

**ESTENSIONE RETE DELLA PUBBLICA
ILLUMINAZIONE TRATTO DI VIA FIRENZE
E REALIZZAZIONE NUOVI IMPIANTI,
TRATTI EX STRADA STATALE 66, IN
LOCALITA' S.ANTONIO E OLMI**



**CALCOLO ILLUMINOTECNICO
TRATTO DI VIA FIRENZE**

Quarrata, Aprile 2021



Il progettista
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Comune di Quarrata - Via Firenze

Standard EN 13201 : 2015

Designer Studio Tecnico

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Application Ulysse 3.5.2

Description Verifica Illuminotecnica Via Firenze

Categoria M2 Stra Urbana di Scorrimento

Teceo 2 72led 700mA Ottica 5103

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1. Fixtures

1.1. TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002

Type TECEO GEN2 2

Reflector 5103

Source 72 LEDs 700mA WW730

Protector Piano, Vetro extra chiaro, Liscio

Source flux 22,557 klm

G* Unclassified

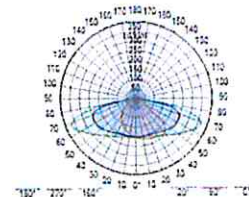
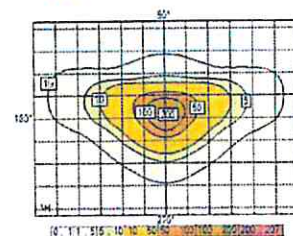
Luminaire wattage 151,0 W

MF 0,80

Matrix 467002

Luminaire flux 18,468 klm

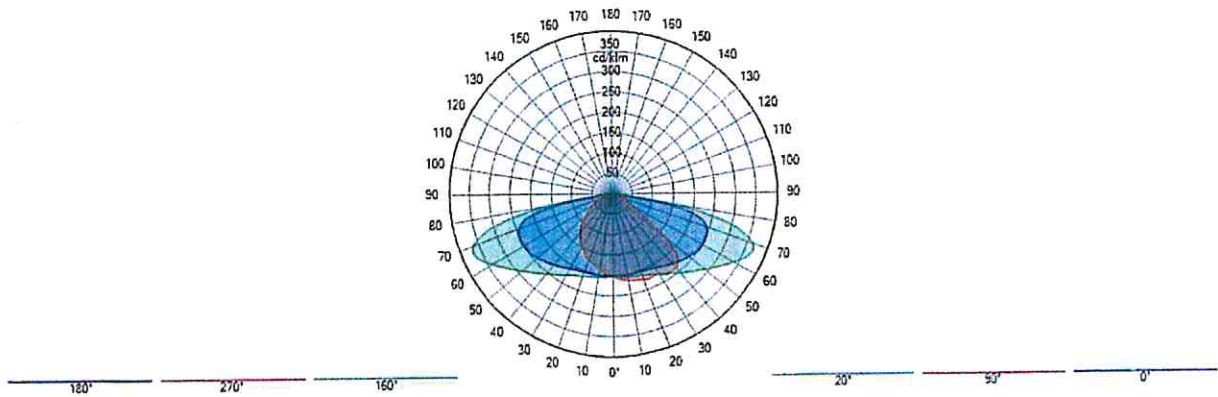
Efficacy 122 lm/W



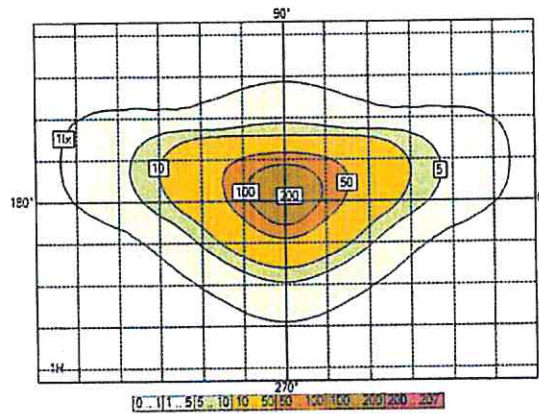
2. Photometric documents

2.1. TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002

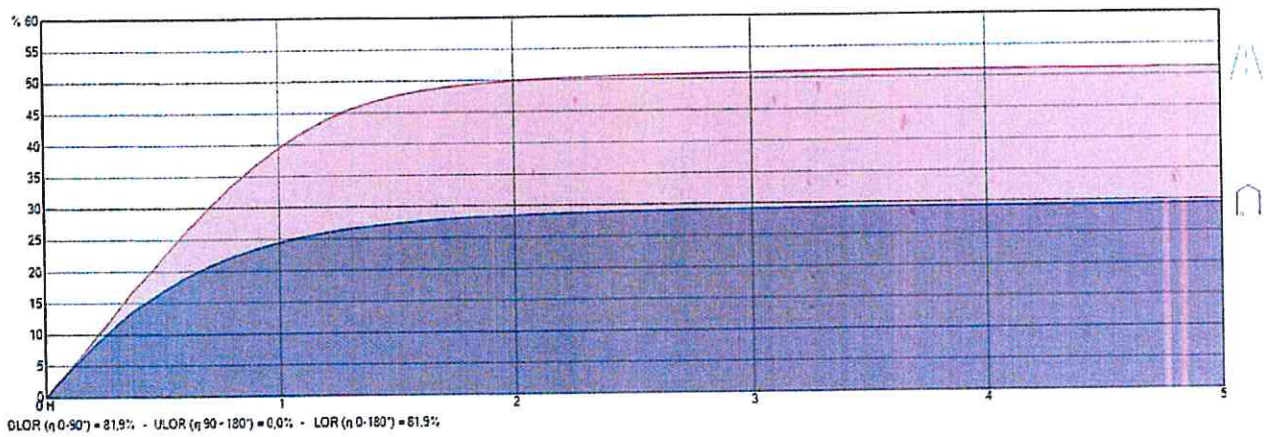
Polar/Cartesian diagram



Isolux



Utilization curve



3. Results

3.1. Grid summary

Multi-lanes (LU)

M2 (LU : Ave = 1,50 cd/m² Uo = 40 % UI = 70 % UoW = 15 % TI : 10 % EIR : 0,35)

1.1 Luminance - RTable - C2007

	Ave (A) (cd/m ²)	Min/Ave (%)	Min/Max (%)	Min (cd/m ²)	Max (cd/m ²)	UL (%)
Dynamic cross section - Observer 1 (-60,00; -7,50; 1,50)	1,63	56	39	0,91	2,35	86 %
Dynamic cross section - Observer 2 (-60,00; -2,50; 1,50)	1,50	56	39	0,84	2,15	91 %

1.2 Luminance - RTable - C2007

	Ave (A) (cd/m ²)	Min/Ave (%)	Min/Max (%)	Min (cd/m ²)	Max (cd/m ²)	UL (%)
Dynamic cross section - Observer 1 (-60,00; -7,50; 1,50)	1,63	56	39	0,91	2,35	86 %
Dynamic cross section - Observer 2 (-60,00; -2,50; 1,50)	1,50	56	39	0,84	2,15	91 %

Single lane (IL)

P1 (IL : Min = 3,00 lux Ave = 15,00 lux)

1. Z positive illuminance

	Ave (A) (lx)	Min/Ave (%)	Min/Max (%)	Min (lx)	Max (lx)
Dynamic cross section	15,1	82	66	12,4	18,9

3.2. Observer summary

Multi-lanes (TI 1)

M2 (LU : Ave = 1,50 cd/m² Uo = 40 % UI = 70 % UoW = 15 % TI : 10 % EIR : 0,35)

	TI
Dynamic cross section - Direction (0,0)	8

Multi-lanes (TI 2)

M2 (LU : Ave = 1,50 cd/m² Uo = 40 % UI = 70 % UoW = 15 % TI : 10 % EIR : 0,35)

	TI
Dynamic cross section - Direction (0,0)	10

3.3. Values summary

EIR road

M2 (LU : Ave = 1,50 cd/m² Uo = 40 % UI = 70 % UoW = 15 % TI : 10 % EIR : 0,35)

	EIR road
Dynamic cross section - Multi-lanes (EIR)	0,63

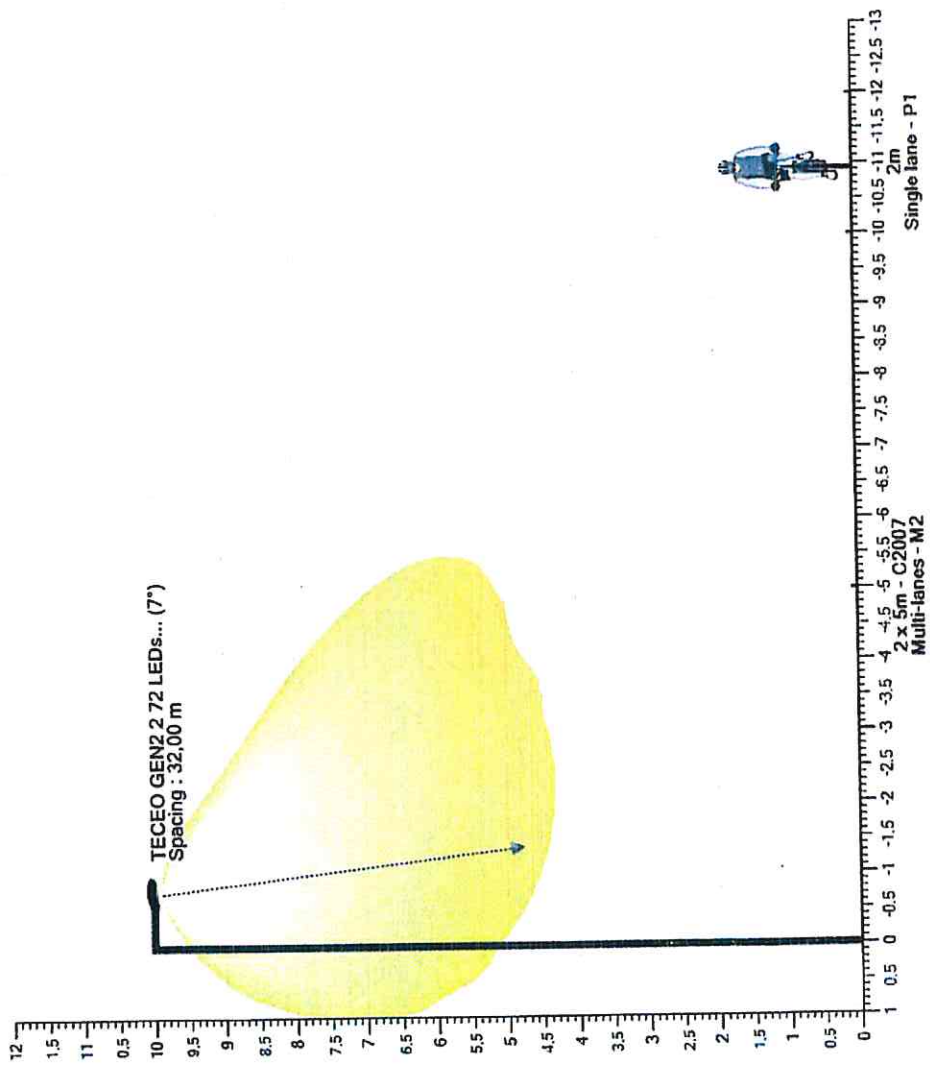
4. Power consumption

4.1. Dynamic cross section

Fixture	Current [mA]	Qty	Dimming	Power / Fixture	Total
TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002	700	31	100 %	151 W	4706 W



5. Cross section

5.1. 2D View









6. Dynamic cross section


6.1. Matrix description

Ph. color	Description	Current [mA]	Source flux [klm]	Luminair e flux [klm]	Power [W]	Efficacy [lm/W]	MF	Height [m]	Fixture
	TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002	700	22,557	18,468	150,6	123	0,800	6 x 10,00	

6.2. Luminaire positions

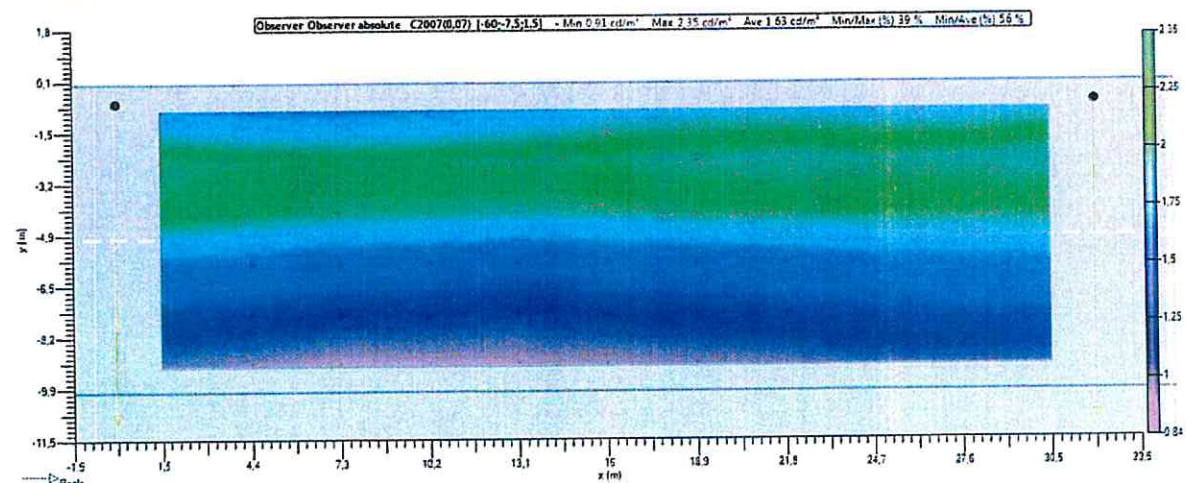
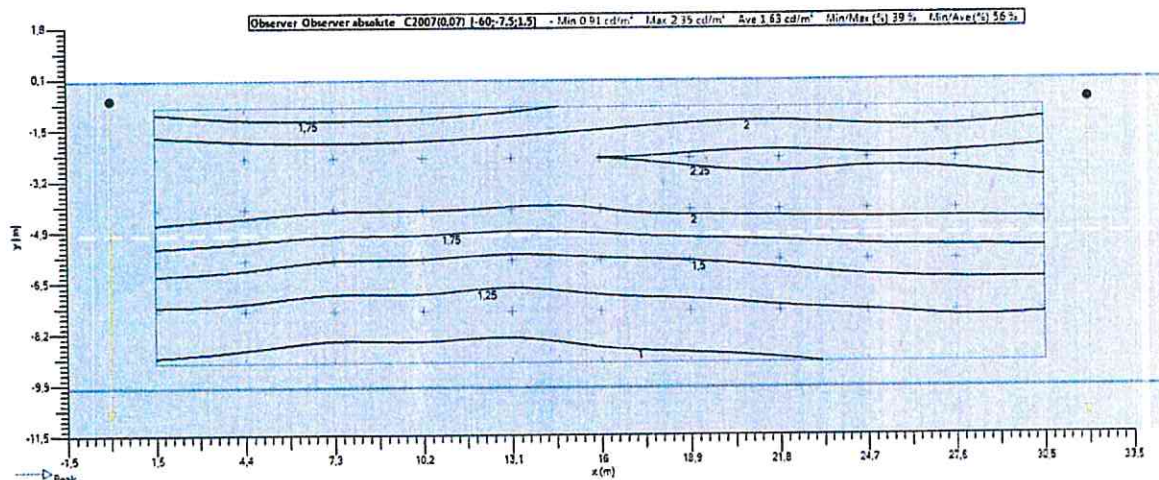
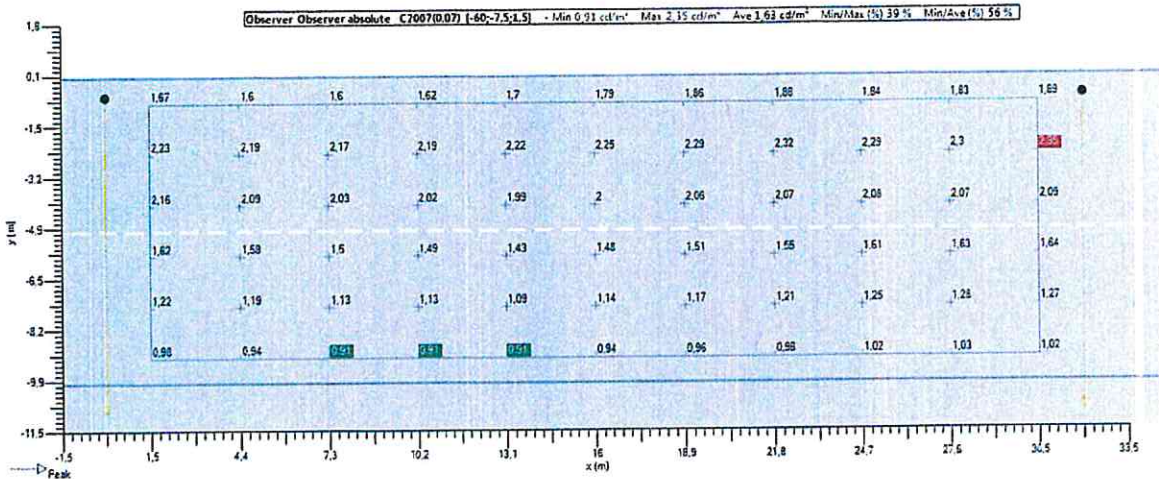
	Color	N°	Position			Luminaire							Target		
			X [m]	Y [m]	Z [m]	Name	Current [mA]	Az [°]	Incl [°]	Rot [°]	Flux [klm]	MF	X [m]	Y [m]	Z [m]
<input checked="" type="checkbox"/>		1	-32,00	-0,60	10,00	TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002	-	180,0	7,0	0,0	22,557	0,800	-32,00	-1,83	0,00
<input checked="" type="checkbox"/>		2	0,00	-0,60	10,00	TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002	-	180,0	7,0	0,0	22,557	0,800	0,00	-1,83	0,00
<input checked="" type="checkbox"/>		3	32,00	-0,60	10,00	TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002	-	180,0	7,0	0,0	22,557	0,800	32,00	-1,83	0,00
<input checked="" type="checkbox"/>		4	64,00	-0,60	10,00	TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002	-	180,0	7,0	0,0	22,557	0,800	64,00	-1,83	0,00
<input checked="" type="checkbox"/>		5	96,00	-0,60	10,00	TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002	-	180,0	7,0	0,0	22,557	0,800	96,00	-1,83	0,00
<input checked="" type="checkbox"/>		6	128,00	-0,60	10,00	TECEO GEN2 2 72 LEDs 700mA WW730 Piano, Vetro extra chiaro, Liscio 5103 467002	-	180,0	7,0	0,0	22,557	0,800	128,00	-1,83	0,00

6.3. Luminaire groups

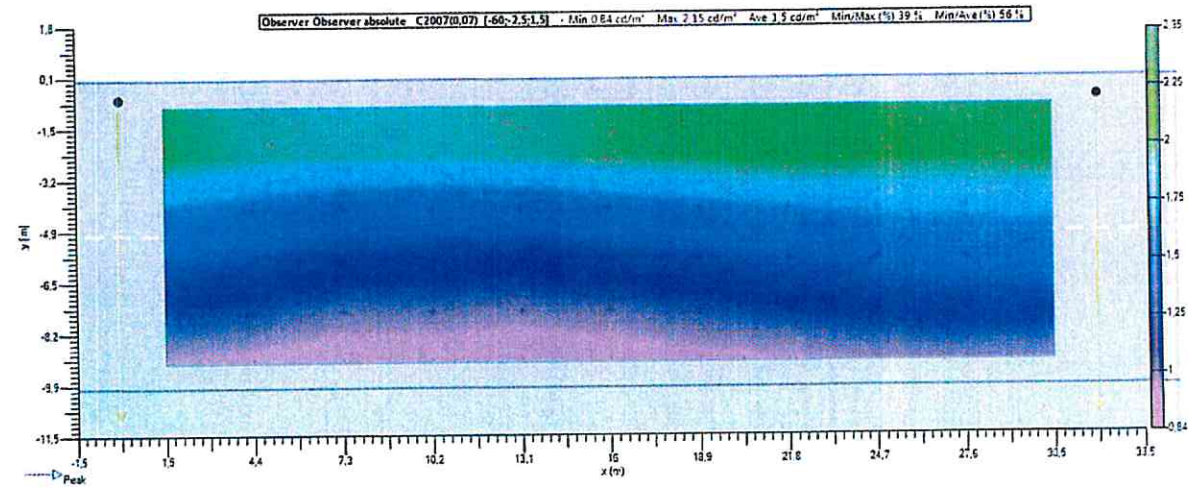
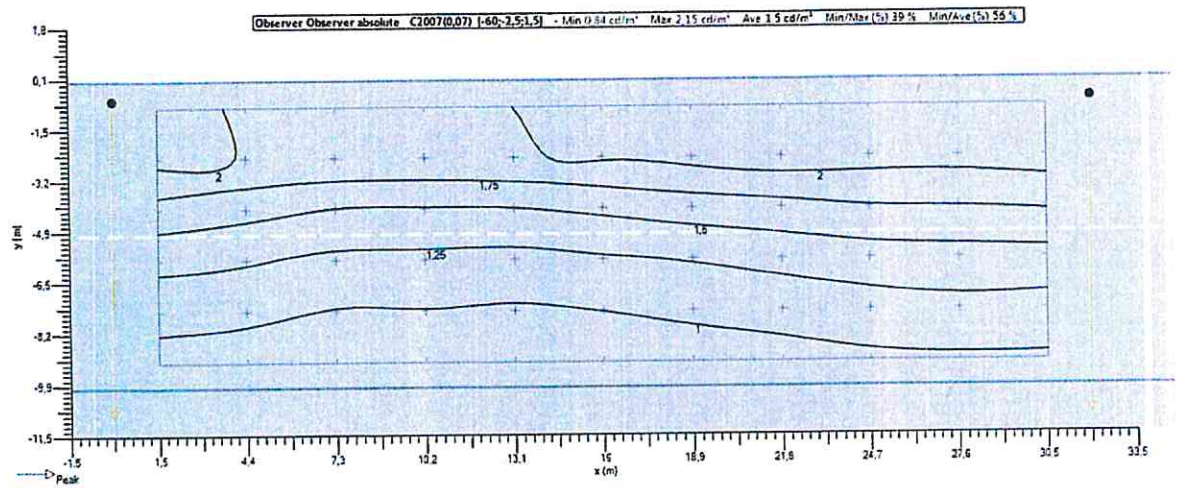
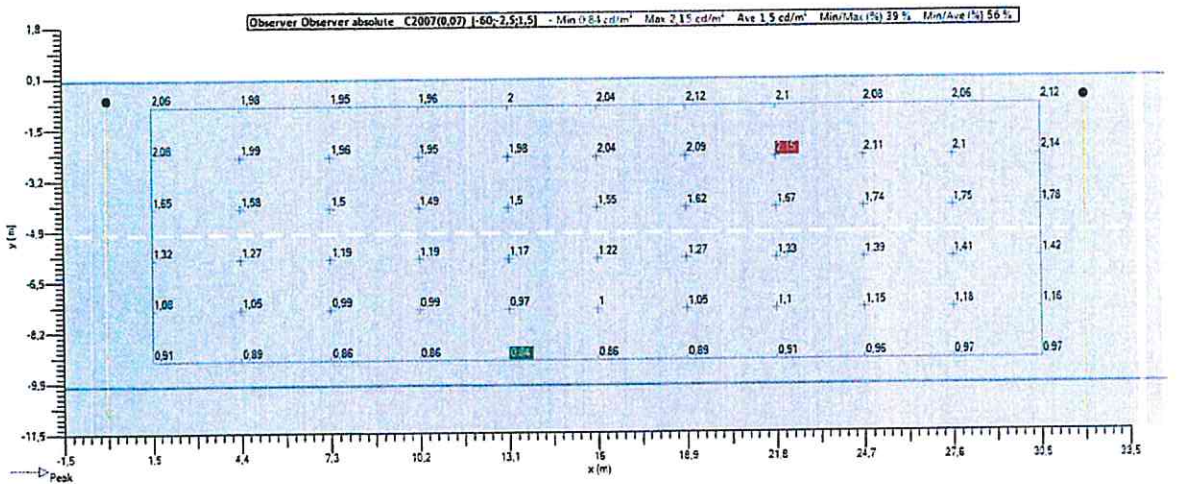
Linear																
	Color	N°	Position			Luminaire					Dimension			Rotation		
			X [m]	Y [m]	Z [m]	Name	Az [°]	Incl [°]	Rot [°]	Dim [%]	Count	Spacing [m]	Size [m]	X [°]	Y [°]	Z [°]
<input checked="" type="checkbox"/>		1	-32,00	-0,60	10,00	Fixture left	180,0	7,0	0,0	100	6	32,00	160,00	0,0	0,0	0,0

6.4. Luminance - Multi-lanes (LU) - C2007

Multi-lanes (LU) - Absolute 1

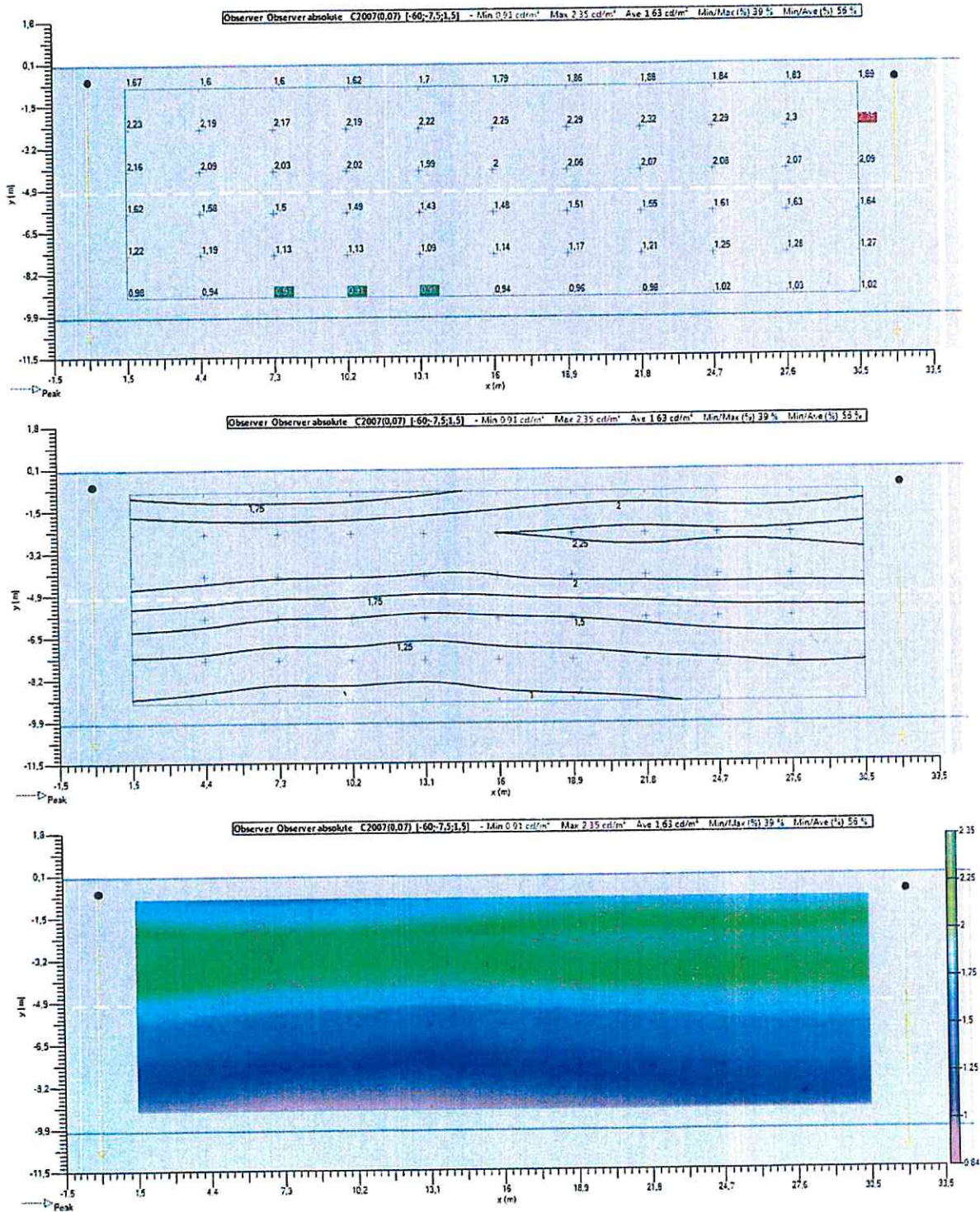


Multi-lanes (LU) - Absolute 2

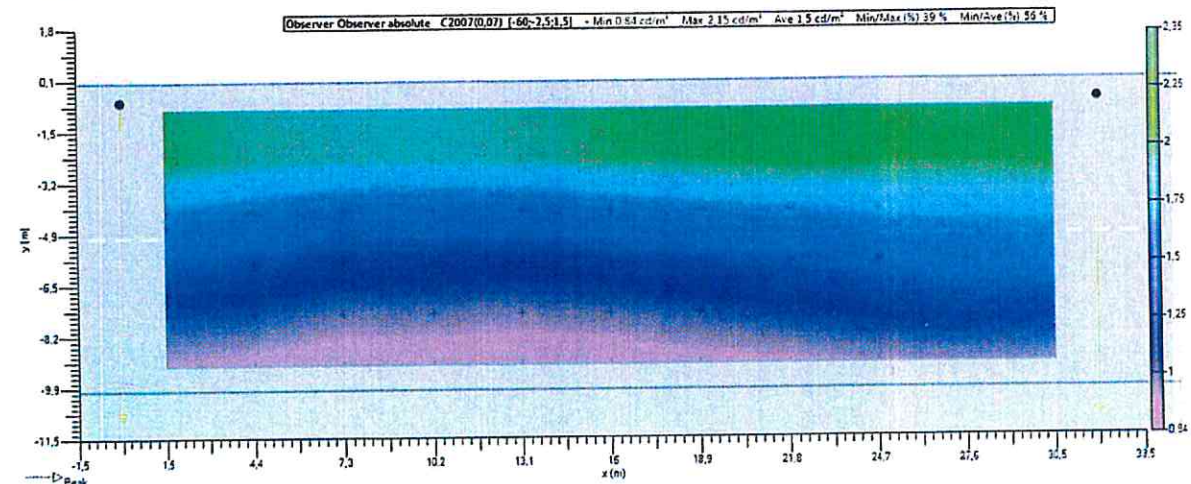
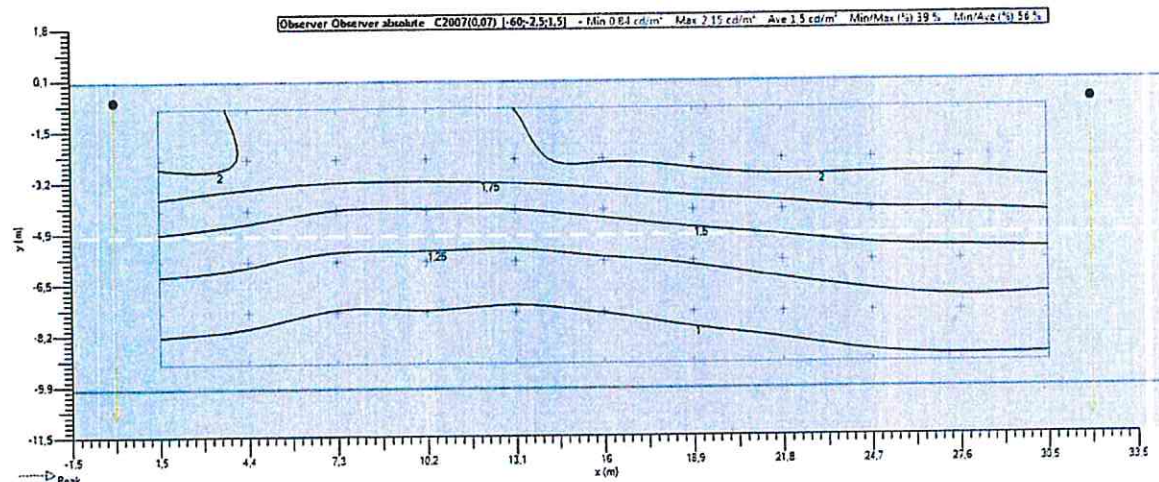
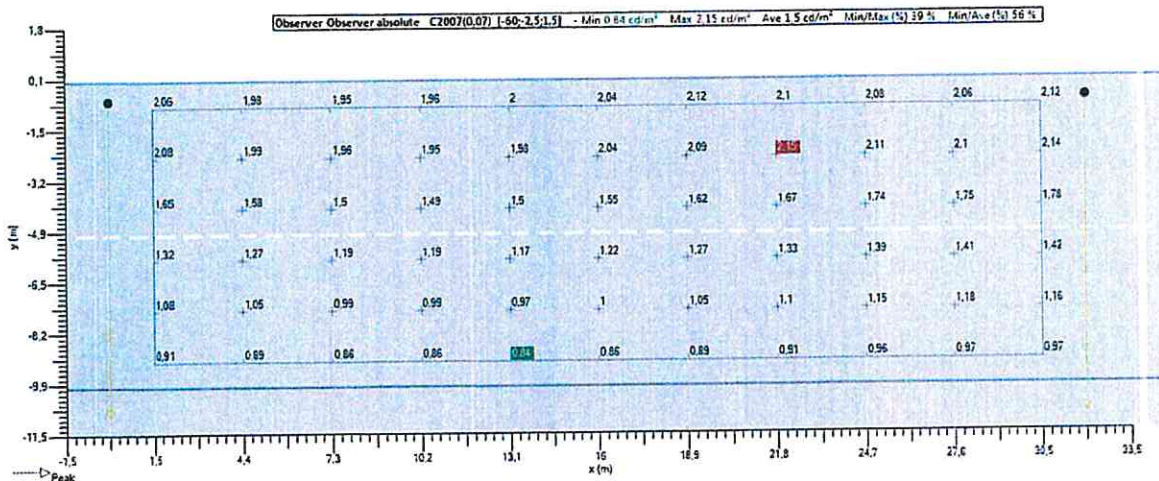


6.5. Luminance - Multi-lanes (LU) - C2007

Multi-lanes (LU) - Optional - Absolute 1

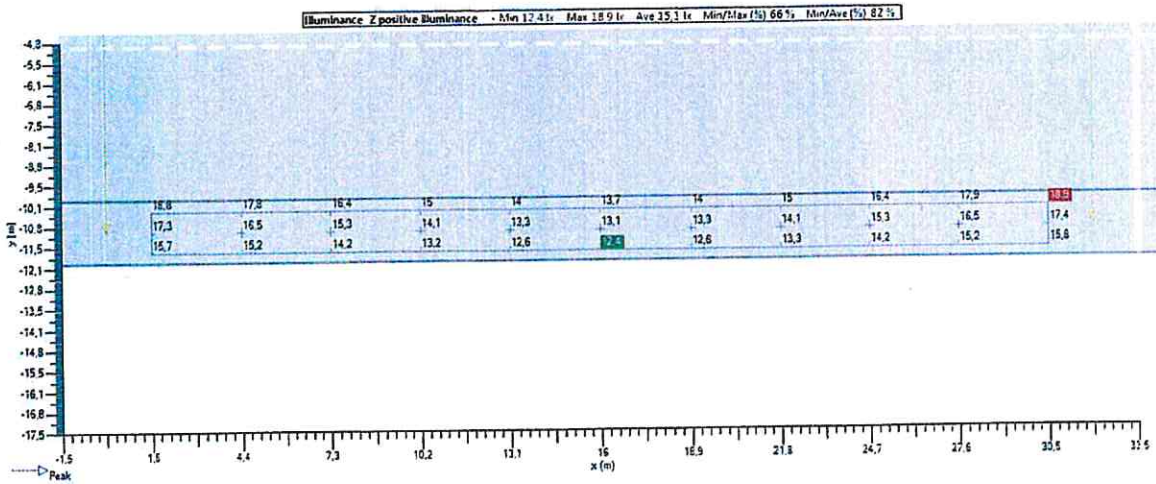


Multi-lanes (LU) - Optional - Absolute 2

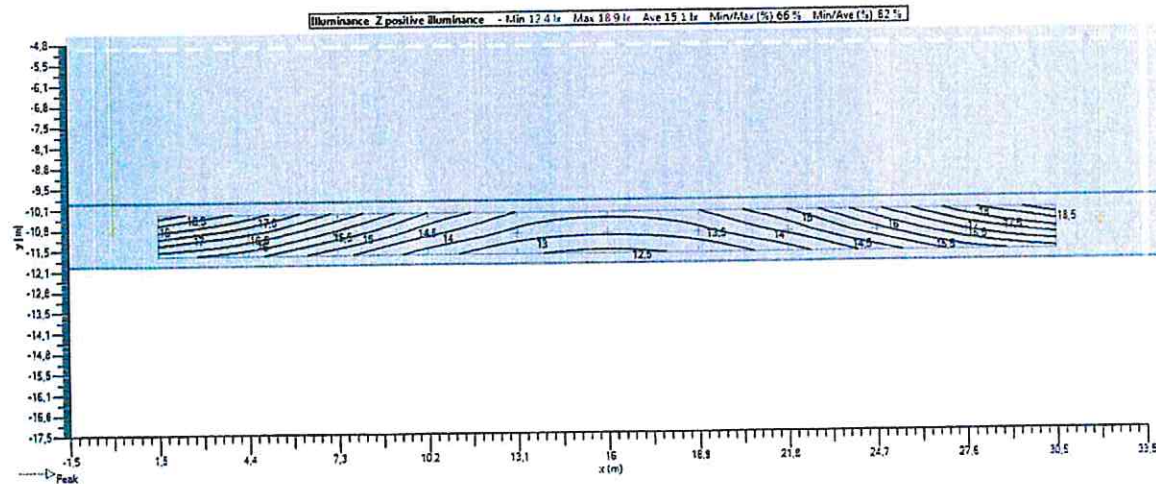


6.6. Single lane (IL) - Z positive

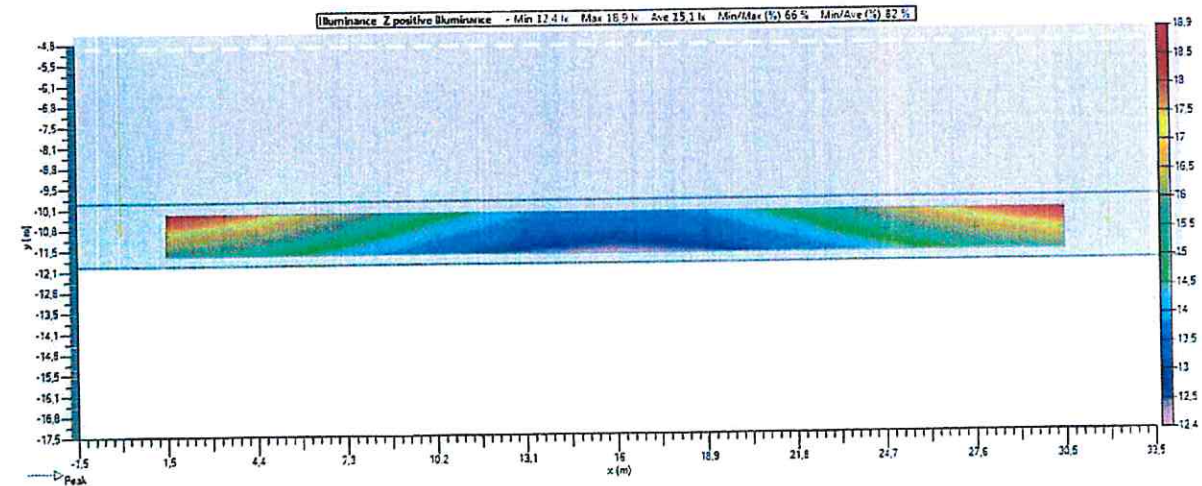
Values



Isolevel

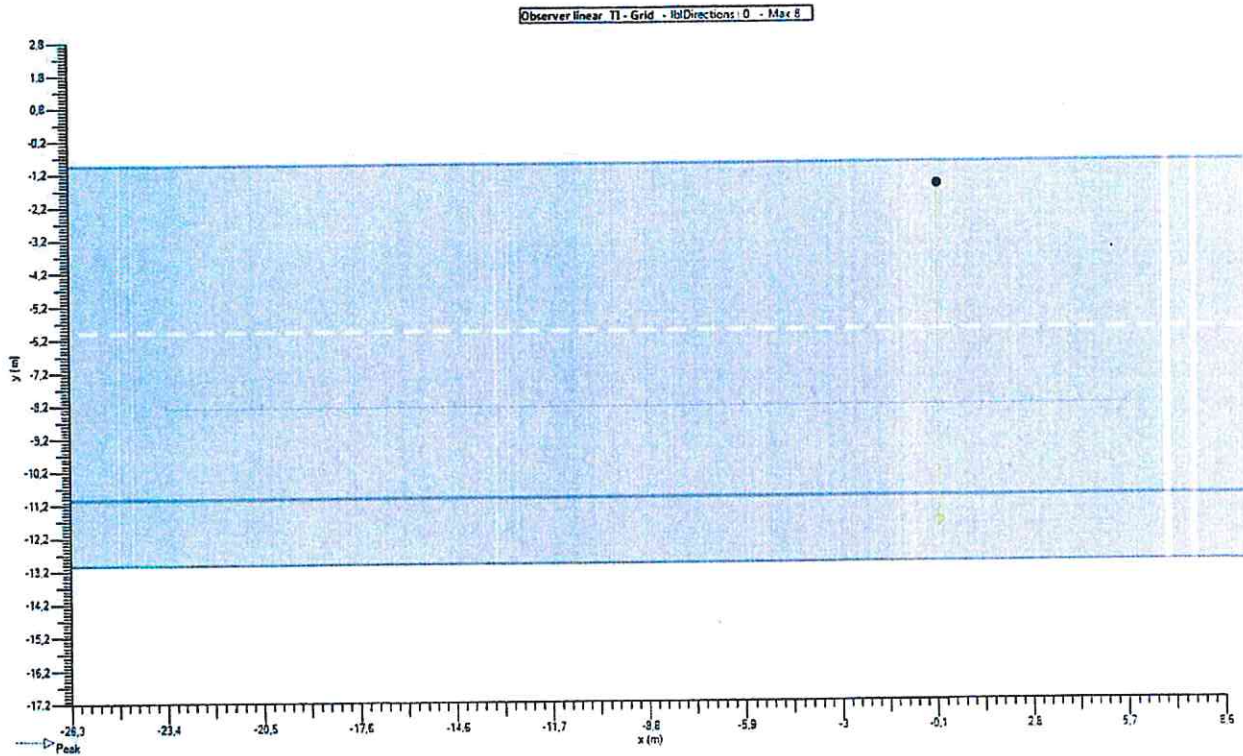


Shading

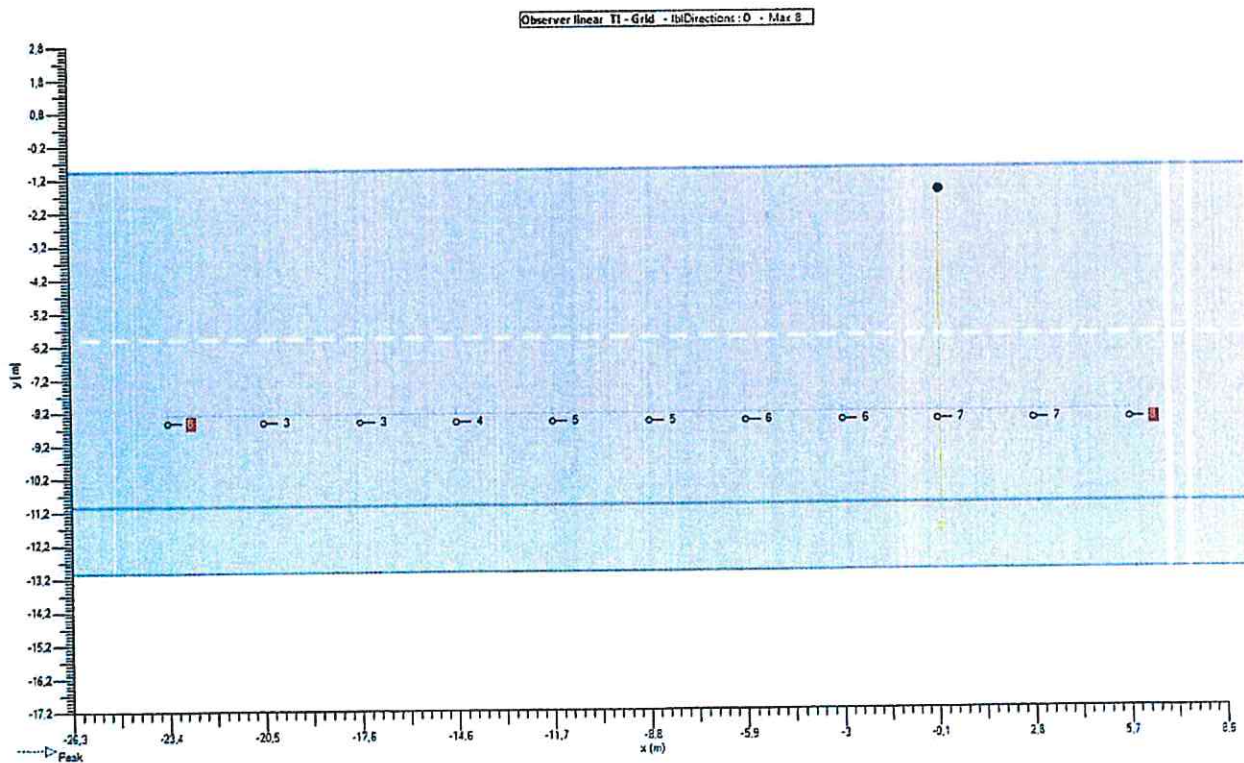


6.7. Multi-lanes (TI 1) - TI - Grid

Implantation

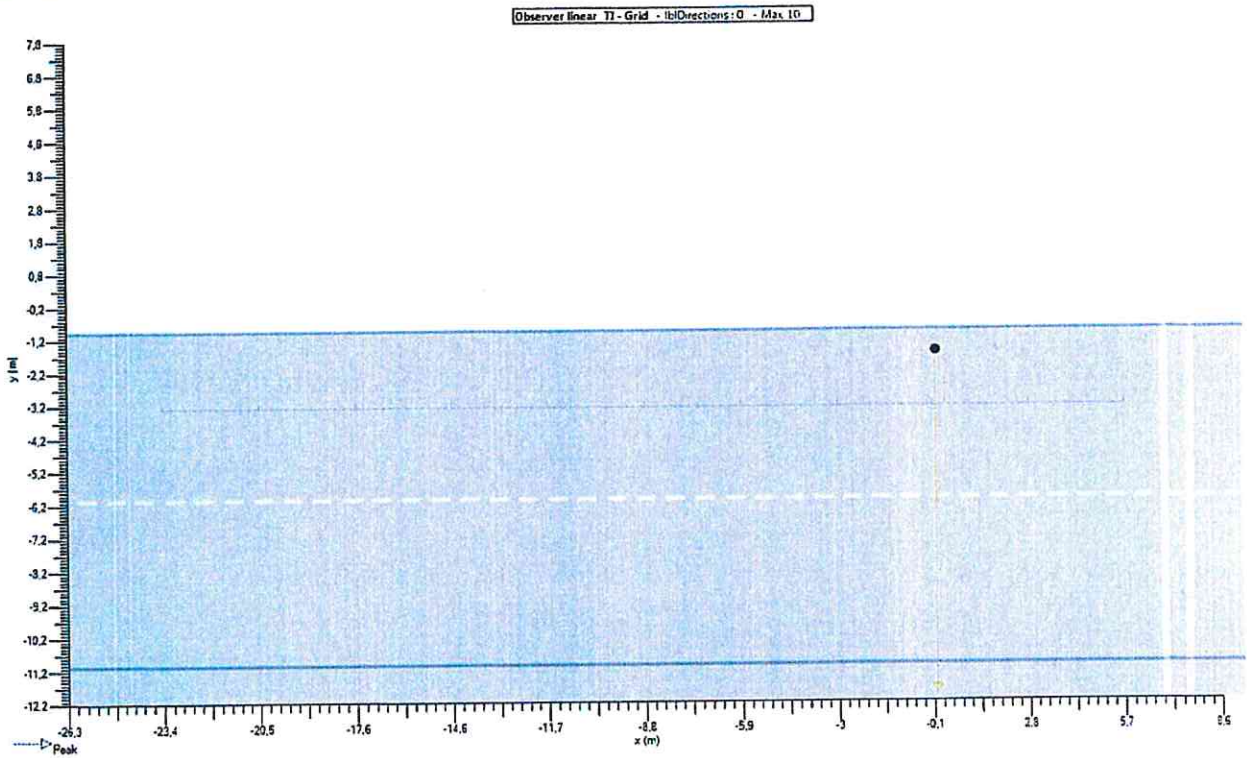


Values

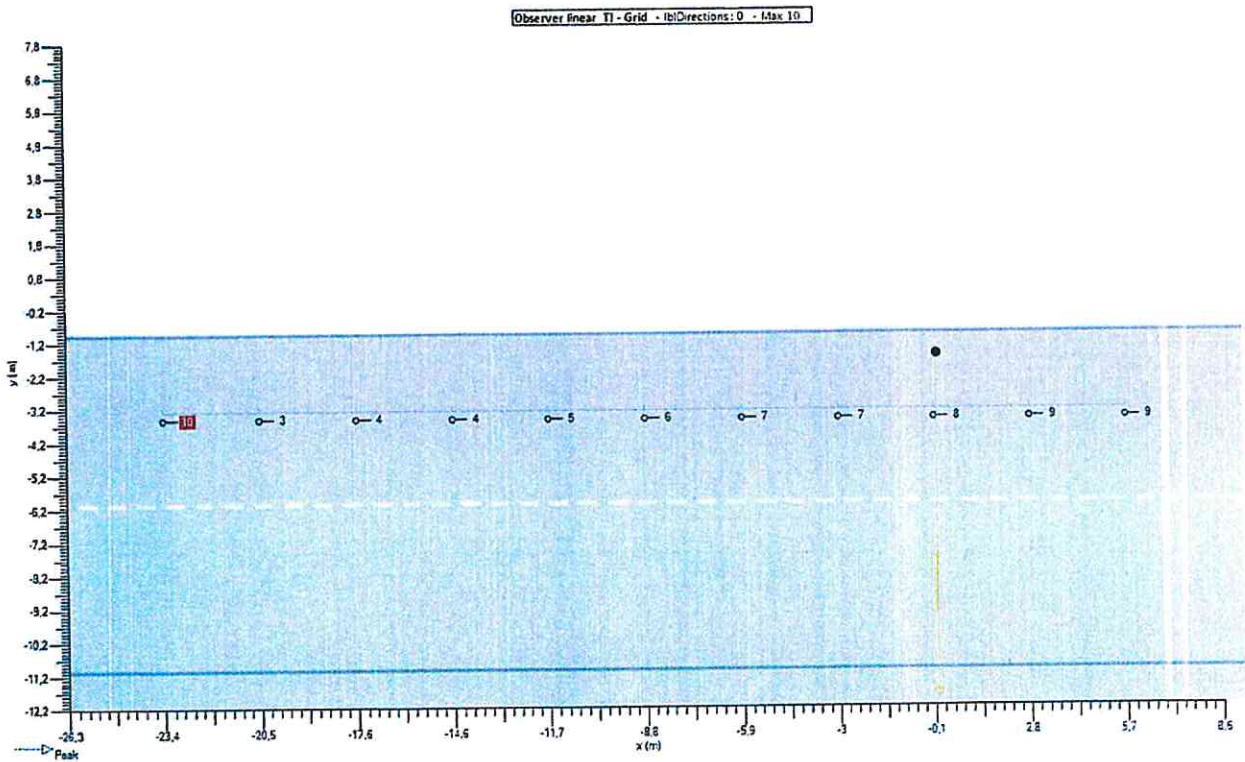


6.8. Multi-lanes (TI 2) - TI - Grid

Implantation




Values




7. Grids

7.1. Multi-lanes (LU)

General	
Type	Grid rectangular XY
Enabled	<input checked="" type="checkbox"/>
Colour	

Geometry			
Origin	X 1,45 m	Y -9,17 m	Z 0,00 m
Rotation	X 0,0 °	Y 0,0 °	Z 0,0 °
Dimension	Count X 11	Count Y 6	
	Spacing X 2,91 m	Spacing Y 1,67 m	
	Size X 29,09 m	Size Y 8,33 m	


7.2. Single lane (IL)

General	
Type	Grid rectangular XY
Enabled	<input checked="" type="checkbox"/>
Colour	

Geometry			
Origin	X 1,45 m	Y -11,67 m	Z 0,00 m
Rotation	X 0,0 °	Y 0,0 °	Z 0,0 °
Dimension	Count X 11	Count Y 3	
	Spacing X 2,91 m	Spacing Y 0,67 m	
	Size X 29,09 m	Size Y 1,33 m	


8. Observer

8.1. Multi-lanes (TI 1)

General	
Type	Observer linear
En	<input checked="" type="checkbox"/>
Color	
Directions	0,0
Calculation	TI - Grid
Grid	Multi-lanes (LU)

Geometry			
Origin	X -23,38 m	Y -7,50 m	Z 1,50 m
Rotation	X 0,0 °	Y 0,0 °	Z 0,0 °
Dimension	Count 11	Spacing 2,91 m	Size 29,09 m

8.2. Multi-lanes (TI 2)

General	
Type	Observer linear
En	<input checked="" type="checkbox"/>
Color	
Directions	0,0
Calculation	TI - Grid
Grid	Multi-lanes (LU)

Geometry			
Origin	X -23,38 m	Y -2,50 m	Z 1,50 m
Rotation	X 0,0 °	Y 0,0 °	Z 0,0 °
Dimension	Count 11	Spacing 2,91 m	Size 29,09 m