

Cwmavon RFC

Rugby LED - 200lux

Date: 27-01-2026

Designer: Andy Poplett

Description: The design has been completed using the Philips Asymmetric OptiVision LED GEN 3 Floodlights. A total of 12no have been used to achieve an average of 200lux per pitch.

Floodlights are mounted on 6 x 15 metre columns.

The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

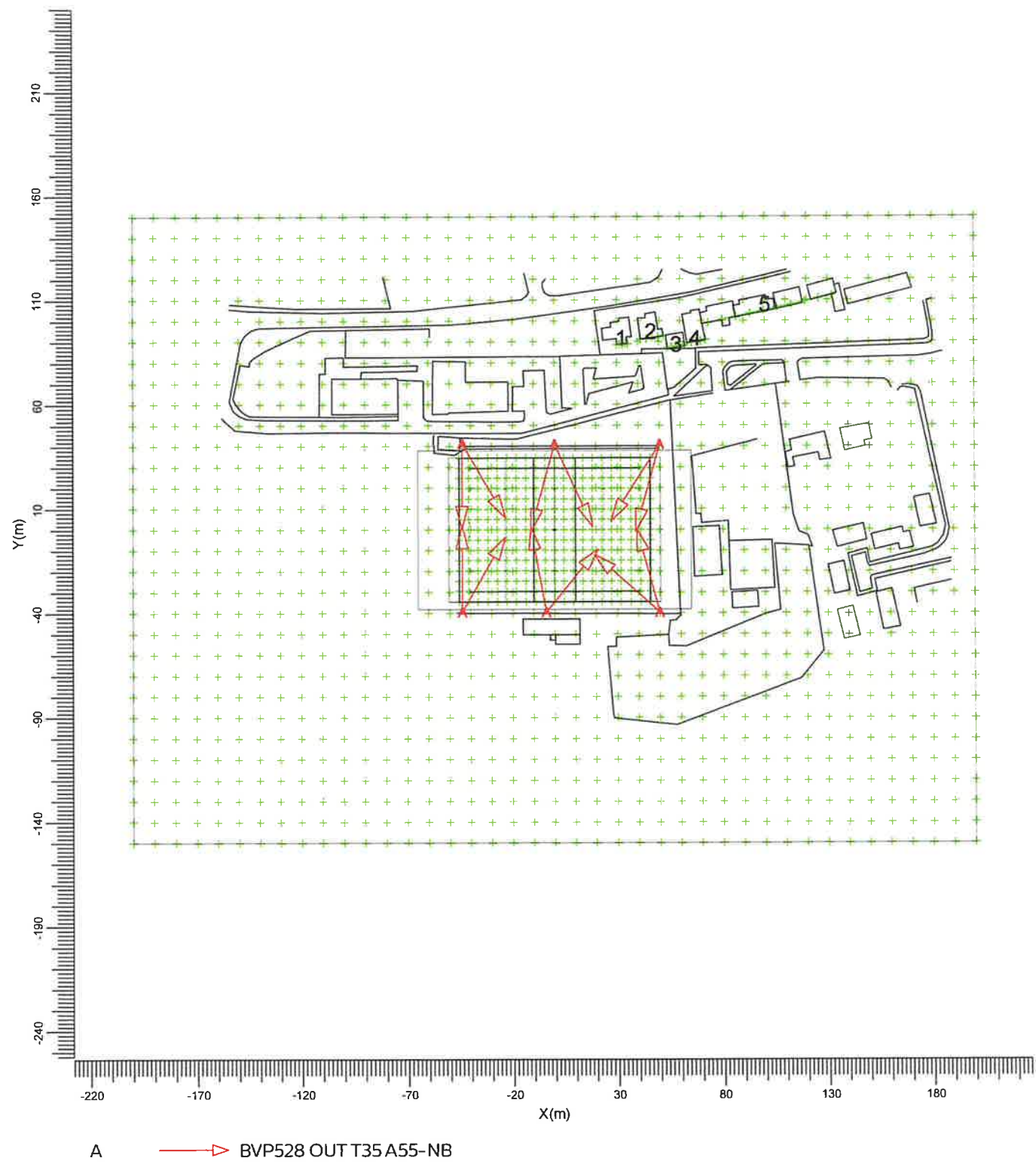
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CalcuLuX Area 7.9.0.0

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1.2 Top Project Overview



Scale
1:2500

1. Project Description

1.1 Description

Maintenance Factor:- 0.90

2. Summary

2.1 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	12	BVP528 OUT T35 A55-NB	1 * LED2590-4S/757	1505.9	1 * 259000

The total installed power: 18.07 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code	Power (kWatt)
	A	
Pitch	12	18.07
All ON	12	18.07

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code	Power (kWatt)
	A	
Point	2	3.01
Point1	2	3.01
Point2	2	3.01
Point3	2	3.01
Point4	2	3.01
Point5	2	3.01

2.2 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Pitch	0.90
2	All ON	1.00

(II)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave	Max Min/AveMin/Max
Rugby Pitch	1	Surface Illuminance	lux	206	0.70 0.39
Spillage	2	Surface Illuminance	lux	19.9	0.00 0.00
Ev Grid 1	2	Surface Illuminance	lux		4.02
Ev Grid 2	2	Surface Illuminance	lux		3.27
Ev Grid 3	2	Surface Illuminance	lux		3.03
Ev Grid 4	2	Surface Illuminance	lux		2.37
Ev Grid 5	2	Surface Illuminance	lux		1.68

Obtrusive Light Calculations:

Switching Mode	ULR
1	0.00

Switching Mode	ULR
2	0.00

3. Calculation Results

3.1 Rugby Pitch: Graphical Table

Pitch

Grid

Calculation

: Rugby Pitch at Z = -0.00 m

: Surface Illuminance (lux)



Average
206

Min/Ave
0.70

Min/Max
0.39

Project maintenance factor
0.90

Scale
1:750

3.2 Spillage: Graphical Table

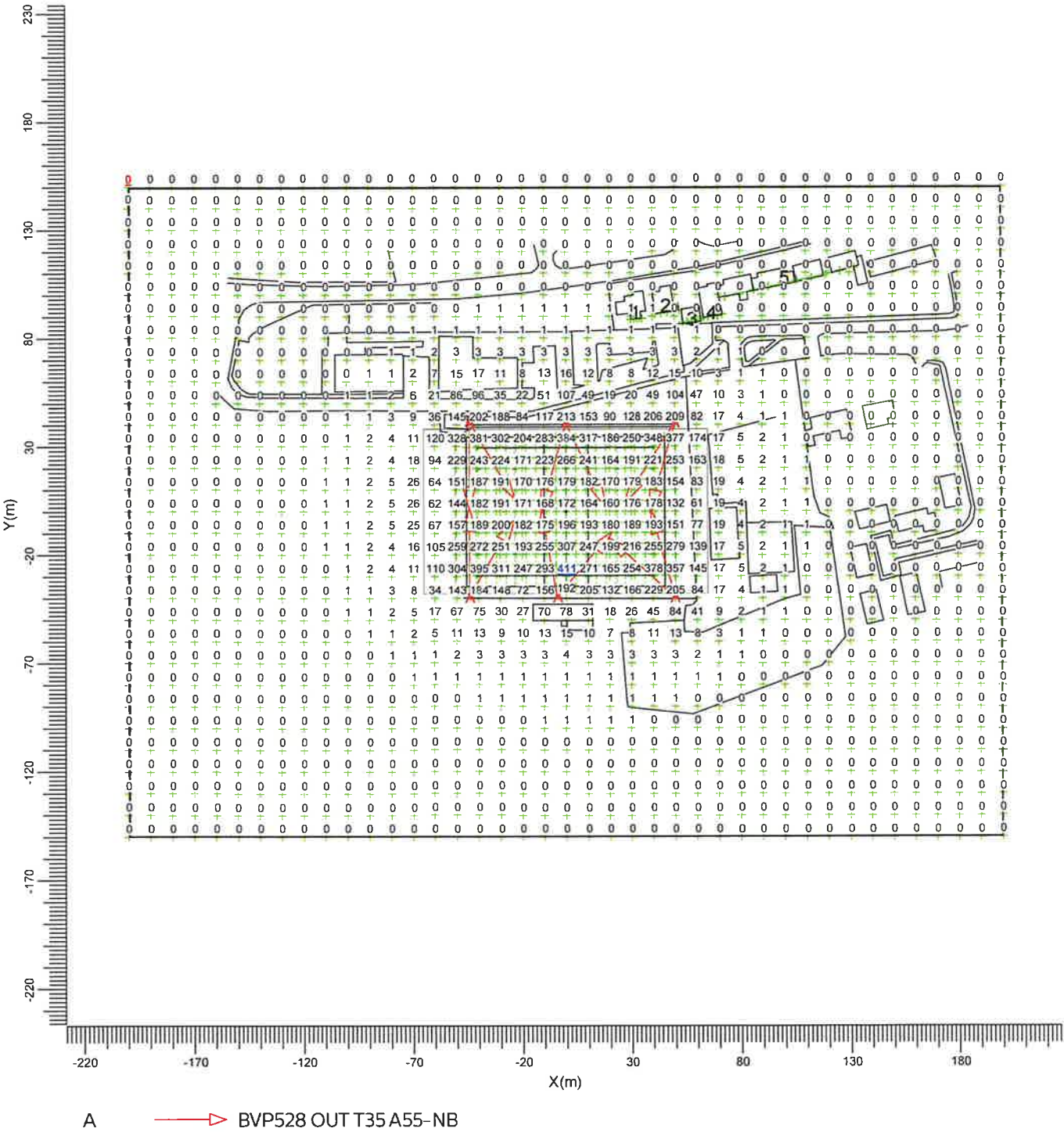
All ON

Grid

Calculation

Spillage at Z = -0.00 m

Surface Illuminance (lux)



Average19.9

Min/Ave0.00

Min/Max0.00

Project maintenance factor1.00

Scale1:2500

3.3 Spillage: Iso Contour

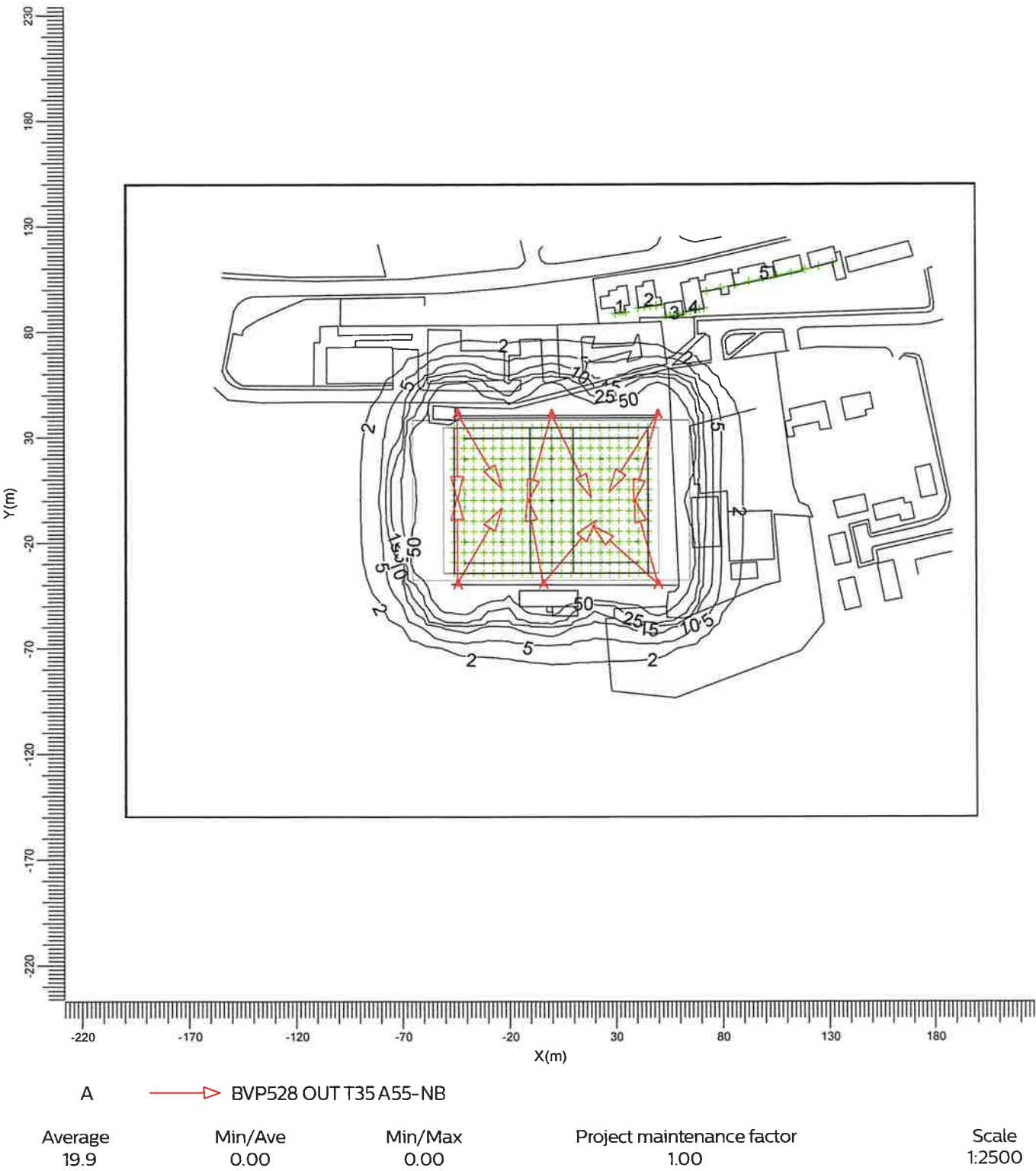
All ON

Grid

Calculation

: Spillage at Z = -0.00 m

: Surface Illuminance (lux)



3.4 Spillage: Filled Iso Contour

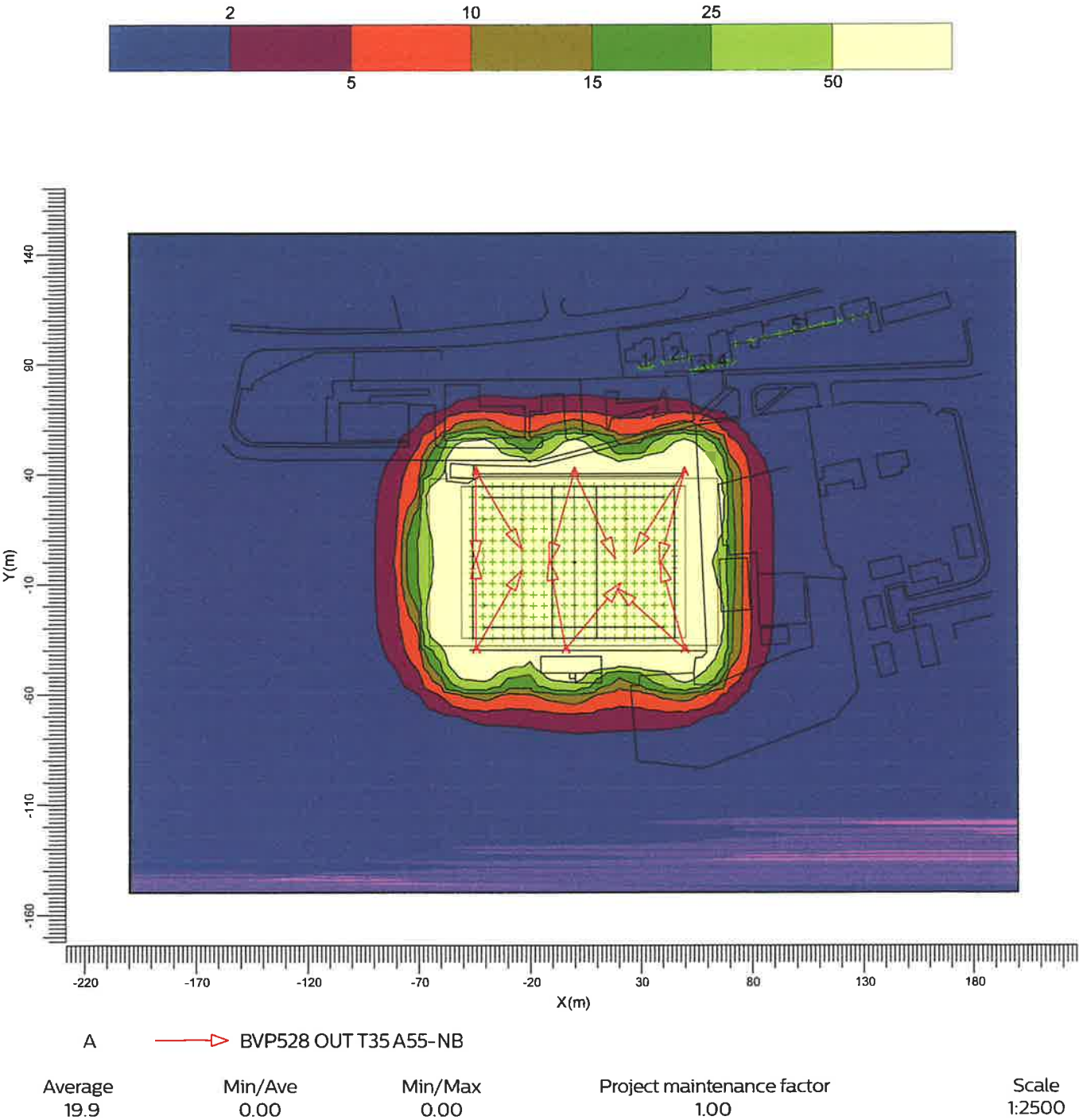
All ON

Grid

Calculation

Spillage at Z = -0.00 m

Surface Illuminance (lux)



3.5 Ev Grid 1: Graphical Table

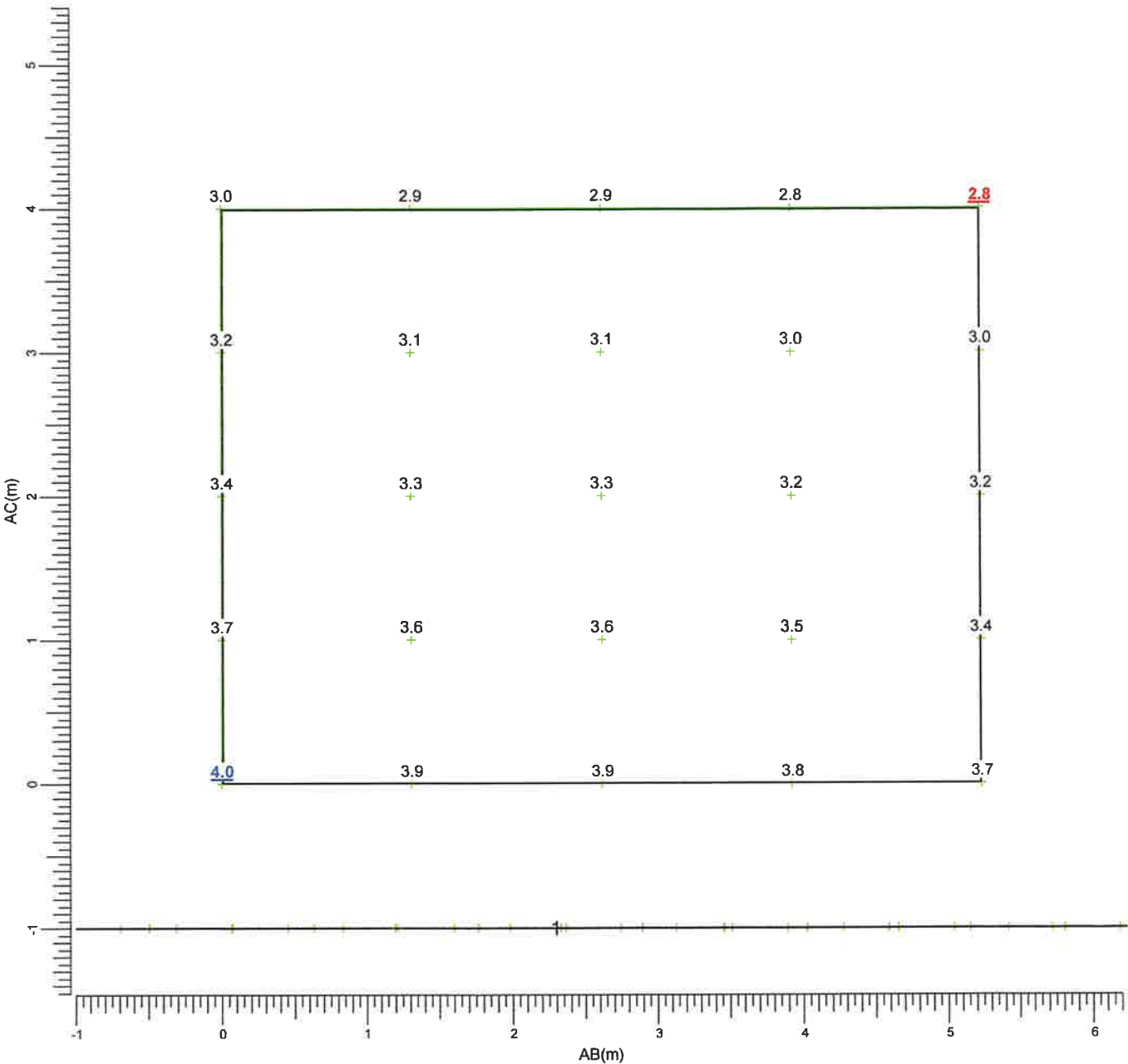
All ON

Grid

Calculation

Ev Grid 1

Surface Illuminance (lux)



(30.10, 88.50, 5.00) C-----D (35.30, 89.10, 5.00)

(30.10, 88.50, 1.00) A-----B (35.30, 89.10, 1.00)

A : BVP528 OUT T35 A55-NB

Maximum
4.02

Project maintenance factor
1.00

Scale
1:40

3.6 Ev Grid 1: Iso Contour

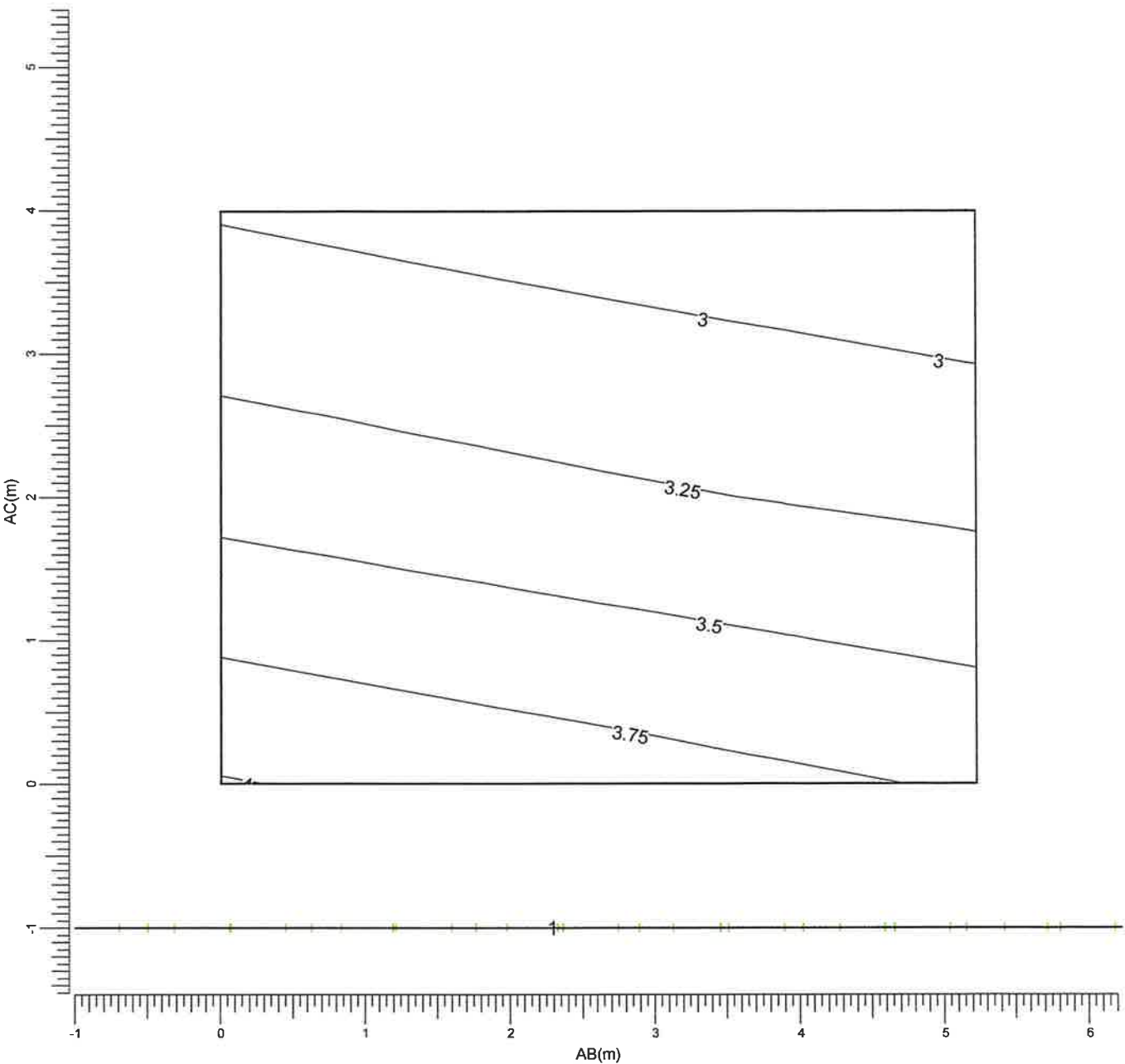
All ON

Grid

Calculation

Ev Grid 1

Surface Illuminance (lux)



(30.10,	88.50,	5.00)	C-----D	(35.30,	89.10,	5.00)
(30.10,	88.50,	1.00)	A-----B	(35.30,	89.10,	1.00)

A: BVP528 OUT T35 A55-NB

Maximum	Project maintenance factor	Scale
4.02	1.00	1:40

3.7 Ev Grid 2: Graphical Table

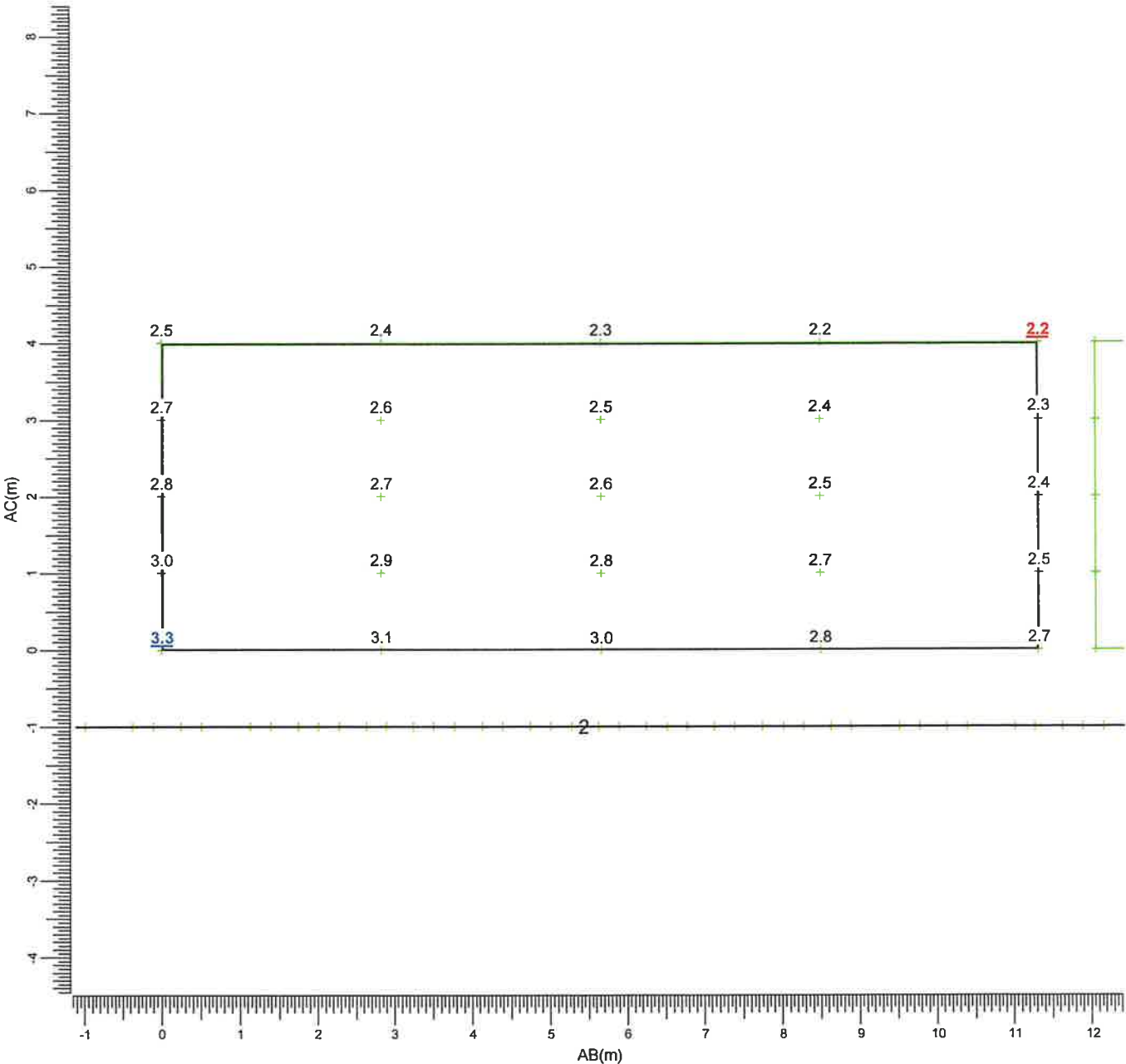
All ON

Grid

Calculation

Ev Grid 2

Surface Illuminance (lux)



(4110, 9110, 5.00) C-----D (52.30, 92.80, 5.00)

(4110, 9110, 1.00) A-----B (52.30, 92.80, 1.00)

A: BVP528 OUT T35 A55-NB

Maximum
3.27

Project maintenance factor
1.00

Scale
1:75

3.8 Ev Grid 2: Iso Contour

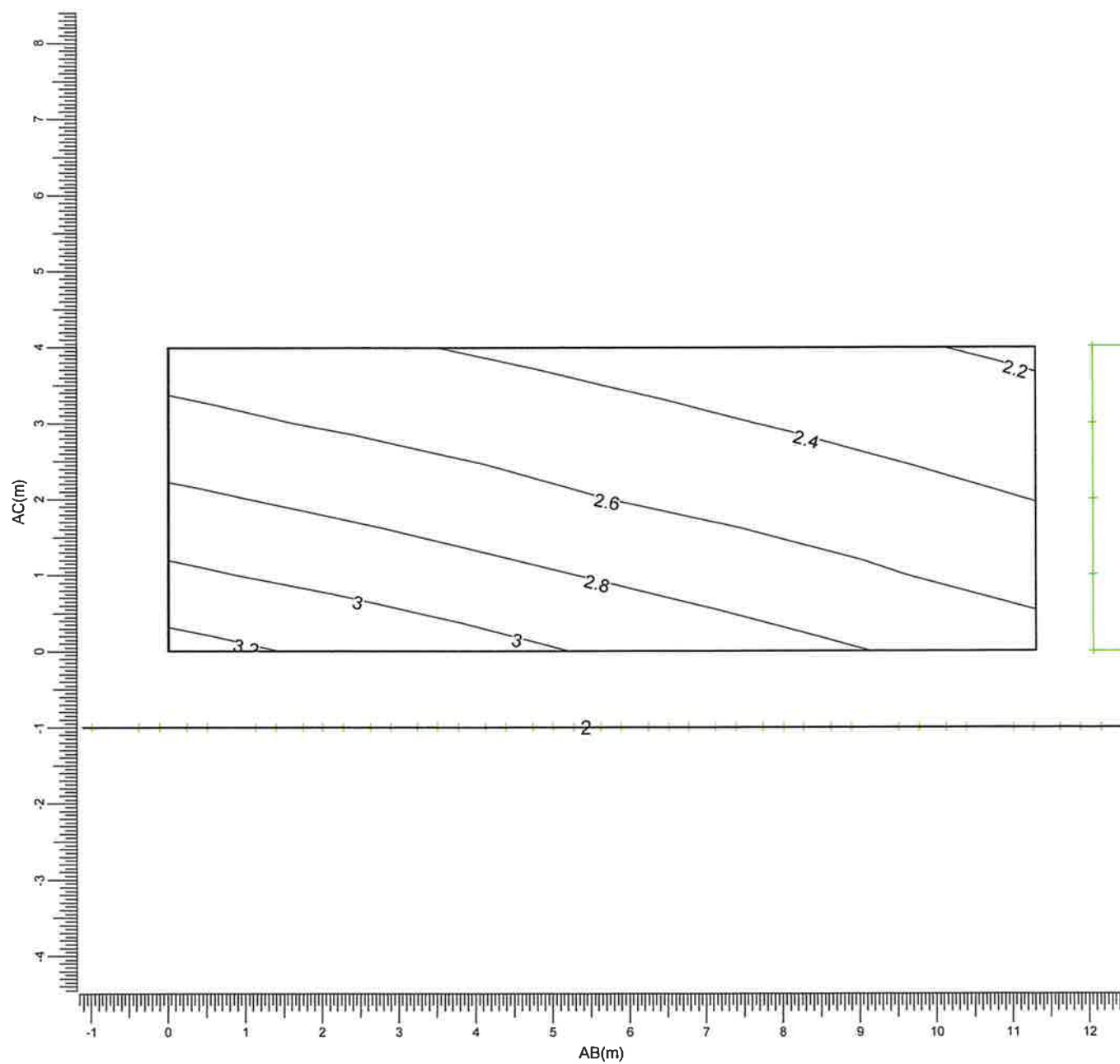
All ON

Grid

Calculation

Ev Grid 2

Surface Illuminance (lux)



(41.10,	91.10,	5.00)	C-----D (52.30,	92.80,	5.00)
(41.10,	91.10,	1.00)	A-----B (52.30,	92.80,	1.00)

A: BVP528 OUT T35 A55-NB

Maximum	Project maintenance factor	Scale
3.27	1.00	1:75

3.10 Ev Grid 3: Iso Contour

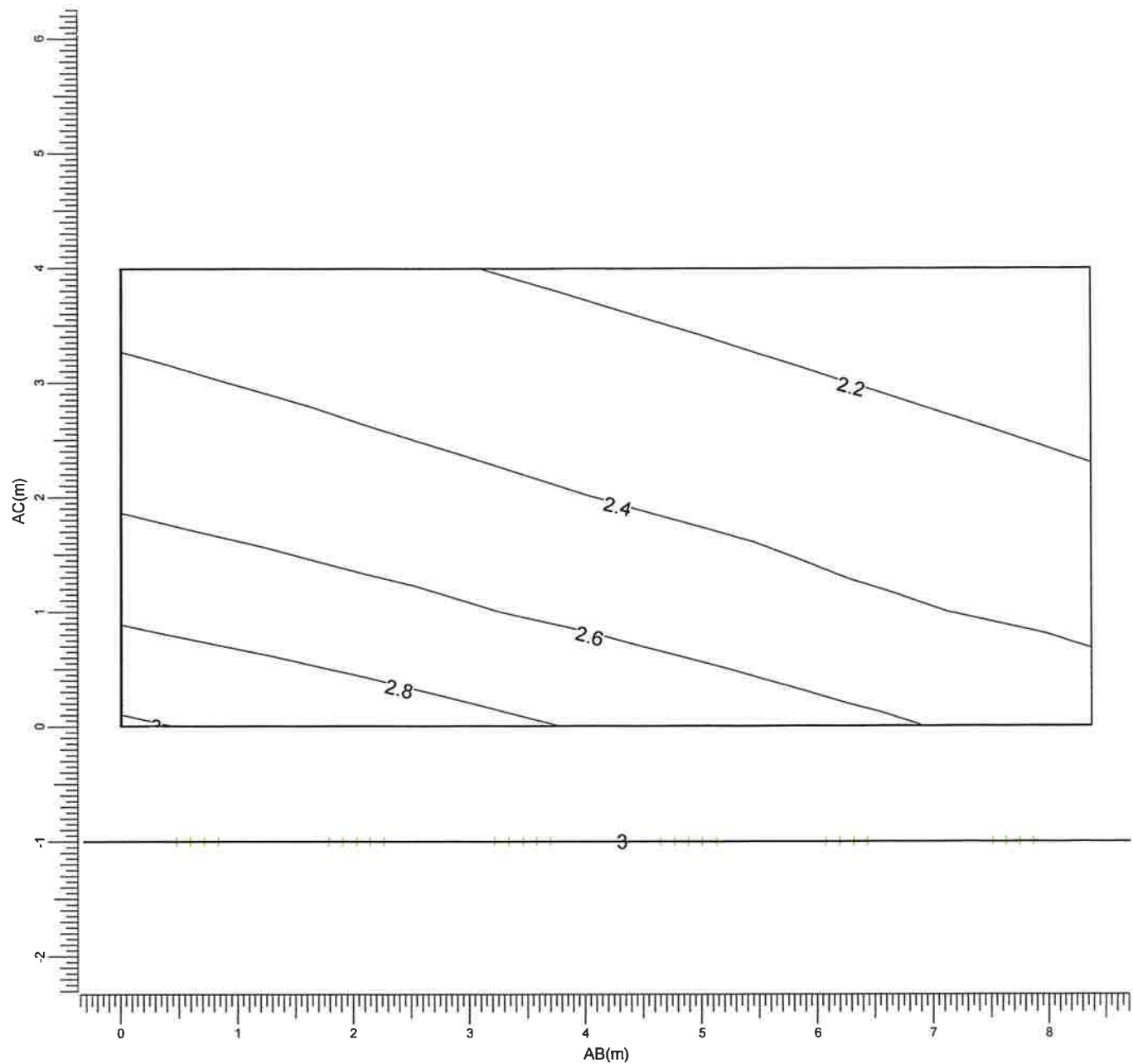
All ON

Grid

Calculation

: Ev Grid 3

: Surface Illuminance (lux)



(53.90, 87.20, 5.00)

(53.90, 87.20, 1.00)

C-----D (62.20, 88.40, 5.00)

A-----B (62.20, 88.40, 1.00)

A : BVP528 OUT T35 A55-NB

Maximum
3.03

Project maintenance factor
1.00

Scale
1:50

3.11 Ev Grid 4: Graphical Table

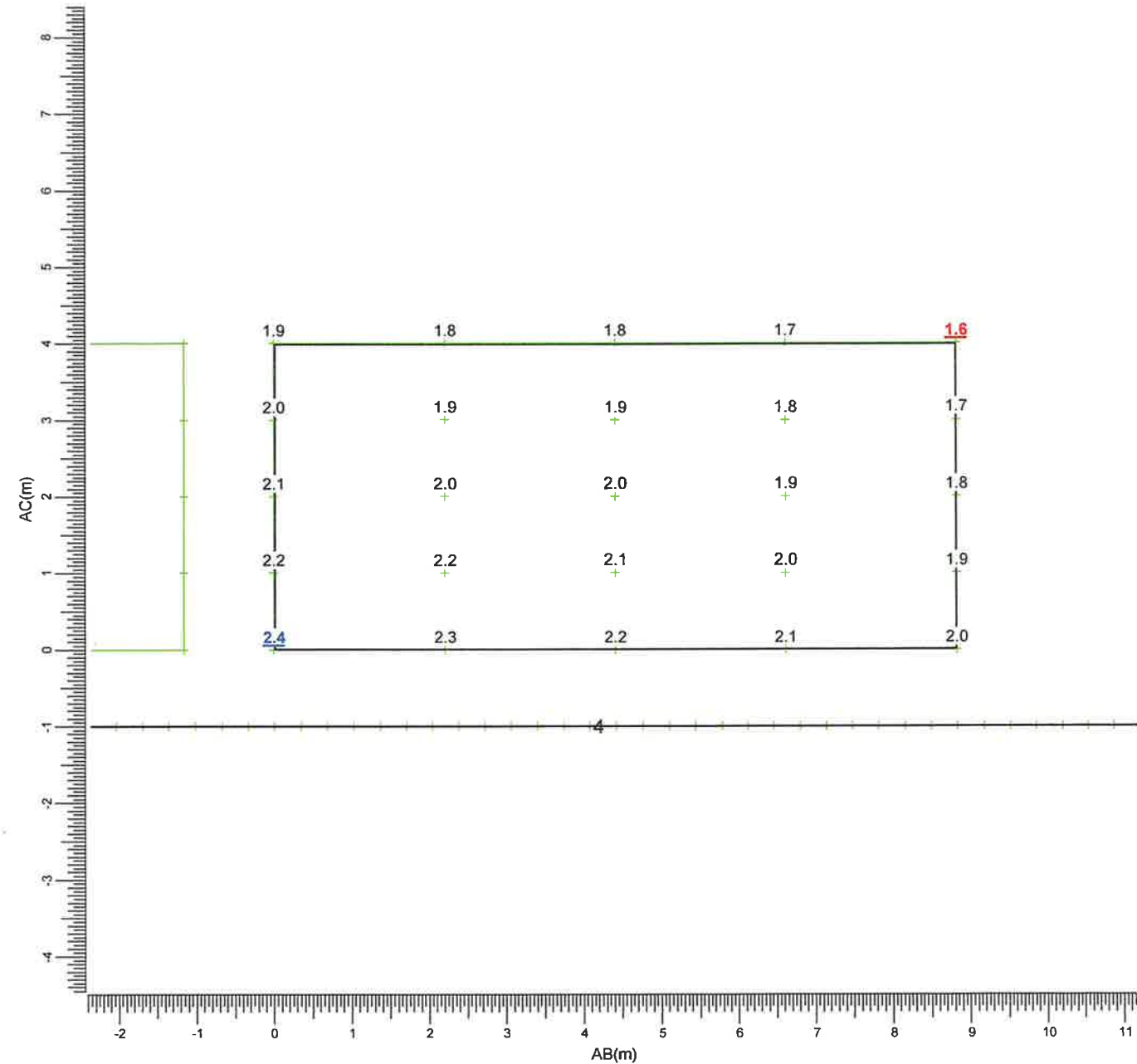
All ON

Grid

Calculation

Ev Grid 4

Surface Illuminance (lux)



(63.20, 89.40, 5.00) C-----D (71.90, 90.90, 5.00)

(63.20, 89.40, 1.00) A-----B (71.90, 90.90, 1.00)

A: BVP528 OUT T35 A55-NB

Maximum
2.37

Project maintenance factor
1.00

Scale
1:75

3.12 Ev Grid 4: Iso Contour

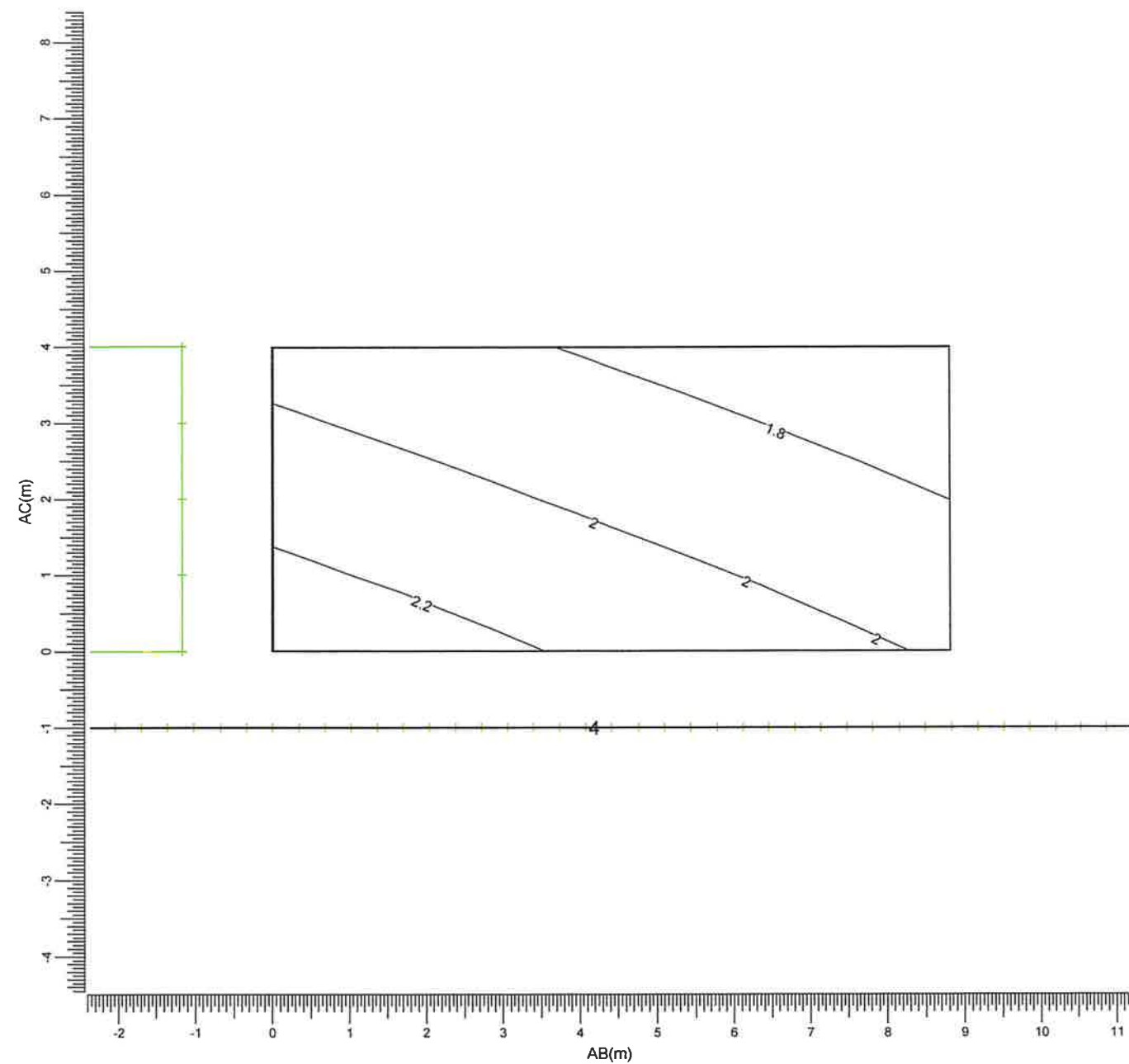
All ON

Grid

Calculation

: Ev Grid 4

: Surface Illuminance (lux)



(63.20,	89.40,	5.00)	C-----D	(71.90,	90.90,	5.00)
(63.20,	89.40,	1.00)	A-----B	(71.90,	90.90,	1.00)

A: BVP528 OUT T35 A55-NB

Maximum	Project maintenance factor	Scale
2.37	1.00	1:75

3.13 Ev Grid 5: Graphical Table

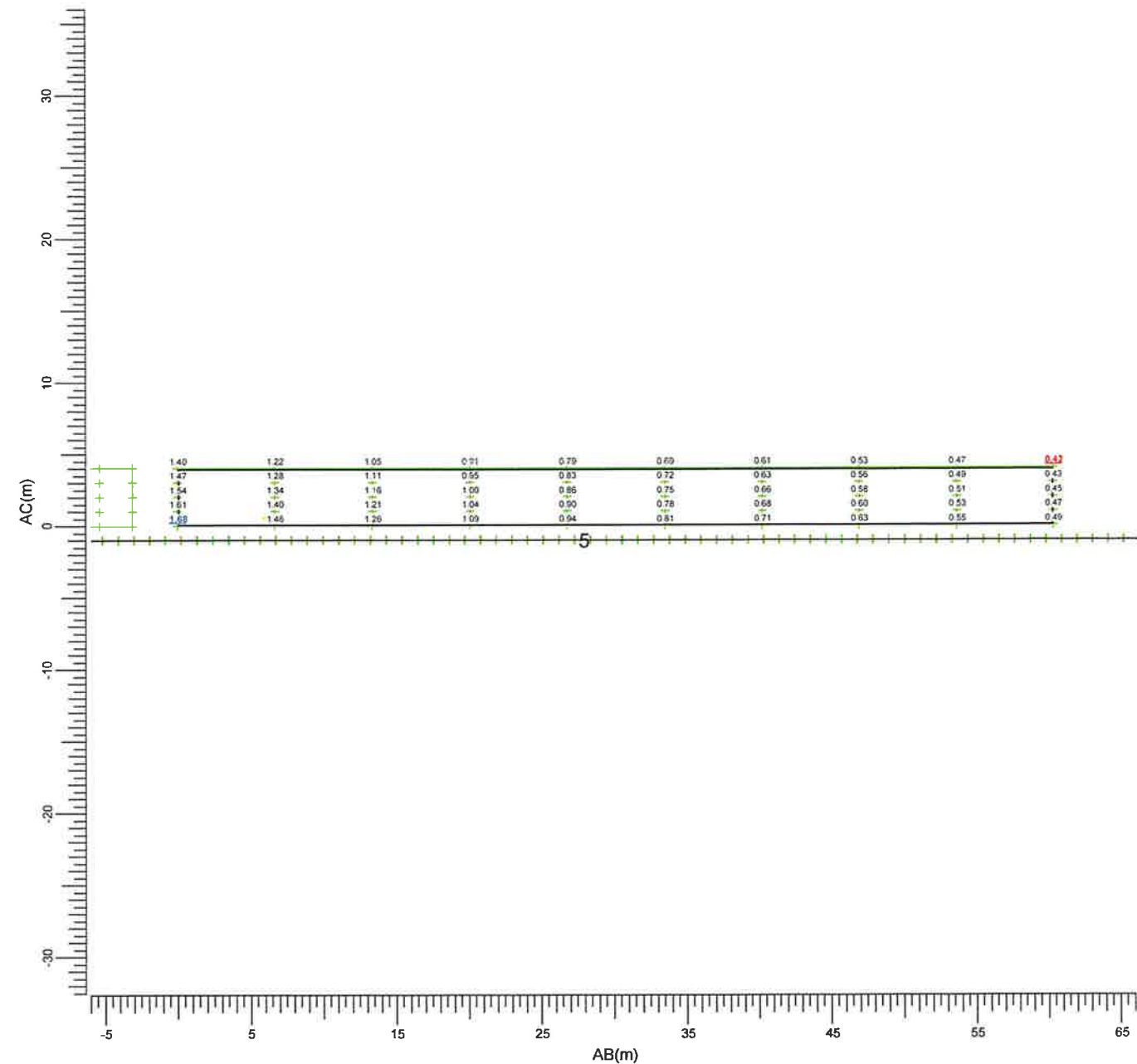
All ON

Grid

Calculation

Ev Grid 5

Surface Illuminance (lux)



(73.30, 99.10, 5.00) C-----D (132.30, 112.20, 5.00)

(73.30, 99.10, 1.00) A-----B (132.30, 112.20, 1.00)

A: BVP528 OUT T35 A55-NB

Maximum
1.68

Project maintenance factor
1.00

Scale
1:400

3.14 Ev Grid 5: Iso Contour

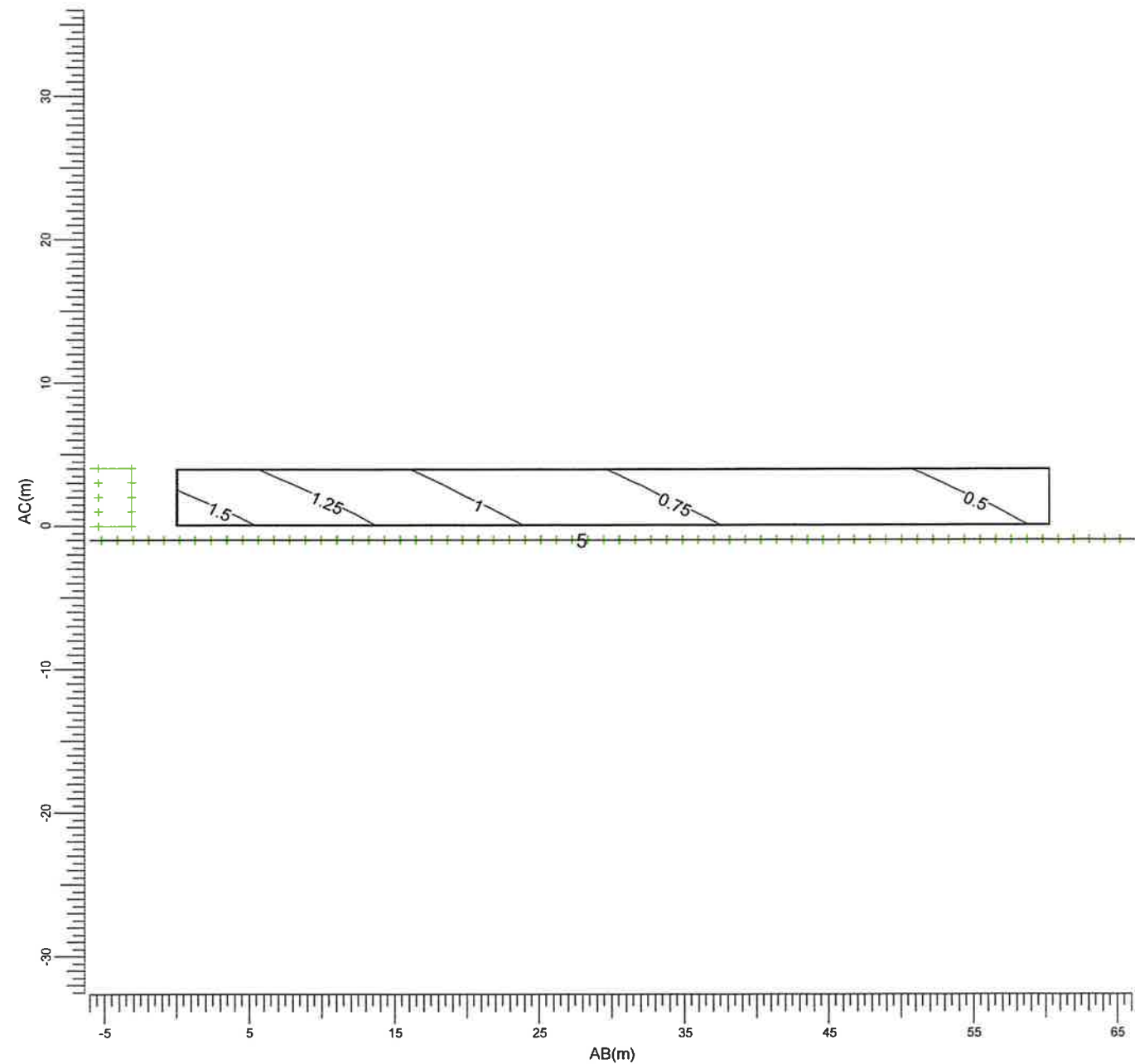
All ON

Grid

Calculation

Ev Grid 5

Surface Illuminance (lux)



(73.30,	99.10,	5.00)	C-----D (132.30,	112.20,	5.00)
(73.30,	99.10,	1.00)	A-----B (132.30,	112.20,	1.00)

A : BVP528 OUT T35 A55-NB

Maximum	Project maintenance factor	Scale
1.68	1.00	1:400

4. Luminaire Details

4.1 Project Luminaires

OptiVision LED gen3.5 2022
BVP528 OUT T35 1xLED2590-4S/757/757 E3/D4I A55-NB

Light output ratios
DLOR : 0.82
ULOR : 0.00
TLOR : 0.82
Ballast : E3/D4I
Lamp flux : 259000 lm
Luminaire wattage : 1505.9 W
Measurement code : LVA2111038

Note: Luminaire data not from database.

