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 SCHREDER, AXIA 2.1 5187 - 16 Ni... (AXIA 2.1 5187 1...)

1.1.1 Stranica s podacima

Proizvođač: SCHREDER

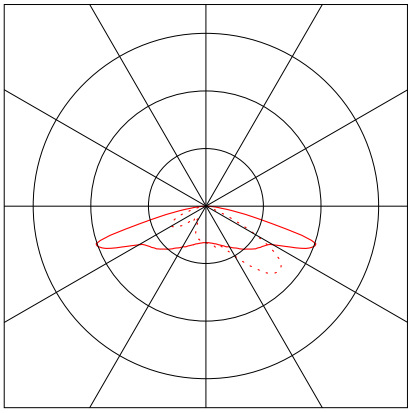
AXIA 2.1 5187 16 Nichia NVSL219CT 390mA WW 383372 Integrated lenses - 230V 25deg EF.ldt
AXIA 2.1 5187 - 16 Nichia NVSL219CT 390mA WW 230V Integrated lenses 383372

Podaci o svjetiljci

Svjetl. iskoristivost svjetiljke	:	90.4%
Efikasnost svjetiljki	:	112.89 lm/W
Klasifikacija	:	A20 ↓100.0% ↑0.0%
CIE Flux Codes	:	25 60 95 100 90
UGR 4H 8H	:	30.1 / 20.4
Snaga	:	21 W
Svjetlosni tok	:	2370.6 lm
Dimenzije	:	650 mm x 250 mm x 103 mm

Opremljeno žaruljama

Broj	:	1
Opis	:	16 Nichia NVSL219CT
Boja	:	
Svjetlosni tok	:	2622.4 lm



1 Podaci o svjetiljci

1.2 SCHREDER, AXIA 2.1 5221 - 16 Ni... (AXIA 2.1 5221 1...)

1.2.1 Stranica s podacima

Proizvođač: SCHREDER

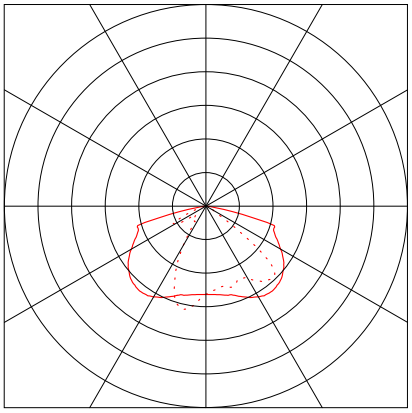
AXIA 2.1 5221 16 Nichia NVSL219CT 390mA WW 397652 Integrated lenses - 230V 25deg EF.ldt
AXIA 2.1 5221 - 16 Nichia NVSL219CT 390mA WW 230V Integrated lenses 397652

Podaci o svjetiljci

Svjetl. iskoristivost svjetiljke	:	90.9%
Efikasnost svjetiljki	:	113.51 lm/W
Klasifikacija	:	A30 ↓100.0% ↑0.0%
CIE Flux Codes	:	43 76 97 100 91
UGR 4H 8H	:	27.9 / 16.9
Snaga	:	21 W
Svjetlosni tok	:	2383.8 lm
Dimenzije	:	650 mm x 250 mm x 132 mm

Opremljeno žaruljama

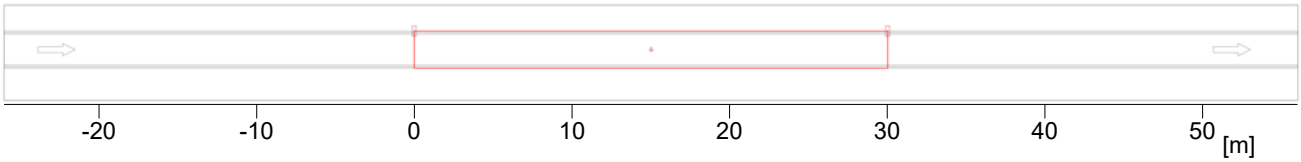
Broj	:	1
Opis	:	16 Nichia NVSL219CT
Boja	:	
Svjetlosni tok	:	2622.4 lm



2 Pješačka staza v2

2.1 Opis, Pješačka staza v2

2.1.1 Tlocrt



2 Pješačka staza v2

2.2 Sažetak, Pješačka staza v2

2.2.1 Pregled rezultata, objectName

SCHREDER

4 1

Tipska oznaka : AXIA 2.1 5221 16 Nichia NVSL219CT 390mA WW 397652 Integrated lenses - 230V 25d
Naziv svjetiljke : AXIA 2.1 5221 - 16 Nichia NVSL219CT 390mA WW 230V Integrated lenses 397652
Žarulje : 1 x 16 Nichia NVSL219CT 21 W / 2622.4 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	: 700 W/km	Razred jakosti svjetlosti	: G*4

Road

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

Rasvijetljenosti

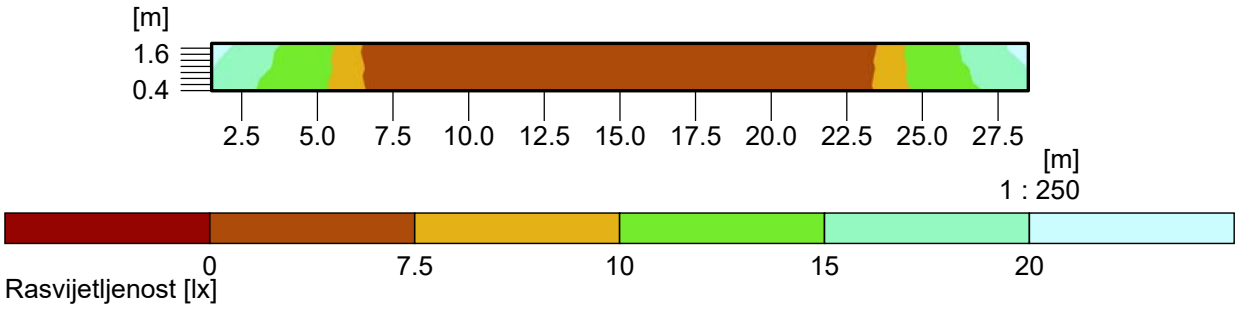
Izračun polja: 30m x 2.35m (10 x 3 Točke)

	Ēm	Emin	Uo	Ud
	8.46 lx	1.53 lx	0.18	0.07
P3	>= 7.50 lx	>= 1.50 lx		

2 Pješačka staza v2

2.3 Rezultati izračuna, Pješačka staza v2

2.3.1 Pseudo boje, Road (E horizontal)



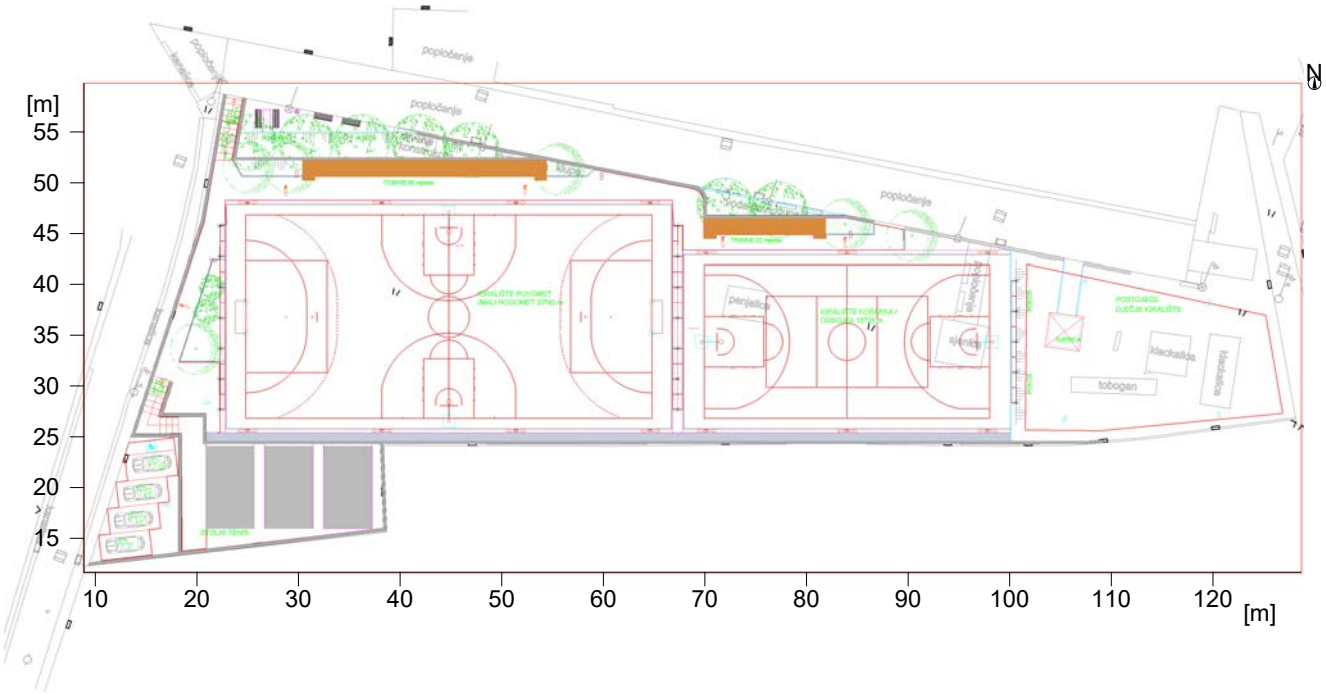
Visina referentne površine : 0.00 m

Srednja rasvijetljenost	Esr	: 8.5 lx
Minimalna rasvijetljenost	Emin	: 1.5 lx
Maksimalna rasvijetljenost	Emax	: 22.3 lx
Jednolikost Uo	min/sred	: 1 : 5.53 (0.18)
Jednolikost Ud	min/max	: 1 : 14.6 (0.07)

3 Vanjska rasvjeta v2

3.1 Opis, Vanjska rasvjeta v2

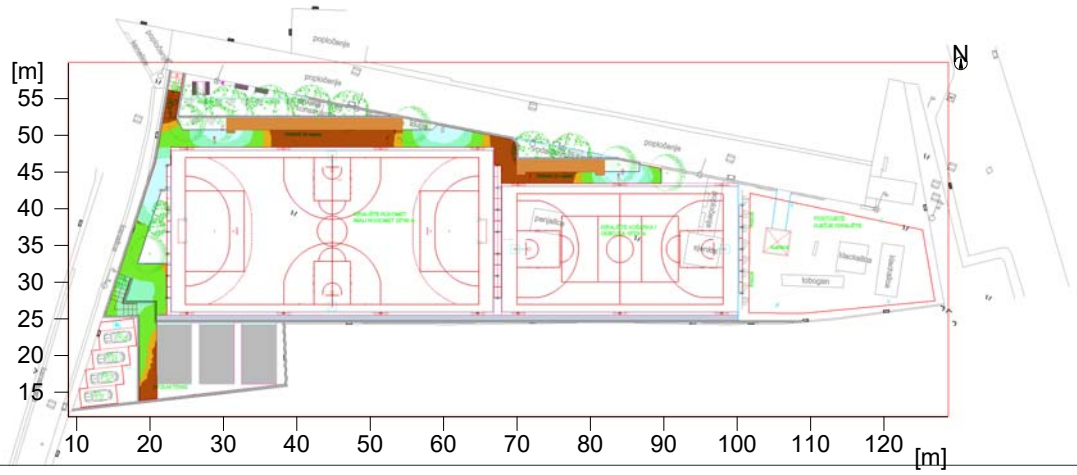
3.1.1 Tlocrt



3 Vanjska rasvjeta v2

3.2 Sažetak, Vanjska rasvjeta v2

3.2.1 Pregled rezultata, Pješačke staze



Rasvijetljenost [lx]

Općenito

Upotrijebljeni računski algoritam	Svjetiljke s dir.-/indirektnom raspodjelom
Visina mjerne površine	0.00 m
Faktor održavanja	0.90
Ukupni svjetlosni tok svih žarulja	26224 lm
Ukupna snaga	210 W
Ukupna snaga po površini (5765.04 m²)	0.04 W/m²

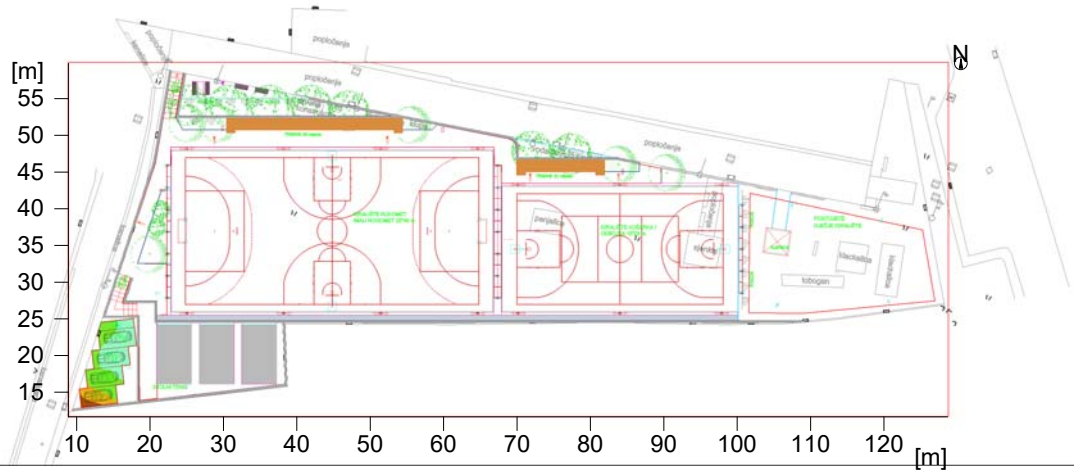
Rasvijetljenosti

Srednja rasvijetljenost	Esr	11.6 lx
Minimalna rasvijetljenost	Emin	1.5 lx
Maksimalna rasvijetljenost	Emax	26.7 lx
Jednolikost Uo	Emin/Em	1:7.83 (0.13)
Jednolikost Ud	Emin/Emax	1:18 (0.06)

Tip	Kom.	Proizvod	
		SCHREDER	
3	6	Tipska oznaka	: AXIA 2.1 5187 16 Nichia NVSL219CT 390mA WW 383372 Integrated lenses - 230V 25d
		Naziv svjetiljke	: AXIA 2.1 5187 - 16 Nichia NVSL219CT 390mA WW 230V Integra ted lenses 383372
		Žarulje	: 1 x 16 Nichia NVSL219CT 21 W / 2622.4 lm
4	4	Tipska oznaka	: AXIA 2.1 5221 16 Nichia NVSL219CT 390mA WW 397652 Integrated lenses - 230V 25d
		Naziv svjetiljke	: AXIA 2.1 5221 - 16 Nichia NVSL219CT 390mA WW 230V Integra ted lenses 397652
		Žarulje	: 1 x 16 Nichia NVSL219CT 21 W / 2622.4 lm

3.2 Sažetak, Vanjska rasvjeta v2

3.2.2 Pregled rezultata, Parking



Rasvijetljenost [lx]

Općenito

Upotrijebljeni računski algoritam	Svjetiljke s dir.-/indirektnom raspodjelom
Visina mjerne površine	0.00 m
Faktor održavanja	0.90
Ukupni svjetlosni tok svih žarulja	26224 lm
Ukupna snaga	210 W
Ukupna snaga po površini (5765.04 m²)	0.04 W/m²

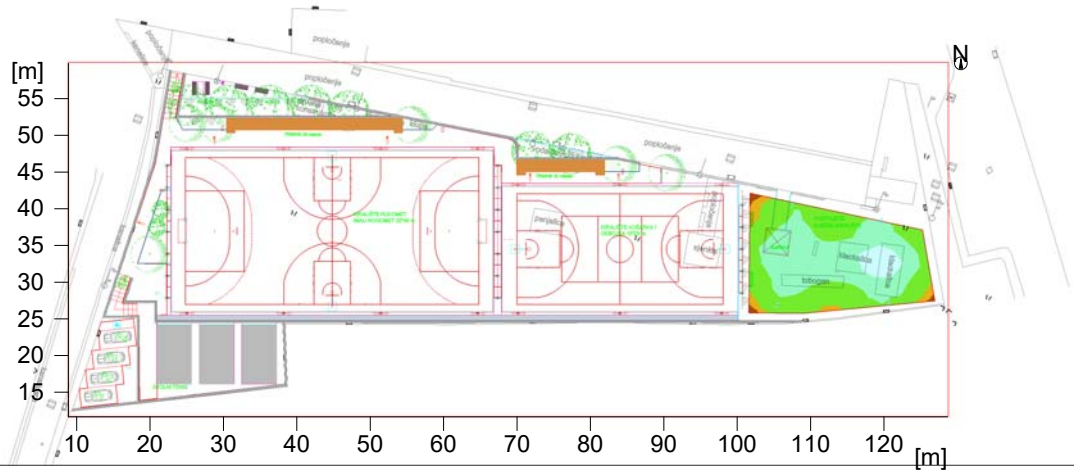
Rasvijetljenosti

Srednja rasvijetljenost	Esr	12.9 lx
Minimalna rasvijetljenost	Emin	6.6 lx
Maksimalna rasvijetljenost	Emax	16.3 lx
Jednolikost Uo	Emin/Em	1:1.96 (0.51)
Jednolikost Ud	Emin/Emax	1:2.48 (0.4)

Tip	Kom.	Proizvod	
		SCHREDER	
3	6	Tipska oznaka	: AXIA 2.1 5187 16 Nichia NVSL219CT 390mA WW 383372 Integrated lenses - 230V 25d
		Naziv svjetiljke	: AXIA 2.1 5187 - 16 Nichia NVSL219CT 390mA WW 230V Integra ted lenses 383372
		Žarulje	: 1 x 16 Nichia NVSL219CT 21 W / 2622.4 lm
4	4	Tipska oznaka	: AXIA 2.1 5221 16 Nichia NVSL219CT 390mA WW 397652 Integrated lenses - 230V 25d
		Naziv svjetiljke	: AXIA 2.1 5221 - 16 Nichia NVSL219CT 390mA WW 230V Integra ted lenses 397652
		Žarulje	: 1 x 16 Nichia NVSL219CT 21 W / 2622.4 lm

3.2 Sažetak, Vanjska rasvjeta v2

3.2.3 Pregled rezultata, Dječje igralište



Rasvijetljenost [lx]

Općenito

Upotrijebljeni računski algoritam	Svjetiljke s dir.-/indirektnom raspodjelom
Visina mjerne površine	0.00 m
Faktor održavanja	0.90
Ukupni svjetlosni tok svih žarulja	26224 lm
Ukupna snaga	210 W
Ukupna snaga po površini (5765.04 m²)	0.04 W/m²

Rasvijetljenosti

Srednja rasvijetljenost	Esr	14.4 lx
Minimalna rasvijetljenost	Emin	7.6 lx
Maksimalna rasvijetljenost	Emax	21.7 lx
Jednolikost Uo	Emin/Em	1:1.88 (0.53)
Jednolikost Ud	Emin/Emax	1:2.84 (0.35)

Tip	Kom.	Proizvod	
		SCHREDER	
3	6	Tipska oznaka	: AXIA 2.1 5187 16 Nichia NVSL219CT 390mA WW 383372 Integrated lenses - 230V 25d
		Naziv svjetiljke	: AXIA 2.1 5187 - 16 Nichia NVSL219CT 390mA WW 230V Integra ted lenses 383372
		Žarulje	: 1 x 16 Nichia NVSL219CT 21 W / 2622.4 lm
4	4	Tipska oznaka	: AXIA 2.1 5221 16 Nichia NVSL219CT 390mA WW 397652 Integrated lenses - 230V 25d
		Naziv svjetiljke	: AXIA 2.1 5221 - 16 Nichia NVSL219CT 390mA WW 230V Integra ted lenses 397652
		Žarulje	: 1 x 16 Nichia NVSL219CT 21 W / 2622.4 lm

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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5.1 Legends 8
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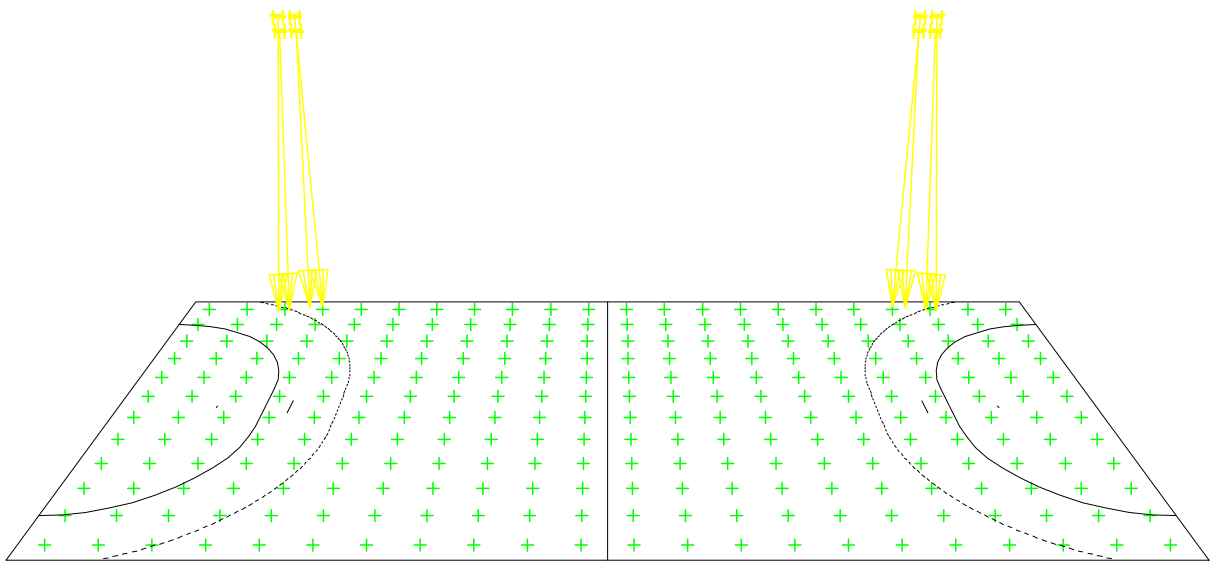
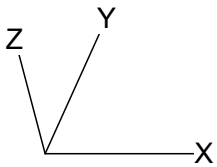
1. Project Description

1.1 3-D Project Overview





H → OMNIstar 2260 144 LEDS 500m

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)
H	8	OMNIstar 2260 144 LEDS 500mA W W 347322	1 * 144 LEDS 500mA WW	222.0	1 * 29376

The total installed power: 1.78 (kWatt)

2.3 Calculation Results

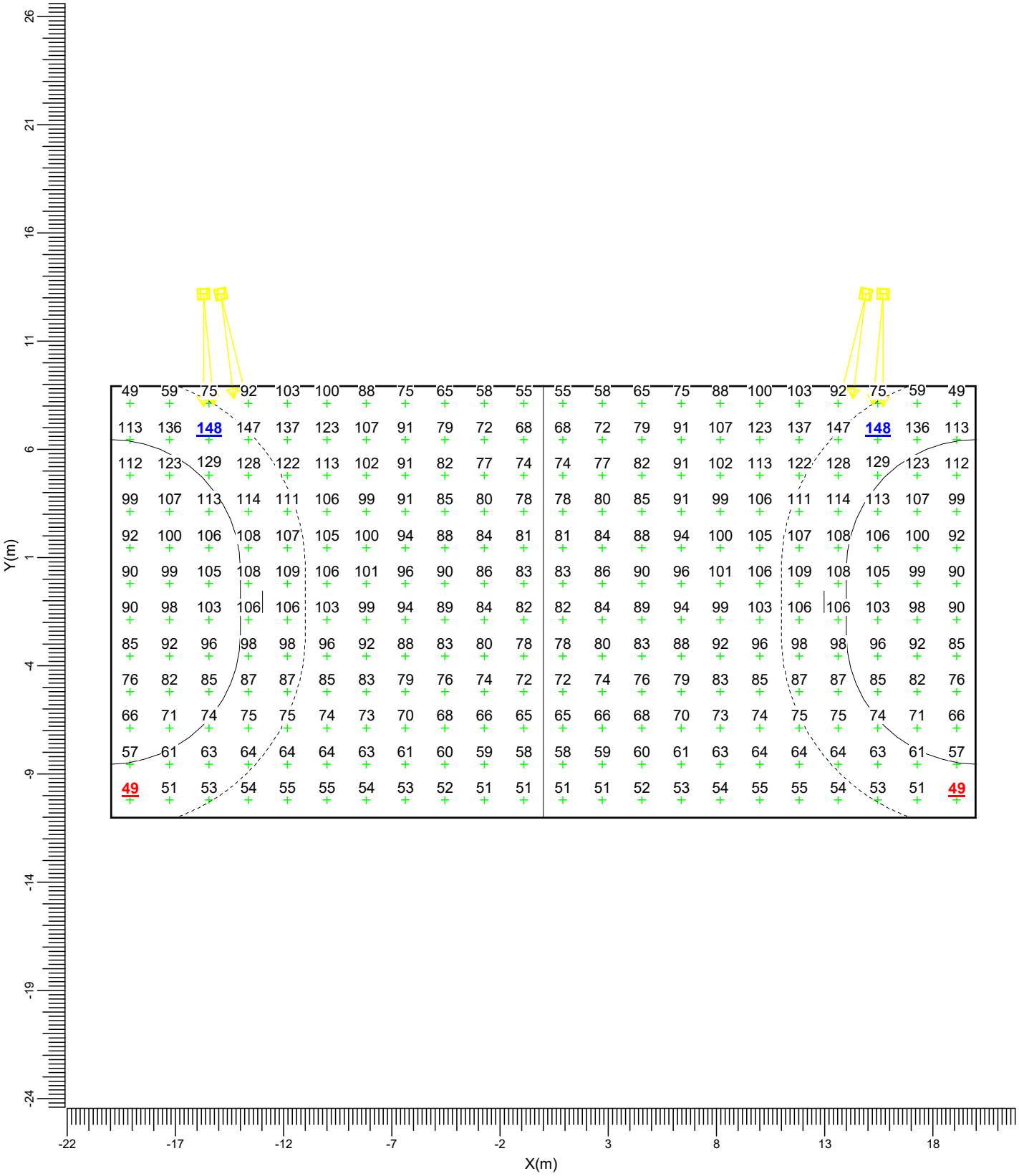
(Il)luminance Calculations:

Calculation	Type	Unit	Ave	Min/Ave	Min/Max
Handball	Surface Illuminance	lux	86.1	0.57	0.33

3. Calculation Results

3.1 Handball: Graphical Table

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

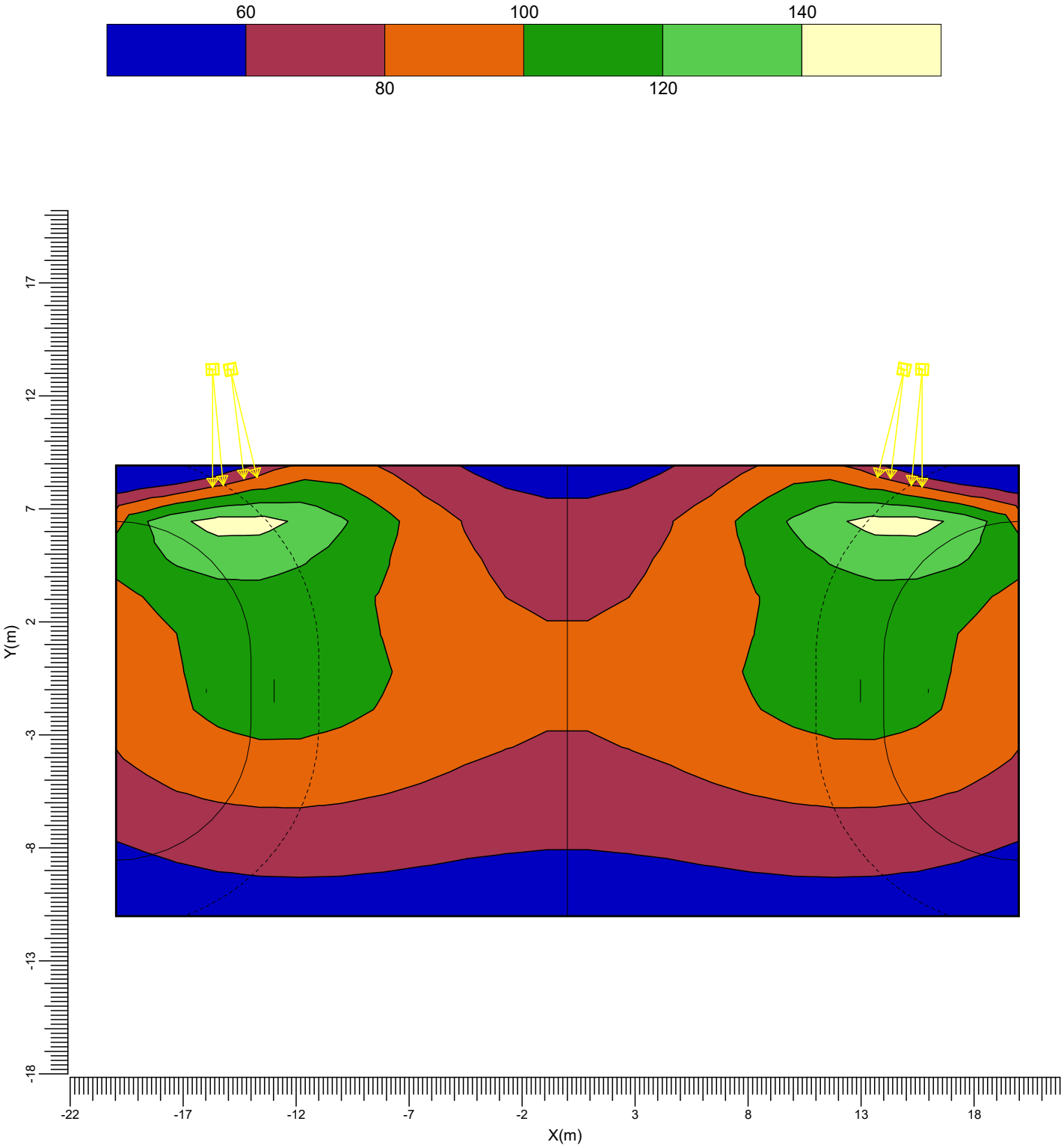


H → OMNIstar 2260 144 LEDS 500m

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
86.1	0.57	0.33	0.90	1:250

3.2 Handball: Filled Iso Contour

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



H → OMNIstar 2260 144 LEDS 500m

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
86.1	0.57	0.33	0.90	1:250

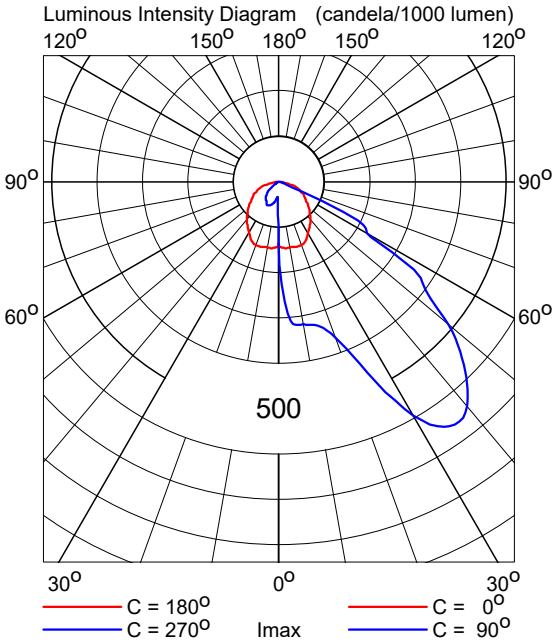
4. Luminaire Details

4.1 Project Luminaires

OMNIstar 2260 144 LEDS 500mA W 1x144 LEDS 500mA WW W 347322

Light output ratios		
DLOR	:	0.81
ULOR	:	0.00
TLOR	:	0.81
Lamp flux	:	29376 lm
Luminaire wattage	:	222.0 W
Measurement code	:	34732

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
H	8	OMNIstar 2260 144 LEDS 500mA W W 347322	1 * 144 LEDS 500mA WW	1 * 29376

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Angles		
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0
1 * H	-15.70	13.15	12.30	-84.8	22.7	0.0
1 * H	-15.70	13.15	13.00	-90.0	21.8	0.0
1 * H	-14.90	13.15	12.30	-82.9	21.5	0.0
1 * H	-14.90	13.15	13.00	-76.2	20.6	0.0
1 * H	14.90	13.15	12.30	-97.1	21.5	0.0
1 * H	14.90	13.15	13.00	-103.8	20.6	0.0
1 * H	15.70	13.15	12.30	-95.2	22.7	0.0
1 * H	15.70	13.15	13.00	-90.0	21.8	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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3.1 Basketball: Filled Iso Contour 5

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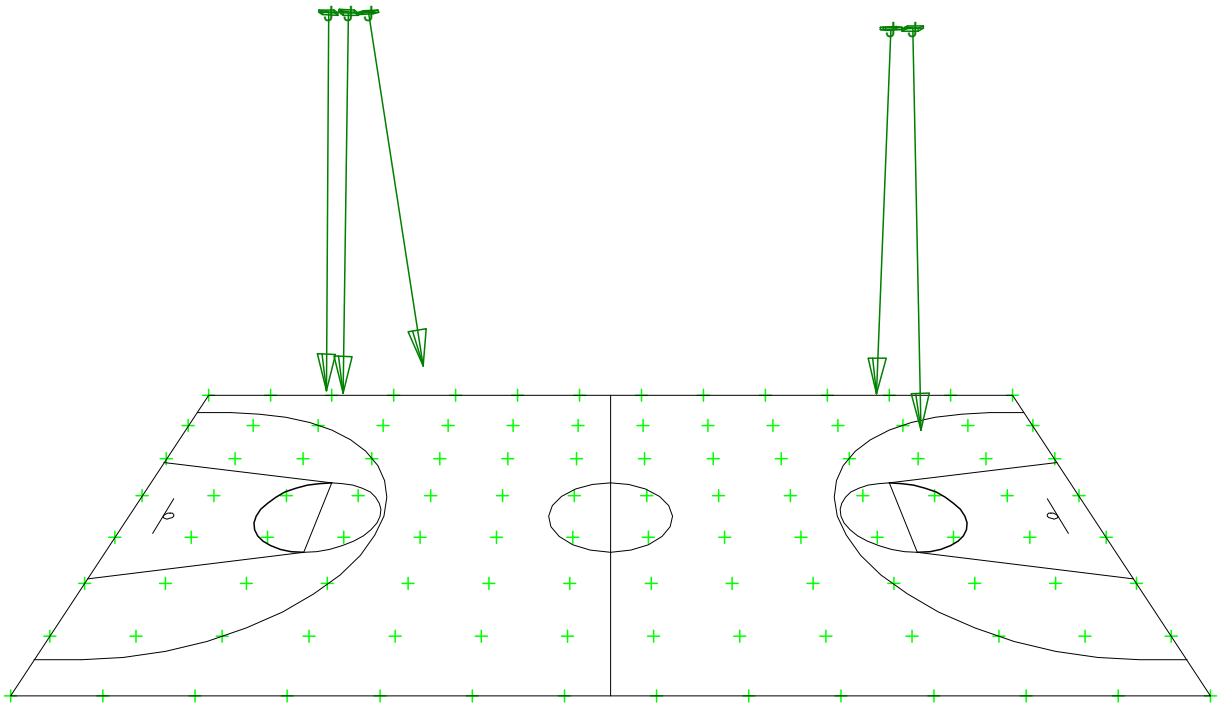
4.1 Project Luminaires 6

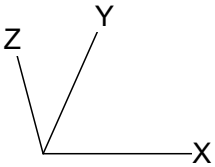
5. Installation Data 7

5.1 Legends 7
5.2 Luminaire Positioning and Orientation 7

1. Project Description

1.1 3-D Project Overview





J → OMNIstar 2260 144 LEDS 500m

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)
J	5	OMNIstar 2260 144 LEDS 500mA W W 347322	1 * 144 LEDS 500mA WW	222.0	1 * 29376

The total installed power: 1.11 (kWatt)

2.3 Calculation Results

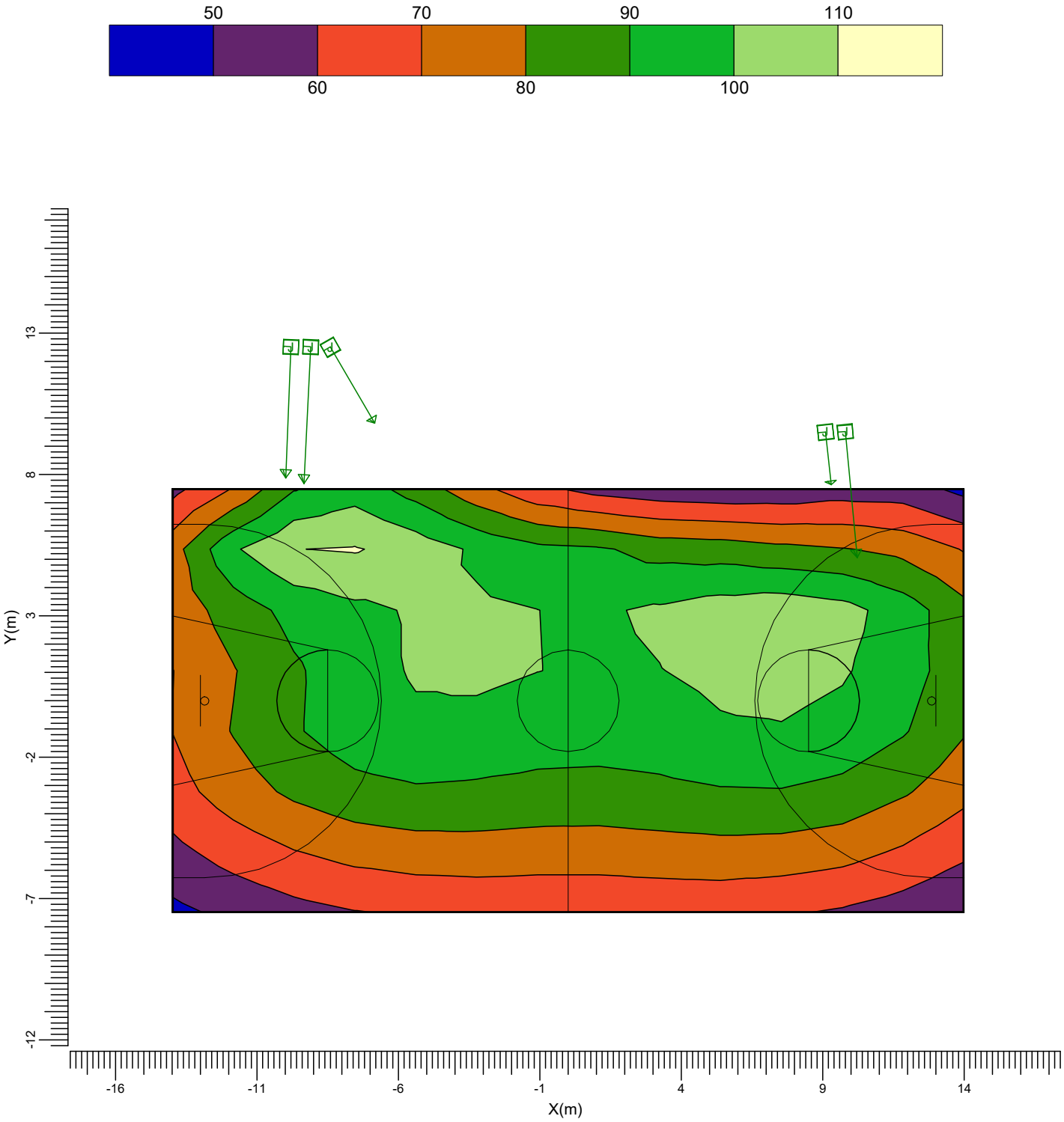
(Il)luminance Calculations:

Calculation	Type	Unit	Ave	Min/Ave	Min/Max
Basketball	Surface Illuminance	lux	81.2	0.58	0.43

3. Calculation Results

3.1 Basketball: Filled Iso Contour

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



J → OMNIstar 2260 144 LEDS 500m

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
81.2	0.58	0.43	0.90	1:200

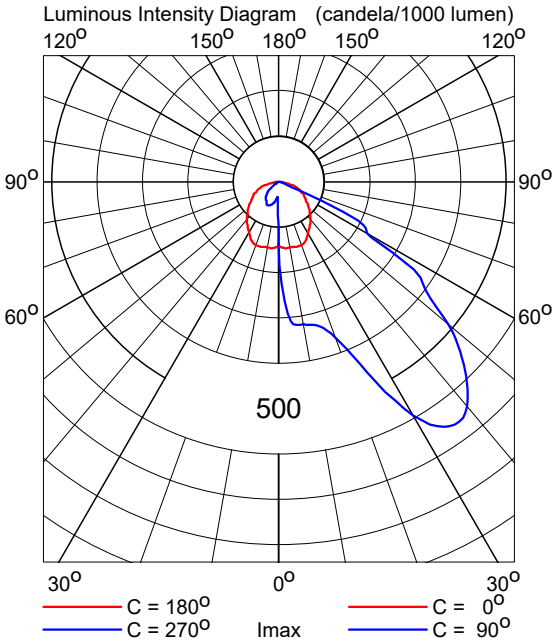
4. Luminaire Details

4.1 Project Luminaires

OMNIstar 2260 144 LEDS 500mA W 1x144 LEDS 500mA WW W 347322

Light output ratios		
DLOR	:	0.81
ULOR	:	0.00
TLOR	:	0.81
Lamp flux	:	29376 lm
Luminaire wattage	:	222.0 W
Measurement code	:	34732

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
J	5	OMNIstar 2260 144 LEDS 500mA W W 347322	1 * 144 LEDS 500mA WW	1 * 29376

5.2 Luminaire Positioning and Orientation

Qty and Code	Position			Aiming Angles		
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0
1 * J	-9.80	12.50	12.30	-92.2	20.6	0.0
1 * J	-9.10	12.50	12.30	-92.9	21.4	0.0
1 * J	-8.40	12.50	12.30	-60.0	14.1	0.0
1 * J	9.10	9.50	12.30	-84.1	8.6	0.0
1 * J	9.80	9.50	12.30	-84.6	19.9	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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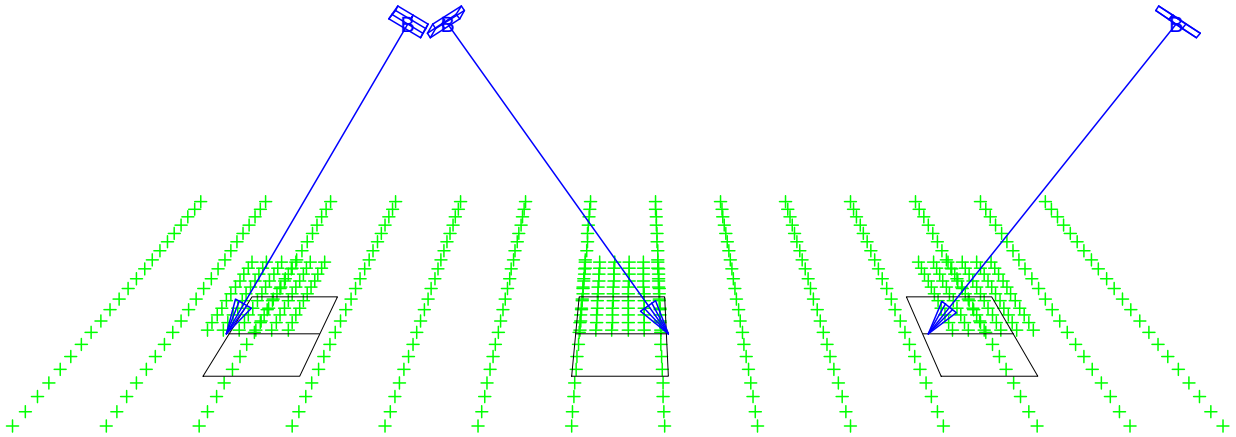
4.1 Project Luminaires 9

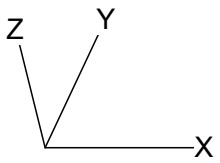
5. Installation Data 10

5.1 Legends 10
5.2 Luminaire Positioning and Orientation 10

1. Project Description

1.1 3-D Project Overview





B → OMNIstar 5127 72 LEDS 350m

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	OMNIstar 5127 72 LEDS 350mA WW 349092	1 * 72 LEDS 350mA WW	77.0	1 * 10800

The total installed power: 0.23 (kWatt)

2.3 Calculation Results

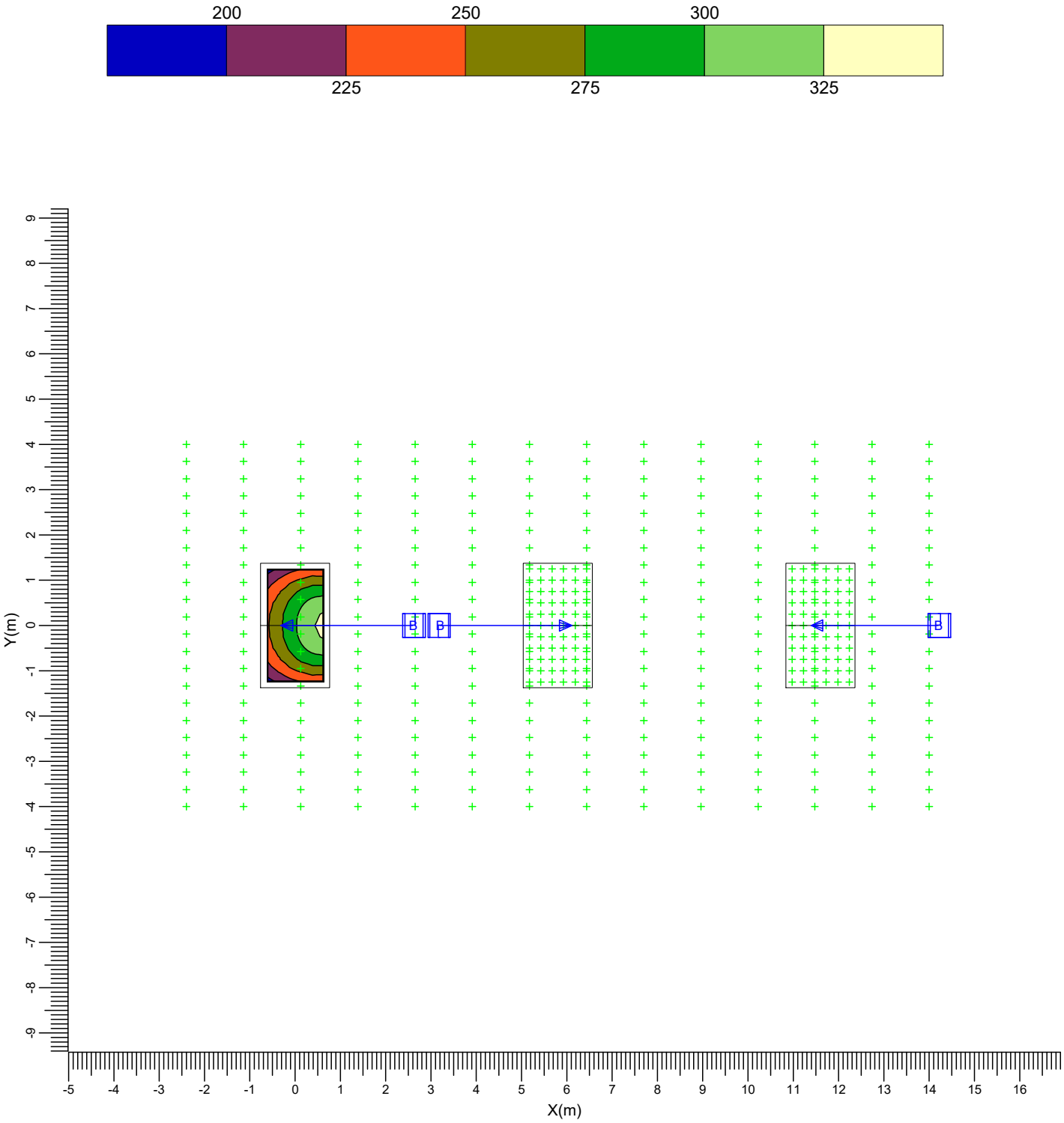
(Il)luminance Calculations:

Calculation	Type	Unit	Ave	Min/Ave	Min/Max
Table Tennis	Surface Illuminance	lux	263	0.72	0.57
Table Tennis1	Surface Illuminance	lux	277	0.75	0.61
Table Tennis2	Surface Illuminance	lux	273	0.74	0.60
Grid	Surface Illuminance	lux	125	0.17	0.06

3. Calculation Results

3.1 Table Tennis: Filled Iso Contour

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

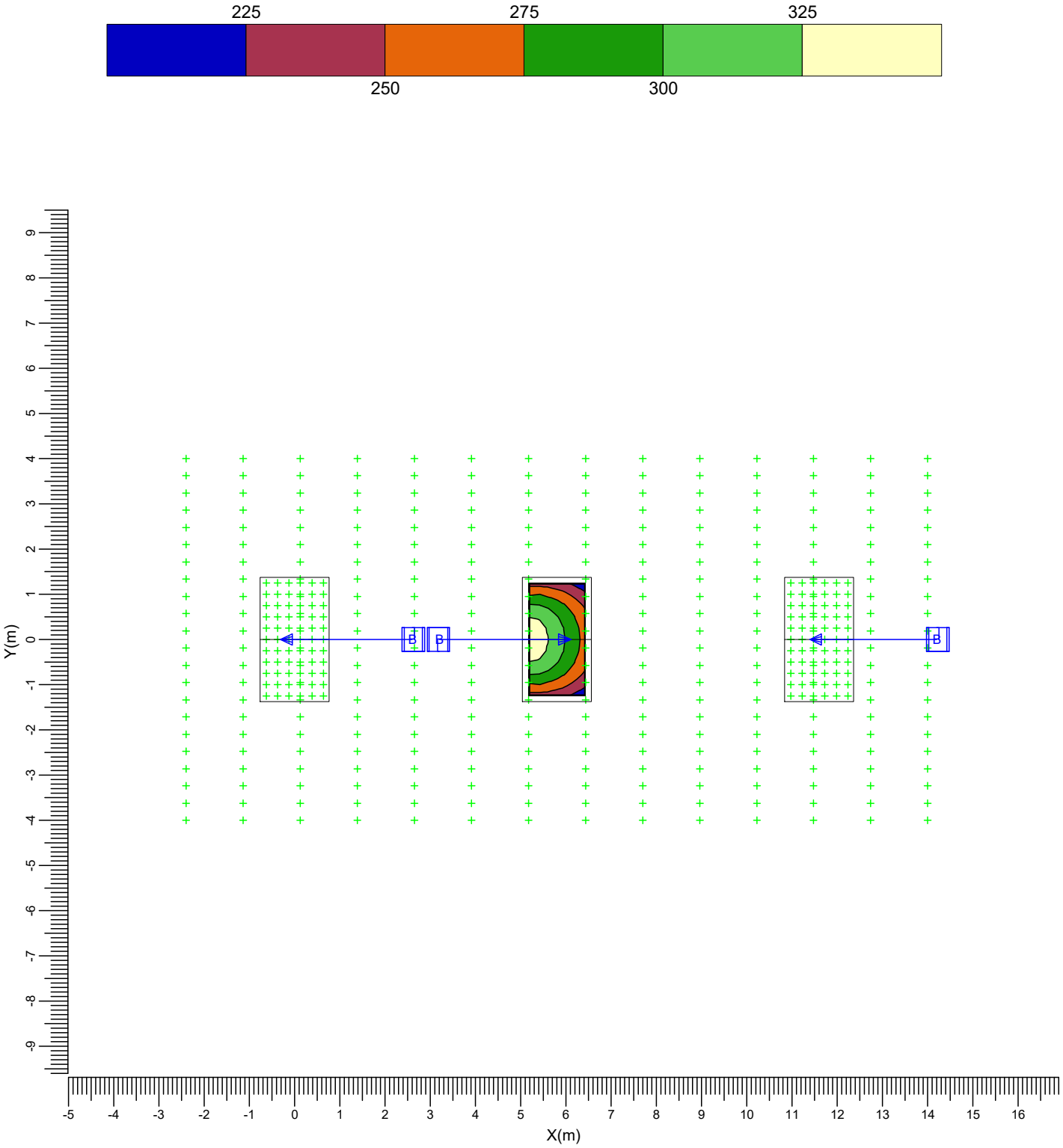


B → OMNIstar 5127 72 LEDS 350m

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
263	0.72	0.57	0.90	1:125

3.2 Table Tennis1: Filled Iso Contour

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

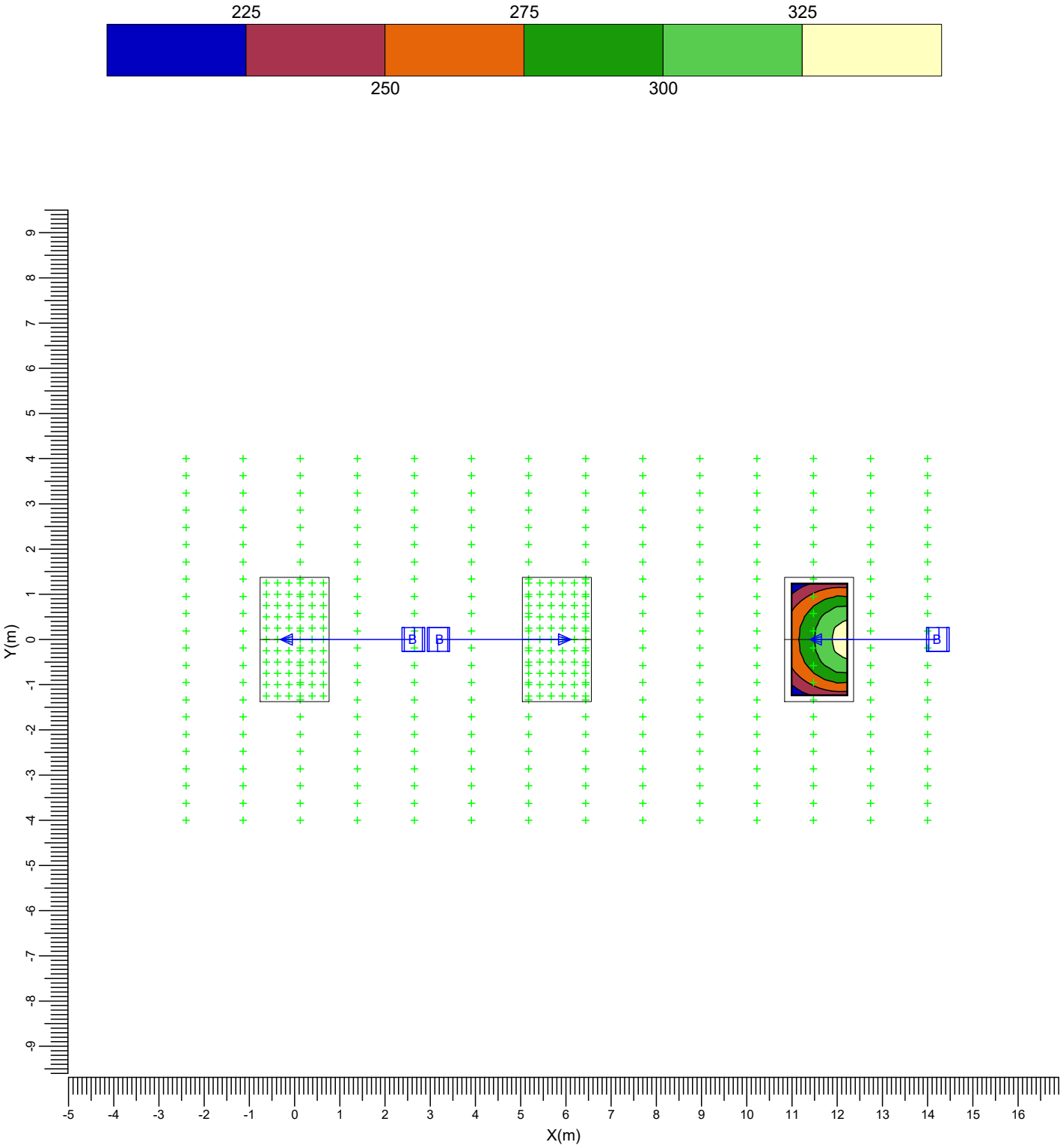


B → OMNIstar 5127 72 LEDS 350m

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
277	0.75	0.61	0.90	1:125

3.3 Table Tennis2: Filled Iso Contour

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

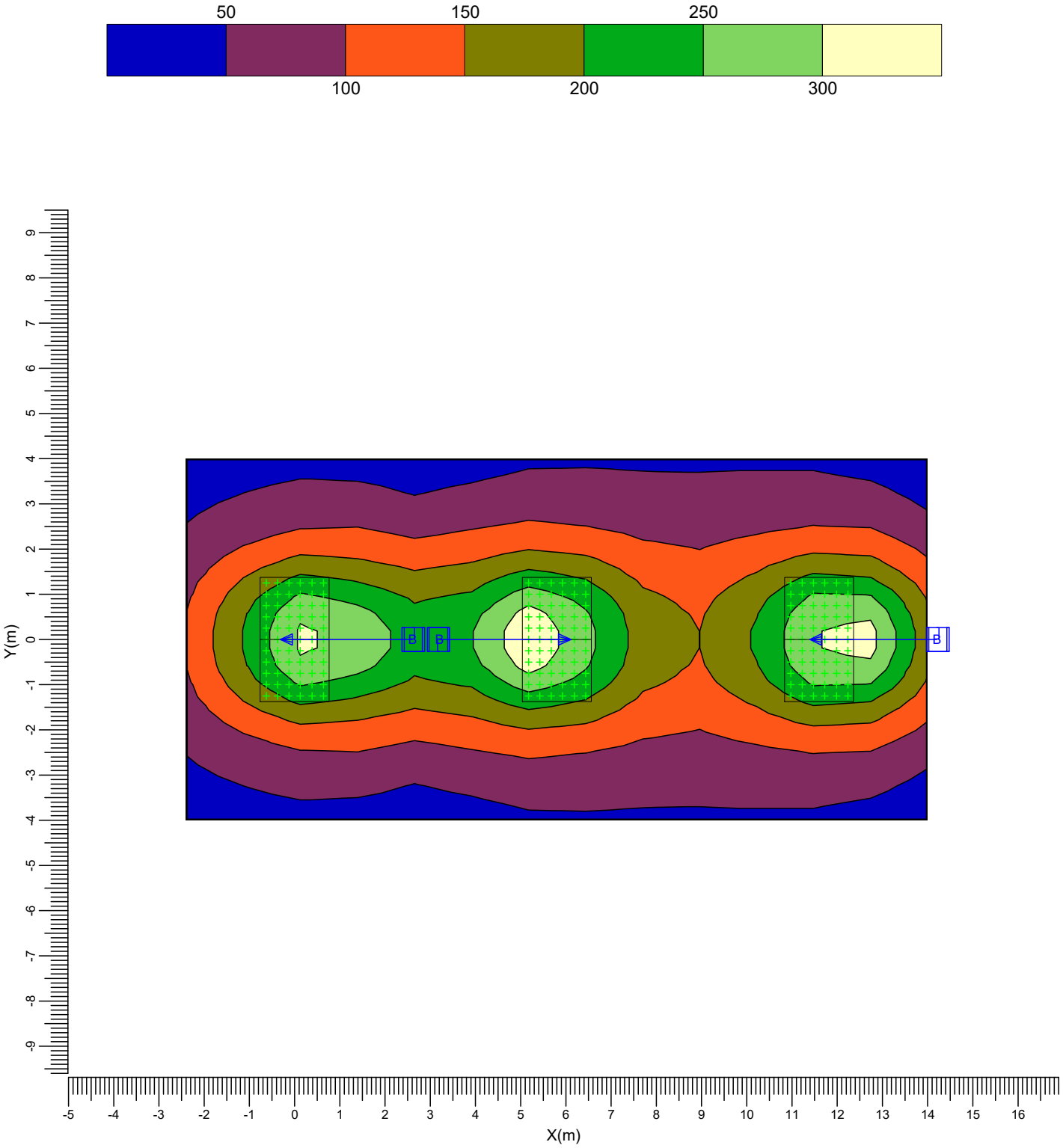


B → OMNIstar 5127 72 LEDS 350m

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
273	0.74	0.60	0.90	1:125

3.4 Grid: Filled Iso Contour

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



B → OMNIstar 5127 72 LEDS 350m

Average	Min/Ave	Min/Max	Project maintenance factor	Scale
125	0.17	0.06	0.90	1:125

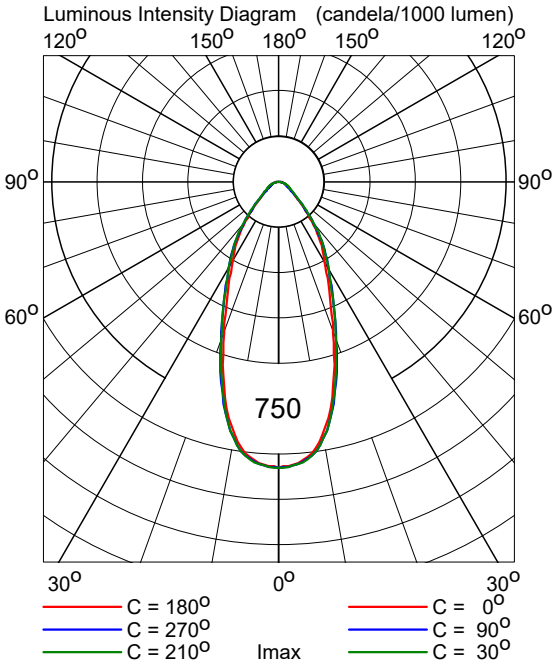
4. Luminaire Details

4.1 Project Luminaires

OMNIstar 5127 72 LEDS 350mA WW 1x72 LEDS 350mA WW 349092

Light output ratios		
DLOR	:	0.83
ULOR	:	0.00
TLOR	:	0.83
Lamp flux	:	10800 lm
Luminaire wattage	:	77.0 W
Measurement code	:	34909

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
B	3	OMNIstar 5127 72 LEDS 350mA WW 349092	1 * 72 LEDS 350mA WW	1 * 10800

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	31.7	0.0