

Horse Menage v2

Installation : Knacks Farm

Project number : WS.PR1324

Customer : Kosnic Lighting Ltd

Processed by : Wayne Smith

Date : 04.09.2023

Project description:

Lighting calculations are provided as a guide only.

Schemes are based upon the room dimensions and information issued by the Client.

All dimensions and project information / requirements must be checked prior to order.

The Lighting Scheme has been designed to CIBSE guidelines where applicable. Standard reflectance levels used.

Lighting designs are carried out for estimation purposes only and Kosnic accept no responsibility, and cannot be held liable for, any variances in light levels achieved. It is ultimately the responsibility of the installer to ensure the solution offered is suitable for the installation environment, and meets all of the requirements of the end user.

Where applicable, Emergency Lighting has been suggested in accordance with BS5266, EN1838 and EN50172. It is the responsibility of the Purchaser/Installer, and not Kosnic, to ensure that the design complies with local fire, health, and safety regulations. The emergency lighting must be checked and approved by a local fire control officer and approved by the building owner. In the event that the design is found not to comply, Kosnic will adjust the design in consultation with the customer to ensure that it does comply with such regulations.

Any emergency lighting calculations included do not account for the location of critical emergency items, such as, but not limited to, plant or switch room task locations, reception telephone, first aid points, extinguisher points, call points, push bars, fire panels, etc. These areas may require higher risk lux levels under emergency conditions.

In the absence of a Fire Strategy plan, any exit signs specified have been done so based on assumptions regarding the shortest exit routes. These are estimations only and should be reviewed in full prior to any order. Responsibility for this lies with the Purchaser/Installer and the responsible person, or building owner, for the site.

Any controls or sensors specified by Kosnic are offered purely as a suggestion and Kosnic accept no responsibility, and cannot be held liable for, specified controls meeting the specific needs and/or requirements of the site/installation. It is the responsibility of the Purchaser/Installer to make sure that any proposed controls or sensors meet their specific needs and/or requirements, or the specific needs and/or requirements of the site/installation.

Kosnic Lighting Ltd is not qualified to determine the structural and electrical appropriateness of their designs and is not responsible, and cannot be held liable for, any improper engineering, construction, rigging or handling methods, or for any improper use of structures or equipment that may be employed to realise the design.

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.

1 Luminaire data

1.1 Kosnic, LED Floodlight - Havasu... (HAV240-A150 (20...))

1.1.1 Data sheet

Manufacturer: Kosnic



HAV240-A150 (200w Output) Asymmetric Floodlight Luminaire LED Floodlight - Havasu
200w Havasu LED Premium High-Power Floodlight w/ Type IV Optic (5000k)

Overview

The Kosnic Havasu LED floodlights are high-power premium luminaires available in two sizes, both with wattage switching, and can be supplied with a variety of illumination pattern choices. The floodlights are IP66 rated for outdoor use, robust and have high lumen efficiency and a long life.

Features

- Switchable wattage
- Beam angle options: Spot (70° x 30°), Flood (60° x 60°), Wide (90° x 90°), Type IV (140° x 50°), Asymmetric 50 (120° x 50°)
- Class I, IP66, IK08
- High lumen output
- High power, up to 240W
- Efficiency of 150lm/W
- 54,000h rated lifetime
- Diecast aluminium
- Instant start
- Negligible UV output
- Slim profile

Please see datasheet or website for more info.

Luminaire data

Absolute Photometry	
Luminaire efficacy	: 150 lm/W
Classification	: A20 ↓100.0% ↑0.0%
CIE Flux Codes	: 28 65 95 100 100
UGR 4H 8H	: 40.3 / 35.3
Control gear	: Electronic ballast
Power	: 200 W
Luminous flux	: 30000 lm
Dimensions	: 410 mm x 445 mm x 50 mm

Equipped with

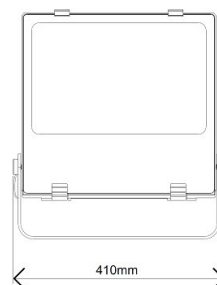
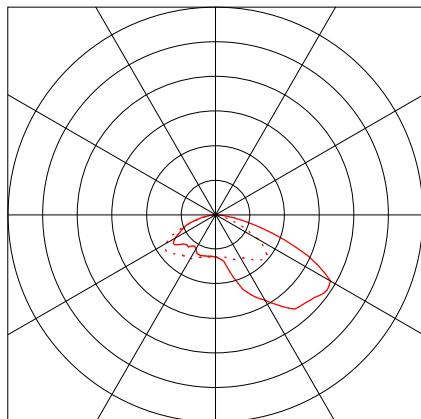
Quantity	: 1
Designation	: LED
Colour	: 5000K
Socket	: -
Colour reproduction	: 70

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1 Luminaire data

1.1 Kosnic, LED Floodlight - Havas... (HAV240-A150 (20...))

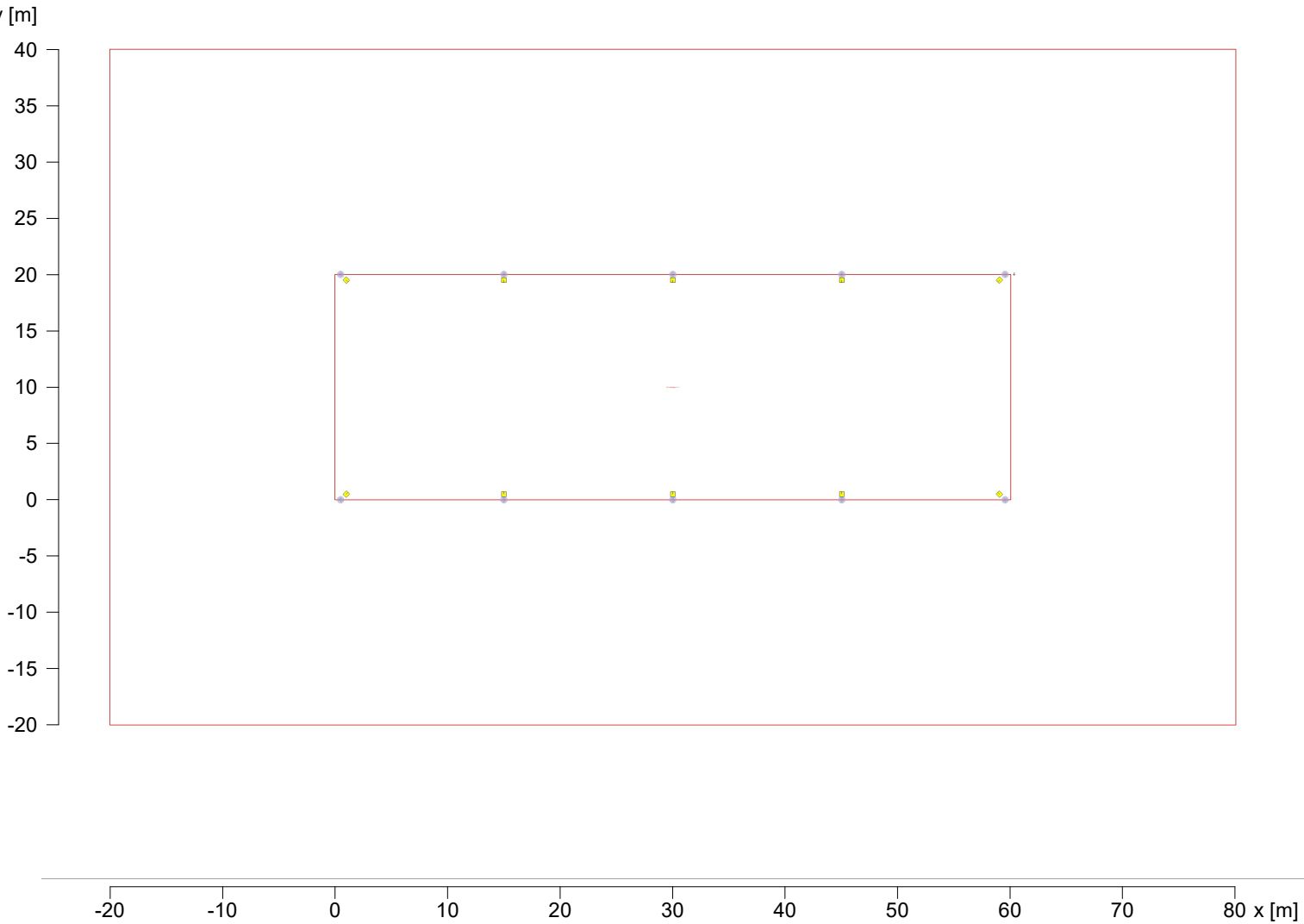
1.1.1 Data sheet



2 Horse Menage

2.1 Description, Horse Menage

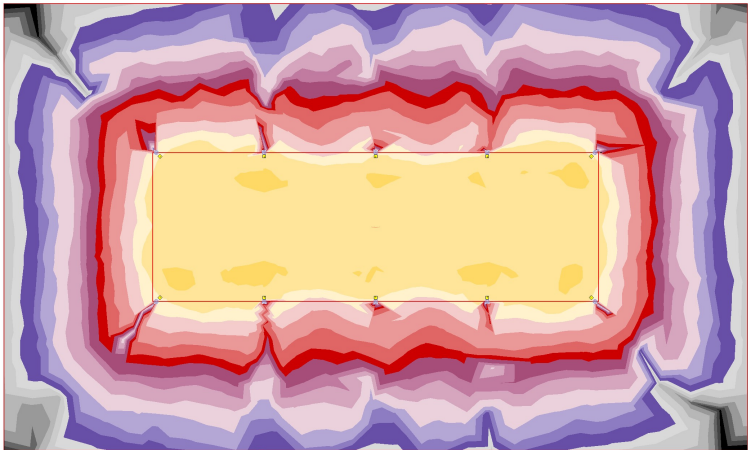
2.1.1 Floor plan



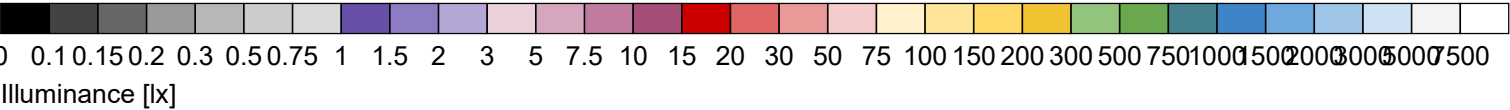
2 Horse Menage

2.2 Summary, Horse Menage

2.2.1 Result overview, Overspill



-20 -10 0 10 20 30 40 50 60 70 80 x [m]



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Height (phot. centre) [m]:	5.97 m
Maintenance factor	0.80
Total luminous flux	300000 lm
Total power	2000 W
Total power per area (1200.00 m²)	1.67 W/m²
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	$\bar{E}_m$	39 lx
Minimum illuminance	E_{min}	0 lx
Maximum illuminance	E_{max}	156 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	1:280 (0)
Diversity U_d	E_{min}/E_{max}	1:1110 (0)

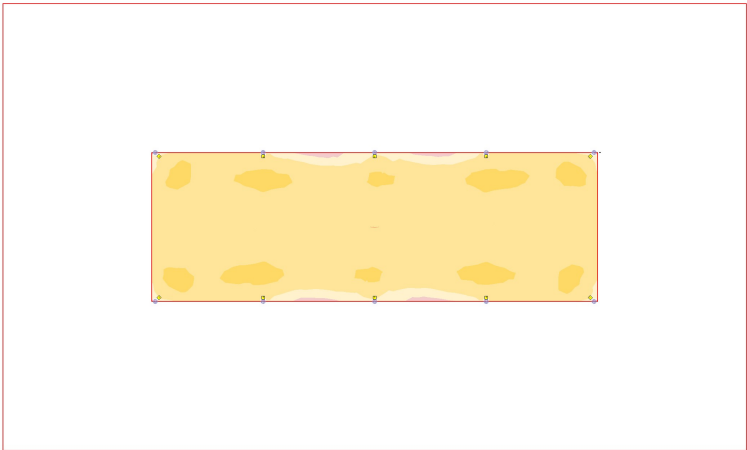
Type No. Make

2	10 x	Kosnic
		Order No. : HAV240-A150 (200w Output)
		Luminaire name : LED Floodlight - Havasu
		Equipment : 1 x LED 200 W / 30000 lm

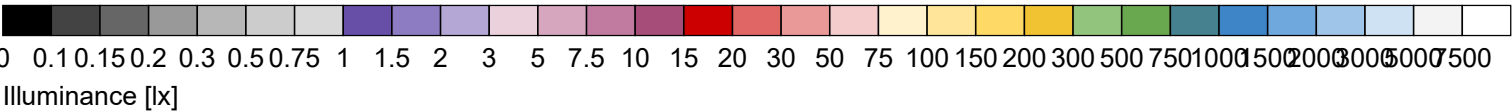
The ULR value has been calculated without obstruction by other objects.

2.2 Summary, Horse Menage

2.2.2 Result overview, Evaluation area 1



-20 -10 0 10 20 30 40 50 60 70 80 x [m]



General

Calculation algorithm used	Average indirect fraction
Height (phot centre)	5.97 m
Maintenance factor	0.80
Total luminous flux	300000.00 lm
Total power	2000.0 W
Total power per area (1200.00 m²)	1.67 W/m² (1.31 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

$\bar{E}_m$	Horizontal
E_{min}	128 lx
$E_{min}/\bar{E}_m (U_o)$	77 lx
$E_{min}/E_{max} (U_d)$	0.61
Upward light ratio (ULR)	0.48
Position	0.00

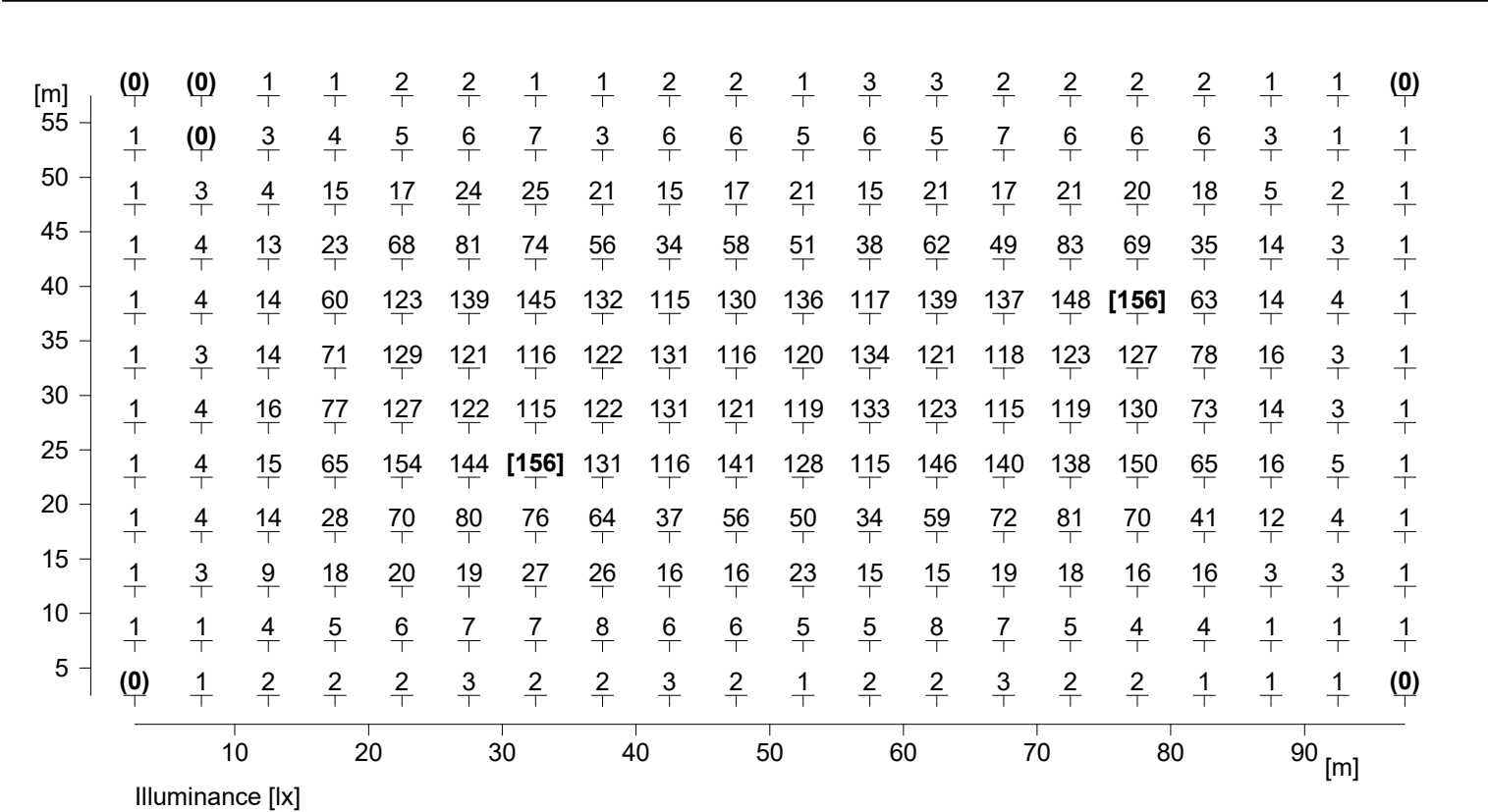
Type No. Make

2	10 x	Kosnic	Order No.	: HAV240-A150 (200w Output)
			Luminaire name	: LED Floodlight - Havasu
			Equipment	: 1 x LED 200 W / 30000 lm

2 Horse Menage

2.3 Calculation results, Horse Menage

2.3.1 Table, Overspill (E)

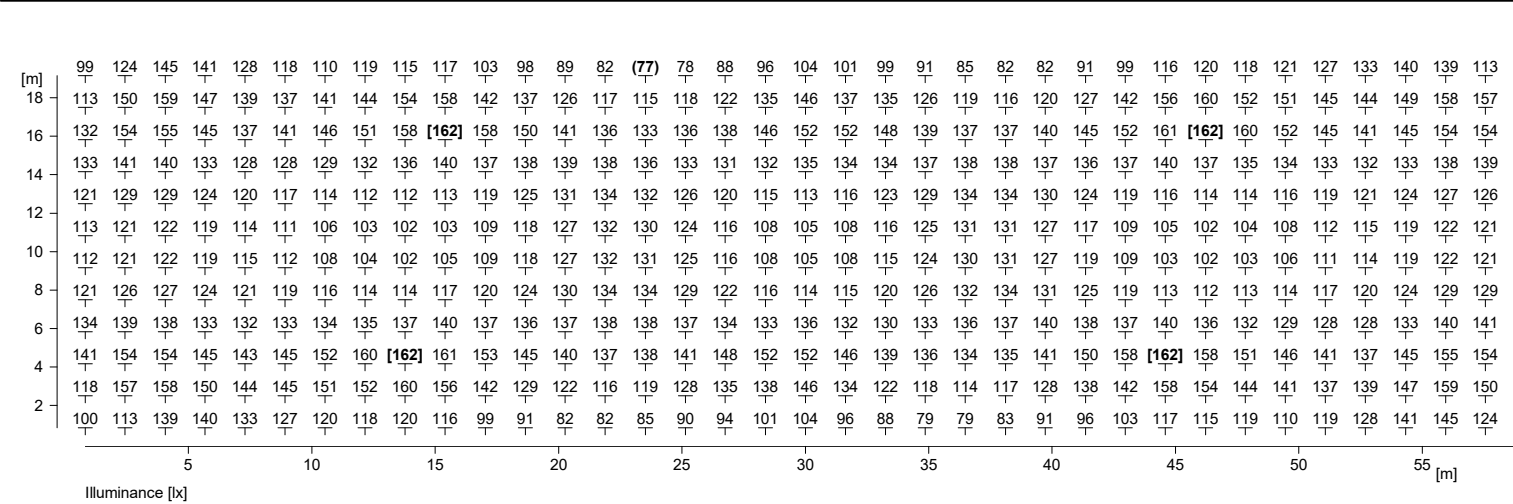


Height reference plane	: 0.00 m
Average illuminance	$\bar{E}_m$: 39 lx
Minimum illuminance	E_{min} : 0 lx
Maximum illuminance	E_{max} : 156 lx
Uniformity U_o	$E_{min}/\bar{E}_m$: 1 : 279.89 (0.00)
Diversity U_d	E_{min}/E_{max} : 1 : 1113.86 (0.00)

3 Horse Menage

3.1 Calculation results, Horse Menage

3.1.1 Table, Reference plane 1.1 (E)



Part1

Height reference plane		: 0.00 m
Average illuminance	$\bar{E}_m$	: 128 lx
Minimum illuminance	E_{min}	: 77 lx
Maximum illuminance	E_{max}	: 162 lx
Uniformity U_o	$E_{min}/\bar{E}_m$	: 1 : 1.65 (0.61)
Diversity U_d	E_{min}/E_{max}	: 1 : 2.10 (0.48)

3 Horse Menage

3.1 Calculation results, Horse Menage

3.1.1 Table, Reference plane 1.1 (E)

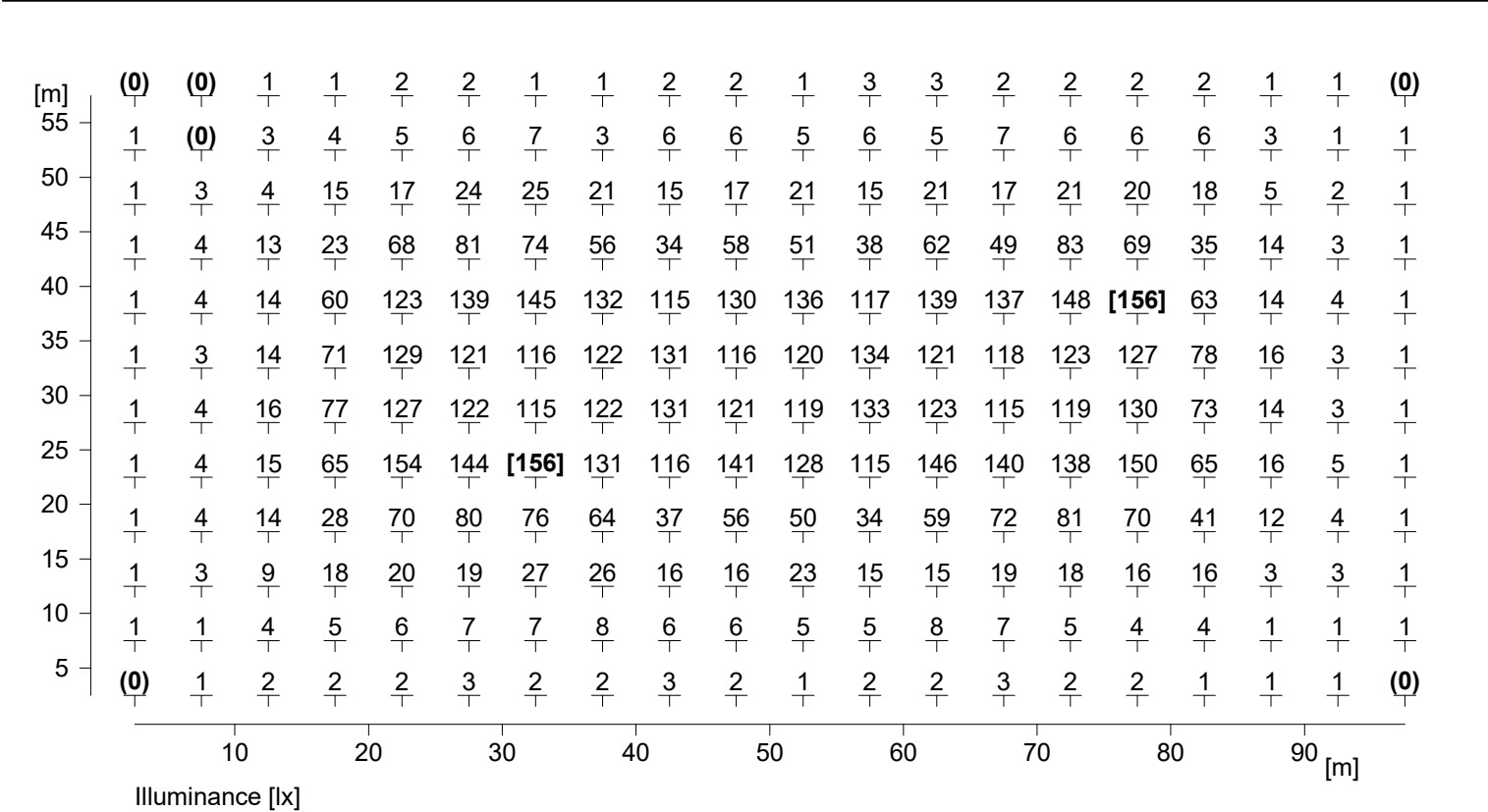
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Part2

3.1 Calculation results, Horse Menage

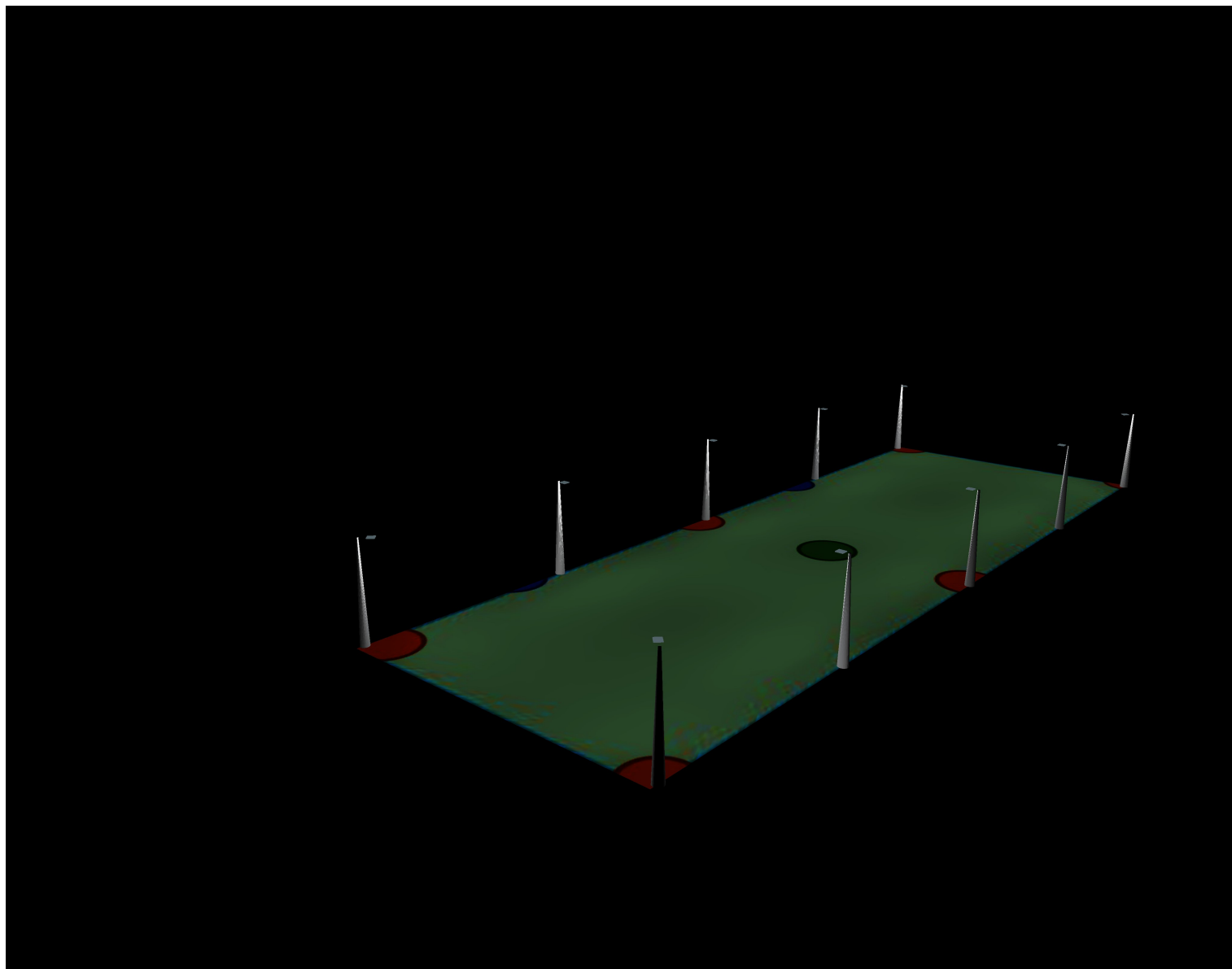
3.1.2 Table, Overspill (E)



Height reference plane	: 0.00 m
Average illuminance	$\bar{E}_m$: 39 lx
Minimum illuminance	E_{min} : 0 lx
Maximum illuminance	E_{max} : 156 lx
Uniformity U_o	$E_{min}/\bar{E}_m$: 1 : 279.90 (0.00)
Diversity U_d	E_{min}/E_{max} : 1 : 1113.87 (0.00)

3.1 Calculation results, Horse Menage

3.1.3 3D luminance, View 1



3.1 Calculation results, Horse Menage
3.1.4 3D pseudo colours, View 1 (E)

