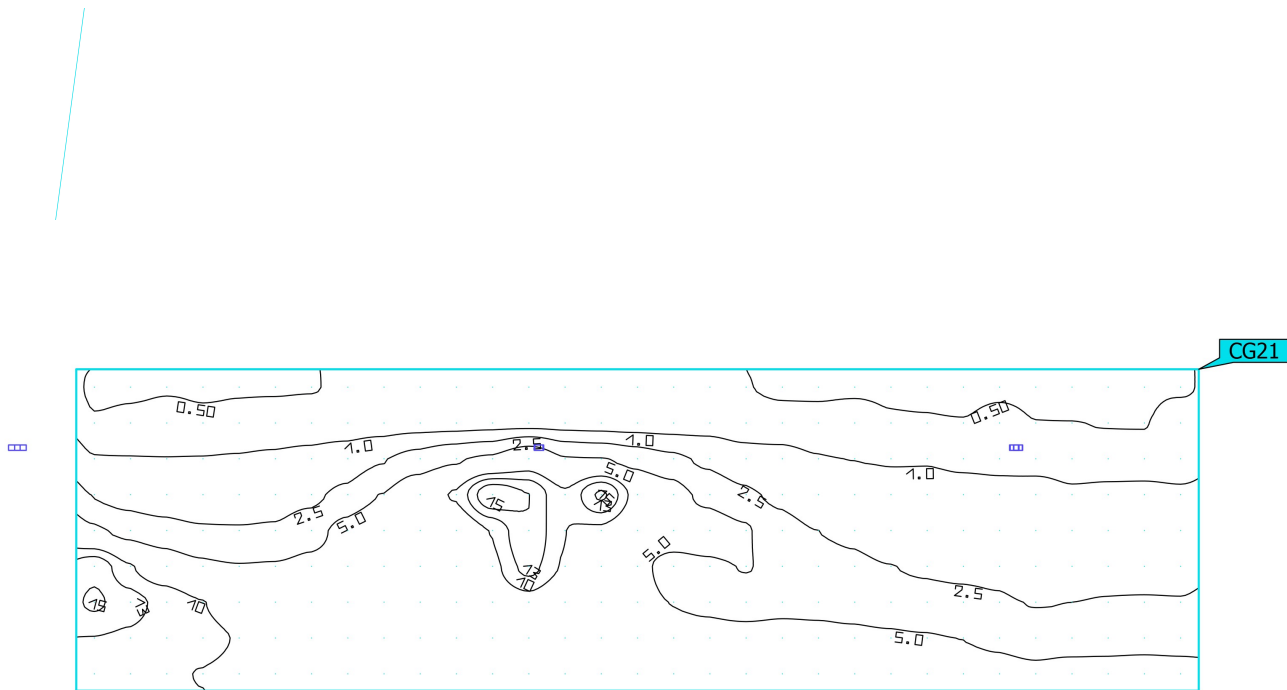
Site 1 (Light scene 1)
Site boundary 7



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Site boundary 7 Perpendicular illuminance Height: 4.000 m	8.47 lx	0.28 lx	29.3 lx	0.033	0.010	CG20

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Site 1 (Light scene 1)
Site boundary 6

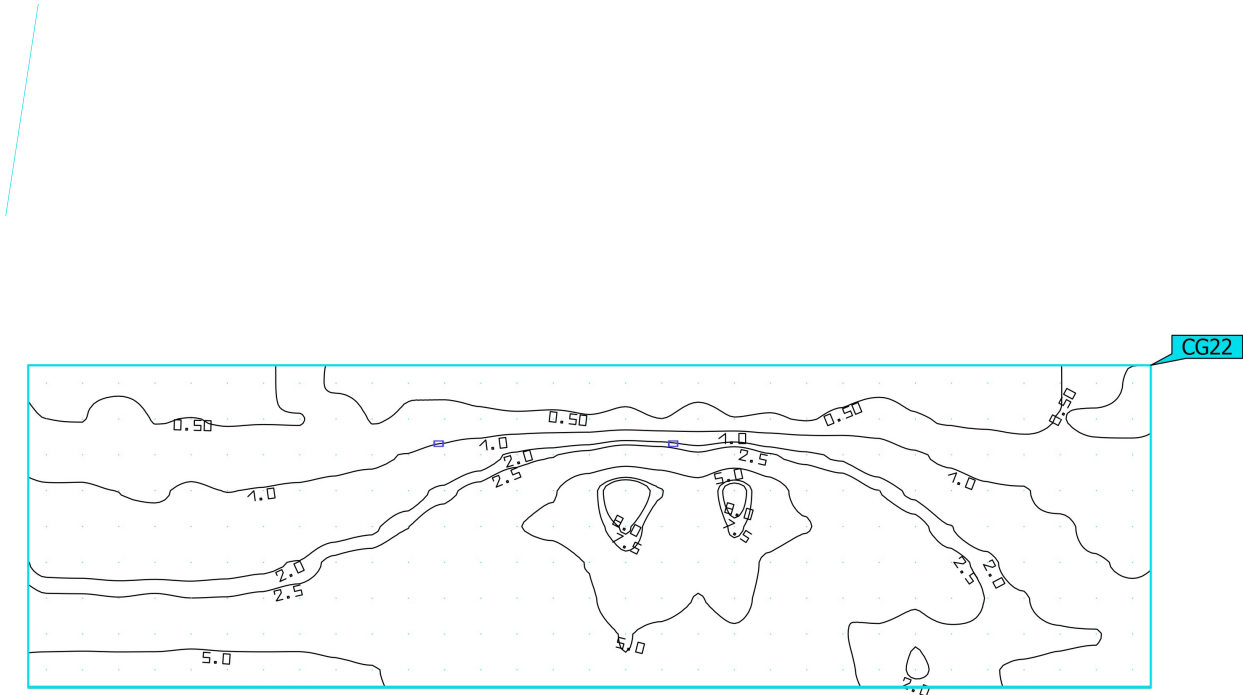


Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Site boundary 6 Perpendicular illuminance Height: 4.000 m	4.32 lx	0.41 lx	17.3 lx	0.095	0.024	CG21

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Site 1 (Light scene 1)

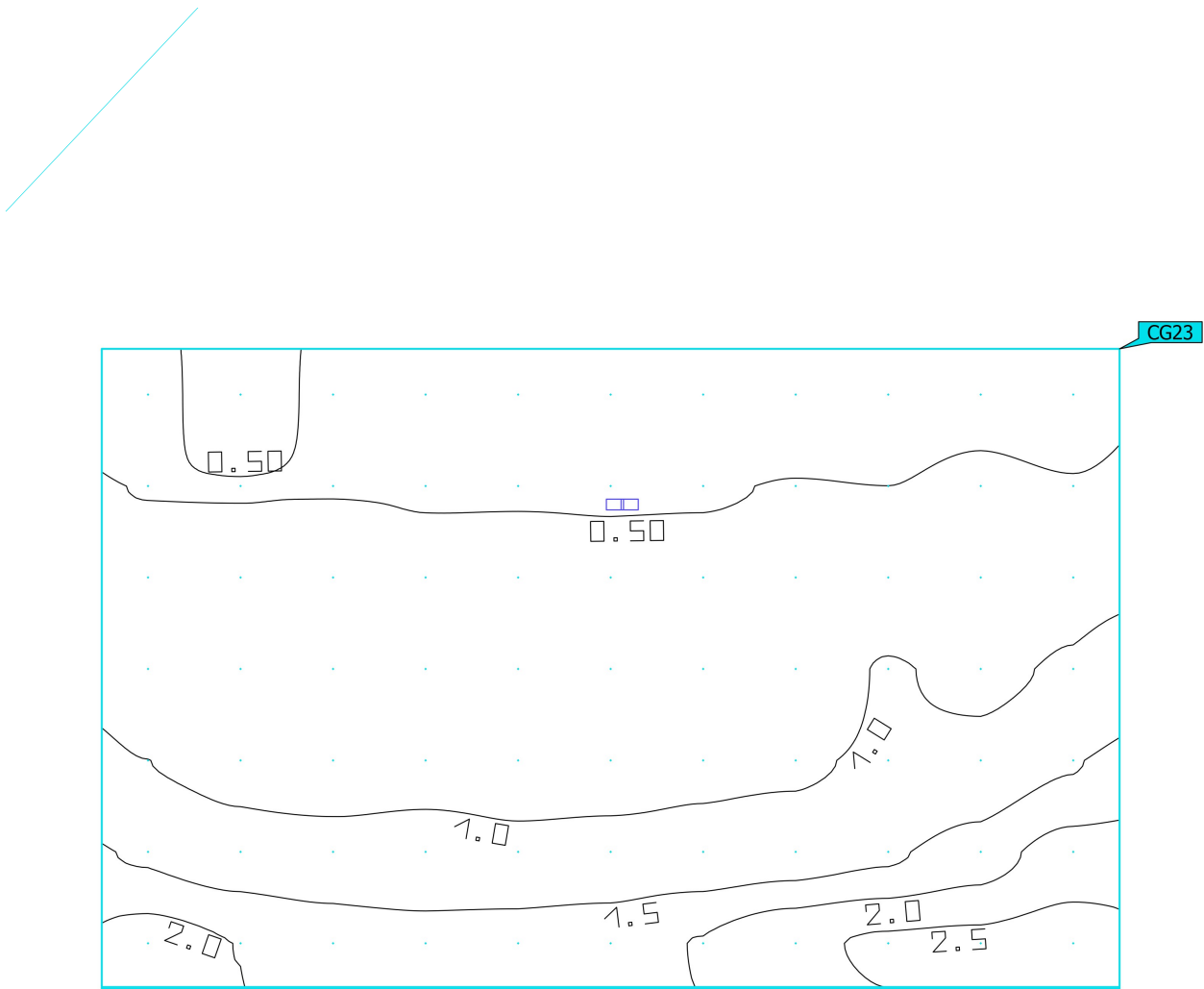
Site boundary 5



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Site boundary 5 Perpendicular illuminance Height: 4.000 m	2.52 lx	0.36 lx	9.29 lx	0.14	0.039	CG22

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

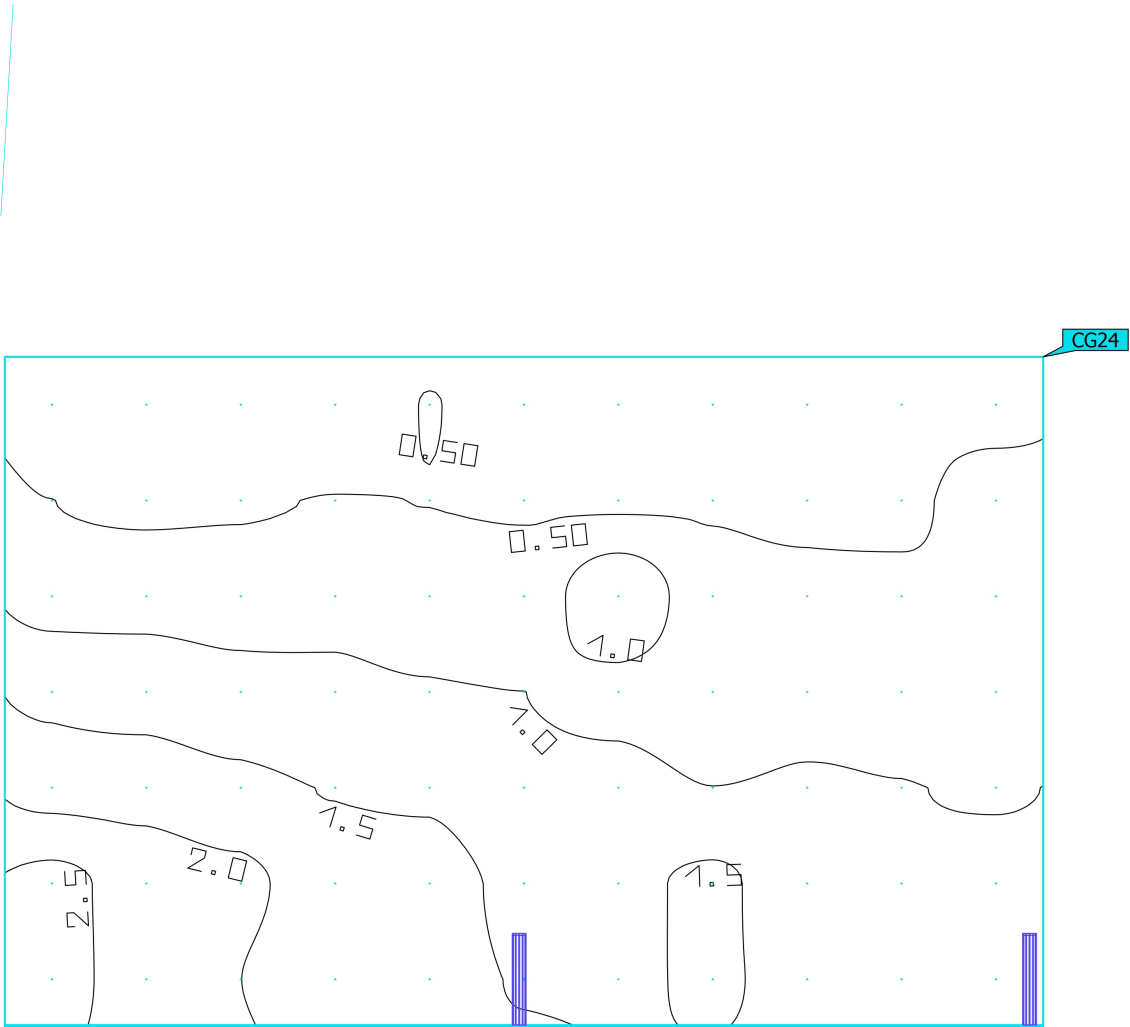
Site 1 (Light scene 1)
Site boundary 4



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Site boundary 4 Perpendicular illuminance Height: 4.000 m	0.99 lx	0.33 lx	2.70 lx	0.33	0.12	CG23

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

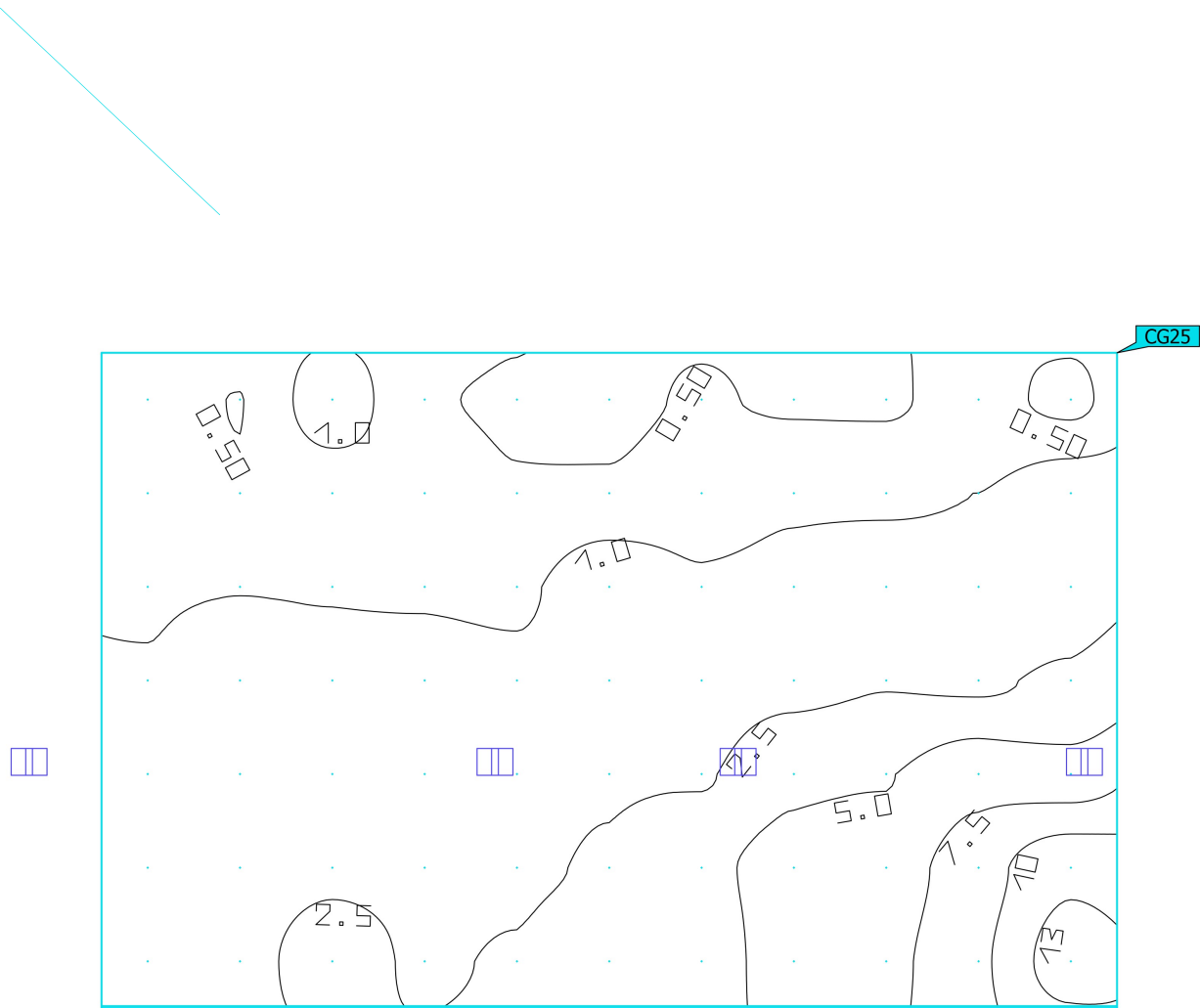
Site 1 (Light scene 1)
Site boundary 3



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Site boundary 3 Perpendicular illuminance Height: 4.000 m	1.06 lx	0.31 lx	2.66 lx	0.29	0.12	CG24

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

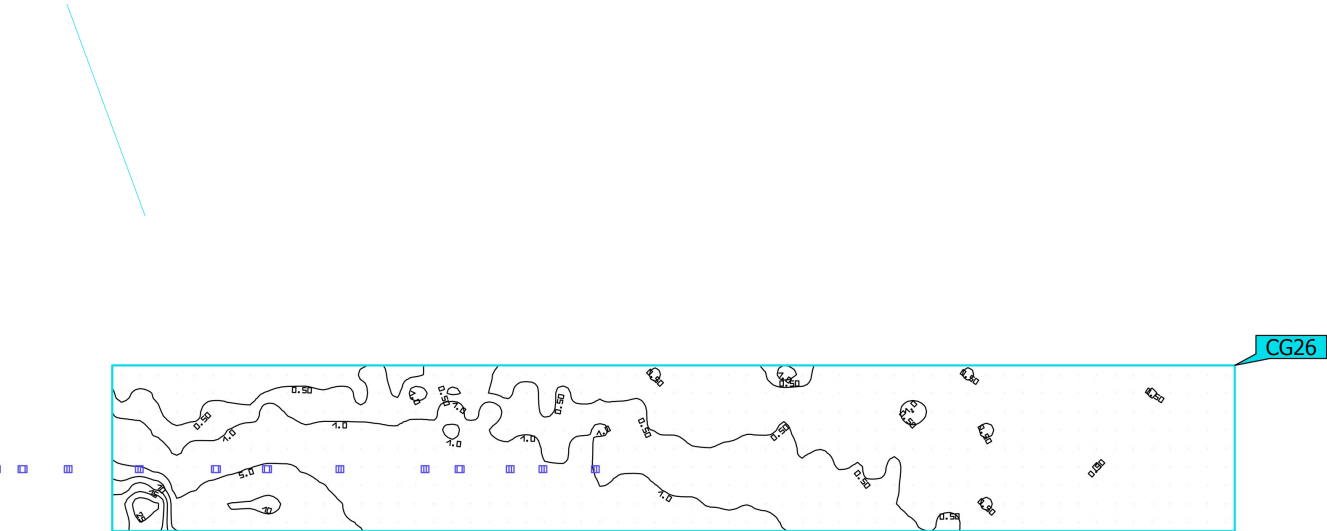
Site 1 (Light scene 1)
Site boundary 2



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Site boundary 2 Perpendicular illuminance Height: 4.000 m	2.49 lx	0.39 lx	13.7 lx	0.16	0.028	CG25

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

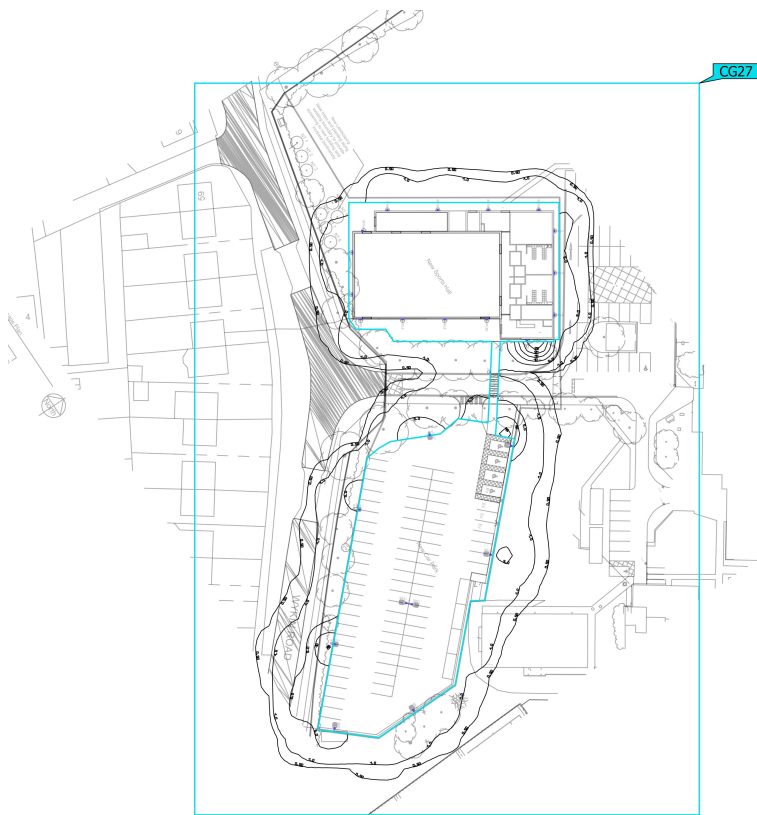
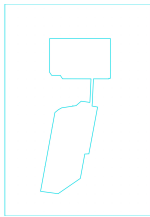
Site 1 (Light scene 1)
Site boundary 1



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Site boundary 1 Perpendicular illuminance Height: 4.000 m	1.54 lx	0.075 lx	28.1 lx	0.049	0.003	CG26

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

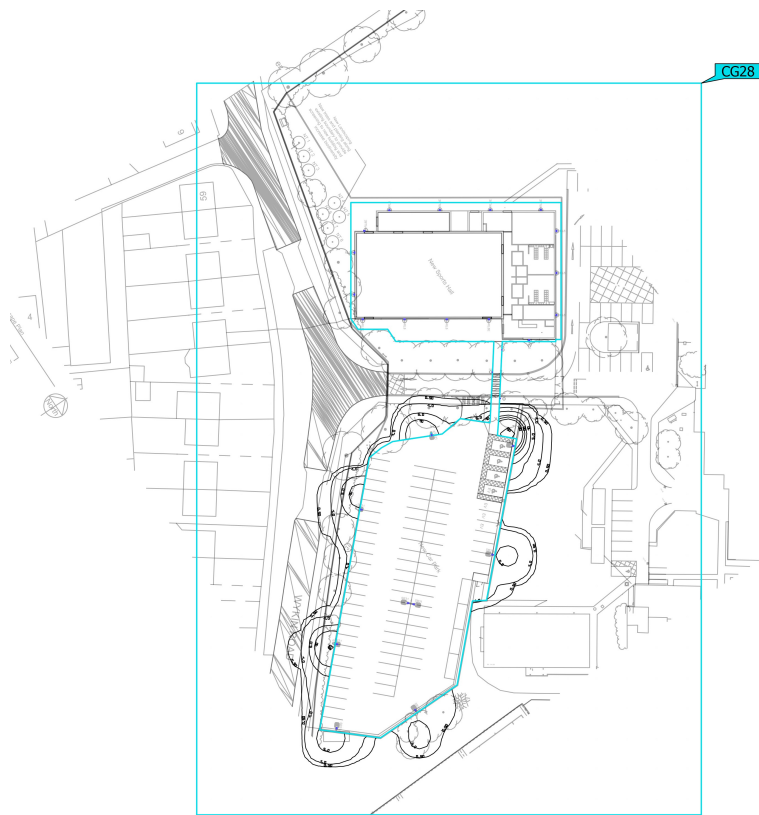
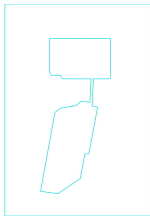
Site 1 (Light scene 1)
Entire Site 1m height



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Entire Site 1m height Perpendicular illuminance Height: 1.000 m	0.78 lx	0.007 lx	29.8 lx	0.009	0.000	CG27

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

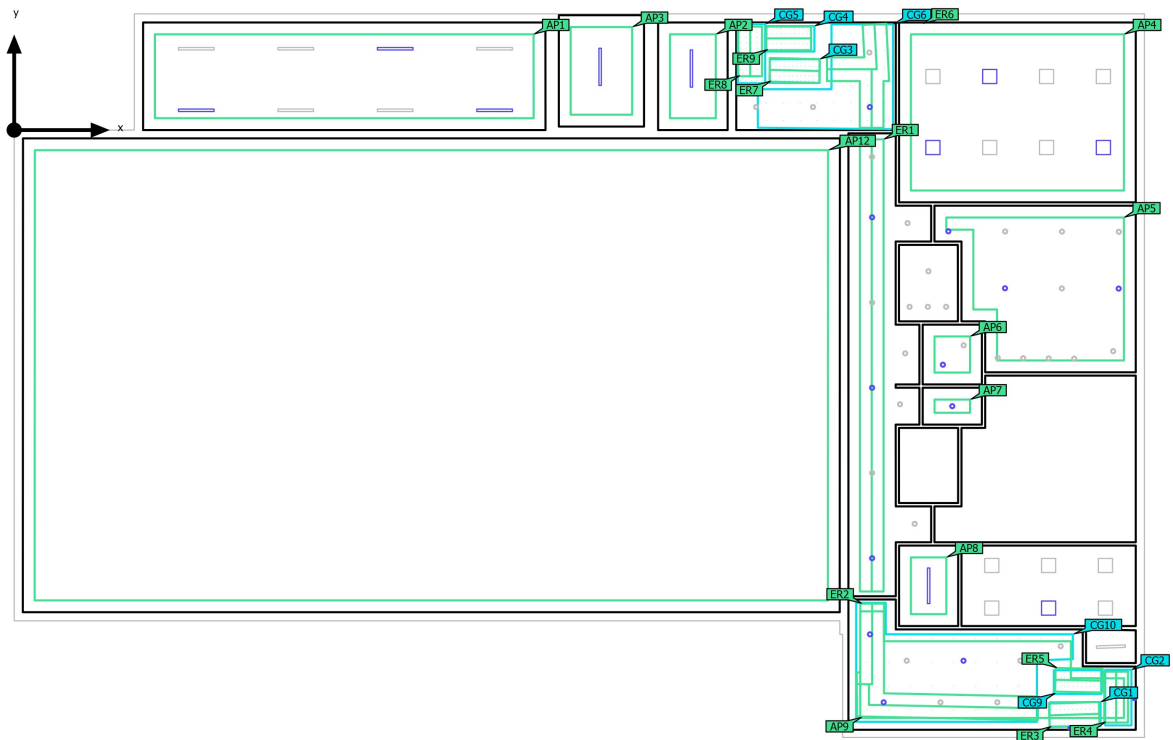
Site 1 (Light scene 1)
Entire Site 4m height



Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Entire Site 4m height Perpendicular illuminance Height: 4.000 m	0.44 lx	0.000 lx	57.5 lx	0.00	0.00	CG28

Utilisation profile: DIALux presetting (5.1.4 Standard (outdoor transportation area))

Building 1 · Storey 1 (Emergency light scene)

Calculation objects

Building 1 · Storey 1 (Emergency light scene)

Calculation objects

Anti panic surfaces

Properties	E _{min}	E _{max}	U _d	Index
Anti panic surface (Equipment Store) Perpendicular illuminance (adaptive) Height: 0.000 m	1.09 lx	16.2 lx	0.067	AP1
Anti panic surface (Plant Room) Perpendicular illuminance (adaptive) Height: 0.000 m	4.72 lx	16.5 lx	0.29	AP2
Anti panic surface (ASHP) Perpendicular illuminance (adaptive) Height: 0.000 m	5.06 lx	16.6 lx	0.30	AP3
Anti panic surface (Fitness Suite) Perpendicular illuminance (adaptive) Height: 0.000 m	0.72 lx	26.7 lx	0.027	AP4
Anti panic surface (Changing Room A) Perpendicular illuminance (adaptive) Height: 0.000 m	1.21 lx	24.5 lx	0.049	AP5
Anti panic surface (Acc Shower) Perpendicular illuminance (adaptive) Height: 0.000 m	10.7 lx	23.8 lx	0.45	AP6
Anti panic surface (Acc WC) Perpendicular illuminance (adaptive) Height: 0.000 m	19.4 lx	23.6 lx	0.82	AP7
Anti panic surface (Store 1) Perpendicular illuminance (adaptive) Height: 0.000 m	85.3 lx	145 lx	0.59	AP8
Anti panic surface (Reception) Perpendicular illuminance (adaptive) Height: 0.000 m	2.68 lx	29.9 lx	0.090	AP9
Anti panic surface (Sports Hall) Perpendicular illuminance (adaptive) Height: 0.000 m	0.58 lx	13.6 lx	0.043	AP12

Building 1 · Storey 1 (Emergency light scene)

Calculation objects

Escape routes

Properties	E_{min} Middle area	E_{max} Middle area	E_{min} Centerline	E_{max} Centerline	U_d	Index
Emergency route 1 (Corridor) Perpendicular illuminance (adaptive) Height: 0.000 m	1.47 lx	26.3 lx	1.54 lx	26.3 lx	0.059	ER1
Emergency route 2 (Reception) Perpendicular illuminance (adaptive) Height: 0.000 m	5.14 lx	29.9 lx	6.21 lx	29.6 lx	0.21	ER2
Emergency route 3 (Reception Stairs) Perpendicular illuminance (adaptive) Height: 0.227 m	3.74 lx	25.0 lx	4.85 lx	22.7 lx	0.21	ER3
Emergency route 4 (Reception Landing) Perpendicular illuminance (adaptive) Height: 1.476 m	7.97 lx	29.9 lx	12.9 lx	29.8 lx	0.43	ER4
Emergency route 5 (Reception Stairs) Perpendicular illuminance (adaptive) Height: 2.498 m	15.4 lx	31.3 lx	22.3 lx	29.1 lx	0.77	ER5
Emergency route 6 (Stairs 2 Lobby) Perpendicular illuminance (adaptive) Height: 0.000 m	2.50 lx	28.3 lx	3.47 lx	28.1 lx	0.12	ER6
Emergency route 7 (Stairs 2) Perpendicular illuminance (adaptive) Height: 1.243 m	4.21 lx	16.3 lx	4.30 lx	14.9 lx	0.29	ER7
Emergency route 8 (Stairs 2 Landing) Perpendicular illuminance (adaptive) Height: 1.459 m	5.72 lx	27.2 lx	8.96 lx	23.3 lx	0.39	ER8
Emergency route 9 (Stairs 2) Perpendicular illuminance (adaptive) Height: 1.617 m	12.1 lx	30.7 lx	16.4 lx	23.0 lx	0.71	ER9

Calculation surfaces

Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Reception Stairs Perpendicular illuminance Height: 0.778 m	13.5 lx	3.91 lx	24.1 lx	0.29	0.16	CG1

Building 1 · Storey 1 (Emergency light scene)

Calculation objects

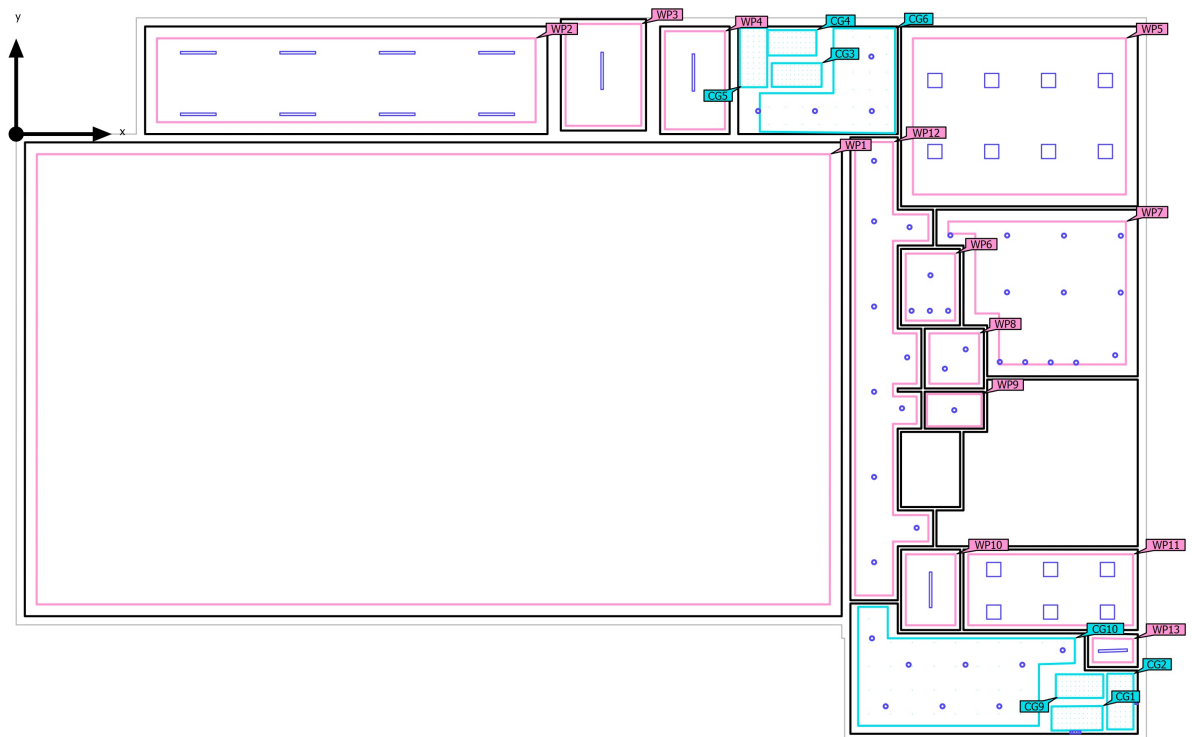
Reception Stairs landing Perpendicular illuminance Height: 1.443 m	17.9 lx	6.03 lx	28.8 lx	0.34	0.21	CG2
Stairs 2 Perpendicular illuminance Height: 0.812 m	7.81 lx	4.12 lx	16.6 lx	0.53	0.25	CG3
Stairs 2 Perpendicular illuminance Height: 2.108 m	20.0 lx	11.9 lx	30.0 lx	0.60	0.40	CG4
Stairs 2 landing Perpendicular illuminance Height: 1.475 m	16.1 lx	5.14 lx	27.5 lx	0.32	0.19	CG5
Stairs 2 lobby Perpendicular illuminance Height: 0.000 m	11.9 lx	2.44 lx	28.1 lx	0.21	0.087	CG6
Reception Stairs Perpendicular illuminance Height: 2.192 m	25.1 lx	17.0 lx	32.0 lx	0.68	0.53	CG9
Reception Perpendicular illuminance Height: 0.750 m	21.2 lx	2.09 lx	55.6 lx	0.099	0.038	CG10

Notes on planning:

The emergency lighting scene was calculated without reflection and without taking into account the placed furniture.

Building 1 · Storey 1 (Light scene 1)

Calculation objects



Building 1 · Storey 1 (Light scene 1)

Calculation objects

Working planes

Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_0 (g_1)$	g_2	Index
Working plane (Sports Hall) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.500 m	557 lx	392 lx	677 lx	0.70	0.58	WP1
Working plane (Equipment Store) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.500 m	214 lx	144 lx	264 lx	0.67	0.55	WP2
Working plane (ASHP) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	215 lx	123 lx	304 lx	0.57	0.40	WP3
Working plane (Plant Room) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	238 lx	121 lx	322 lx	0.51	0.38	WP4
Working plane (Fitness Suite) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.500 m	330 lx	197 lx	406 lx	0.60	0.49	WP5
Working plane (WCs A) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	244 lx	140 lx	321 lx	0.57	0.44	WP6
Working plane (Changing Room A) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.500 m	164 lx	77.2 lx	265 lx	0.47	0.29	WP7
Working plane (Acc Shower) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	211 lx	161 lx	250 lx	0.76	0.64	WP8
Working plane (Acc WC) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.100 m	213 lx	180 lx	243 lx	0.85	0.74	WP9
Working plane (Store 1) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	158 lx	122 lx	200 lx	0.77	0.61	WP10
Working plane (Office) Perpendicular illuminance Height: 0.750 m, Wall zone: 0.200 m	617 lx	421 lx	747 lx	0.68	0.56	WP11

Building 1 · Storey 1 (Light scene 1)

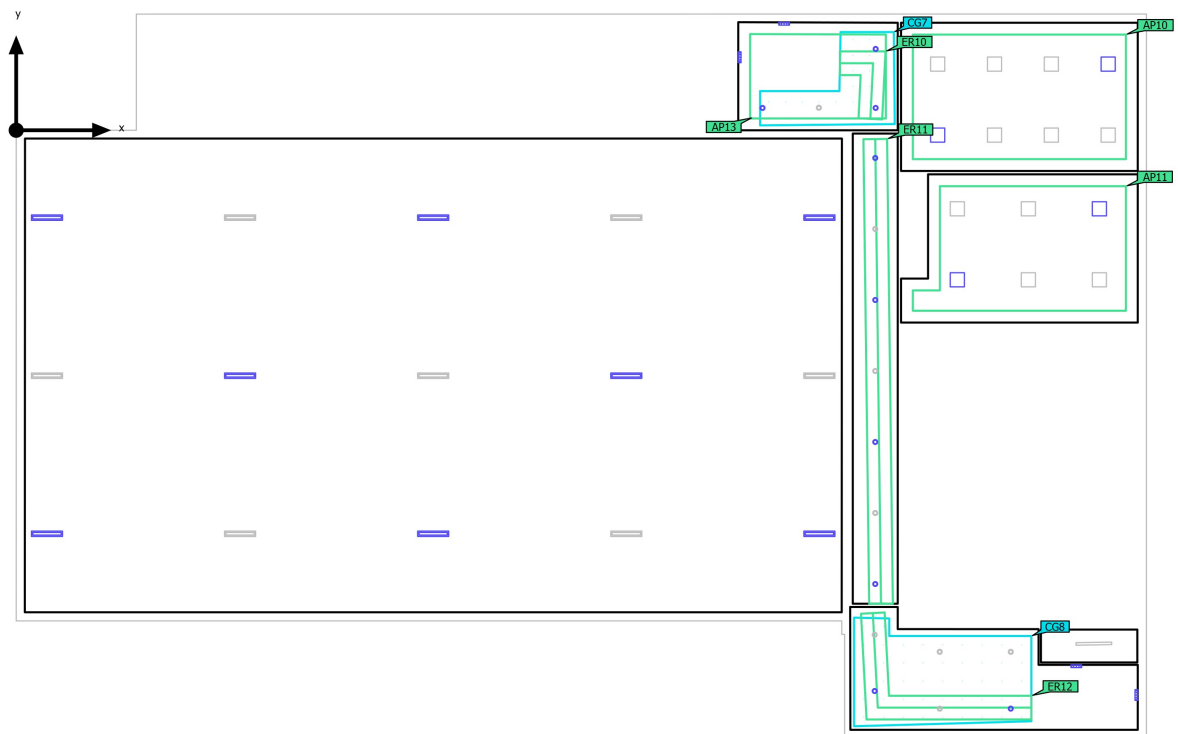
Calculation objects

Working plane (Corridor) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	133 lx	70.9 lx	215 lx	0.53	0.33	WP12
Working plane (Store 2) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	153 lx	138 lx	166 lx	0.90	0.83	WP13

Calculation surfaces

Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_o (g_1)$	g_2	Index
Reception Stairs Perpendicular illuminance Height: 0.778 m	165 lx	109 lx	220 lx	0.66	0.50	CG1
Reception Stairs landing Perpendicular illuminance Height: 1.443 m	203 lx	104 lx	280 lx	0.51	0.37	CG2
Stairs 2 Perpendicular illuminance Height: 0.812 m	133 lx	98.7 lx	185 lx	0.74	0.53	CG3
Stairs 2 Perpendicular illuminance Height: 2.108 m	229 lx	169 lx	294 lx	0.74	0.57	CG4
Stairs 2 landing Perpendicular illuminance Height: 1.475 m	192 lx	101 lx	270 lx	0.53	0.37	CG5
Stairs 2 lobby Perpendicular illuminance Height: 0.000 m	151 lx	82.8 lx	187 lx	0.55	0.44	CG6
Reception Stairs Perpendicular illuminance Height: 2.192 m	206 lx	148 lx	289 lx	0.72	0.51	CG9
Reception Perpendicular illuminance Height: 0.750 m	359 lx	218 lx	475 lx	0.61	0.46	CG10

Building 1 · Storey 2 (Emergency light scene)

Calculation objects

Building 1 · Storey 2 (Emergency light scene)

Calculation objects

Anti panic surfaces

Properties	E_{min}	E_{max}	U_d	Index
Anti panic surface (Classroom 1) Perpendicular illuminance (adaptive) Height: 0.000 m	0.73 lx	25.7 lx	0.028	AP10
Anti panic surface (Classroom 2) Perpendicular illuminance (adaptive) Height: 0.000 m	9.81 lx	338 lx	0.029	AP11
Anti panic surface (Stairs 2) Perpendicular illuminance (adaptive) Height: 0.000 m	8.53 lx	33.4 lx	0.26	AP13

Escape routes

Properties	E_{min} Middle area	E_{max} Middle area	E_{min} Centerline	E_{max} Centerline	U_d	Index
Emergency route 10 (Stairs 2) Perpendicular illuminance (adaptive) Height: 0.000 m	19.3 lx	33.4 lx	20.2 lx	33.3 lx	0.61	ER10
Emergency route 11 (Corridor) Perpendicular illuminance (adaptive) Height: 0.000 m	3.61 lx	26.4 lx	3.93 lx	26.3 lx	0.15	ER11
Emergency route 12 (lobby) Perpendicular illuminance (adaptive) Height: 0.000 m	1.46 lx	28.2 lx	1.48 lx	28.1 lx	0.053	ER12

Calculation surfaces

Properties	$\bar{E}$	E_{min}	E_{max}	$U_o (g_1)$	g_2	Index
Stairs 2 Lobby Perpendicular illuminance Height: -0.000 m	25.3 lx	12.0 lx	32.9 lx	0.47	0.36	CG7
Reception Stairs Lobby Perpendicular illuminance Height: -0.000 m	11.4 lx	1.94 lx	26.0 lx	0.17	0.075	CG8

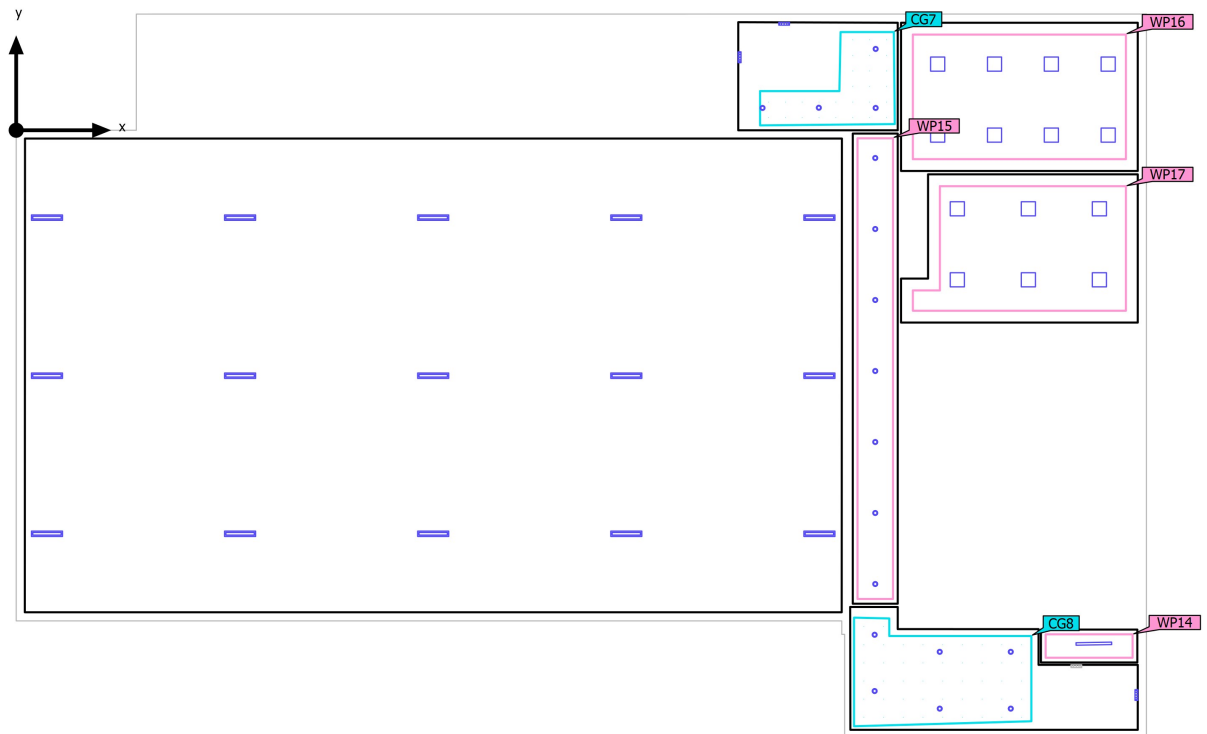
Building 1 · Storey 2 (Emergency light scene)

Calculation objects

Notes on planning:

The emergency lighting scene was calculated without reflection and without taking into account the placed furniture.

Building 1 · Storey 2 (Light scene 1)

Calculation objects

Building 1 · Storey 2 (Light scene 1)

Calculation objects

Working planes

Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_o (g_1)$	g_2	Index
Working plane (Cleaners) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	153 lx	94.1 lx	192 lx	0.62	0.49	WP14
Working plane (Corridor) Perpendicular illuminance Height: 0.000 m, Wall zone: 0.200 m	114 lx	94.4 lx	128 lx	0.83	0.74	WP15
Working plane (Classroom 1) Perpendicular illuminance Height: 0.750 m, Wall zone: 0.500 m	505 lx	326 lx	734 lx	0.65	0.44	WP16
Working plane (Classroom 2) Perpendicular illuminance Height: 0.750 m, Wall zone: 0.500 m	489 lx	169 lx	804 lx	0.35	0.21	WP17

Calculation surfaces

Properties	$\bar{E}$	$E_{\min}$	$E_{\max}$	$U_o (g_1)$	g_2	Index
Stairs 2 Lobby Perpendicular illuminance Height: -0.000 m	187 lx	146 lx	231 lx	0.78	0.63	CG7
Reception Stairs Lobby Perpendicular illuminance Height: -0.000 m	144 lx	92.6 lx	165 lx	0.64	0.56	CG8

Glossary

A

A	Formula symbol for a surface in the geometry
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B

Background area	The background area borders the direct ambient area according to DIN EN 12464-1 and reaches up to the borders of the room. In larger rooms, the background area is at least 3 m wide. It is located horizontally at floor level.
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C

CCT	(Engl. correlated colour temperature) Body temperature of a thermal radiator which serves to describe its light colour. Unit: Kelvin [K]. The lesser the numerical value the redder; the greater the numerical value the bluer the light colour. The colour temperature of gas-discharge lamps and semi-conductors are termed "correlated colour temperature" in contrast to the colour temperature of thermal radiators. Allocation of the light colours to the colour temperature ranges acc. to EN 12464-1: Light colour - colour temperature [K] warm white (ww) < 3,300 K neutral white (nw) ≥ 3,300 – 5,300 K daylight white (dw) > 5,300 K
Clearance height	The designation for the distance between upper edge of the floor and bottom edge of the ceiling (in the completely furnished status of room).
Control group	A group of luminaires that are dimmed and controlled together. For each lighting scene, a control group provides its own dimming value. All luminaires within a control group share this dimming value. The control groups with their luminaires are automatically determined by DIALux on the basis of the created light scenes and their luminaire groups.
CRI	(Engl. colour rendering index) Designation for the colour rendering index of a luminaire or a lamp acc. to DIN 6169: 1976 or CIE 13.3: 1995. The general colour rendering index Ra (or CRI) is a dimensionless figure that describes the quality of a white light source in regards to its similarity with the remission spectra of defined 8 test colours (see DIN 6169 or CIE 1974) to a reference light source.

Glossary

D

Daylight autonomy	Describes what percentage of the daily working time the required illuminance is met by daylight. The nominal illuminance is used from the room profile, unlike described in EN 17037. The calculation is not done in the centre of the room but at the placed sensor measuring point. A room is considered sufficiently supplied with daylight if it achieves at least 50% daylight autonomy.
Daylight factor	Ratio of the illuminance achieved solely by daylight incidence at a point in the inside to the horizontal illuminance in the outer area under an unobstructed sky. Formula symbol: D (Engl. daylight factor) Unit: %
Daylight quotient effective area	A calculation surface within which the daylight quotient is calculated.

E

Energy evaluation	Based on an hourly calculation procedure for daylight in indoor spaces, considering the project geometry and any existing daylight control systems. Orientation and location of the project are also considered. The calculation uses the specified system power of the luminaires to determine the energy demand. A linear relationship between power and luminous flux in the dimmed state is assumed for daylight-controlled luminaires. Times of use and nominal illuminance are determined from the usage profiles of the spaces. Switched-on luminaires that are explicitly excluded from control also consider the specified times-of-use. The daylight control systems use a simplified control logic that closes them at an outdoor horizontal illuminance of 27,500lx. The calendar year 2022 is used as a reference only. It is not a simulation of this year. The reference year is only used to assign the days of the week to the calculated results. The changeover to summer time is not considered. The reference sky type used is the average sky described in CIE 110 without direct sunlight. The method was developed together with the Fraunhofer Institute for Building Physics and is available for review by the Joint Working Group 1 ISO TC 274 as an extension of the previous annual regression-based method.
Eta (η)	(light output ratio) The light output ratio describes what percentage of the luminous flux of a free radiating lamp (or LED module) is emitted by the luminaire when installed. Unit: %

Glossary

G

g_1	Often also U_o (Engl. overall uniformity) Designates the overall uniformity of the illuminance on a surface. It is the quotient from E_{min} to $\bar{E}$ and is required, for instance, in standards for illumination of workstations.
g_2	Actually it designates the "non-uniformity" of the illuminance on a surface. It is the quotient of E_{min} to E_{max} and is generally only relevant for certifying the emergency lighting acc. to EN 1838.

I

Illuminance	Describes the ratio of the luminous flux that strikes a certain surface to the size of this surface ($lm/m^2 = lx$). The illuminance is not tied to an object surface. It can be determined anywhere in space (inside or outside). The illuminance is not a product feature because it is a recipient value. Luxometers are used for measuring. Unit: Lux Abbreviation: lx Formula symbol: E
Illuminance, adaptive	For the determining of the middle adaptive illuminance on a surface, this is rastered "adaptively". In the area of large illuminance differences within the surface, the raster is subdivided finer; within lesser differences, a rougher classification is made.
Illuminance, horizontal	Illuminance that is calculated or measured on a horizontal (level) surface (this can be for example a table top or the floor). The horizontal illuminance is usually identified by the formula letter E_h .
Illuminance, perpendicular	Illuminance that is calculated or measured plumb-vertical to a surface. This needs to be taken into account for tilted surfaces. If the surface is horizontal or vertical, then there is no difference between the perpendicular and the horizontal or vertical illuminance.
Illuminance, vertical	Illuminance that is calculated or measured on a vertical surface (this can be for example the front of some shelves). The vertical illuminance is usually identified by the formula letter E_v .

L

LENI	(Engl. lighting energy numeric indicator) Lighting energy numeric indicator acc. to EN 15193 Unit: $kWh/(m^2 \cdot a)$
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Glossary

LLMF	(Engl. lamp lumen maintenance factor)/acc. to CIE 97: 2005 Lamp flux maintenance factor that takes the luminous flux reduction into account of a luminaire or an LED module in the course of the operating time. The lamp flux maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no luminous flux reduction existing).
LMF	(Engl. luminaire maintenance factor)/acc. to CIE 97: 2005 Luminaire maintenance factor that takes the soiling into account of the luminaire in the course of the operating time. The luminaire maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no soiling existing).
LSF	(Engl. lamp survival factor)/acc. to CIE 97: 2005 Lamp survival factor that takes the total failure into account of a luminaire in the course of the operating time. The lamp survival factor is specified as a decimal digit and can have a maximum value of 1 (no failures existing within the time concerned or prompt replacement after the failure).
Luminance	Dimension for the "brightness impression" that the human eye has of a surface. The surface itself can emit light thereby or light striking it can be reflected (emitter value). It is the only photometric value that the human eye can perceive. Unit: Candela per square metre Abbreviation: cd/m² Formula symbol: L
Luminous efficacy	Ratio of the emitted luminous flux Φ [lm] to the absorbed electrical power P [W] Unit: lm/W. This ratio can be formed for the lamp or LED module (lamp or module light output), the lamp or module with control gear (system light output) and the complete luminaire (luminaire light output).
Luminous flux	Dimension for the total light output that is emitted from one light source in all directions. It is thus an "emitter value" that specifies the entire emitting output. The luminous flux of a light source can only be determined in a laboratory. A difference is made between the lamp or LED module luminous flux and the luminaire luminous flux. Unit: Lumen Abbreviation: lm Formula symbol: Φ
Luminous intensity	Describes the intensity of the light in a certain direction (emitter value). The luminous intensity is a matter of the luminous flux Φ that is emitted in a certain spherical angle Ω. The radiation characteristics of a light source are presented graphically in a light distribution curve (LDC). The luminous intensity is an SI base unit. Unit: Candela Abbreviation: cd Formula symbol: I

Glossary

M

Maintenance factor	See MF
MF	(Engl. maintenance factor)/acc. to CIE 97: 2005 Maintenance factor as decimal number between 0 and 1 that describes the ratio of the new value of a photometric planning parameter (e.g. of the illuminance) to a maintenance value after a certain time. The maintenance factor takes into account the soiling of luminaires and rooms as well as the luminous flux reduction and the failure of light sources. The maintenance factor is taken into account either overall or determined in detail acc. to CIE 97: 2005 by the formula $RMF \times LMF \times LLMF \times LSF$.

P

P	(Engl. power) Electric power consumption Unit: watt Abbreviation: W
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R

$R_{(UG)} \max$	Measure of the psychological glare in indoor spaces. In addition to the luminance of luminaires, the level of the $R_{(UG)}$ value also depends on the observer position, the viewing direction and the ambient luminance. The calculation is made according to the table method, see CIE 117. Among other things, EN 12464-1:2021 specifies maximum permissible $R_{(UG)}$-values $R_{(UGL)}$ for various indoor workplaces.
Reflection factor	The reflection factor of a surface describes how much of the striking light is reflected back. The reflection factor is defined by the colour of the surface.
RMF	(Engl. room maintenance factor)/acc. to CIE 97: 2005 Room maintenance factor that takes the soiling into account of the space encompassing surfaces in the course of the operating time. The room maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no soiling existing).

S

Surrounding area	The ambient area directly borders the area of the visual task and should be planned with a width of at least 0.5 m according to DIN EN 12464-1. It is at the same height as the area of the visual task.
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Glossary

U

UGR (max)	(unified glare rating) Measure for the psychological glare effect in interiors. In addition to luminaire luminance, the UGR value also depends on the position of the observer, the viewing direction and the ambient luminance. Among other things, EN 12464-1 specifies maximum permissible UGR values for various indoor workplaces.
UGR observer	Calculation point in the room, for the DIALux the UGR value is determined. The location and height of the calculation point should correspond to the typical observer position (position and eye level of the user).

V

Visual task area	The area that is needed for carrying out the visual task in accordance with DIN EN 12464 -1. The height corresponds with the height at which the visual task is executed.
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W

Wall zone	Circumferential area between working plane and walls which is not taken into account for the calculation.
Working plane	Virtual measuring or calculation surface at the height of the visual task that generally follows the room geometry. The working plane may also feature a wall zone.