OŠ Remete igrališta

Prostor :

Broj projekta :

Stranka :

Projektirao :

Datum : 14.11.2017

Slijedeće vrijednosti temelje se na egzaktnom izračunu provedenom na kalibriranim žaruljama, svjetiljkama i njihovom zajedničkom radu. U praksi su moguća manja odstupanja.Ne postoje nikakve garancije na datoteke svjetiljki. Proizvođač ne preuzima nikakvu odgovornost za nastalu štetu odnosno štetu prouzročenu korisniku ili trećoj osobi.

1 Podaci o svjetiljci

1.1 Philips Lighting, BGP615 T25 1 xLED20-4S/830 DN11 ()

1.1.1 Stranica s podacima

Proizvođač: Philips Lighting

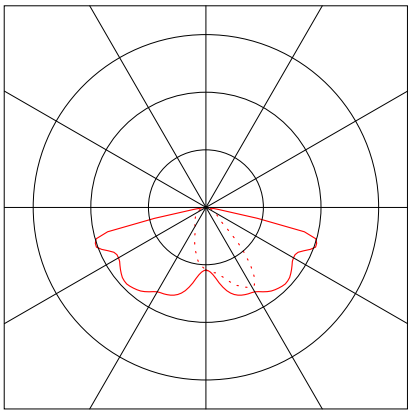
other BGP615 T25 1 xLED20-4S/830 DN11

Podaci o svjetiljci

Svjetl. iskoristivost svjetiljke	:	91%
Efikasnost svjetiljki	:	101.11 lm/W
Klasifikacija	:	A30 ↓100.0% ↑0.0%
CIE Flux Codes	:	44 75 97 100 91
Bliještenje	:	G*3 / D6
Snaga	:	18 W
Svjetlosni tok	:	1820 lm
Dimenzije	:	622 mm x 290 mm x 120 mm

Opremljeno žaruljama

Broj	:	1
Opis	:	LED20-4S/830
Boja	:	-
Svjetlosni tok	:	2000 lm



1 Podaci o svjetiljci

1.2 Philips Lighting, BGP615 T25 1 xLED16-4S/830 DM31 ()

1.2.1 Stranica s podacima

Proizvođač: Philips Lighting

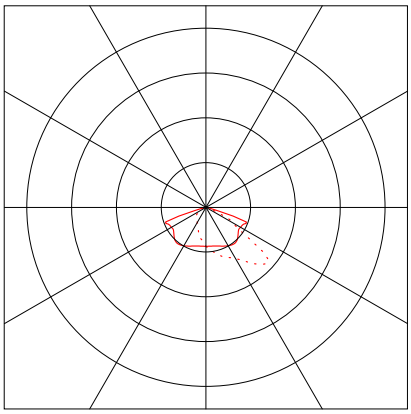
other BGP615 T25 1 xLED16-4S/830 DM31

Podaci o svjetiljci

Svjetl. iskoristivost svjetiljke	:	91%
Efikasnost svjetiljki	:	99.73 lm/W
Klasifikacija	:	A30 ↓100.0% ↑0.0%
CIE Flux Codes	:	33 75 99 100 91
Bliještenje	:	G*6 / D6
Snaga	:	14.6 W
Svjetlosni tok	:	1456 lm
Dimenzije	:	622 mm x 290 mm x 120 mm

Opremljeno žaruljama

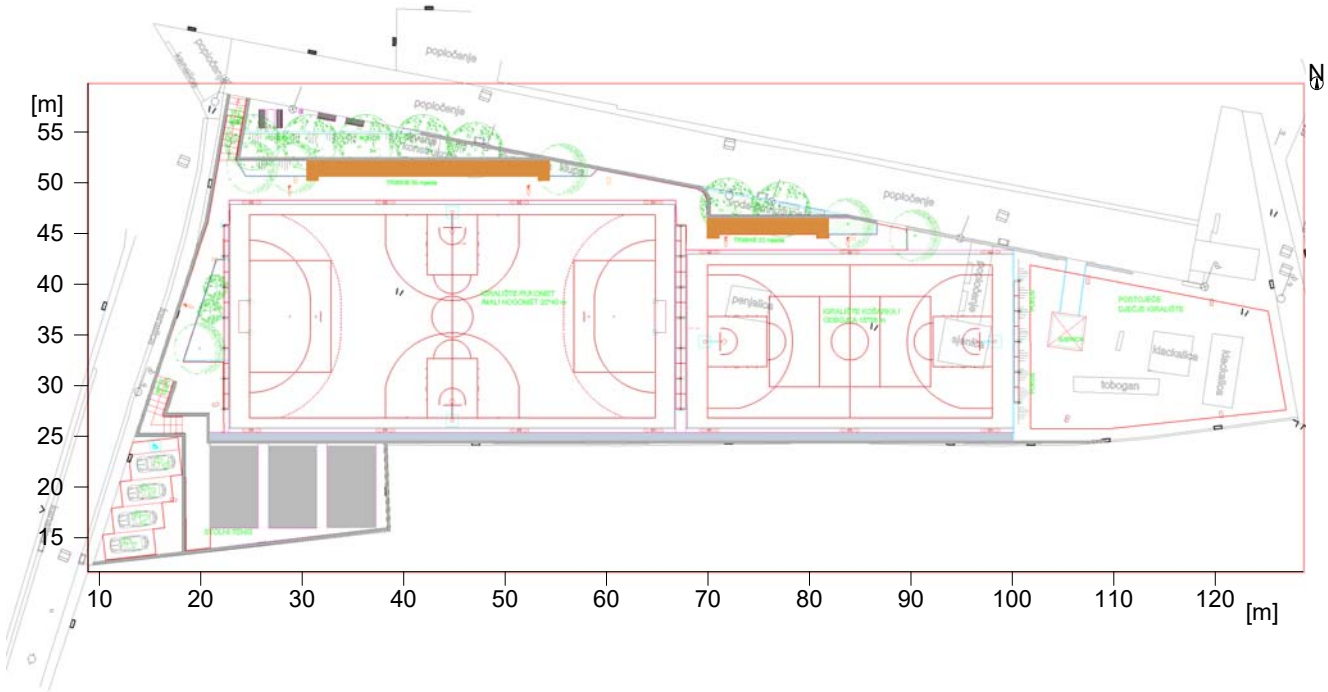
Broj	:	1
Opis	:	LED16-4S/830
Boja	:	-
Svjetlosni tok	:	1600 lm



2 Vanjska rasvjeta v1

2.1 Opis, Vanjska rasvjeta v1

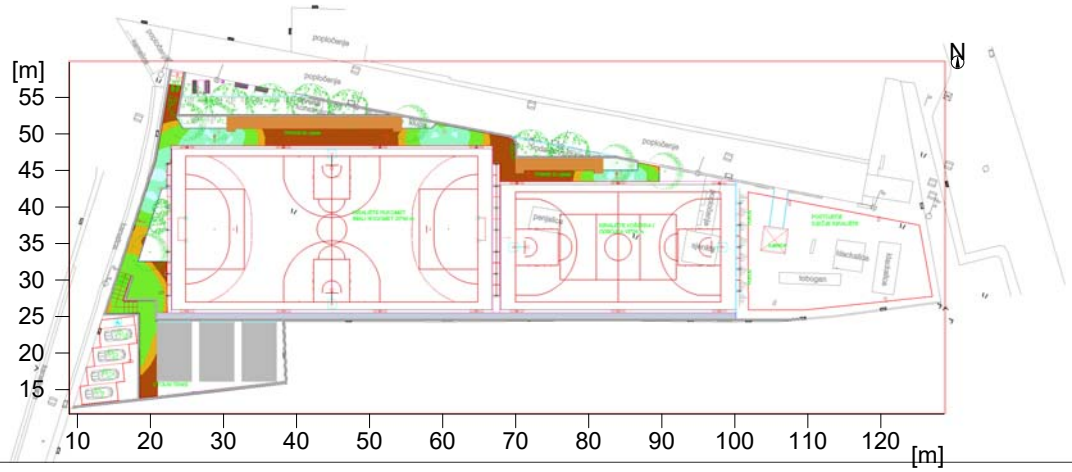
2.1.1 Tlocrt



2 Vanjska rasvjeta v1

2.2 Sažetak, Vanjska rasvjeta v1

2.2.1 Pregled rezultata, Pješačke staze



Rasvijetljenost [lx]

Općenito

Upotrijebljeni računski algoritam	Svjetiljke s dir.-/indirektnom raspodjelom
Visina mjerne površine	0.00 m
Visina (fot. centar) [m]:	5.00 m
Faktor održavanja	0.90
Ukupni svjetlosni tok svih žarulja	17600 lm
Ukupna snaga	159.6 W
Ukupna snaga po površini (5765.04 m²)	0.03 W/m²

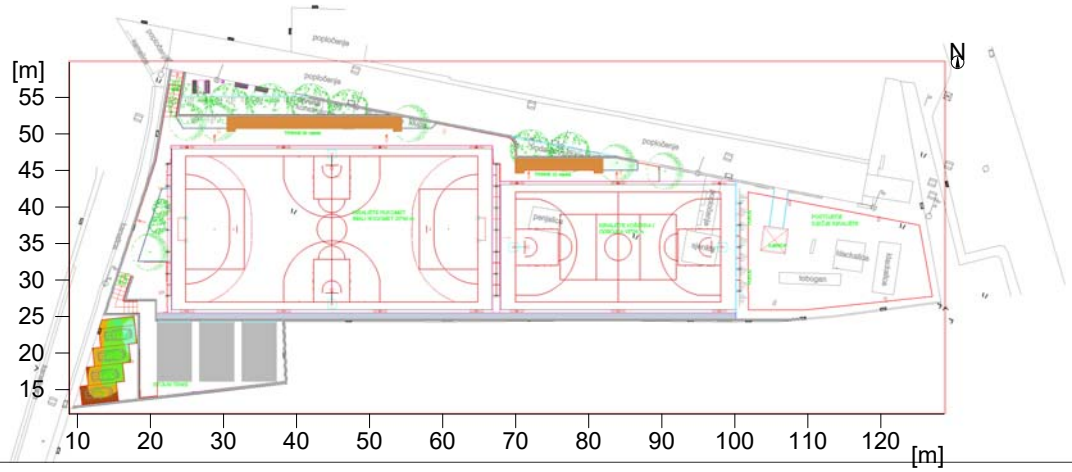
Rasvijetljenosti

Srednja rasvijetljenost	Esr	10.1 lx
Minimalna rasvijetljenost	Emin	1.6 lx
Maksimalna rasvijetljenost	Emax	20.6 lx
Jednolikost Uo	Emin/Em	1:6.28 (0.16)
Jednolikost Ud	Emin/Emax	1:12.8 (0.08)

Tip	Kom.	Proizvod	
		Philips Lighting	
1	4	Tipska oznaka	:
		Naziv svjetiljke	: BGP615 T25 1 xLED20-4S/830 DN11
		Žarulje	: 1 x LED20-4S/830 18 W / 2000 lm
2	6	Tipska oznaka	:
		Naziv svjetiljke	: BGP615 T25 1 xLED16-4S/830 DM31
		Žarulje	: 1 x LED16-4S/830 14.6 W / 1600 lm

2.2 Sažetak, Vanjska rasvjeta v1

2.2.2 Pregled rezultata, Parking



Rasvijetljenost [lx]

Općenito

Upotrijebljeni računski algoritam	Svjetiljke s dir.-/indirektnom raspodjelom
Visina mjerne površine	0.00 m
Visina (fot. centar) [m]:	5.00 m
Faktor održavanja	0.90
Ukupni svjetlosni tok svih žarulja	17600 lm
Ukupna snaga	159.6 W
Ukupna snaga po površini (5765.04 m²)	0.03 W/m²

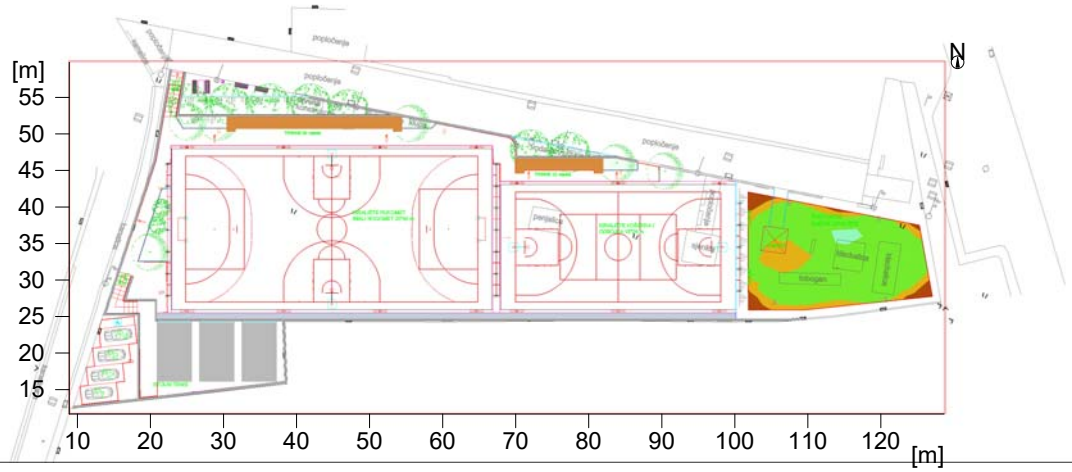
Rasvijetljenosti

Srednja rasvijetljenost	Esr	10.4 lx
Minimalna rasvijetljenost	Emin	5.7 lx
Maksimalna rasvijetljenost	Emax	15.0 lx
Jednolikost Uo	Emin/Em	1:1.84 (0.54)
Jednolikost Ud	Emin/Emax	1:2.65 (0.38)

Tip	Kom.	Proizvod	
		Philips Lighting	
1	4	Tipska oznaka	:
		Naziv svjetiljke	: BGP615 T25 1 xLED20-4S/830 DN11
		Žarulje	: 1 x LED20-4S/830 18 W / 2000 lm
2	6	Tipska oznaka	:
		Naziv svjetiljke	: BGP615 T25 1 xLED16-4S/830 DM31
		Žarulje	: 1 x LED16-4S/830 14.6 W / 1600 lm

2.2 Sažetak, Vanjska rasvjeta v1

2.2.3 Pregled rezultata, Dječje igralište



Rasvijetljenost [lx]

Općenito

Upotrijebljeni računski algoritam	Svjetiljke s dir.-/indirektnom raspodjelom
Visina mjerne površine	0.00 m
Visina (fot. centar) [m]:	5.00 m
Faktor održavanja	0.90
Ukupni svjetlosni tok svih žarulja	17600 lm
Ukupna snaga	159.6 W
Ukupna snaga po površini (5765.04 m²)	0.03 W/m²

Rasvijetljenosti

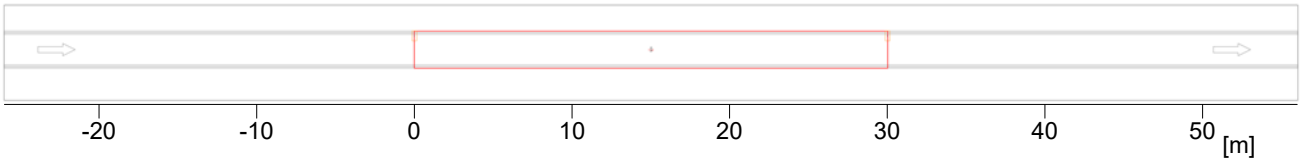
Srednja rasvijetljenost	Esr	11.0 lx
Minimalna rasvijetljenost	Emin	3.6 lx
Maksimalna rasvijetljenost	Emax	15.5 lx
Jednolikost Uo	Emin/Em	1:3.05 (0.33)
Jednolikost Ud	Emin/Emax	1:4.32 (0.23)

Tip	Kom.	Proizvod	
		Philips Lighting	
1	4	Tipska oznaka	:
		Naziv svjetiljke	: BGP615 T25 1 xLED20-4S/830 DN11
		Žarulje	: 1 x LED20-4S/830 18 W / 2000 lm
2	6	Tipska oznaka	:
		Naziv svjetiljke	: BGP615 T25 1 xLED16-4S/830 DM31
		Žarulje	: 1 x LED16-4S/830 14.6 W / 1600 lm

3 Pješačka staza v1

3.1 Opis, Pješačka staza v1

3.1.1 Tlocrt



Objekt : OŠ Remete igralište
Prostor :
Broj projekta :
Datum : 14.11.2017

1 Pješačka staza v1

1.1 Sažetak, Pješačka staza v1

1.1.1 Pregled rezultata, objectName

1 1

Philips Lighting
Tipska oznaka :
Naziv svjetiljke : BGP615 T25 1 xLED20-4S/830 DN11
Žarulje : 1 x LED20-4S/830 18 W / 2000 lm

MyLumRow

Postavljanje svjetiljki	: Linija lijevo	Faktor održavanja	: 0.90
Razmak između svjetiljki	30.00 m	Visina (fot. centar)	: 5.00 m
Svjetiljka od ruba	: 0.00 m	Nagib	: 0.00 °
Abs. position	: 2.35 m	Razred bliještanja	: D6
Potrošnja struje/km	: 600 W/km	Razred jakosti svjetlosti	: G*3

Road

Širina	: 2.35 m	Vozne trake	: 1
Površina	: R3, q0=0.07	Površina (mokra)	: -none-, q0=0.1

Rasvijetljenosti

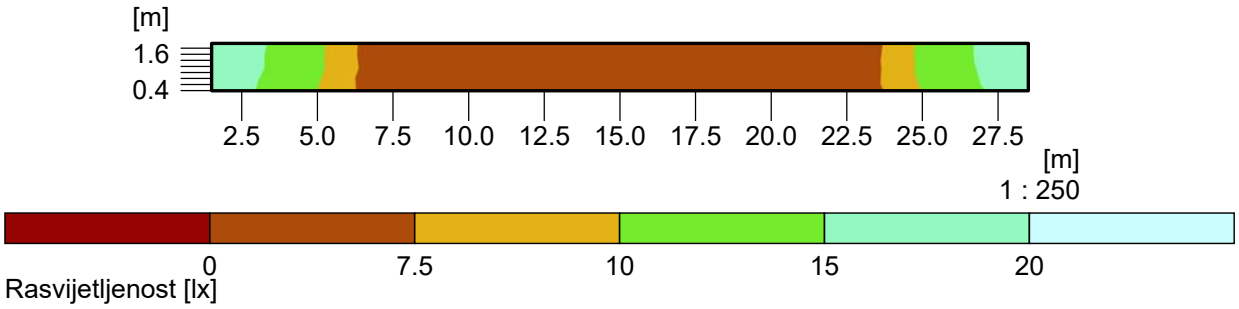
Izračun polja: 30m x 2.35m (10 x 3 Točke)

	Ēm	Emin	Uo	Ud
	8.18 lx	2.01 lx	0.25	0.10
P3	>= 7.50 lx	>= 1.50 lx		

1 Pješačka staza v1

1.2 Rezultati izračuna, Pješačka staza v1

1.2.1 Pseudo boje, Road (E horizontal)



Visina referentne površine : 0.00 m

Srednja rasvijetljenost	Esr	: 8.2 lx
Minimalna rasvijetljenost	Emin	: 2 lx
Maksimalna rasvijetljenost	Emax	: 20.1 lx
Jednolikost Uo	min/sred	: 1 : 4.08 (0.25)
Jednolikost Ud	min/max	: 1 : 10 (0.1)

Rukometno-nogometno igralište

Date: 14-11-2017

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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4.1 Project Luminaires 7

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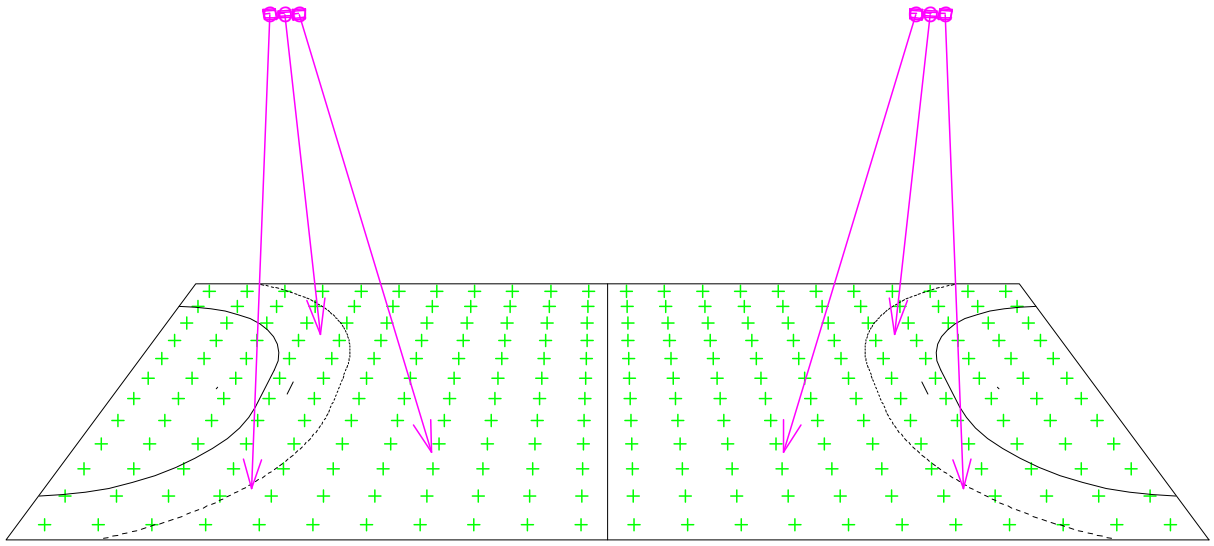
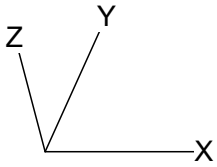
1. Project Description

1.1 3-D Project Overview





C → BVP650 T35 S

2. Summary

2.1 General Information

The overall maintenance factor used for this project is 0.90.

2.2 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
C	6	BVP650 T35 S	1 * LED280-4S/830	245.0	1 * 28000

The total installed power: 1.47 (kWatt)

2.3 Calculation Results

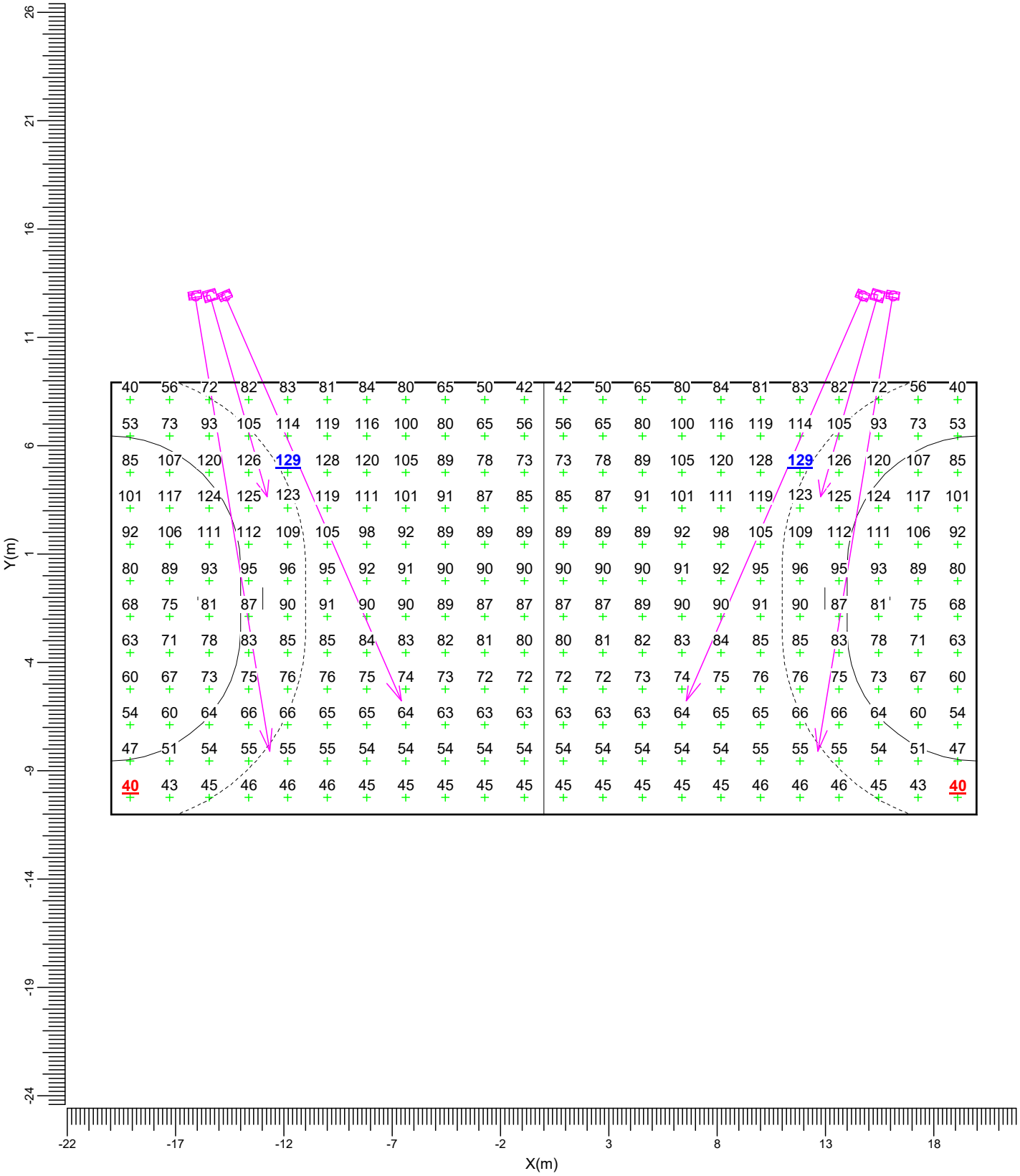
(Il)luminance Calculations:

Calculation	Type	Unit	Ave	Min/Ave	Min/Max
Handball	Surface Illuminance	lux	79.7	0.50	0.31

3. Calculation Results

3.1 Handball: Graphical Table

Grid : Handball at Z = -0.00 m
Calculation : Surface Illuminance (lux)

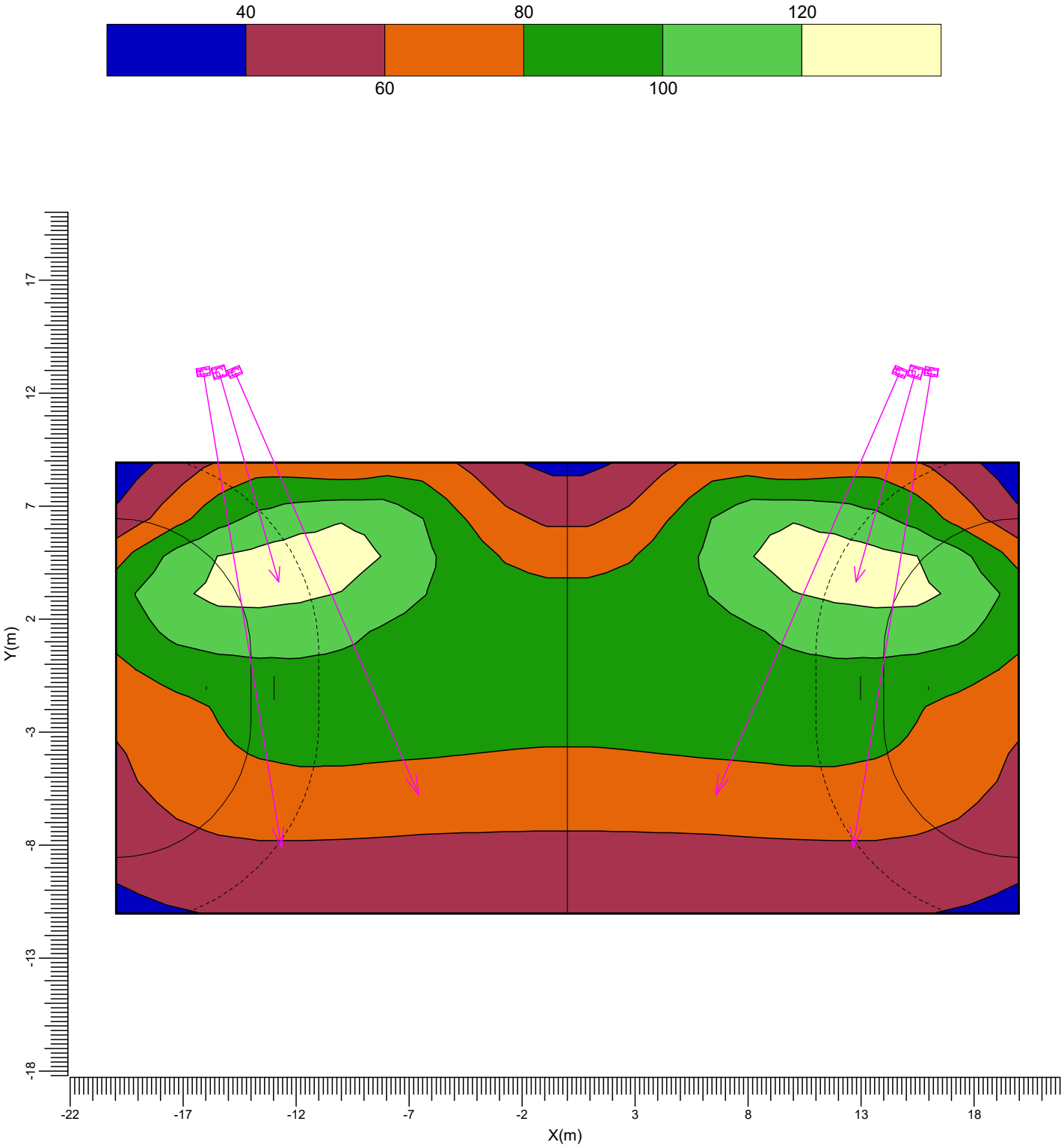


C → BVP650 T35 S

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
79.7	0.50	0.31	0.90	1:250

3.2 Handball: Filled Iso Contour

Grid : Handball at Z = -0.00 m
Calculation : Surface Illuminance (lux)



C → BVP650 T35 S

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
79.7	0.50	0.31	0.90	1:250

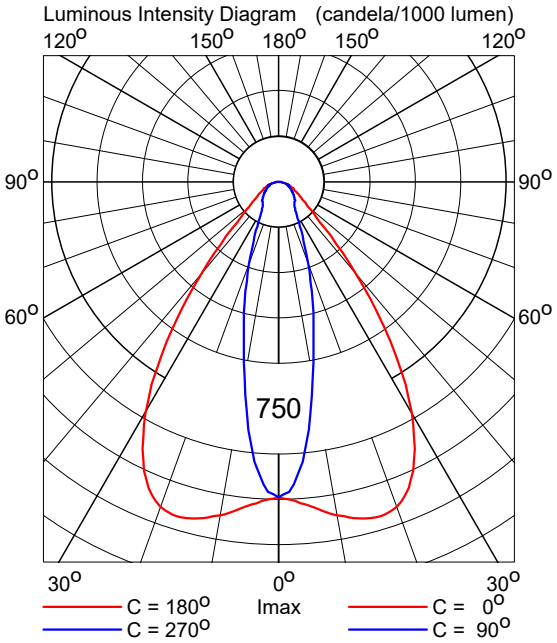
4. Luminaire Details

4.1 Project Luminaires

ClearFlood
BVP650 T35 1 xLED280-4S/830 S

Light output ratios

DLOR	:	0.84
ULOR	:	0.00
TLOR	:	0.84
Ballast	:	-
Lamp flux	:	28000 lm
Luminaire wattage	:	245.0 W
Measurement code	:	LVM1629400



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
C	6	BVP650 T35 S	1 * LED280-4S/830	1 * 28000

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Angles		
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0
1 * C	-16.10	12.90	12.30	-80.7	60.0	0.0
1 * C	-15.40	12.90	12.30	-74.2	38.0	0.0
1 * C	-14.70	12.90	12.30	-66.5	58.9	0.0
1 * C	14.70	12.90	12.30	-113.5	58.9	0.0
1 * C	15.40	12.90	12.30	-105.8	38.0	0.0
1 * C	16.10	12.90	12.30	-99.3	60.0	0.0

Košarkaško igralište

Date: 14-11-2017

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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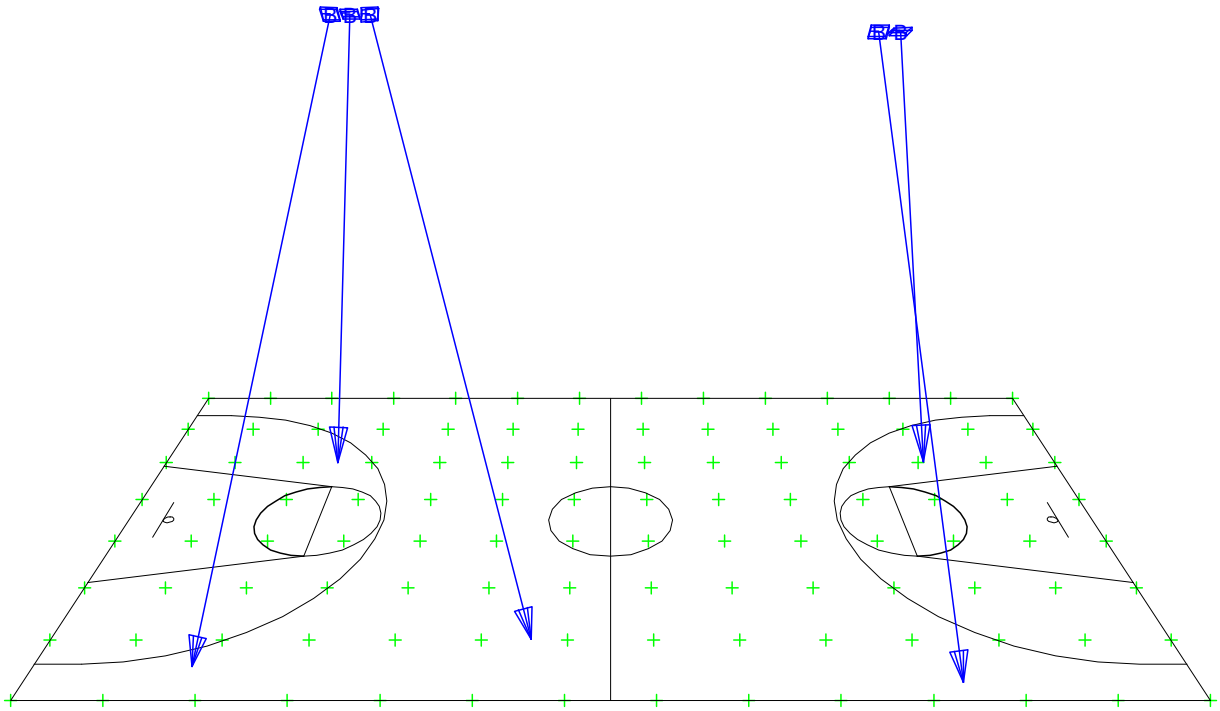
4.1 Project Luminaires 7

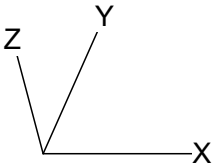
5. Installation Data 8

5.1 Legends 8
5.2 Luminaire Positioning and Orientation 8

1. Project Description

1.1 3-D Project Overview





B → BVP650 T35 S

2. Summary

2.1 General Information

The overall maintenance factor used for this project is 0.90.

2.2 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
B	5	BVP650 T35 S	1 * LED220-4S/830	184.0	1 * 22000

The total installed power: 0.92 (kWatt)

2.3 Calculation Results

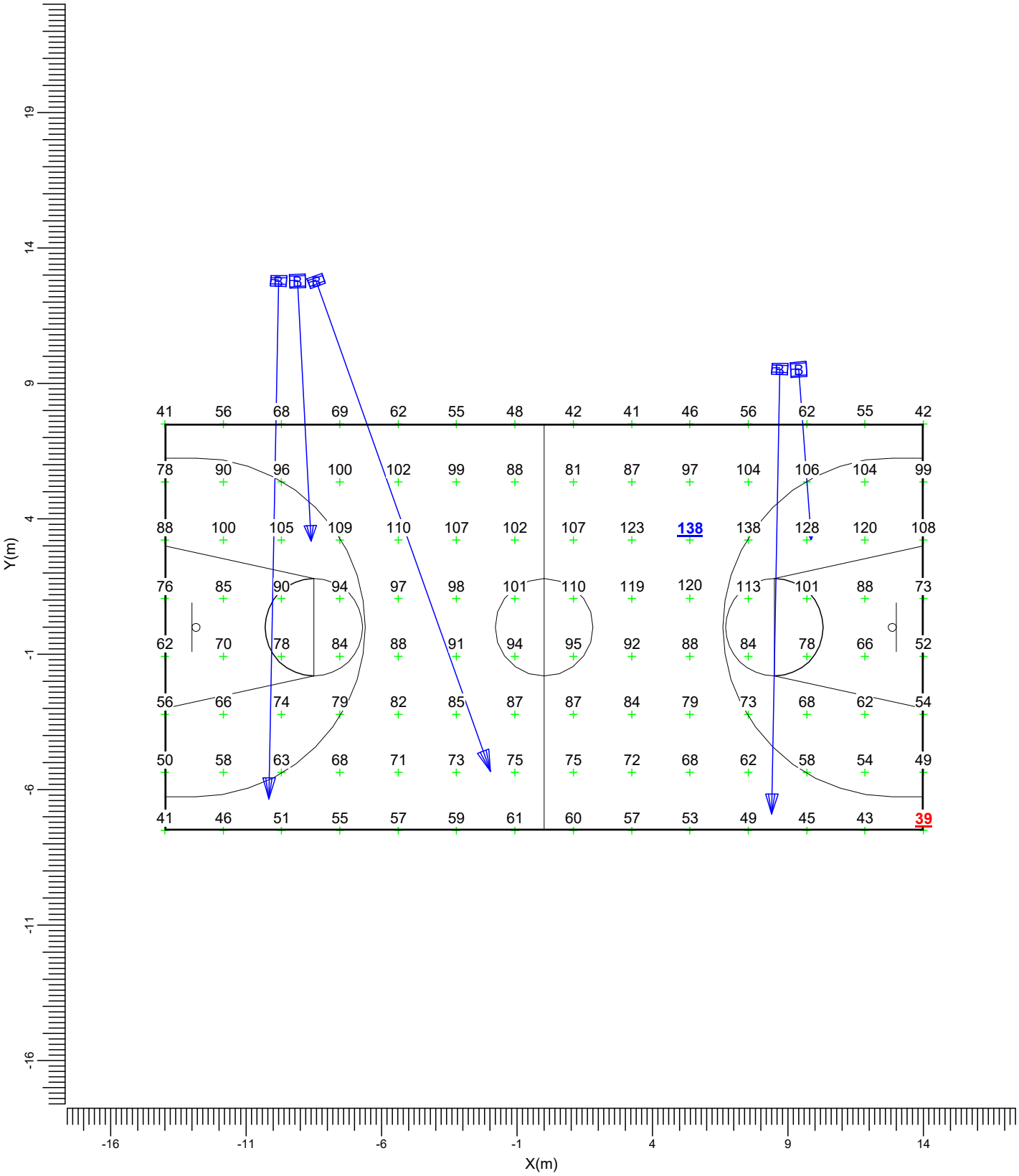
(Il)luminance Calculations:

Calculation	Type	Unit	Ave	Min/Ave	Min/Max
Basketball	Surface Illuminance	lux	78.5	0.50	0.28

3. Calculation Results

3.1 Basketball: Graphical Table

Grid : Basketball at Z = -0.00 m
Calculation : Surface Illuminance (lux)

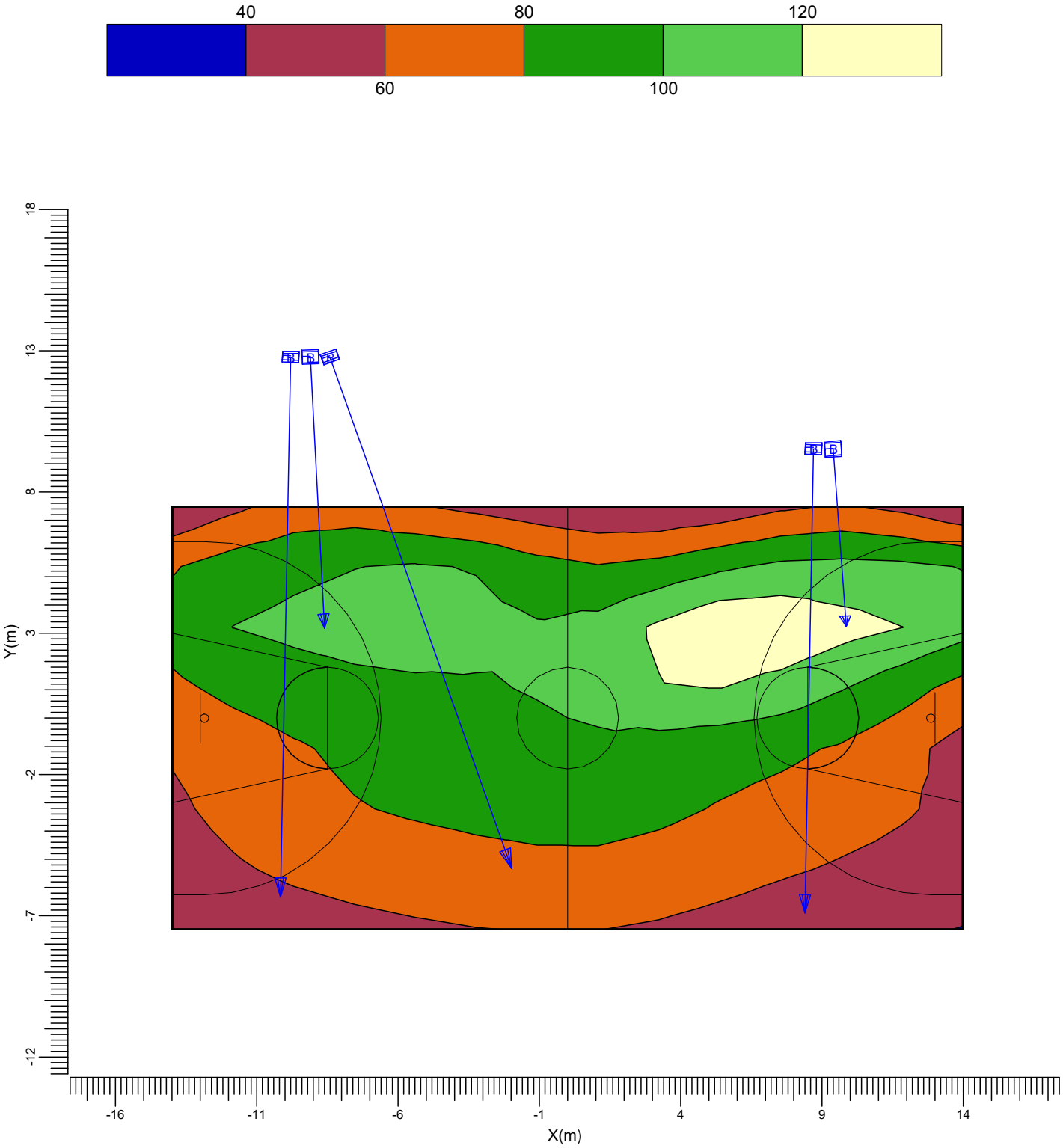


B → BVP650 T35 S

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
78.5	0.50	0.28	0.90	1:200

3.2 Basketball: Filled Iso Contour

Grid : Basketball at Z = -0.00 m
Calculation : Surface Illuminance (lux)



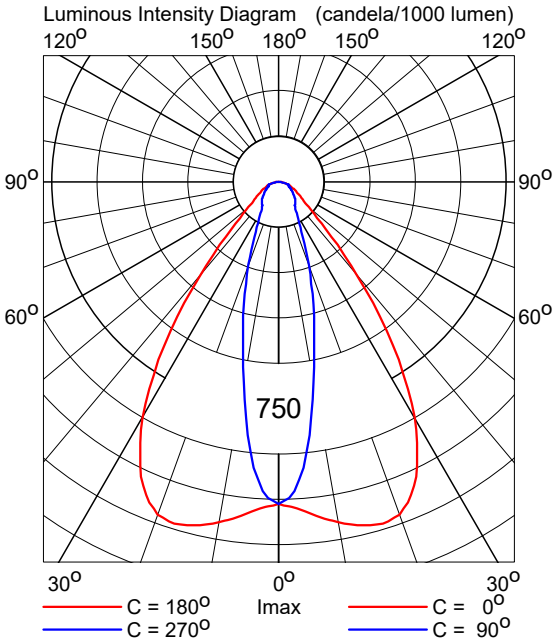
B → BVP650 T35 S

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
78.5	0.50	0.28	0.90	1:200

4. Luminaire Details

4.1 Project Luminaires

ClearFlood
BVP650 T35 1 xLED220-4S/830 S



Light output ratios

DLOR	:	0.86
ULOR	:	0.00
TLOR	:	0.86
Ballast	:	-
Lamp flux	:	22000 lm
Luminaire wattage	:	184.0 W
Measurement code	:	LVM1629400

5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
B	5	BVP650 T35 S	1 * LED220-4S/830	1 * 22000

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Angles		
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0
1 * B	-9.80	12.75	12.30	-91.1	57.2	0.0
1 * B	-9.10	12.75	12.30	-87.0	37.9	0.0
1 * B	-8.40	12.75	12.30	-70.5	57.3	0.0
1 * B	8.70	9.50	12.30	-91.0	53.1	0.0
1 * B	9.40	9.50	12.30	-85.8	27.0	0.0

Stolni tenis

Date: 13-06-2017

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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3.3 Table Tennis2: Filled Iso Contour 7
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4.1 Project Luminaires 9

5. Installation Data 10

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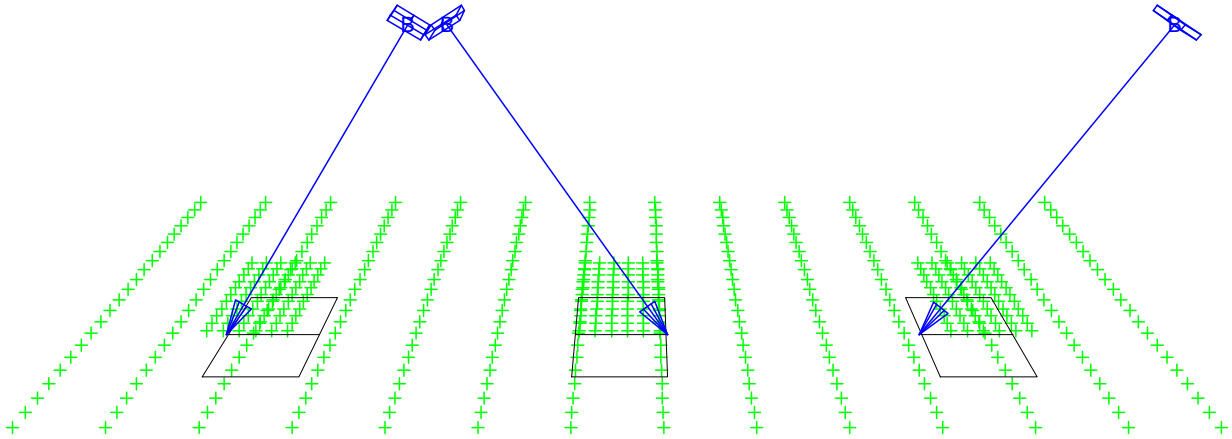
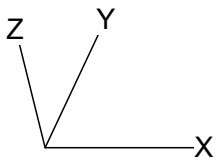
5.2 Luminaire Positioning and Orientation 10

1. Project Description

1.1 3-D Project Overview





B → BVP650 T35 S

2. Summary

2.1 General Information

The overall maintenance factor used for this project is 0.90.

2.2 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
B	3	BVP650 T35 S	1 * LED70-4S/830	56.0	1 * 7000

The total installed power: 0.17 (kWatt)

2.3 Calculation Results

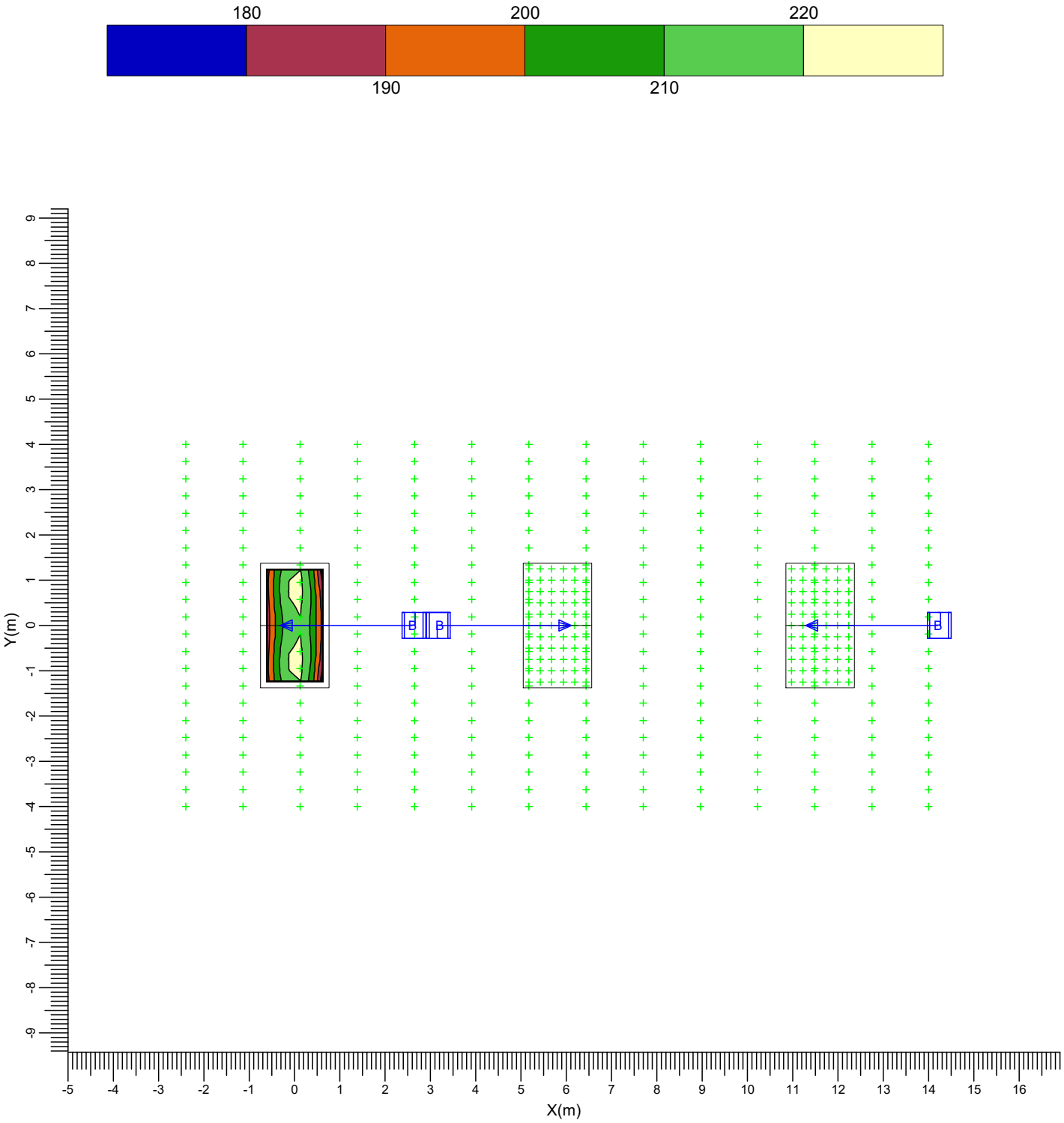
(Il)luminance Calculations:

Calculation	Type	Unit	Ave	Min/Ave	Min/Max
Table Tennis	Surface Illuminance	lux	203	0.85	0.77
Table Tennis1	Surface Illuminance	lux	207	0.85	0.78
Table Tennis2	Surface Illuminance	lux	200	0.82	0.75
Grid	Surface Illuminance	lux	86.2	0.15	0.06

3. Calculation Results

3.1 Table Tennis: Filled Iso Contour

Grid : Table Tennis at Z = 0.75 m
Calculation : Surface Illuminance (lux)

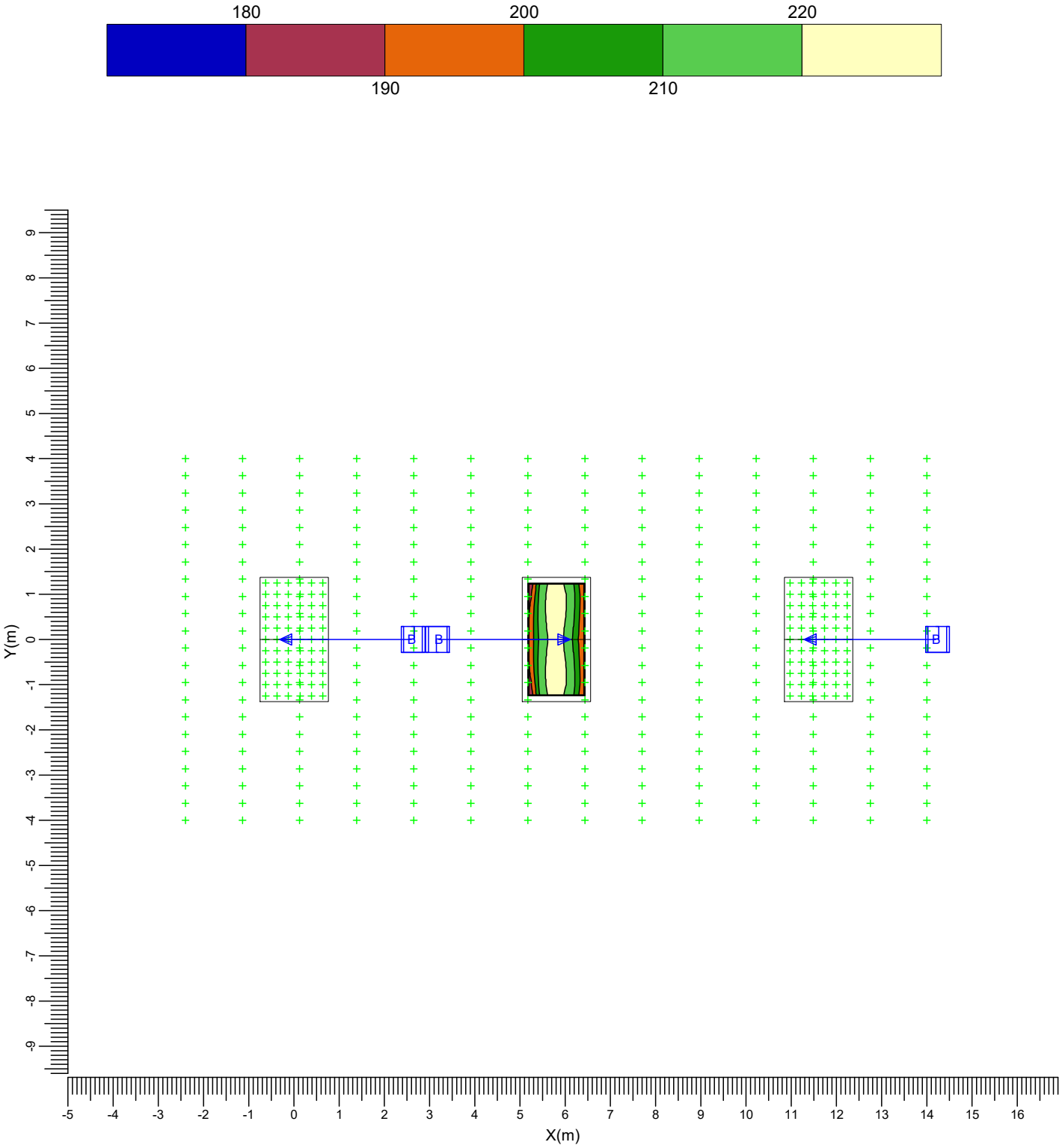


B → BVP650 T35 S

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
203	0.85	0.77	0.90	1:125

3.2 Table Tennis1: Filled Iso Contour

Grid : Table Tennis1 at Z = 0.75 m
Calculation : Surface Illuminance (lux)

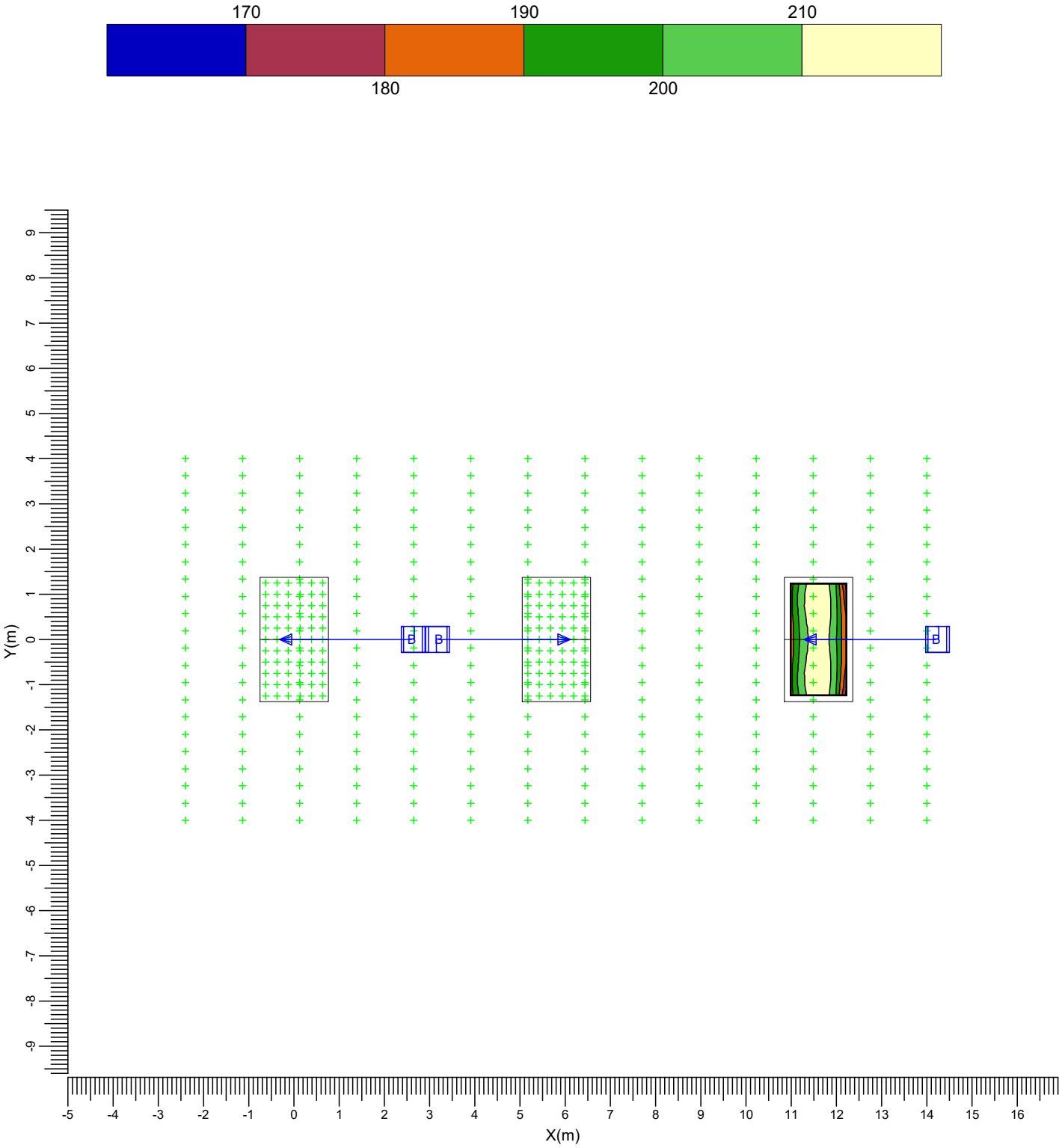


B → BVP650 T35 S

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
207	0.85	0.78	0.90	1:125

3.3 Table Tennis2: Filled Iso Contour

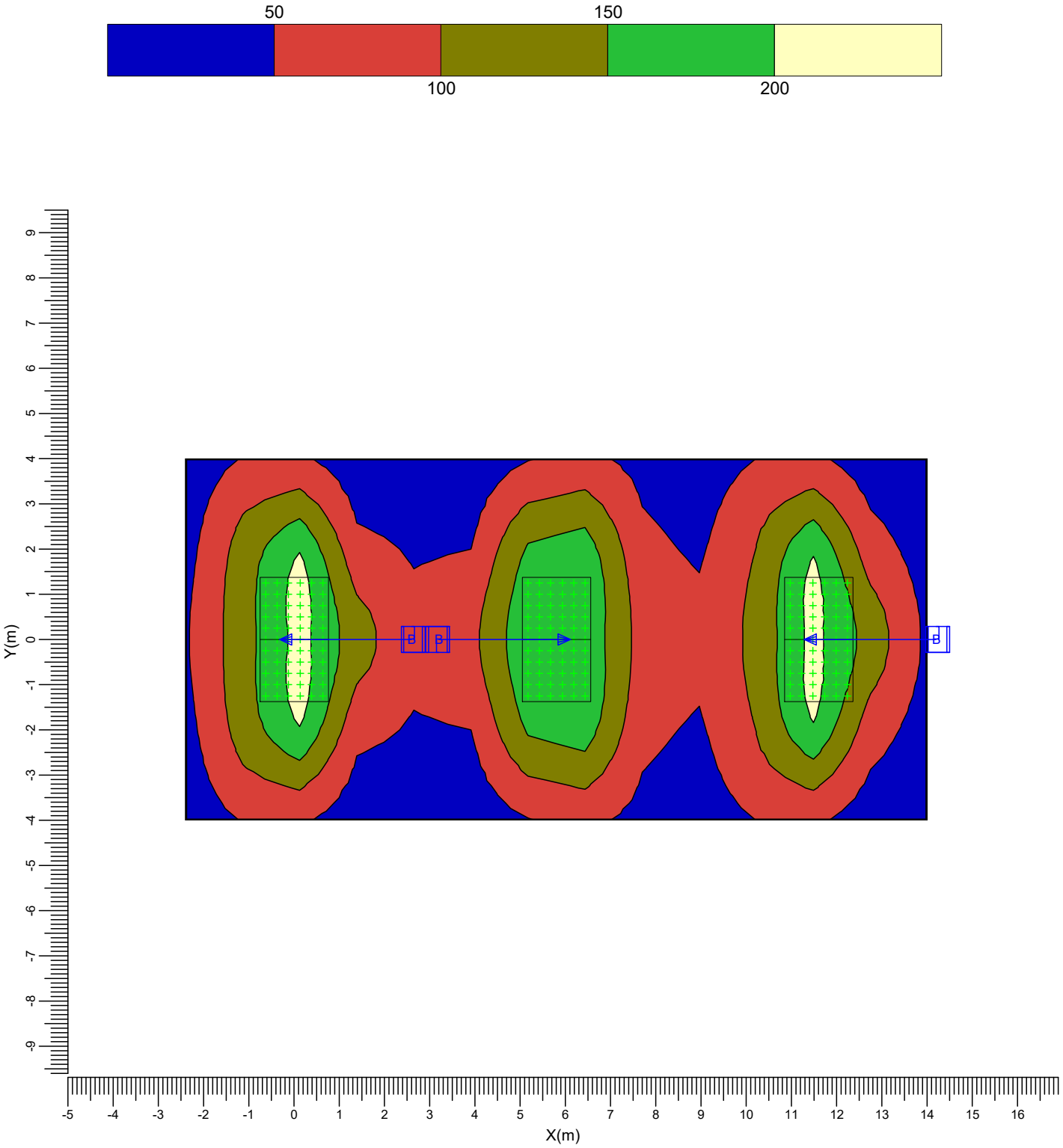
Grid : Table Tennis2 at Z = 0.75 m
Calculation : Surface Illuminance (lux)



Average	Min/Ave	Min/Max	Project maintenance factor	Scale
200	0.82	0.75	0.90	1:125

3.4 Grid: Filled Iso Contour

Grid : Grid at Z = 0.75 m
Calculation : Surface Illuminance (lux)

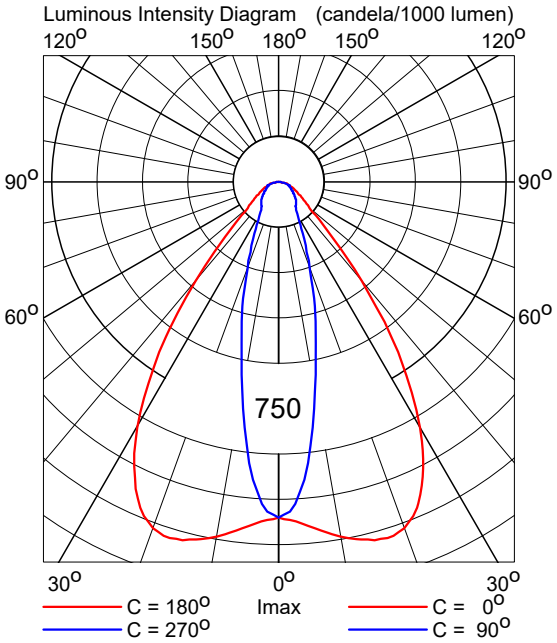


Average	Min/Ave	Min/Max	Project maintenance factor	Scale
86.2	0.15	0.06	0.90	1:125

4. Luminaire Details

4.1 Project Luminaires

ClearFlood
BVP650 T35 1 xLED70-4S/830 S



Light output ratios

DLOR	:	0.89
ULOR	:	0.00
TLOR	:	0.89
Ballast	:	-
Lamp flux	:	7000 lm
Luminaire wattage	:	56.0 W
Measurement code	:	LVM1629400

5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
B	3	BVP650 T35 S	1 * LED70-4S/830	1 * 7000

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Angles		
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0
1 * B	2.60	-0.00	5.30	180.0	32.7	0.0
1 * B	3.20	-0.00	5.30	0.0	32.6	0.0
1 * B	14.20	-0.00	5.30	180.0	32.7	0.0