

Installation : Warrior Warehouses\_R0

Project number : D-542110

Customer :

Processed by : Signify

Date : 30.11.2023

Project description:

Disclaimer: The nominal values shown are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply. This calculation is based on provisional data and not suitable for construction.

Emergency luminaires may need adjusting or additional quantity required to cover points of emphasis such as fire alarm panels, fire call points, fire-fighting equipment etc. No first aid posts, firefighting equipment, refuge areas or fire bells have been identified so these have not been allowed for in the design. A fire risk assessment should be provided by the client with details of high risk areas needing above standard levels, as such this has not been calculated.

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

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NOT FOR CONSTRUCTION

Object :  
Installation : Warrior Warehouses\_R0  
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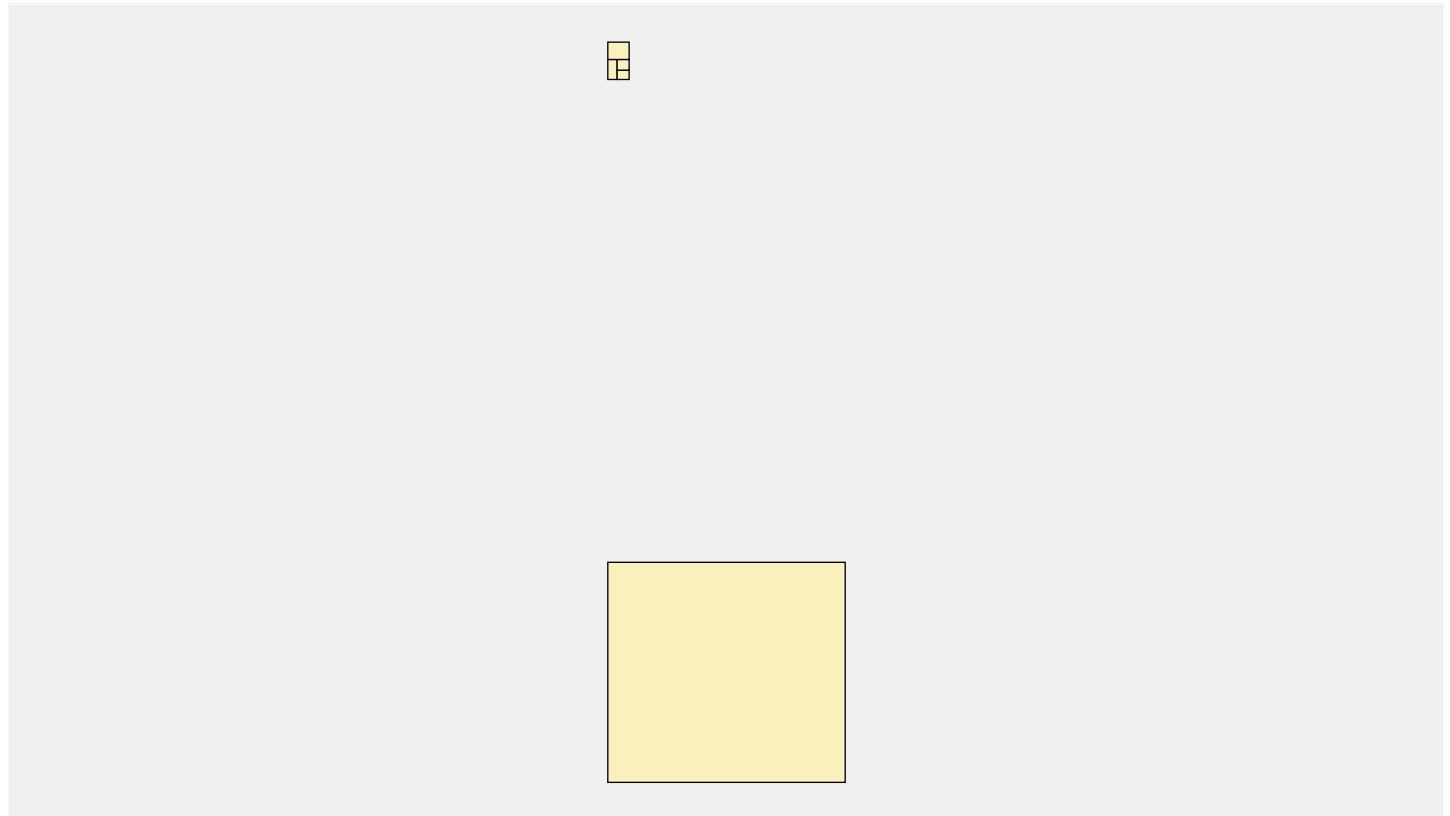
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
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## Summary, Warehouse



### .1 Floor overview



Number of rooms	5	 Calculated
Total area	1943 m <sup>2</sup>	
Number of luminaires	47	
Total luminous flux	778000 lm	
Total power	5404 W	
Total power per area	2.78 W/m <sup>2</sup>	

## Parts list


### Type No.\Make


		<b>Philips Lighting</b>	
1	30 x	Order No.	: !BY122P G4 PSU 1 xLED250S/840 WB
		Luminaire name	: C
		Equipment	: 1 x LED250S/840 172 W / 25000 lm
3	2 x	Order No.	: !RC132V G5 36S/840 PSU W60L60 OC
		Luminaire name	: A
		Equipment	: 1 x LED36S/840 29 W / 3600 lm


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## Summary, Warehouse

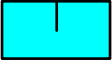
### .1 Floor overview

4 2E x Order No. : !IRC132V G5 36S/840 PSU W60L60 OC ELB3 -- Emergency Lighting --  
 Luminaire name : AE  
 Equipment : 1 x LED36S/840 29 W / 3600 lm  
 Emergency : 360 lm (10.0 %)

5 1 x Order No. : !WL140V LED34S/840 PSU WH  
 Luminaire name : B  
 Equipment : 1 x LED34S/840 32 W / 3400 lm

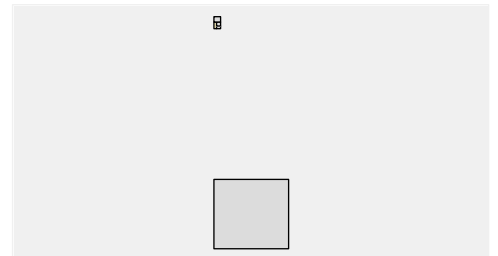
6 3E x Order No. : !WL140V LED34S/840 PSU WH ELB3 -- Emergency Lighting --  
 Luminaire name : BE  
 Equipment : 1 x LED34S/840 32 W / 3400 lm  
 Emergency : 360 lm (10.6 %)

#### 1500lm - CORE EM HO /2022-06-08 Eulumdat/1 B-Tilt = 0.00

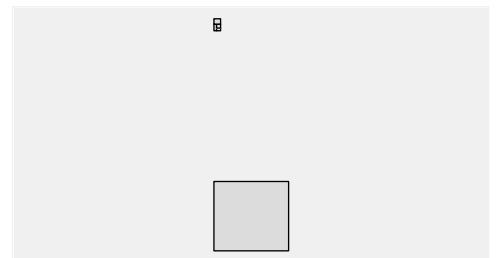
2 9E x Order No. : !CORE EM HO BKD LED150/865 NM3 ELB IP65 -- Emergency Lighting --  
 Luminaire name : E1  
 Equipment : 1 x 1 W / 1500 lm (0%)  
 Emergency : 1500 lm

## Rooms

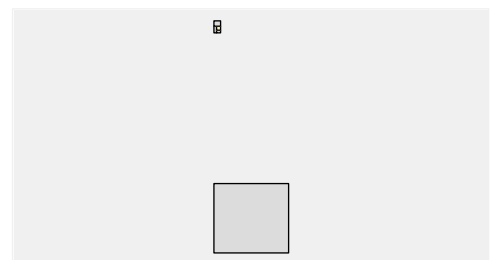
**Circulation** 2 x Luminaires  
 Total luminous flux 6800 lm  
 Total power 64 W  
 Total power per area (6 m<sup>2</sup>) 10.35 W/m<sup>2</sup>  
 $\bar{E}_m$  244 lx  
 $E_{min}$  205 lx  
 $E_{min}/\bar{E}_m (U_0)$  0.84  
 RUG  $\leq 20.9$



**Change** 1 x Luminaires  
 Total luminous flux 3400 lm  
 Total power 32 W  
 Total power per area (4 m<sup>2</sup>) 7.78 W/m<sup>2</sup>  
 $\bar{E}_m$  163 lx  
 $E_{min}$  148 lx  
 $E_{min}/\bar{E}_m (U_0)$  0.91  
 RUG 10.0



**WC / SHW** 1 x Luminaires  
 Total luminous flux 3400 lm  
 Total power 32 W  
 Total power per area (5 m<sup>2</sup>) 6.98 W/m<sup>2</sup>  
 $\bar{E}_m$  160 lx  
 $E_{min}$  145 lx  
 $E_{min}/\bar{E}_m (U_0)$  0.90  
 RUG 10.0

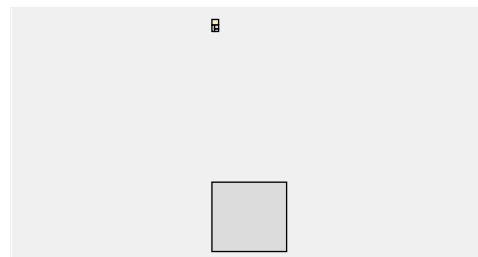


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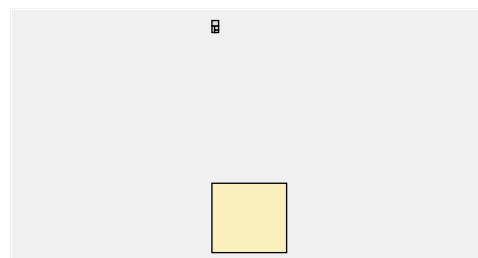
## Summary, Warehouse

### .1 Floor overview

<b>Office / Kitchen</b>	4 x Luminaires
Total luminous flux	14400 lm
Total power	116 W
Total power per area (13 m <sup>2</sup> )	8.77 W/m <sup>2</sup>
$\bar{E}_m$	562 lx
$E_{min}$	482 lx
$E_{min}/\bar{E}_m (U_0)$	0.86
RUG	$\leq 16.2$



<b>Warehouse</b>	39 x Luminaires
Total luminous flux	750000 lm
Total power	5160 W
Total power per area (1915 m <sup>2</sup> )	2.69 W/m <sup>2</sup>
$\bar{E}_m$	335 lx
$E_{min}$	159 lx
$E_{min}/\bar{E}_m (U_0)$	0.48
RUG	$\leq 26.2$

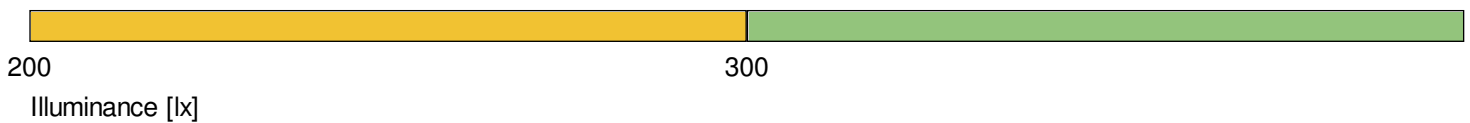
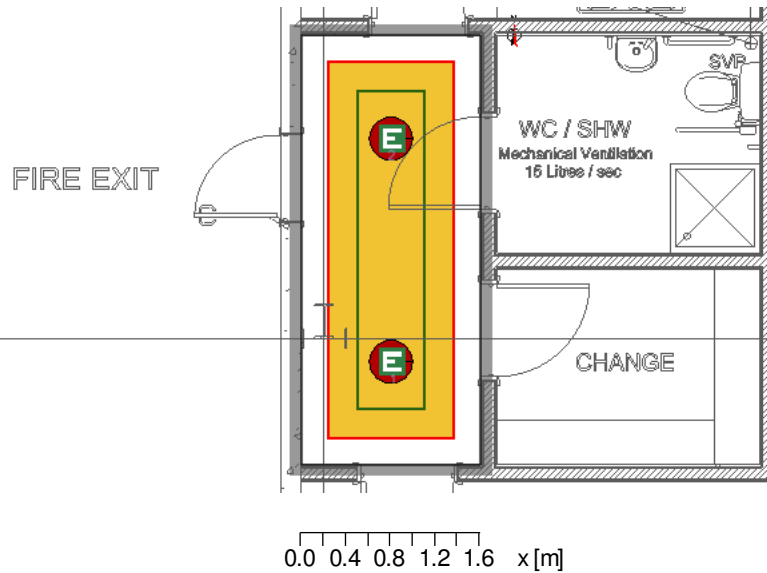


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# 1 Circulation

## 1.1 Summary, Circulation

### 1.1.1 Result overview, Evaluation area 1



#### General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.80 m
Maintenance factor	0.80
Total luminous flux	6800.00 lm
Total power	64.0 W
Total power per area (6.18 m <sup>2</sup> )	10.35 W/m <sup>2</sup> (4.24 W/m <sup>2</sup> /100lx)

#### Evaluation area 1

#### Reference plane 1.1

	Horizontal	cylindrical
$\bar{E}_m$	244 lx	93 lx
$E_{min}$	205 lx	84 lx
$E_{min}/\bar{E}_m (U_0)$	0.84	0.91
$E_{min}/E_{max} (U_d)$	0.76	
$E_z/E_h$		0.30
Position	0.00 m	0.45 m
RUG (1.0H 2.5H)	$\leq 20.9$	
Luminaire : (BE, !WL140V LED34S/840 PSU WH ELB3 )		

#### Major surfaces

$\bar{E}_m$	$U_0$
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Object :  
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## 1 Circulation

### 1.1 Summary, Circulation

#### 1.1.1 Result overview, Evaluation area 1

##### Type No.\Make

6	2E x	<b>Philips Lighting</b>	
		Order No.	: !WL140V LED34S/840 PSU WH ELB3
		Luminaire name	: BE
		Equipment	: 1 x LED34S/840 32 W / 3400 lm
		Emergency	: 360 lm (10.6 %)

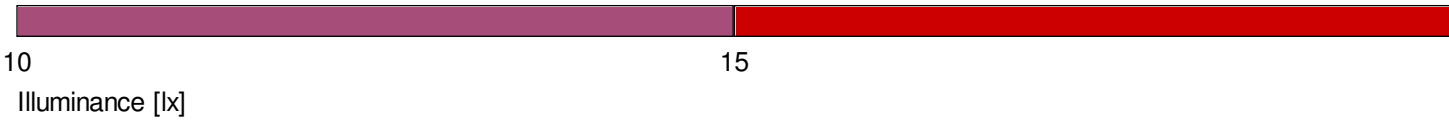
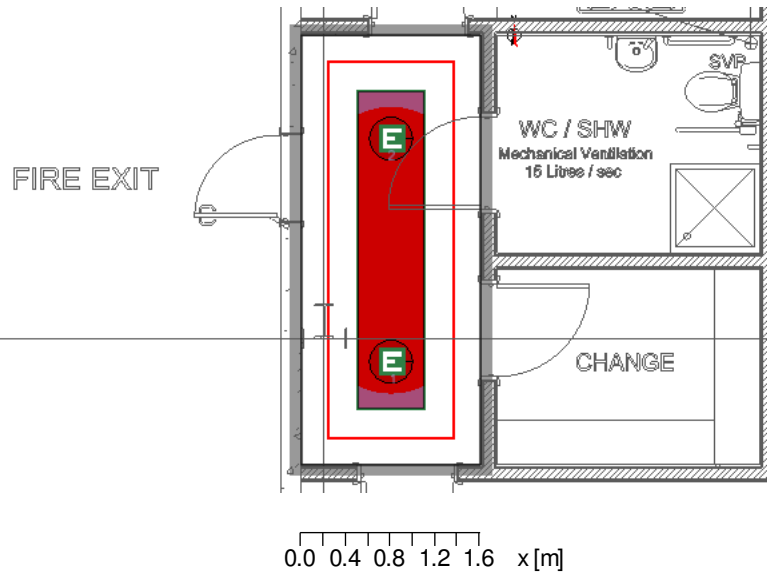
-- Emergency Lighting --

Object :  
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# 1 Circulation

## 1.2 Summary, Circulation

### 1.2.1.1 Result overview (emergency lighting)

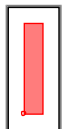


#### General

Calculation algorithm used : Direct component  
 Maintenance factor : 0.8  
 Height (phot. centre) : 2.76 m  
 Maximum I : 110 cd <= 900 cd

#### Anti panic area:

No.	Emin [lx]	Surface Emax [lx]	Ud
<b>Anti panic area 1.1</b>			
Calculation field: 0.61m x 2.85m (4 x 20 pts), Height = 0.00m			
1		14.07 lx	1: 1.25
		<span style="color: green;">&gt;= 0.5 lx</span>	<span style="color: green;">&gt;= 1 : 40</span>



#### Type No.\Make

6 2E x **Philips Lighting**  
 Order No. : !WL140V LED34S/840 PSU WH ELB3 -- Emergency Lighting --  
 Luminaire name : BE  
 Equipment : 1 x LED34S/840 32 W / 3400 lm  
 Emergency : 360 lm (10.6 %)

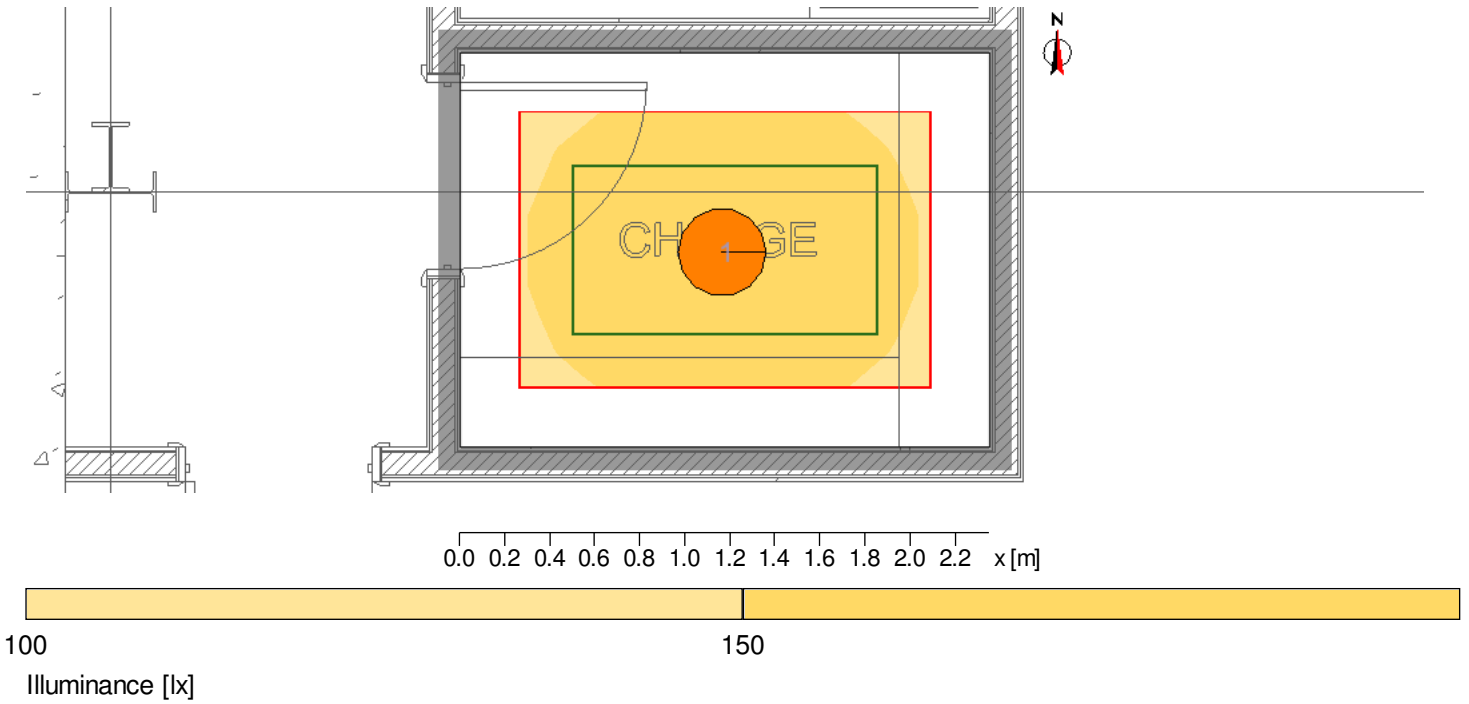


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## 2 Change

### 2.1 Summary, Change

#### 2.1.1 Result overview, Evaluation area 1



#### General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.80 m
Maintenance factor	0.80
Total luminous flux	3400.00 lm
Total power	32.0 W
Total power per area (4.11 m <sup>2</sup> )	7.78 W/m <sup>2</sup> (4.78 W/m <sup>2</sup> /100lx)

#### Evaluation area 1

#### Reference plane 1.1

	Horizontal	cylindrical
$\bar{E}_m$	163 lx	60 lx
$E_{min}$	148 lx	55 lx
$E_{min}/\bar{E}_m (U_0)$	0.91	0.93
$E_{min}/E_{max} (U_d)$	0.85	
$E_z/E_h$		0.28
Position	0.00 m	0.45 m
RUG (1.5H 1.1H)	10.0	

Luminaire :  
 (B, !WL140V LED34S/840 PSU WH )

Hints:  
 - Encountered room dimensions less than 2H. RUG value has been set to 10 as lower limit.

#### Major surfaces

$\bar{E}_m$   $U_0$


Object :  
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## 2 Change

### 2.1 Summary, Change

#### 2.1.1 Result overview, Evaluation area 1

##### Type No.\Make

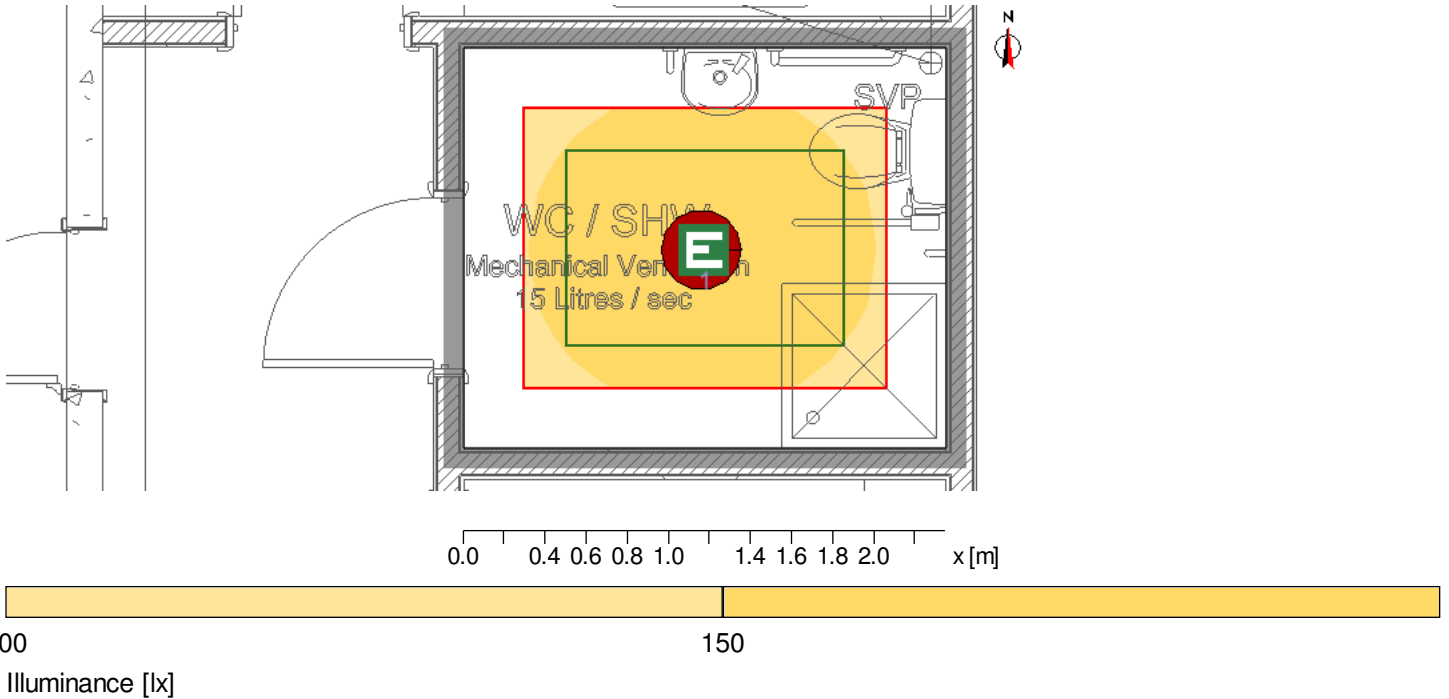
5	1 x	<b>Philips Lighting</b>	
		Order No.	: !WL140V LED34S/840 PSU WH
		Luminaire name	: B
		Equipment	: 1 x LED34S/840 32 W / 3400 lm

Object :  
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### 3 WC / SHW

#### 3.1 Summary, WC / SHW

##### 3.1.1 Result overview, Evaluation area 1



#### General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.80 m
Maintenance factor	0.80
Total luminous flux	3400.00 lm
Total power	32.0 W
Total power per area (4.58 m <sup>2</sup> )	6.98 W/m <sup>2</sup> (4.35 W/m <sup>2</sup> /100lx)

#### Evaluation area 1

#### Reference plane 1.1

	Horizontal	cylindrical
$\bar{E}_m$	160 lx	59 lx
$E_{min}$	145 lx	53 lx
$E_{min}/\bar{E}_m (U_0)$	0.90	0.90
$E_{min}/E_{max} (U_d)$	0.83	
$E_z/E_h$		0.28
Position	0.00 m	0.45 m
RUG (1.5H 1.3H)	10.0	

Luminaire :  
 (BE, !WL140V LED34S/840 PSU WH ELB3 )

Hints:  
 - Encountered room dimensions less than 2H. RUG value has been set to 10 as lower limit.

<b>Major surfaces</b>	$\bar{E}_m$	$U_0$
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Object :  
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### 3 WC / SHW

#### 3.1 Summary, WC / SHW

##### 3.1.1 Result overview, Evaluation area 1

###### Type No.\Make

		<b>Philips Lighting</b>	
6	1E x	Order No. : !WL140V LED34S/840 PSU WH ELB3	-- Emergency Lighting --
		Luminaire name : BE	
		Equipment : 1 x LED34S/840 32 W / 3400 lm	
		Emergency : 360 lm (10.6 %)	

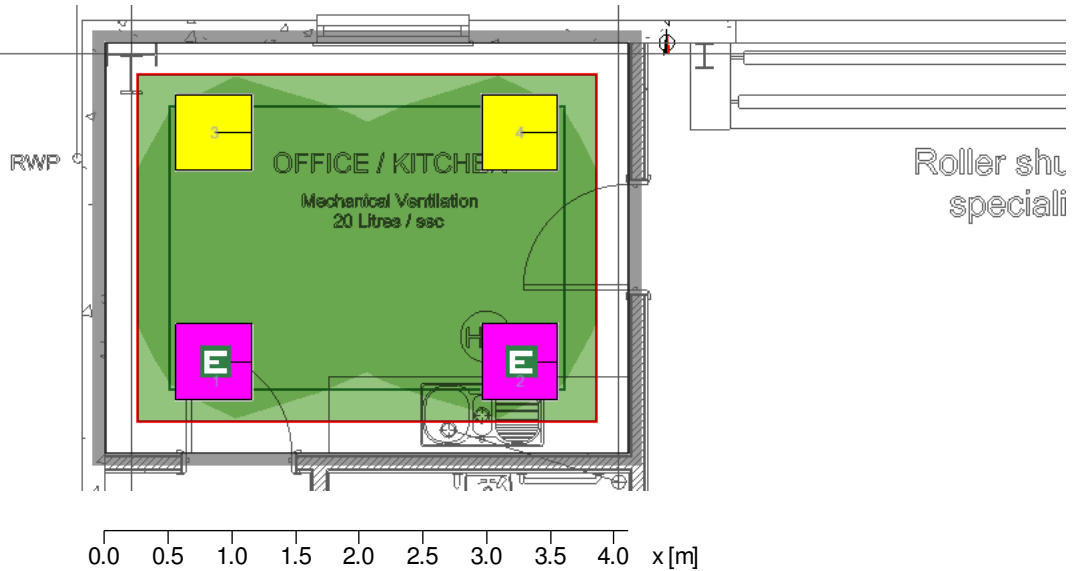


Object :  
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## 4 Office / Kitchen

### 4.1 Summary, Office / Kitchen

#### 4.1.1 Result overview, Evaluation area 1



300  
 Illuminance [lx]

#### General

Calculation algorithm used  
 Height of luminaire plane  
 Maintenance factor

Average indirect fraction  
 2.80 m  
 0.80

Total luminous flux  
 Total power  
 Total power per area (13.22 m<sup>2</sup>)

14400.00 lm  
 116.0 W  
 8.77 W/m<sup>2</sup> (1.56 W/m<sup>2</sup>/100lx)

#### Evaluation area 1

#### Reference plane 1.1

Horizontal  
 $\bar{E}_m$  562 lx  
 $E_{min}$  482 lx  
 $E_{min}/\bar{E}_m (U_0)$  0.86  
 $E_{min}/E_{max} (U_d)$  0.74  
 $E_z/E_h$   
 Position 0.75 m  
 RUG (2.0H 2.6H)  $\leq 16.2$   
 Luminaire :  
 (AE, IRC132V G5 36S/840 PSU W60L60 OC ELB3)

cylindrical  
 222 lx  
 191 lx  
 0.86  
 0.34  
 1.20 m

#### Major surfaces

$\bar{E}_m$

$U_0$



Object :  
Installation : Warrior Warehouses\_R0  
Project number : D-542110  
Date : 30.11.2023

## 4 Office / Kitchen

### 4.1 Summary, Office / Kitchen

#### 4.1.1 Result overview, Evaluation area 1

##### Type No.\Make

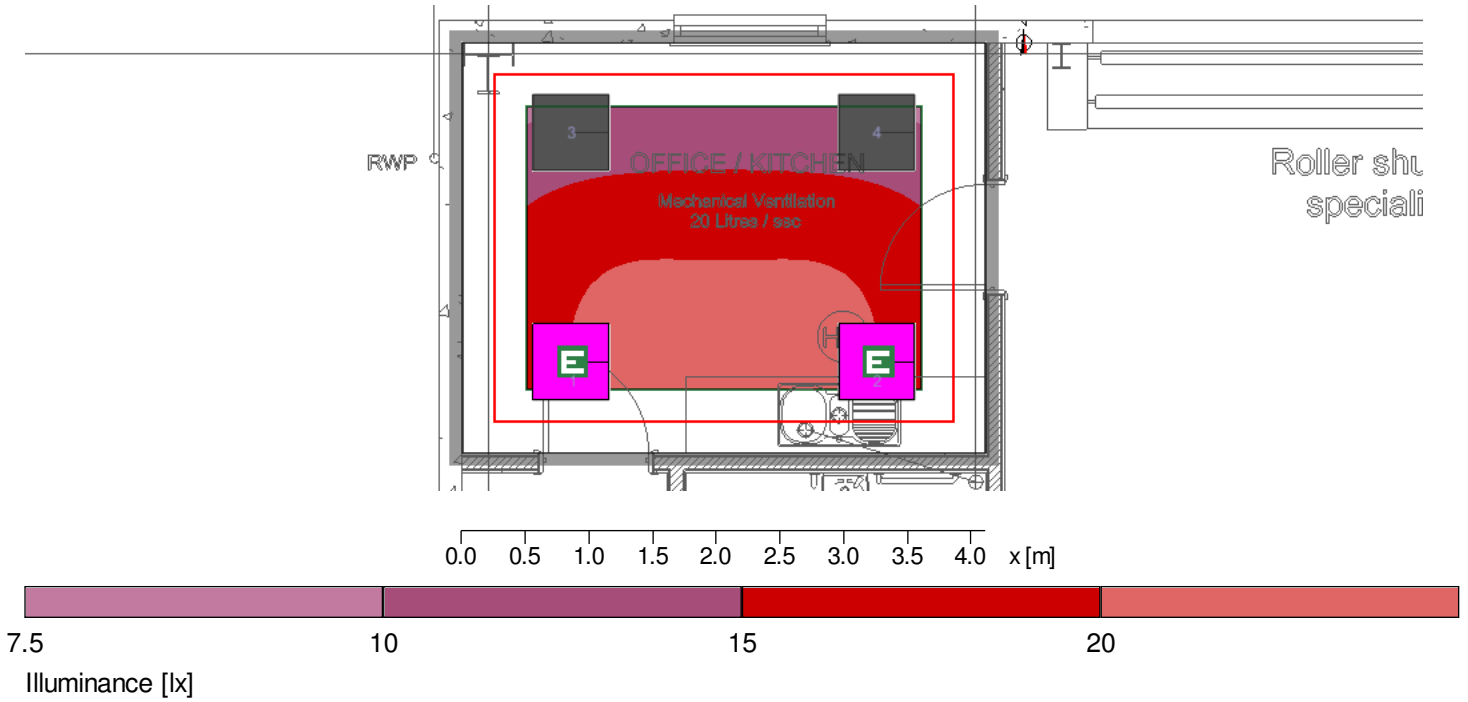
		<b>Philips Lighting</b>		
3	2 x	Order No.	: !RC132V G5 36S/840 PSU W60L60 OC	
		Luminaire name	: A	
		Equipment	: 1 x LED36S/840 29 W / 3600 lm	
4	2E x	Order No.	: !RC132V G5 36S/840 PSU W60L60 OC ELB3	-- Emergency Lighting --
		Luminaire name	: AE	
		Equipment	: 1 x LED36S/840 29 W / 3600 lm	
		Emergency	: 360 lm (10.0 %)	

Object :  
 Installation : Warrior Warehouses\_R0  
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## 4 Office / Kitchen

### 4.2 Summary, Office / Kitchen

#### 4.2.1.1 Result overview (emergency lighting)

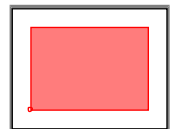


#### General

Calculation algorithm used : Direct component  
 Maintenance factor : 0.8  
 Height (phot. centre) : 2.80 m  
 Maximum I : 170 cd <= 900 cd

#### Anti panic area:

No.	Surface	Emin [lx]	Emax [lx]	Ud
<b>Anti panic area 1.1</b>				
Calculation field: 3.11m x 2.22m (7 x 5 pts), Height = 0.00m				
1		8.95 lx	21.61 lx	1: 2.41
		>= 0.5 lx		>= 1 : 40



#### Type No.\Make

4 2E x **Philips Lighting**  
 Order No. : !RC132V G5 36S/840 PSU W60L60 OC ELB3 -- Emergency Lighting --  
 Luminaire name : AE  
 Equipment : 1 x LED36S/840 29 W / 3600 lm  
 Emergency : 360 lm (10.0 %)

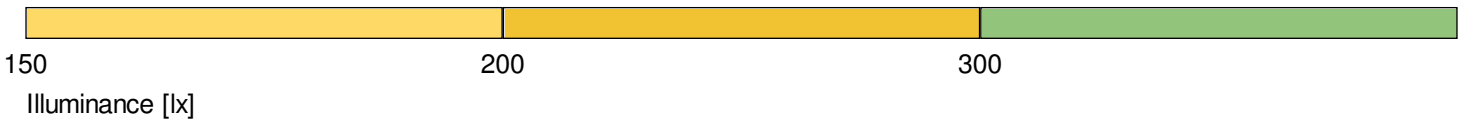
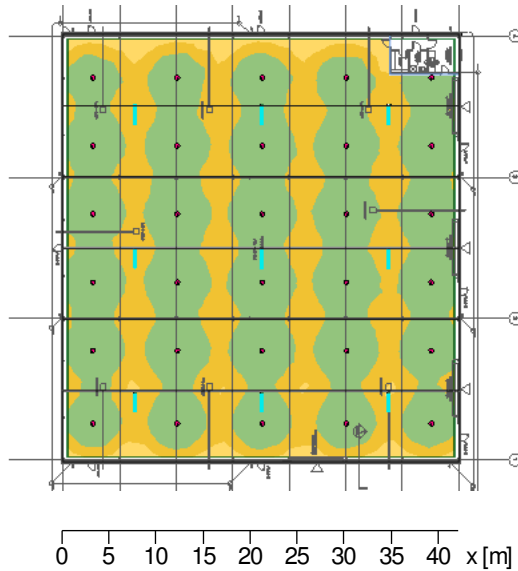


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## 5 Warehouse

### 5.1 Summary, Warehouse

#### 5.1.1 Result overview, Evaluation area 1



#### General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	4.80 m
Maintenance factor	0.80
Total luminous flux	750000.00 lm
Total power	5160.0 W
Total power per area (1915.18 m <sup>2</sup> )	2.69 W/m <sup>2</sup> (0.81 W/m <sup>2</sup> /100lx)

#### Evaluation area 1

#### Reference plane 1.1

	Horizontal	cylindrical
$\bar{E}_m$	335 lx	118 lx
$E_{min}$	159 lx	78 lx
$E_{min}/\bar{E}_m (U_0)$	0.48	0.66
$E_{min}/E_{max} (U_d)$	0.32	
$E_z/E_h$		0.35
Position	0.00 m	0.45 m
RUG (11.9H 12.0H)	$\leq 26.2$	

Luminaire :  
 (C, !BY122P G4 PSU 1 xLED250S/840 WB)

Hints:  
 - At least one of the room dimensions has been limited to 12H.

#### Major surfaces

$\bar{E}_m$

$U_0$


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## 5 Warehouse

### 5.1 Summary, Warehouse

#### 5.1.1 Result overview, Evaluation area 1

##### Type No.\Make

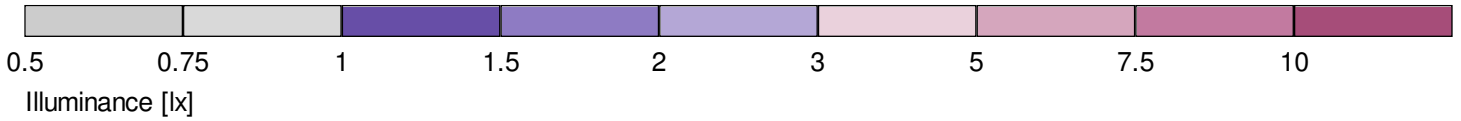
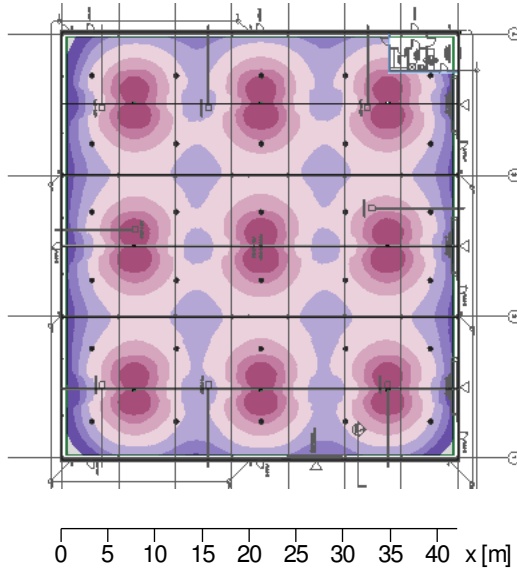
		<b>Philips Lighting</b>	
1	30 x	Order No.	: !BY122P G4 PSU 1 xLED250S/840 WB
		Luminaire name	: C
		Equipment	: 1 x LED250S/840 172 W / 25000 lm

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## 5 Warehouse

### 5.2 Summary, Warehouse

#### 5.2.1.1 Result overview (emergency lighting)

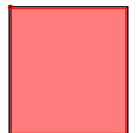


#### General

Calculation algorithm used : Direct component  
 Maintenance factor : 0.8  
 Height (phot. centre) : 4.76 m  
 Maximum I : 460 cd <= 5000 cd

#### Anti panic area:

No.	Surface Emin [lx]	Surface Emax [lx]	Ud
<b>Anti panic area 1.1</b>			
Calculation field: 44.41m x 41.18m (16 x 15 pts), Height = 0.00m			
1	0.66 lx	14.44 lx	1: 21.80
	>= 0.5 lx		>= 1 : 40



#### Type No.\Make

**2 9E x 1500lm - CORE EM HO /2022-06-08 Eulumdat/1 B-Tilt = 0.00**  
 Order No. : !CORE EM HO BKD LED150/865 NM3 ELB IP65  
 Luminaire name : E1  
 Equipment : 1 x 1 W / 1500 lm (0%)  
 Emergency : 1500 lm

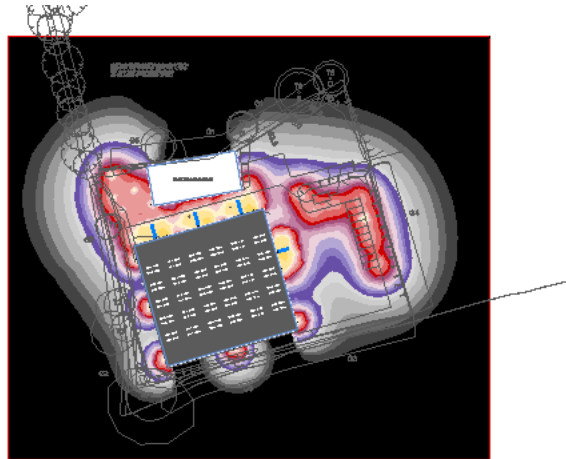
-- Emergency Lighting --

Object :  
 Installation : Warrior Warehouses\_R0  
 Project number : D-542110  
 Date : 30.11.2023

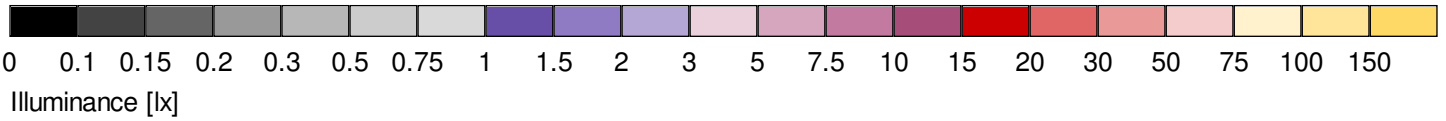
# 1 Exterior 1

## 1.1 Summary, Exterior 1

### 1.1.1 Result overview, Evaluation area 1



80 100 120 140 160 180 200 220 240 x [m]



#### General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	168477.00 lm
Total power	1340.3 W
Total power per area (23925.00 m <sup>2</sup> )	0.06 W/m <sup>2</sup> (1.34 W/m <sup>2</sup> /100lx)

#### Evaluation area 1

#### Reference plane 1.1

	Horizontal
$\bar{E}_m$	4.17 lx
$E_{min}$	0 lx
$E_{min}/\bar{E}_m (U_0)$	0.00
$E_{min}/E_{max} (U_d)$	0.00
Position	0.00 m

#### Type No.\Make


	<b>Philips Lighting</b>
	Order No. : !BVP130 T25 1 xLED172-4S/840 OFA52
	Luminaire name : G
	Equipment : 1 x LED172-4S/840 164 W / 17000 lm


Object :  
Installation : Warrior Warehouses\_R0  
Project number : D-542110  
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## 1 Exterior 1

### 1.1 Summary, Exterior 1

#### 1.1.1 Result overview, Evaluation area 1

7 14 x **PHILIPS**  
 Order No. : !BCP500 T25 S LED56/740 NO  
Luminaire name : D  
Equipment : 1 x LED56/740 37.5 W / 5600 lm

8 9E x **PHILIPS CORE WALL LED17-35S PSU IP65 OA BK 18W 4000K**  
 Order No. : !PHILIPS CORE WALL LED17-35S PSU IP65 OA BK 18W 4000K -- Emergency Lighti  
Luminaire name : F  
Equipment : 1 x 17.7 W / 2453 lm  
Emergency : 300 lm (12.2 %)