

**ESTENSIONE RETE DELLA PUBBLICA  
ILLUMINAZIONE TRATTO DI VIA BEL  
RIPOSO IN LOCALITA' VALENZATICO**



**CALCOLO ILLUMINOTECNICO**

Quarrata, Aprile 2021

Il progettista  
Ing. Iuri Gelli



# Comune di Quarrata - Via Bel Riposo

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**Standard** EN 13201 : 2015

**Designer** Studio Tecnico

**Date** 21/02/2021

**Application** Ulysse 3.5.2

**Description** Verifica Illuminotecnica Via Bel Riposo

Categoria M3 Strada Urbana di Quartiere

Teceo 1 32led 800mA 80W ottica 5248

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## 1. Fixtures

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### 1.1. TECEO GEN2 1 32 LEDs 800mA WW730 Piano, Vetro extra chiaro, Liscio 5248 468702

Type TECEO GEN2 1

Reflector 5248

Source 32 LEDs 800mA WW730

Protector Piano, Vetro extra chiaro, Liscio

Source flux 11,283 klm

G\* 2

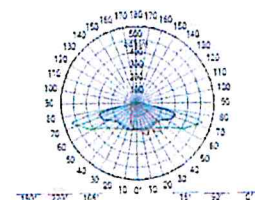
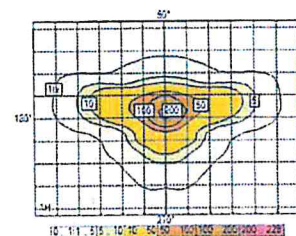
Luminaire wattage 80,0 W

MF 0,80

Matrix 468702

Luminaire flux 8,903 klm

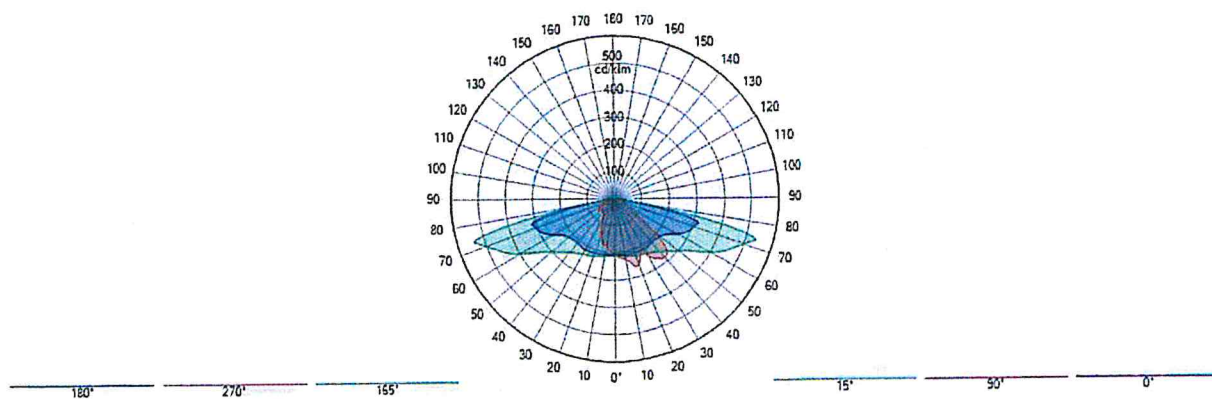
Efficacy 111 lm/W



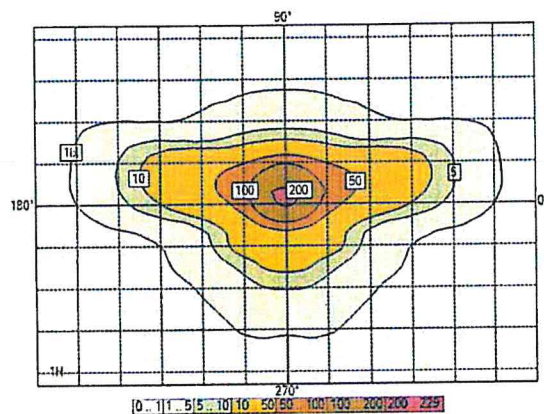
## 2. Photometric documents

### 2.1. TECEO GEN2 1 32 LEDs 800mA WW730 Piano, Vetro extra chiaro, Liscio 5248 468702

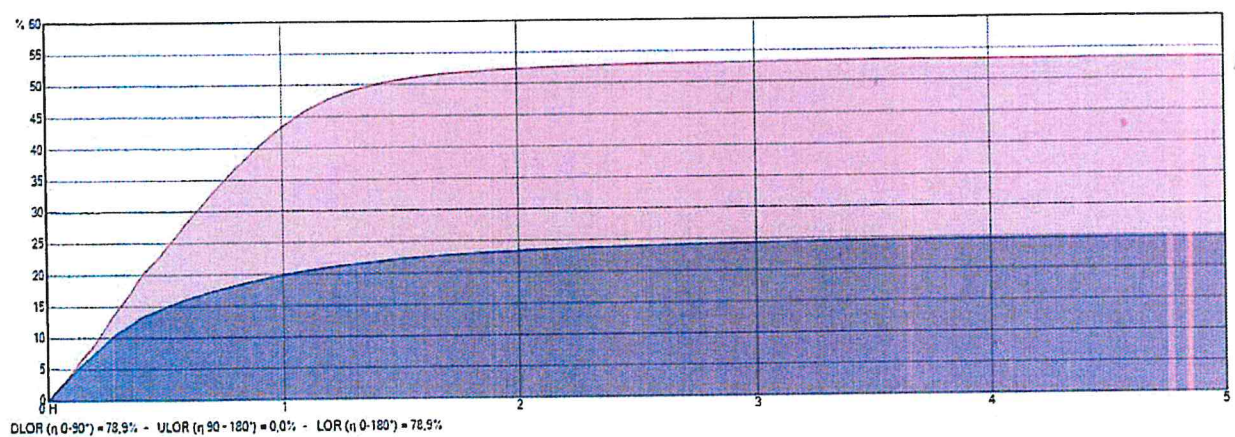
Polar/Cartesian diagram



Isolux



Utilization curve

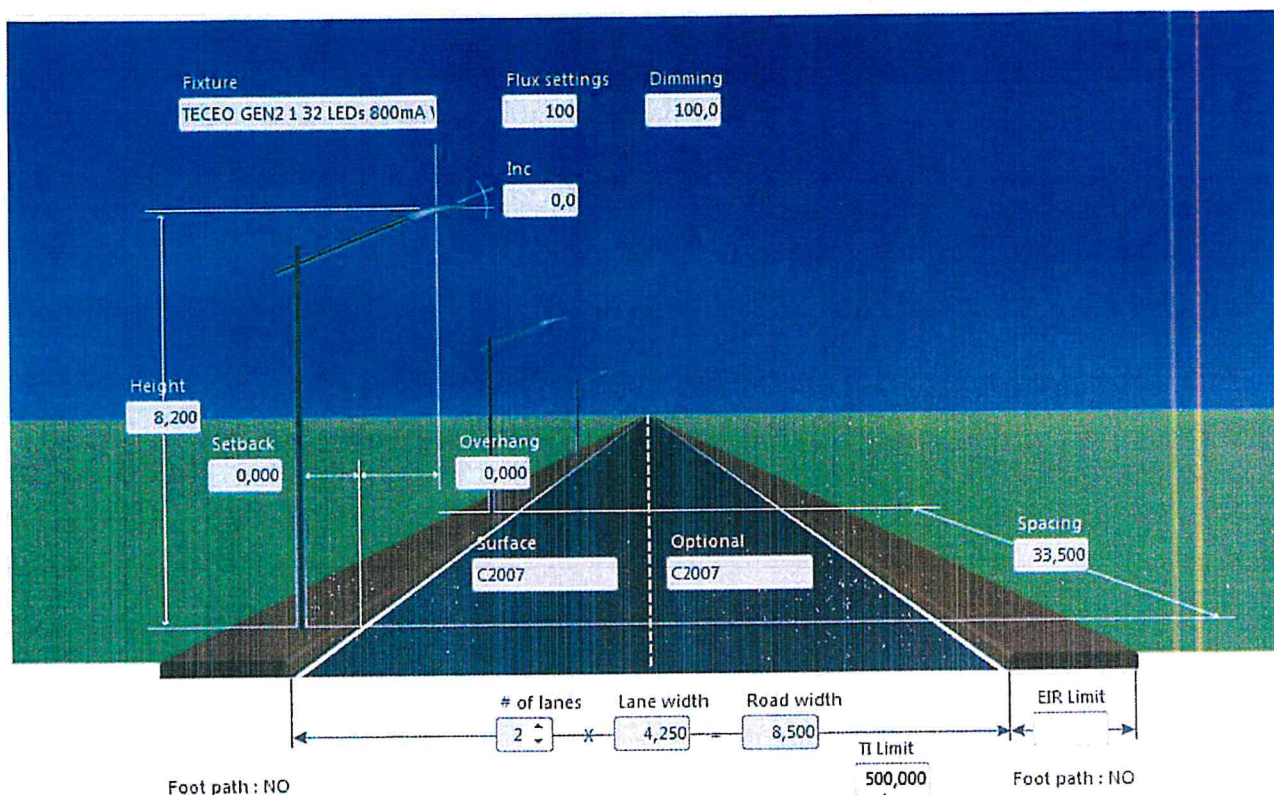


### 3. Standard

#### 3.1. Standard summary

Calculations according to CEN 13201 : 2015

Selected lighting class Road : M3 - LU : Ave = 1,00 cd/m<sup>2</sup> Uo = 40 % UI = 60 % UoW = 15 % TI : 15 % EIR : 0,30



#### 3.2. Results

Power per km 2,389 kW

Road (LU)

Luminance

|                            |   |                        |
|----------------------------|---|------------------------|
| Ave 1,00 cd/m <sup>2</sup> | ✓ | 1,00 cd/m <sup>2</sup> |
| Min 0,43 cd/m <sup>2</sup> | ✓ |                        |
| Uo 42 %                    | ✓ | 40,00 %                |
| UoW 42 %                   | ✓ | 15,00 %                |
| UI 1 73 %                  | ✓ | 60,00 %                |
| UI 2 82 %                  | ✓ | 60,00 %                |

Values

|          |   |      |
|----------|---|------|
| EIR 0,35 | ✓ | 0,30 |
| TI 14    | ✓ | 15   |

## 4. Configuration

### 4.1. Matrix description

| Ph. color                                                                         | Description                                                                    | Current [mA] | Source flux [klm] | Luminaire flux [klm] | Power [W] | Efficacy [lm/W] | MF    | Height [m] | Fixture                                                                             |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--------------|-------------------|----------------------|-----------|-----------------|-------|------------|-------------------------------------------------------------------------------------|
|  | TECEO GEN2 1 32 LEDs 800mA WW730 Piano, Vetro extra chiaro, Liscio 5248 468702 | 800          | 11,283            | 8,903                | 80,0      | 111             | 0,800 | 5 x 8,20   |  |

### 4.2. Luminaire positions

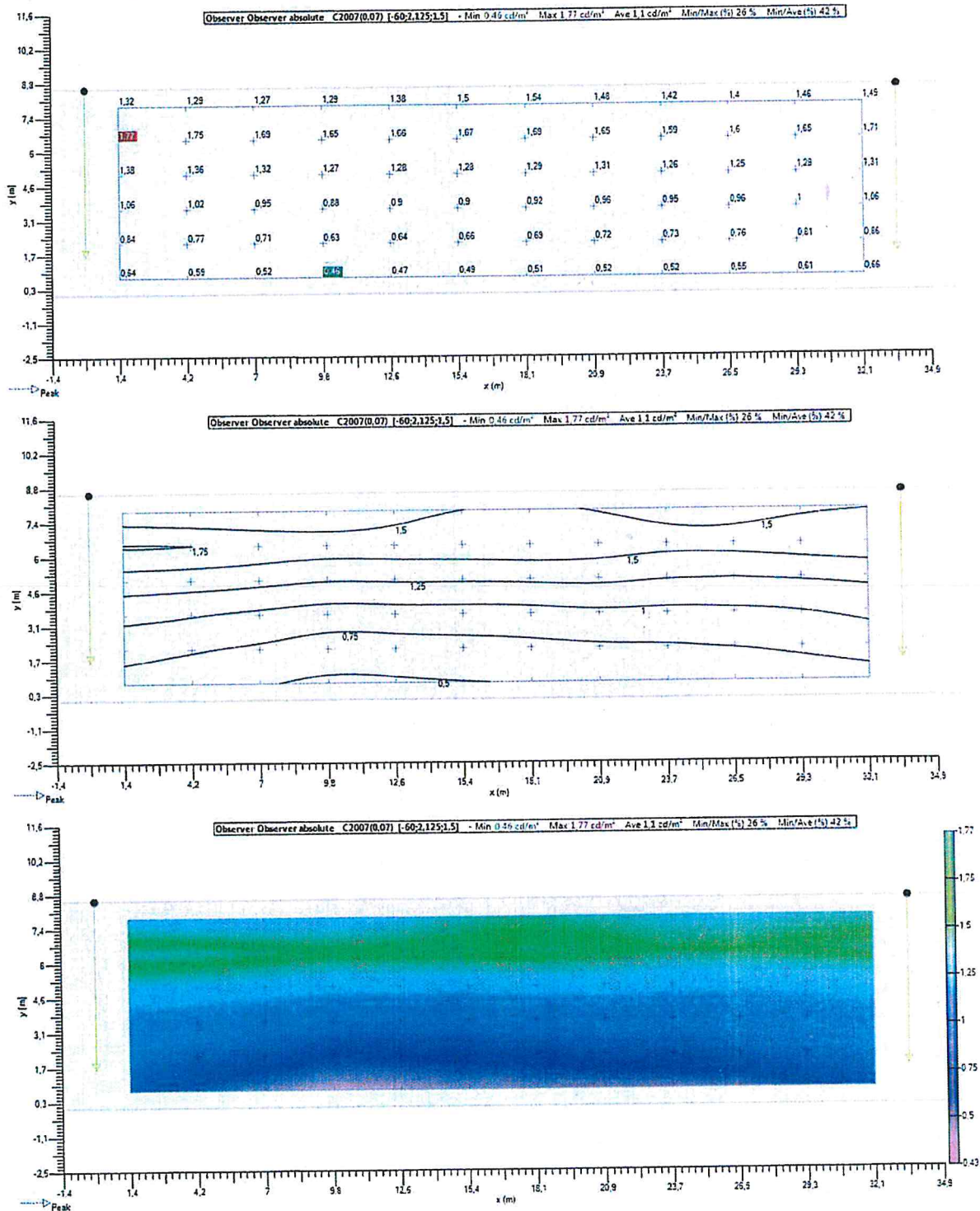
|                                     | Color                                                                             | N° | Position |       |       | Luminaire                                                                      |              |        |          |         |            |       | Target |       |       |
|-------------------------------------|-----------------------------------------------------------------------------------|----|----------|-------|-------|--------------------------------------------------------------------------------|--------------|--------|----------|---------|------------|-------|--------|-------|-------|
|                                     |                                                                                   |    | X [m]    | Y [m] | Z [m] | Name                                                                           | Current [mA] | Az [°] | Incl [°] | Rot [°] | Flux [klm] | MF    | X [m]  | Y [m] | Z [m] |
| <input checked="" type="checkbox"/> |  | 1  | -33,50   | 8,50  | 8,20  | TECEO GEN2 1 32 LEDs 800mA WW730 Piano, Vetro extra chiaro, Liscio 5248 468702 | 800          | 180,0  | 0,0      | 0,0     | 11,283     | 0,800 | -33,50 | 8,50  | 0,00  |
| <input checked="" type="checkbox"/> |  | 2  | 0,00     | 8,50  | 8,20  | TECEO GEN2 1 32 LEDs 800mA WW730 Piano, Vetro extra chiaro, Liscio 5248 468702 | 800          | 180,0  | 0,0      | 0,0     | 11,283     | 0,800 | 0,00   | 8,50  | 0,00  |
| <input checked="" type="checkbox"/> |  | 3  | 33,50    | 8,50  | 8,20  | TECEO GEN2 1 32 LEDs 800mA WW730 Piano, Vetro extra chiaro, Liscio 5248 468702 | 800          | 180,0  | 0,0      | 0,0     | 11,283     | 0,800 | 33,50  | 8,50  | 0,00  |
| <input checked="" type="checkbox"/> |  | 4  | 67,00    | 8,50  | 8,20  | TECEO GEN2 1 32 LEDs 800mA WW730 Piano, Vetro extra chiaro, Liscio 5248 468702 | 800          | 180,0  | 0,0      | 0,0     | 11,283     | 0,800 | 67,00  | 8,50  | 0,00  |
| <input checked="" type="checkbox"/> |  | 5  | 100,50   | 8,50  | 8,20  | TECEO GEN2 1 32 LEDs 800mA WW730 Piano, Vetro extra chiaro, Liscio 5248 468702 | 800          | 180,0  | 0,0      | 0,0     | 11,283     | 0,800 | 100,50 | 8,50  | 0,00  |

### 4.3. Luminaire groups

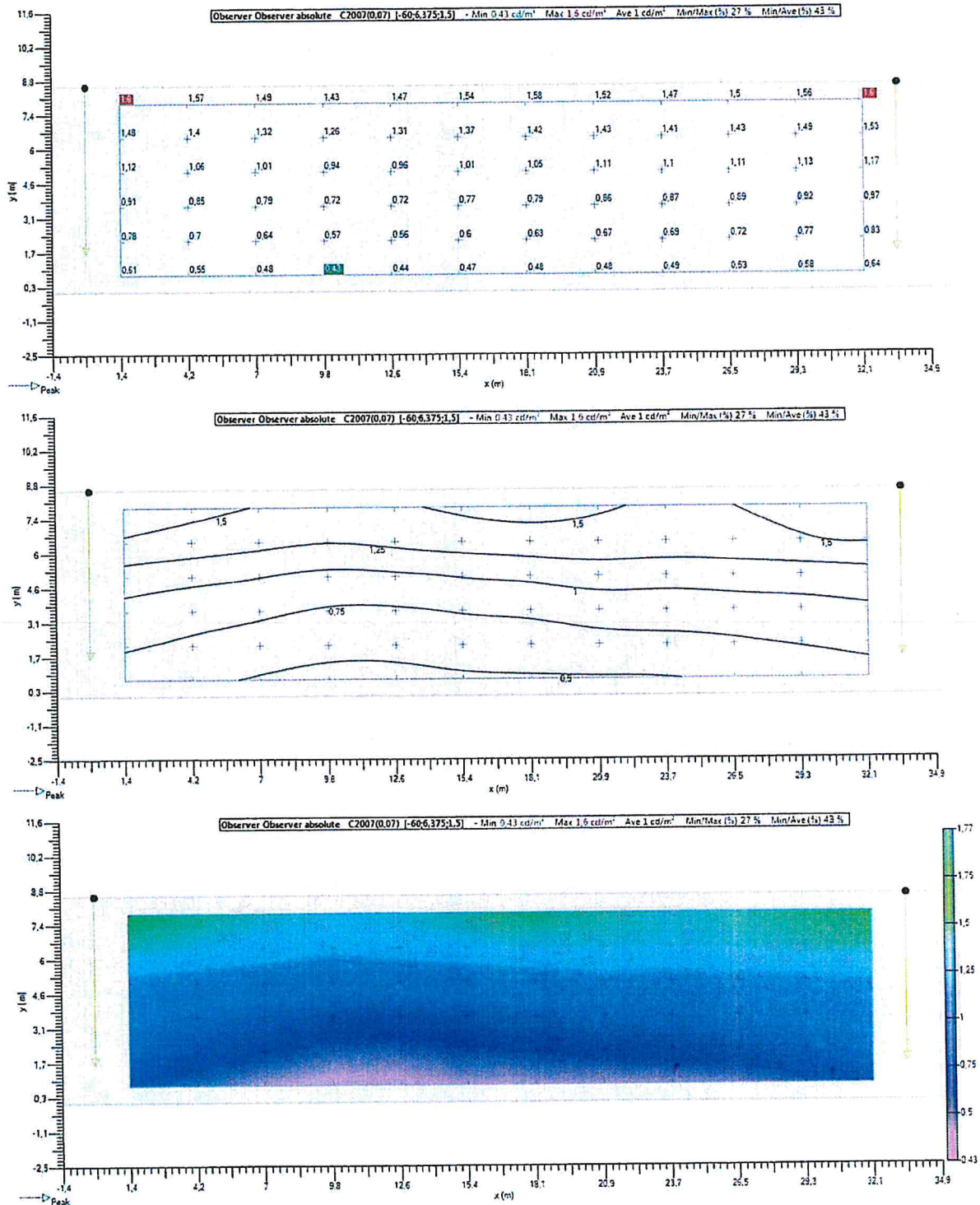
| Linear                              |                                                                                     |    |          |       |       |           |        |          |         |         |           |             |          |          |       |       |
|-------------------------------------|-------------------------------------------------------------------------------------|----|----------|-------|-------|-----------|--------|----------|---------|---------|-----------|-------------|----------|----------|-------|-------|
|                                     | Color                                                                               | N° | Position |       |       | Luminaire |        |          |         |         | Dimension |             |          | Rotation |       |       |
|                                     |                                                                                     |    | X [m]    | Y [m] | Z [m] | Name      | Az [°] | Incl [°] | Rot [°] | Dim [%] | Count     | Spacing [m] | Size [m] | X [°]    | Y [°] | Z [°] |
| <input checked="" type="checkbox"/> |  | 1  | -33,50   | 8,50  | 8,20  | Left      | 180,0  | 0,0      | 0,0     | 100     | 5         | 33,50       | 134,00   | 0,0      | 0,0   | 0,0   |

## 4.4. Luminance - Road (LU) - C2007

### Road (LU) - Absolute 1

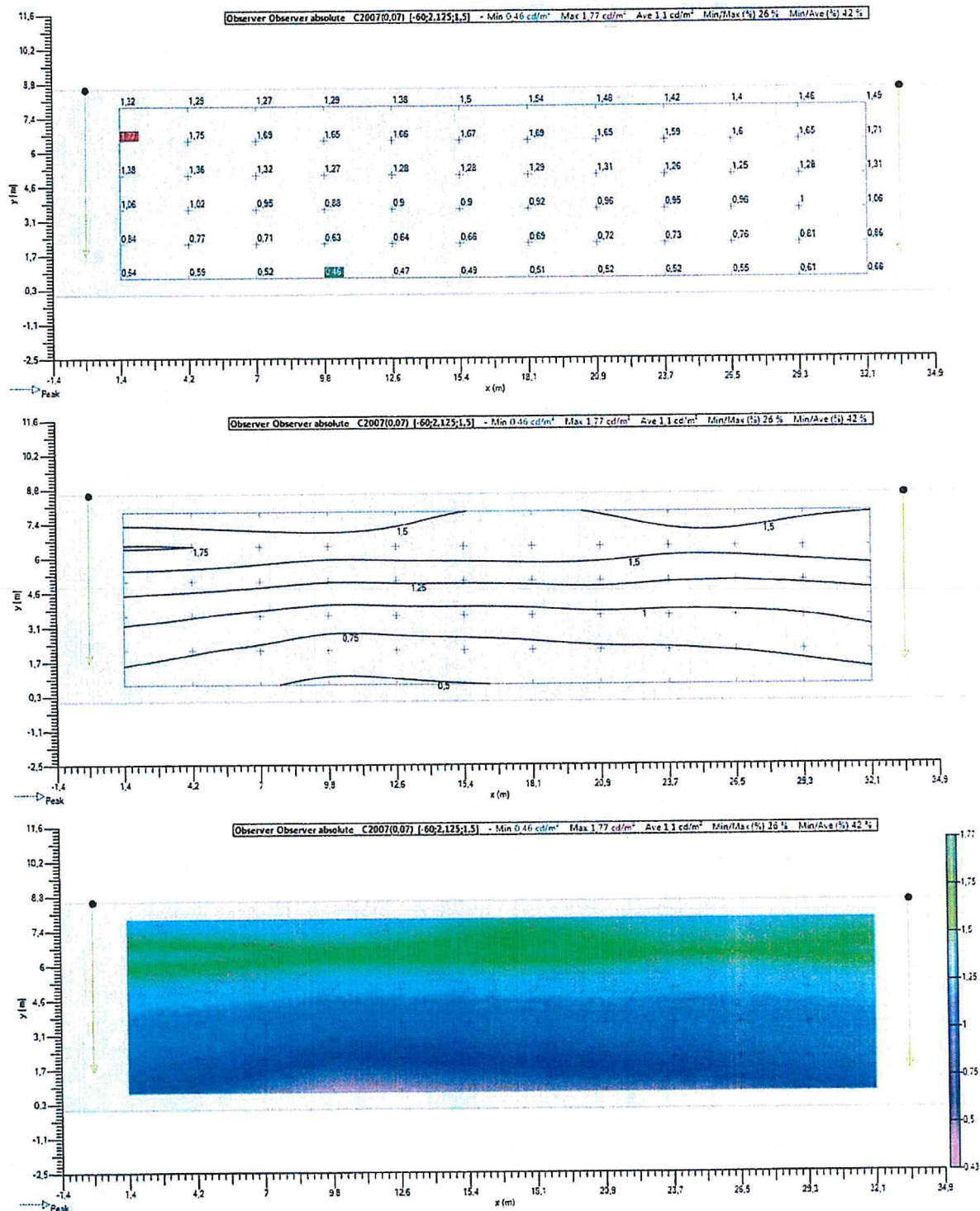


Road (LU) - Absolute 2

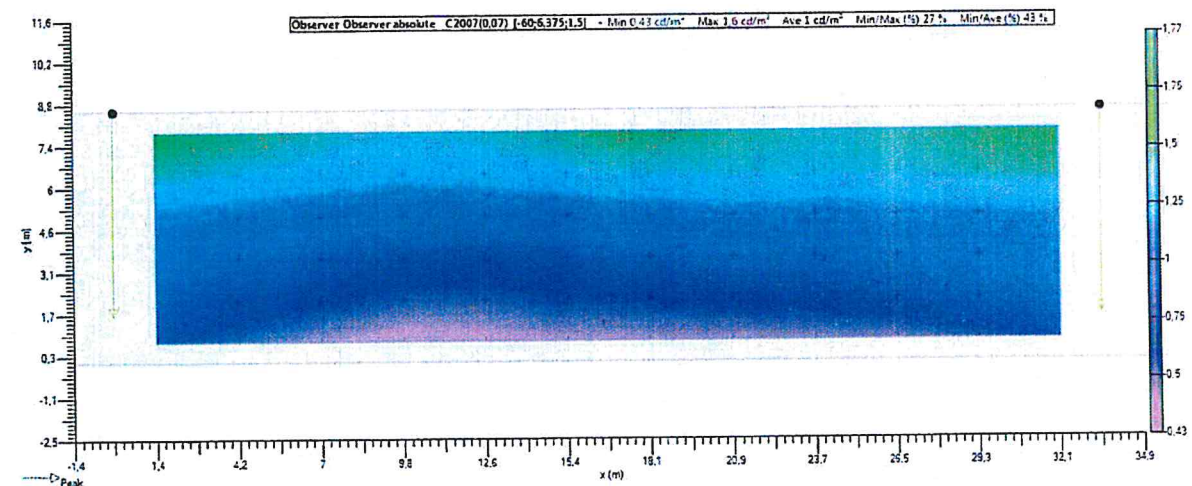
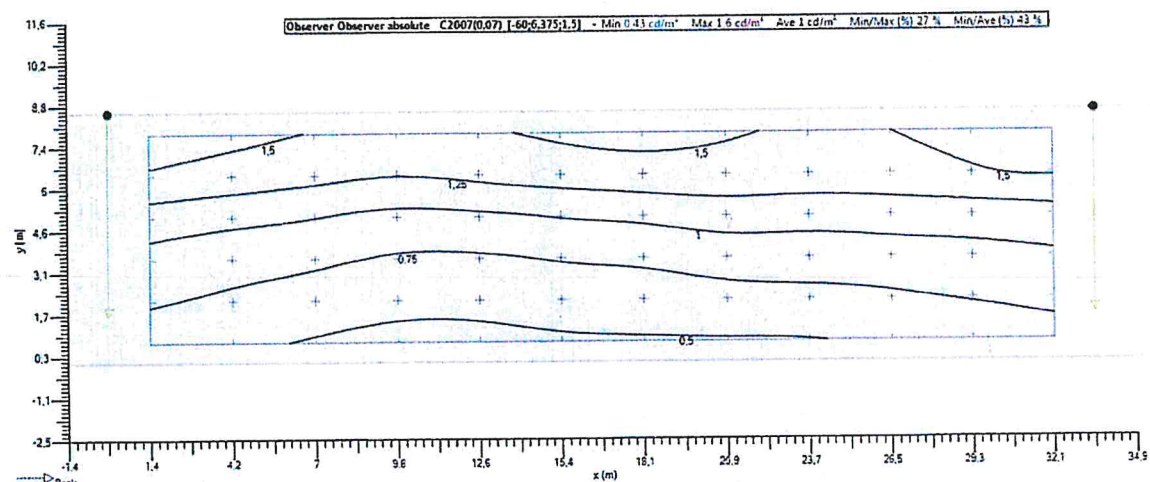
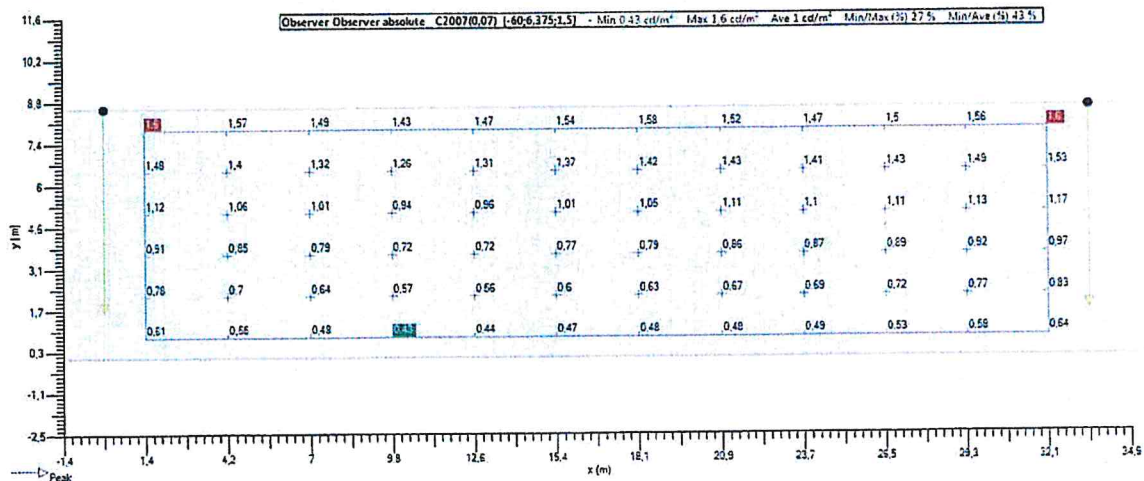


## 4.5. Luminance - Road (LU) - C2007

### Road (LU) - Optional - Absolute 1

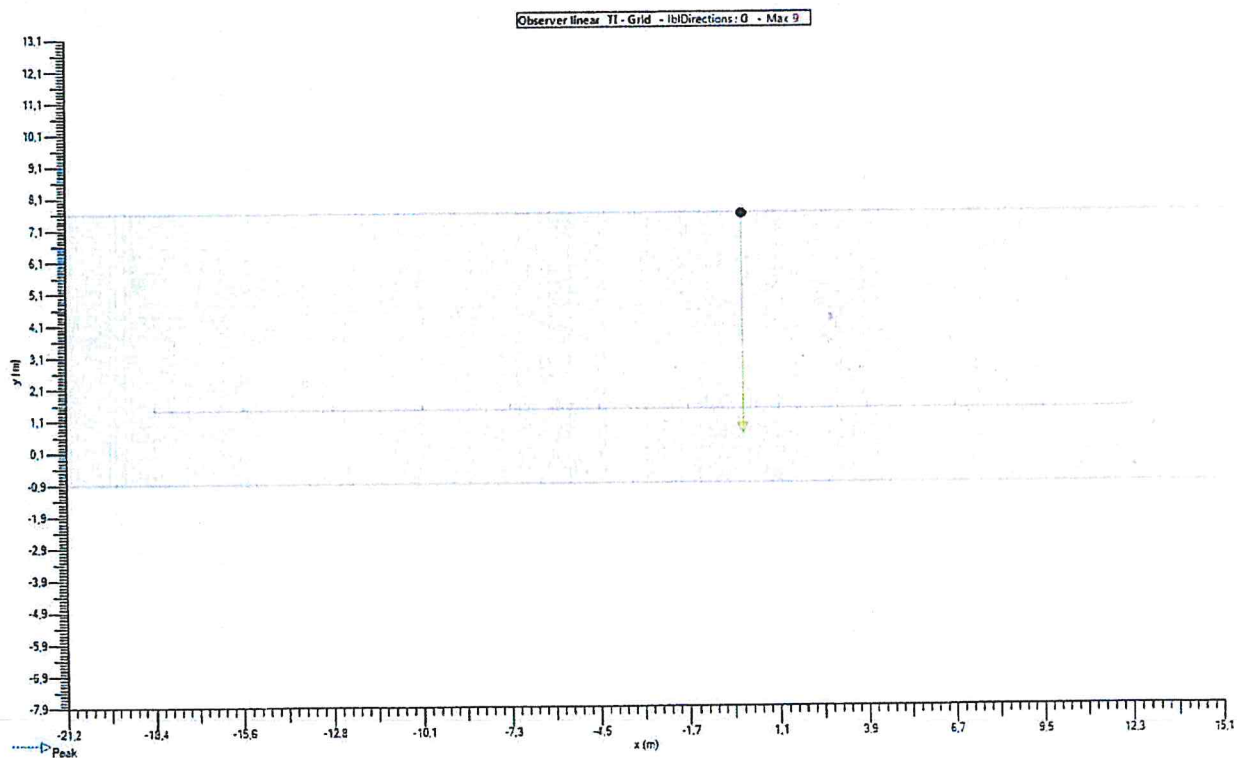


Road (LU) - Optional - Absolute 2

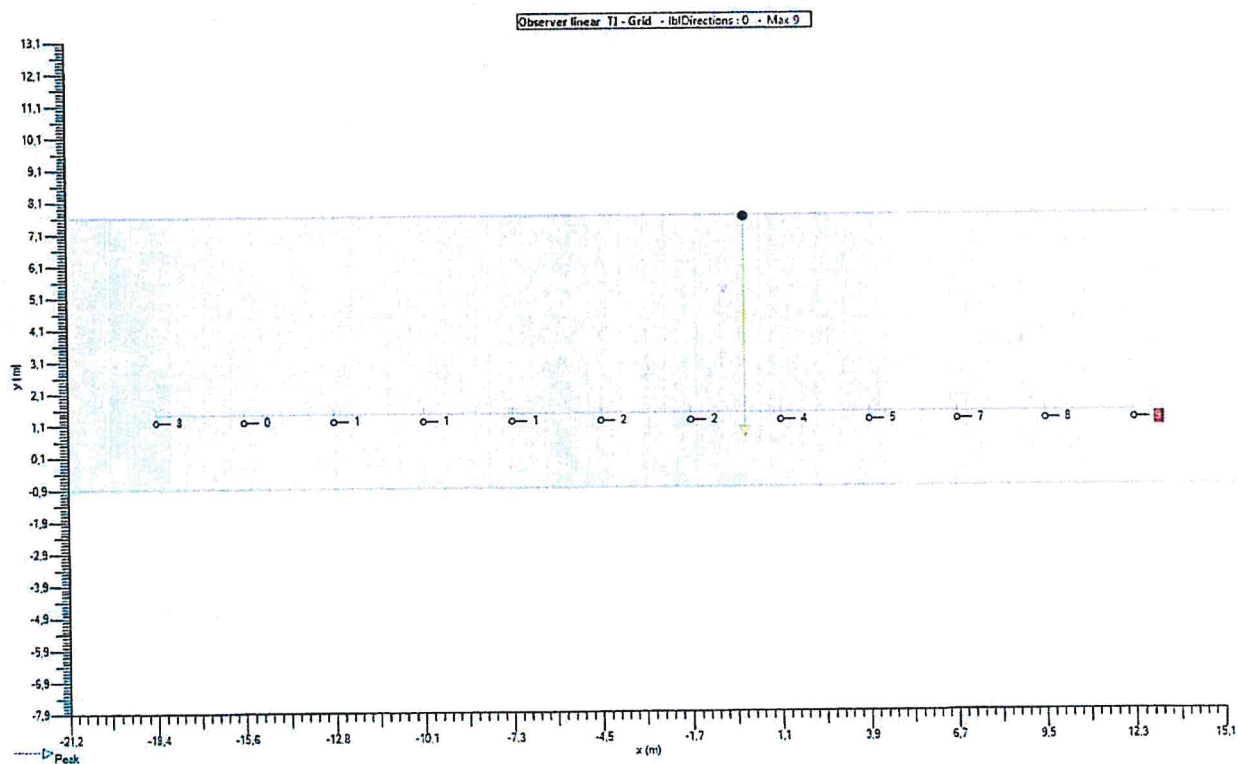


## 4.6. Road (TI 1) - TI - Grid

### Implantation

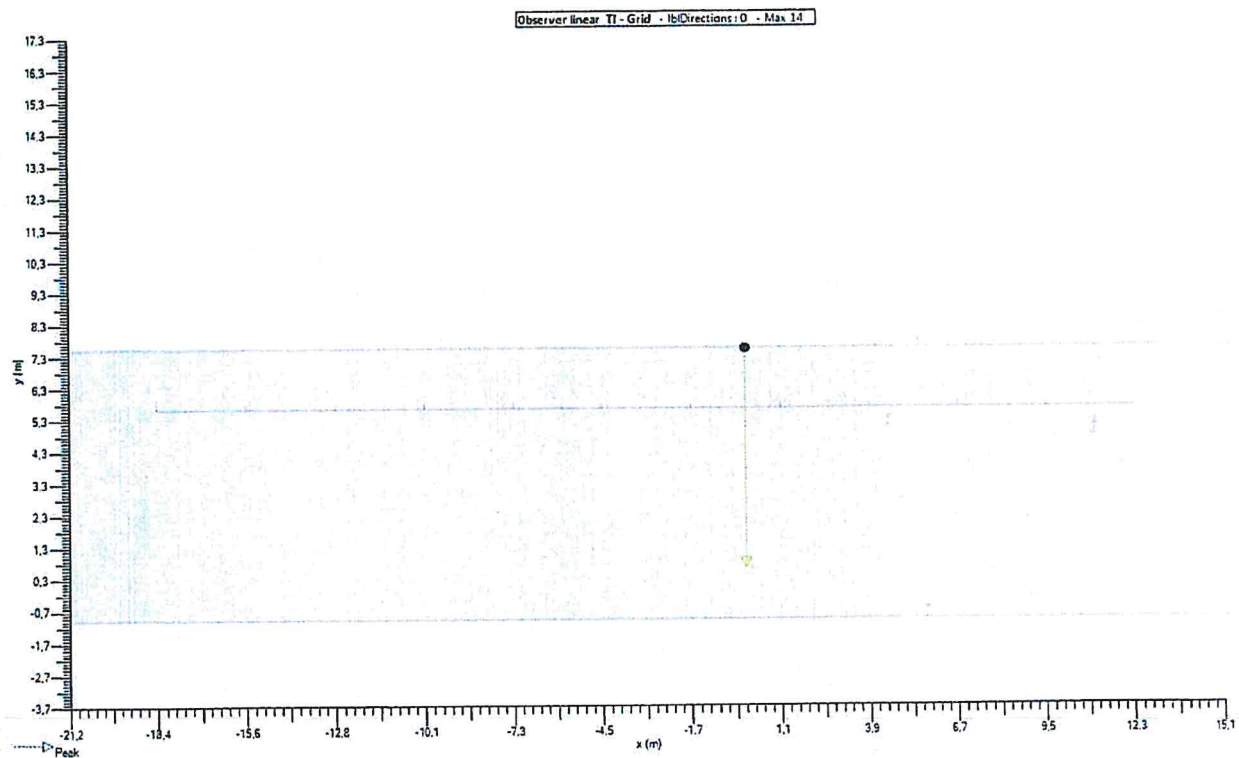


### Values

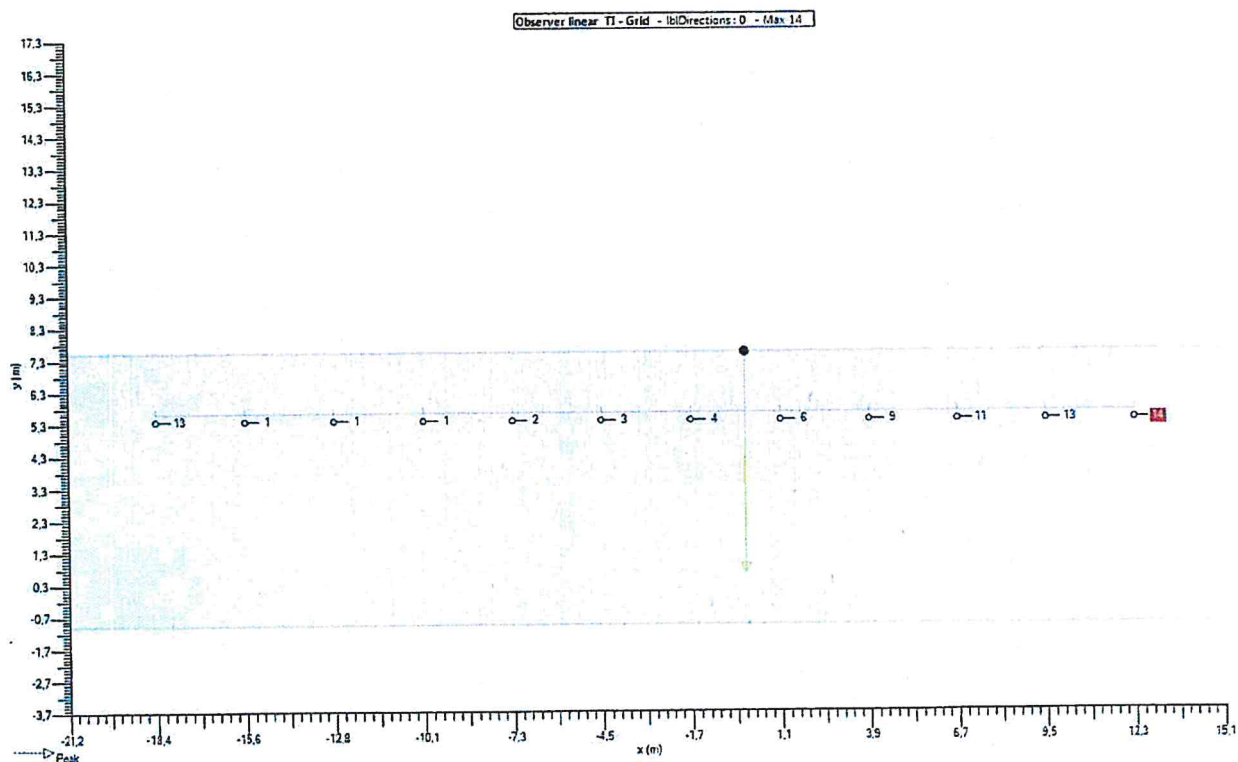


## 4.7. Road (TI 2) - TI - Grid

### Implantation



### Values



## 5. Grids

### 5.1. Road (LU)

#### General

Type Grid rectangular XY

Enabled ☒Colour 

#### Geometry

Origin X 1,40 m Y 0,71 m Z 0,00 m

Rotation X 0,0 ° Y 0,0 ° Z 0,0 °

Dimension Count X 12 Count Y 6

Spacing X 2,79 m Spacing Y 1,42 m

Size X 30,71 m Size Y 7,08 m

## 6. Observer

### 6.1. Road (TI 1)

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| <b>General</b>                                                                          |
| Type Observer linear                                                                    |
| En <input checked="" type="checkbox"/>                                                  |
| Color  |
| Directions 0,0                                                                          |
| Calculation TI - Grid                                                                   |
| Grid Road (LU)                                                                          |

|                 |            |                |              |
|-----------------|------------|----------------|--------------|
| <b>Geometry</b> |            |                |              |
| Origin          | X -18,43 m | Y 2,13 m       | Z 1,50 m     |
| Rotation        | X 0,0 °    | Y 0,0 °        | Z 0,0 °      |
| Dimension       | Count 12   | Spacing 2,79 m | Size 30,71 m |

### 6.2. Road (TI 2)

|                                                                                         |
|-----------------------------------------------------------------------------------------|
| <b>General</b>                                                                          |
| Type Observer linear                                                                    |
| En <input checked="" type="checkbox"/>                                                  |
| Color  |
| Directions 0,0                                                                          |
| Calculation TI - Grid                                                                   |
| Grid Road (LU)                                                                          |

|                 |            |                |              |
|-----------------|------------|----------------|--------------|
| <b>Geometry</b> |            |                |              |
| Origin          | X -18,43 m | Y 6,38 m       | Z 1,50 m     |
| Rotation        | X 0,0 °    | Y 0,0 °        | Z 0,0 °      |
| Dimension       | Count 12   | Spacing 2,79 m | Size 30,71 m |