

B02-NCO Accommodation

Lux Level Calculation Report

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### Supervisor Office

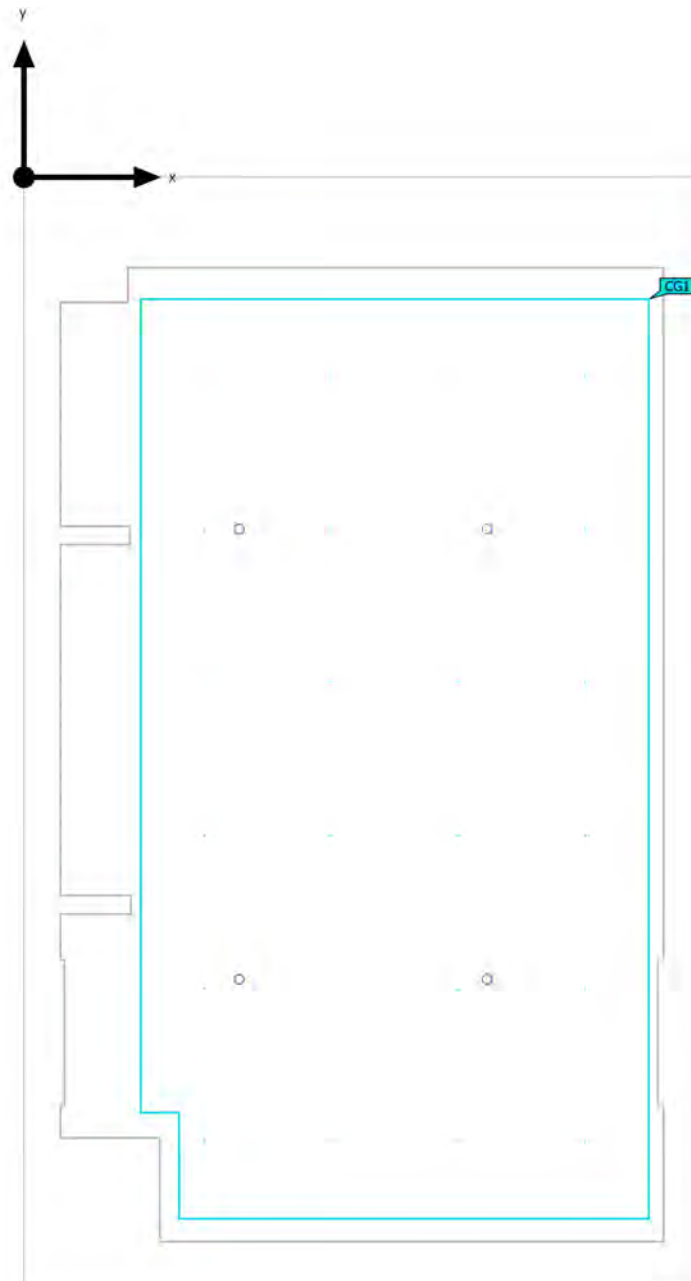
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## Building B02 Description

## 01- Typical Bedroom Description

## 01- Typical Bedroom · Storey 1 (Light scene 1)

## Calculation objects



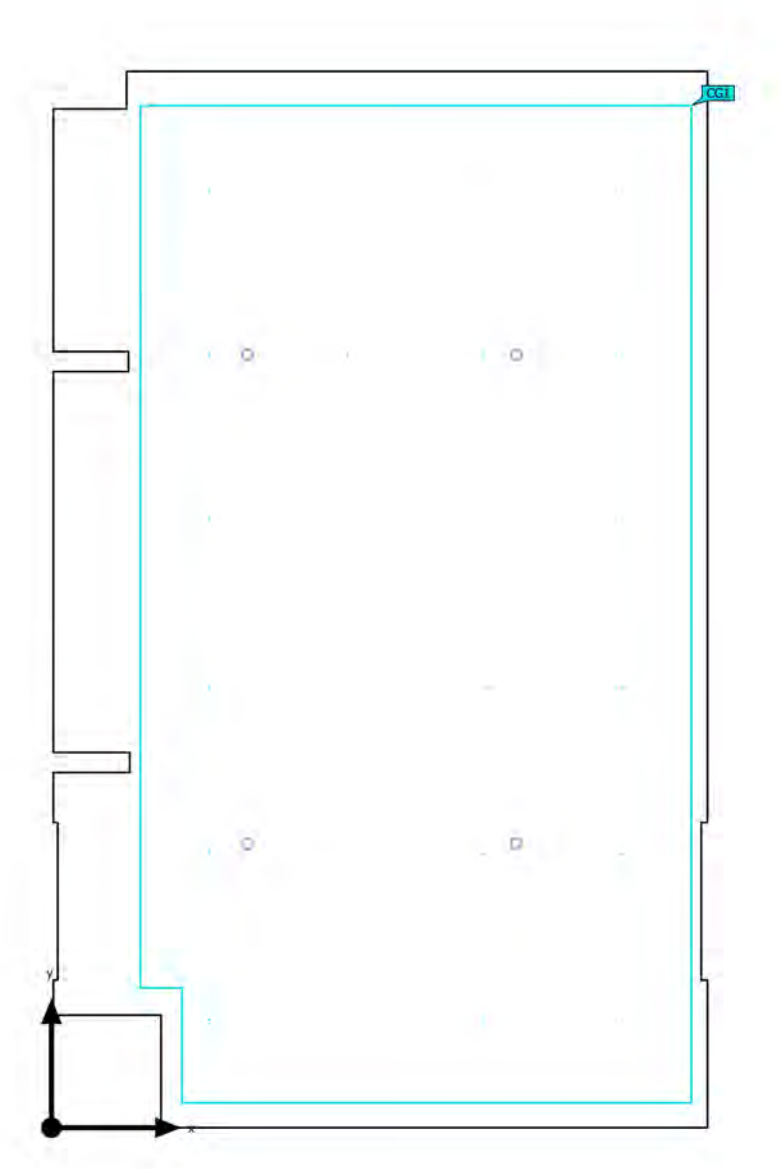
## 01- Typical Bedroom · Storey 1 (Light scene 1)

## Calculation objects

## Calculation surfaces

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Calculation surface 1 Perpendicular illuminance Height: 0.000 m	167 lx	79.7 lx	314 lx	0.48	0.25	CG1

01- Typical Bedroom · Storey 1 · Bedroom (Light scene 1)  
Summary



Ground area	42.85 m <sup>2</sup>		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %	Clearance height	2.800 m
Maintenance factor	0.80 (fixed)	Mounting height	2.800 m

## 01- Typical Bedroom · Storey 1 · Bedroom (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	198 kWh/a	

(1) Based on a rectangular space of 8.440 m x 5.225 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

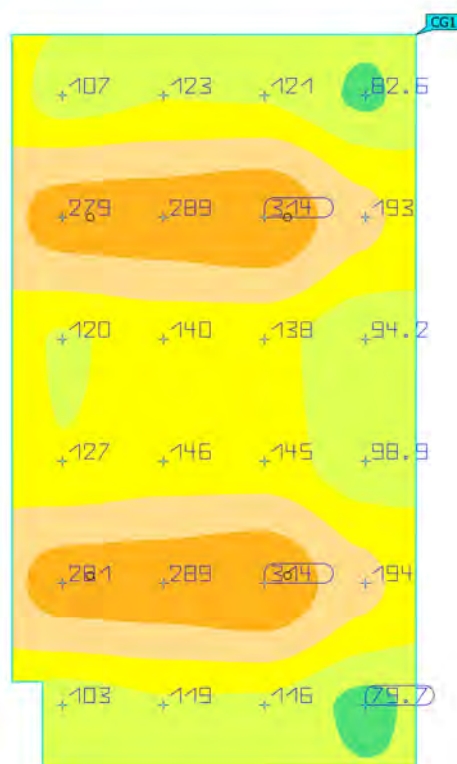
Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
4	FRATER	DLG5-020	COB Down Light Gemini 05	–	20.0 W	2000 lm	100.0 lm/W

## 01- Typical Bedroom · Bedroom (Light scene 1)

## Calculation surface 1



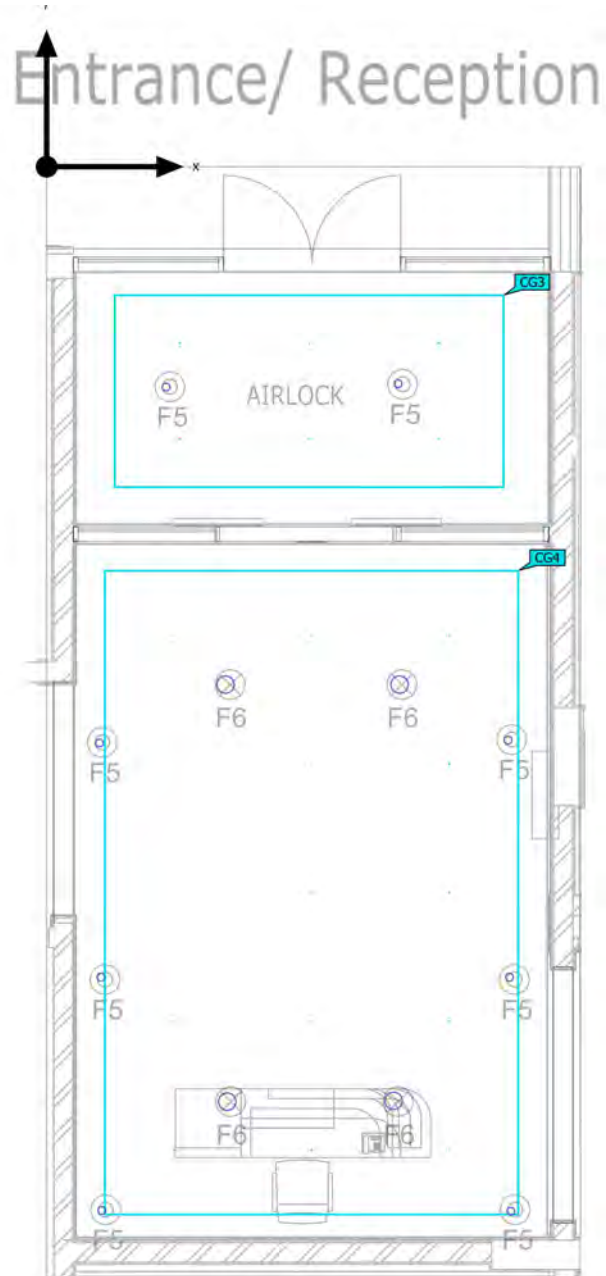
Properties		$E_{\min}$	$E_{\max}$	$U_o (g_1)$	$g_2$	Index
Calculation surface 1	167 lx	79.7 lx	314 lx	0.48	0.25	CG1
Perpendicular illuminance						
Height: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))



## 02-Entrance/ Reception Description

02-Entrance/ Reception · Storey 1 (Light scene 1)  
Calculation objects



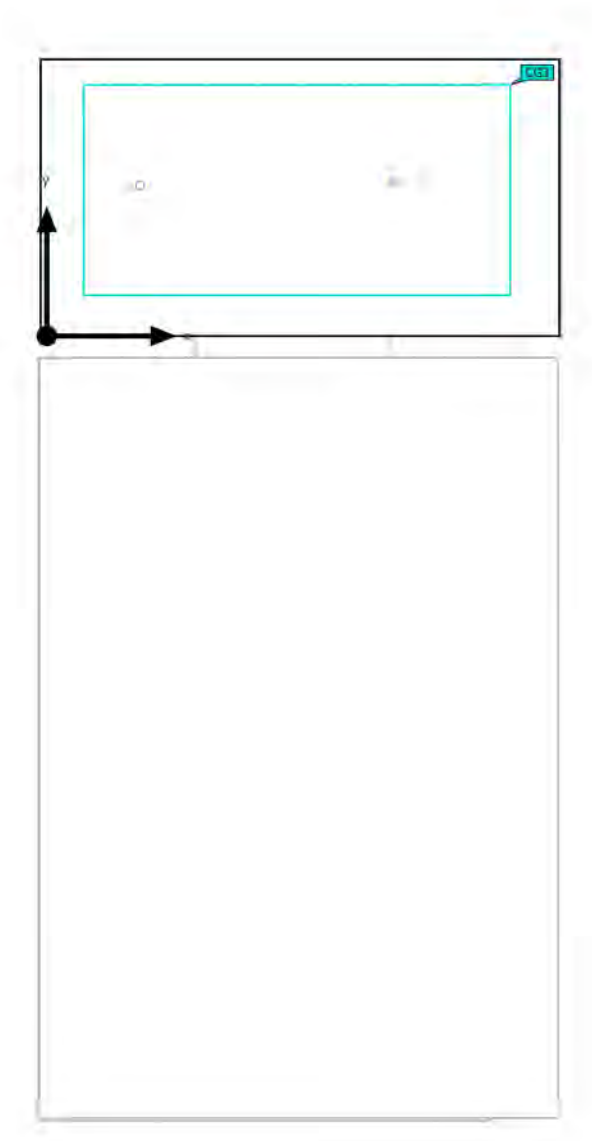
## 02-Entrance/ Reception · Storey 1 (Light scene 1)

## Calculation objects

## Calculation surfaces

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Calculation surface 5 Perpendicular illuminance Height: 0.000 m	167 lx	155 lx	184 lx	0.93	0.84	CG3
Calculation surface 6 Perpendicular illuminance Height: 0.000 m	254 lx	177 lx	309 lx	0.70	0.57	CG4

02-Entrance/ Reception · Storey 1 · Airlock (Light scene 1)  
Summary



Ground area	12.32 m²		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %		
Maintenance factor	0.80 (fixed)	Mounting height	2.800 m

## 02-Entrance/ Reception · Storey 1 · Airlock (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	54.5 kWh/a	

(1) Based on a rectangular space of 4.805 m x 2.565 m and SHR of 0.25.

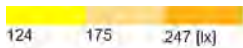
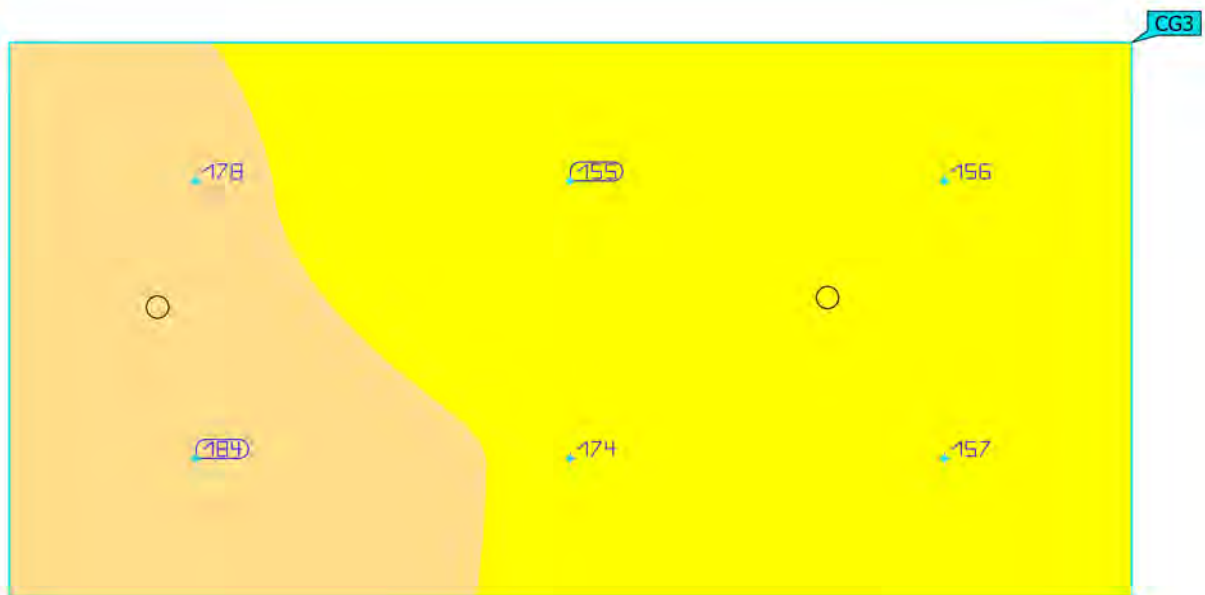
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
2	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

02-Entrance/ Reception · Airlock (Light scene 1)  
Calculation surface 5

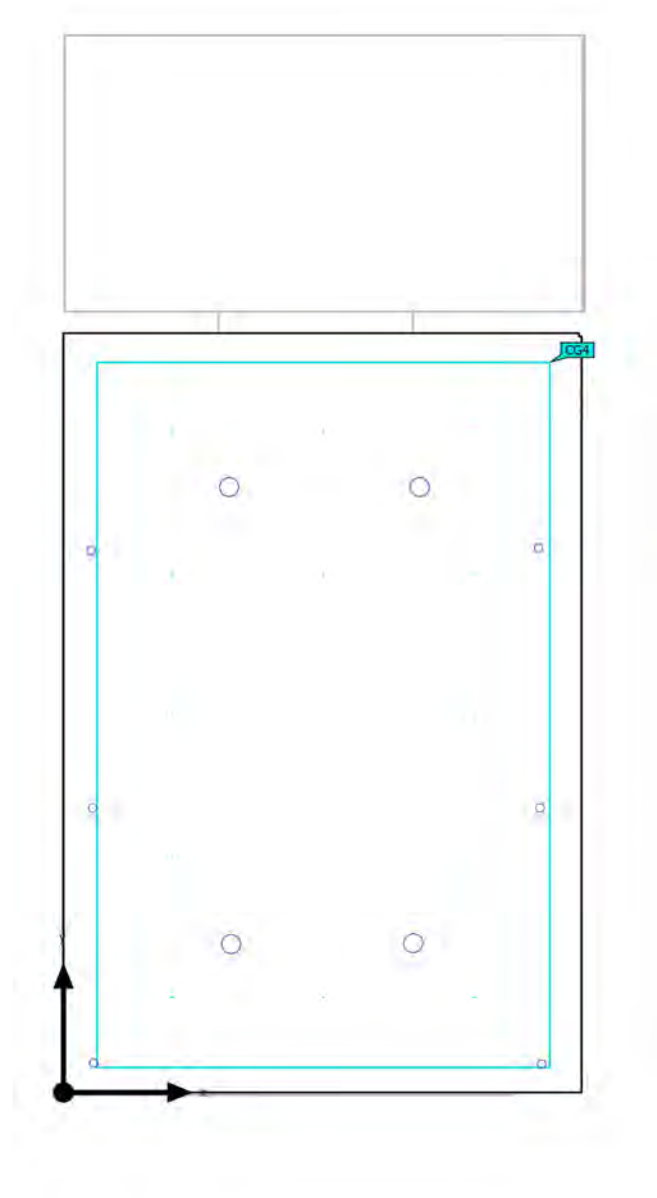


Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Calculation surface 5	167 lx	155 lx	184 lx	0.93	0.84	CG3
Perpendicular illuminance						
Height: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

## 02-Entrance/ Reception · Storey 1 · Reception (Light scene 1)

### Summary



Ground area	33.86 m <sup>2</sup>		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %		
Maintenance factor	0.80 (fixed)	Mounting height	2.800 m

## 02-Entrance/ Reception · Storey 1 · Reception (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	332 kWh/a	

(1) Based on a rectangular space of 4.807 m x 7.045 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

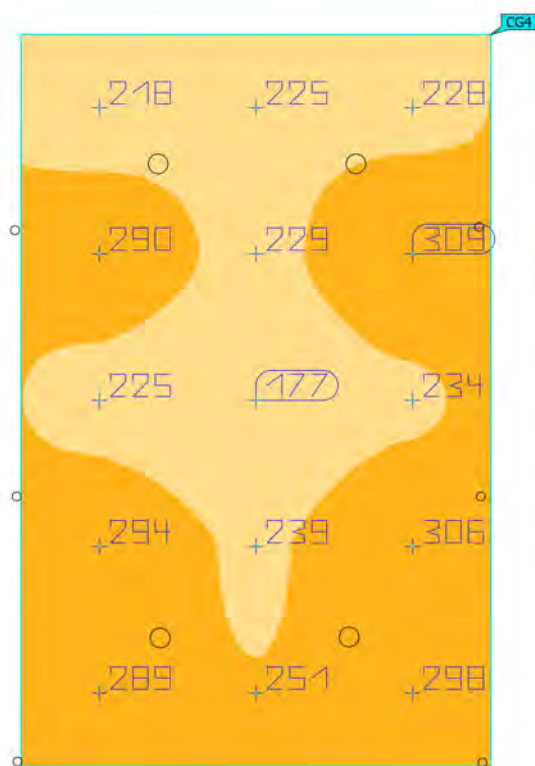
#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
6	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W
4	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W



## 02-Entrance/ Reception · Reception (Light scene 1)

## Calculation surface 6



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Calculation surface 6	254 lx	177 lx	309 lx	0.70	0.57	CG4
Perpendicular illuminance						
Height: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

## 03-Main Corridor Description

### 03-Main Corridor · Storey 1 (Light scene 1)

#### Calculation objects



## 03-Main Corridor · Storey 1 (Light scene 1)

## Calculation objects

## Calculation surfaces

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Calculation surface 2 Perpendicular illuminance Height: 0.000 m	157 lx	55.3 lx	311 lx	0.35	0.18	CG2

## 03-Main Corridor · Storey 1 · Main Corridor (Light scene 1)

## Summary



Ground area	174.58 m <sup>2</sup>		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %	Clearance height	2.800 m
Maintenance factor	0.80 (fixed)	Mounting height	2.800 m

## 03-Main Corridor · Storey 1 · Main Corridor (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	978 kWh/a	

(1) Based on a rectangular space of 2.940 m x 60.265 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

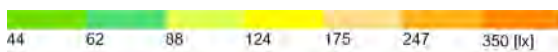
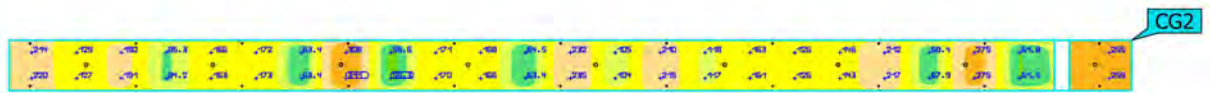
Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
22	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W
9	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W

### 03-Main Corridor · Main Corridor (Light scene 1)

#### Calculation surface 2



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Calculation surface 2	157 lx	55.3 lx	311 lx	0.35	0.18	CG2
Perpendicular illuminance						
Height: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

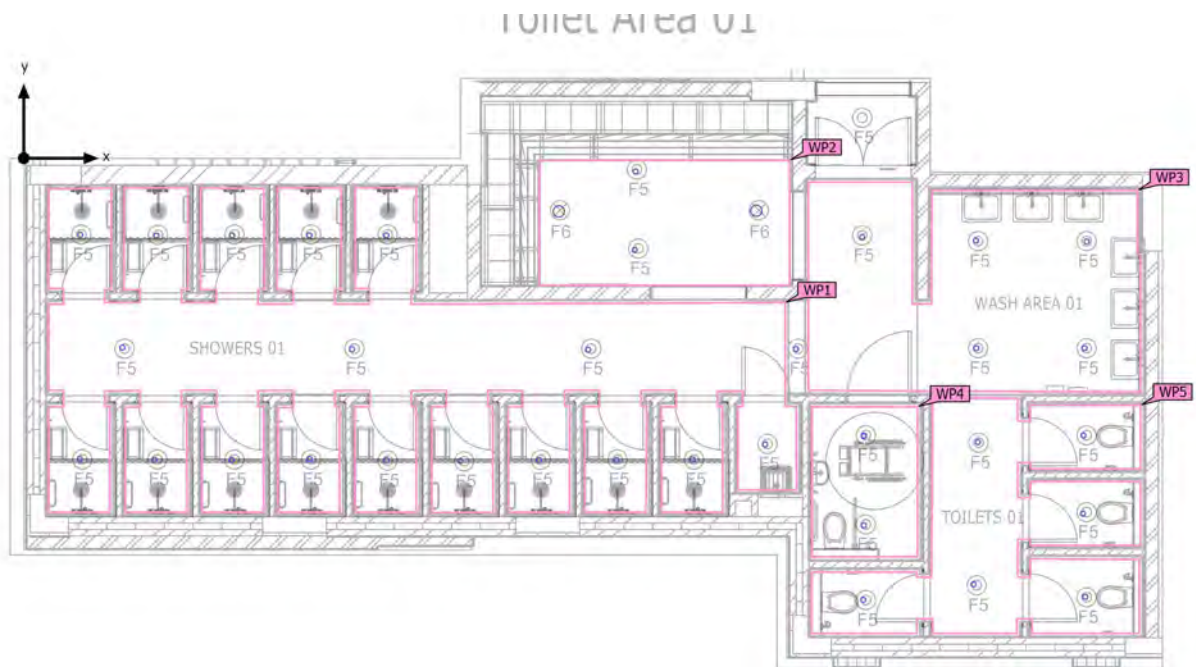
## 04-Toilet Area 01

### Description



## 04-Toilet Area 01 · Storey 1 (Light scene 1)

## Calculation objects



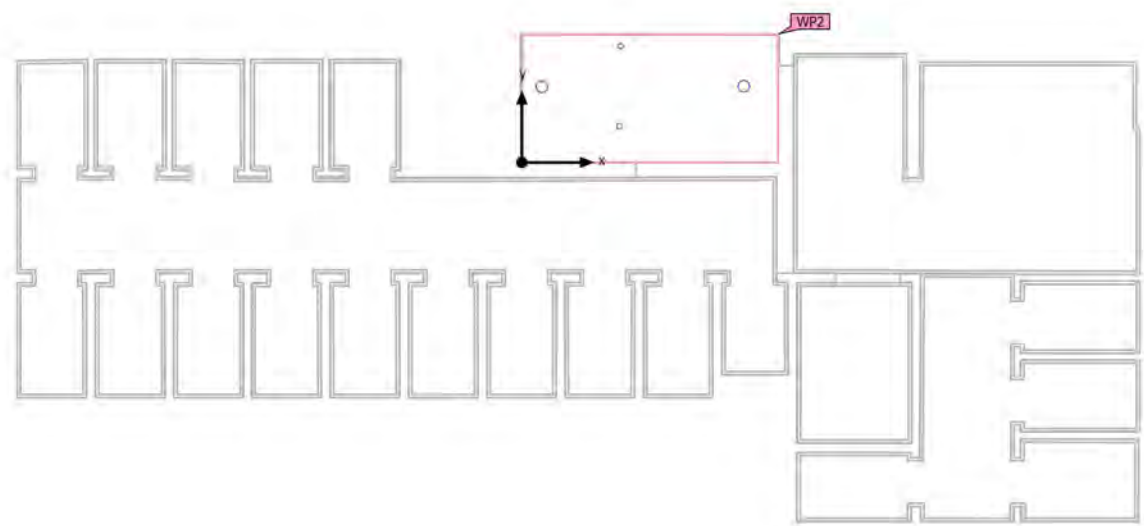
## 04-Toilet Area 01 · Storey 1 (Light scene 1)

## Calculation objects

## Working planes

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Lockers) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	310 lx	163 lx	446 lx	0.53	0.37	WP2
Working plane (Shower) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.050 m	187 lx	60.5 lx	296 lx	0.32	0.20	WP1
Working plane (Toilet-POD) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.050 m	343 lx	184 lx	460 lx	0.54	0.40	WP4
Working plane (Toilets) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.050 m	216 lx	121 lx	326 lx	0.56	0.37	WP5
Working plane (Wash Area) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.050 m	253 lx	120 lx	373 lx	0.47	0.32	WP3

04-Toilet Area 01 · Storey 1 · Lockers (Light scene 1)  
Summary



Ground area                      7.71 m<sup>2</sup>

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,  
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Mounting height                2.800 m

Height<sub>Working plane</sub>            0.000 m

Wall zone<sub>Working plane</sub>        0.000 m

## 04-Toilet Area 01 · Storey 1 · Lockers (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	310 lx	WP2
	U <sub>o</sub> (g <sub>1</sub> )	0.53	WP2
Energy estimation <sup>(2)</sup>	Consumption	139 kWh/a	

(1) Based on a rectangular space of 1.965 m x 3.925 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

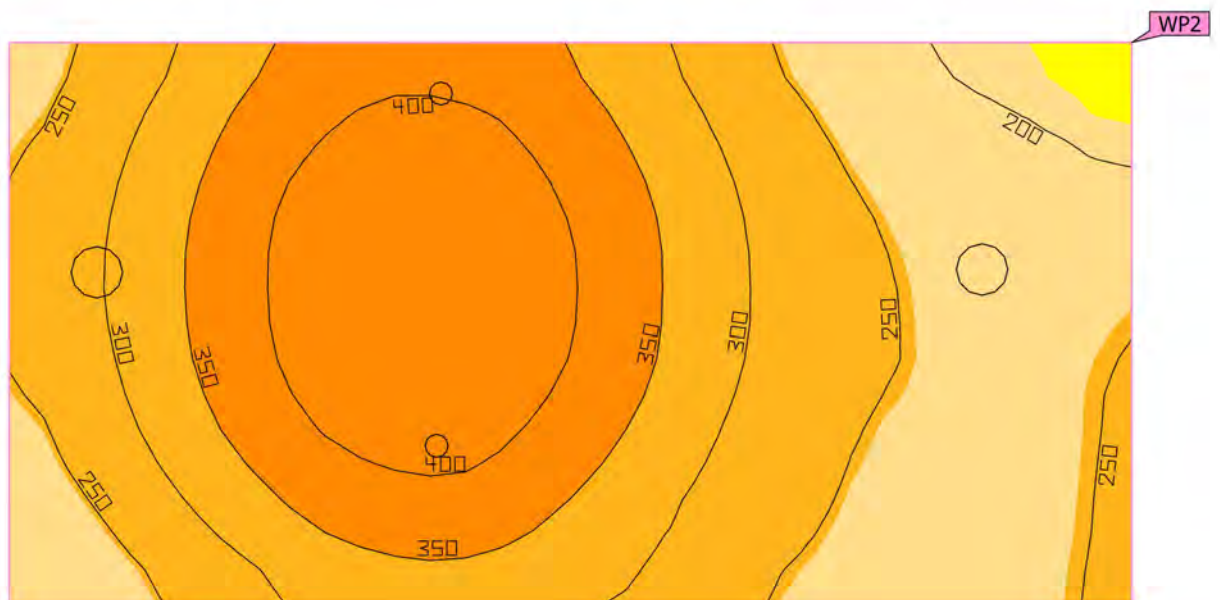
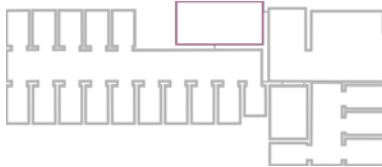
Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
2	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W
2	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W

# 04-Toilet Area 01 · Storey 1 · Lockers (Light scene 1)

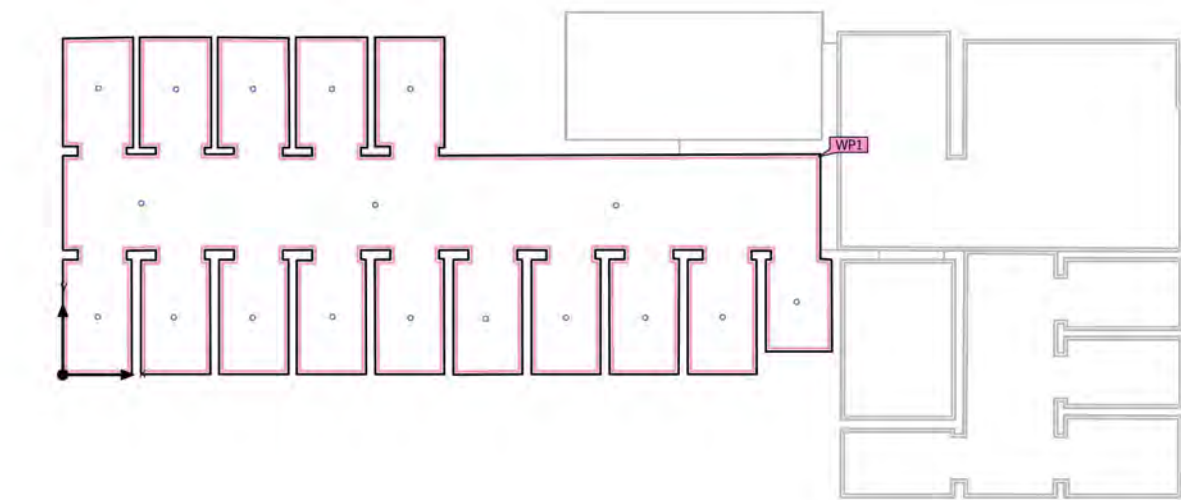
## Working plane (Lockers)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Lockers)	310 lx	163 lx	446 lx	0.53	0.37	WP2
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

04-Toilet Area 01 · Storey 1 · Shower (Light scene 1)  
Summary



Ground area                      46.00 m²

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,   
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Mounting height                2.800 m

Height<sub>Working plane</sub>            0.000 m

Wall zone<sub>Working plane</sub>        0.050 m

## 04-Toilet Area 01 · Storey 1 · Shower (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	187 lx	WP1
	U <sub>o</sub> (g <sub>1</sub> )	0.32	WP1
Energy estimation <sup>(2)</sup>	Consumption	490 kWh/a	

(1) Based on a rectangular space of 11.818 m x 5.188 m and SHR of 0.25.

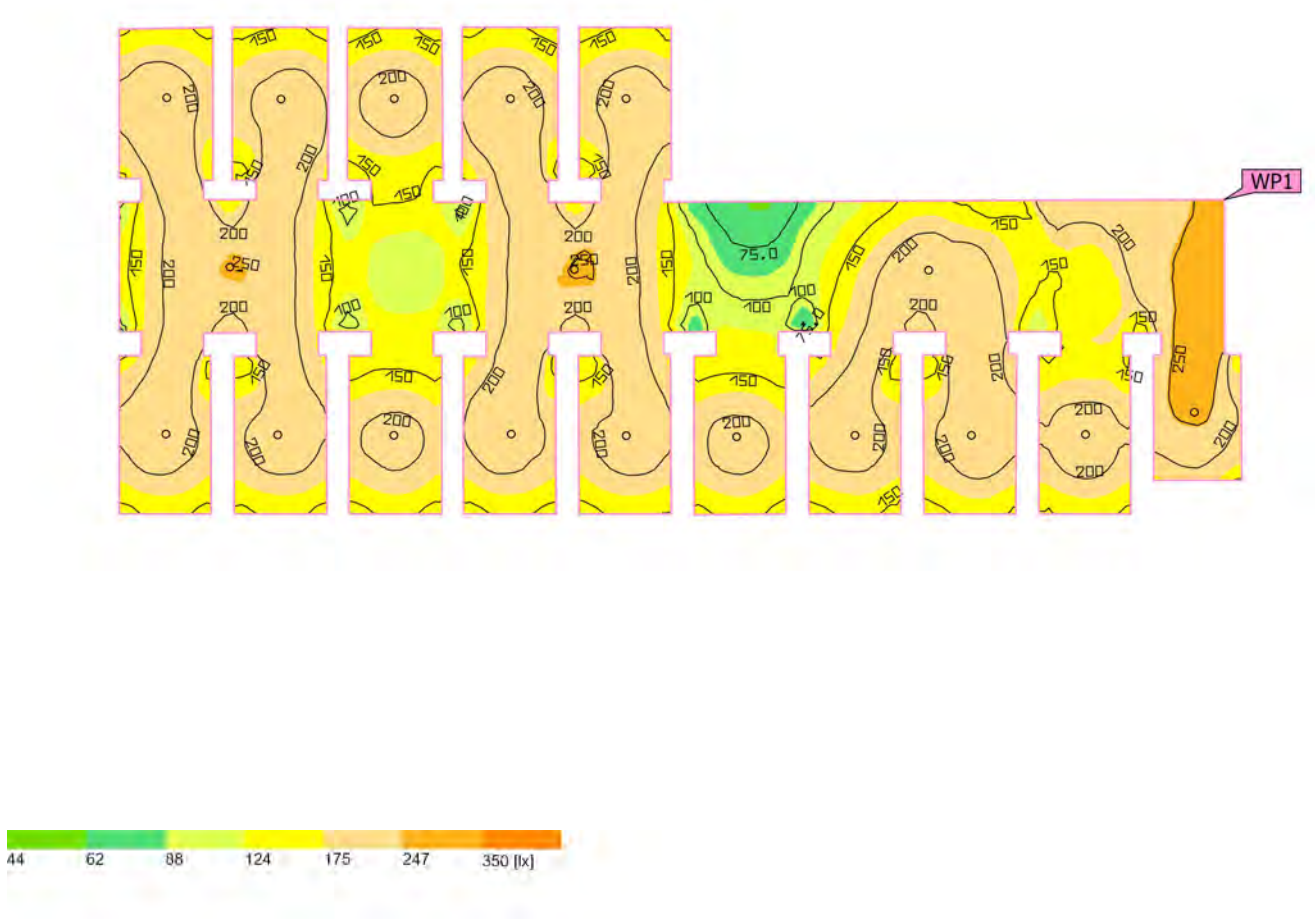
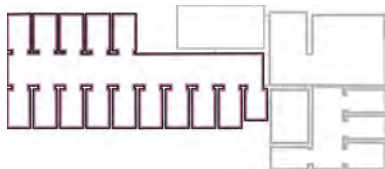
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
18	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

04-Toilet Area 01 · Storey 1 · Shower (Light scene 1)  
Working plane (Shower)

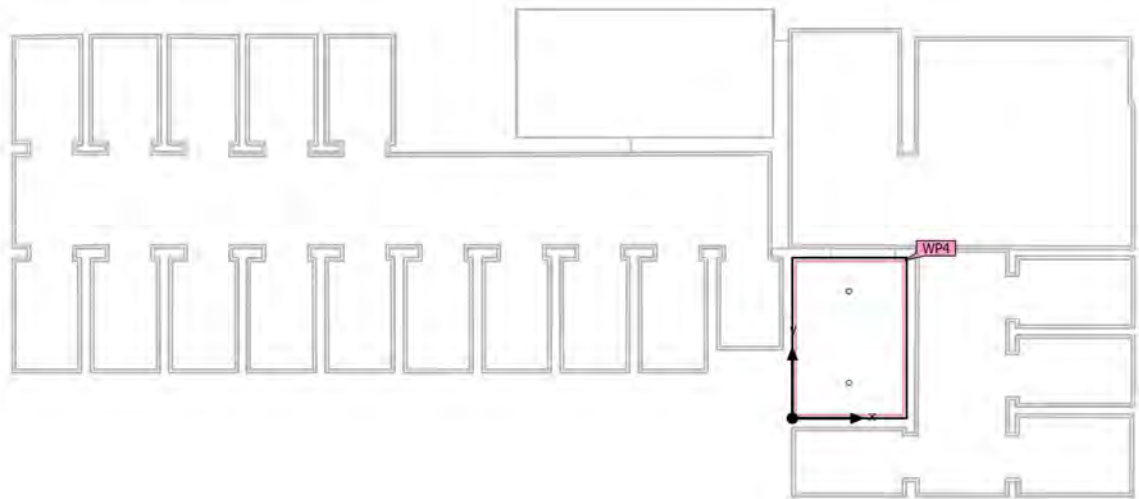


Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Shower)	187 lx	60.5 lx	296 lx	0.32	0.20	WP1
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.050 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))



04-Toilet Area 01 · Storey 1 · Toilet-POD (Light scene 1)  
Summary



Ground area                      4.30 m<sup>2</sup>

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,   
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Mounting height                2.800 m

Height<sub>Working plane</sub>           0.000 m

Wall zone<sub>Working plane</sub>        0.050 m

## 04-Toilet Area 01 · Storey 1 · Toilet-POD (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	343 lx	WP4
	$U_o (g_1)$	0.54	WP4
Energy estimation <sup>(2)</sup>	Consumption	81.7 kWh/a	

(1) Based on a rectangular space of 1.752 m x 2.455 m and SHR of 0.25.

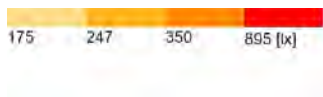
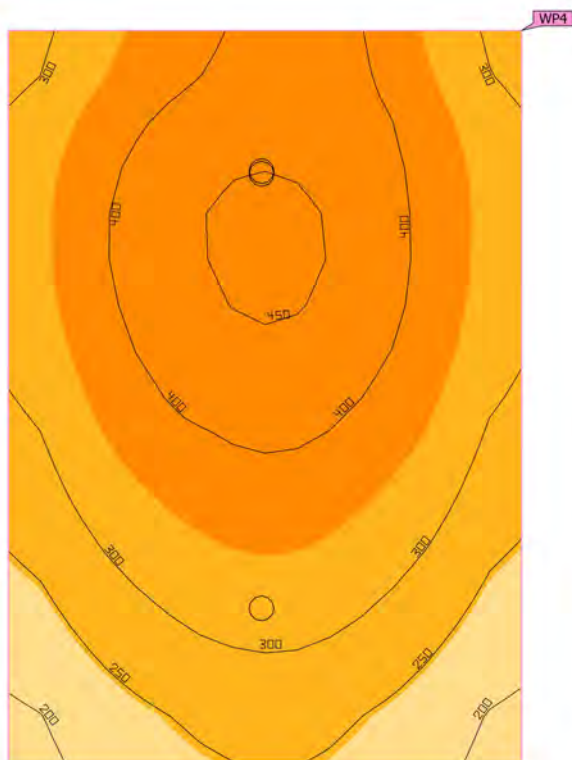
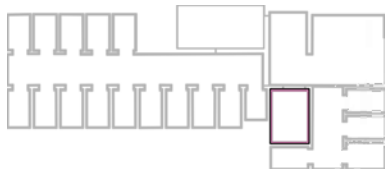
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	$R_{UG}$	P		Luminous efficacy
3	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

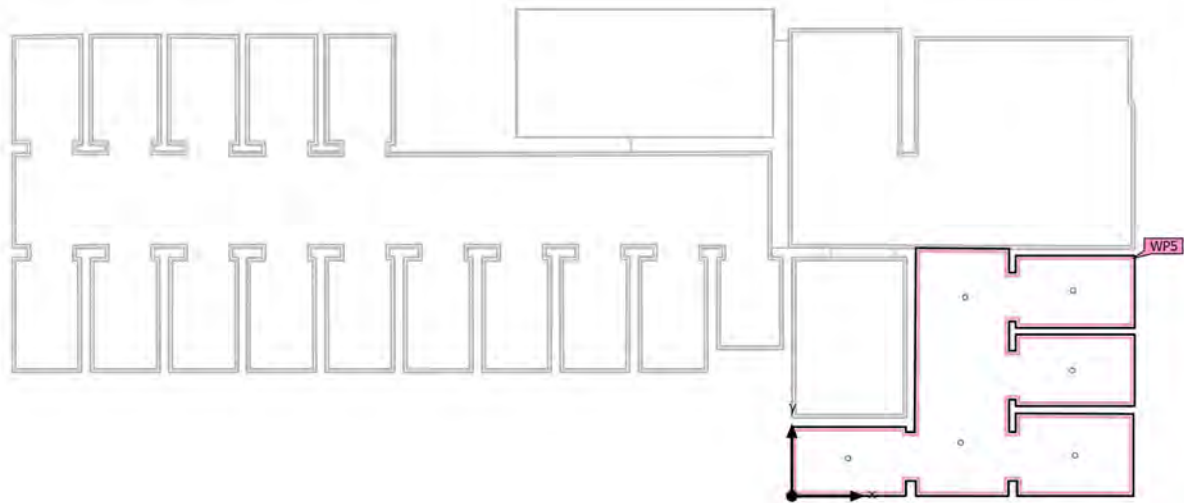
04-Toilet Area 01 · Storey 1 · Toilet-POD (Light scene 1)  
Working plane (Toilet-POD)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Toilet-POD)	343 lx	184 lx	460 lx	0.54	0.40	WP4
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.050 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

04-Toilet Area 01 · Storey 1 · Toilets (Light scene 1)  
Summary



Ground area                      13.93 m<sup>2</sup>

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,  
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Mounting height                2.800 m

Height<sub>Working plane</sub>            0.000 m

Wall zone<sub>Working plane</sub>        0.050 m

## 04-Toilet Area 01 · Storey 1 · Toilets (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	216 lx	WP5
	$U_o (g_1)$	0.56	WP5
Energy estimation <sup>(2)</sup>	Consumption	163 kWh/a	

(1) Based on a rectangular space of 3.802 m x 5.255 m and SHR of 0.25.

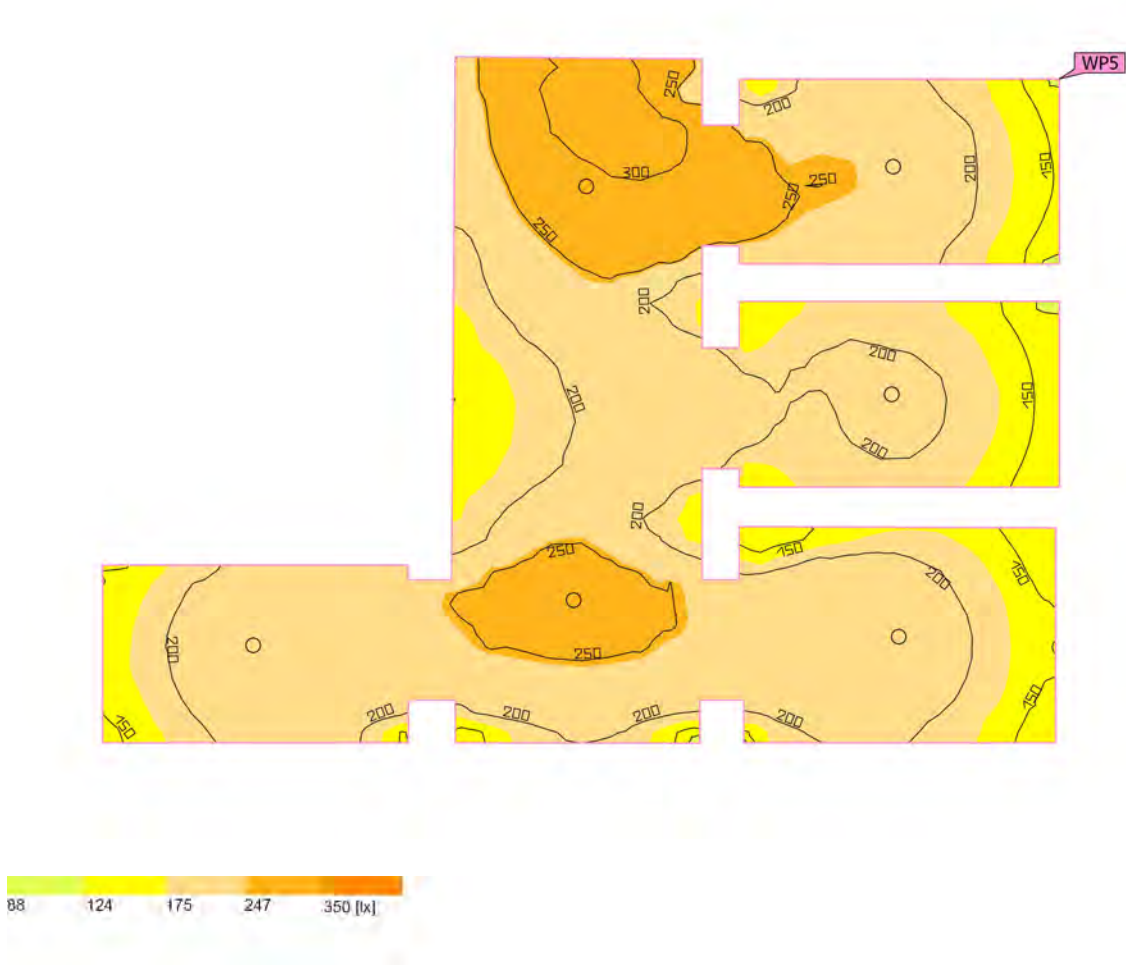
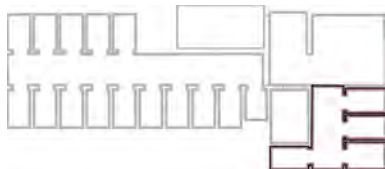
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	$R_{UG}$	P		Luminous efficacy
6	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

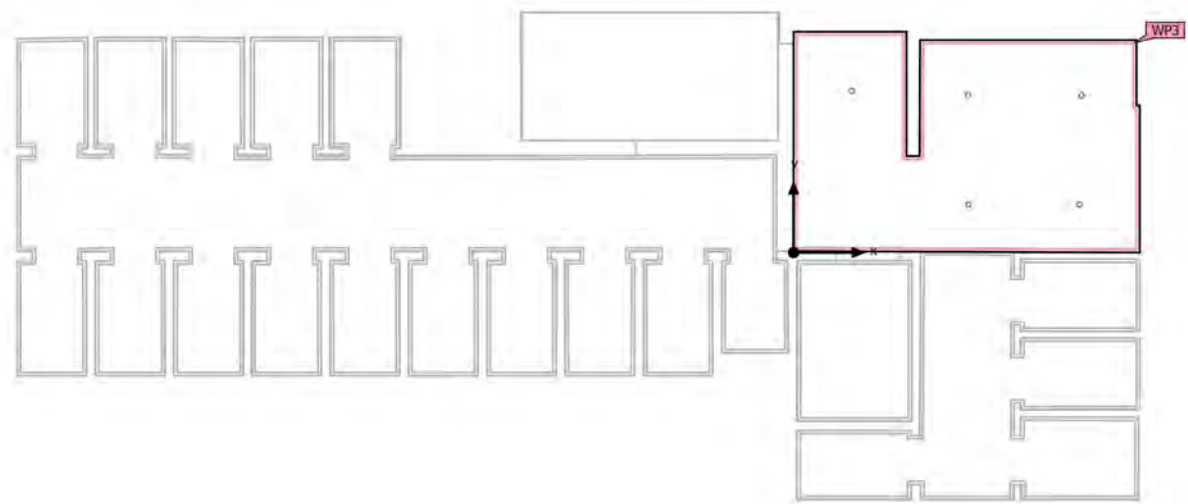
04-Toilet Area 01 · Storey 1 · Toilets (Light scene 1)  
Working plane (Toilets)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Toilets)	216 lx	121 lx	326 lx	0.56	0.37	WP5
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.050 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

04-Toilet Area 01 · Storey 1 · Wash Area (Light scene 1)  
Summary



Ground area                      17.05 m<sup>2</sup>

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,  
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Mounting height                2.800 m

Height<sub>Working plane</sub>           0.000 m

Wall zone<sub>Working plane</sub>        0.050 m

## 04-Toilet Area 01 · Storey 1 · Wash Area (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	253 lx	WP3
	U <sub>o</sub> (g <sub>1</sub> )	0.47	WP3
Energy estimation <sup>(2)</sup>	Consumption	136 kWh/a	

(1) Based on a rectangular space of 5.317 m x 3.375 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

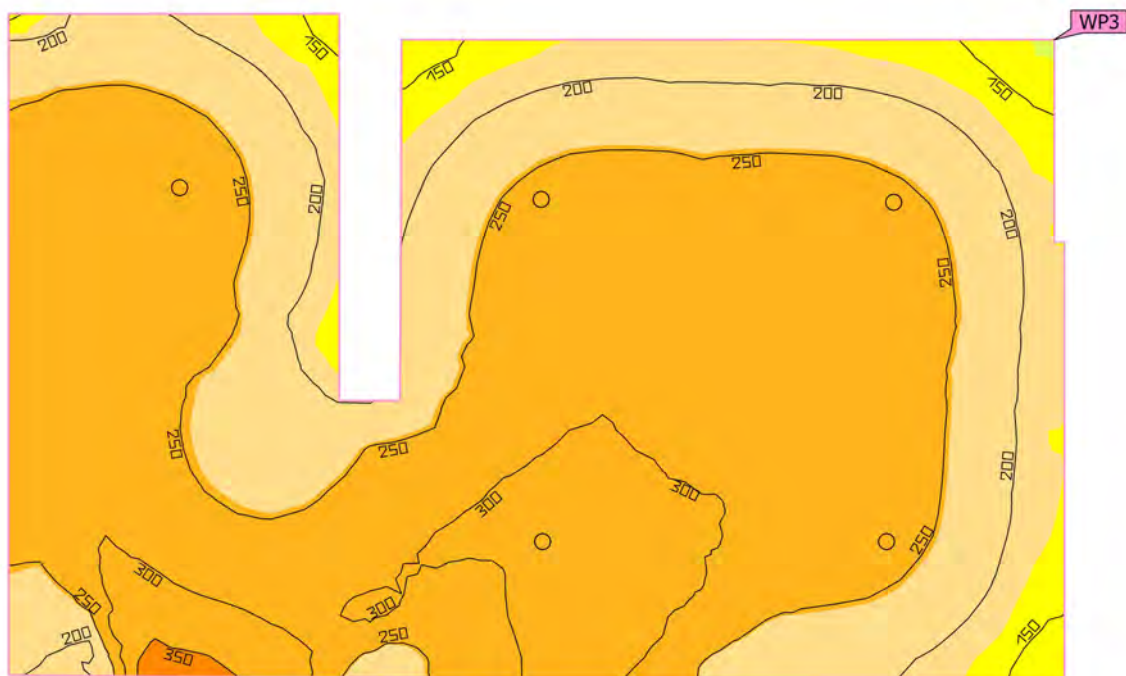
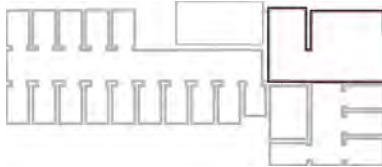
#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
5	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W



## 04-Toilet Area 01 · Storey 1 · Wash Area (Light scene 1)

### Working plane (Wash Area)



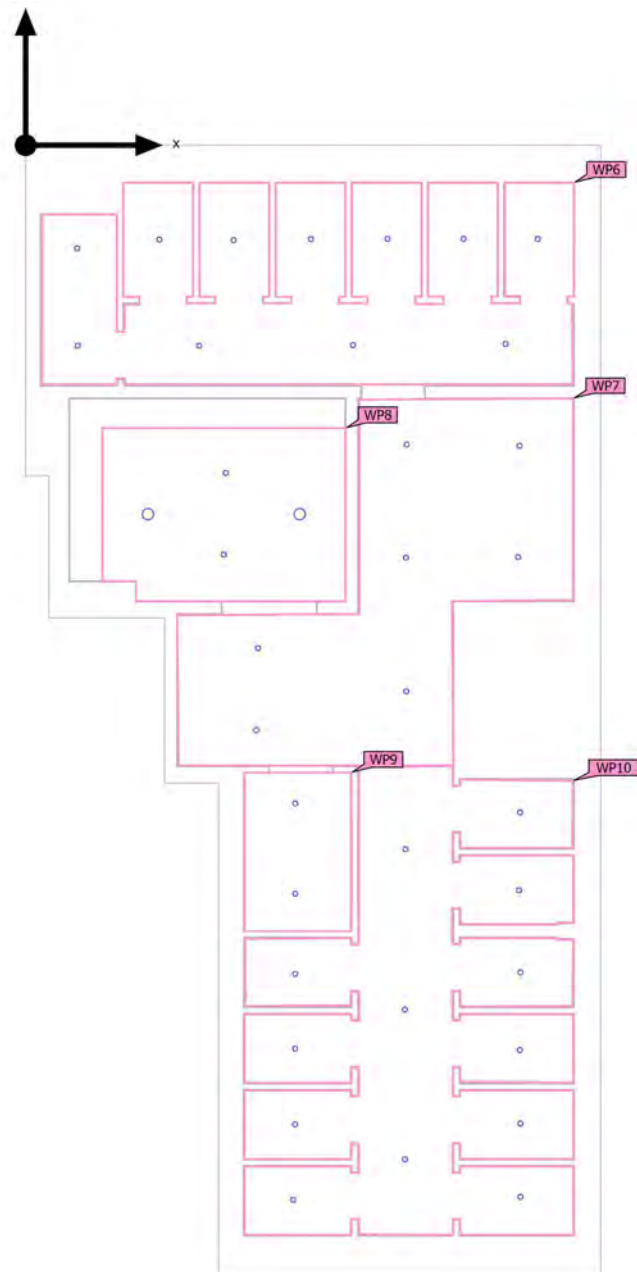
Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Wash Area)	253 lx	120 lx	373 lx	0.47	0.32	WP3
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.050 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

## 05-Toilet Area Description

## 05-Toilet Area · Storey 1 (Light scene 1)

## Calculation objects



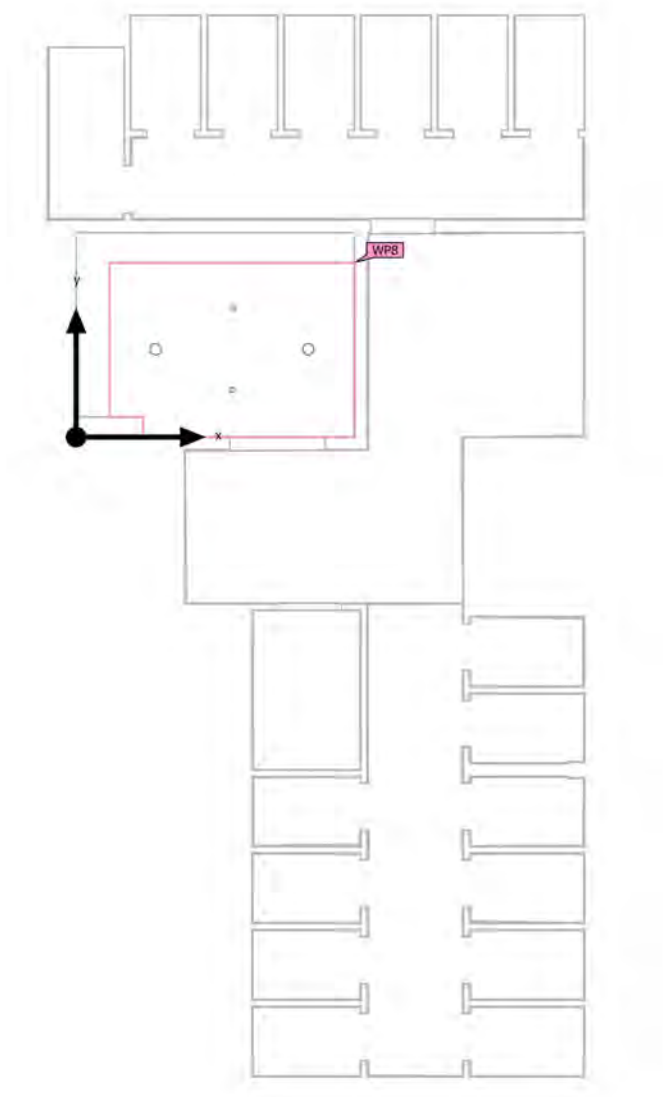
## 05-Toilet Area · Storey 1 (Light scene 1)

## Calculation objects

## Working planes

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Lockers) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	293 lx	127 lx	460 lx	0.43	0.28	WP8
Working plane (Showers) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.010 m	195 lx	92.0 lx	263 lx	0.47	0.35	WP10
Working plane (Toilet-POD) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	238 lx	143 lx	331 lx	0.60	0.43	WP9
Working plane (Toilet) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	205 lx	94.2 lx	282 lx	0.46	0.33	WP6
Working plane (Wash Area) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	233 lx	97.4 lx	356 lx	0.42	0.27	WP7

05-Toilet Area · Storey 1 · Lockers (Light scene 1)  
Summary



Ground area                      10.29 m<sup>2</sup>

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,  
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Mounting height                2.800 m

Height<sub>Working plane</sub>            0.000 m

Wall zone<sub>Working plane</sub>        0.000 m

## 05-Toilet Area · Storey 1 · Lockers (Light scene 1)

## Summary

## Results

	Symbol	Calculated	Index
Working plane	perpendicular	293 lx	WP8
	$U_o (g_1)$	0.43	WP8
Energy estimation <sup>(2)</sup>	Consumption	139 kWh/a	

(1) Based on a rectangular space of 2.730 m x 3.830 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

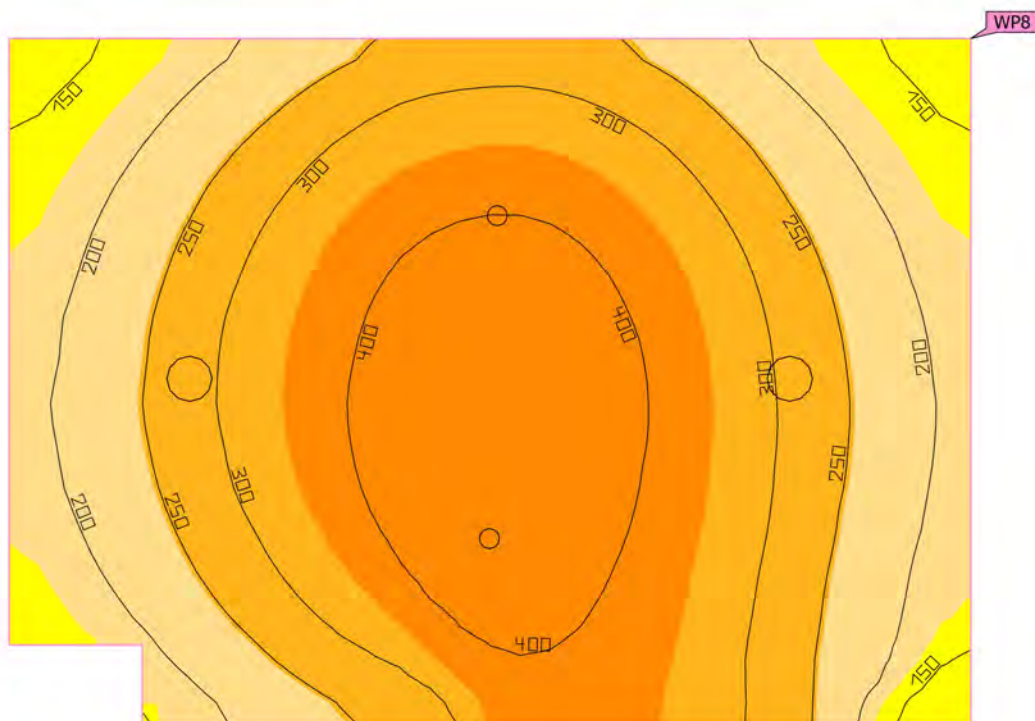
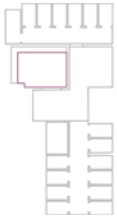
Utilisation profile: DIALux presetting (34.2 Standard (office))

## Luminaire list

pcs.	Manufacturer	Article No.	Article name	$R_{UG}$	P		Luminous efficacy
2	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W
2	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W

## 05-Toilet Area · Storey 1 · Lockers (Light scene 1)

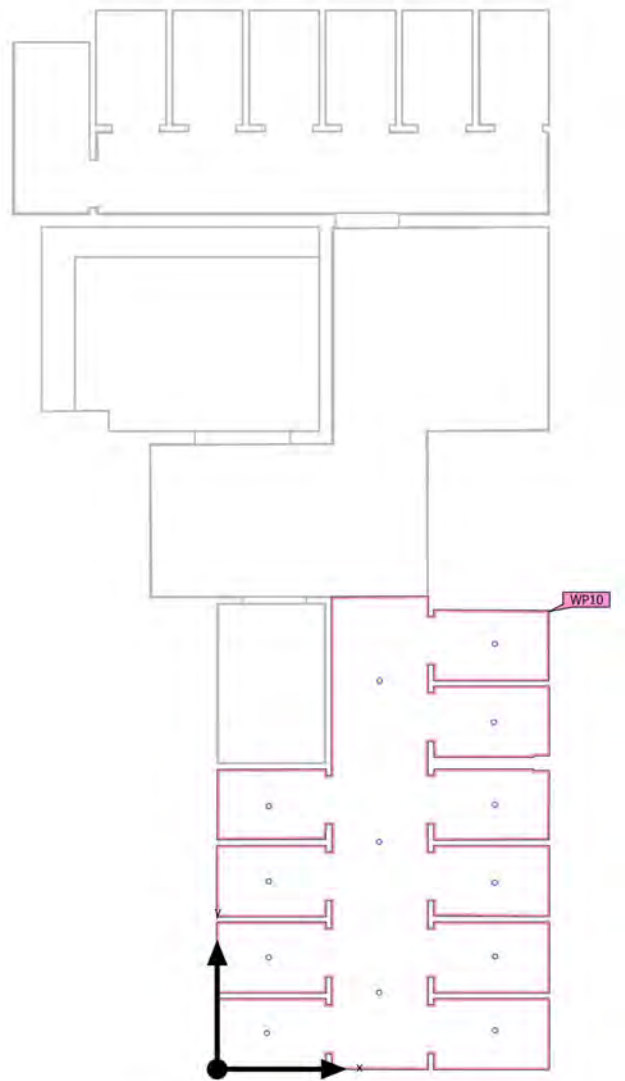
### Working plane (Lockers)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Lockers)	293 lx	127 lx	460 lx	0.43	0.28	WP8
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

05-Toilet Area · Storey 1 · Showers (Light scene 1)  
Summary



Ground area	31.06 m²
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Mounting height	2.800 m
Height <sub>Working plane</sub>	0.000 m
Wall zone <sub>Working plane</sub>	0.010 m



## 05-Toilet Area · Storey 1 · Showers (Light scene 1)

## Summary

## Results

	Symbol	Calculated	Index
Working plane	perpendicular	195 lx	WP10
	$U_o (g_1)$	0.47	WP10
Energy estimation <sup>(2)</sup>	Consumption	354 kWh/a	

(1) Based on a rectangular space of 7.412 m x 5.200 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

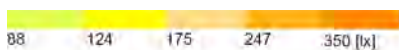
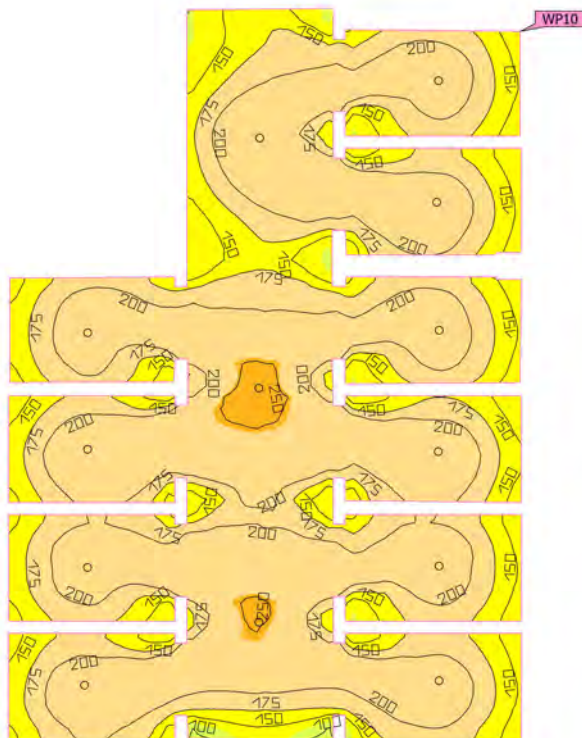
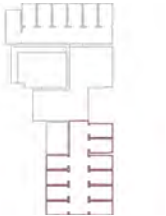
Utilisation profile: DIALux presetting (34.2 Standard (office))

## Luminaire list

pcs.	Manufacturer	Article No.	Article name	$R_{UG}$	P		Luminous efficacy
13	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

## 05-Toilet Area · Storey 1 · Showers (Light scene 1)

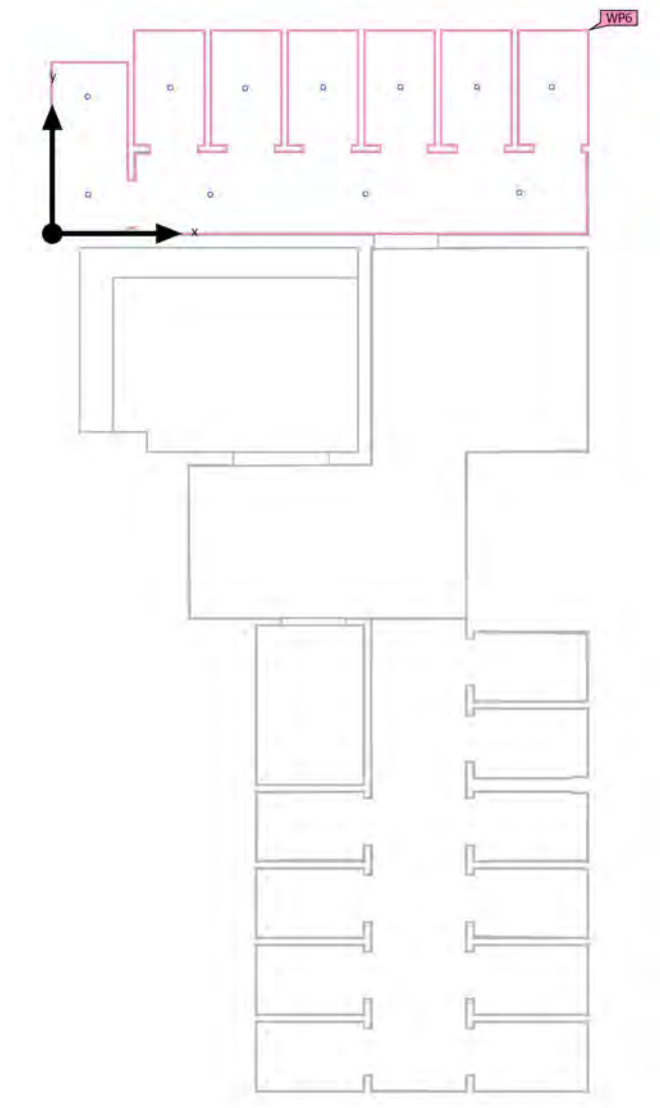
### Working plane (Showers)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Showers)	195 lx	92.0 lx	263 lx	0.47	0.35	WP10
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.010 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

05-Toilet Area · Storey 1 · Toilet (Light scene 1)  
Summary



Ground area                      24.58 m<sup>2</sup>

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,  
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Mounting height                      2.800 m

Height<sub>Working plane</sub>                      0.000 m

Wall zone<sub>Working plane</sub>                      0.000 m

## 05-Toilet Area · Storey 1 · Toilet (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	205 lx	WP6
	U <sub>o</sub> (g <sub>1</sub> )	0.46	WP6
Energy estimation <sup>(2)</sup>	Consumption	299 kWh/a	

(1) Based on a rectangular space of 3.180 m x 8.380 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

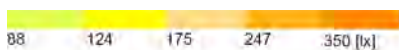
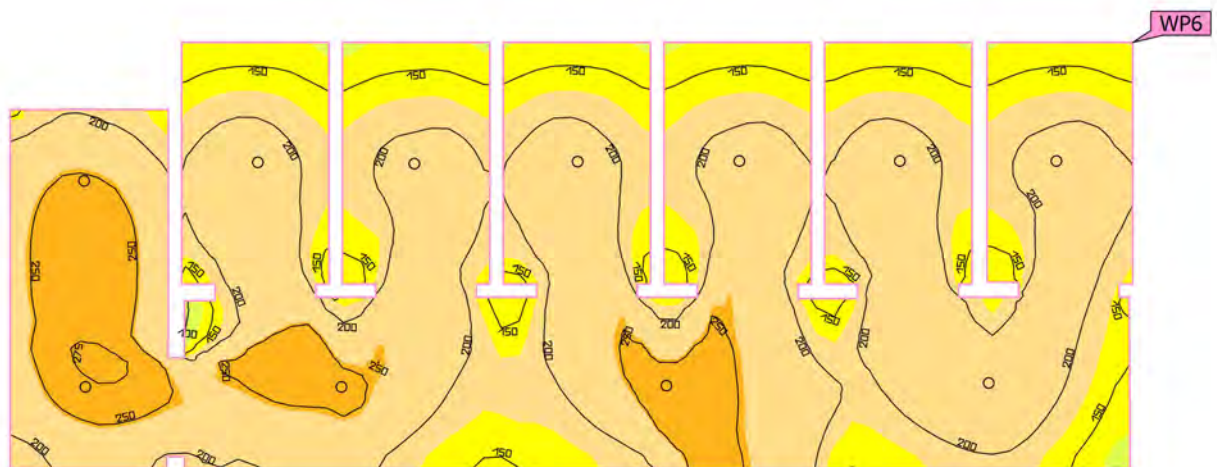
Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
11	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

## 05-Toilet Area · Storey 1 · Toilet (Light scene 1)

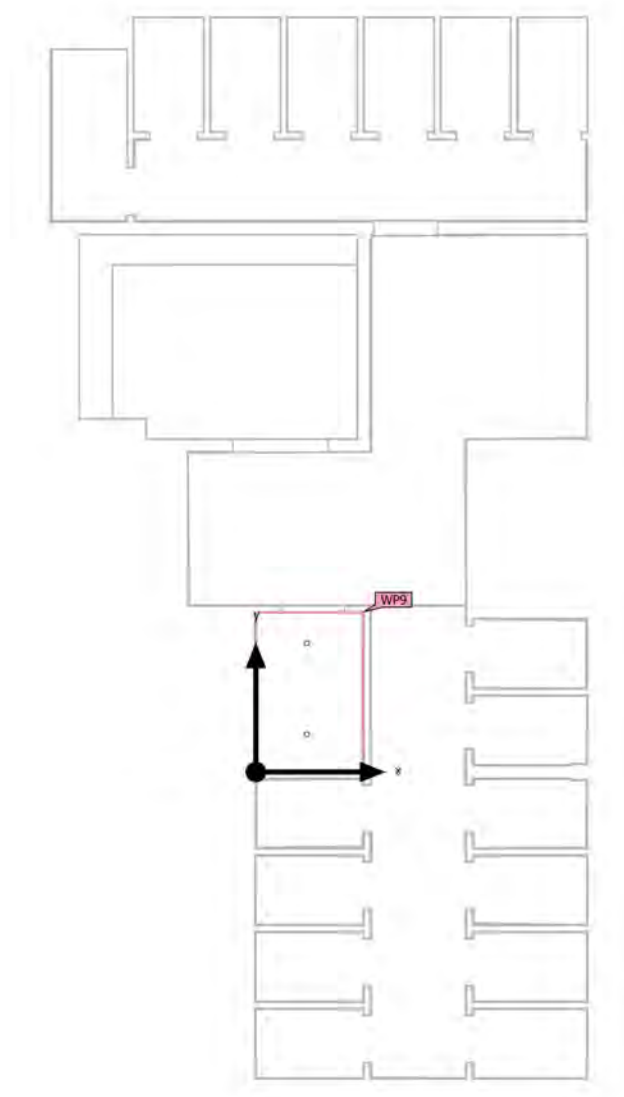
### Working plane (Toilet)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Toilet)	205 lx	94.2 lx	282 lx	0.46	0.33	WP6
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

05-Toilet Area · Storey 1 · Toilet-POD (Light scene 1)  
Summary



Ground area	4.19 m <sup>2</sup>
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Mounting height	2.800 m
Height <sub>Working plane</sub>	0.000 m
Wall zone <sub>Working plane</sub>	0.000 m

## 05-Toilet Area · Storey 1 · Toilet-POD (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	238 lx	WP9
	U <sub>o</sub> (g <sub>1</sub> )	0.60	WP9
Energy estimation <sup>(2)</sup>	Consumption	54.5 kWh/a	

(1) Based on a rectangular space of 2.500 m x 1.675 m and SHR of 0.25.

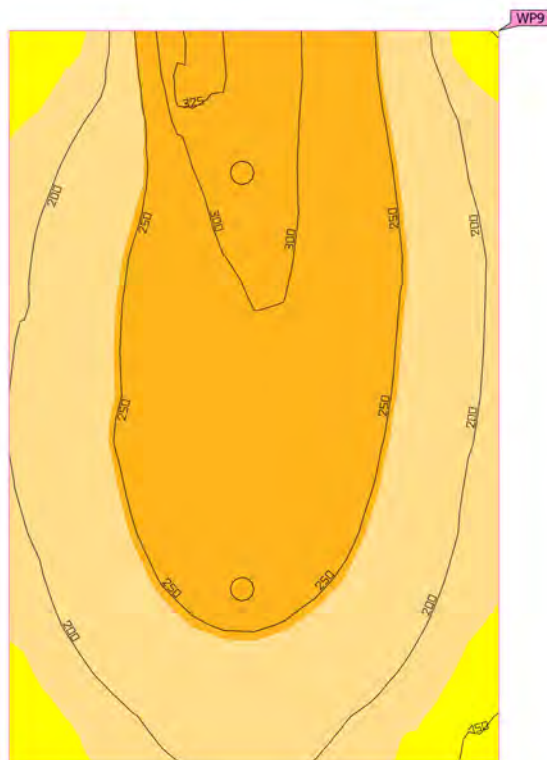
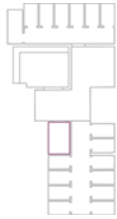
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
2	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

# 05-Toilet Area · Storey 1 · Toilet-POD (Light scene 1) Working plane (Toilet-POD)

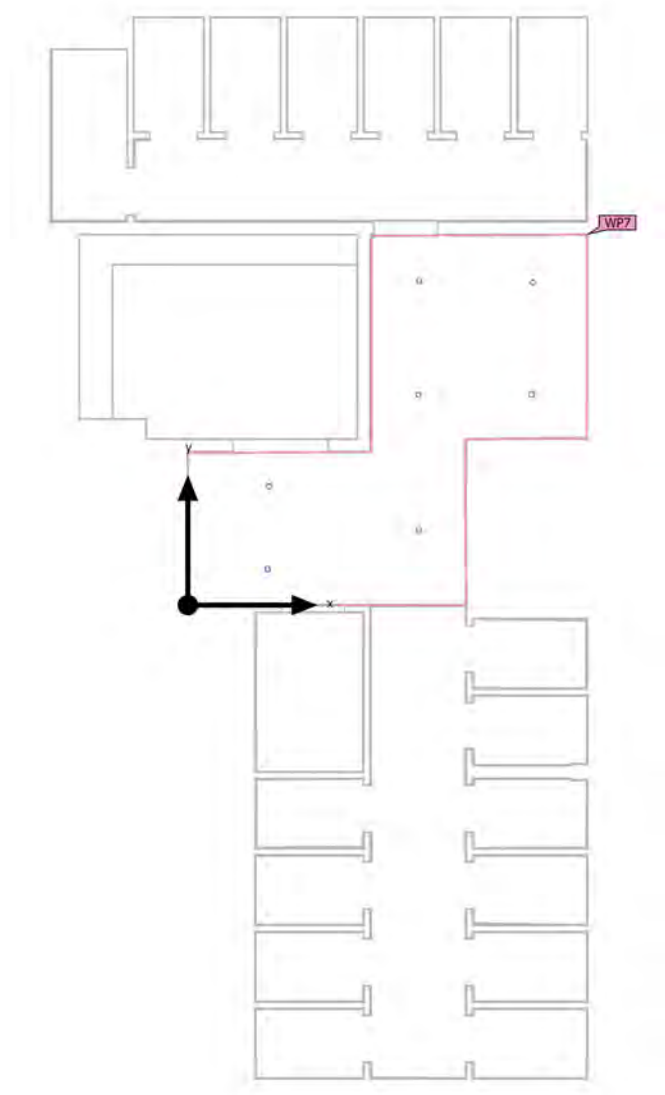


Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Toilet-POD)	238 lx	143 lx	331 lx	0.60	0.43	WP9
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))



05-Toilet Area · Storey 1 · Wash Area (Light scene 1)  
Summary



Ground area                      21.33 m²

Reflection factors              Ceiling: 50.0 %,  
   Walls: 0.0 %,  
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Mounting height                2.800 m

Height<sub>Working plane</sub>           0.000 m

Wall zone<sub>Working plane</sub>        0.000 m

## 05-Toilet Area · Storey 1 · Wash Area (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	233 lx	WP7
	U <sub>o</sub> (g <sub>1</sub> )	0.42	WP7
Energy estimation <sup>(2)</sup>	Consumption	191 kWh/a	

(1) Based on a rectangular space of 5.788 m x 6.238 m and SHR of 0.25.

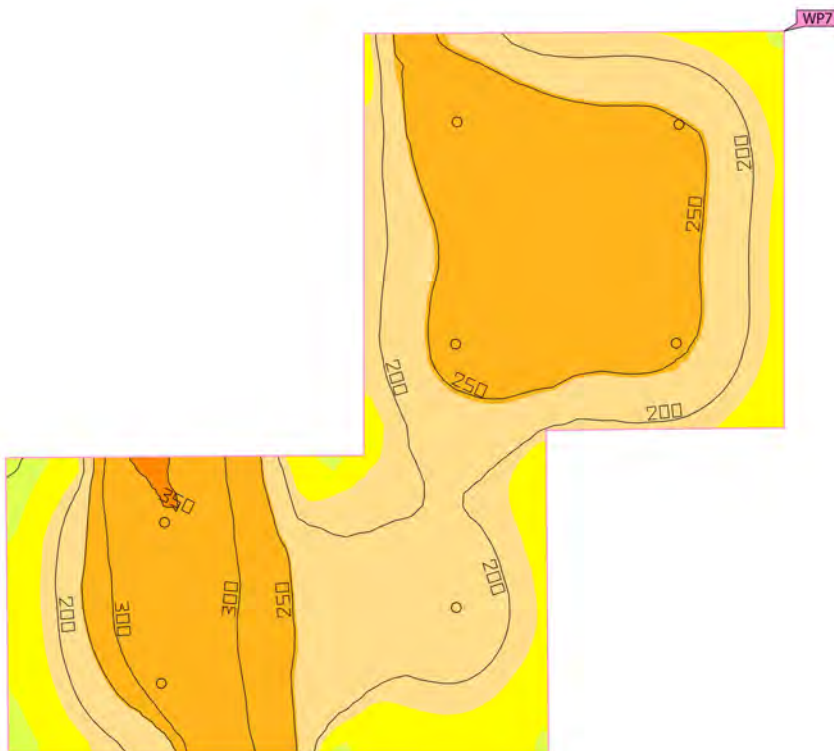
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
7	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

# 05-Toilet Area · Storey 1 · Wash Area (Light scene 1) Working plane (Wash Area)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Wash Area)	233 lx	97.4 lx	356 lx	0.42	0.27	WP7
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

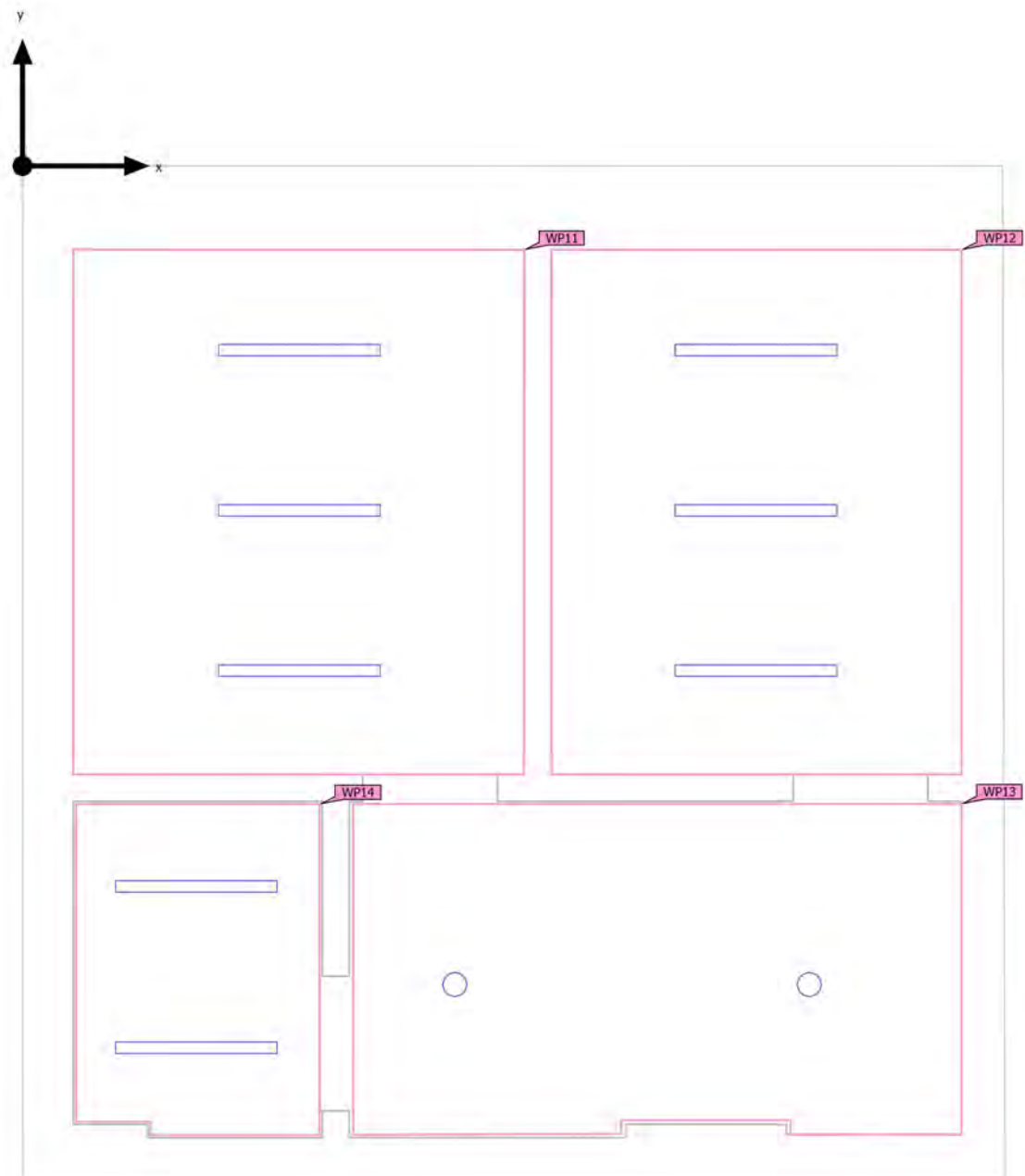
Utilisation profile: DIALux presetting (34.2 Standard (office))

## 06-Service Area 01

### Description

## 06-Service Area 01 · Storey 1 (Light scene 1)

## Calculation objects



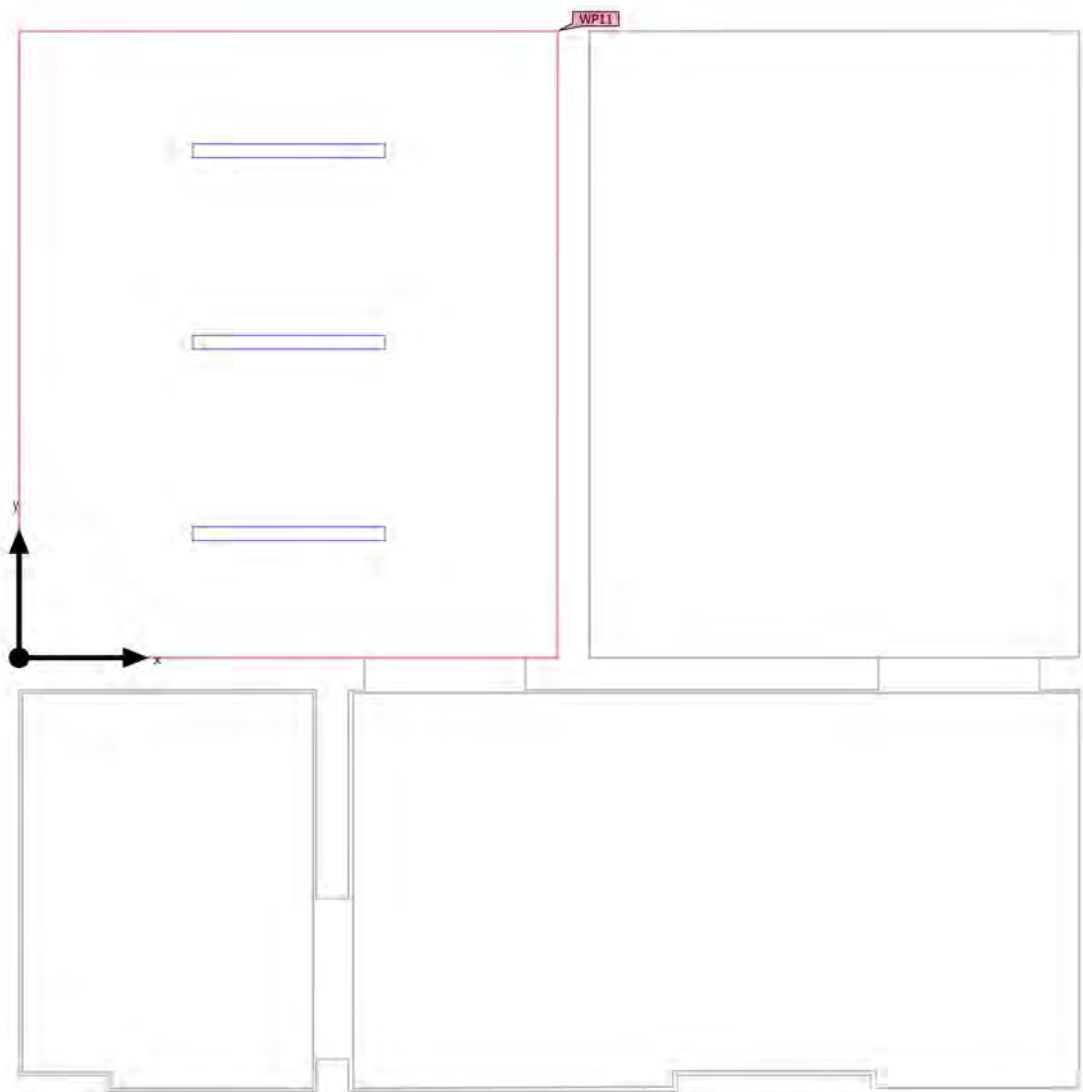
## 06-Service Area 01 · Storey 1 (Light scene 1)

## Calculation objects

## Working planes

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (BDT-V/D) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	477 lx	279 lx	652 lx	0.58	0.43	WP11
Working plane (FTR-V/D) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	501 lx	297 lx	662 lx	0.59	0.45	WP12
Working plane (Service Rooms Corridor) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	250 lx	162 lx	349 lx	0.65	0.46	WP13
Working plane (Store) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	370 lx	310 lx	435 lx	0.84	0.71	WP14

06-Service Area 01 · Storey 1 · BDT-V/D (Light scene 1)  
Summary



Ground area	13.06 m²
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Mounting height	3.000 m
Height <sub>Working plane</sub>	0.800 m
Wall zone <sub>Working plane</sub>	0.000 m

## 06-Service Area 01 · Storey 1 · BDT-V/D (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	477 lx	WP11
	$U_o (g_1)$	0.58	WP11
Energy estimation <sup>(2)</sup>	Consumption	293 kWh/a	

(1) Based on a rectangular space of 3.350 m x 3.900 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

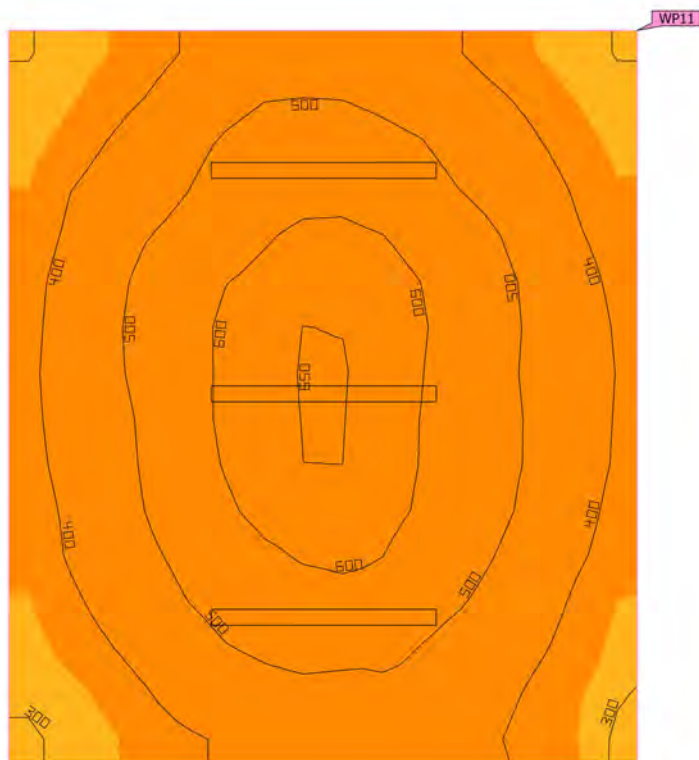
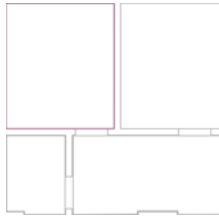
Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	$R_{UG}$	P	Luminous efficacy	
3	FRATER	WPCA-040	WEATHERPROOF CALIBER	–	39.5 W	4952 lm	125.4 lm/W



# 06-Service Area 01 · Storey 1 · BDT-V/D (Light scene 1) Working plane (BDT-V/D)

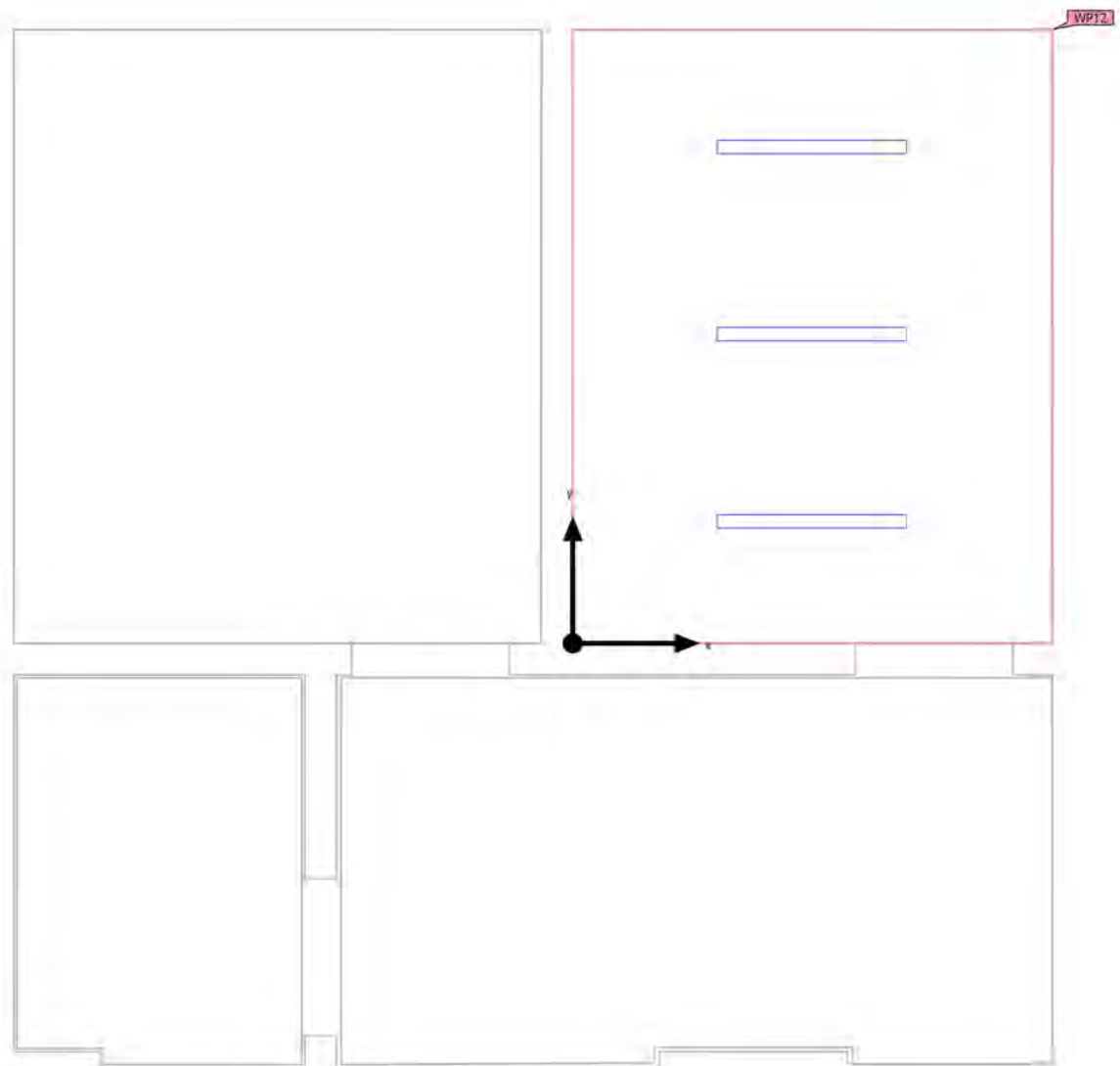


Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (BDT-V/D)	477 lx	279 lx	652 lx	0.58	0.43	WP11
Perpendicular illuminance (adaptive)						
Height: 0.800 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

## 06-Service Area 01 · Storey 1 · FTR-V/D (Light scene 1)

## Summary



Ground area	11.89 m <sup>2</sup>
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Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
--------------------	---

Maintenance factor	0.80 (fixed)
--------------------	--------------

Mounting height	3.000 m
-----------------	---------

Height <sub>Working plane</sub>	0.800 m
---------------------------------	---------

Wall zone <sub>Working plane</sub>	0.000 m
------------------------------------	---------

## 06-Service Area 01 · Storey 1 · FTR-V/D (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	501 lx	WP12
	U <sub>o</sub> (g <sub>1</sub> )	0.59	WP12
Energy estimation <sup>(2)</sup>	Consumption	293 kWh/a	

(1) Based on a rectangular space of 3.048 m x 3.900 m and SHR of 0.25.

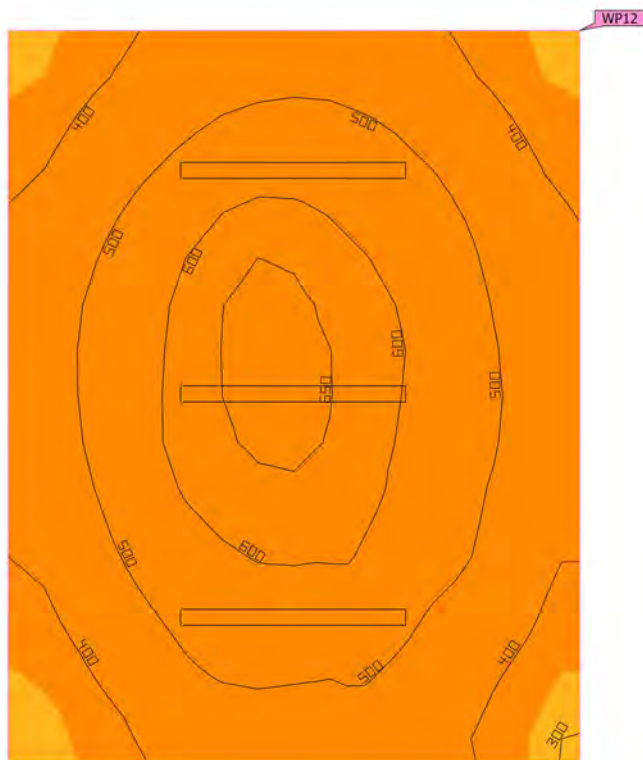
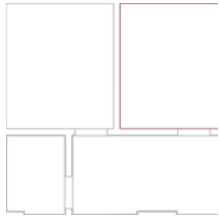
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
3	FRATER	WPCA-040	WEATHERPROOF CALIBER	–	39.5 W	4952 lm	125.4 lm/W

# 06-Service Area 01 · Storey 1 · FTR-V/D (Light scene 1) Working plane (FTR-V/D)

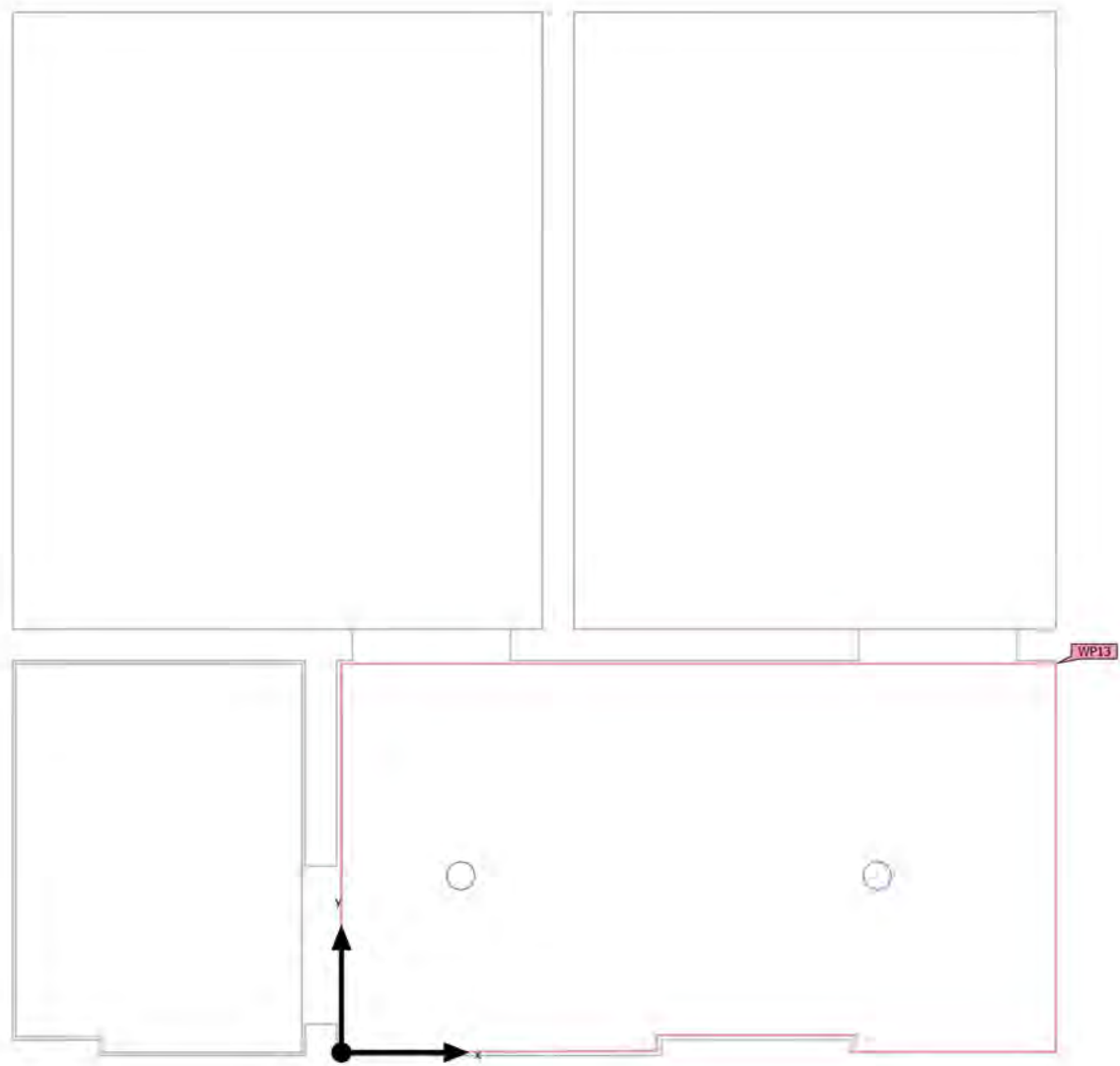


Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (FTR-V/D)	501 lx	297 lx	662 lx	0.59	0.45	WP12
Perpendicular illuminance (adaptive)						
Height: 0.800 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

## 06-Service Area 01 · Storey 1 · Service Rooms Corridor (Light scene 1)

### Summary



Ground area	10.97 m <sup>2</sup>
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Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
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Maintenance factor	0.80 (fixed)
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Mounting height	2.800 m
-----------------	---------

Height <sub>Working plane</sub>	0.000 m
---------------------------------	---------

Wall zone <sub>Working plane</sub>	0.000 m
------------------------------------	---------

## 06-Service Area 01 · Storey 1 · Service Rooms Corridor (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	250 lx	WP13
	U <sub>o</sub> (g <sub>1</sub> )	0.65	WP13
Energy estimation <sup>(2)</sup>	Consumption	84.2 kWh/a	

(1) Based on a rectangular space of 2.461 m x 4.520 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

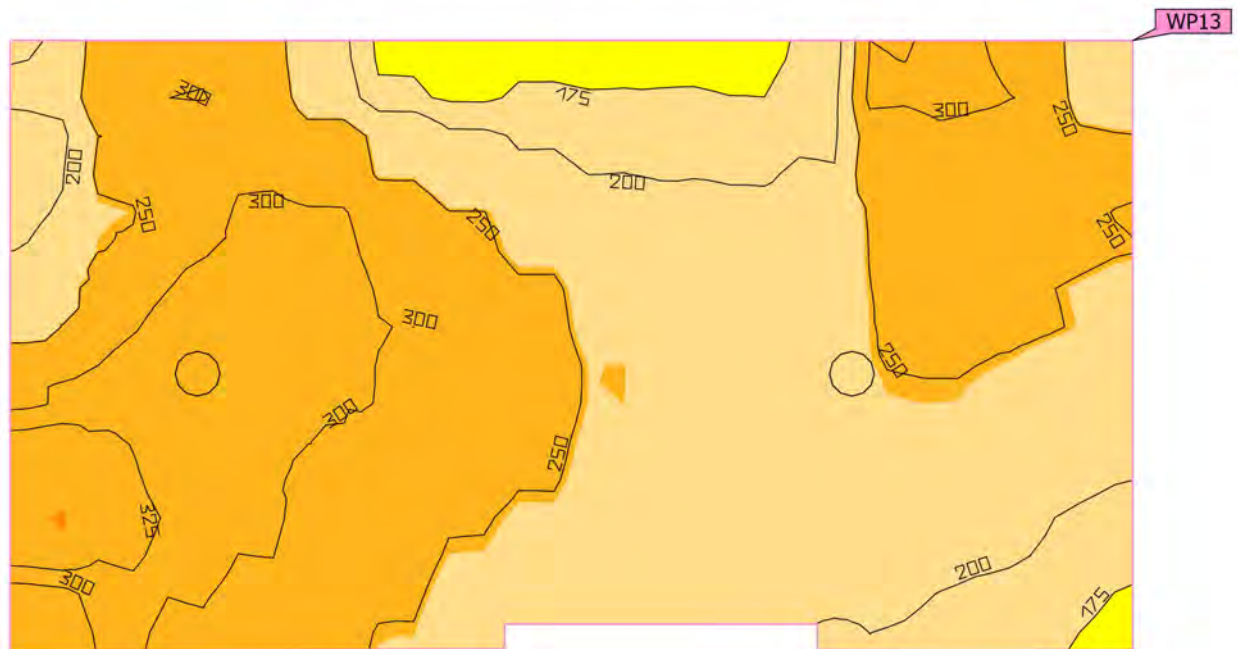
Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
2	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W

# 06-Service Area 01 · Storey 1 · Service Rooms Corridor (Light scene 1)

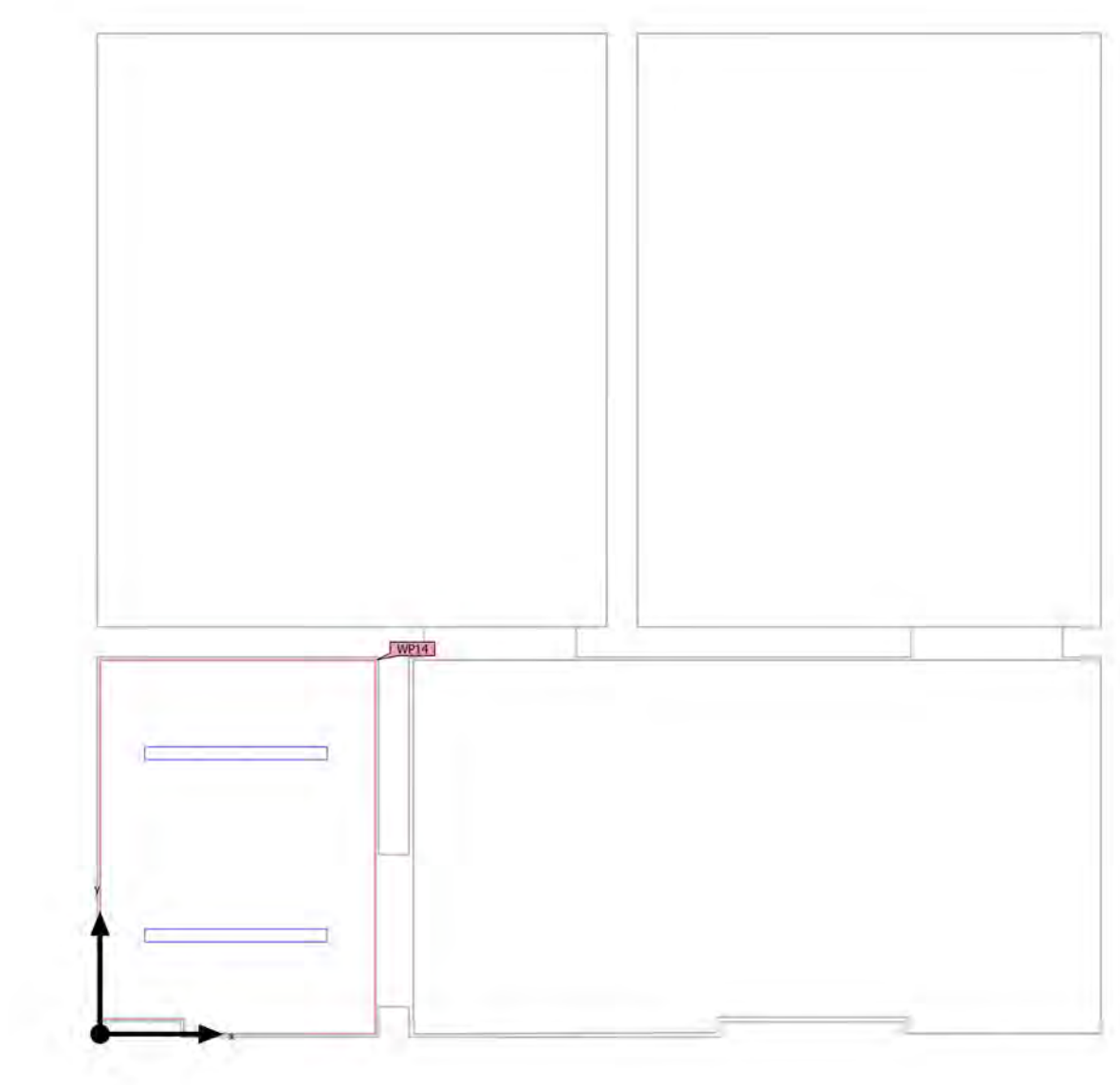
## Working plane (Service Rooms Corridor)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Service Rooms Corridor)	250 lx	162 lx	349 lx	0.65	0.46	WP13
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

06-Service Area 01 · Storey 1 · Store (Light scene 1)  
Summary



Ground area	4.40 m <sup>2</sup>
Reflection factors	Ceiling: 50.0 %, Walls: 0.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Mounting height	3.000 m
Height <small>Working plane</small>	0.000 m
Wall zone <small>Working plane</small>	0.000 m



## 06-Service Area 01 · Storey 1 · Store (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	370 lx	WP14
	U <sub>o</sub> (g <sub>1</sub> )	0.84	WP14
Energy estimation <sup>(2)</sup>	Consumption	196 kWh/a	

(1) Based on a rectangular space of 2.460 m x 1.810 m and SHR of 0.25.

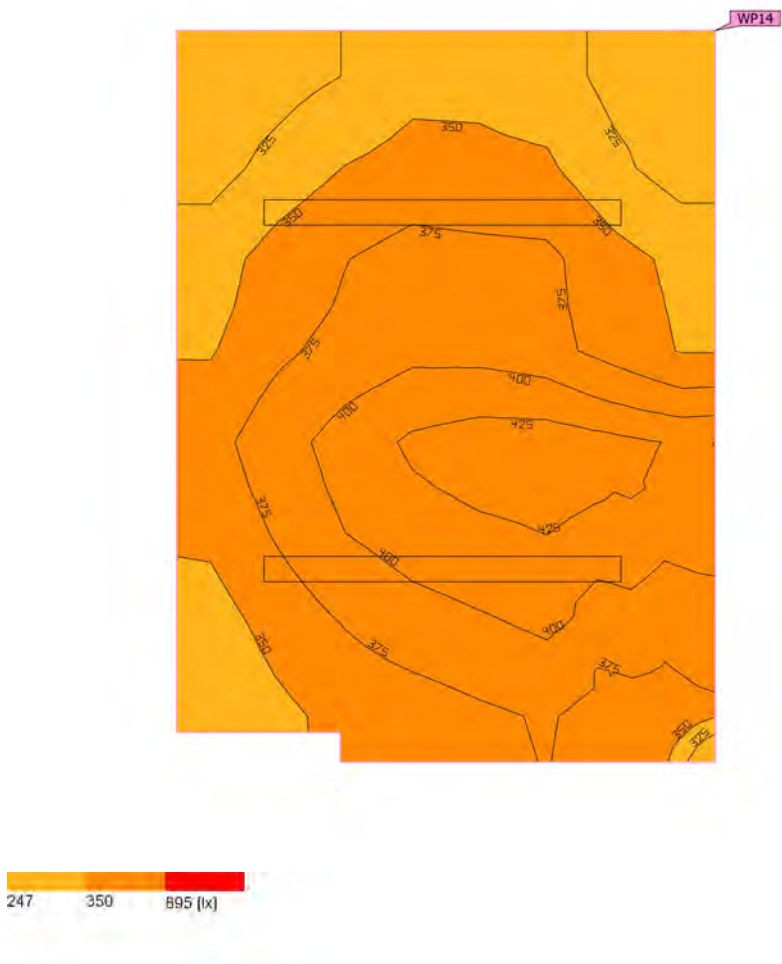
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
2	FRATER	WPCA-040	WEATHERPROOF CALIBER	–	39.5 W	4952 lm	125.4 lm/W

06-Service Area 01 · Storey 1 · Store (Light scene 1)  
Working plane (Store)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Store)	370 lx	310 lx	435 lx	0.84	0.71	WP14
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

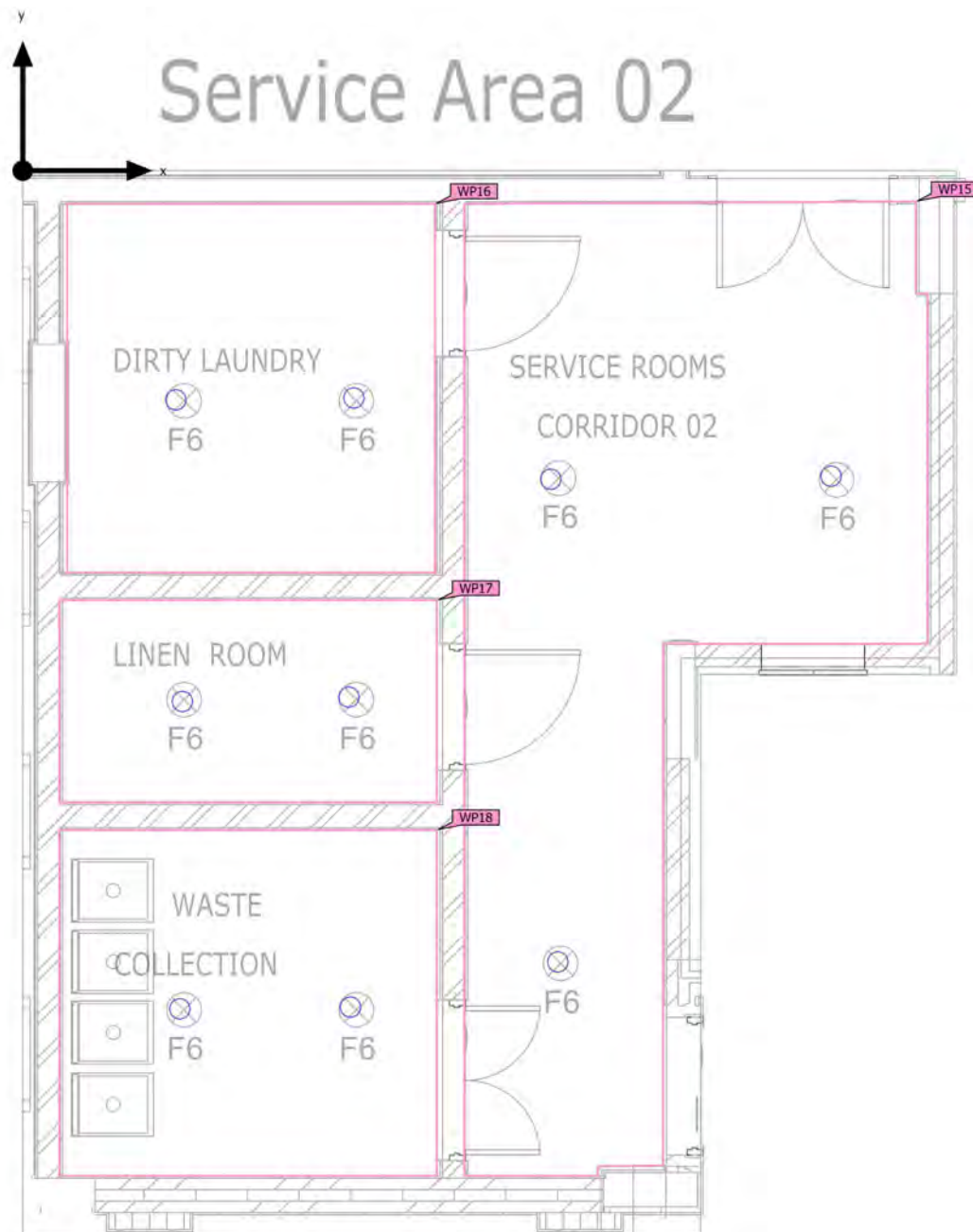
Utilisation profile: DIALux presetting (34.2 Standard (office))

## 07- Service Area 02

### Description

## 07- Service Area 02 · Storey 1 (Light scene 1)

## Calculation objects



## 07- Service Area 02 · Storey 1 (Light scene 1)

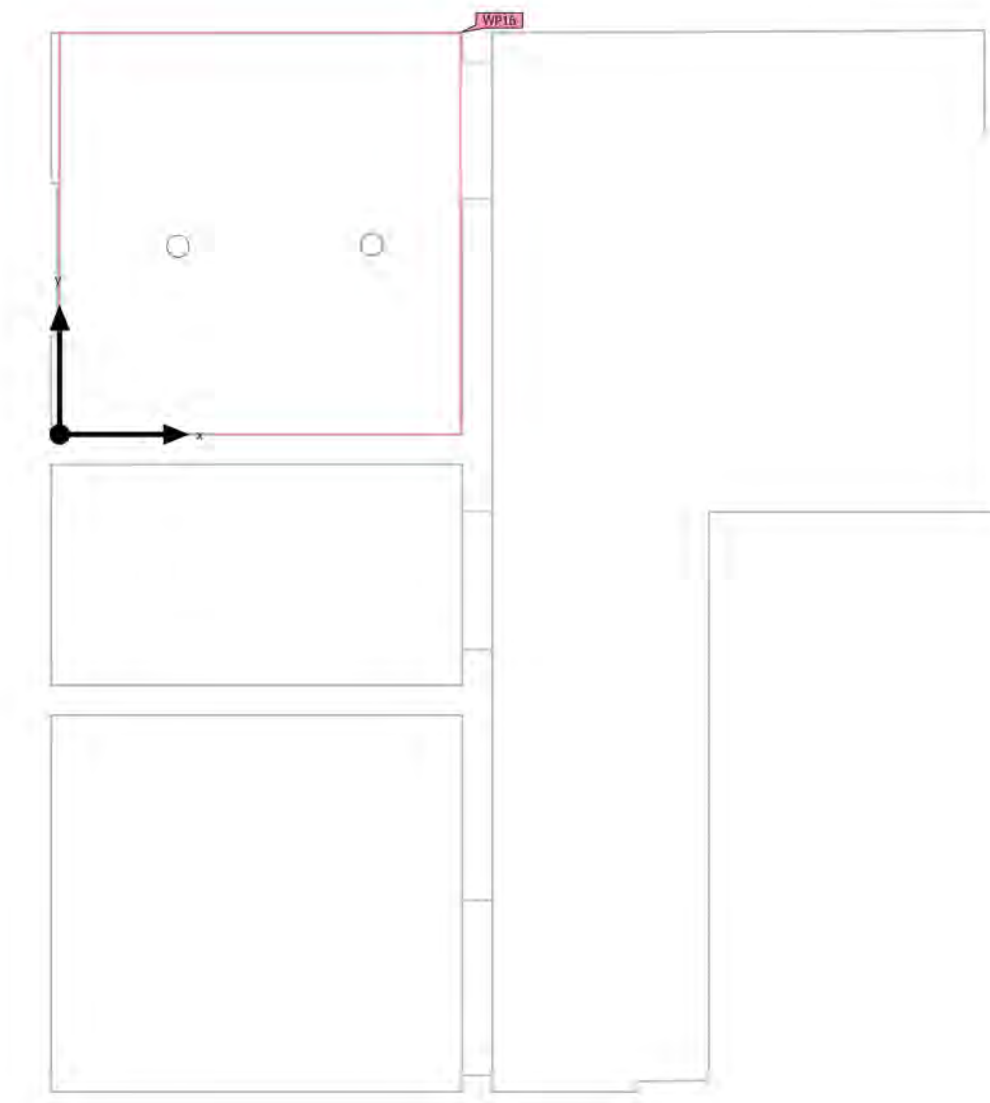
## Calculation objects

## Working planes

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Dirty Laundry) Perpendicular illuminance (adaptive) Height: 1.000 m, Wall zone: 0.000 m	238 lx	79.0 lx	400 lx	0.33	0.20	WP16
Working plane (Linen Room) Perpendicular illuminance (adaptive) Height: 1.000 m, Wall zone: 0.000 m	334 lx	168 lx	446 lx	0.50	0.38	WP17
Working plane (Service Rooms Corridor) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	145 lx	58.1 lx	232 lx	0.40	0.25	WP15
Working plane (Waste Collection) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	183 lx	102 lx	241 lx	0.56	0.42	WP18

## 07- Service Area 02 · Storey 1 · Dirty Laundry (Light scene 1)

### Summary



Ground area	10.27 m <sup>2</sup>		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %	Mounting height	2.800 m
Maintenance factor	0.80 (fixed)	Height <small>Working plane</small>	1.000 m
		Wall zone <small>Working plane</small>	0.000 m

## 07- Service Area 02 · Storey 1 · Dirty Laundry (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	238 lx	WP16
	U <sub>o</sub> (g <sub>1</sub> )	0.33	WP16
Energy estimation <sup>(2)</sup>	Consumption	84.2 kWh/a	

(1) Based on a rectangular space of 3.210 m x 3.200 m and SHR of 0.25.

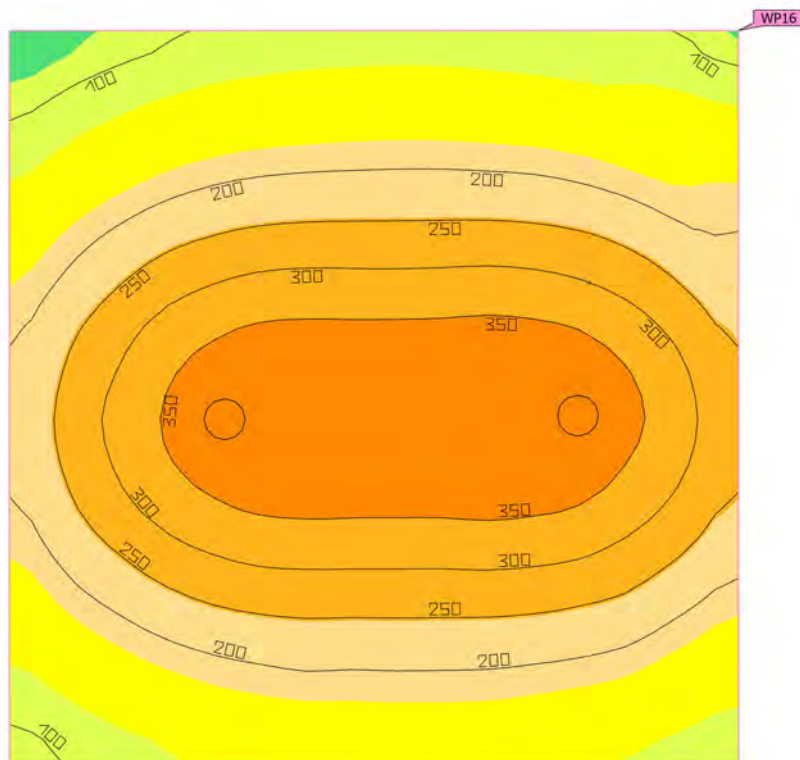
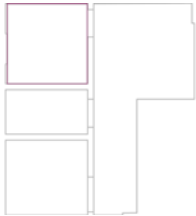
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
2	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W

# 07- Service Area 02 · Storey 1 · Dirty Laundry (Light scene 1) Working plane (Dirty Laundry)

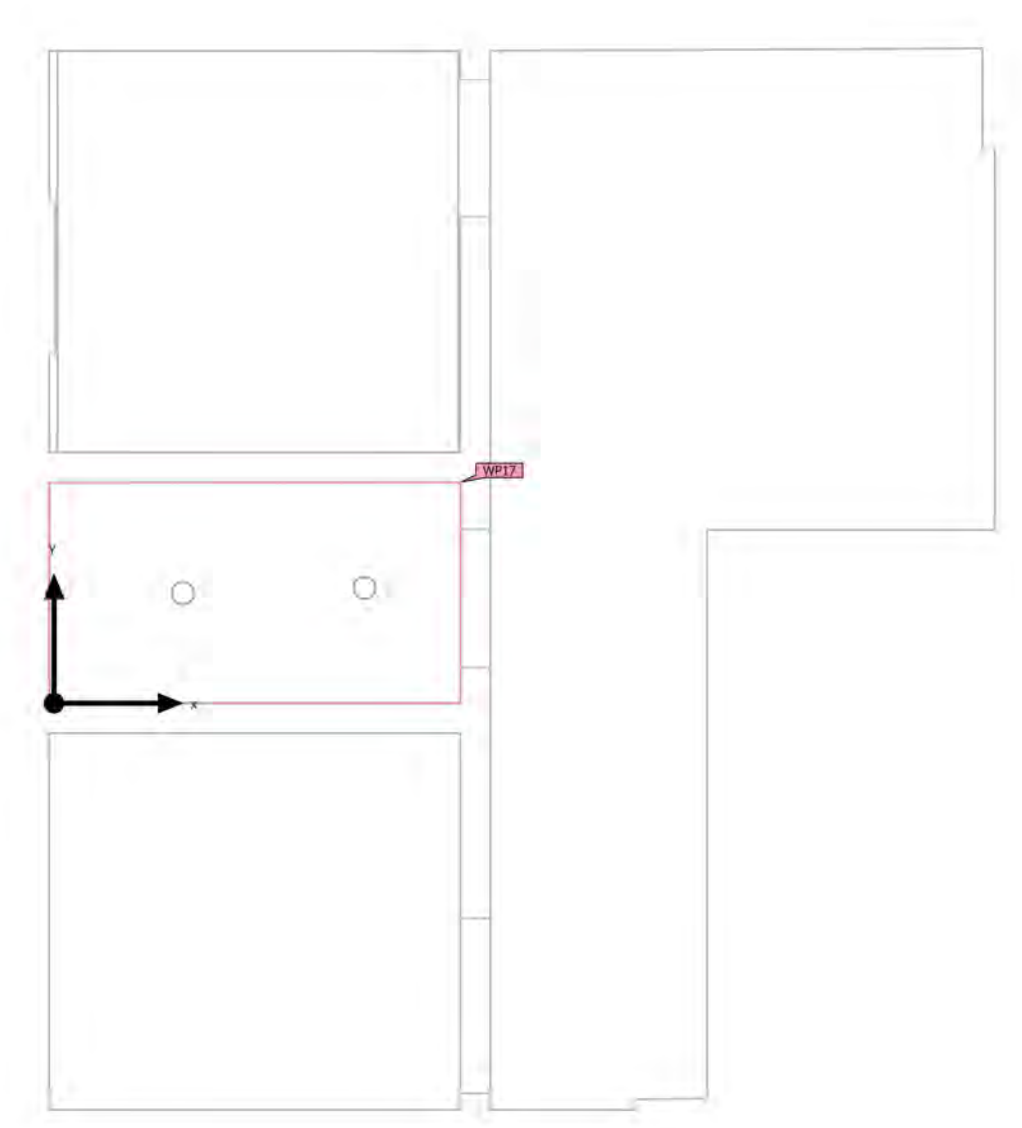


Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Dirty Laundry)	238 lx	79.0 lx	400 lx	0.33	0.20	WP16
Perpendicular illuminance (adaptive)						
Height: 1.000 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))



07- Service Area 02 · Storey 1 · Linen Room (Light scene 1)  
Summary



Ground area	5.78 m <sup>2</sup>
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Mounting height	2.800 m
Height <sub>Working plane</sub>	1.000 m
Wall zone <sub>Working plane</sub>	0.000 m

## 07- Service Area 02 · Storey 1 · Linen Room (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	334 lx	WP17
	U <sub>o</sub> (g <sub>1</sub> )	0.50	WP17
Energy estimation <sup>(2)</sup>	Consumption	84.2 kWh/a	

(1) Based on a rectangular space of 1.760 m x 3.285 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

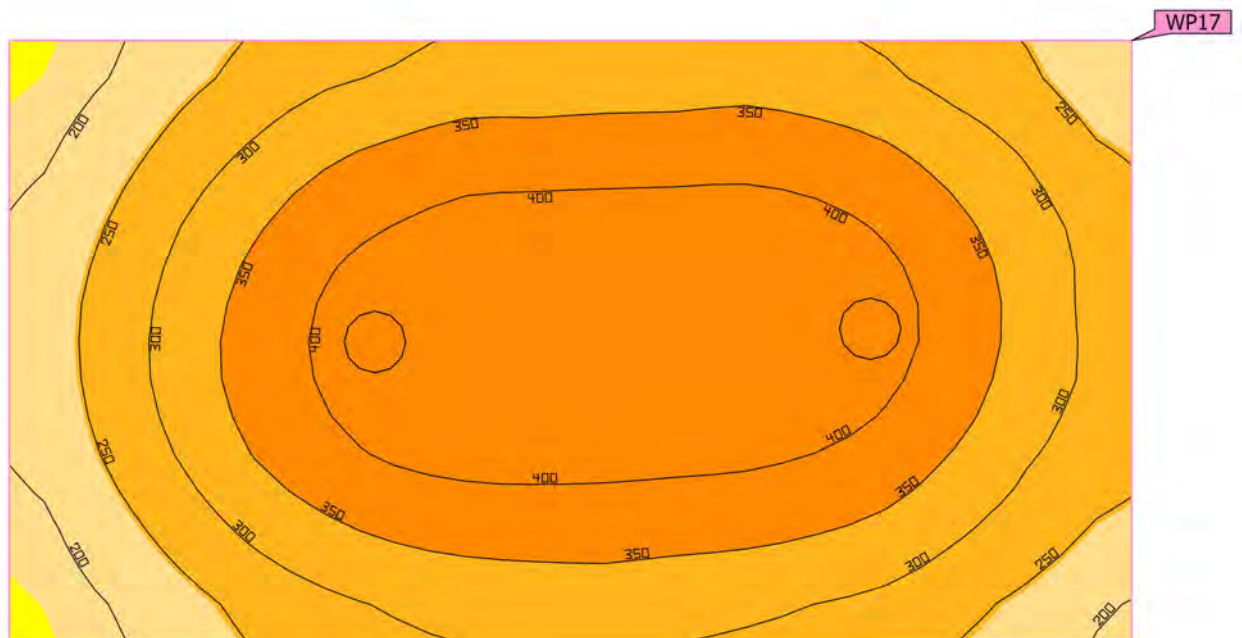
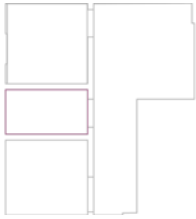
Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
2	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W

## 07- Service Area 02 · Storey 1 · Linen Room (Light scene 1)

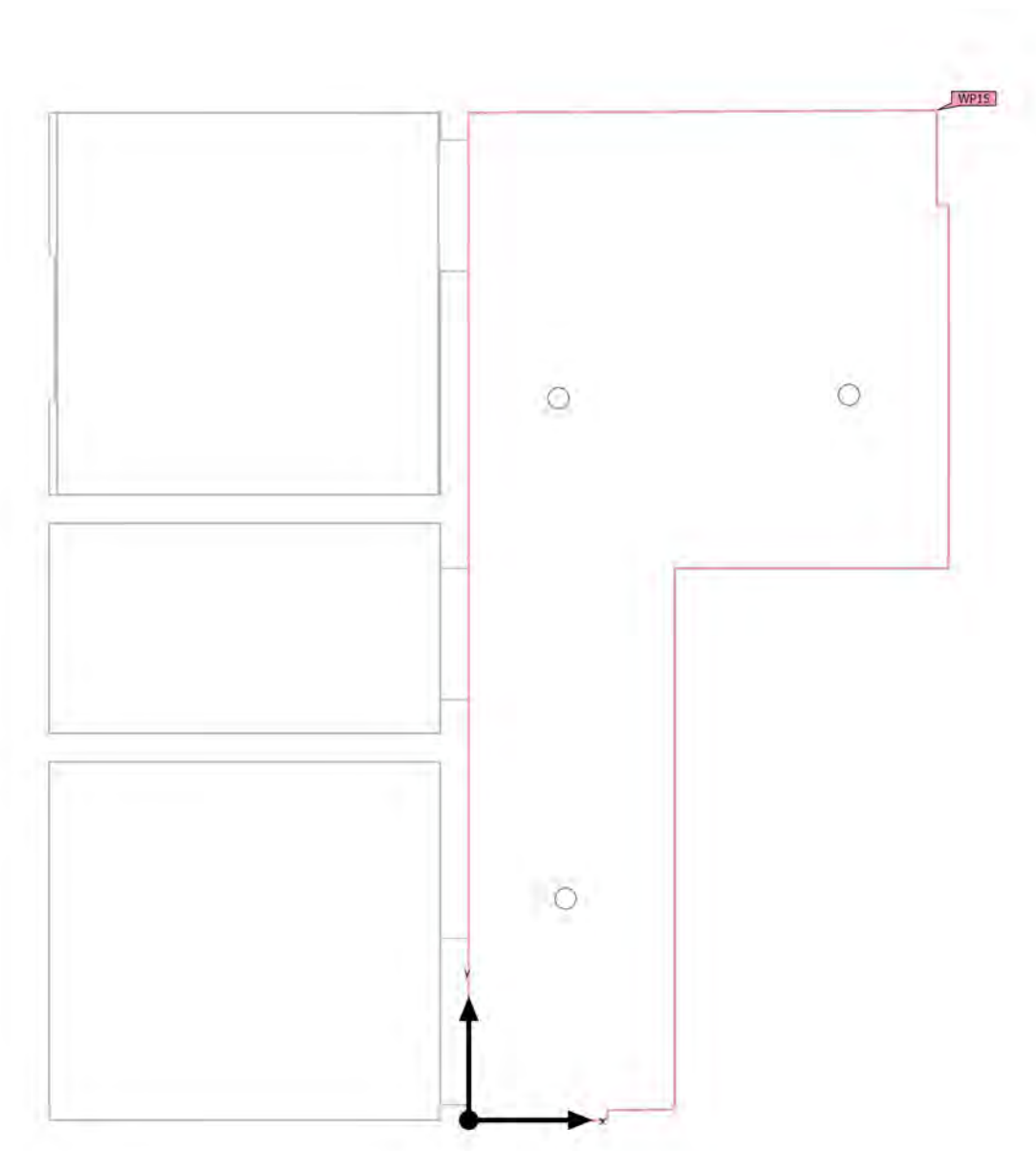
### Working plane (Linen Room)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Linen Room)	334 lx	168 lx	446 lx	0.50	0.38	WP17
Perpendicular illuminance (adaptive)						
Height: 1.000 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

07- Service Area 02 · Storey 1 · Service Rooms Corridor (Light scene 1)  
Summary



Ground area	23.36 m²
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Mounting height	2.800 m
Height <small>Working plane</small>	0.000 m
Wall zone <small>Working plane</small>	0.000 m

## 07- Service Area 02 · Storey 1 · Service Rooms Corridor (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	145 lx	WP15
	$U_o (g_1)$	0.40	WP15
Energy estimation <sup>(2)</sup>	Consumption	126 kWh/a	

(1) Based on a rectangular space of 8.480 m x 4.030 m and SHR of 0.25.

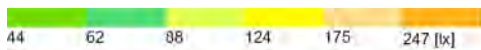
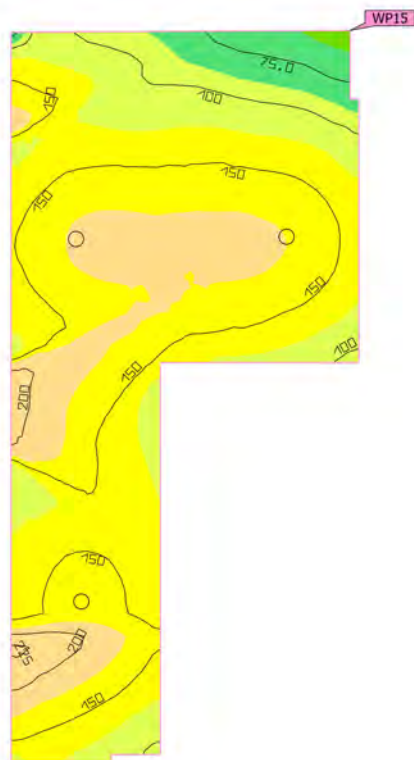
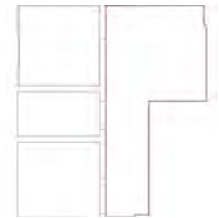
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	$R_{UG}$	P		Luminous efficacy
3	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W

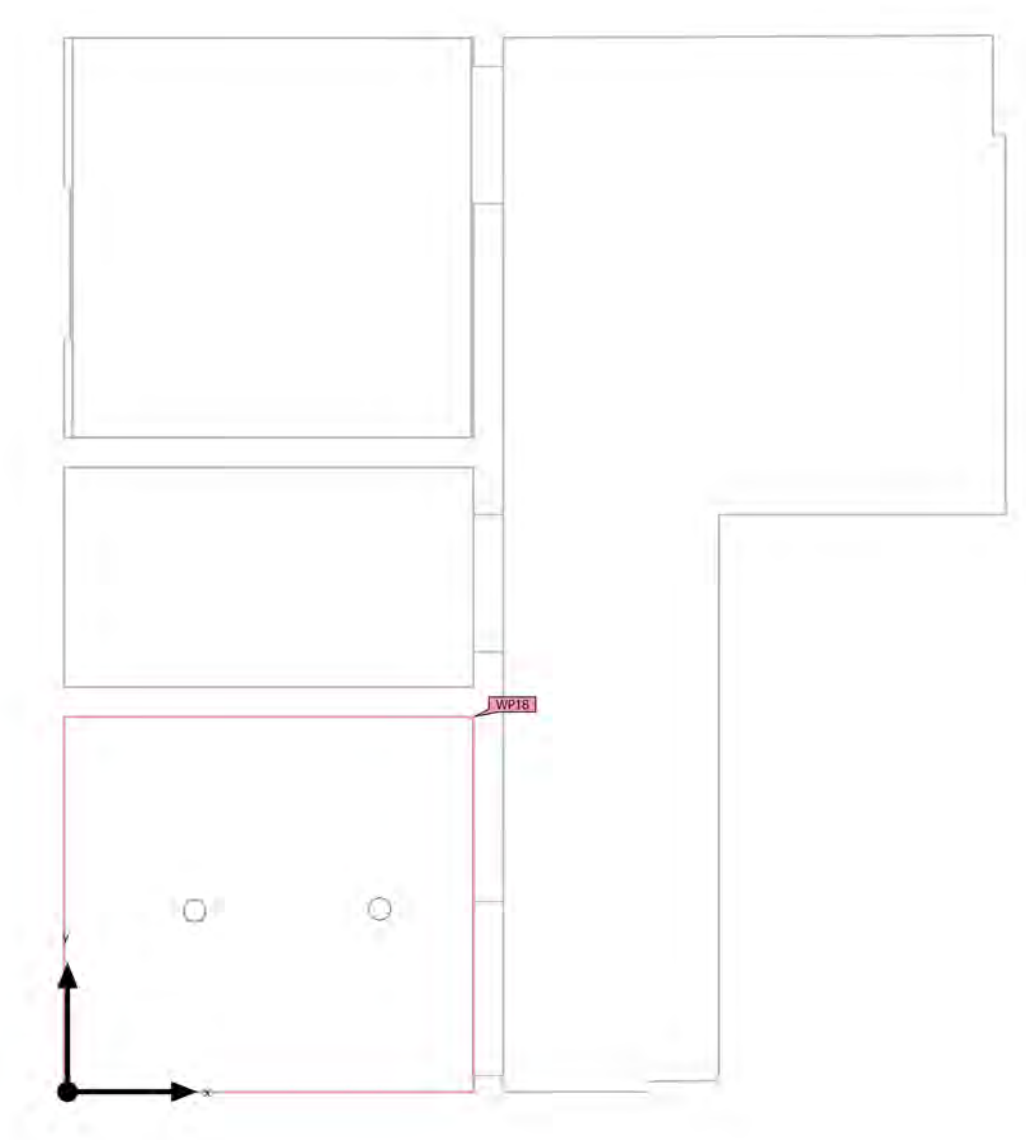
# 07- Service Area 02 · Storey 1 · Service Rooms Corridor (Light scene 1) Working plane (Service Rooms Corridor)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Service Rooms Corridor)	145 lx	58.1 lx	232 lx	0.40	0.25	WP15
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

07- Service Area 02 · Storey 1 · Waste Collection (Light scene 1)  
Summary



Ground area	9.89 m <sup>2</sup>
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Mounting height	2.800 m
Height <small>Working plane</small>	0.000 m
Wall zone <small>Working plane</small>	0.000 m

## 07- Service Area 02 · Storey 1 · Waste Collection (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	183 lx	WP18
	U <sub>o</sub> (g <sub>1</sub> )	0.56	WP18
Energy estimation <sup>(2)</sup>	Consumption	84.2 kWh/a	

(1) Based on a rectangular space of 3.285 m x 3.010 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

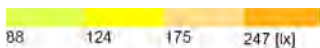
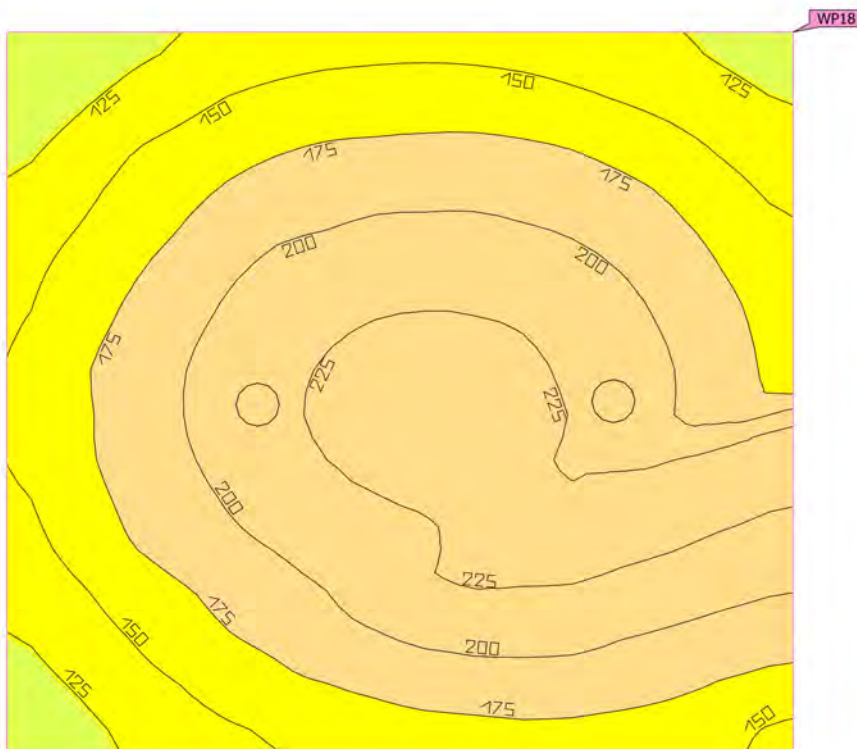
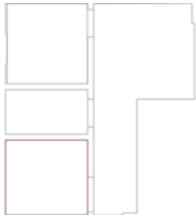
#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
2	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W



## 07- Service Area 02 · Storey 1 · Waste Collection (Light scene 1)

### Working plane (Waste Collection)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Waste Collection)	183 lx	102 lx	241 lx	0.56	0.42	WP18
Perpendicular illuminance (adaptive)						
Height: 0.000 m, Wall zone: 0.000 m						

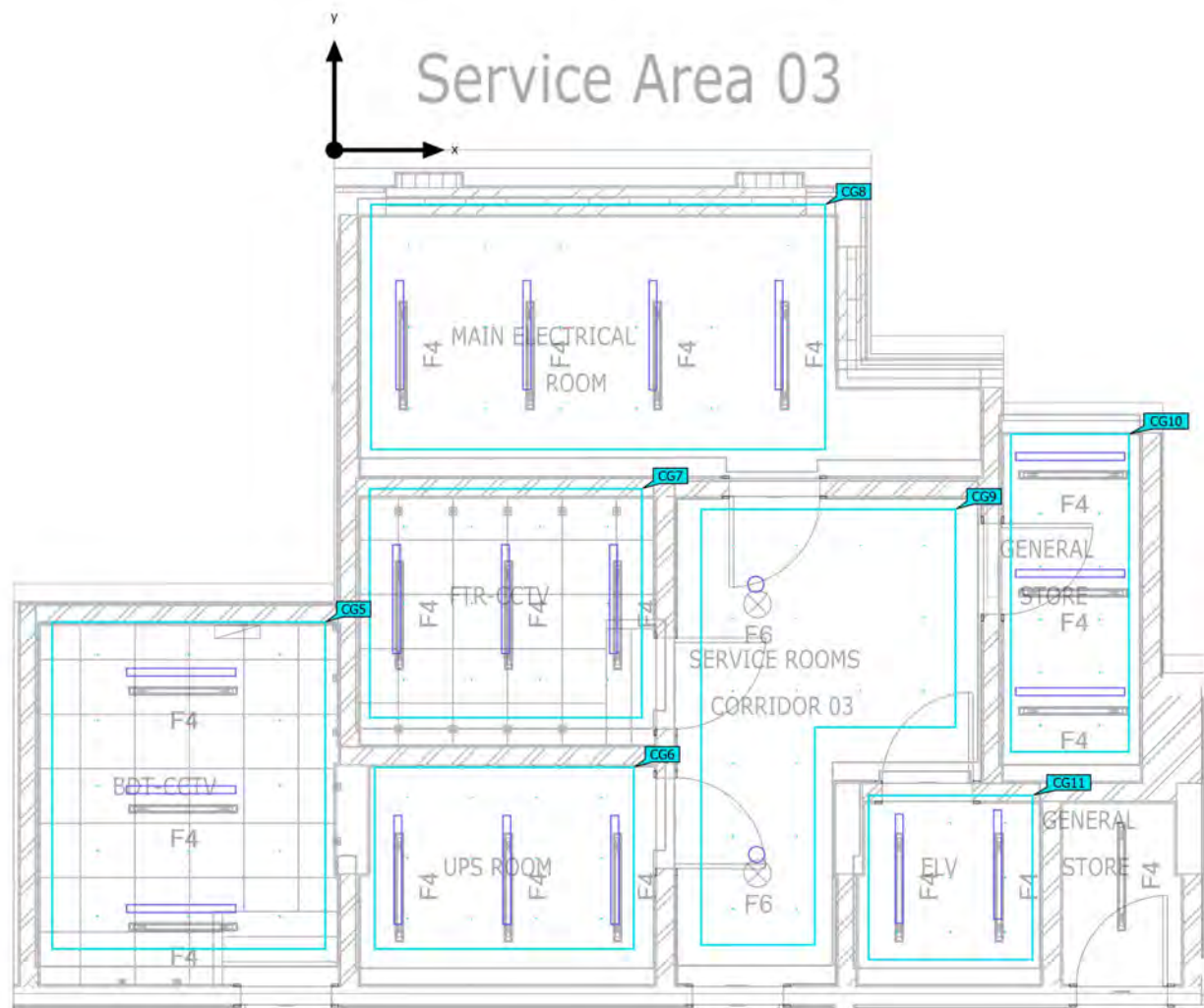
Utilisation profile: DIALux presetting (34.2 Standard (office))

## 08-Service Area 03

### Description

## 08-Service Area 03 · Storey 1 (Light scene 1)

### Calculation objects



## 08-Service Area 03 · Storey 1 (Light scene 1)

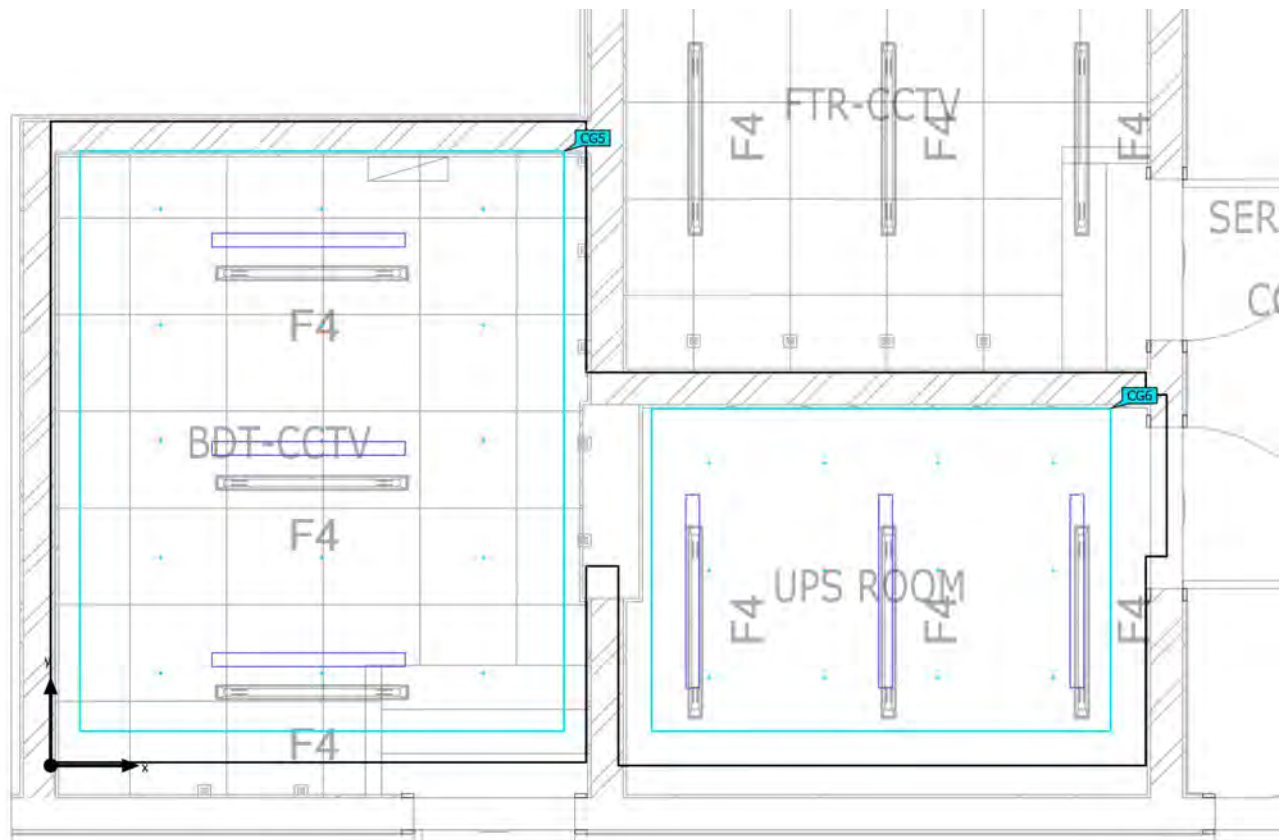
## Calculation objects

## Calculation surfaces

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
BDT- CCTV Perpendicular illuminance Height: 0.800 m	537 lx	411 lx	663 lx	0.77	0.62	CG5
ELV Perpendicular illuminance Height: 0.800 m	583 lx	523 lx	665 lx	0.90	0.79	CG11
FTR CCTV Perpendicular illuminance Height: 0.800 m	596 lx	514 lx	707 lx	0.86	0.73	CG7
General Store Perpendicular illuminance Height: 0.000 m	458 lx	390 lx	500 lx	0.85	0.78	CG10
Main Electric Room Perpendicular illuminance Height: 0.800 m	548 lx	430 lx	667 lx	0.78	0.64	CG8
Service Room Corridor Perpendicular illuminance Height: 0.000 m	130 lx	50.7 lx	170 lx	0.39	0.30	CG9
UPS Perpendicular illuminance Height: 0.000 m	493 lx	432 lx	549 lx	0.88	0.79	CG6

## 08-Service Area 03 · Storey 1 · BDT-CCTV/ UPS (Light scene 1)

## Summary



Ground area	21.59 m <sup>2</sup>		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %	Clearance height	3.000 m
Maintenance factor	0.80 (fixed)	Mounting height	3.000 m

## 08-Service Area 03 · Storey 1 · BDT-CCTV/ UPS (Light scene 1)

## Summary

## Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	587 kWh/a	

(1) Based on a rectangular space of 4.000 m x 6.930 m and SHR of 0.25.

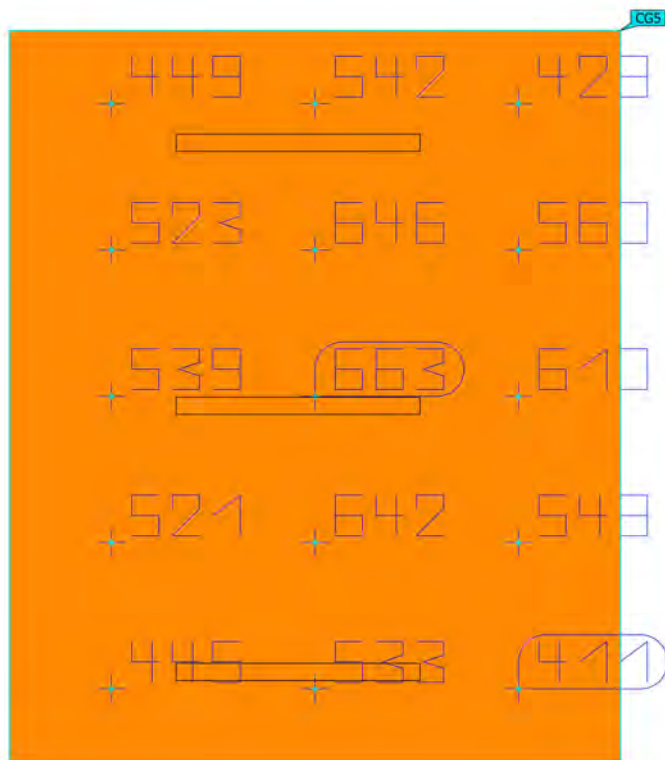
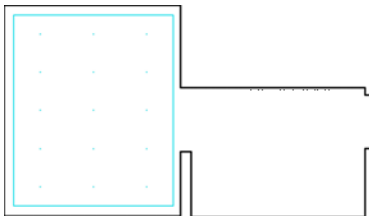
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

## Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
6	FRATER	WPCA-040	WEATHERPROOF CALIBER	–	39.5 W	4952 lm	125.4 lm/W

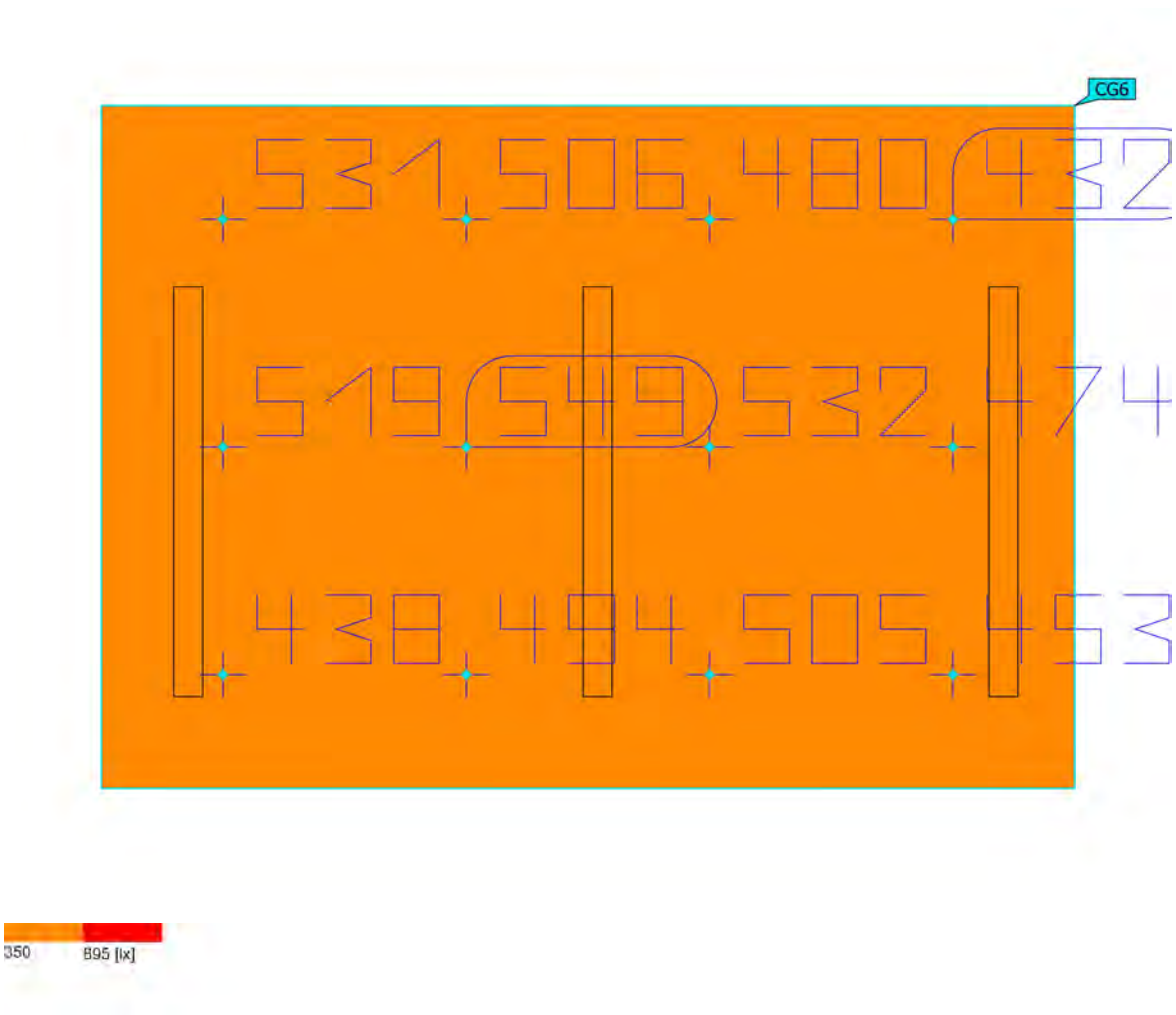
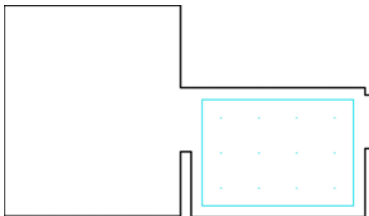
08-Service Area 03 · BDT-CCTV/ UPS (Light scene 1)  
BDT- CCTV



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
BDT- CCTV	537 lx	411 lx	663 lx	0.77	0.62	CG5
Perpendicular illuminance						
Height: 0.800 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

08-Service Area 03 · BDT-CCTV/ UPS (Light scene 1)  
UPS

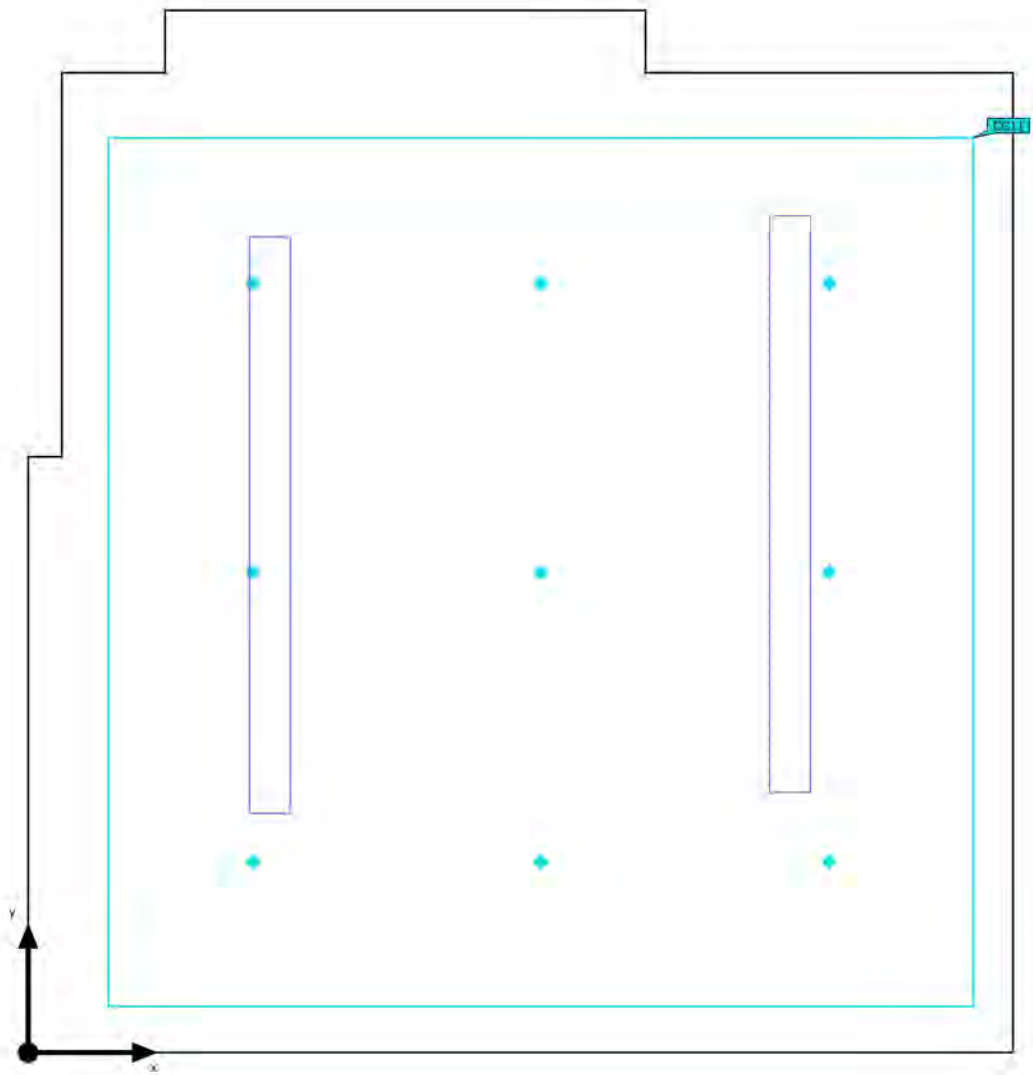


Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
UPS	493 lx	432 lx	549 lx	0.88	0.79	CG6
Perpendicular illuminance						
Height: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))



08-Service Area 03 · Storey 1 · ELV (Light scene 1)  
Summary



Ground area                      4.26 m<sup>2</sup>

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,   
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Clearance height                3.000 m

Mounting height                3.000 m

## 08-Service Area 03 · Storey 1 · ELV (Light scene 1)

## Summary

## Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	196 kWh/a	

(1) Based on a rectangular space of 2.170 m x 2.050 m and SHR of 0.25.

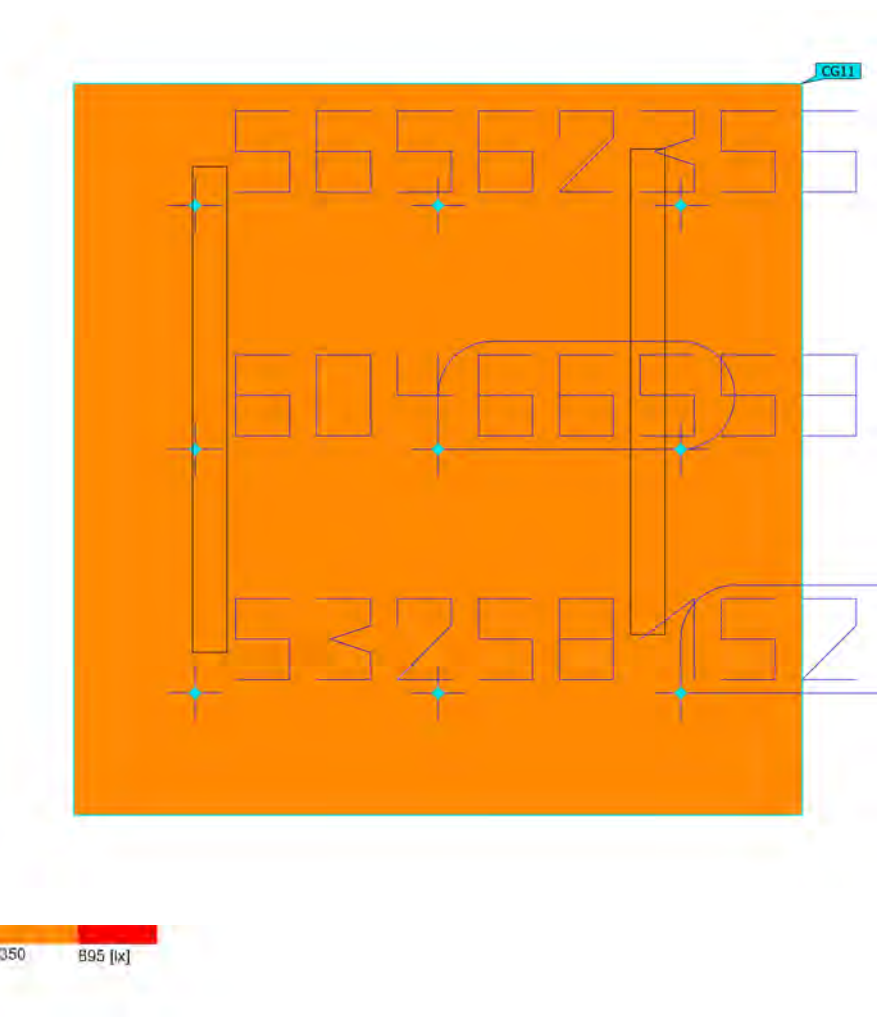
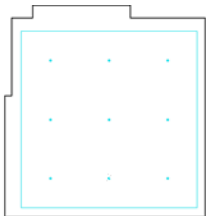
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

## Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
2	FRATER	WPCA-040	WEATHERPROOF CALIBER	–	39.5 W	4952 lm	125.4 lm/W

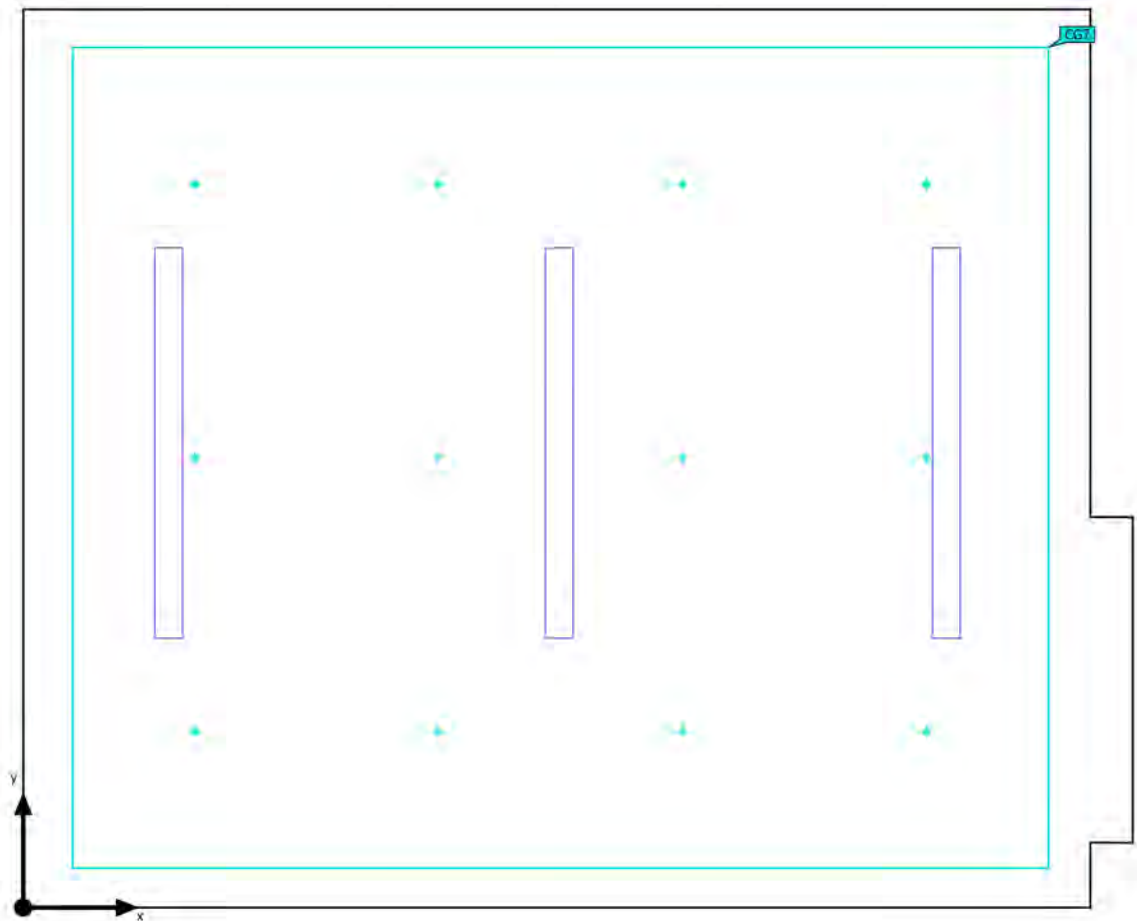
08-Service Area 03 · ELV (Light scene 1)  
ELV



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
ELV	583 lx	523 lx	665 lx	0.90	0.79	CG11
Perpendicular illuminance						
Height: 0.800 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

08-Service Area 03 · Storey 1 · FTR-CCTV (Light scene 1)  
Summary



Ground area	9.17 m <sup>2</sup>
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Clearance height	3.000 m
Mounting height	3.000 m

## 08-Service Area 03 · Storey 1 · FTR-CCTV (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	293 kWh/a	

(1) Based on a rectangular space of 2.760 m x 3.405 m and SHR of 0.25.

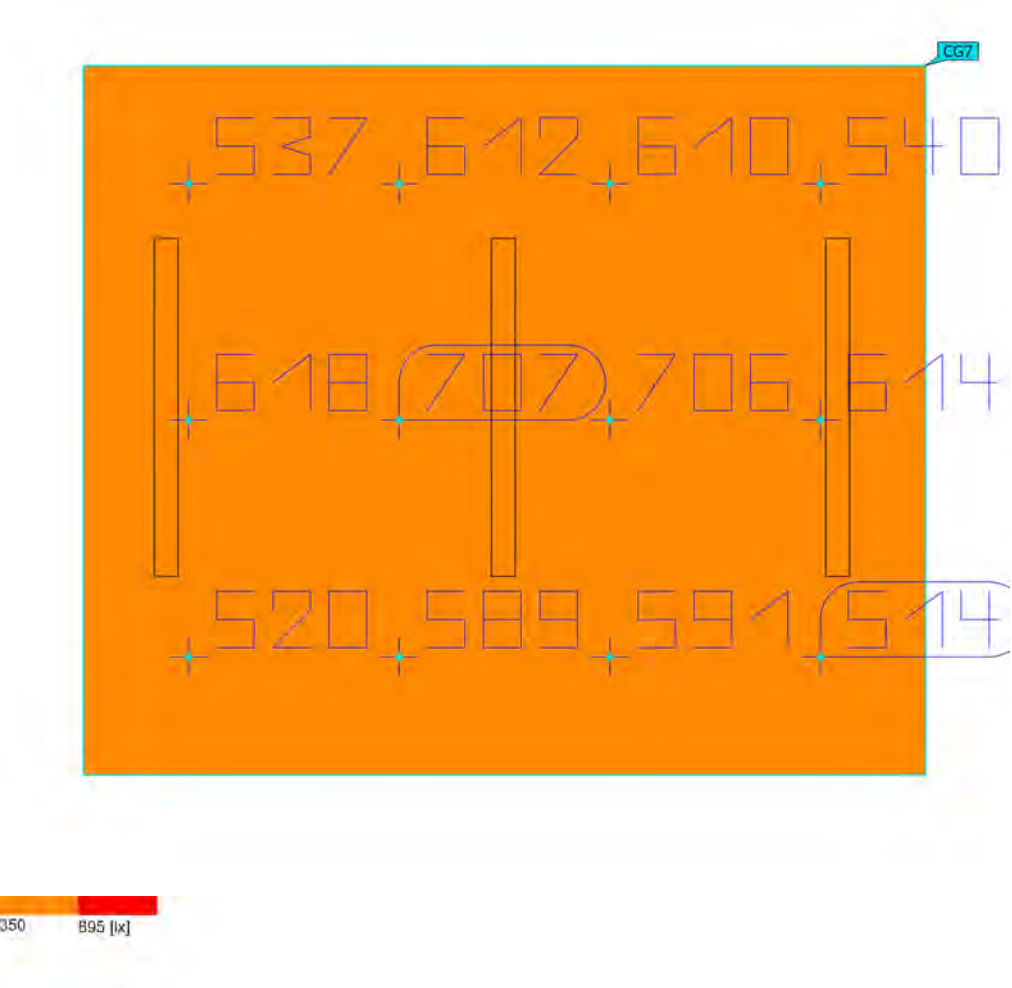
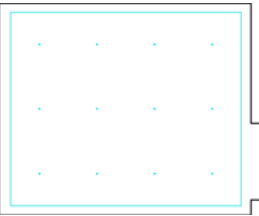
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
3	FRATER	WPCA-040	WEATHERPROOF CALIBER	–	39.5 W	4952 lm	125.4 lm/W

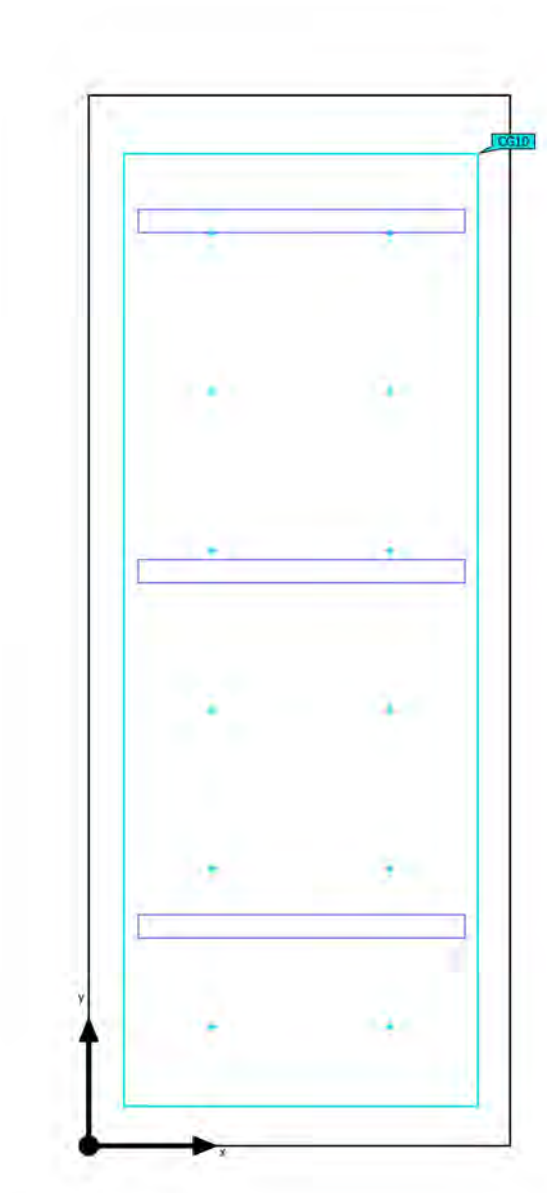
08-Service Area 03 · FTR-CCTV (Light scene 1)  
FTR CCTV



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
FTR CCTV	596 lx	514 lx	707 lx	0.86	0.73	CG7
Perpendicular illuminance						
Height: 0.800 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

08-Service Area 03 · Storey 1 · General Store (Light scene 1)  
Summary



Ground area	5.97 m²		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %		
Maintenance factor	0.80 (fixed)	Mounting height	3.000 m

## 08-Service Area 03 · Storey 1 · General Store (Light scene 1)

## Summary

## Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	293 kWh/a	

(1) Based on a rectangular space of 1.548 m x 3.860 m and SHR of 0.25.

(2) Calculated using DIN:18599-4.

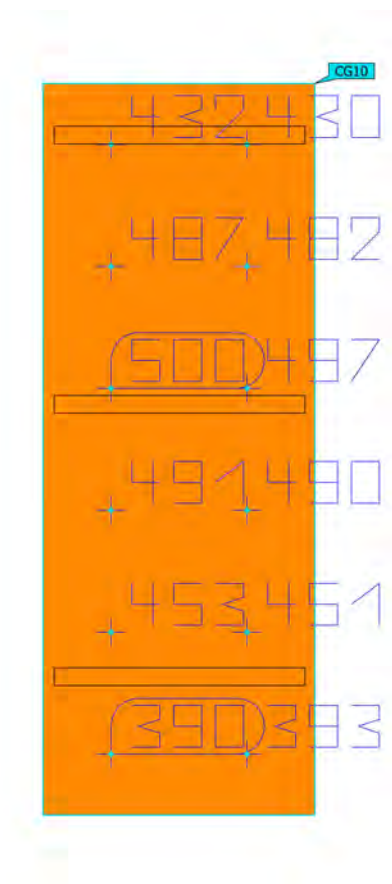
Utilisation profile: DIALux presetting (34.2 Standard (office))

## Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
3	FRATER	WPCA-040	WEATHERPROOF CALIBER	–	39.5 W	4952 lm	125.4 lm/W



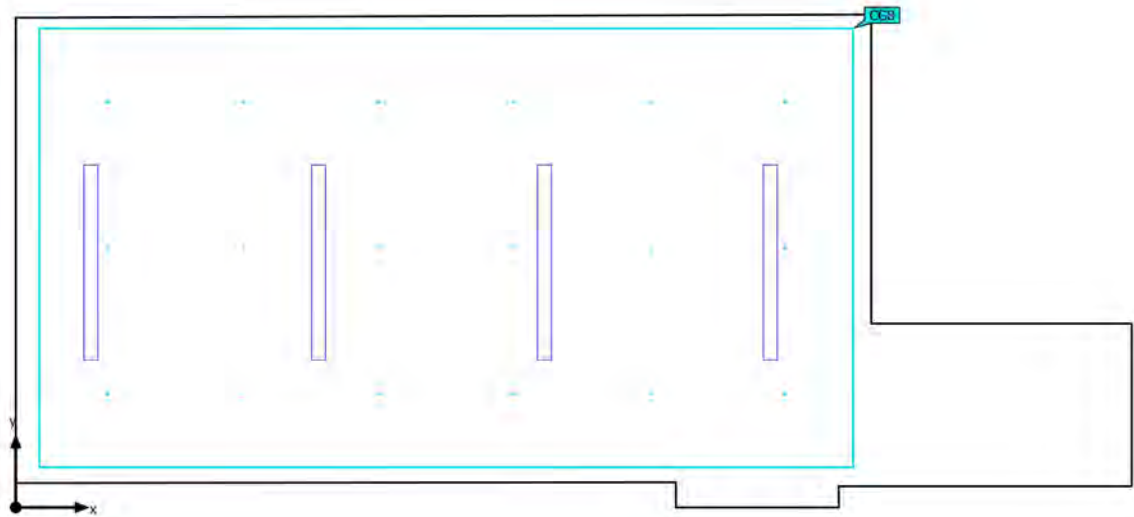
08-Service Area 03 · General Store (Light scene 1)  
General Store



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
General Store	458 lx	390 lx	500 lx	0.85	0.78	CG10
Perpendicular illuminance						
Height: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

08-Service Area 03 · Storey 1 · Main Electrical Room (Light scene 1)  
Summary



Ground area                      16.83 m²

Reflection factors              Ceiling: 50.0 %,  
   Walls: 50.0 %,   
   Floor: 20.0 %

Maintenance factor            0.80 (fixed)

Clearance height                3.000 m

Mounting height                3.000 m

## 08-Service Area 03 · Storey 1 · Main Electrical Room (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	391 kWh/a	

(1) Based on a rectangular space of 6.855 m x 3.030 m and SHR of 0.25.

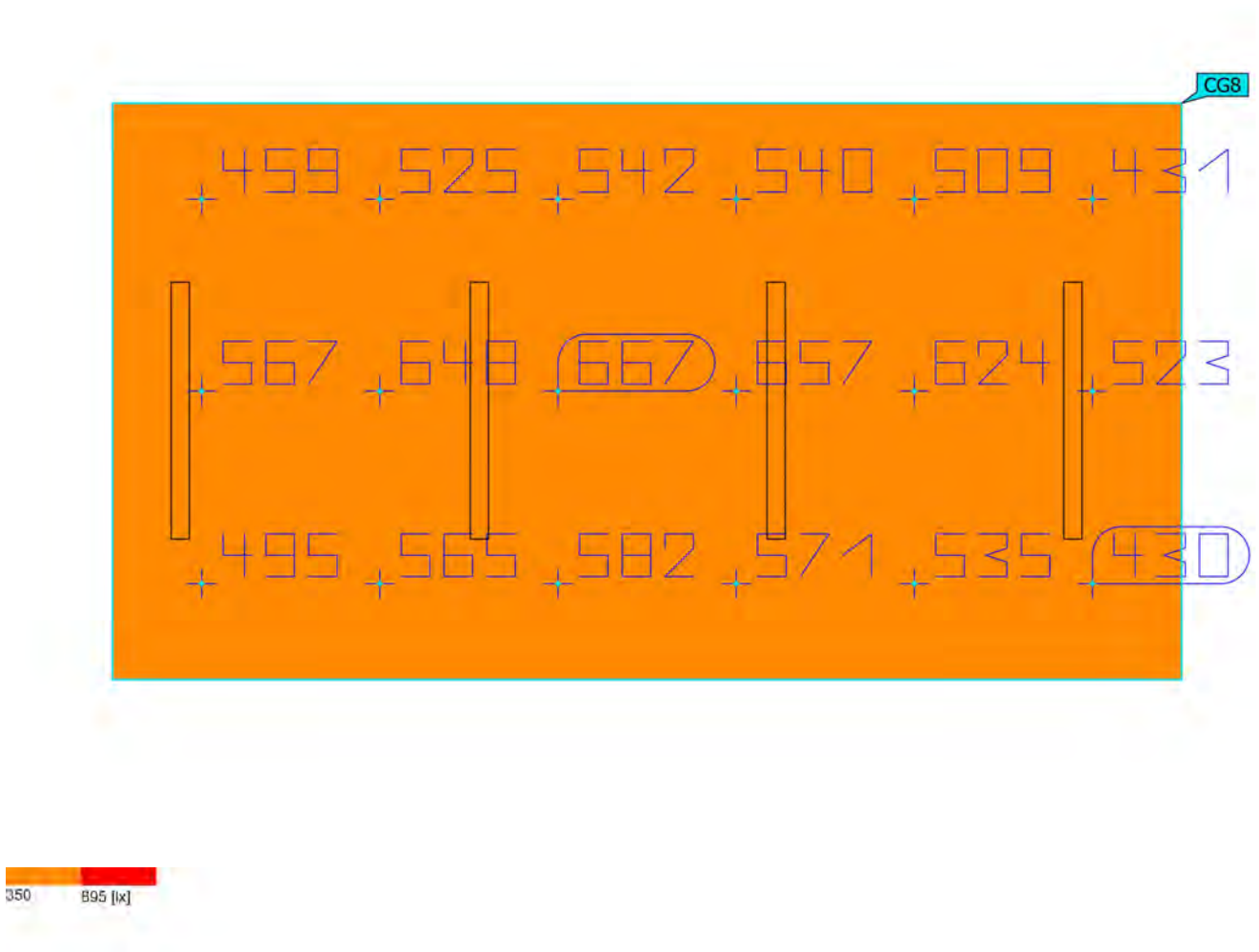
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P	Luminous efficacy	
4	FRATER	WPCA-040	WEATHERPROOF CALIBER	–	39.5 W	4952 lm	125.4 lm/W

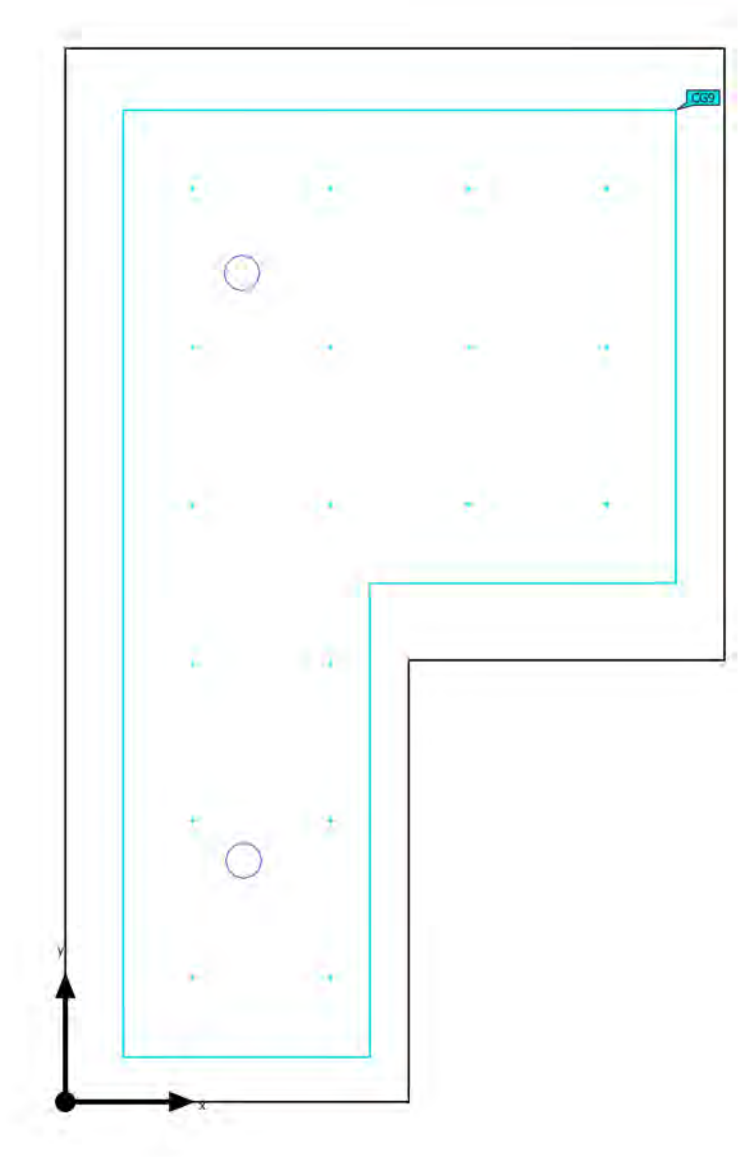
08-Service Area 03 · Main Electrical Room (Light scene 1)  
Main Electric Room



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Main Electric Room Perpendicular illuminance Height: 0.800 m	548 lx	430 lx	667 lx	0.78	0.64	CG8

Utilisation profile: DIALux presetting (34.2 Standard (office))

08-Service Area 03 · Storey 1 · Service Room Corridor (Light scene 1)  
Summary



Ground area	14.25 m²		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %	Clearance height	2.800 m
Maintenance factor	0.80 (fixed)	Mounting height	2.800 m

## 08-Service Area 03 · Storey 1 · Service Room Corridor (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	84.2 kWh/a	

(1) Based on a rectangular space of 5.340 m x 3.340 m and SHR of 0.25.

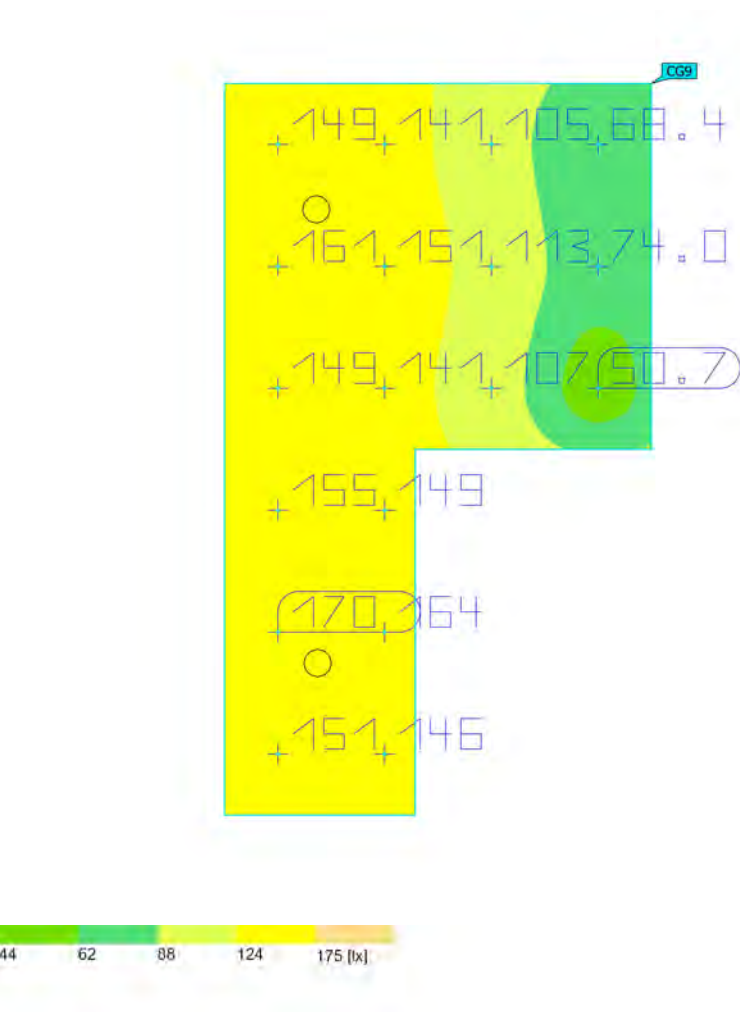
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	R <sub>UG</sub>	P		Luminous efficacy
2	FRATER	DLS1-017	Down Light DLS1 17W 6500K	–	17.0 W	2040 lm	120.0 lm/W

08-Service Area 03 · Service Room Corridor (Light scene 1)  
Service Room Corridor



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Service Room Corridor	130 lx	50.7 lx	170 lx	0.39	0.30	CG9
Perpendicular illuminance						
Height: 0.000 m						

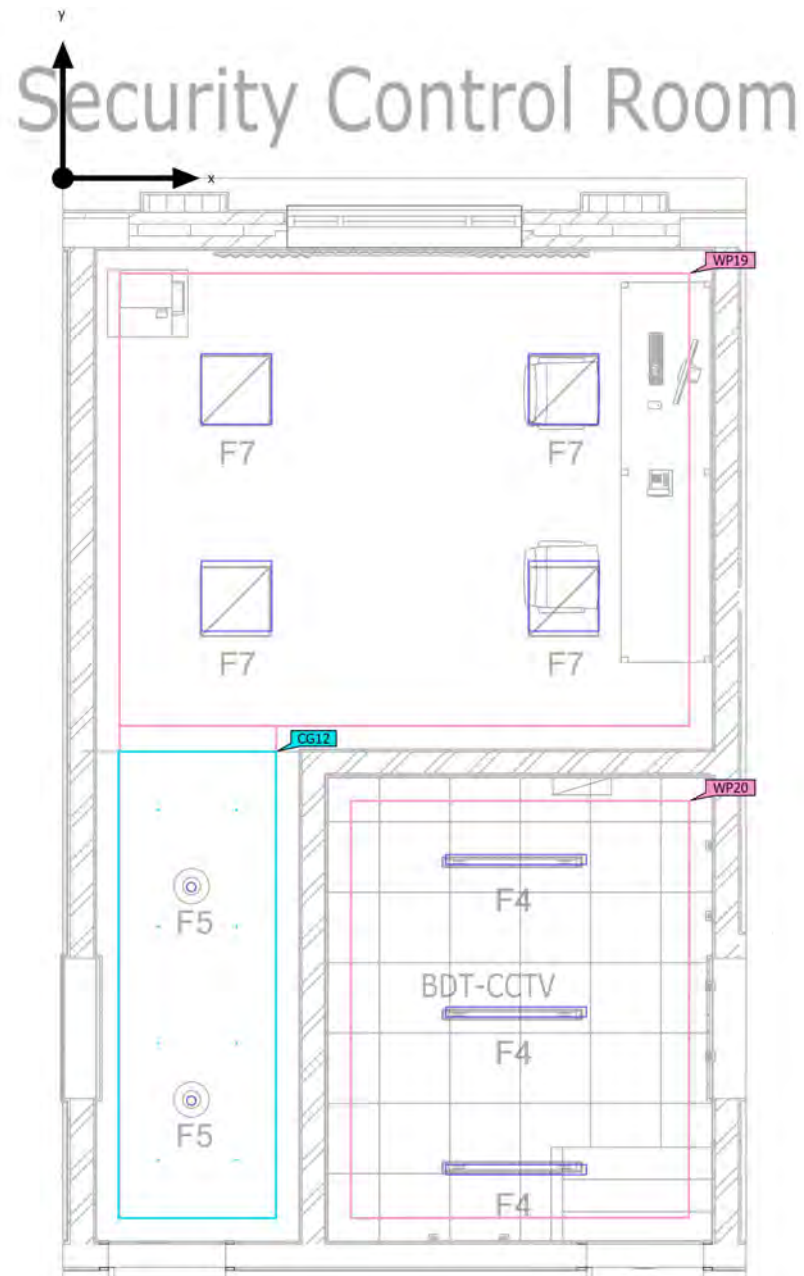
Utilisation profile: DIALux presetting (34.2 Standard (office))

## 09-Security Contrl Room Description



## 09-Security Contrl Room · Storey 1 (Light scene 1)

## Calculation objects



## 09-Security Contrl Room · Storey 1 (Light scene 1)

## Calculation objects

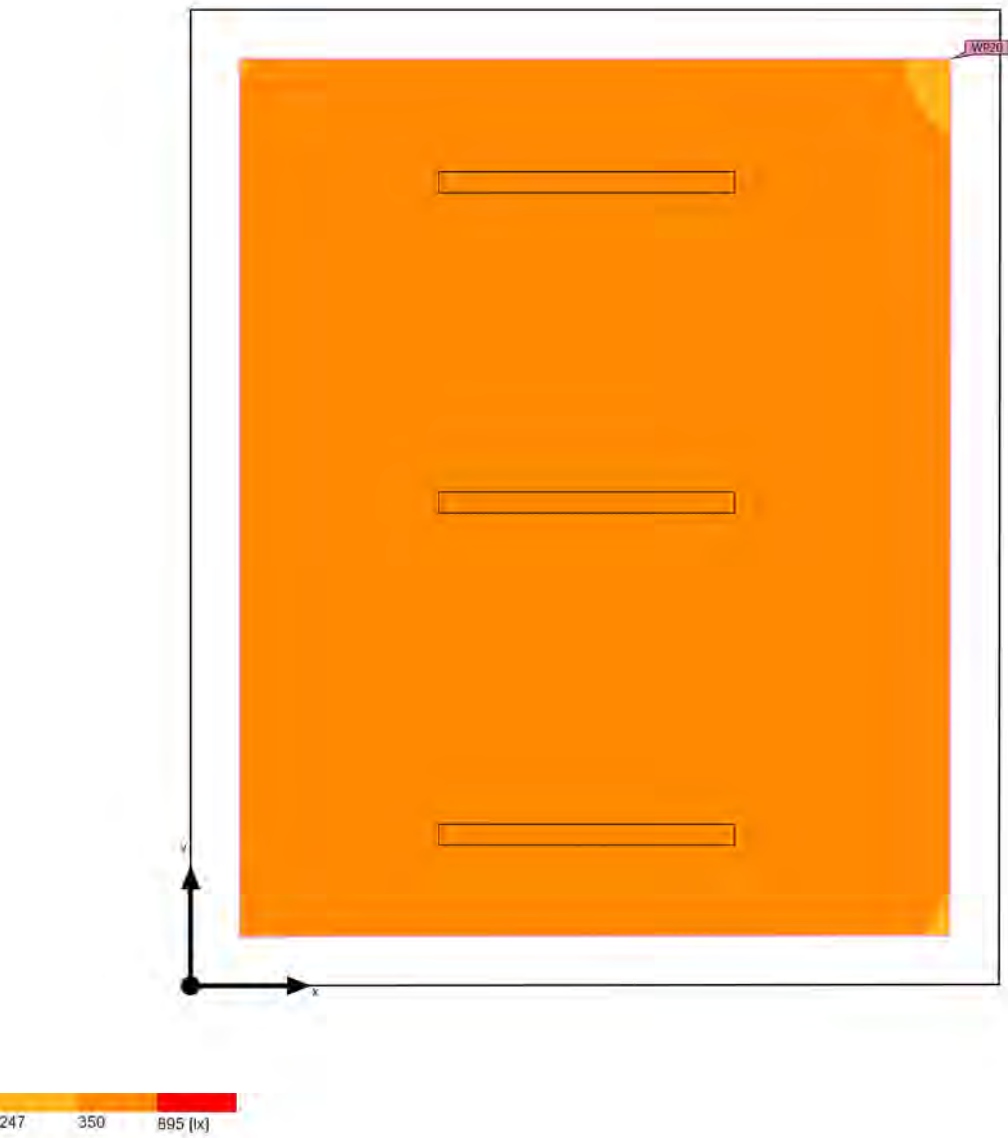
## Working planes

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (BDT-CCTV) Perpendicular illuminance (adaptive) Height: 1.000 m, Wall zone: 0.200 m	528 lx	342 lx	675 lx	0.65	0.51	WP20
Working plane (Sub Security Control Room) Perpendicular illuminance (adaptive) Height: 1.000 m, Wall zone: 0.200 m	528 lx	293 lx	678 lx	0.55	0.43	WP19

## Calculation surfaces

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Passage Perpendicular illuminance Height: 0.000 m	256 lx	191 lx	303 lx	0.75	0.63	CG12

09-Security Contrl Room · BDT-CCTV (Light scene 1)  
Summary



Ground area	12.99 m <sup>2</sup>
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %
Maintenance factor	0.80 (fixed)

Clearance height	2.800 m
Mounting height	3.000 m
Height <sub>Working plane</sub>	1.000 m
Wall zone <sub>Working plane</sub>	0.200 m

## 09-Security Contrl Room · BDT-CCTV (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	528 lx	WP20
	$U_o (g_1)$	0.65	WP20
	Lighting power density	11.56 W/m <sup>2</sup>	
		2.19 W/m <sup>2</sup> /100 lx	
Energy estimation <sup>(2)</sup>	Consumption	293 kWh/a	
Space	Lighting power density	9.12 W/m <sup>2</sup>	
		1.73 W/m <sup>2</sup> /100 lx	

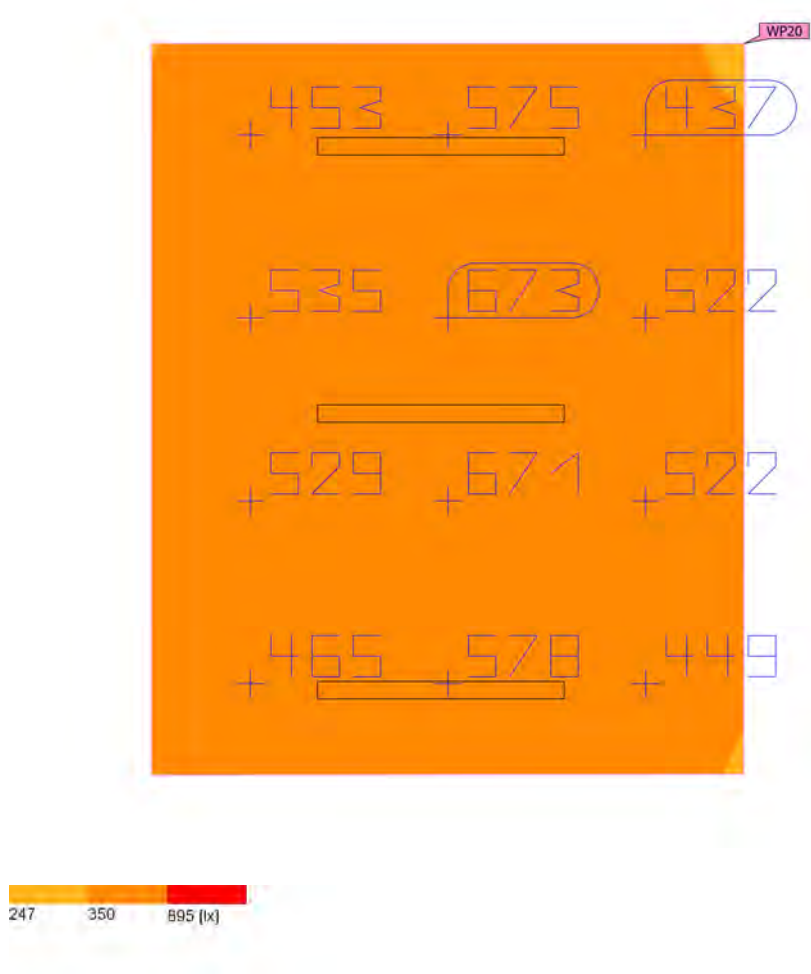
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Luminous efficacy	
3	FRATER	WPCA-040	WEATHERPROOF CALIBER	39.5 W	4952 lm	125.4 lm/W

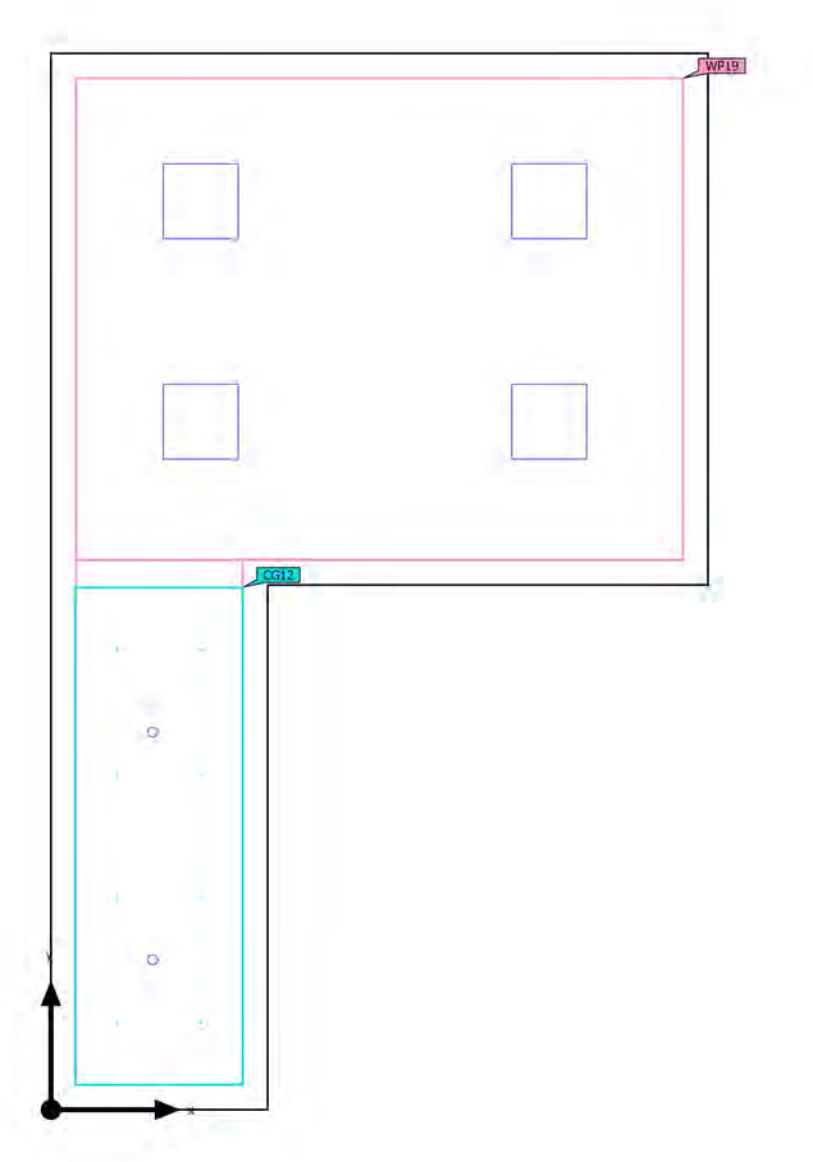
09-Security Contrl Room · BDT-CCTV (Light scene 1)  
Working plane (BDT-CCTV)



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (BDT-CCTV)	528 lx	342 lx	675 lx	0.65	0.51	WP20
Perpendicular illuminance (adaptive)						
Height: 1.000 m, Wall zone: 0.200 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

09-Security Contrl Room · Storey 1 · Sub Security Control Room (Light scene 1)  
Summary



Ground area	29.69 m²	Clearance height	2.800 m
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %	Mounting height	2.800 m
Maintenance factor	0.80 (fixed)	Height <sub>Working plane</sub>	1.000 m
		Wall zone <sub>Working plane</sub>	0.200 m

## 09-Security Contrl Room · Storey 1 · Sub Security Control Room (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Working plane	perpendicular	528 lx	WP19
	$U_o (g_1)$	0.55	WP19
Energy estimation <sup>(2)</sup>	Consumption	530 kWh/a	

(1) Based on a rectangular space of 8.460 m x 5.260 m and SHR of 0.25.

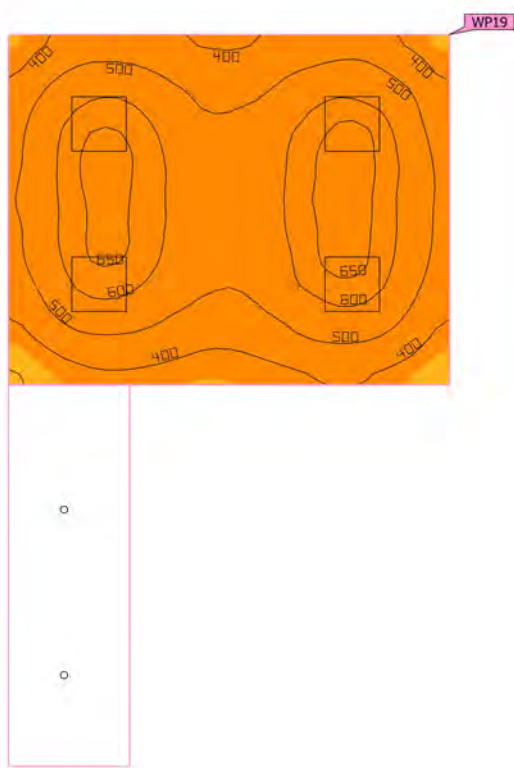
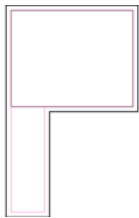
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	$R_{UG}$	P	Luminous efficacy	
4	FRATER	BP10-048	LED BACK LIGHT PANEL BP10	–	48.0 W	4800 lm	100.0 lm/W
2	FRATER	DLG5-010	COB Down Light Gemini 05	–	11.0 W	1066 lm	96.9 lm/W

09-Security Contrl Room · Storey 1 · Sub Security Control Room (Light scene 1)  
Working plane (Sub Security Control Room)

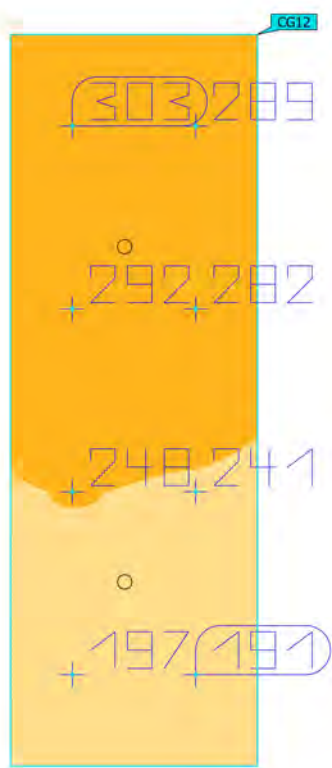


Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Working plane (Sub Security Control Room)	528 lx	293 lx	678 lx	0.55	0.43	WP19
Perpendicular illuminance (adaptive)						
Height: 1.000 m, Wall zone: 0.200 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))



09-Security Contrl Room · Sub Security Control Room (Light scene 1)  
Passage



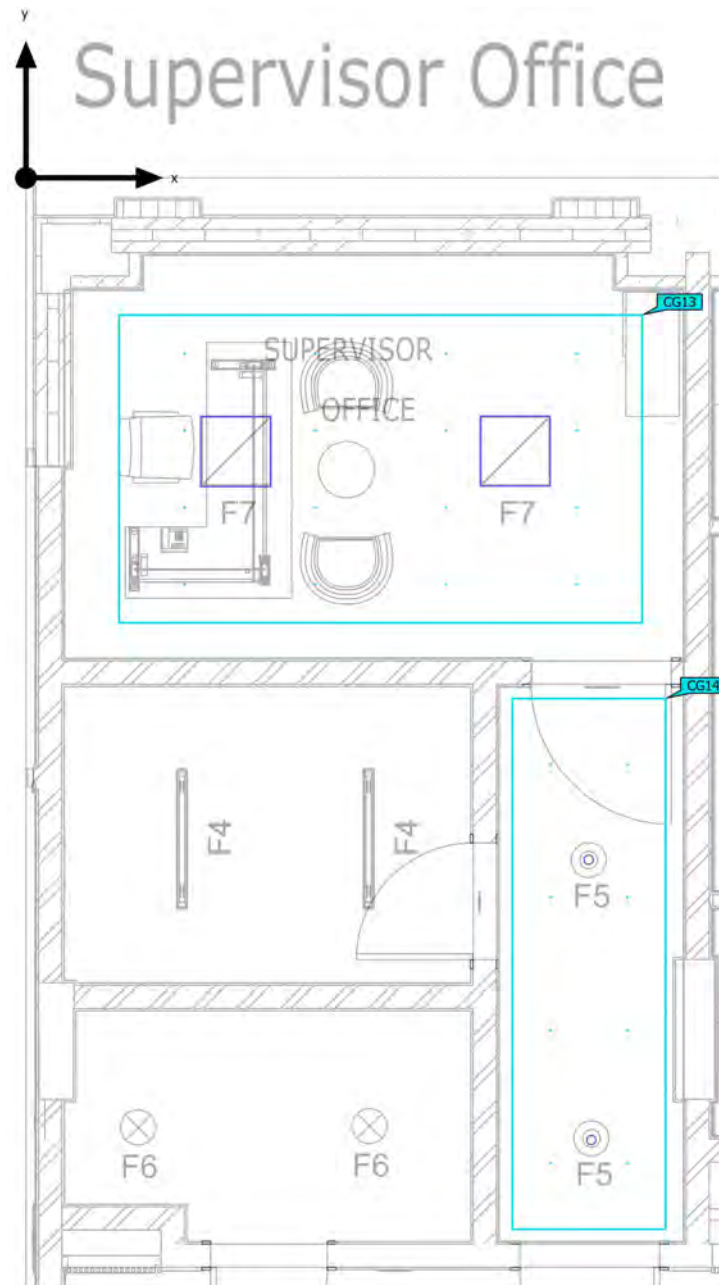
Properties		E <sub>min</sub>	E <sub>max</sub>	U <sub>o</sub> (g <sub>1</sub> )	g <sub>2</sub>	Index
Passage	256 lx	191 lx	303 lx	0.75	0.63	CG12
Perpendicular illuminance						
Height: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

## 10- Supervisor Office Description

## 10- Supervisor Office (Light scene 1)

## Calculation objects



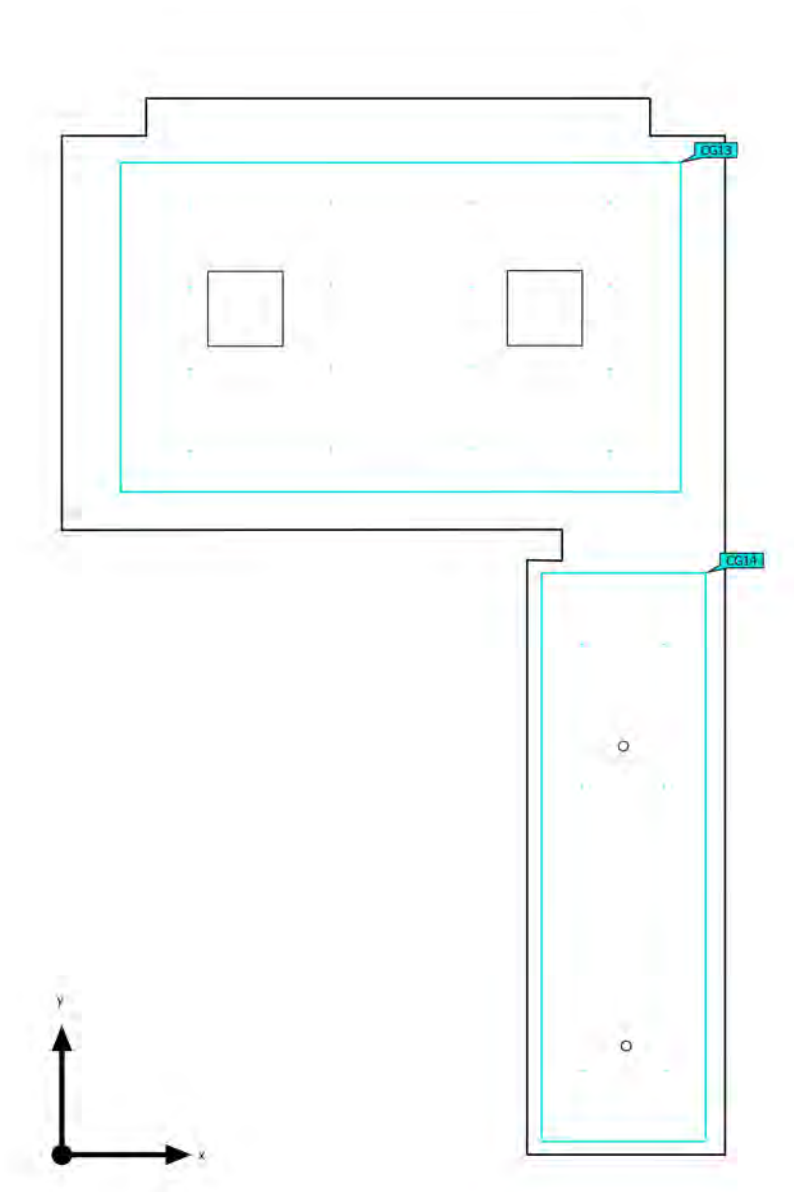
## 10- Supervisor Office (Light scene 1)

## Calculation objects

## Calculation surfaces

Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Passage Perpendicular illuminance Height: 0.000 m	182 lx	149 lx	214 lx	0.82	0.70	CG14
Supervisor Office Perpendicular illuminance Height: 1.000 m	367 lx	249 lx	464 lx	0.68	0.54	CG13

10- Supervisor Office · Supervisor Office (Light scene 1)  
Summary



Ground area	25.84 m²		
Reflection factors	Ceiling: 50.0 %, Walls: 50.0 %, Floor: 20.0 %	Clearance height	2.800 m
Maintenance factor	0.80 (fixed)	Mounting height	2.800 m

## 10- Supervisor Office · Supervisor Office (Light scene 1)

### Summary

#### Results

	Symbol	Calculated	Index
Energy estimation <sup>(2)</sup>	Consumption	292 kWh/a	
Space	Lighting power density	4.57 W/m <sup>2</sup>	

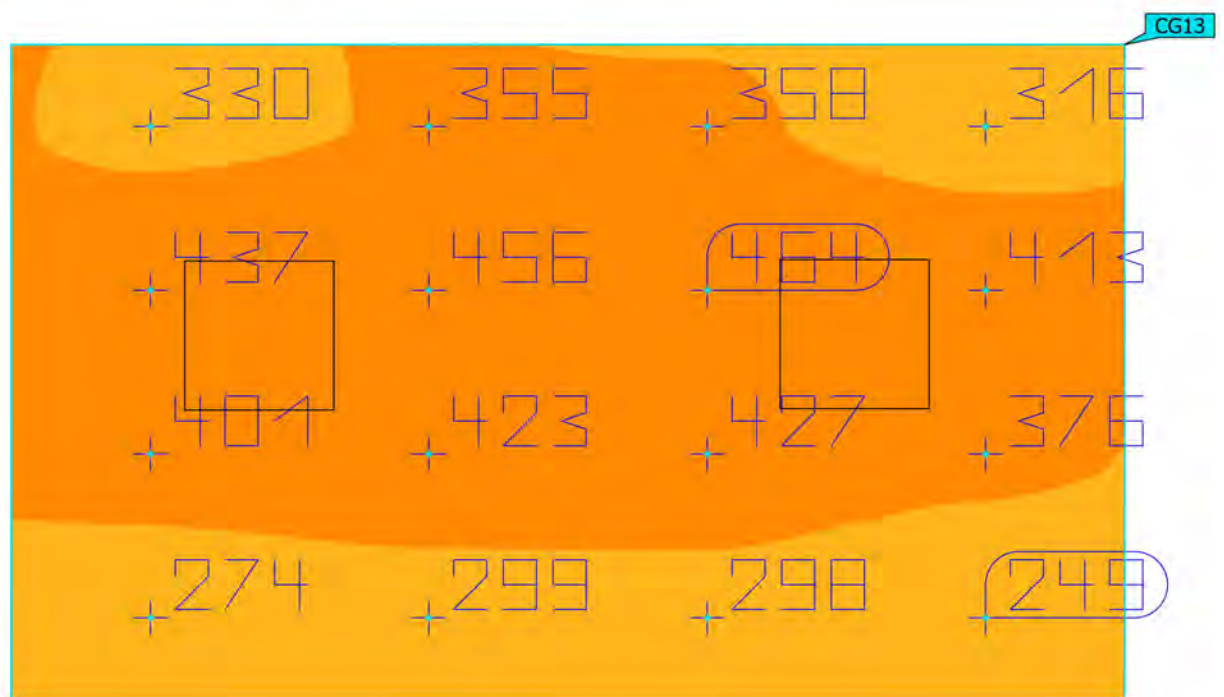
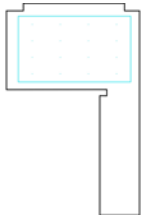
(2) Calculated using DIN:18599-4.

Utilisation profile: DIALux presetting (34.2 Standard (office))

#### Luminaire list

pcs.	Manufacturer	Article No.	Article name	P		Luminous efficacy
2	FRATER	BP10-048	LED BACK LIGHT PANEL BP10	48.0 W	4800 lm	100.0 lm/W
2	FRATER	DLG5-010	COB Down Light Gemini 05	11.0 W	1066 lm	96.9 lm/W

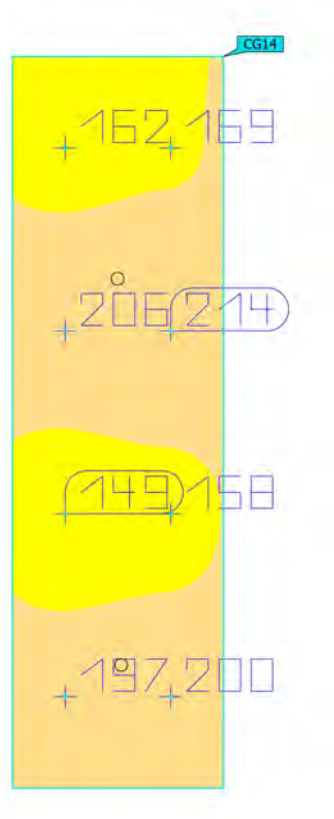
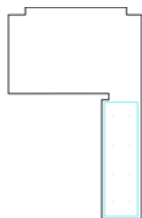
# 10- Supervisor Office · Supervisor Office (Light scene 1) Supervisor Office



Properties		$E_{min}$	$E_{max}$	$U_o (g_1)$	$g_2$	Index
Supervisor Office	367 lx	249 lx	464 lx	0.68	0.54	CG13
Perpendicular illuminance						
Height: 1.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))

10- Supervisor Office · Supervisor Office (Light scene 1)  
Passage



Properties		E <sub>min</sub>	E <sub>max</sub>	U <sub>o</sub> (g <sub>1</sub> )	g <sub>2</sub>	Index
Passage	182 lx	149 lx	214 lx	0.82	0.70	CG14
Perpendicular illuminance						
Height: 0.000 m						

Utilisation profile: DIALux presetting (34.2 Standard (office))