

# Stamford Road Development

Installation : Stair 01

Project number : C4C23846

Customer : Edwin McGinn

Processed by : EE

Date : 10.08.2021

Project description:

Drawing Reference: SRD-EOC-XX-ZZ-DR-S-2701-Stair-01-Plans

Rev 00 - Stair 01 calculation.

Reflectances: walls and stair threads all 50%.

Lighting Design: we are to use a MF as 0.8.

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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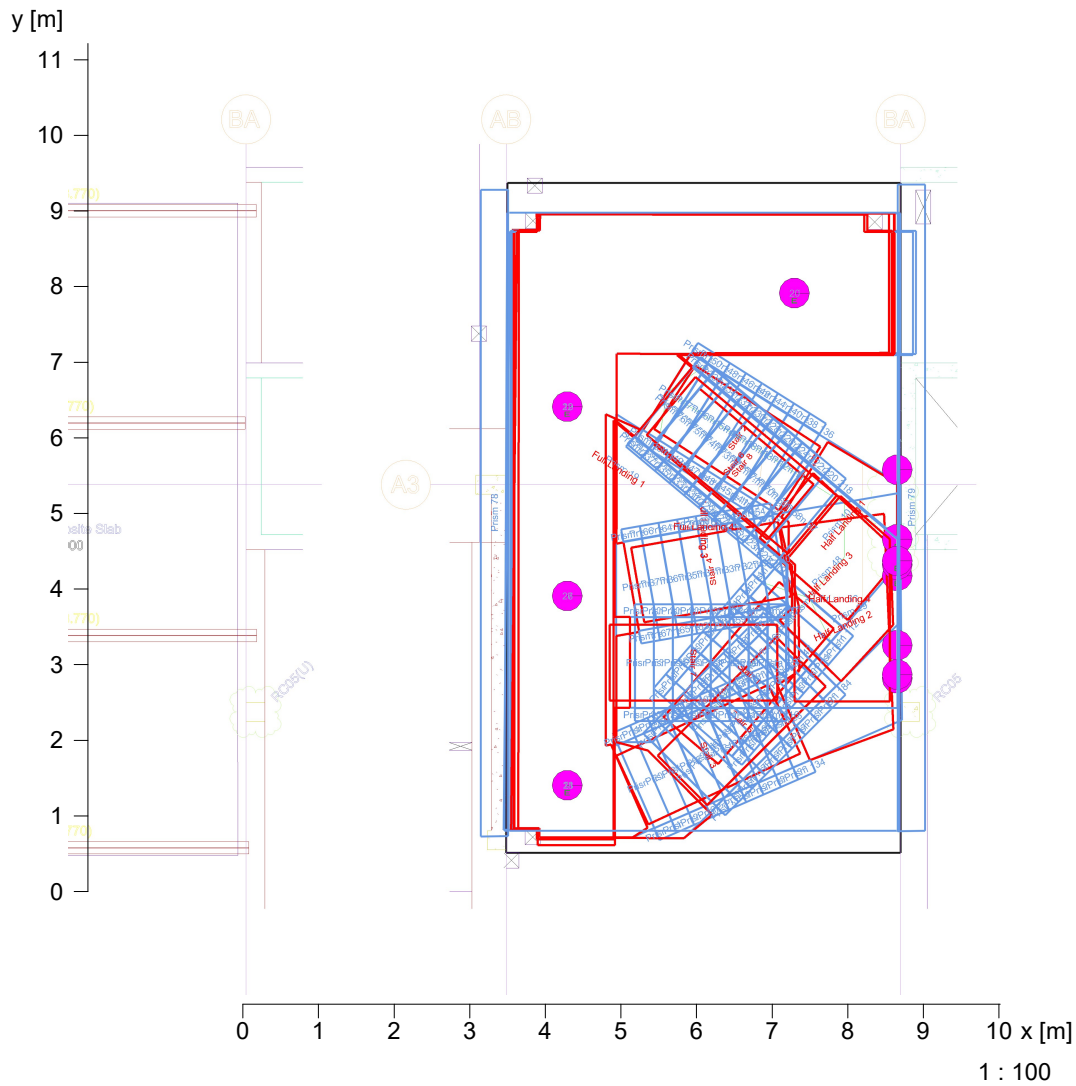
W.Blows

Whitecroft Lighting Ltd, Ashton-under-Lyne, Lancashire, OL7 0AX

# 1 Exterior 1

## 1.1 Description, Exterior 1

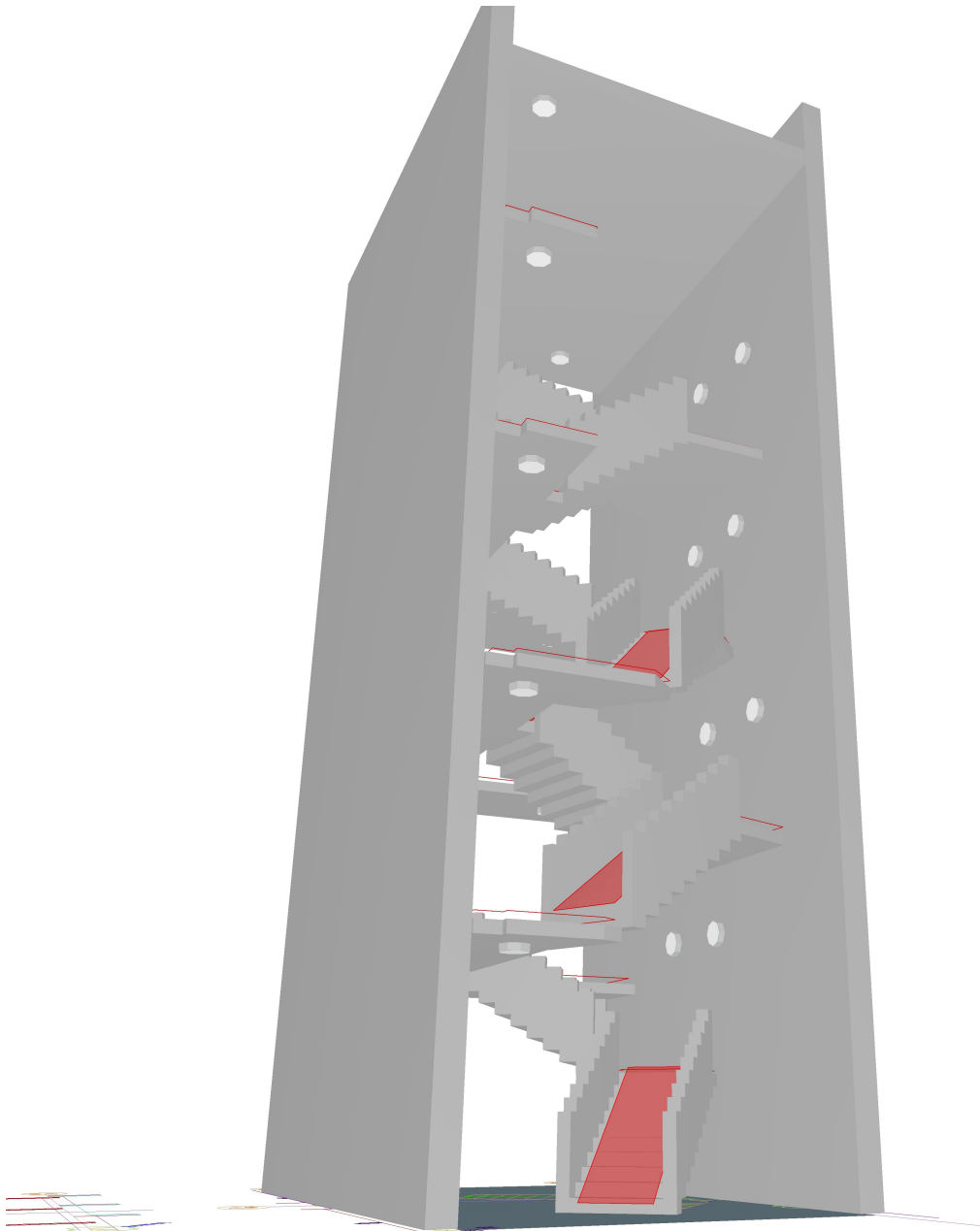
### 1.1.1 Floor plan



## 1.1 Description, Exterior 1

### 1.1.2 3D view, View 1

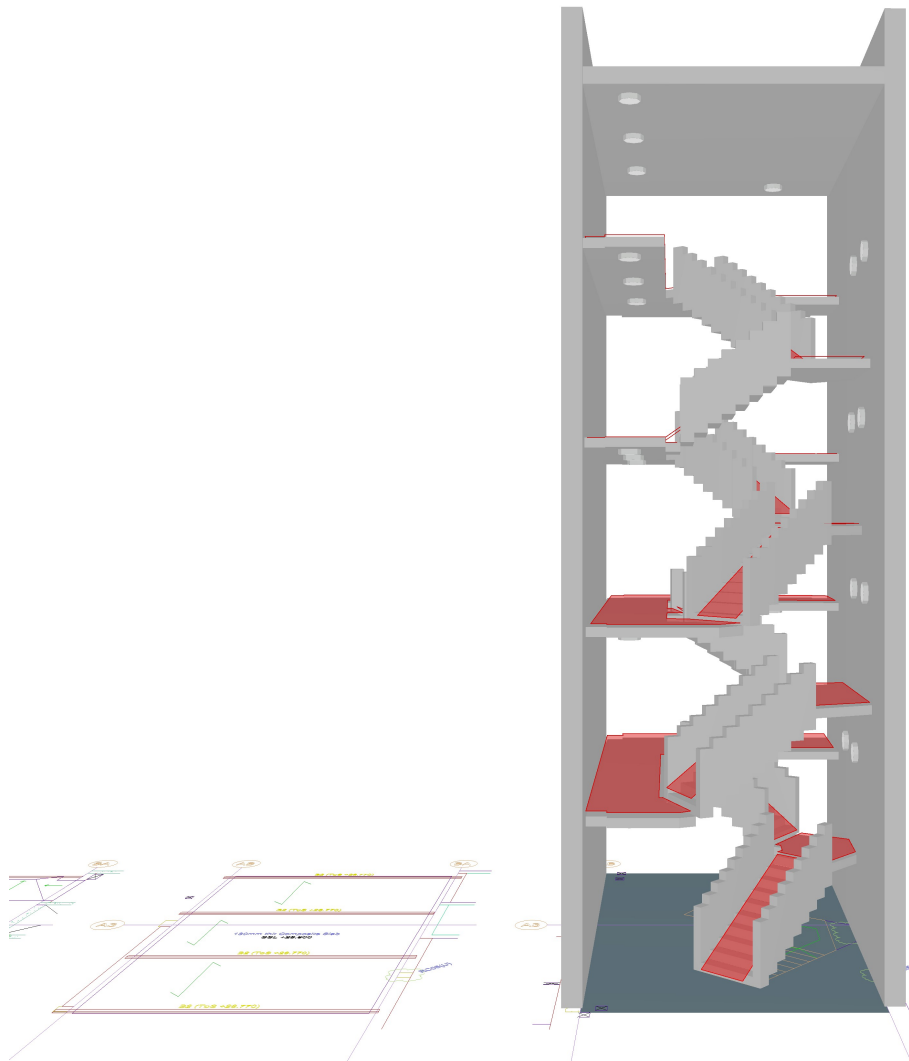
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## 1.1 Description, Exterior 1

### 1.1.3 3D view, View from the front

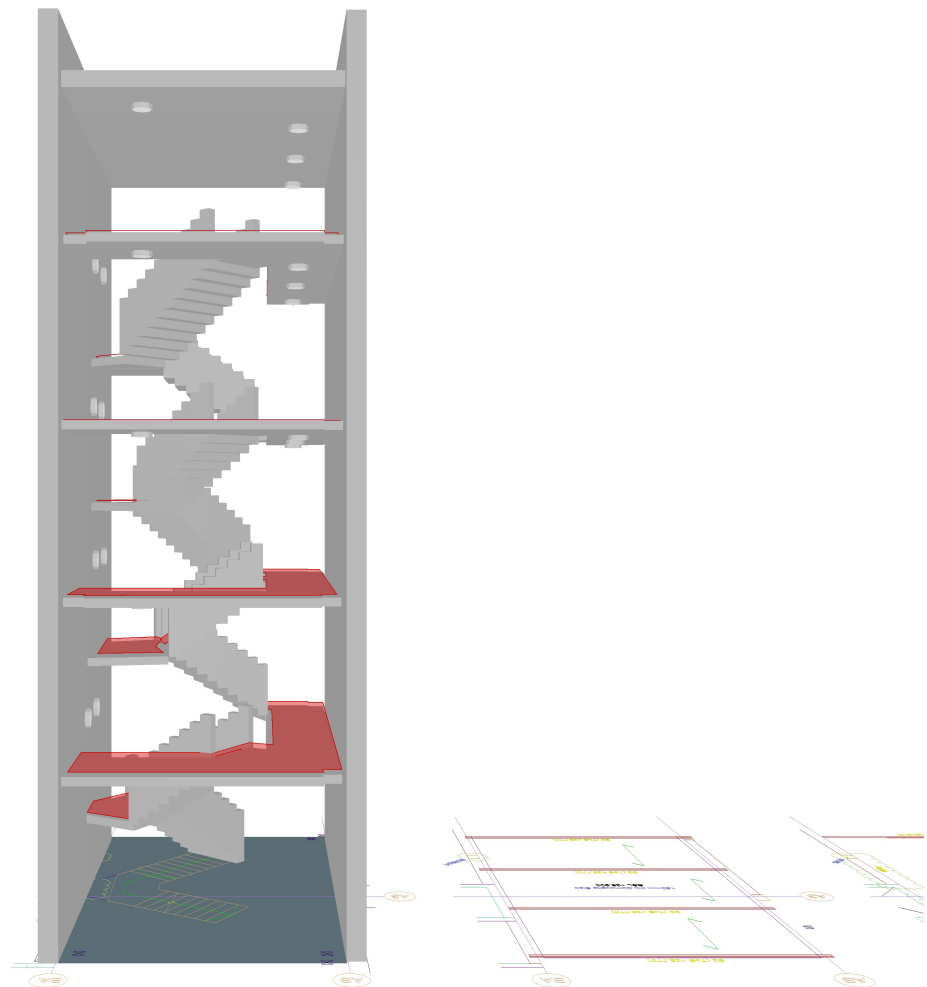
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## 1.1 Description, Exterior 1

### 1.1.4 3D view, View from the back

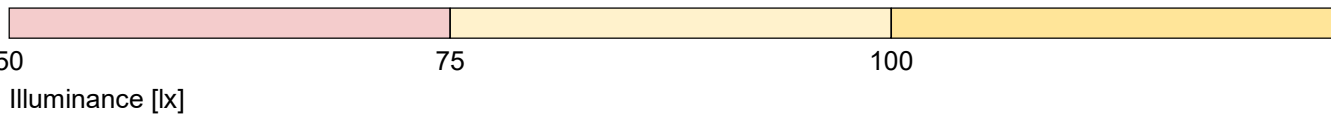
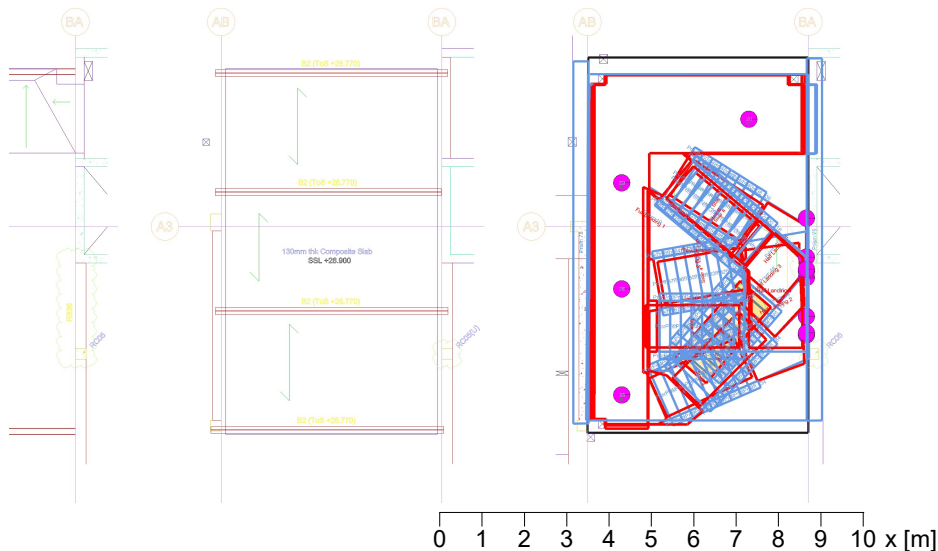
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# 1 Exterior 1

## 1.2 Summary, Exterior 1

### 1.2.1 Result overview, Stair 1



#### General

|                                  |                           |
|----------------------------------|---------------------------|
| Calculation algorithm used       | Average indirect fraction |
| Maintenance factor               | 0.80                      |
| Total luminous flux of all lamps | 75330 lm                  |
| Total power                      | 567 W                     |
| Total power per area (46.03 m²)  | 12.32 W/m²                |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Em        | 95 lx         |
| Minimum illuminance | Emin      | 64 lx         |
| Maximum illuminance | Emax      | 124 lx        |
| Uniformity Uo       | Emin/Em   | 1:1.48 (0.67) |
| Diversity Ud        | Emin/Emax | 1:1.93 (0.52) |

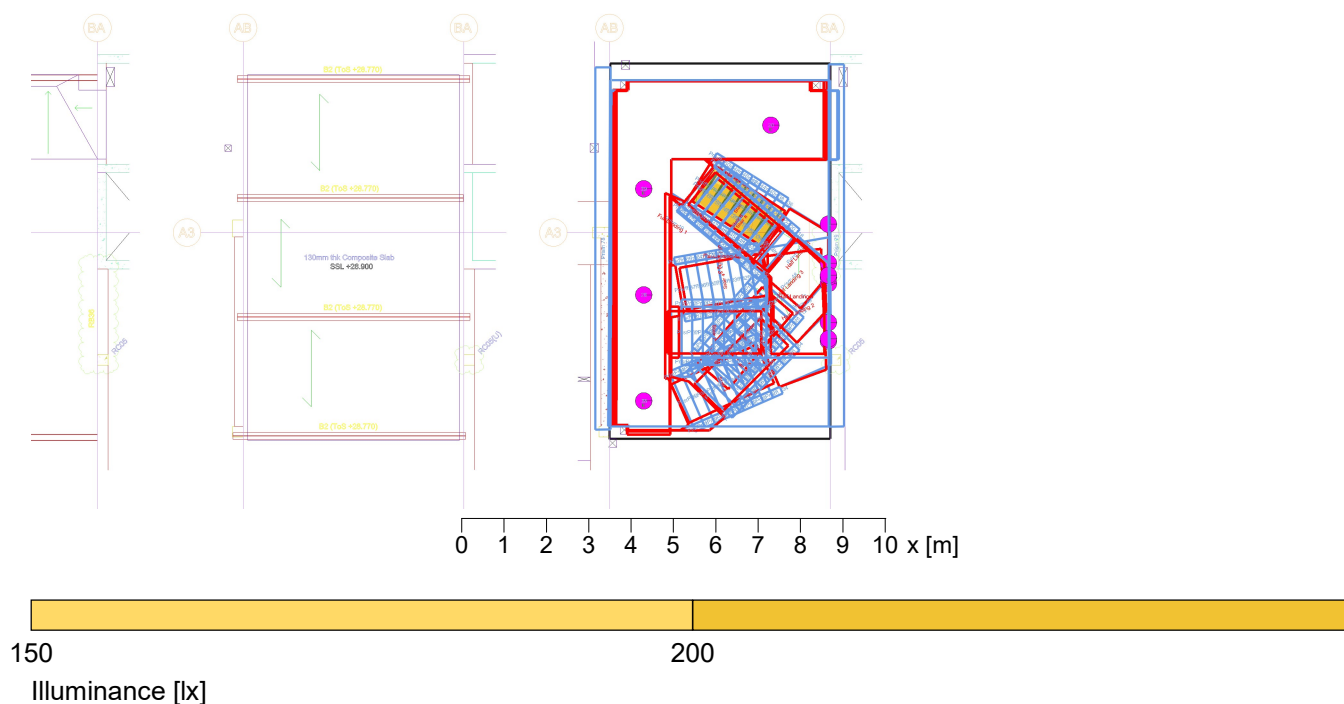
#### Type No.Make

|   |    |                                    |
|---|----|------------------------------------|
| 1 | 27 | <b>Whitecroft Lighting</b>         |
|   |    | Order No. : K6H4274KS              |
|   |    | Luminaire name : KOLO IP65         |
|   |    | Equipment : 1 x LED 21 W / 2790 lm |



## 1.2 Summary, Exterior 1

### 1.2.2 Result overview, Stair 2



#### General

|                                  |                           |
|----------------------------------|---------------------------|
| Calculation algorithm used       | Average indirect fraction |
| Maintenance factor               | 0.80                      |
| Total luminous flux of all lamps | 75330 lm                  |
| Total power                      | 567 W                     |
| Total power per area (46.03 m²)  | 12.32 W/m²                |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Em        | 208 lx        |
| Minimum illuminance | Emin      | 165 lx        |
| Maximum illuminance | Emax      | 244 lx        |
| Uniformity Uo       | Emin/Em   | 1:1.26 (0.79) |
| Diversity Ud        | Emin/Emax | 1:1.47 (0.68) |

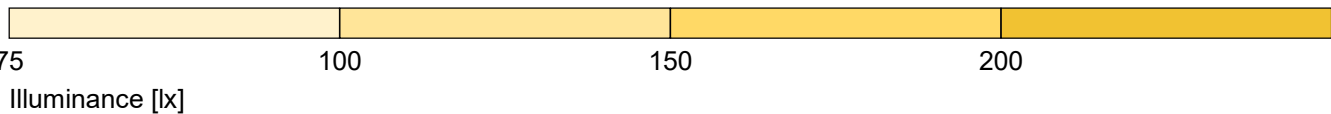
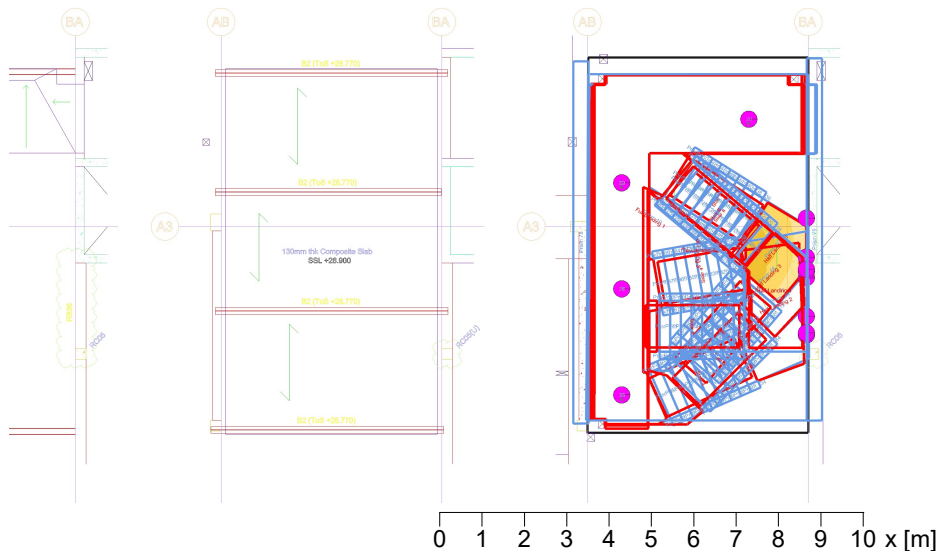
#### Type No. Make

|   |    |                                    |
|---|----|------------------------------------|
| 1 | 27 | <b>Whitecroft Lighting</b>         |
|   |    | Order No. : K6H4274KS              |
|   |    | Luminaire name : KOLO IP65         |
|   |    | Equipment : 1 x LED 21 W / 2790 lm |



## 1.2 Summary, Exterior 1

### 1.2.3 Result overview, Half Landing 1



#### General

|                                  |                           |
|----------------------------------|---------------------------|
| Calculation algorithm used       | Average indirect fraction |
| Height of evaluation surface     | 1.75 m                    |
| Maintenance factor               | 0.80                      |
| Total luminous flux of all lamps | 75330 lm                  |
| Total power                      | 567 W                     |
| Total power per area (46.03 m²)  | 12.32 W/m²                |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Em        | 167 lx        |
| Minimum illuminance | Emin      | 95 lx         |
| Maximum illuminance | Emax      | 222 lx        |
| Uniformity Uo       | Emin/Emax | 1:1.76 (0.57) |
| Diversity Ud        | Emin/Emax | 1:2.33 (0.43) |

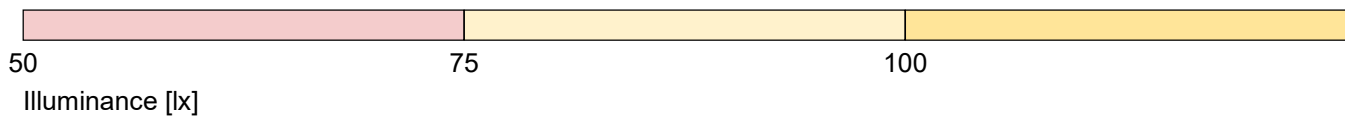
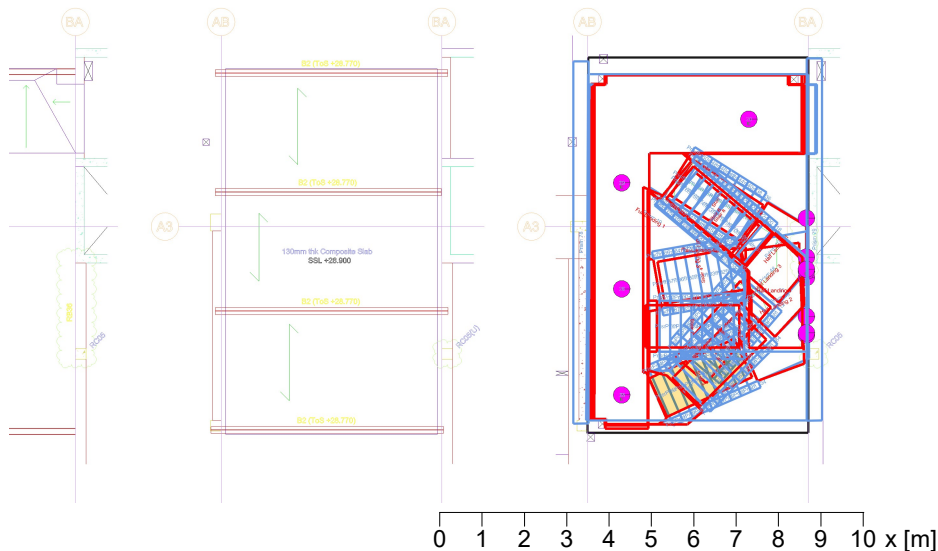
#### Type No. Make

|   |    |                                    |
|---|----|------------------------------------|
| 1 | 27 | <b>Whitecroft Lighting</b>         |
|   |    | Order No. : K6H4274KS              |
|   |    | Luminaire name : KOLO IP65         |
|   |    | Equipment : 1 x LED 21 W / 2790 lm |



## 1.2 Summary, Exterior 1

### 1.2.4 Result overview, Stair 3



#### General

|                                  |                           |
|----------------------------------|---------------------------|
| Calculation algorithm used       | Average indirect fraction |
| Maintenance factor               | 0.80                      |
| Total luminous flux of all lamps | 75330 lm                  |
| Total power                      | 567 W                     |
| Total power per area (46.03 m²)  | 12.32 W/m²                |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Em        | 112 lx        |
| Minimum illuminance | Emin      | 66 lx         |
| Maximum illuminance | Emax      | 146 lx        |
| Uniformity Uo       | Emin/Em   | 1:1.7 (0.59)  |
| Diversity Ud        | Emin/Emax | 1:2.21 (0.45) |

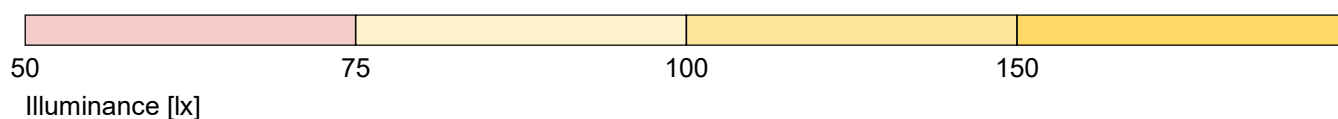
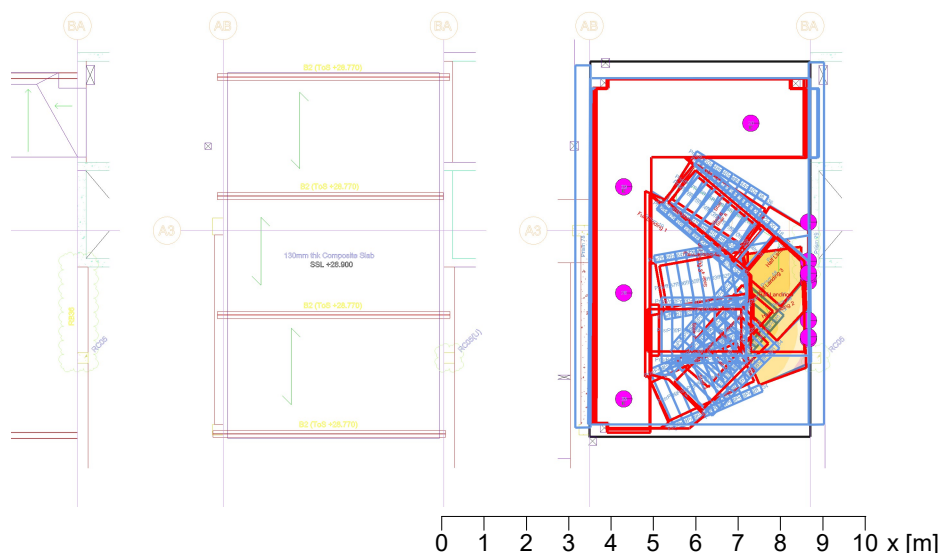
#### Type No. Make

|   |    |                                    |
|---|----|------------------------------------|
| 1 | 27 | <b>Whitecroft Lighting</b>         |
|   |    | Order No. : K6H4274KS              |
|   |    | Luminaire name : KOLO IP65         |
|   |    | Equipment : 1 x LED 21 W / 2790 lm |



## 1.2 Summary, Exterior 1

### 1.2.5 Result overview, Half Landing 2



#### General

|                                  |                           |
|----------------------------------|---------------------------|
| Calculation algorithm used       | Average indirect fraction |
| Height of evaluation surface     | 4.99 m                    |
| Maintenance factor               | 0.80                      |
| Total luminous flux of all lamps | 75330 lm                  |
| Total power                      | 567 W                     |
| Total power per area (46.03 m²)  | 12.32 W/m²                |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Em        | 136 lx        |
| Minimum illuminance | Emin      | 70 lx         |
| Maximum illuminance | Emax      | 188 lx        |
| Uniformity Uo       | Emin/Emax | 1:1.95 (0.51) |
| Diversity Ud        | Emin/Emax | 1:2.69 (0.37) |

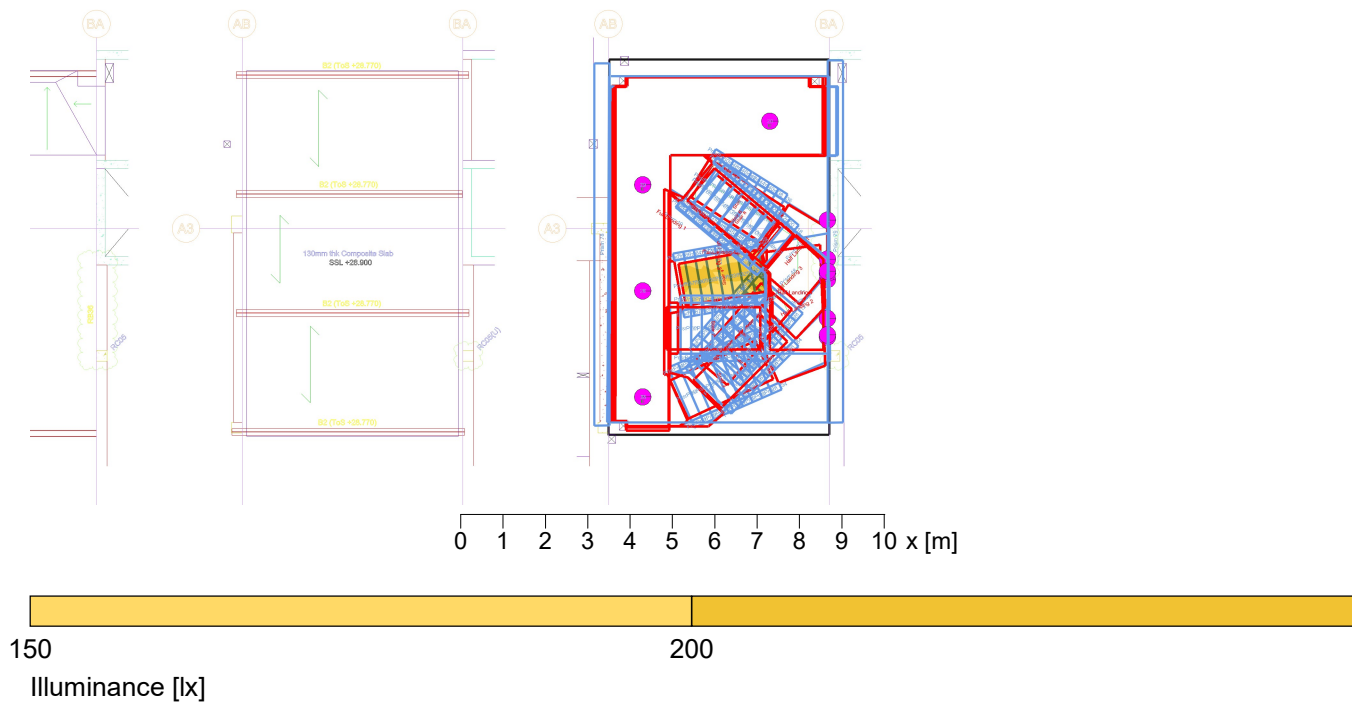
#### Type No. Make

|   |    |                                    |
|---|----|------------------------------------|
| 1 | 27 | <b>Whitecroft Lighting</b>         |
|   |    | Order No. : K6H4274KS              |
|   |    | Luminaire name : KOLO IP65         |
|   |    | Equipment : 1 x LED 21 W / 2790 lm |



## 1.2 Summary, Exterior 1

### 1.2.6 Result overview, Stair 4



#### General

|                                              |                           |
|----------------------------------------------|---------------------------|
| Calculation algorithm used                   | Average indirect fraction |
| Maintenance factor                           | 0.80                      |
| Total luminous flux of all lamps             | 75330 lm                  |
| Total power                                  | 567 W                     |
| Total power per area (46.03 m <sup>2</sup> ) | 12.32 W/m <sup>2</sup>    |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Em        | 193 lx        |
| Minimum illuminance | Emin      | 163 lx        |
| Maximum illuminance | Emax      | 237 lx        |
| Uniformity Uo       | Emin/Em   | 1:1.18 (0.85) |
| Diversity Ud        | Emin/Emax | 1:1.46 (0.69) |

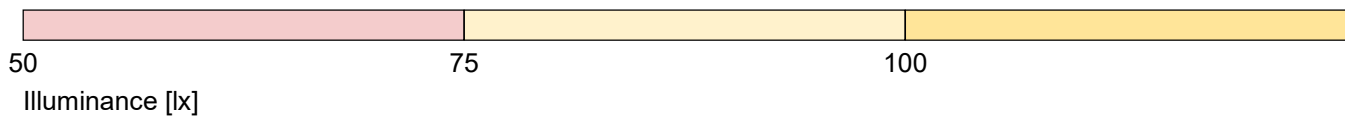
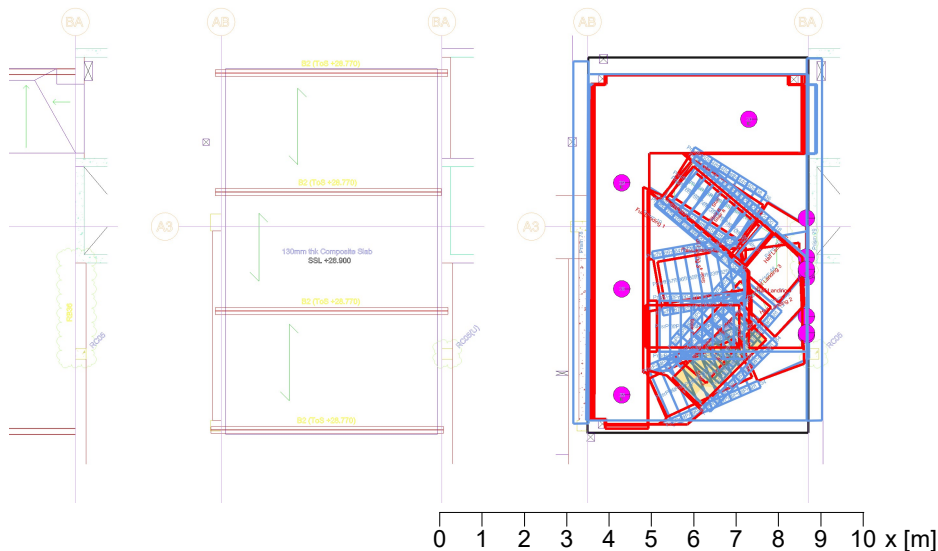
#### Type No.Make

|   |    |                                    |
|---|----|------------------------------------|
| 1 | 27 | <b>Whitecroft Lighting</b>         |
|   |    | Order No. : K6H4274KS              |
|   |    | Luminaire name : KOLO IP65         |
|   |    | Equipment : 1 x LED 21 W / 2790 lm |



## 1.2 Summary, Exterior 1

### 1.2.7 Result overview, Stair 5



#### General

|                                  |                           |
|----------------------------------|---------------------------|
| Calculation algorithm used       | Average indirect fraction |
| Maintenance factor               | 0.80                      |
| Total luminous flux of all lamps | 75330 lm                  |
| Total power                      | 567 W                     |
| Total power per area (46.03 m²)  | 12.32 W/m²                |

#### Illuminance

|                     |           |               |
|---------------------|-----------|---------------|
| Average illuminance | Em        | 95 lx         |
| Minimum illuminance | Emin      | 68 lx         |
| Maximum illuminance | Emax      | 109 lx        |
| Uniformity Uo       | Emin/Em   | 1:1.4 (0.71)  |
| Diversity Ud        | Emin/Emax | 1:1.62 (0.62) |

#### Type No. Make

|   |    |                                    |
|---|----|------------------------------------|
| 1 | 27 | <b>Whitecroft Lighting</b>         |
|   |    | Order No. : K6H4274KS              |
|   |    | Luminaire name : KOLO IP65         |
|   |    | Equipment : 1 x LED 21 W / 2790 lm |

