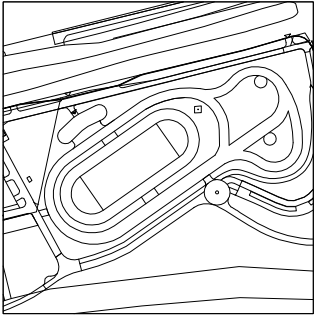


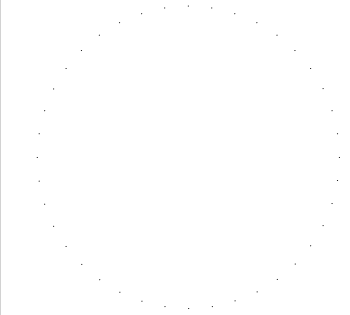


|   |   |   |         |
|---|---|---|---------|
| Revize  | Schéma  | Paré  | Severka |
|   |   | S-JTSK<br>0,000 =371,350 m n. m. Bpv  |         |
| ČÍSLO - DATUM - POPIS ZMĚNY   |    |  |         |
| Investor<br>Městská část Praha 6<br><br>Kontaktní osoba investora<br>Městská část Praha 6<br>Mgr. Jakub Stárek<br>Čs. armády 23, 160 52 Praha<br>Tel.: +420 220 189 155       | Adresa investora<br>Městská část Praha 6<br>IČ: 00063703<br>DS: bmzby7c   |  |         |
| Generální projektant<br>A PLUS a.s.<br>Hlavní inženýr projektu<br>VÍT MOLER<br>Zástupce hlavního inženýra projektu<br>TOMÁŠ ZELINKA<br>Hlavní architekt projektu<br>VÍT MOLER | Adresa generálního projektanta<br>ČESKÁ 154/12, 602 00, BRNO<br>E.: info@aplus.cz<br>Tel.: +420 542 210 101<br>IČ: 26236419<br>DIČ: CZ26236419<br>DS: afhm2t8             |  |         |
| Projektant části PD<br>J.VESELSKÝ<br>Zodpovědný projektant<br>J.VESELSKÝ<br>Vypracoval<br>J.VESELSKÝ  | Adresa projektanta části PD<br>ExPlan s.r.o., Michelská 18/12a,<br>Michle, 140 00 Praha 4<br>E.: explan@explan.cz<br>Tel.: 724 955 052<br>IČ: 24186287<br>DIČ: CZ24186287 |   |         |
| Název stavby<br>AREÁL KOLEČKOVÝCH SPORTŮ - LADRONKA<br>Stupeň<br>DOKUMENTACE PRO SPOLEČNÉ POVOLENÍ<br>Název stavebního objektu<br>Areálové osvětlení (VO)<br>Část             | Stavba<br>AKL<br>Stupeň<br>DUSP<br>Číslo PS-SO<br>IO.703<br>Označení části  |   |         |
| Název výkresu<br>Výpočet osvětlení<br><br>Zakázkové číslo<br>3283   | Číslo výkresu<br>002<br>Revize<br>00  |   |         |
| Datum<br>2024-05  | Měřítko<br>-  |   |         |

### Akce

292 2024 Praha - park Ladronka, VO

### Zadání

Stezky pro chodce a kola; parkoviště

Výška sloupů omezena v úseku ochranného pásma vvn

### Zatřídění a požadavky na osvětlení

ČSN EN 13201-2

| Třída osvětlení | $\bar{E}_m$ [lx] | $E_{min}$ [lx] | $\max(\bar{E}_m)$ [lx] | Další požadavky, je-li potřeba rozeznání obličejů |                   |
|-----------------|------------------|----------------|------------------------|---|-------------------|
|                 |                  |                |                        | $E_{v,min}$ [lx]                                  | $E_{sc,min}$ [lx] |
| P1              | $\geq 15,0$      | $\geq 3,00$    | $\leq 22,50$           | 5,0   | 5,0               |
| P2              | $\geq 10,0$      | $\geq 2,00$    | $\leq 15,00$           | 3,0   | 2,0               |
| P3              | $\geq 7,50$      | $\geq 1,50$    | $\leq 11,25$           | 2,5   | 1,5               |
| P4              | $\geq 5,00$      | $\geq 1,00$    | $\leq 7,50$            | 1,5   | 1,0               |
| P5              | $\geq 3,00$      | $\geq 0,60$    | $\leq 4,50$            | 1,0   | 0,6               |
| P6              | $\geq 2,00$      | $\geq 0,40$    | $\leq 3,00$            | 0,6   | 0,2               |
| P7              | -                | -              | -                      | -   | -                 |

### Uspořádání soustav VO

#### Sloupy A (VO stezek širších)

Svítlidla: 6x IZYLLUM 1 / 5305 / 20 LED / WW730 / 400 mA / 26 W  
 Závěsná výška: 6,0 m  
 Výložník: není  
 Náklon svítidla: 0°  
 Umístění sloupu: do 1 m od kraje  
 Rozteč: max. 33 m v přímém úseku

#### Sloupy B (VO stezek užších)

Svítlidla: 8x IZYLLUM 1 / 5302 / 10 LED / WW730 / 500 mA / 17 W  
 Závěsná výška: 6,0 m  
 Výložník: není  
 Náklon svítidla: 0°  
 Umístění sloupu: do 1 m od kraje  
 Rozteč: max. 33 m v přímém úseku

#### Sloupy C (VO parkoviště)

Svítlidla: 6x IZYLLUM 1 / 5393 / 20 LED / WW730 / 350 mA / 23 W  
 Závěsná výška: 6,0 m  
 Výložník: není  
 Náklon svítidla: 5°  
 Umístění sloupu: do 1 m od kraje  
 Rozteč: viz výkres

### Vypracoval

Ing. Roman Sedláček, světelný technik; Schröder Czech Republic, a.s.

V Praze dne 20. května 2024

## Praha - park Ladronka, VO1

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**Standard** EN 13201 : 2015

**Designer** rs

**Study #** 292 2024

**Date** 20.05.2024

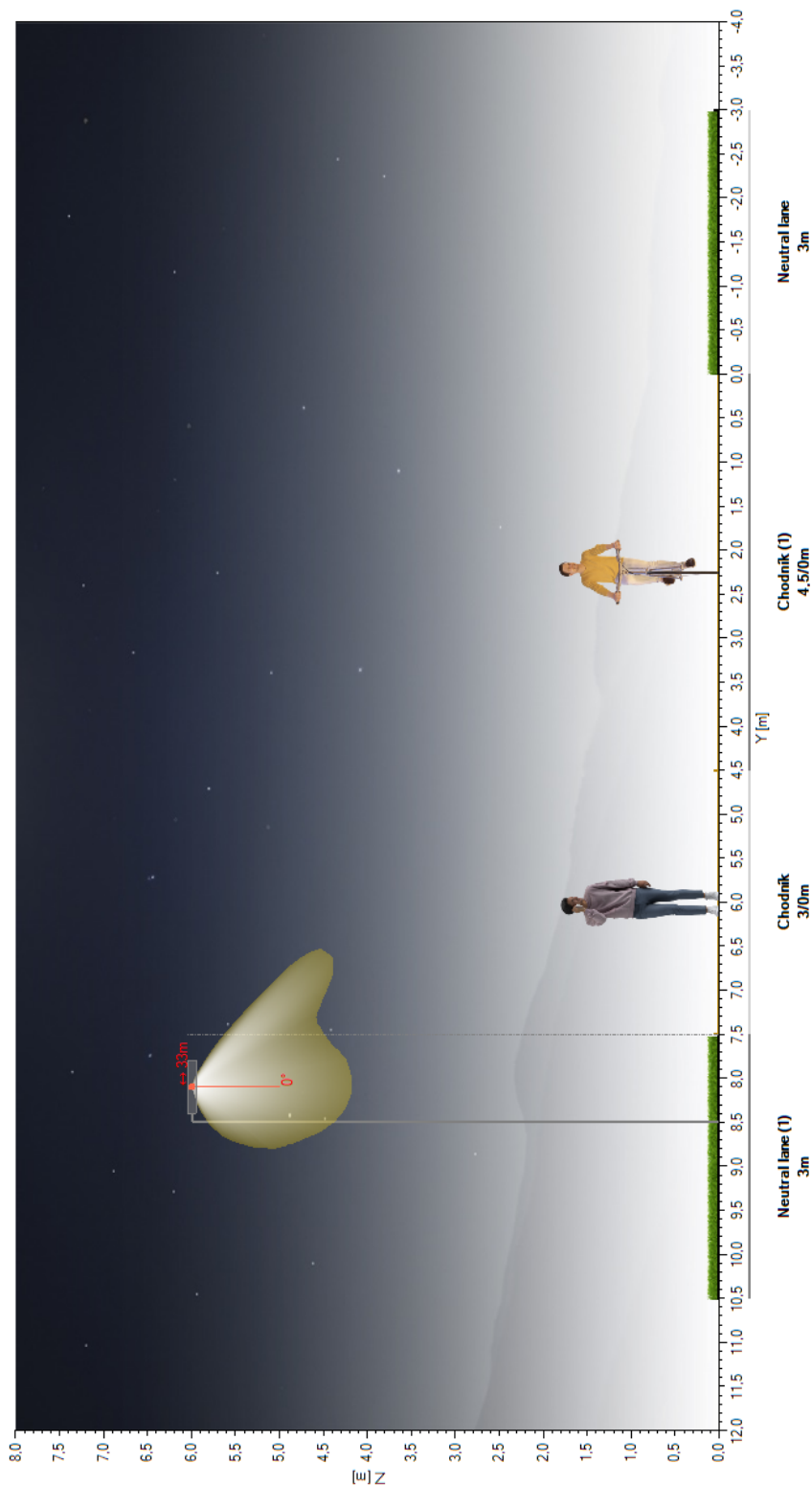
**Application** Ulysse 4.Beta 1.8

**Description** Platí pro sinici 7,5 m širokou

**File** Výpočet VO1.lp3

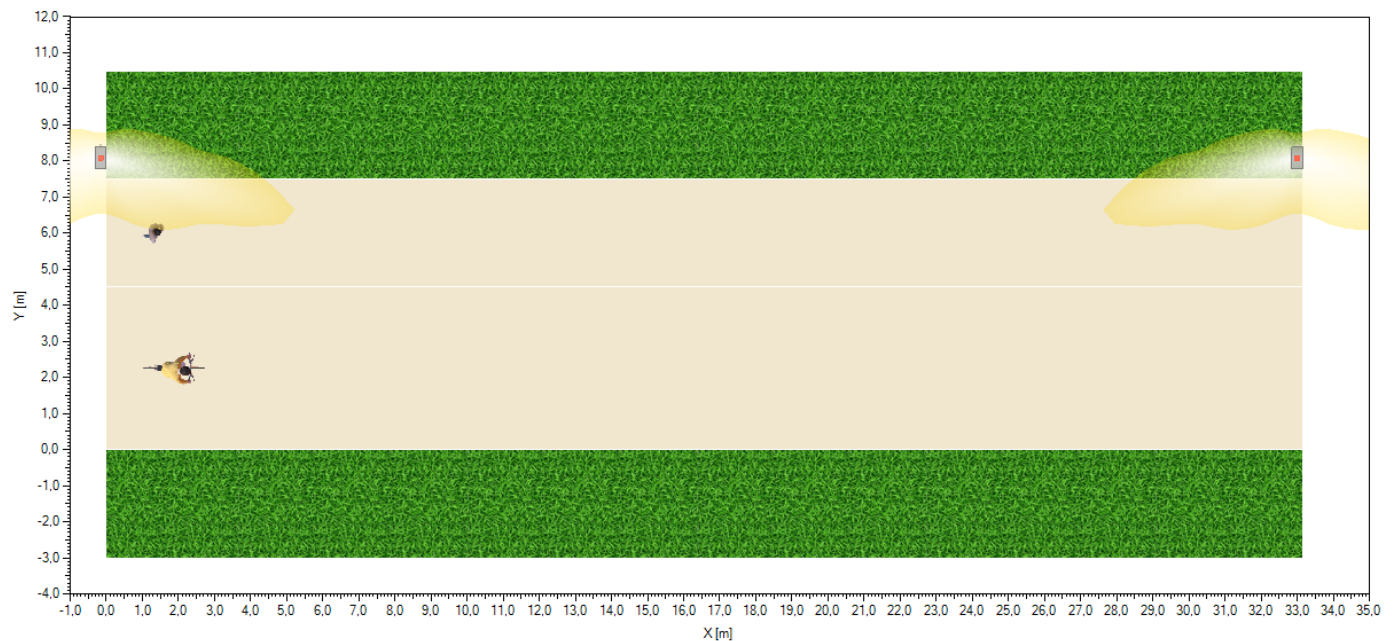
# 1. 2D View

## 1.1. Cross section





## 1.2. Top view



## 2. Fixtures

### 2.1. IZYLUM 1 20 LEDs 400mA WW730 Flat glass 5305 LE 450682

Type IZYLUM 1

Reflector 5305

Source 20 LEDs 400mA WW730

Protector Flat glass

Source flux 4,159 klm

G\* 3

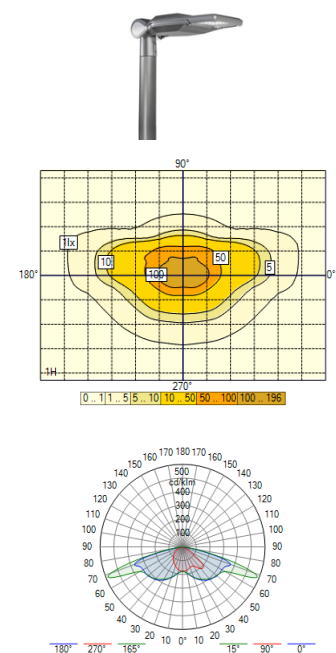
Luminaire wattage 25,6 W

MF 0,85

Matrix 450682

Luminaire flux 3,662 klm

Efficacy 143 lm/W



3. Results

3.1. Grid summary

Chodník (IL)

P4 (IL : Min = 1,00 lux Ave = 5,00 lux)

|                           |                 |                |                |          |          |   |
|---------------------------|-----------------|----------------|----------------|----------|----------|---|
| 1. Z positive illuminance | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |   |
| Uspořádání VO             | 8,01            | 42             | 19             | 3,33     | 17,37    | ✔ |

Chodník (1) (IL)



P4 (IL : Min = 1,00 lux Ave = 5,00 lux)

|                           |                 |                |                |          |          |   |
|---------------------------|-----------------|----------------|----------------|----------|----------|---|
| 1. Z positive illuminance | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |   |
| Uspořádání VO             | 5,14            | 36             | 19             | 1,85     | 9,93     | ✔ |





3.2. Values summary

4. Uspořádání VO


4.1. Matrix description

| Photometric colour  | Description  | Current [mA] | Source flux [klm] | Luminaires flux [klm] | Power [W] | Efficacy [lm/W] | MF    | Height [m] | Fixture   |
|---|--|--------------|-------------------|-----------------------|-----------|-----------------|-------|------------|---|
|  | IZYLUM 1 20 LEDs 400mA WW730 Flat glass 5305 LE 450682 | 400          | 4,159             | 3,662                 | 25,6      | 143             | 0,850 | 4 x 6,00   |  |

4.2. Luminaire positions

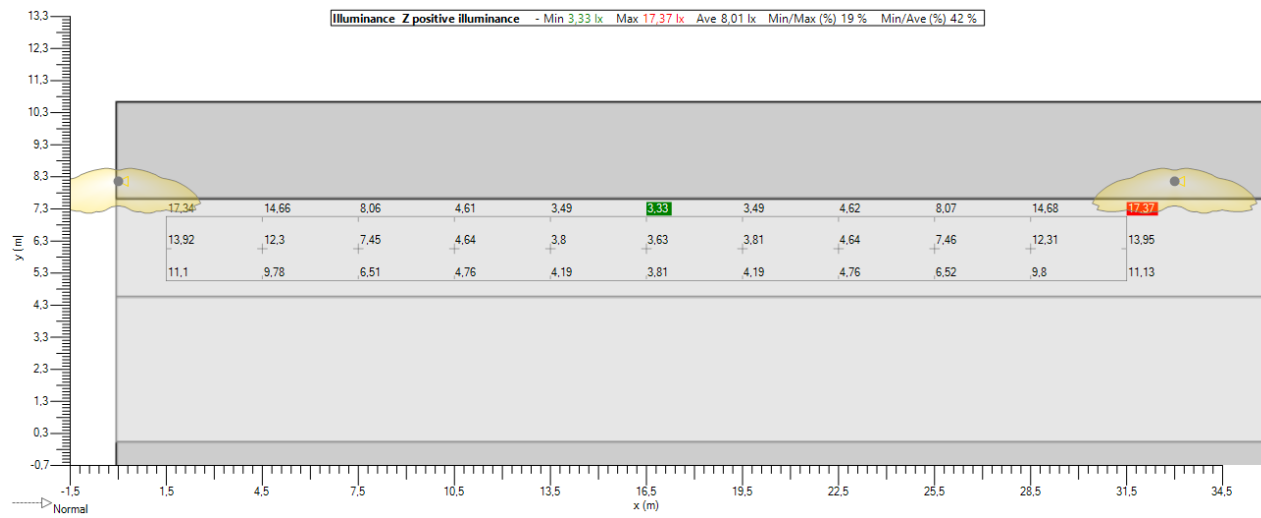
|                                     | Colour  | N° | Position |       |       | Luminaire  |              |         |           |                 |          |            |       | Target |       |       |
|-------------------------------------|---|----|----------|-------|-------|--|--------------|---------|-----------|-----------------|----------|------------|-------|--------|-------|-------|
|                                     |   |    | X [m]    | Y [m] | Z [m] | Name   | Current [mA] | Az. [°] | Incl. [°] | Incl (lmax) [°] | Rot. [°] | Flux [klm] | MF    | X [m]  | Y [m] | Z [m] |
| <input checked="" type="checkbox"/> |  | 1  | 0,00     | 8,10  | 6,00  | IZYLUM 1 20 LEDs 400mA WW730 Flat glass 5305 LE 450682 | 400          | 180,0   | 0,0       | 44,0            | 0,0      | 4,159      | 0,850 | 0,00   | 8,10  | 0,00  |
| <input checked="" type="checkbox"/> |  | 2  | 33,00    | 8,10  | 6,00  | IZYLUM 1 20 LEDs 400mA WW730 Flat glass 5305 LE 450682 | 400          | 180,0   | 0,0       | 44,0            | 0,0      | 4,159      | 0,850 | 33,00  | 8,10  | 0,00  |
| <input checked="" type="checkbox"/> |  | 3  | 66,00    | 8,10  | 6,00  | IZYLUM 1 20 LEDs 400mA WW730 Flat glass 5305 LE 450682 | 400          | 180,0   | 0,0       | 44,0            | 0,0      | 4,159      | 0,850 | 66,00  | 8,10  | 0,00  |
| <input checked="" type="checkbox"/> |  | 4  | 99,00    | 8,10  | 6,00  | IZYLUM 1 20 LEDs 400mA WW730 Flat glass 5305 LE 450682 | 400          | 180,0   | 0,0       | 44,0            | 0,0      | 4,159      | 0,850 | 99,00  | 8,10  | 0,00  |

4.3. Luminaire groups

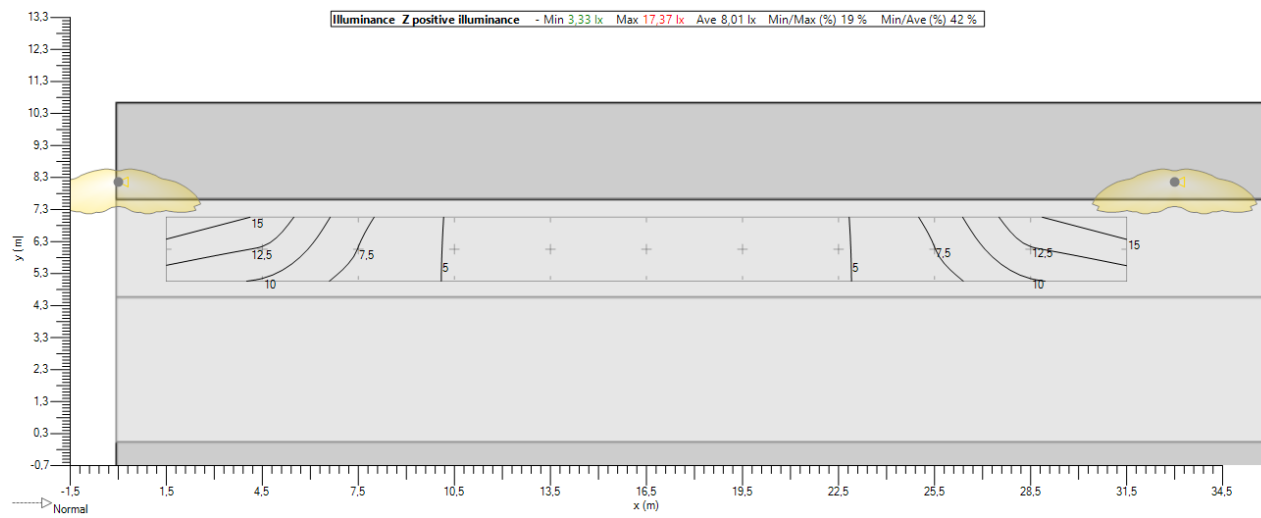
| Linear                              |   |    |          |       |       |           |         |           |          |         |           |             |          |          |       |       |
|-------------------------------------|---|----|----------|-------|-------|-----------|---------|-----------|----------|---------|-----------|-------------|----------|----------|-------|-------|
|                                     | Colour  | 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  | 0,00     | 8,10  | 6,00  | Sloupy    | 180,0   | 0,0       | 0,0      | 100     | 4         | 33,00       | 99,00    | 0,0      | 0,0   | 0,0   |

4.4. Chodník (IL) - Z positive

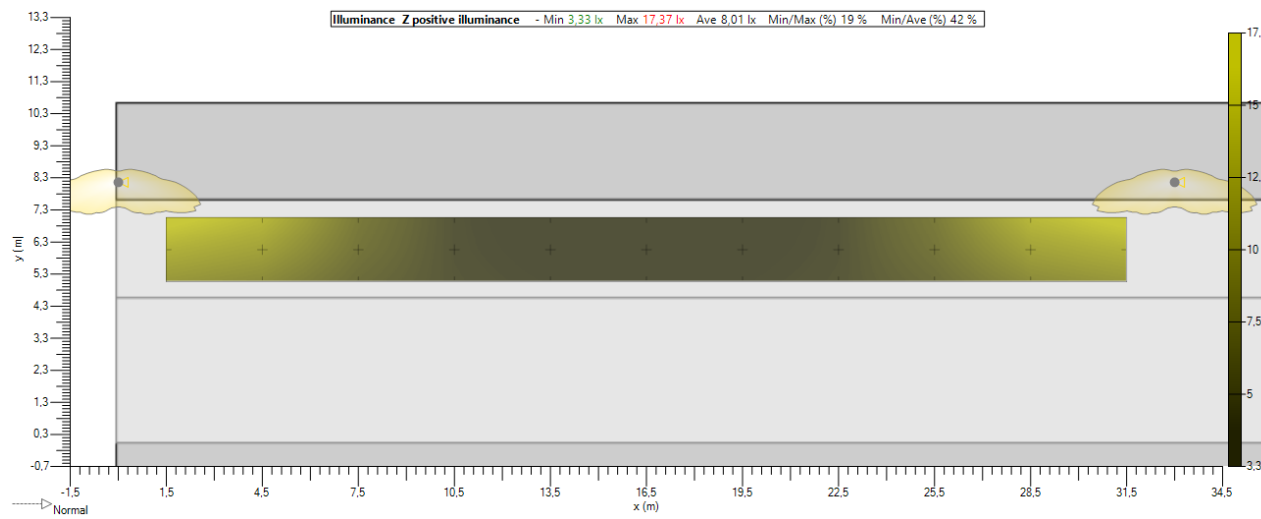
Values



Isolevel

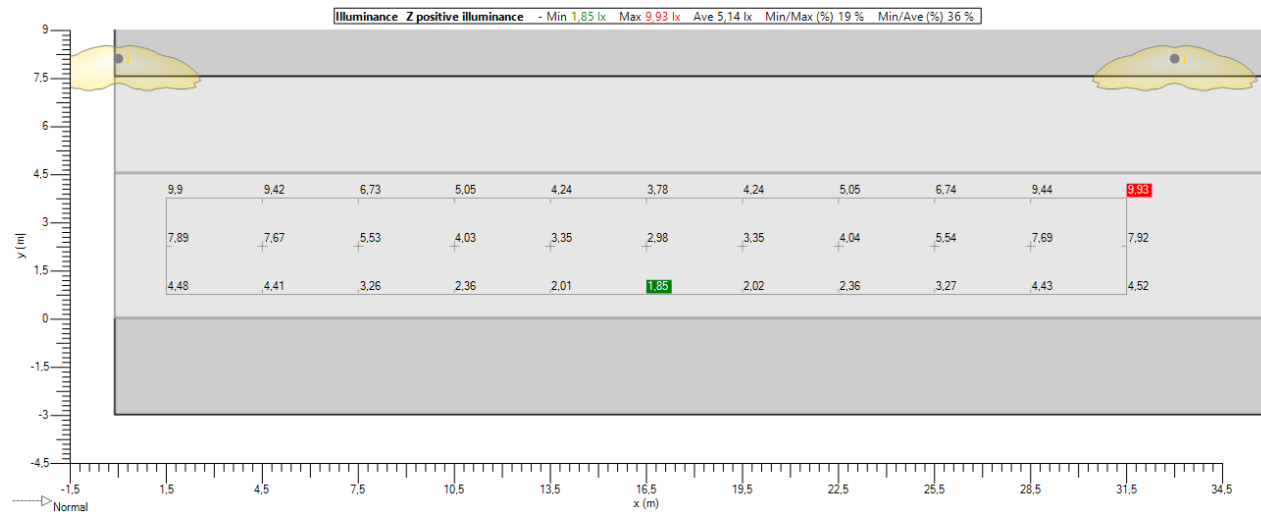


Shading

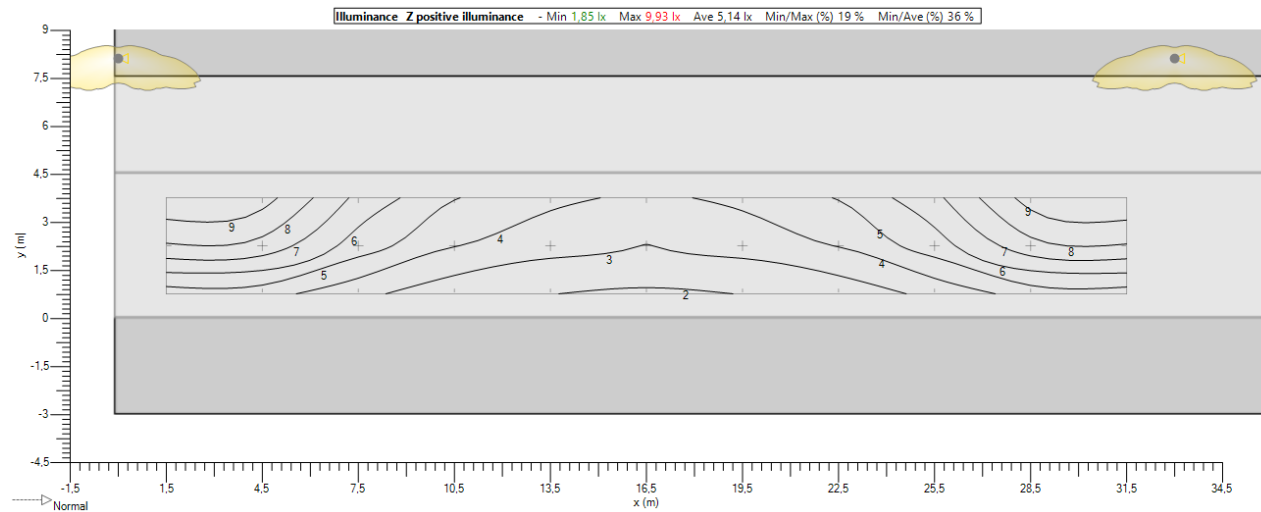


4.5. Chodník (1) (IL) - Z positive

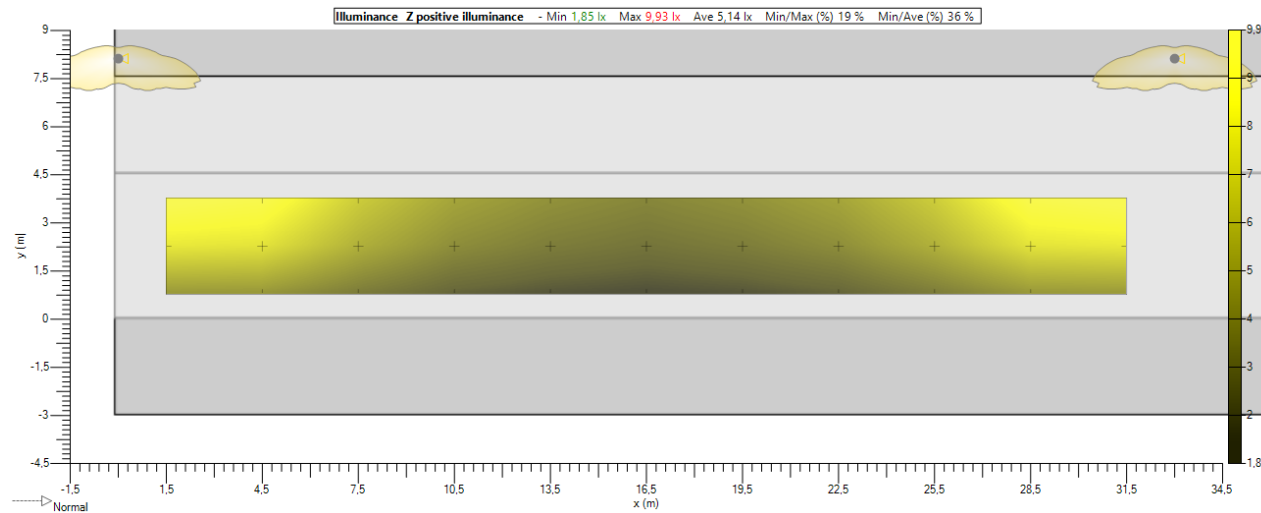
Values



Isolevel



Shading




## 5. Grids

### 5.1. Chodník (IL)

#### General

Type Grid rectangular XY

Enabled ☒

Colour 

#### Geometry


|           |                  |                  |          |
|-----------|------------------|------------------|----------|
| Origin    | X 1,50 m         | Y 5,00 m         | Z 0,00 m |
| Rotation  | X 0,0 °          | Y 0,0 °          | Z 0,0 °  |
| Dimension | Count X 11       | Count Y 3        |          |
|           | Spacing X 3,00 m | Spacing Y 1,00 m |          |
|           | Size X 30,00 m   | Size Y 2,00 m    |          |

### 5.2. Chodník (1) (IL)

#### General

Type Grid rectangular XY

Enabled ☒

Colour 

#### Geometry

|           |                  |                  |          |
|-----------|------------------|------------------|----------|
| Origin    | X 1,50 m         | Y 0,75 m         | Z 0,00 m |
| Rotation  | X 0,0 °          | Y 0,0 °          | Z 0,0 °  |
| Dimension | Count X 11       | Count Y 3        |          |
|           | Spacing X 3,00 m | Spacing Y 1,50 m |          |
|           | Size X 30,00 m   | Size Y 3,00 m    |          |

## Praha - park Ladronka, VO2

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**Standard** EN 13201 : 2015

**Designer** rs

**Study #** 292 2024

**Date** 20.05.2024

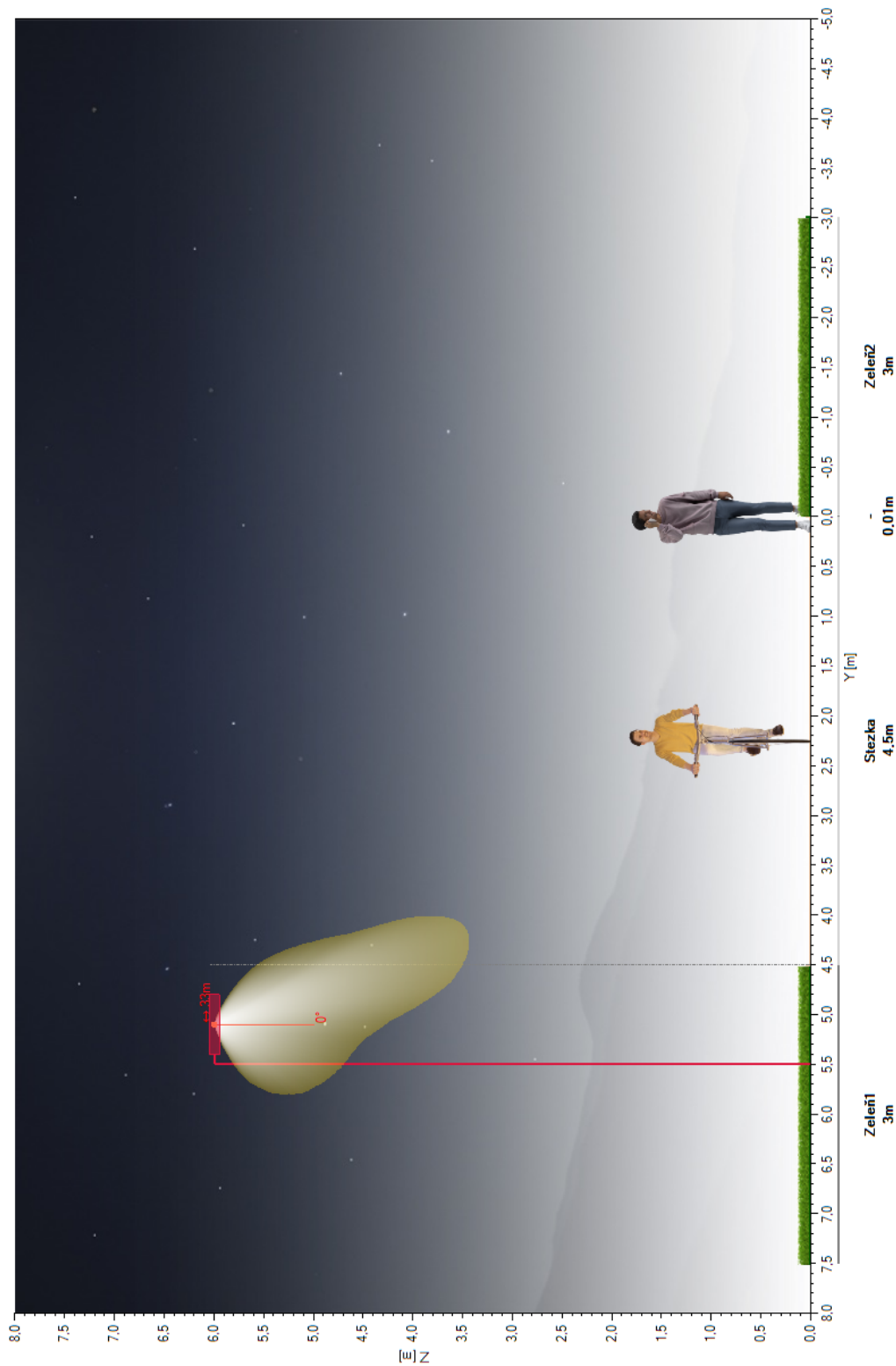
**Application** Ulysse 4.Beta 1.8

**Description** Platí pro sinici 4,5 m širokou

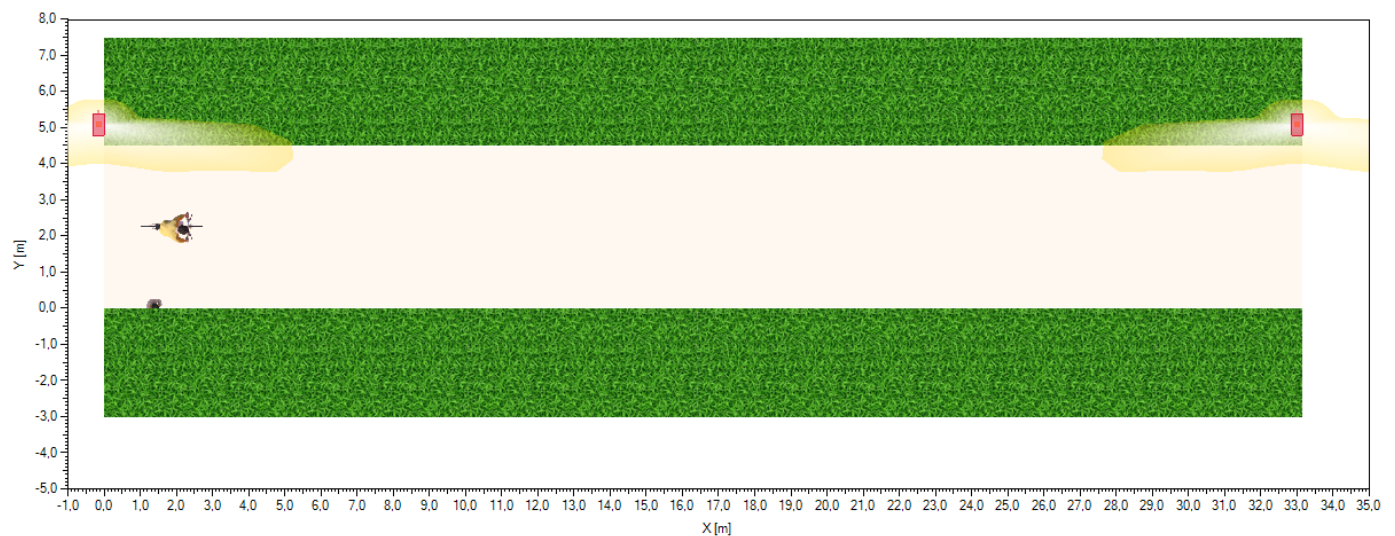
**File** Výpočet VO2.lp3

# 1. 2D View

## 1.1. Cross section



## 1.2. Top view



## 2. Fixtures

### 2.1. IZYLUM 1 10 LEDs 500mA WW730 Flat glass 5302 LE 450502

Type IZYLUM 1

Reflector 5302

Source 10 LEDs 500mA WW730

Protector Flat glass

Source flux 2,516 klm

G\* 3

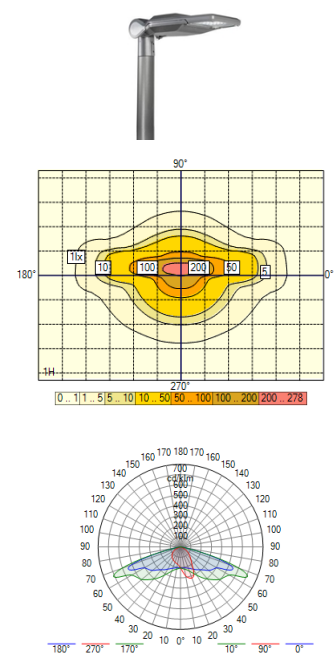
Luminaire wattage 17,1 W

MF 0,85

Matrix 450502

Luminaire flux 2,203 klm

Efficacy 129 lm/W





3. Results

3.1. Grid summary



Stezka (IL)

|                           |                 |                |                |          |          |
|---------------------------|-----------------|----------------|----------------|----------|----------|
| 1. Z positive illuminance | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |
| Uspořádání VO             | 6,12            | 37             | 14             | 2,24     | 15,76    |





3.2. Values summary

4. Uspořádání VO


4.1. Matrix description

| Photometric colour  | Description  | Current [mA] | Source flux [klm] | Luminair e flux [klm] | Power [W] | Efficacy [lm/W] | MF    | Height [m] | Fixture   |
|---|--|--------------|-------------------|-----------------------|-----------|-----------------|-------|------------|---|
|  | IZYLUM 1 10 LEDs 500mA WW730 Flat glass 5302 LE 450502 | 500          | 2,516             | 2,203                 | 17,1      | 129             | 0,850 | 4 x 6,00   |  |

4.2. Luminaire positions

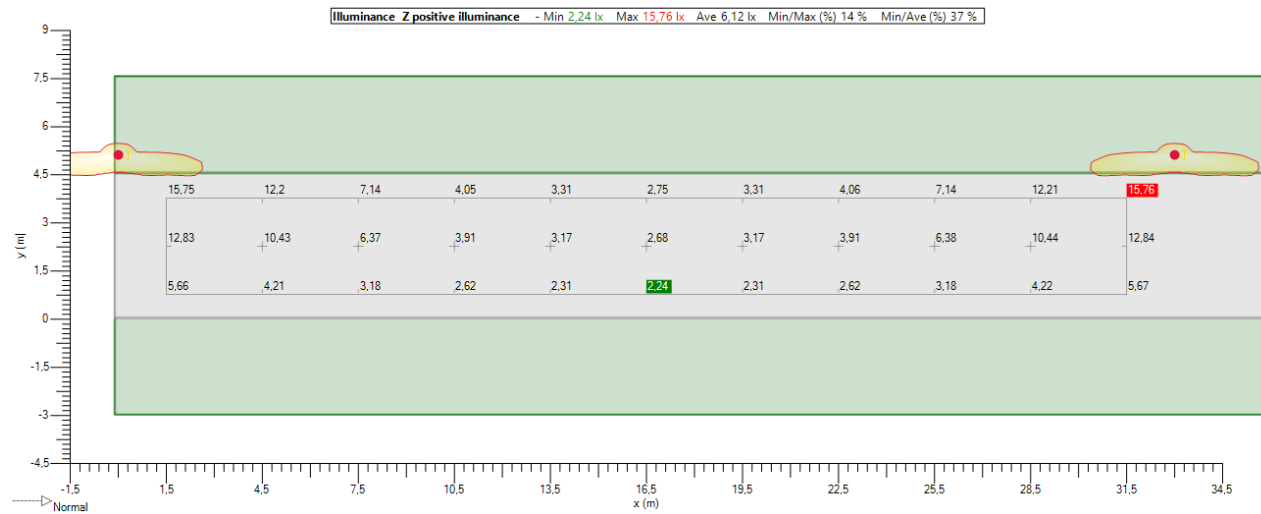
|                                     | Colour  | N° | Position |       |       | Luminaire  |              |         |           |                 |          |            |       | Target |       |       |
|-------------------------------------|---|----|----------|-------|-------|--|--------------|---------|-----------|-----------------|----------|------------|-------|--------|-------|-------|
|                                     |   |    | X [m]    | Y [m] | Z [m] | Name   | Current [mA] | Az. [°] | Incl. [°] | Incl (Imax) [°] | Rot. [°] | Flux [klm] | MF    | X [m]  | Y [m] | Z [m] |
| <input checked="" type="checkbox"/> |  | 1  | 0,00     | 5,10  | 6,00  | IZYLUM 1 10 LEDs 500mA WW730 Flat glass 5302 LE 450502 | 500          | 180,0   | 0,0       | 20,0            | 0,0      | 2,516      | 0,850 | 0,00   | 5,10  | 0,00  |
| <input checked="" type="checkbox"/> |  | 2  | 33,00    | 5,10  | 6,00  | IZYLUM 1 10 LEDs 500mA WW730 Flat glass 5302 LE 450502 | 500          | 180,0   | 0,0       | 20,0            | 0,0      | 2,516      | 0,850 | 33,00  | 5,10  | 0,00  |
| <input checked="" type="checkbox"/> |  | 3  | 66,00    | 5,10  | 6,00  | IZYLUM 1 10 LEDs 500mA WW730 Flat glass 5302 LE 450502 | 500          | 180,0   | 0,0       | 20,0            | 0,0      | 2,516      | 0,850 | 66,00  | 5,10  | 0,00  |
| <input checked="" type="checkbox"/> |  | 4  | 99,00    | 5,10  | 6,00  | IZYLUM 1 10 LEDs 500mA WW730 Flat glass 5302 LE 450502 | 500          | 180,0   | 0,0       | 20,0            | 0,0      | 2,516      | 0,850 | 99,00  | 5,10  | 0,00  |

4.3. Luminaire groups

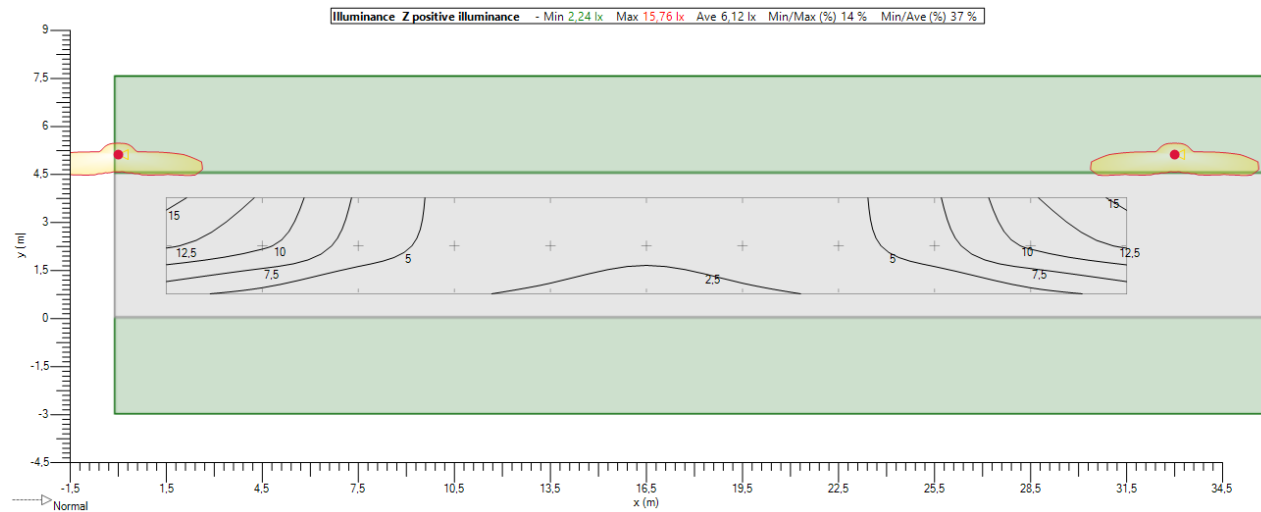
| Linear                              |   |    |          |       |       |           |         |           |          |         |           |             |          |          |       |       |
|-------------------------------------|---|----|----------|-------|-------|-----------|---------|-----------|----------|---------|-----------|-------------|----------|----------|-------|-------|
|                                     | Colour  | 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  | 0,00     | 5,10  | 6,00  | Sloupy    | 180,0   | 0,0       | 0,0      | 100     | 4         | 33,00       | 99,00    | 0,0      | 0,0   | 0,0   |

4.4. Stezka (IL) - Z positive

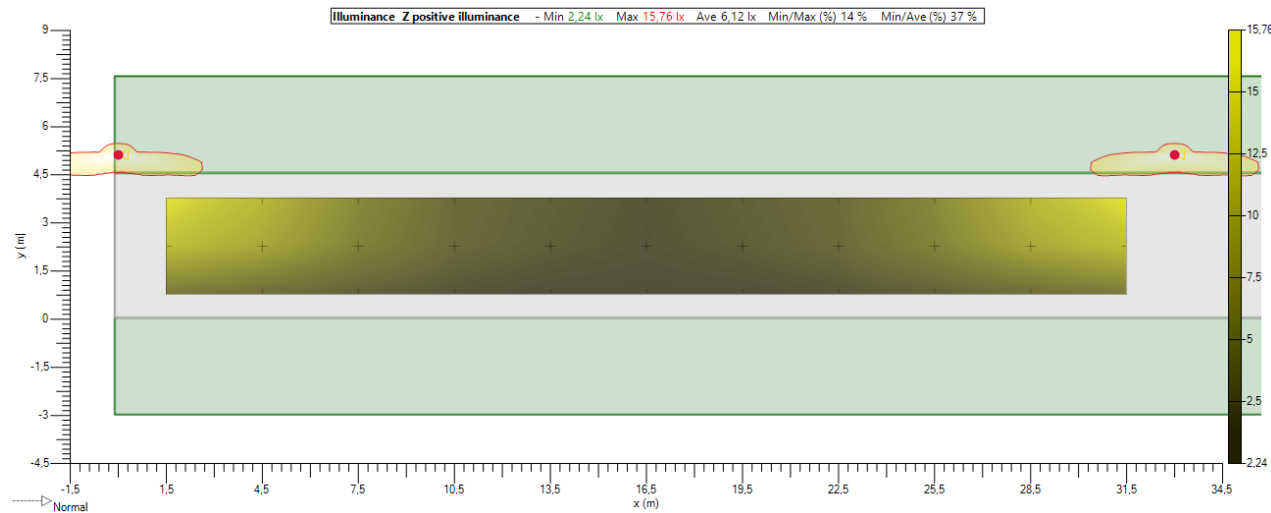
Values



Isolevel



Shading



## 5. Grids

### 5.1. Stezka (IL)

#### General

- Type Grid rectangular XY
- Enabled ☒
- Colour

#### Geometry

- Origin

X 1,50 m

Y 0,75 m

Z 0,00 m
- Rotation

X 0,0 °

Y 0,0 °

Z 0,0 °
- Dimension

Count X 11

Count Y 3

Spacing X 3,00 m

Spacing Y 1,50 m

Size X 30,00 m

Size Y 3,00 m

## Praha - park Ladronka, VO3

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**Designer** rs

**Study #** 292 2024

**Date** 20.05.2024

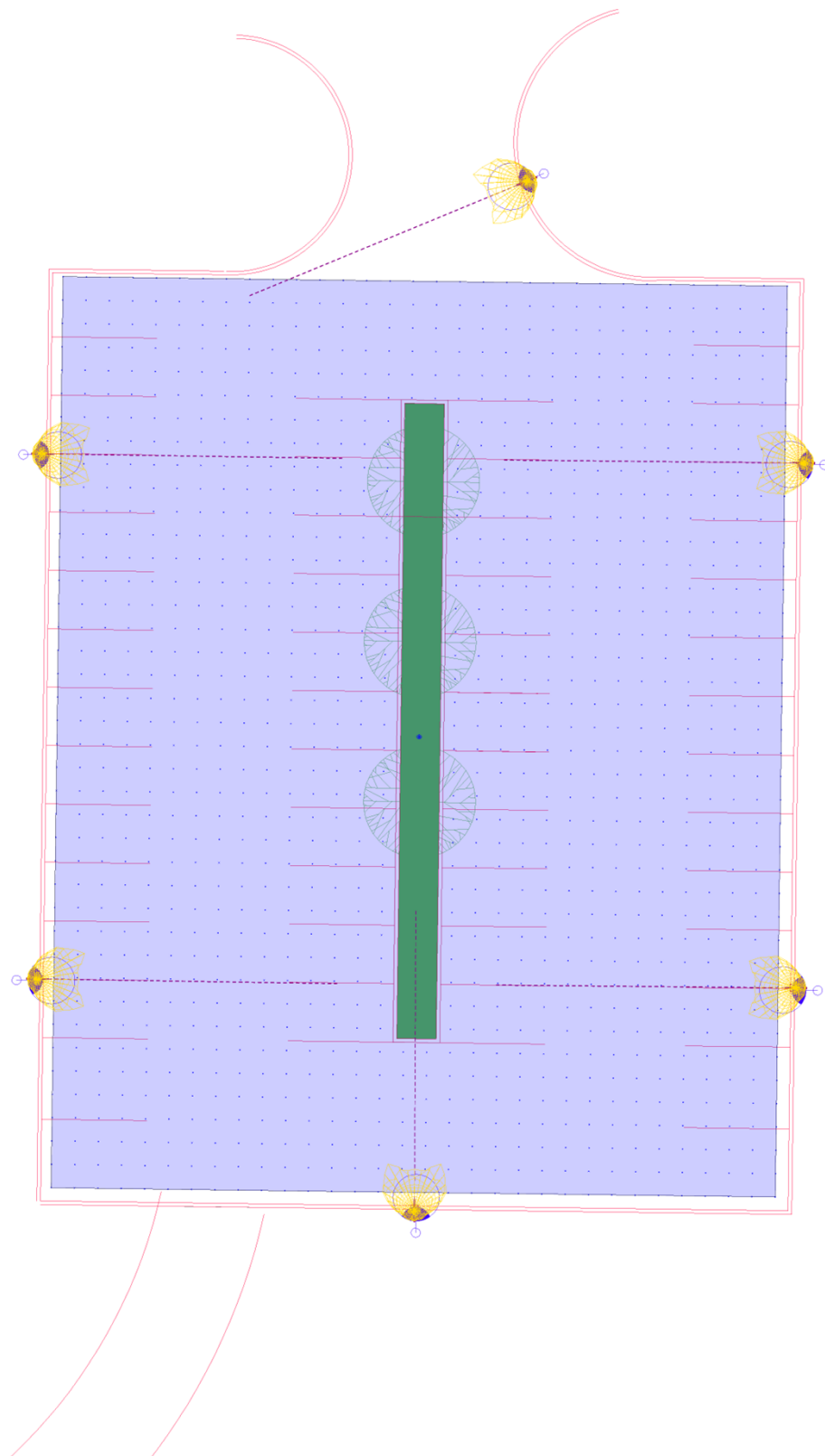
**Application** Ulysse 4.Beta 1.8

**Description** PARKOVIŠTĚ

**File** Výpočet VO3.lp3

# 1. Views

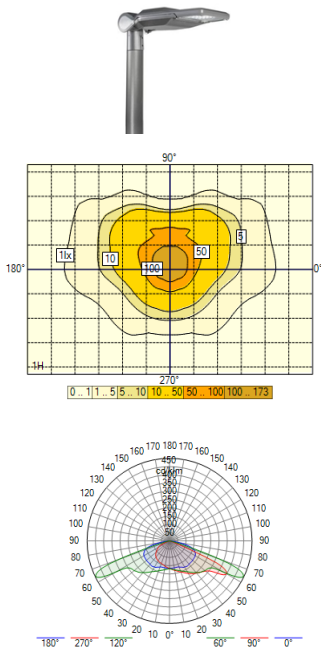
## 1.1. Půdorys



2. Fixtures

2.1. IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322

- Type IZYLUM 1
- Reflector 5393
- Source 20 LEDs 350mA WW730
- Protector Flat glass
- Source flux 3,700 klm
- Luminaire wattage 22,4 W
- MF 0,85
- Matrix 501322
- Luminaire flux 3,213 klm
- Efficacy 143 lm/W



3. Results

3.1. Grid summary

Parkoviště

P4 (IL : Min = 1,00 lux Ave = 5,00 lux)

|                           |                 |                |                |          |          |   |
|---------------------------|-----------------|----------------|----------------|----------|----------|---|
| 1. Z positive illuminance | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |   |
| Uspořádání VO             | 7,23            | 49             | 21             | 3,56     | 16,65    | ✔ |

3.2. Values summary

4. Power consumption

4.1. Uspořádání VO



| Fixture  | Current<br>[mA] | Qty | Dimming | Power/Fixture | Total |
|--|-----------------|-----|---------|---------------|-------|
| IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322 | 350             | 6   | 100 %   | 22 W          | 135 W |

Total 135 W







5. Uspořádání VO

5.1. Matrix description

| Photometric color | Description | Current<br>[mA] | Source flux<br>[klm] | Luminaire flux<br>[klm] | Power<br>[W] | Efficacy<br>[lm/W] | MF | Height [m] | Fixture |
|-------------------|-------------|-----------------|----------------------|-------------------------|--------------|--------------------|----|------------|---------|
|-------------------|-------------|-----------------|----------------------|-------------------------|--------------|--------------------|----|------------|---------|

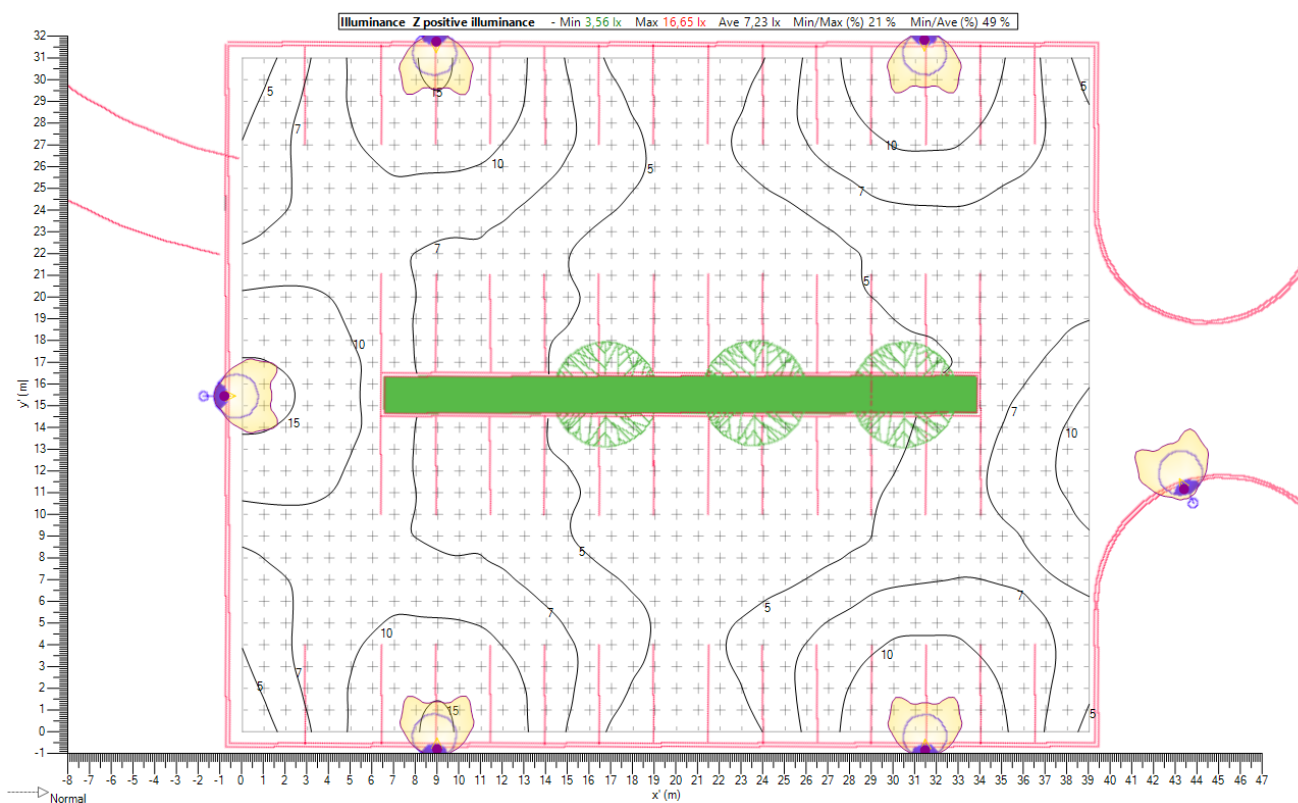
|   |  |     |       |       |      |     |       |          |   |
|---|--|-----|-------|-------|------|-----|-------|----------|---|
|  | IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322 | 350 | 3,700 | 3,213 | 22,4 | 143 | 0,850 | 6 x 6,00 |  |
|---|--|-----|-------|-------|------|-----|-------|----------|---|

5.2. Luminaire positions

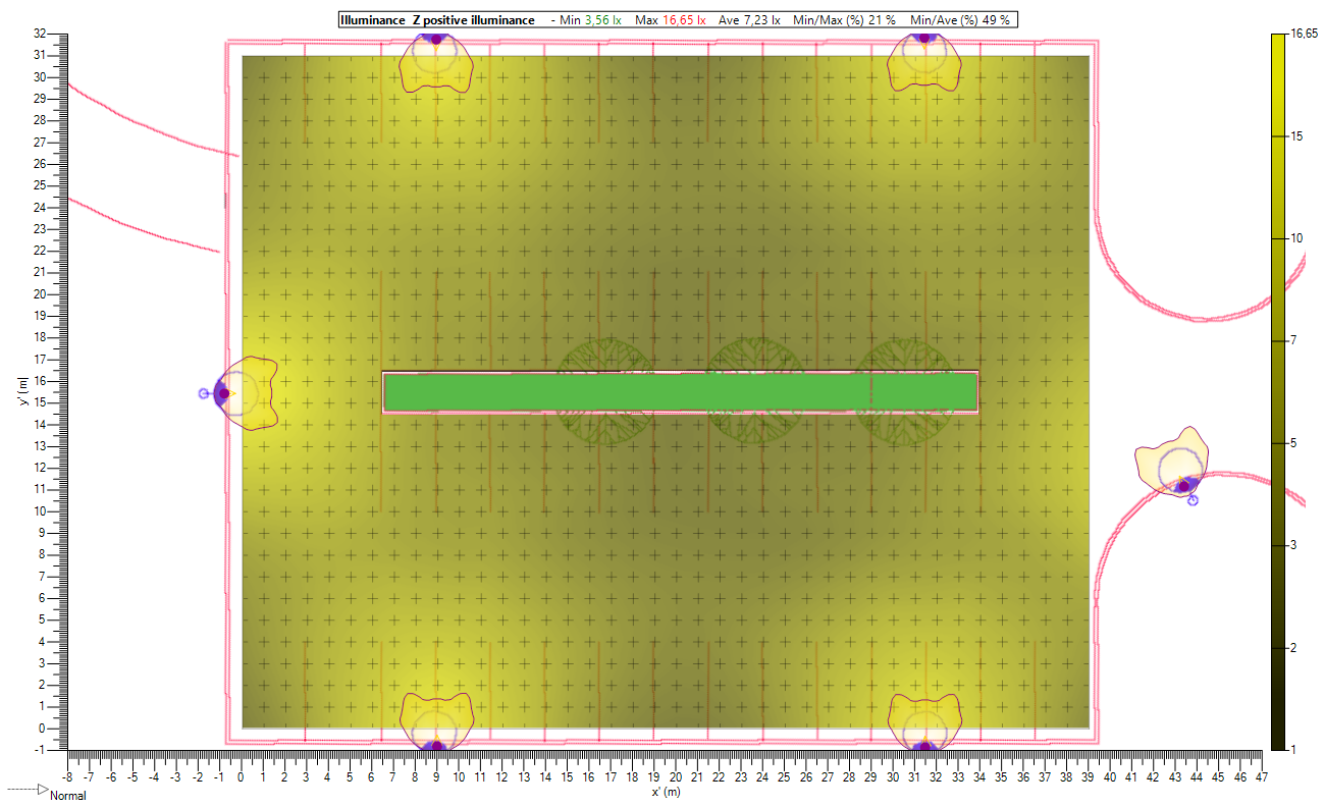
|                                     | Colour  | N° | Position |        |       | Luminaire  |              |         |           |                 |          |            |       | Target |        |       |
|-------------------------------------|---|----|----------|--------|-------|--|--------------|---------|-----------|-----------------|----------|------------|-------|--------|--------|-------|
|                                     |   |    | X [m]    | Y [m]  | Z [m] | Name   | Current [mA] | Az. [°] | Incl. [°] | Incl (Imax) [°] | Rot. [°] | Flux [klm] | MF    | X [m]  | Y [m]  | Z [m] |
| <input checked="" type="checkbox"/> |  | 1  | 73,58    | -15,20 | 6,00  | IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322 | 350          | 134,6   | 5,0       | 65,0            | 0,0      | 3,700      | 0,850 | 73,96  | -15,56 | 0,00  |
| <input checked="" type="checkbox"/> |  | 2  | 78,38    | -33,59 | 6,00  | IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322 | 350          | 44,0    | 5,0       | 65,0            | 0,0      | 3,700      | 0,850 | 78,75  | -33,21 | 0,00  |
| <input checked="" type="checkbox"/> |  | 3  | 89,28    | 0,90   | 6,00  | IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322 | 350          | 134,6   | 5,0       | 65,0            | 0,0      | 3,700      | 0,850 | 89,65  | 0,53   | 0,00  |
| <input checked="" type="checkbox"/> |  | 4  | 96,84    | -37,99 | 6,00  | IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322 | 350          | 314,3   | 5,0       | 65,0            | 0,0      | 3,700      | 0,850 | 96,47  | -37,62 | 0,00  |
| <input checked="" type="checkbox"/> |  | 5  | 112,40   | -5,05  | 6,00  | IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322 | 350          | 291,3   | 5,0       | 65,0            | 0,0      | 3,700      | 0,850 | 111,91 | -4,86  | 0,00  |
| <input checked="" type="checkbox"/> |  | 6  | 112,63   | -21,99 | 6,00  | IZYLUM 1 20 LEDs 350mA WW730 Flat glass 5393 LE 501322 | 350          | 314,3   | 5,0       | 65,0            | 0,0      | 3,700      | 0,850 | 112,25 | -21,62 | 0,00  |

### 5.3. Parkoviště - Z positive

#### Isolevel



#### Shading





## 6. Grids

### 6.1. Parkoviště

#### General

Type Grid rectangular XY

Use exclusion Use exclusion

Enabled ☒

Colour 

#### Geometry

Origin X 89,99 m Y -43,82 m Z 0,00 m

Rotation X 0,0 ° Y 0,0 ° Z 45,5 °

Dimension Count X 40 Count Y 32  
Spacing X 1,00 m Spacing Y 1,00 m  
Size X 39,00 m Size Y 31,00 m

### Akce

293 2024 Praha - park Ladronka, osvětlení sportovních drah

### Zadání

dráha

$E_m = 500$  lx; sloupy pod vedením vvn nejvýše 6metrové;

dráha 200metrová (menší vnitřní okruh) a 400metrová s odbočkami, každou uvažovat zvlášť

### Zatřídění a požadavky na osvětlení

*Je zřejmé, že zadavatel požaduje osvětlení podle normy ČSN EN 12193, Tab. A13:*

ČSN EN 12193 / 2019, tab. A13: **Bruslení** (venkovní hry)

| Třída | $E_{ave\ hor}$ | $U_2$       | $R_G$ | $R_a$     |
|-------|----------------|-------------|-------|-----------|
| I.    | $\geq 500$ lx  | $\geq 0,70$ | 50    | $\geq 70$ |
| II.   | $\geq 200$ lx  | $\geq 0,50$ | 50    | $\geq 60$ |
| III.  | $\geq 100$ lx  | $\geq 0,50$ | 55    | $\geq 60$ |

### Uspořádání osvětlovacích soustav

*Barva písma se shoduje s barvou značky svítidla ve výkresu.*

#### **1) Dráha 200 m**

Světelné body **A1**: 8x **BRITELINE GEN2-2 / 5449 Asym / 648 LED / NW740 / 700 mA ztlum. na 77 % / 1052 W**

Závěsná výška: 8 m

Náklon: 0°

Rozteč: do 18 m v rovném úseku

Světelné body **B**: 6x **BRITELINE GEN2-1 / 5449 Asym / 354 LED / NW740 / 700 mA ztlum. na 90 % / 625 W**

Závěsná výška: 8 m

Náklon: 0°

Rozteč: v obloucích, 13 - 15 m

Světelné body **C**: 2x **BRITELINE GEN2-1 / 5449 Asym / 324 LED / NW740 / 700 mA ztlum. na 90 % / 625 W**

Závěsná výška: 6 m

Náklon: 5°

Rozteč: do 14 m v rovném úseku

**Současný příkon** soustavy pro 200metrový okruh:

$$P_{\Sigma} = 8 \cdot 1052 \text{ W} + 6 \cdot 625 \text{ W} + 2 \cdot 625 \text{ W} = 13\,416 \text{ W} = 13,5 \text{ kW}$$

## **2) Dráha 400 m**

Světelné body **A1**: 8x **BRITELINE GEN2-2 / 5449 Asym / 648 LED / NW740 / 700 mA *ztlum. na 77 % / 1052 W***

Závěsná výška: 8 m

Náklon: 0°

Rozteč: do 18 m v rovném úseku

Světelné body **A2**: 4x **BRITELINE GEN2-2 / 5449 Asym / 648 LED / NW740 / 700 mA *ztlum. na 88 % / 1202 W***

Závěsná výška: 8 m

Náklon: 0°

Rozteč: v obloucích, 13 - 15 m

Světelné body **C**: 23x **BRITELINE GEN2-1 / 5449 Asym / 324 LED / NW740 / 700 mA *ztlum. na 90 % / 625 W***

Závěsná výška: 6 m

Náklon: 5°

Rozteč: do 14 m v rovném úseku

**Současný příkon** soustavy pro 400metrový okruh včetně jeho odboček:

$$P_2 = 8 \cdot 1052 \text{ W} + 4 \cdot 1202 \text{ W} + 23 \cdot 625 \text{ W} = 27\,599 \text{ W} = \mathbf{27,6 \text{ kW}}$$

**Současný příkon celkový** obou soustav:

$$P = P_1 + P_2 = 13,5 \text{ W} + 27,6 \text{ kW} = \mathbf{41,1 \text{ kW}}$$

### **Vypracoval**

Ing. Roman Sedláček, světelný technik  
Schröder Czech Republic, a.s.  
V Praze dne 24. května 2024

## Praha - park Ladronka, osvětlení sportovní dráhy - 200 m

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**Designer** rs

**Study #** 293 2024

**Date** 24.05.2024

**Application** Ulysse 4.Beta 1.8

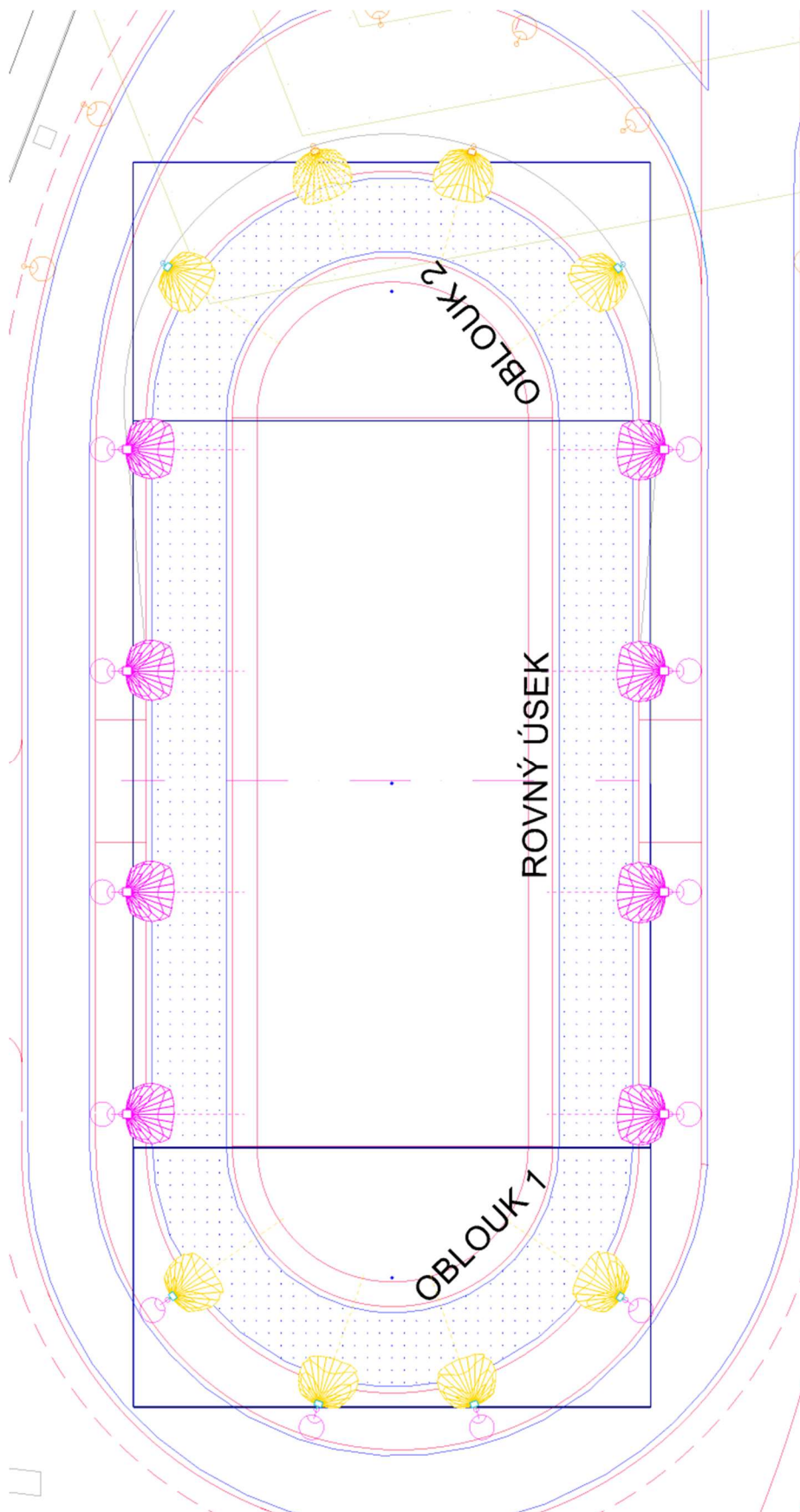
**Description** VÝPOČET podrobný

Výpočet uvažuje vypnutou soustavu osvětlení pro 200 m

**File** Výpočet podrobný - dráha 200 m.lp3

# 1. Výkres

## 1.1. Půdorys



## 2. Svítidla

### 2.1. BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296

Type BRITELINE GEN2 2

Reflector 5449

Source 648 LEDs 700mA NW740

Protector Integrated lenses

Source flux 195,599 klm

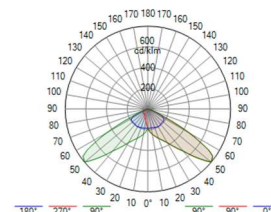
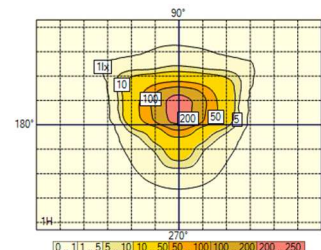
Luminaire wattage 1366 W, *svítidlo ztlumeno na 77 % → 1052 W*

MF 0,90

Matrix E99296

Luminaire flux 195,599 klm

Efficacy 143 lm/W



### 2.2. BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291

Type BRITELINE GEN2 1

Reflector 5449

Source 324 LEDs 700mA NW740

Protector Integrated lenses

Source flux 98,323 klm

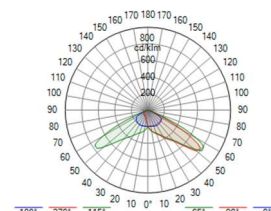
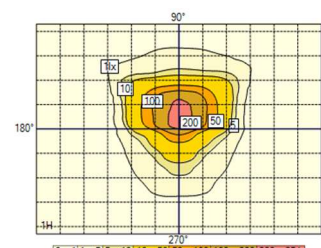
Luminaire wattage 694 W, *svítidlo ztlumeno na 90 % → 625 W*

MF 0,90

Matrix E99291

Luminaire flux 98,323 klm

Efficacy 142 lm/W



3. Výsledky

3.1. Výpočtové plochy

Dráha 200 m - CELÁ

| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| Osvětlovací soustava dráhy 200 m | 530,3           | 77             | 62             | 407,7    | 659,3    | N/A |

Dráha 200 m - OBLOUK 1

| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| Osvětlovací soustava dráhy 200 m | 525,5           | 77             | 64             | 406,2    | 633,7    | N/A |

Dráha 200 m - ROVNÝ ÚSEK

| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| Osvětlovací soustava dráhy 200 m | 528,3           | 79             | 65             | 415,1    | 636,1    | N/A |

Dráha 200 m - OBLOUK 2

| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| Osvětlovací soustava dráhy 200 m | 545,4           | 78             | 65             | 428,1    | 659,6    | N/A |

3.2. Výsledky výpočtu oslnění

Oslnění

|  | GR |
|--|----|
| Osvětlovací soustava dráhy 200 m - Direction (0,0)   | 42 |
| Osvětlovací soustava dráhy 200 m - Direction (135,0) | 38 |
| Osvětlovací soustava dráhy 200 m - Direction (180,0) | 37 |
| Osvětlovací soustava dráhy 200 m - Direction (225,0) | 34 |
| Osvětlovací soustava dráhy 200 m - Direction (270,0) | 39 |
| Osvětlovací soustava dráhy 200 m - Direction (315,0) | 39 |
| Osvětlovací soustava dráhy 200 m - Direction (45,0)  | 42 |
| Osvětlovací soustava dráhy 200 m - Direction (90,0)  | 41 |

4. Bilance příkonová





4.1. Osvětlovací soustava dráhy 200 m

| Fixture   | Current<br>[mA] | Qty | Dimming | Power/Fixture | Total  |
|---|-----------------|-----|---------|---------------|--------|
| BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | 0               | 8   | 90 %    | 625 W         | 4997 W |
| BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | 0               | 8   | 77 %    | 1052 W        | 8415 W |

















Total 13411 W

5. Uspořádání osvětlovací soustavy

5.1. Popis svítidel

















| Photometric colour  | Description   | Current [mA] | Source flux [klm] | Luminaires flux [klm] | Power [W] | Efficacy [lm/W] | MF    | Height [m]           | Fixture   |
|---|---|--------------|-------------------|-----------------------|-----------|-----------------|-------|----------------------|---|
|  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 |              | 98,323            | 98,323                | 694,0     | 142             | 0,900 | 2 x 6,00<br>6 x 8,00 |  |
|  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 |              | 195,599           | 195,599               | 1366,0    | 143             | 0,900 | 8 x 8,00             |  |

5.2. Polohy svítidel

|                                     | Colour  | N° | Position |        |       | Luminaire   |              |         |           |                 |          |            |       | Target  |        |       |
|-------------------------------------|---|----|----------|--------|-------|---|--------------|---------|-----------|-----------------|----------|------------|-------|---------|--------|-------|
|                                     |   |    | X [m]    | Y [m]  | Z [m] | Name  | Current [mA] | Az. [°] | Incl. [°] | Incl (Imax) [°] | Rot. [°] | Flux [klm] | MF    | X [m]   | Y [m]  | Z [m] |
| <input checked="" type="checkbox"/> |    | 1  | -65,04   | -17,34 | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | -35,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -65,04  | -17,34 | 0,00  |
| <input checked="" type="checkbox"/> |   | 2  | -50,30   | -7,01  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | -35,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -50,30  | -7,01  | 0,00  |
| <input checked="" type="checkbox"/> |  | 3  | -35,56   | 3,32   | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | -35,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -35,56  | 3,32   | 0,00  |
| <input checked="" type="checkbox"/> |  | 4  | -20,82   | 13,65  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | -35,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -20,82  | 13,65  | 0,00  |
| <input checked="" type="checkbox"/> |  | 5  | -90,07   | 18,38  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 145,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -90,07  | 18,38  | 0,00  |
| <input checked="" type="checkbox"/> |  | 6  | -75,33   | 28,71  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 145,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -75,33  | 28,71  | 0,00  |
| <input checked="" type="checkbox"/> |  | 7  | -60,59   | 39,04  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 145,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -60,59  | 39,04  | 0,00  |
| <input checked="" type="checkbox"/> |  | 8  | -45,85   | 49,37  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 145,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -45,85  | 49,37  | 0,00  |
| <input checked="" type="checkbox"/> |  | 9  | -79,20   | -22,91 | 8,00  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | -            | 358,7   | 0,0       | 54,0            | 0,0      | 98,323     | 0,900 | -79,20  | -22,91 | 0,00  |
| <input checked="" type="checkbox"/> |  | 10 | -10,92   | 25,17  | 8,00  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | -            | 287,9   | 0,0       | 54,0            | 0,0      | 98,323     | 0,900 | -10,92  | 25,17  | 0,00  |
| <input checked="" type="checkbox"/> |  | 11 | -100,02  | 6,89   | 8,00  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | -            | 110,0   | 0,0       | 54,0            | 0,0      | 98,323     | 0,900 | -100,02 | 6,89   | 0,00  |
| <input checked="" type="checkbox"/> |  | 12 | -31,82   | 55,17  | 8,00  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | -            | 179,5   | 0,0       | 54,0            | 0,0      | 98,323     | 0,900 | -31,82  | 55,17  | 0,00  |
| <input checked="" type="checkbox"/> |  | 13 | -100,36  | -7,80  | 8,00  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | -            | 74,5    | 0,0       | 54,0            | 0,0      | 98,323     | 0,900 | -100,36 | -7,80  | 0,00  |
| <input checked="" type="checkbox"/> |  | 14 | -93,13   | -18,18 | 8,00  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | -            | 36,2    | 0,0       | 54,0            | 0,0      | 98,323     | 0,900 | -93,13  | -18,18 | 0,00  |
| <input checked="" type="checkbox"/> |  | 15 | -17,29   | 50,74  | 6,00  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | -            | 218,2   | 5,0       | 59,0            | 0,0      | 98,323     | 0,900 | -17,61  | 50,33  | 0,00  |
| <input checked="" type="checkbox"/> |  | 16 | -10,03   | 40,31  | 6,00  | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | -            | 250,5   | 5,0       | 59,0            | 0,0      | 98,323     | 0,900 | -10,52  | 40,13  | 0,00  |

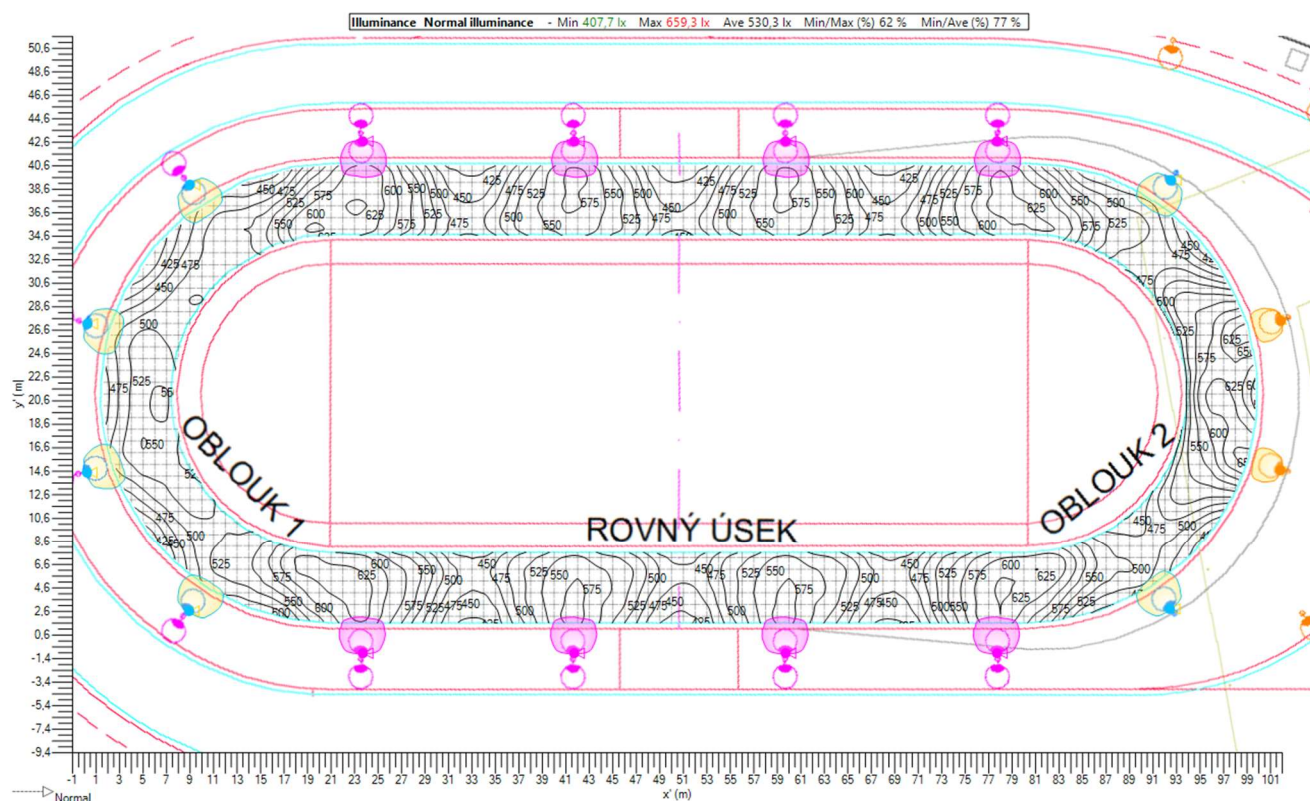


## 5.3. Svítidla skupinově

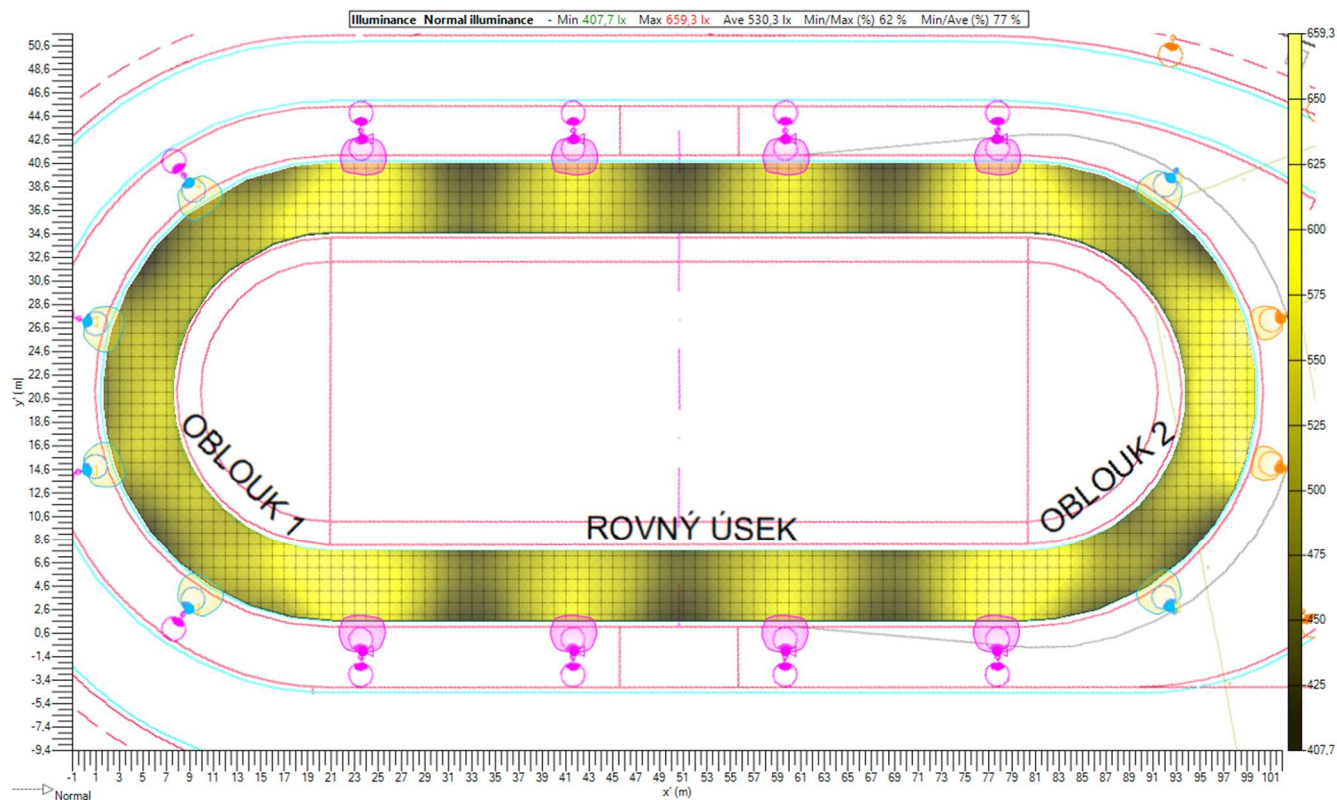
| Single                              |   |    |          |          |          |                 |            |              |             |            |
|-------------------------------------|---|----|----------|----------|----------|-----------------|------------|--------------|-------------|------------|
|                                     | Colour  | N° | Position |          |          | Luminaire       |            |              |             |            |
|                                     |   |    | X<br>[m] | Y<br>[m] | Z<br>[m] | Name            | Az.<br>[°] | Incl.<br>[°] | Rot.<br>[°] | Dim<br>[%] |
| <input checked="" type="checkbox"/> |  | 1  | -65,04   | -17,34   | 8,00     | Světlomet A (1) | -35,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 2  | -50,30   | -7,01    | 8,00     | Světlomet A (2) | -35,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 3  | -35,56   | 3,32     | 8,00     | Světlomet A (3) | -35,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 4  | -20,82   | 13,65    | 8,00     | Světlomet A (4) | -35,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 5  | -90,07   | 18,38    | 8,00     | Světlomet A (5) | 145,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 6  | -75,33   | 28,71    | 8,00     | Světlomet A (6) | 145,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 7  | -60,59   | 39,04    | 8,00     | Světlomet A (7) | 145,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 8  | -45,85   | 49,37    | 8,00     | Světlomet A (8) | 145,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 9  | -79,20   | -22,91   | 8,00     | Světlomet B (1) | 358,7      | 0,0          | 0,0         | 90         |
| <input checked="" type="checkbox"/> |  | 10 | -10,92   | 25,17    | 8,00     | Světlomet B (2) | 287,9      | 0,0          | 0,0         | 90         |
| <input checked="" type="checkbox"/> |  | 11 | -100,02  | 6,89     | 8,00     | Světlomet B (3) | 110,0      | 0,0          | 0,0         | 90         |
| <input checked="" type="checkbox"/> |  | 12 | -31,82   | 55,17    | 8,00     | Světlomet B (4) | 179,5      | 0,0          | 0,0         | 90         |
| <input checked="" type="checkbox"/> |  | 13 | -100,36  | -7,80    | 8,00     | Světlomet B (5) | 74,5       | 0,0          | 0,0         | 90         |
| <input checked="" type="checkbox"/> |  | 14 | -93,13   | -18,18   | 8,00     | Světlomet B (6) | 36,2       | 0,0          | 0,0         | 90         |
| <input checked="" type="checkbox"/> |  | 15 | -17,29   | 50,74    | 6,00     | Světlomet C (1) | 218,2      | 5,0          | 0,0         | 90         |
| <input checked="" type="checkbox"/> |  | 16 | -10,03   | 40,31    | 6,00     | Světlomet C (2) | 250,5      | 5,0          | 0,0         | 90         |

## 5.4. Dráha 200 m - CELÁ

### Isolevel

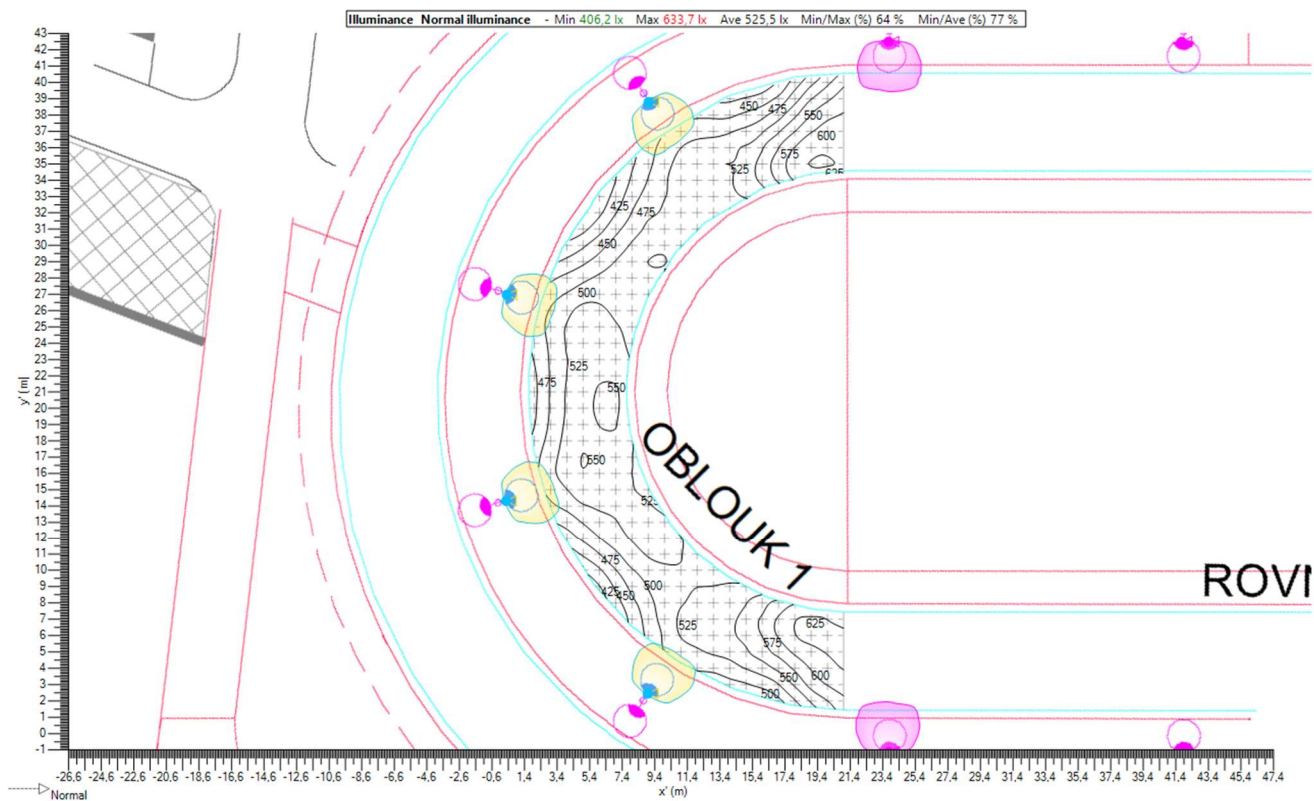


### Shading

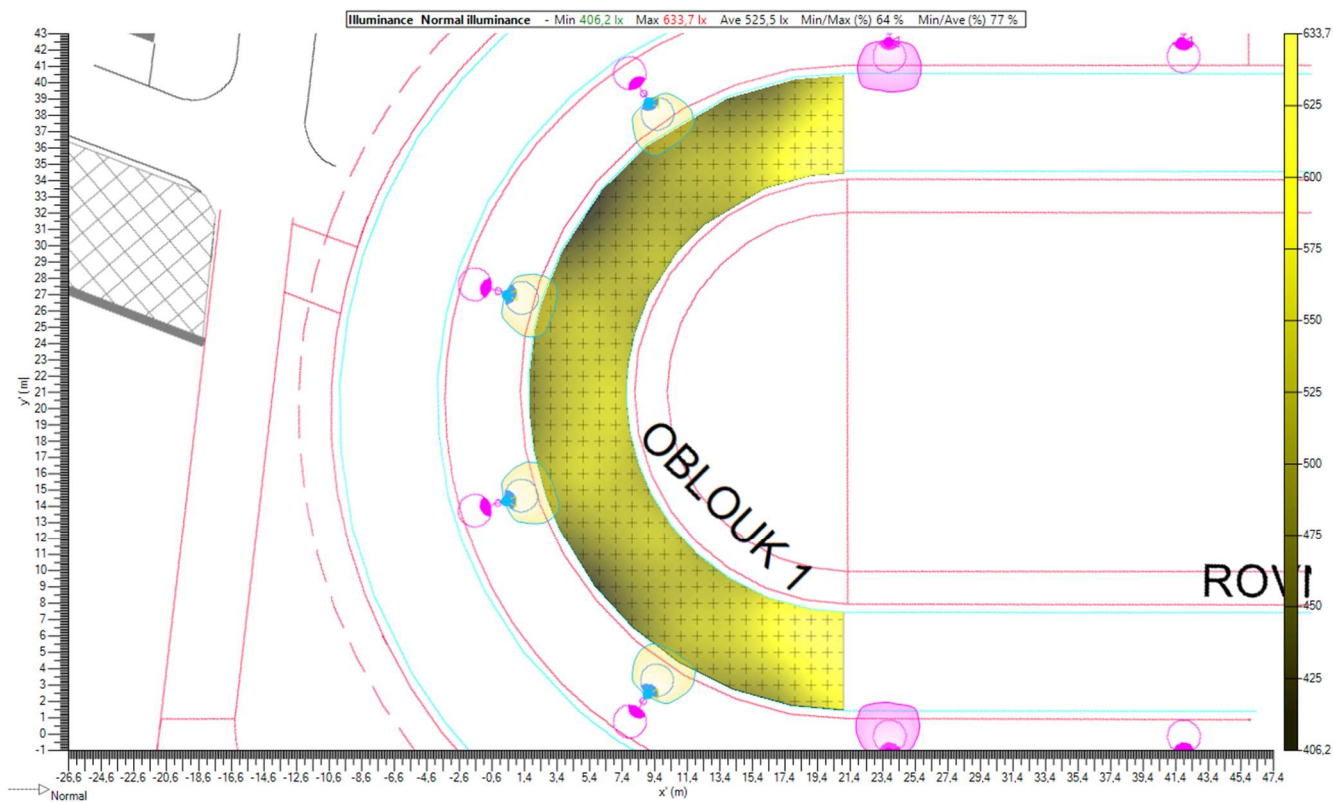


## 5.5. Dráha 200 m - OBLOUK 1

## 5.6. Isolevel



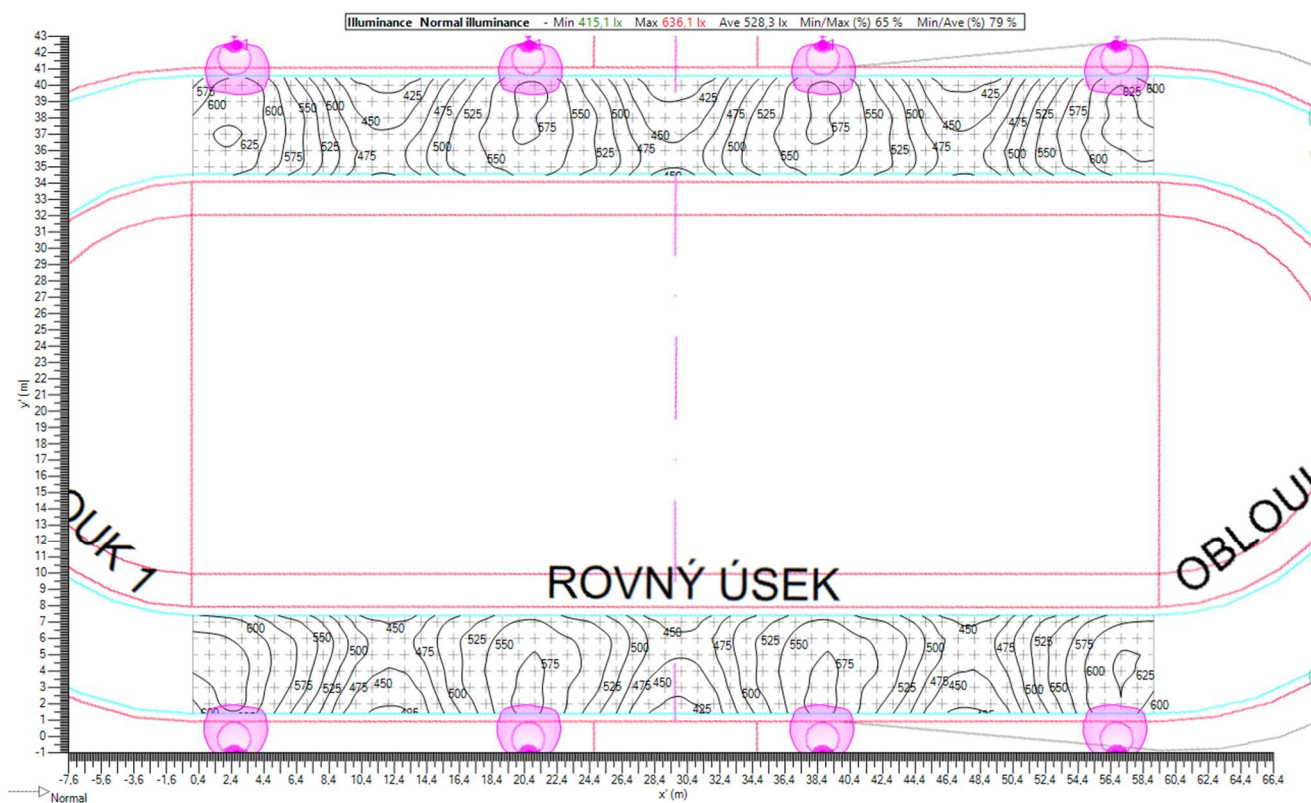
## Shading



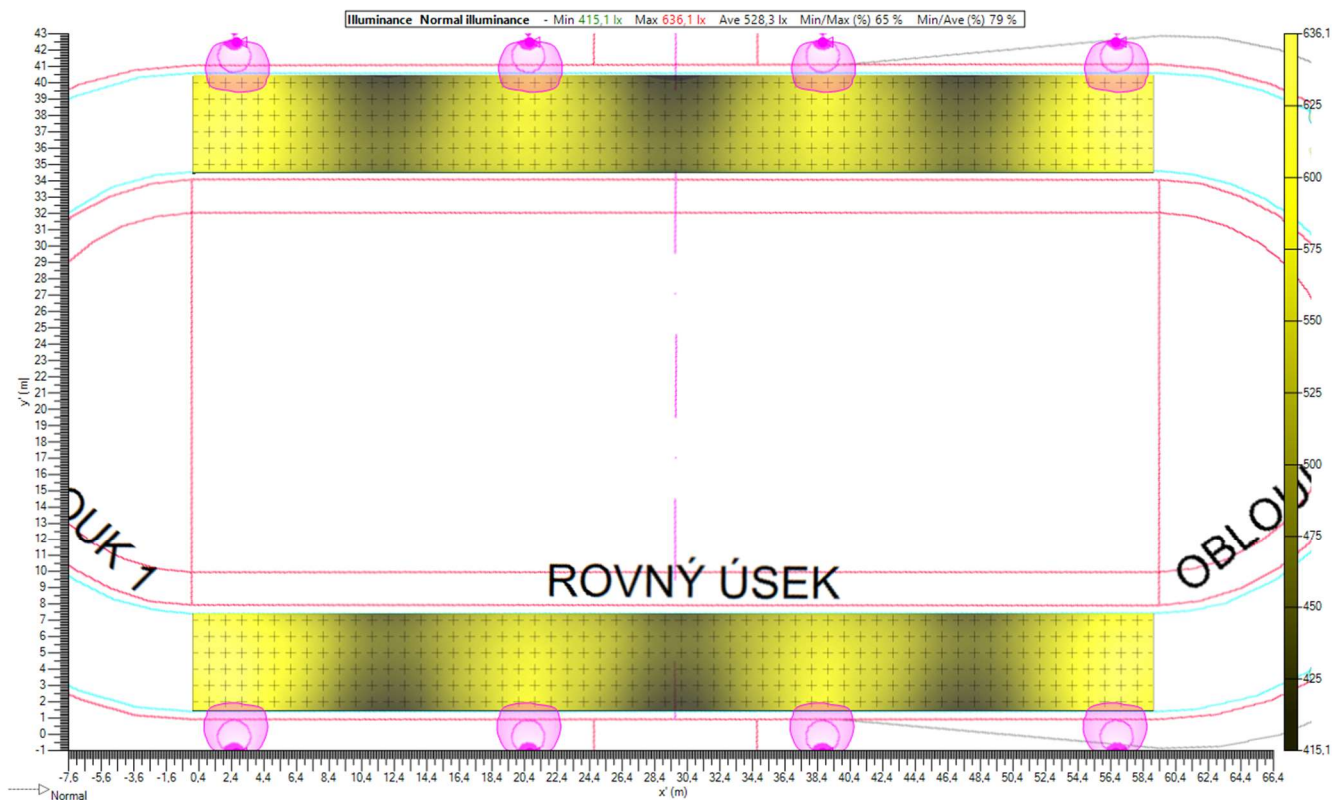


## 5.7. Dráha 200 m - ROVNÝ ÚSEK

## Isolevel

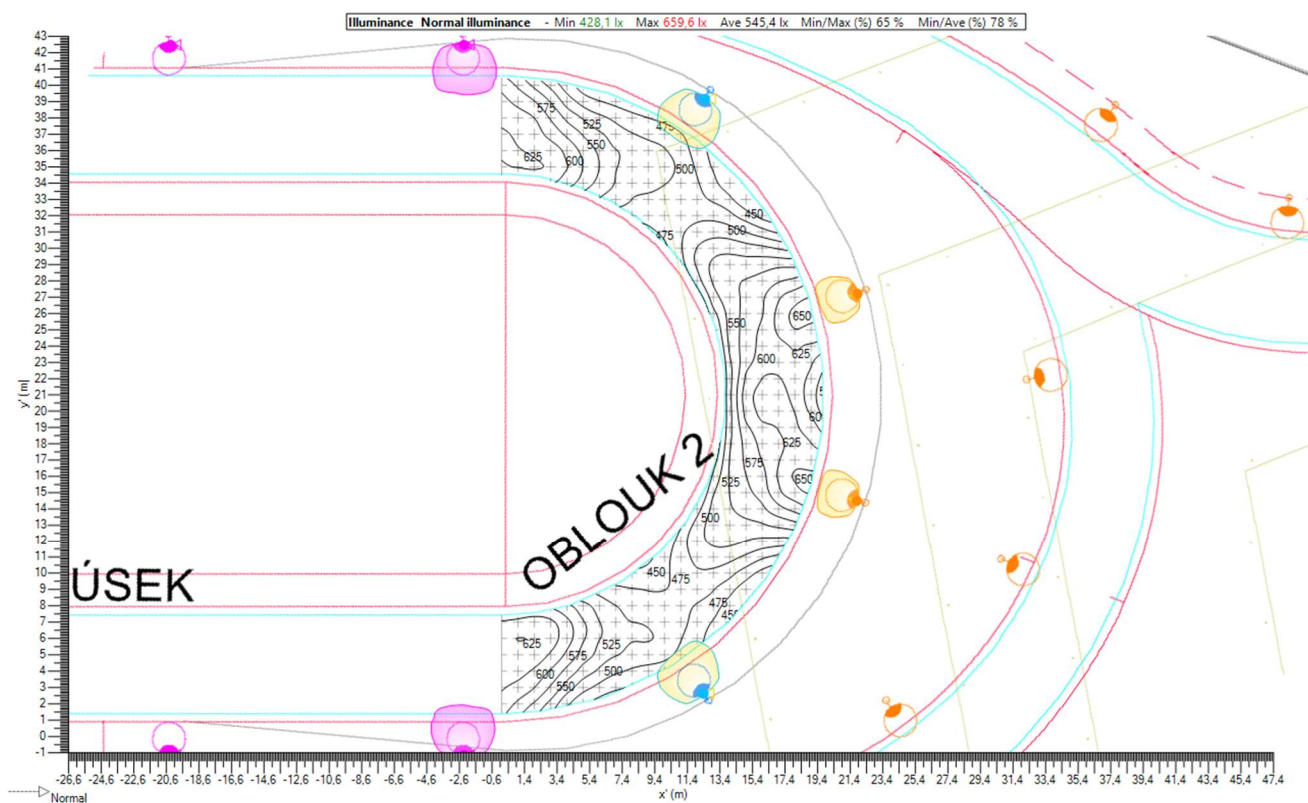


## Shading

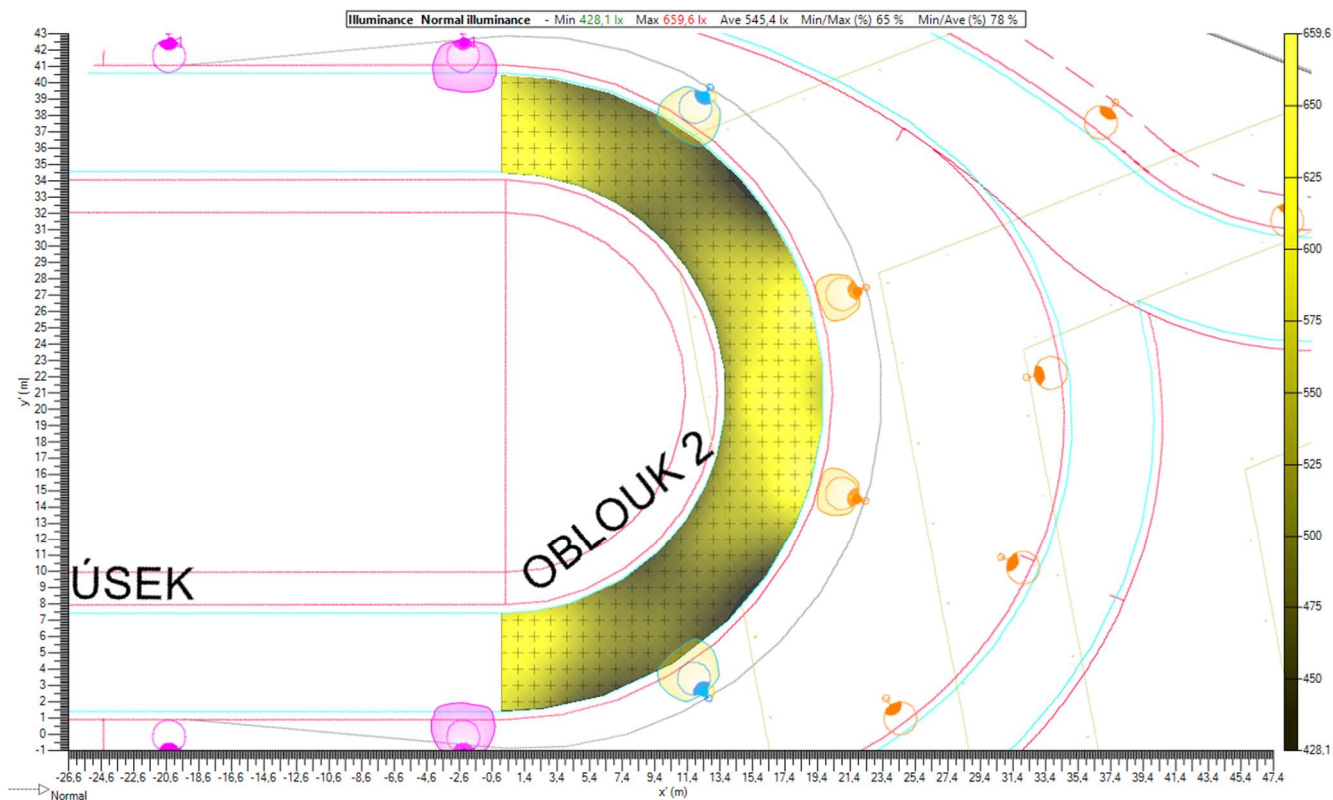


## 5.8. Dráha 200 m - OBLOUK 2

## Isolevel




## Shading




## 6. Výpočtové plochy


### 6.1. Dráha 200 m - CELÁ

| General       |   | Geometry  |             |                  |          |
|---------------|---|-----------|-------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X -85,09 m  | Y -30,03 m       | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °     | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 102 | Count Y 43       |          |
| Colour        |  | Spacing X | 1,00 m      | Spacing Y 1,00 m |          |
|               |   | Size X    | 101,00 m    | Size Y 42,00 m   |          |


### 6.2. Dráha 200 m - OBLOUK 1

| General       |   | Geometry  |            |                  |          |
|---------------|---|-----------|------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X -85,13 m | Y -30,06 m       | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °    | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 22 | Count Y 43       |          |
| Colour        |  | Spacing X | 1,00 m     | Spacing Y 1,00 m |          |
|               |   | Size X    | 21,00 m    | Size Y 42,00 m   |          |

### 6.3. Dráha 200 m - ROVNÝ ÚSEK

| General       |   | Geometry  |            |                  |          |
|---------------|---|-----------|------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X -67,88 m | Y -17,95 m       | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °    | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 60 | Count Y 43       |          |
| Colour        |  | Spacing X | 1,00 m     | Spacing Y 1,00 m |          |
|               |   | Size X    | 59,00 m    | Size Y 42,00 m   |          |

### 6.4. Dráha 200 m - OBLOUK 2

| General       |   | Geometry  |            |                  |          |
|---------------|---|-----------|------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X -19,56 m | Y 15,92 m        | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °    | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 22 | Count Y 43       |          |
| Colour        |  | Spacing X | 1,00 m     | Spacing Y 1,00 m |          |
|               |   | Size X    | 21,00 m    | Size Y 42,00 m   |          |

Schröder

Praha - park Ladronka,  
osvětlení sportovní dráhy 400 m vč. odboček

nastavil formátování: Písmo: není Tučné

Designer rs

Study # 293 2024

Date 24.05.2024

Application Ulysse 4.Beta 1.8

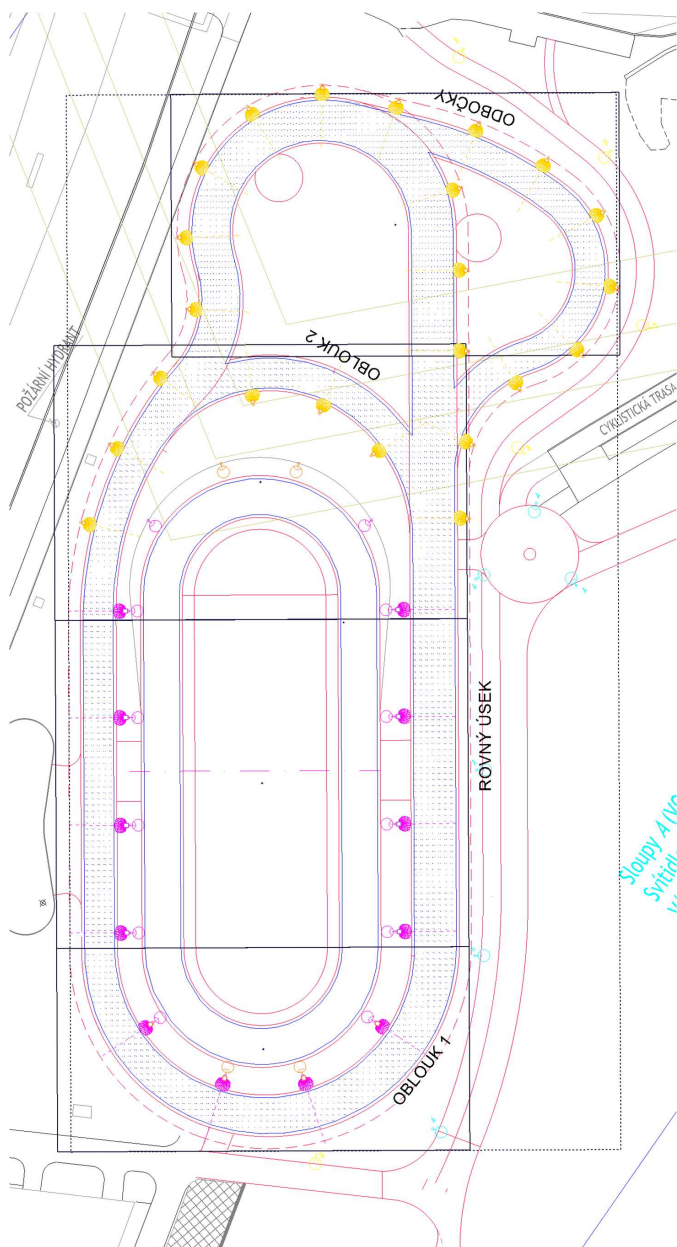
Description VÝPOČET podrobný

Výpočet uvažuje vypnutou soustavu osvětlení pro 200 m

File Výpočet podrobný - dráha 400 m.lp3

## 1. Výkres

### 1.1. Půdorys





2. Svítidla

2.1. BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296

Type BRITELINE GEN2 2

Reflector 5449

Source 648 LEDs 700mA NW740

Protector Integrated lenses

Source flux 195,599 klm

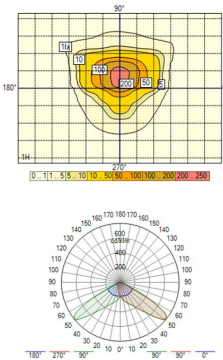
Luminaire wattage 1366,0 WW, *svítidlo ztlumeno na 77 % → 1052 W*  
*svítidlo ztlumeno na 88 % → 1202 W*

MF 0,90

Matrix E99296

Luminaire flux 195,599 klm

Efficacy 143 lm/W



2.2. BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291

Type BRITELINE GEN2 1

Reflector 5449

Source 324 LEDs 700mA NW740

Protector Integrated lenses

Source flux 98,323 klm

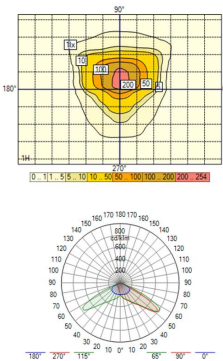
Luminaire wattage 694,0 W, *svítidlo ztlumeno na 90 % → 625 W*

MF 0,90

Matrix E99291

Luminaire flux 98,323 klm

Efficacy 142 lm/W



3. Výsledky

3.1. Výpočtové plochy

Dráha 400 m CELÁ vč. odboček

|                                  |                 |                |                |          |          |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
| Osvětlovací soustava dráhy 400 m | 518,0           | 70             | 50             | 360,1    | 722,4    | N/A |

Dráha 400 m - OBLOUK 1

|                                  |                 |                |                |          |          |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
| Osvětlovací soustava dráhy 400 m | 504,7           | 74             | 60             | 373,1    | 626,6    | N/A |

Dráha 400 m - ROVNÉ ÚSEKY

|                                  |                 |                |                |          |          |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
| Osvětlovací soustava dráhy 400 m | 505,8           | 82             | 71             | 415,5    | 583,4    | N/A |

Dráha 400 m - OBLOUK 2

|                                  |                 |                |                |          |          |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
| Osvětlovací soustava dráhy 400 m | 503,3           | 70             | 52             | 354,2    | 683,0    | N/A |

Dráha 400 m - ODBOČKY

|                                  |                 |                |                |          |          |     |
|----------------------------------|-----------------|----------------|----------------|----------|----------|-----|
| 1. Normal illuminance            | Ave (A)<br>(lx) | Min/Ave<br>(%) | Min/Max<br>(%) | Min (lx) | Max (lx) |     |
| Osvětlovací soustava dráhy 400 m | 549,7           | 69             | 53             | 381,8    | 726,8    | N/A |

3.2. Souhrn výsledků výpočtu oslnění GR

Oslnění

|  |    |
|--|----|
|  | GR |
| Osvětlovací soustava dráhy 400 m - Direction (0,0)   | 42 |
| Osvětlovací soustava dráhy 400 m - Direction (135,0) | 43 |
| Osvětlovací soustava dráhy 400 m - Direction (180,0) | 42 |
| Osvětlovací soustava dráhy 400 m - Direction (225,0) | 42 |
| Osvětlovací soustava dráhy 400 m - Direction (270,0) | 43 |
| Osvětlovací soustava dráhy 400 m - Direction (315,0) | 43 |
| Osvětlovací soustava dráhy 400 m - Direction (45,0)  | 43 |
| Osvětlovací soustava dráhy 400 m - Direction (90,0)  | 42 |





## 4. Bilance příkonová

### 4.1. Osvětlovací soustava dráhy 400 m








| Fixture   | Current [mA] | Qty | Dimming | Power/Fixture | Total   |
|---|--------------|-----|---------|---------------|---------|
| BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 | 0            | 23  | 90 %    | 625 W         | 14366 W |
| BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | 0            | 4   | 88 %    | 1202 W        | 4808 W  |
| BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | 0            | 8   | 77 %    | 1052 W        | 8415 W  |
| Total   |              |     |         |               | 27589 W |
























## 5. Uspořádání osvětlovací soustavy

### 5.1. Popis svítidel







| Photometric colour   | Description   | Current [mA] | Source flux [klm] | Luminaires flux [klm] | Power [W] | Efficacy [lm/W] | MF    | Height [m] | Fixture   |
|--|---|--------------|-------------------|-----------------------|-----------|-----------------|-------|------------|---|
|    | BRITELINE GEN2 1 324 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99291 |              | 98,323            | 98,323                | 694,0     | 142             | 0,900 | 23 x 6,00  |    |
|  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 |              | 195,599           | 195,599               | 1366,0    | 143             | 0,900 | 12 x 8,00  |  |






























### 5.2. Polohy svítidel

|                                     | Colour  | N° | Position |        |       | Luminaire   |              |         |           |                 |          |            |       | Target  |        |       |
|-------------------------------------|---|----|----------|--------|-------|---|--------------|---------|-----------|-----------------|----------|------------|-------|---------|--------|-------|
|                                     |   |    | X [m]    | Y [m]  | Z [m] | Name  | Current [mA] | Az. [°] | Incl. [°] | Incl (lmax) [°] | Rot. [°] | Flux [klm] | MF    | X [m]   | Y [m]  | Z [m] |
| <input checked="" type="checkbox"/> |  | 1  | -64,46   | -18,16 | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 144,7   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -64,46  | -18,16 | 0,00  |
| <input checked="" type="checkbox"/> |  | 2  | -49,72   | -7,83  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 144,4   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -49,72  | -7,83  | 0,00  |
| <input checked="" type="checkbox"/> |  | 3  | -34,98   | 2,50   | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 145,2   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -34,98  | 2,50   | 0,00  |
| <input checked="" type="checkbox"/> |  | 4  | -20,24   | 12,83  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 145,2   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -20,24  | 12,83  | 0,00  |
| <input checked="" type="checkbox"/> |  | 5  | -90,63   | 19,21  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 325,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -90,63  | 19,21  | 0,00  |
| <input checked="" type="checkbox"/> |  | 6  | -75,90   | 29,53  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 325,4   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -75,90  | 29,53  | 0,00  |
| <input checked="" type="checkbox"/> |  | 7  | -61,16   | 39,87  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 324,9   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -61,16  | 39,87  | 0,00  |
| <input checked="" type="checkbox"/> |  | 8  | -46,42   | 50,19  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 325,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -46,42  | 50,19  | 0,00  |
| <input checked="" type="checkbox"/> |  | 9  | -79,17   | -23,92 | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 176,9   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -79,17  | -23,92 | 0,00  |
| <input checked="" type="checkbox"/> |  | 10 | -100,95  | 7,23   | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 292,0   | 0,0       | 50,0            | 0,0      | 195,599    | 0,900 | -100,95 | 7,23   | 0,00  |
| <input checked="" type="checkbox"/> |  | 11 | -93,70   | -18,97 | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 217,0   | 5,0       | 55,0            | 0,0      | 195,599    | 0,900 | -94,12  | -19,53 | 0,00  |
| <input checked="" type="checkbox"/> |  | 12 | -101,31  | -8,11  | 8,00  | BRITELINE GEN2 2 648 LEDs 700mA NW740 Integrated lenses 5449 Asym 55° Wide E99296 | -            | 252,6   | 5,0       | 55,0            | 0,0      | 195,599    | 0,900 | -101,98 | -8,32  | 0,00  |

|                                     |   |    |        |       |      |  |   |       |     |      |     |        |       |        |       |      |
|-------------------------------------|---|----|--------|-------|------|--|---|-------|-----|------|-----|--------|-------|--------|-------|------|
| <input checked="" type="checkbox"/> |    | 13 | -1,08  | 31,08 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 114,6 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | -0,60  | 30,86 | 0,00 |
| <input checked="" type="checkbox"/> |    | 14 | -0,25  | 42,45 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 79,1  | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 0,27   | 42,55 | 0,00 |
| <input checked="" type="checkbox"/> |    | 15 | -5,44  | 52,66 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 49,0  | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | -5,05  | 53,00 | 0,00 |
| <input checked="" type="checkbox"/> |    | 16 | -38,25 | 64,32 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 158,9 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | -38,06 | 63,83 | 0,00 |
| <input checked="" type="checkbox"/> |    | 17 | -24,90 | 67,84 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 173,7 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | -24,84 | 67,32 | 0,00 |
| <input checked="" type="checkbox"/> |    | 18 | -10,99 | 68,65 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 180,4 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | -10,99 | 68,12 | 0,00 |
| <input checked="" type="checkbox"/> |    | 19 | 1,24   | 70,17 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 148,0 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 1,52   | 69,73 | 0,00 |
| <input checked="" type="checkbox"/> |    | 20 | 10,13  | 78,31 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 143,0 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 10,45  | 77,89 | 0,00 |
| <input checked="" type="checkbox"/> |    | 21 | 21,84  | 83,05 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 176,1 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 21,87  | 82,52 | 0,00 |
| <input checked="" type="checkbox"/> |    | 22 | 34,45  | 81,10 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 203,7 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 34,24  | 80,62 | 0,00 |
| <input checked="" type="checkbox"/> |    | 23 | 44,33  | 73,01 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 236,7 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 43,89  | 72,72 | 0,00 |
| <input checked="" type="checkbox"/> |    | 24 | 49,64  | 61,23 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 254,7 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 49,13  | 61,09 | 0,00 |
| <input checked="" type="checkbox"/> |   | 25 | 54,10  | 48,07 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 256,1 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 53,59  | 47,94 | 0,00 |
| <input checked="" type="checkbox"/> |  | 26 | 55,77  | 35,31 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 264,6 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 55,24  | 35,26 | 0,00 |
| <input checked="" type="checkbox"/> |  | 27 | 53,89  | 22,66 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 297,0 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 53,42  | 22,90 | 0,00 |
| <input checked="" type="checkbox"/> |  | 28 | 44,95  | 13,66 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 330,5 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 44,69  | 14,11 | 0,00 |
| <input checked="" type="checkbox"/> |  | 29 | 32,39  | 12,03 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 9,7   | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 32,47  | 12,55 | 0,00 |
| <input checked="" type="checkbox"/> |  | 30 | 21,79  | 17,35 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 24,4  | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 22,01  | 17,83 | 0,00 |
| <input checked="" type="checkbox"/> |  | 31 | 9,46   | 18,53 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 351,3 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 9,38   | 19,05 | 0,00 |
| <input checked="" type="checkbox"/> |  | 32 | -1,15  | 12,11 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 325,8 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | -1,45  | 12,55 | 0,00 |
| <input checked="" type="checkbox"/> |  | 33 | 43,53  | 44,69 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 308,2 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 43,12  | 45,02 | 0,00 |
| <input checked="" type="checkbox"/> |  | 34 | 32,84  | 35,91 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 324,3 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 32,54  | 36,33 | 0,00 |
| <input checked="" type="checkbox"/> |  | 35 | 21,85  | 28,22 | 6,00 | BRITELINE GEN2 1 324 LEDs 700mA NW740<br>Integrated lenses 5449 Asym 55° Wide E99291 | - | 325,4 | 5,0 | 59,0 | 0,0 | 98,323 | 0,900 | 21,55  | 28,65 | 0,00 |

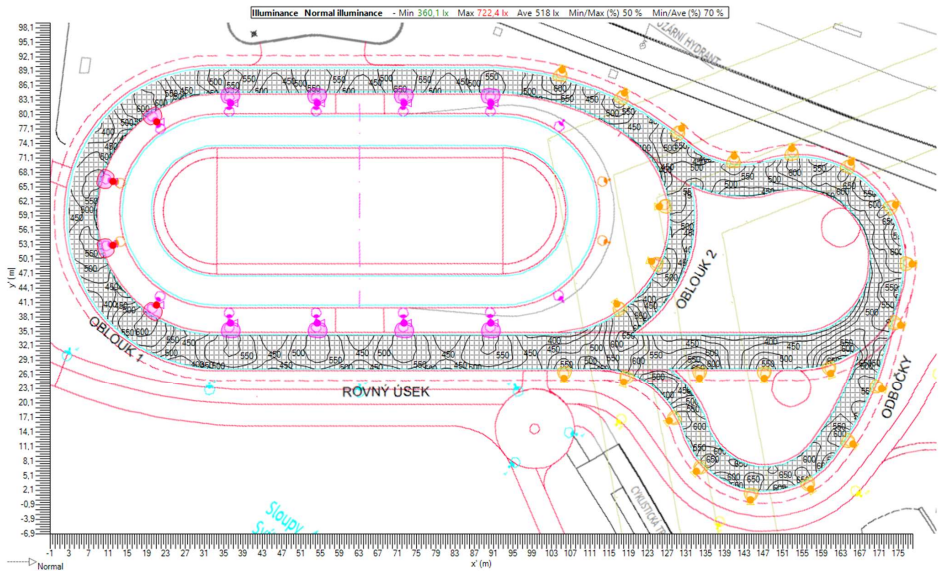
5.3. Svítidla skupinově

| Single                              |   |    |          |          |          |                      |            |              |             |            |
|-------------------------------------|---|----|----------|----------|----------|----------------------|------------|--------------|-------------|------------|
|                                     | Colour  | N° | Position |          |          | Luminaire            |            |              |             |            |
|                                     |   |    | X<br>[m] | Y<br>[m] | Z<br>[m] | Name                 | Az.<br>[°] | Incl.<br>[°] | Rot.<br>[°] | Dim<br>[%] |
| <input checked="" type="checkbox"/> |  | 1  | -64,46   | -18,16   | 8,00     | Světlomet A1 (1) 77% | 144,7      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 2  | -49,72   | -7,83    | 8,00     | Světlomet A1 (2) 77% | 144,4      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 3  | -34,98   | 2,50     | 8,00     | Světlomet A1 (3) 77% | 145,2      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 4  | -20,24   | 12,83    | 8,00     | Světlomet A1 (4) 77% | 145,2      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 5  | -90,63   | 19,21    | 8,00     | Světlomet A1 (5) 77% | 325,0      | 0,0          | 0,0         | 77         |
| <input checked="" type="checkbox"/> |  | 6  | -75,90   | 29,53    | 8,00     | Světlomet A1 (6) 77% | 325,4      | 0,0          | 0,0         | 77         |

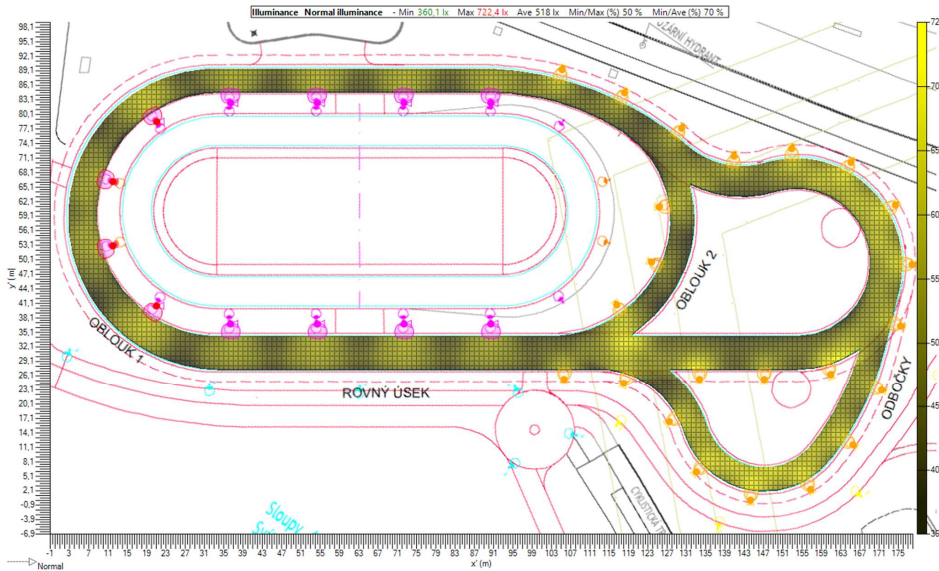
|                                     |   |    |         |        |      |                      |       |     |     |    |
|-------------------------------------|---|----|---------|--------|------|----------------------|-------|-----|-----|----|
| <input checked="" type="checkbox"/> |    | 7  | -61,16  | 39,87  | 8,00 | Světlomet A1 (7) 77% | 324,9 | 0,0 | 0,0 | 77 |
| <input checked="" type="checkbox"/> |    | 8  | -46,42  | 50,19  | 8,00 | Světlomet A1 (8) 77% | 325,0 | 0,0 | 0,0 | 77 |
| <input checked="" type="checkbox"/> |    | 9  | -79,17  | -23,92 | 8,00 | Světlomet A2 (1) 88% | 176,9 | 0,0 | 0,0 | 88 |
| <input checked="" type="checkbox"/> |    | 10 | -100,95 | 7,23   | 8,00 | Světlomet A2 (2) 88% | 292,0 | 0,0 | 0,0 | 88 |
| <input checked="" type="checkbox"/> |    | 11 | -93,70  | -18,97 | 8,00 | Světlomet A2 (3) 88% | 217,0 | 5,0 | 0,0 | 88 |
| <input checked="" type="checkbox"/> |    | 12 | -101,31 | -8,11  | 8,00 | Světlomet A2 (4) 88% | 252,6 | 5,0 | 0,0 | 88 |
| <input checked="" type="checkbox"/> |    | 13 | 10,13   | 78,31  | 6,00 | Světlomet B (10) 90% | 143,0 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 14 | 21,84   | 83,05  | 6,00 | Světlomet B (11) 90% | 176,1 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 15 | 34,45   | 81,10  | 6,00 | Světlomet B (12) 90% | 203,7 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 16 | 44,33   | 73,01  | 6,00 | Světlomet B (13) 90% | 236,7 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 17 | 49,64   | 61,23  | 6,00 | Světlomet B (14) 90% | 254,7 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 18 | 54,10   | 48,07  | 6,00 | Světlomet B (15) 90% | 256,1 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 19 | 55,77   | 35,31  | 6,00 | Světlomet B (16) 90% | 264,6 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 20 | 53,89   | 22,66  | 6,00 | Světlomet B (17) 90% | 297,0 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 21 | 44,95   | 13,66  | 6,00 | Světlomet B (18) 90% | 330,5 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 22 | 32,39   | 12,03  | 6,00 | Světlomet B (19) 90% | 9,7   | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 23 | 21,79   | 17,35  | 6,00 | Světlomet B (20) 90% | 24,4  | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 24 | 9,46    | 18,53  | 6,00 | Světlomet B (21) 90% | 351,3 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |    | 25 | -1,15   | 12,11  | 6,00 | Světlomet B (22) 90% | 325,8 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |   | 26 | 43,53   | 44,69  | 6,00 | Světlomet B (23) 90% | 308,2 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 27 | 32,84   | 35,91  | 6,00 | Světlomet B (24) 90% | 324,3 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 28 | 21,85   | 28,22  | 6,00 | Světlomet B (25) 90% | 325,4 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 29 | -1,08   | 31,08  | 6,00 | Světlomet B (3) 90%  | 114,6 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 30 | -0,25   | 42,45  | 6,00 | Světlomet B (4) 90%  | 79,1  | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 31 | -5,44   | 52,66  | 6,00 | Světlomet B (5) 90%  | 49,0  | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 32 | -38,25  | 64,32  | 6,00 | Světlomet B (6) 90%  | 158,9 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 33 | -24,90  | 67,84  | 6,00 | Světlomet B (7) 90%  | 173,7 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 34 | -10,99  | 68,65  | 6,00 | Světlomet B (8) 90%  | 180,4 | 5,0 | 0,0 | 90 |
| <input checked="" type="checkbox"/> |  | 35 | 1,24    | 70,17  | 6,00 | Světlomet B (9) 90%  | 148,0 | 5,0 | 0,0 | 90 |

5.4. Dráha 400 m CELÁ vč. odboček

Isolevel

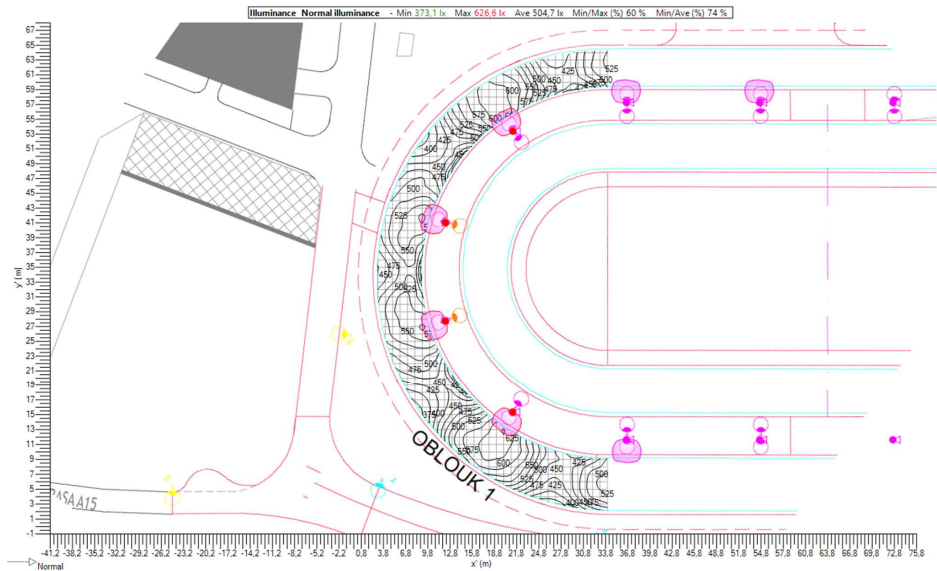


Shading

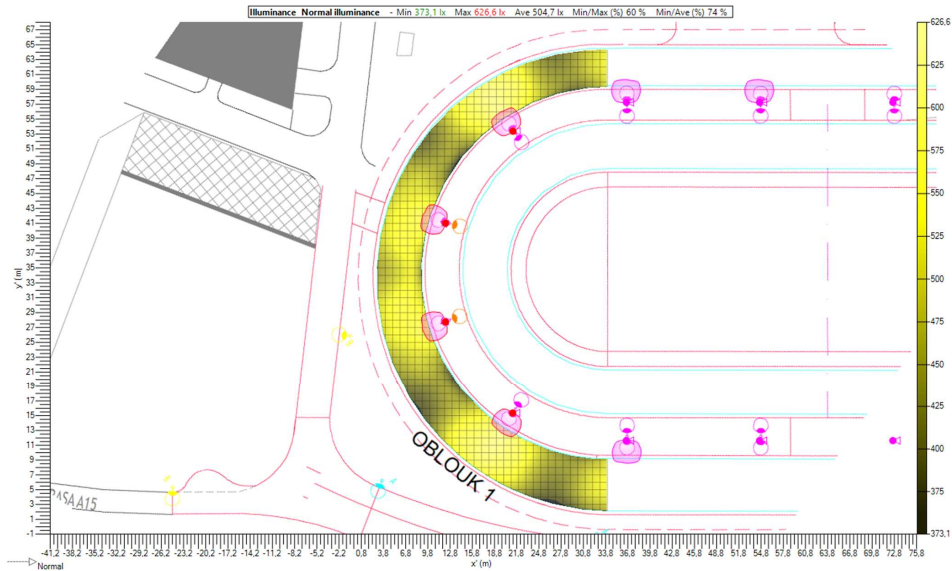


5.5. Dráha 400 m - OBLOUK 1

Isolevel



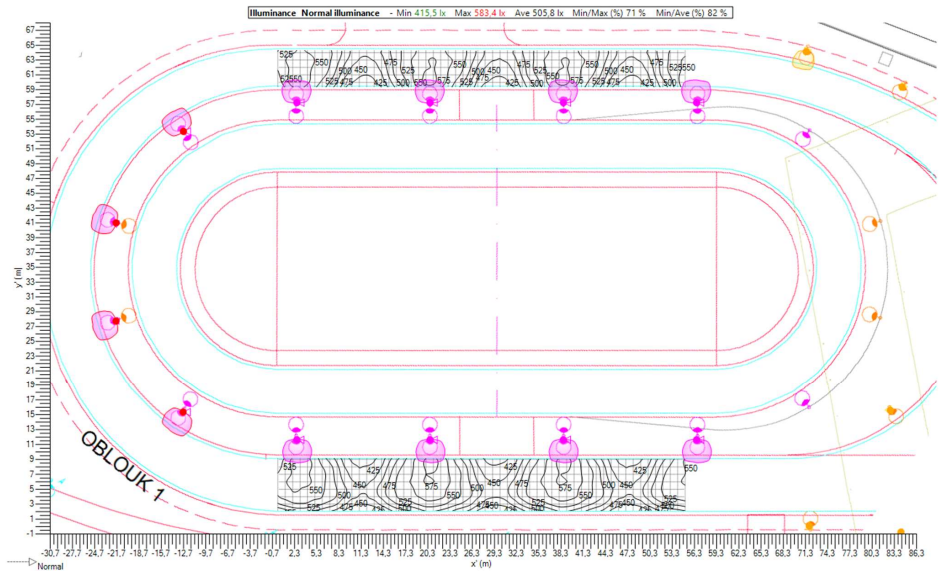
Shading



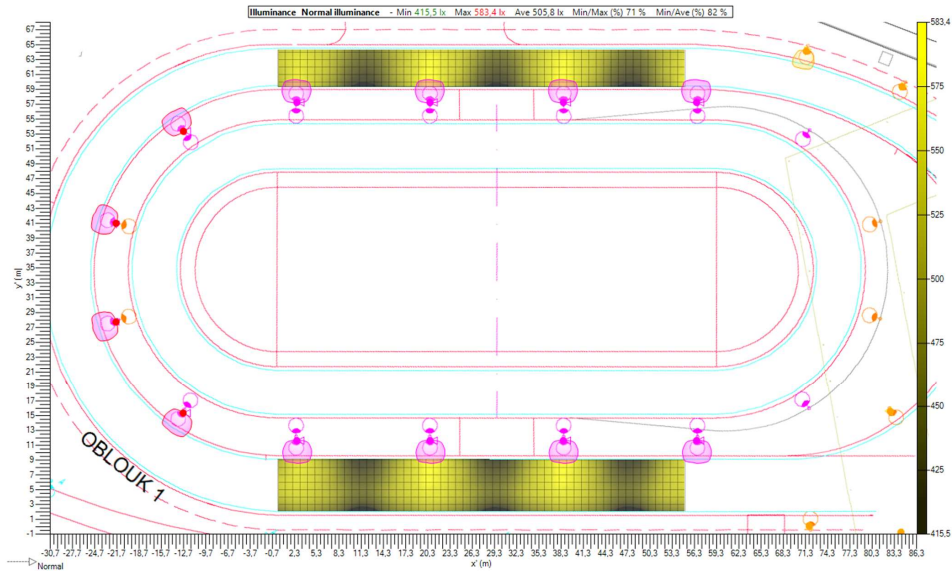


5.6. Dráha 400 m - ROVNÉ ÚSEKY

Isolevel



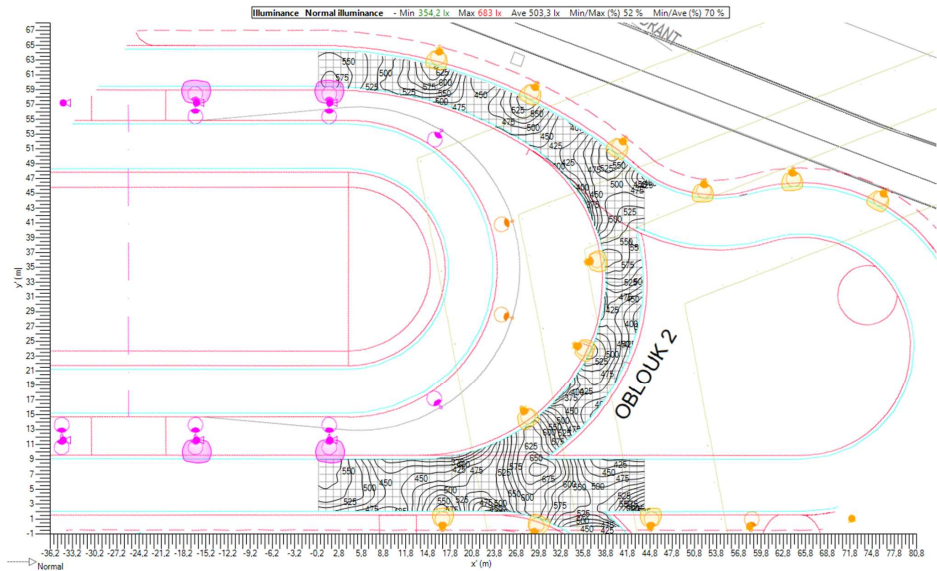
Shading



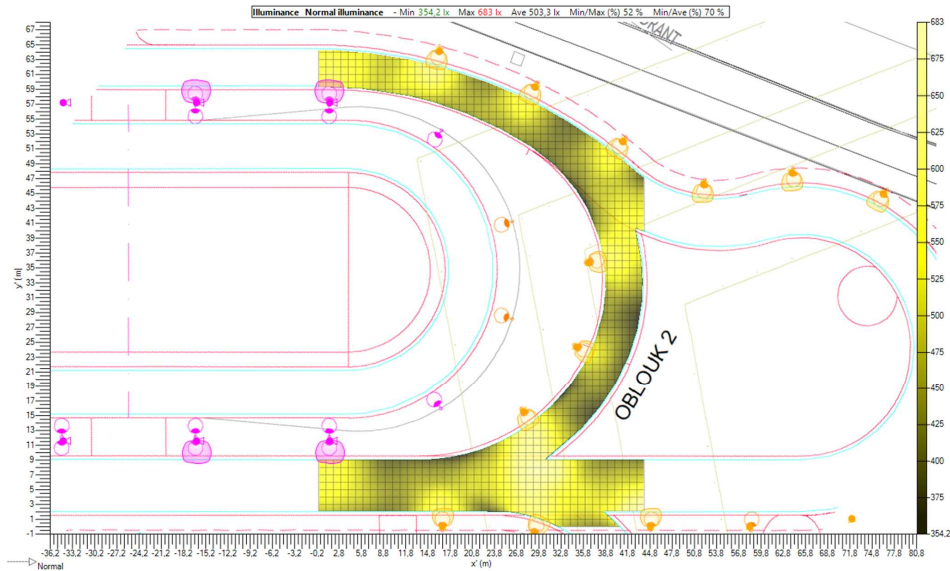


5.7. Dráha 400 m - OBLOUK 2

Isolevel

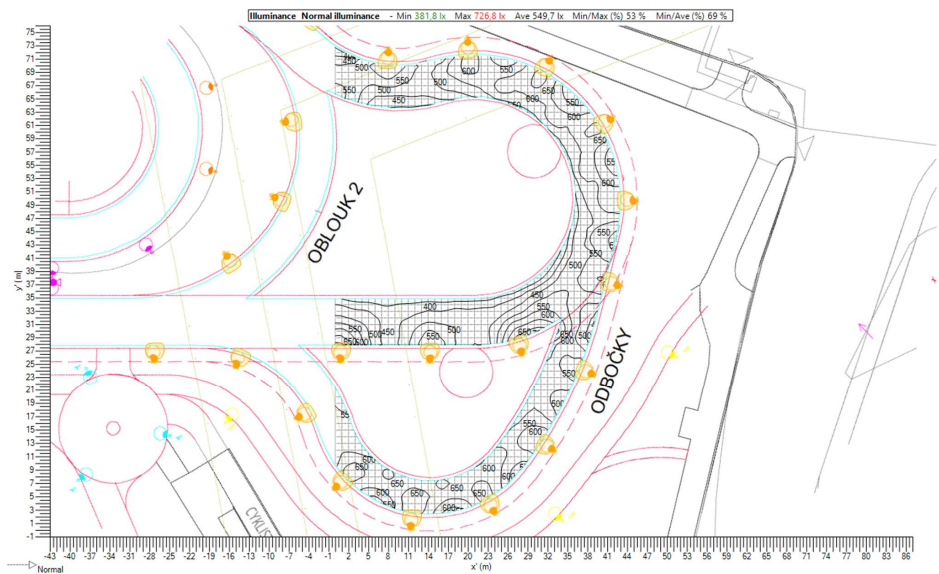


Shading

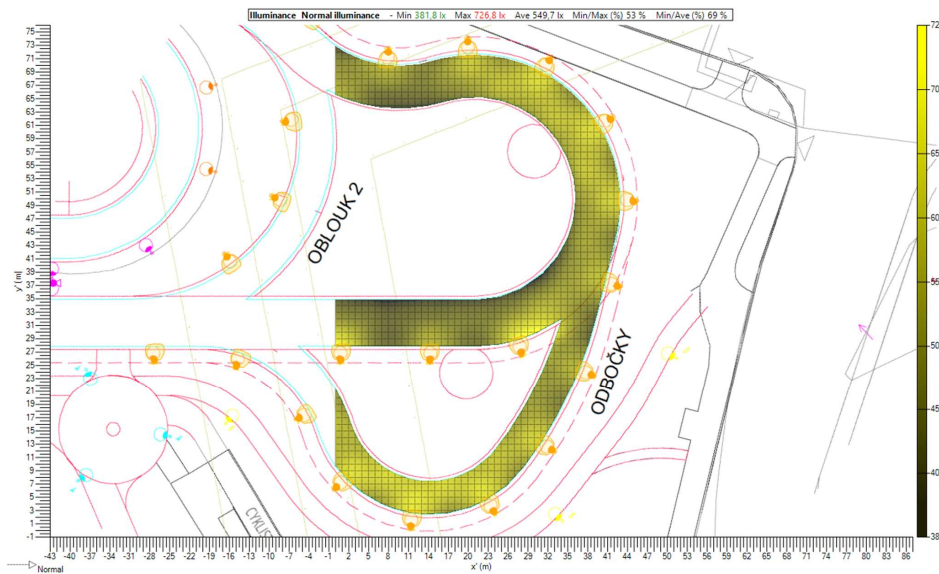


5.8. Dráha 400 m - ODBOČKY

Isolevel




Shading




6. Výpočetní plochy


6.1. Dráha 400 m CELÁ vč. odboček

| General       |   | Geometry  |             |                  |          |
|---------------|---|-----------|-------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X -73,25 m  | Y -69,05 m       | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °     | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 178 | Count Y 93       |          |
| Colour        |  | Spacing X | 1,00 m      | Spacing Y 1,00 m |          |
|               |   | Size X    | 177,00 m    | Size Y 92,00 m   |          |


6.2. Dráha 400 m - OBLOUK 1

| General       |   | Geometry  |            |                  |          |
|---------------|---|-----------|------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X -87,72 m | Y -48,67 m       | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °    | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 35 | Count Y 68       |          |
| Colour        |  | Spacing X | 1,00 m     | Spacing Y 1,00 m |          |
|               |   | Size X    | 34,00 m    | Size Y 67,00 m   |          |


6.3. Dráha 400 m - ROVNÉ ÚSEKY

| General       |   | Geometry  |            |                  |          |
|---------------|---|-----------|------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X -59,88 m | Y -29,15 m       | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °    | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 56 | Count Y 68       |          |
| Colour        |  | Spacing X | 1,00 m     | Spacing Y 1,00 m |          |
|               |   | Size X    | 55,00 m    | Size Y 67,00 m   |          |

6.4. Dráha 400 m - OBLOUK 2

| General       |   | Geometry  |            |                  |          |
|---------------|---|-----------|------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X -14,82 m | Y 2,47 m         | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °    | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 45 | Count Y 68       |          |
| Colour        |  | Spacing X | 1,00 m     | Spacing Y 1,00 m |          |
|               |   | Size X    | 44,00 m    | Size Y 67,00 m   |          |

6.5. Dráha 400 m - ODBOČKY

| General       |   | Geometry  |            |                  |          |
|---------------|---|-----------|------------|------------------|----------|
| Type          | Grid rectangular XY   | Origin    | X 35,99 m  | Y 6,61 m         | Z 0,00 m |
| Use exclusion | Filtered  | Rotation  | X 0,0 °    | Y 0,0 °          | Z 35,0 ° |
| Enabled       | <input checked="" type="checkbox"/>   | Dimension | Count X 45 | Count Y 76       |          |
| Colour        |  | Spacing X | 1,00 m     | Spacing Y 1,00 m |          |
|               |   | Size X    | 44,00 m    | Size Y 75,00 m   |          |