



Equestrian lighting solutions

Riding Arena

Installation : Proposed New Lighting

Project number : LMR02949

Customer : Sophie Drummond

Processed by : KC

Date : 16.03.2021

Project description:

Based on standard external riding area with sand base

25m x 60m

Mounting height 6M

The following recommendations are widely used in the lighting industry and produced by CIBSE.

The following are recommended average lighting levels:

Outdoor: minimum suggested mounting height 10M

Schooling, Dressage (recreational) 100lux

Schooling, showjumping (recreational) 150lux

Competition, dressage 200lux

Competition, Showjumping 300lux

Indoor: minimum suggested mounting height 6M

Schooling, Dressage (recreational) 300 lux

Schooling Showjumping (recreational) 400 lux

Competition, Dressage 500 lux

Competition, Showjumping 700lux

The minimum level of uniformity (light spread to minimise shadows) for all of the above is 0.5 for outdoor and 0.8 for indoor

The above values should be used as a guide to aim for when lighting any arena, however we understand that in many cases there are factors restricting compliance to these recommendations.

The lighting layout within this proposal follows the brief from the client with regard to mounting height and positions.

We have offered a solution based on the design parameters imposed at the time of undertaking the project and we take no responsibility for the outcome of the installation if the lighting levels are not satisfactory.

All calculations are specific to the products used and are not representative of other makes, brands or types of "similar"

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.

Presented by
litemyride.co.uk - Equestrian Lighting Solutions

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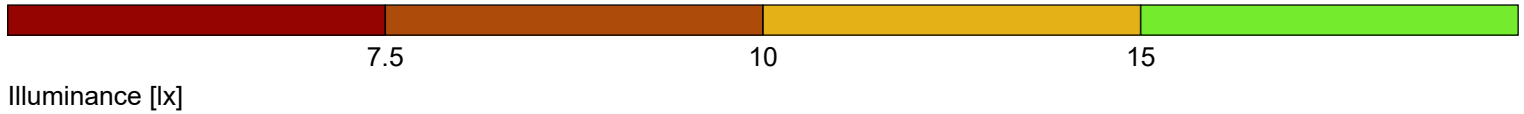
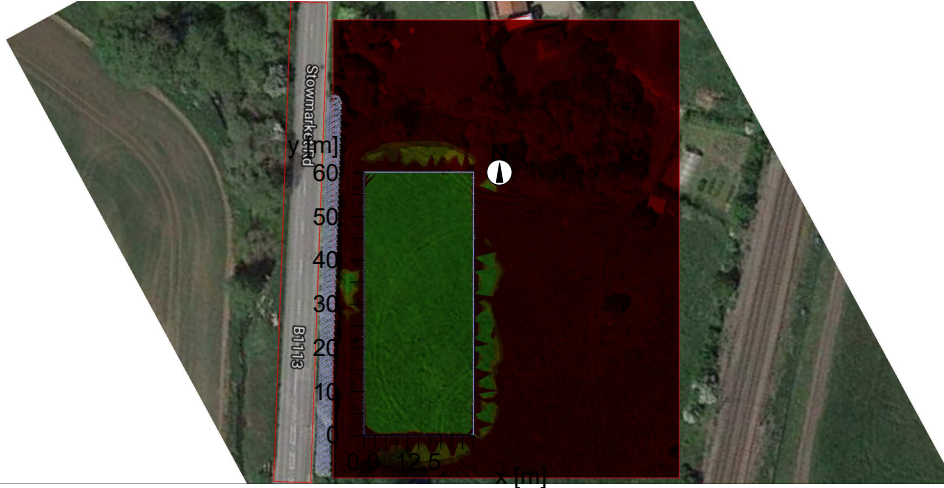


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1 Exterior 1

1.1 Summary, Exterior 1

1.1.1 Result overview, Lightspill



| | |
|--|---------------------------|
| General | |
| Calculation algorithm used | Average indirect fraction |
| Height of evaluation surface | 0.00 m |
| Height (phot centre) [m]: | 6.02 m |
| Maintenance factor | 0.85 |
| Total luminous flux of all lamps | 168888 lm |
| Total power | 1192 W |
| Total power per area (1500.00 m ²) | 0.79 W/m ² |

| | | |
|---------------------|-----------|------------|
| Illuminance | | |
| Average illuminance | Em | 12 lx |
| Minimum illuminance | Emin | 0 lx |
| Maximum illuminance | Emax | 103 lx |
| Uniformity Uo | Emin/Em | 1:294 (0) |
| Diversity Ud | Emin/Emax | 1:2610 (0) |

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1.1 Summary, Exterior 1

1.1.2 Result overview, Property Facade



Illuminance [lx]

General

| | |
|----------------------------|---------------------------|
| Calculation algorithm used | Average indirect fraction |
| Height (phot centre) [m]: | 6.02 m |
| Maintenance factor | 0.85 |

| | |
|--|-----------------------|
| Total luminous flux of all lamps | 168888 lm |
| Total power | 1192 W |
| Total power per area (1500.00 m ²) | 0.79 W/m ² |

Illuminance

| | | |
|---------------------|-----------|---------------|
| Average illuminance | Em | 0.21 lx |
| Minimum illuminance | Emin | 0.18 lx |
| Maximum illuminance | Emax | 0.25 lx |
| Uniformity Uo | Emin/Em | 1:1.14 (0.88) |
| Diversity Ud | Emin/Emax | 1:1.38 (0.72) |

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1.1 Summary, Exterior 1

1.1.3 Result overview, Road



Illuminance [lx]

General

| | |
|------------------------------|---------------------------|
| Calculation algorithm used | Average indirect fraction |
| Height of evaluation surface | 0.00 m |
| Height (phot.center) [m]: | 6.02 m |
| Maintenance factor | 0.85 |

| | |
|--|-----------------------|
| Total luminous flux of all lamps | 168888 lm |
| Total power | 1192 W |
| Total power per area (1500.00 m ²) | 0.79 W/m ² |

Illuminance

| | | |
|---------------------------|-----------|-------------|
| Average illuminance | Em | 0.49 lx |
| Minimum illuminance | Emin | 0 lx |
| Maximum illuminance | Emax | 2.94 lx |
| Uniformity U ₀ | Emin/Em | 1:--- (---) |
| Diversity U _d | Emin/Emax | 1:--- (---) |

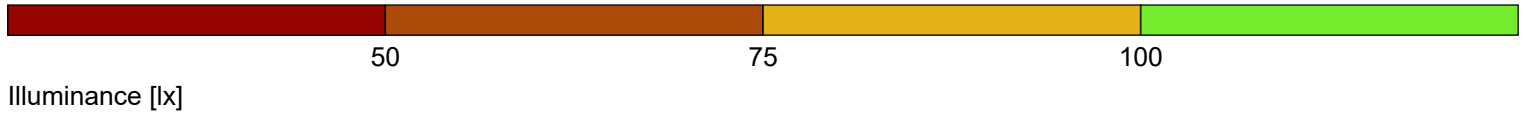
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1.1 Summary, Exterior 1

1.1.4 Result overview, Evaluation area 1



General

| | |
|--|--|
| Calculation algorithm used | Average indirect fraction |
| Height (phot centre) | 6.02 m |
| Maintenance factor | 0.85 |
| Total luminous flux of all lamps | 168888.00 lm |
| Total power | 1192.0 W |
| Total power per area (1500.00 m ²) | 0.79 W/m ² (1.24 W/m ² /100lx) |

Evaluation area 1

Reference plane 1.1

| | |
|----------------|------------|
| | Horizontal |
| Em | 64.2 lx |
| Emin | 14.8 lx |
| Emin/Em (Uo) | 0.23 |
| Emin/Emax (Ud) | 0.14 |
| Position | 0.00 m |

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1 Exterior 1

1.2 Calculation results, Exterior 1

1.2.1 3D luminance, View 1

