



CB CE SAA RoHS

Electrical Information					
Model No.	ST11-180	ST11-240	ST11-300	FL48-450	FL48-600
Power Consumption(±5%)	180W	240W	300W	450W	600W
Power Supply	Sosen				
Input Voltage	100-240VAC, 50 / 60 Hz				
Power Factor	>0.95				
Surge Protection	20kV				
Driver Type	Constant Current (CC)				
Control	Non dimmable				
	0-10V Dimmable				

Optic Information					
LED Type	LED 5050				
Luminous Flux (±10%)	27000lm	36000lm	45000lm	67500lm	90000lm
Efficacy(5000K Ra70)	150lm/W				
Correlated Color Temperature	5000K (3000K, 4000K optional)				
Color Rendering Index	Ra70				
Beam Angle	R10502, R10503, R10504, R10505, R10506, R10507, R10508, R10533, R10564				
UGR level	N/A				

## Description

Definiator Pro LED Area Lights are designed for outdoor lighting applications requiring bright, energy savings and robust performance. The High output LED and PC lens provide outstanding uniformity and efficiency. Multiple asymmetric beam angle makes it flexible for different projects' requirement.

## Key Features

- Compact design with 2 size, 180W to 600W.
- IK10, IP66, 20KV.
- Die cast aluminum housing with external fins, ensure greater heat dissipation.
- Adjustable U bracket wall mount standard for easy installation.
- High output lumen efficiency, up to 150lm/W.
- Durable PC optics resist yellowing. More than 9 variety of beam angles to fit different applications, including Type II, III, IV, V.
- House-side Shield to avoid intrusive light towards buildings.

## Applications

- Parking lots
- Outdoor sports
- Square
- Stadium
- For recreational sports (tennis courts, basketball courts...)
- For billboard lighting (Tall-type billboard, wide-type billboard)
- Exhibition center
- Soccer field

## Dimensions and Mount

Product Dimension	685*362*94mm		656x635x82mm	
Luminaire Net Weight	9.3±0.3 kg	9.9±0.3 kg	15.7±0.3 kg	
Export Carton Size	630x410x165mm		735x725x165mm	
Gross Weight	10.5±0.3 kg	11.1±0.3 kg	17.7±0.3 kg	
Mounting Option	Bracket mount			
Material	Aluminum alloy			
	Polycarbonate optical lens			
Finish	Powder coating			
Fixture Color	Black(RAL9017)			
EPA	2.37ft²/0.22m²		4.2ft²/0.33m²	
IK Rating	IK10			
IP Rating	IP66			

## Lifespan and Warranty

Operating Temperature	-30°C to + 50°C			
Life Time of LED @Ta=25°C	44000hrs-L90			
	93000hrs-L80			
	147000hrs-L70			
Warranty	5 Years			

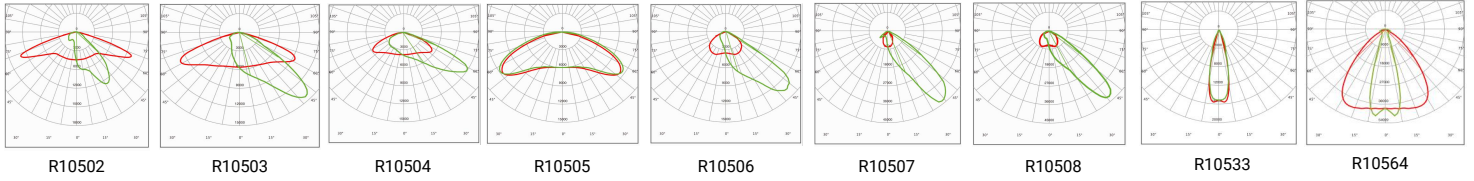
## New Features

*\*Please consult Vizona Team for details.*

## Vizona Pty Ltd

info@vizona.com.au  
www.vizona.com.au  
1300 250 150

## Photometry



## Mounting Options

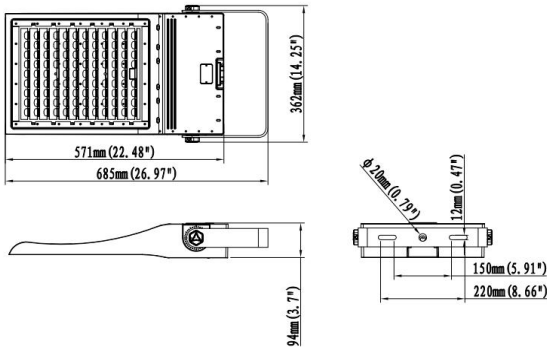


Bracket mount

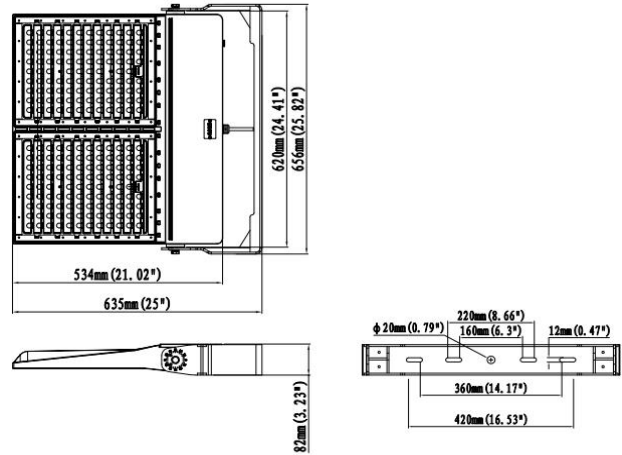
## Dimensions

Unit:mm

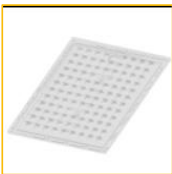
### ST11-180W/240W/300W



### FL48-450W/600W



## Accessories



### PC Optic Lens

Refer to the Photometry

Code: R10502, R10503, R105034, R10505, R10506, R10507, R10508, R10533, R10564



### Anti-Glare Shield

PC Material for back light control .

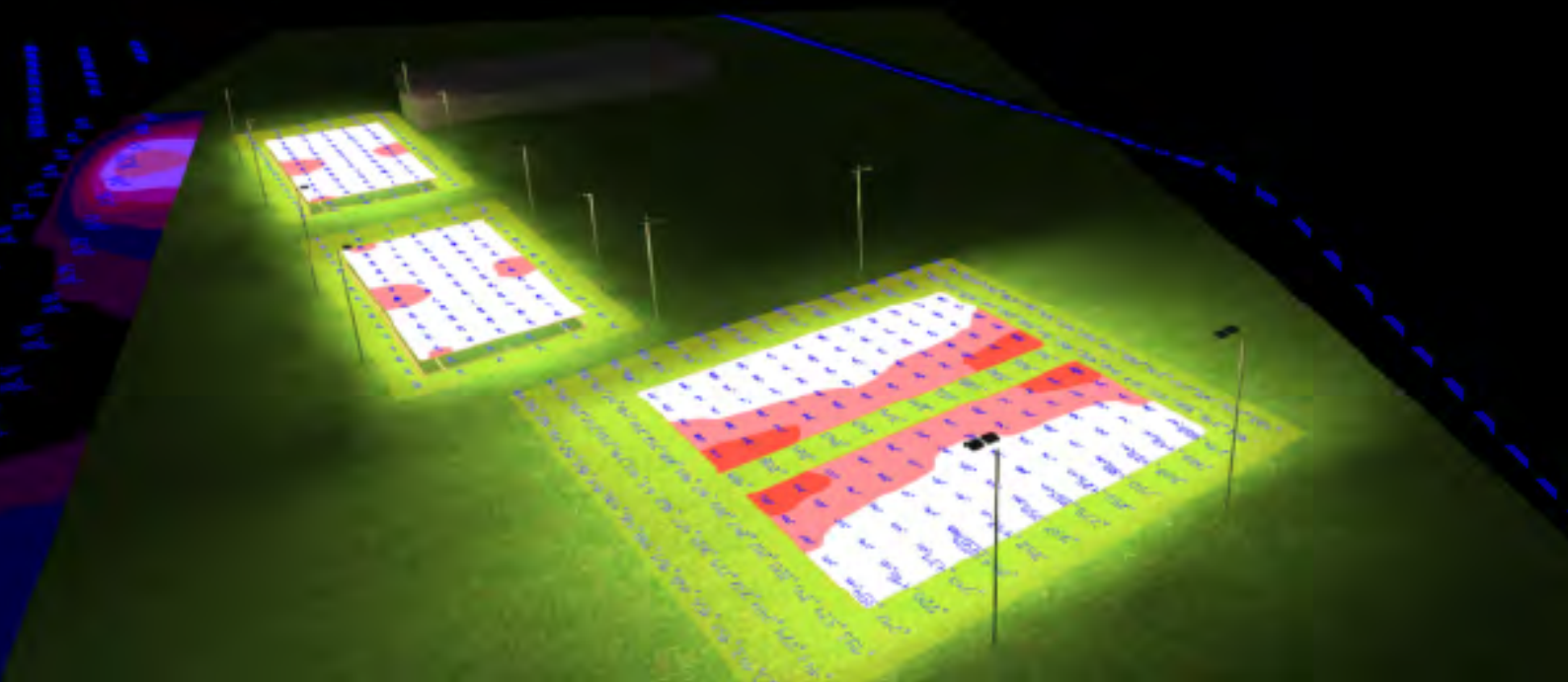
Code: SPR11-06



# Lighting Design

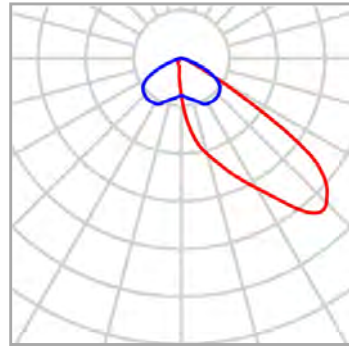
## APPLECROSS TENNIS CLUB

25th January 2023



## Luminaire list

$\Phi_{total}$	$P_{total}$	Luminous efficacy
903312 lm	7184.0 W	125.7 lm/W

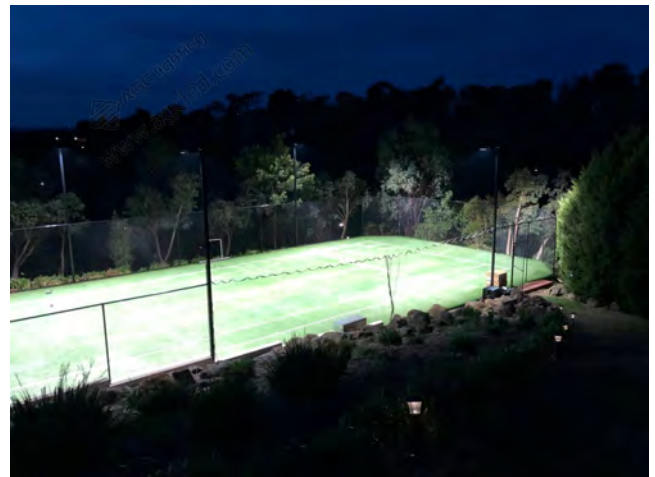


### Definiator Pro LED Floodlight - 450W FL48-450

pcs.	16	P	449.0 W
Manufacturer	Vizona Pty Ltd	$\Phi_{Lamp}$	56456 lm
Article name	Definiator Pro LED 450W - FL48-450	$\Phi_{Luminaire}$	56457 lm
Fitting	1x	$\eta$	100.00 %
		Luminous efficacy	125.7 lm/W

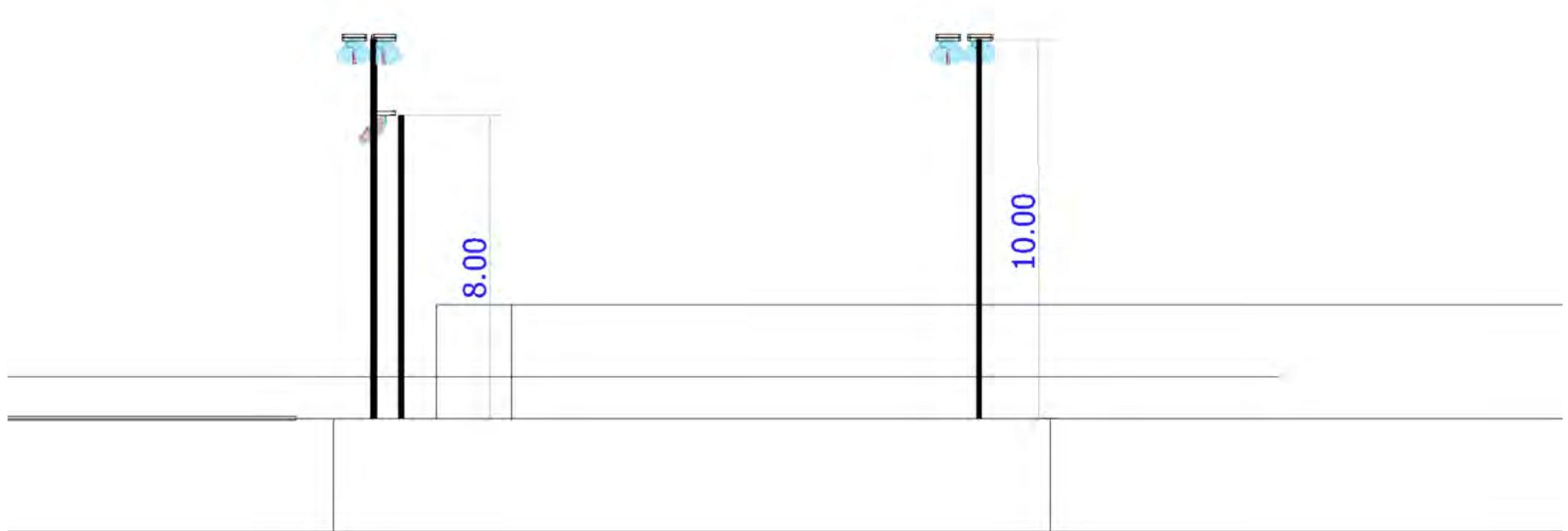
### Lighting Design in Compliance with Australian Standards

AS/NZS 2560.2.1-2003 sports lighting part 2.1 Specific Applications Outdoor Tennis  
 AS/NZS4282-2019(1) Control of obtrusive effect of outdoor lighting.



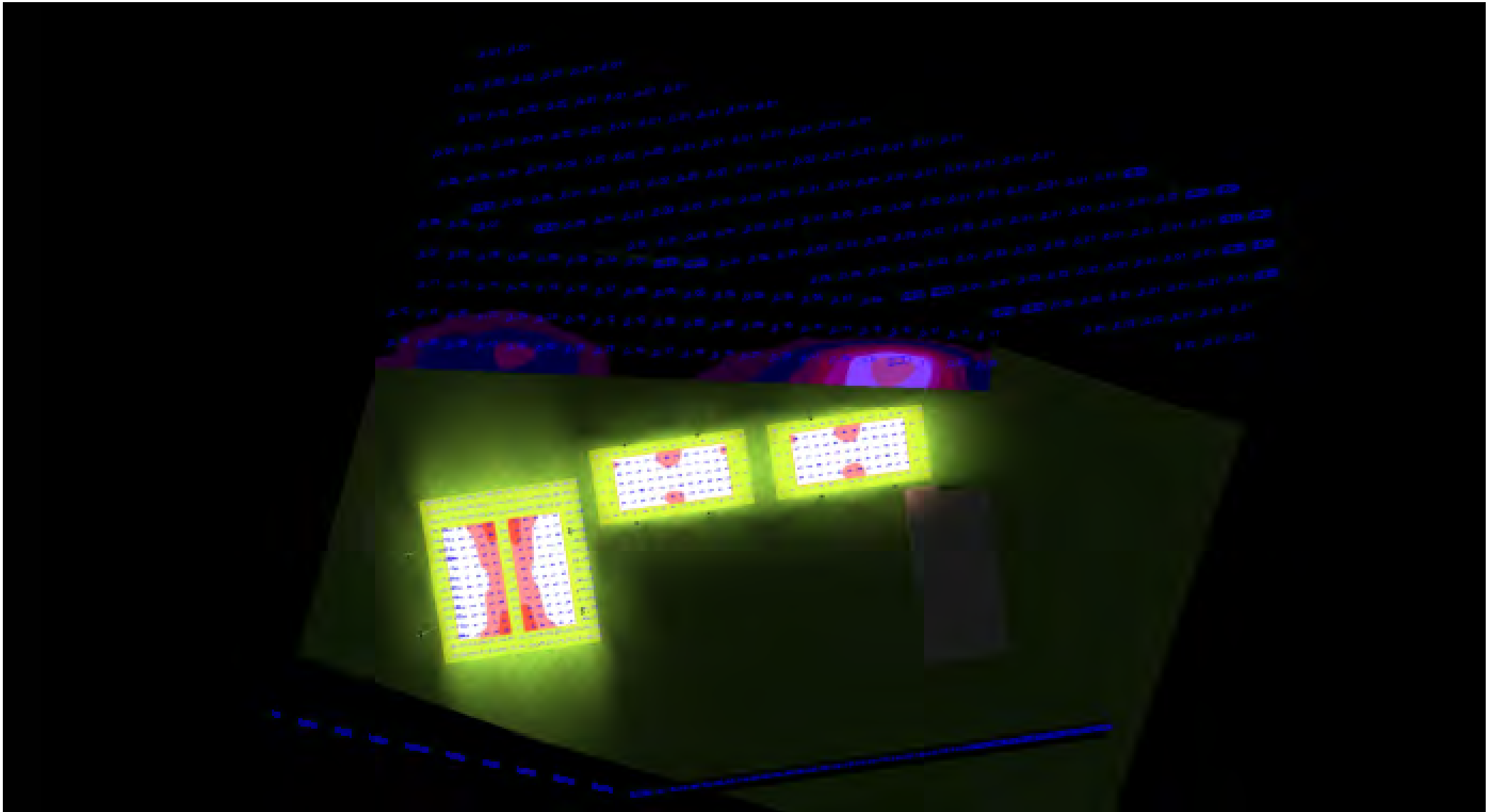


# Images



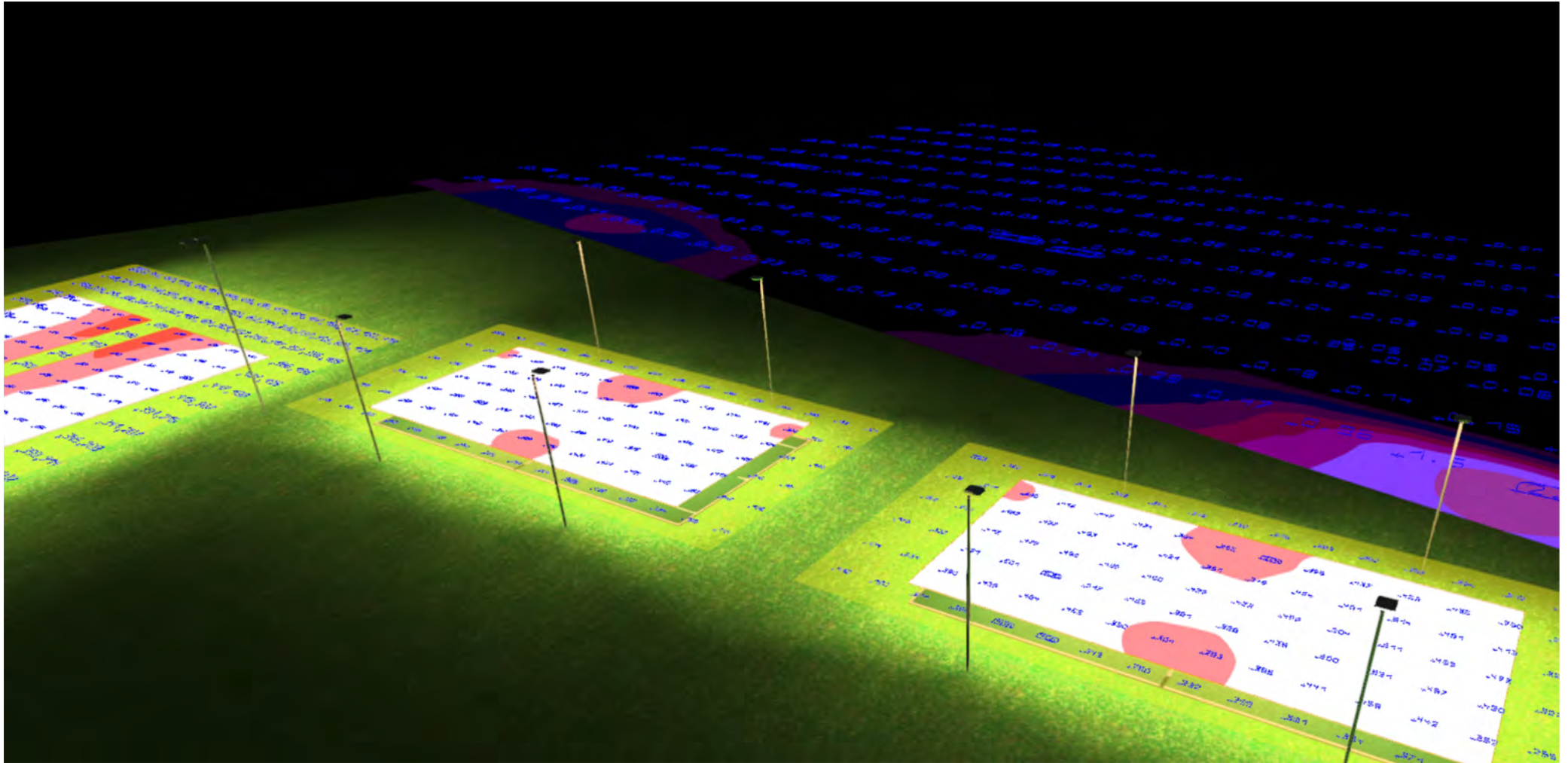


# Images



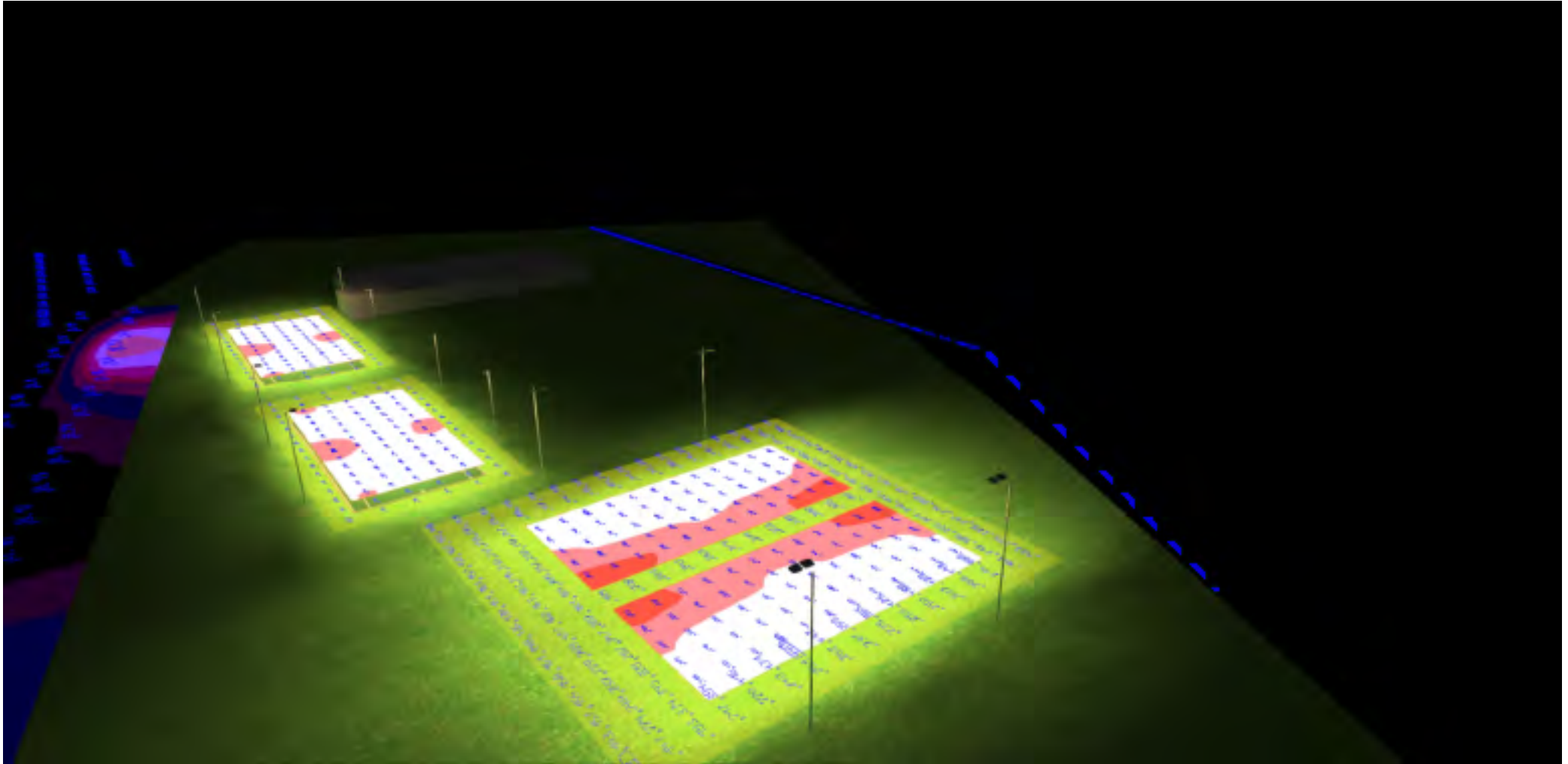


# Images



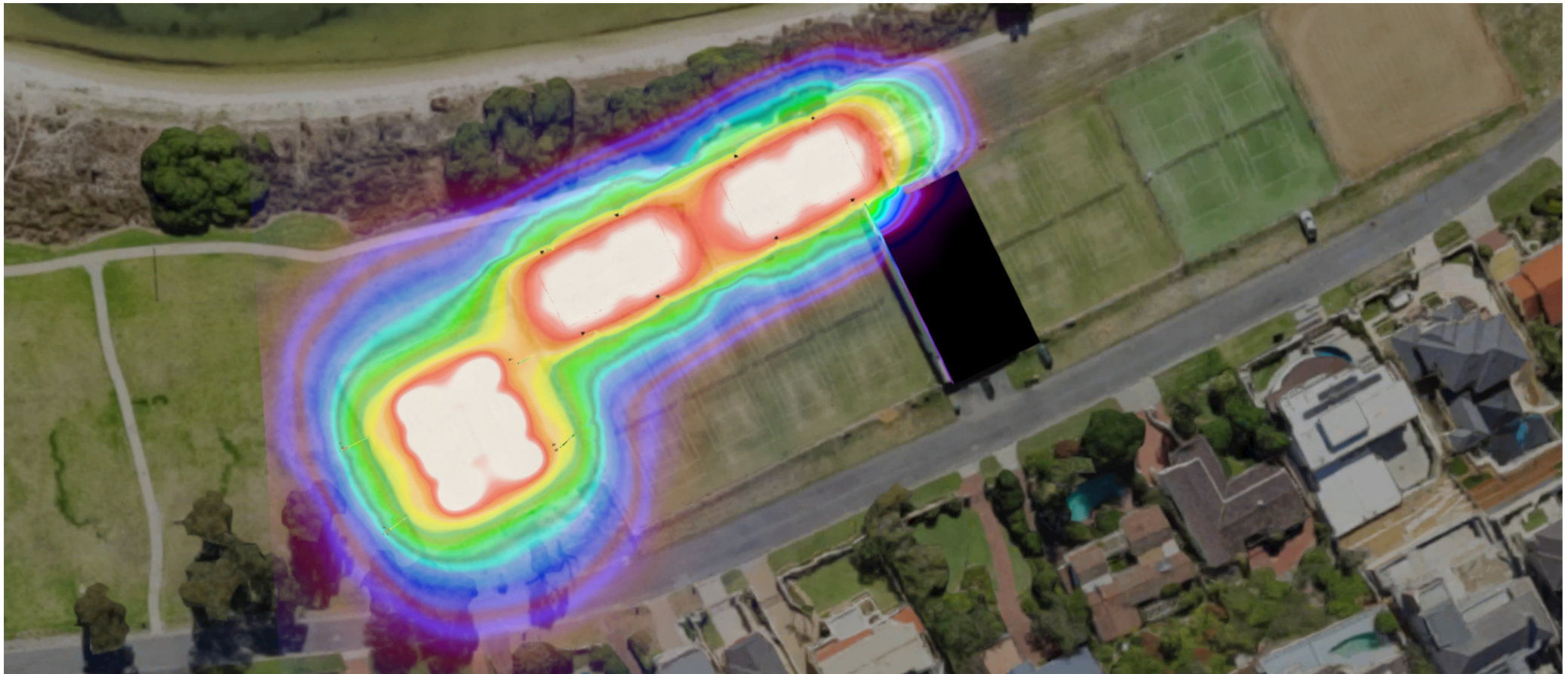


# Images





# Images



# Luminaire layout plan





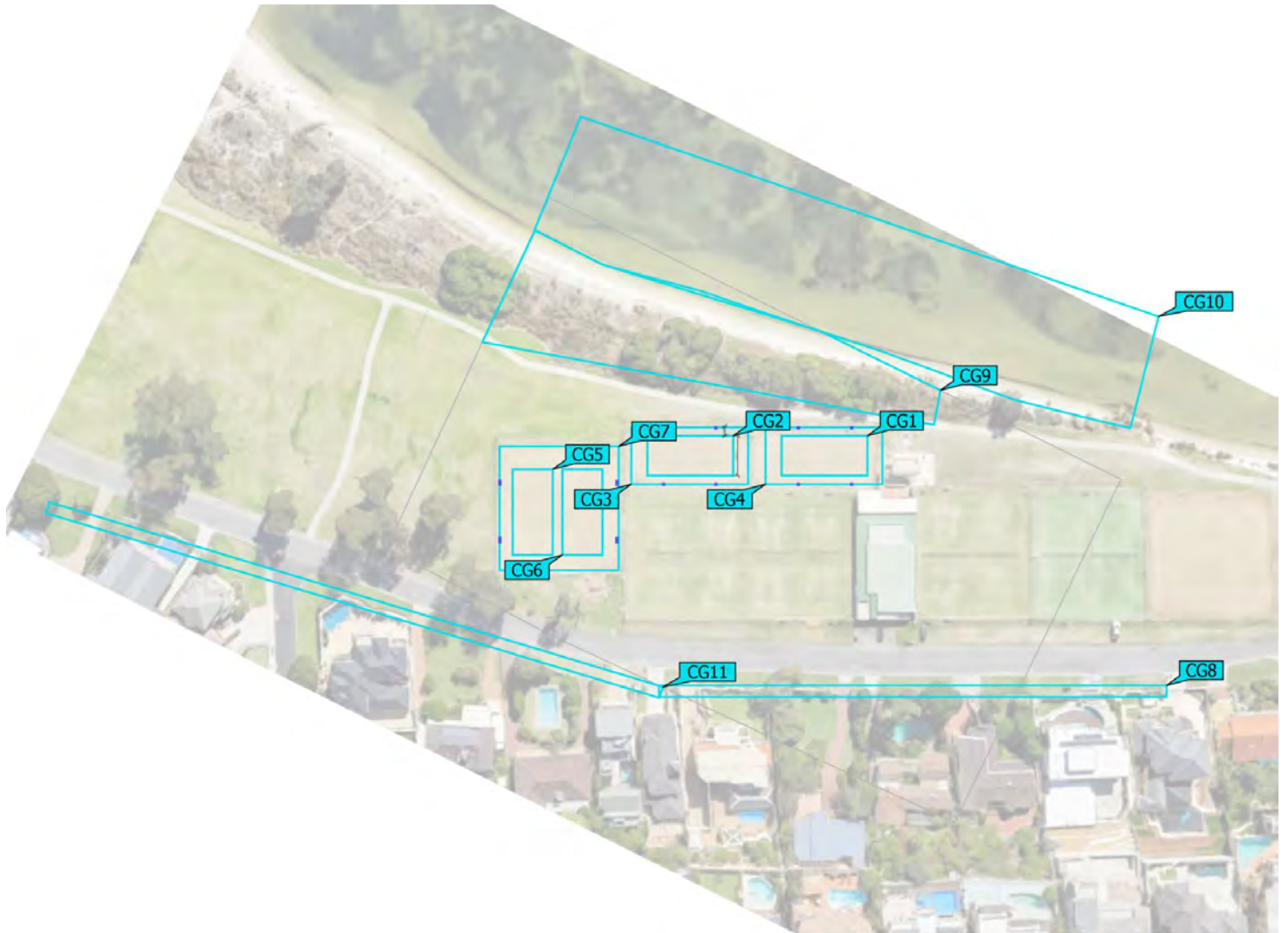
## Luminaire layout plan

### Definiator Pro LED Floodlight - 450W FL48-450

X	Y	Mounting height	Luminaire
-2.041 m	-15.863 m	10.000 m	1
-2.041 m	-31.559 m	10.000 m	2
-34.094 m	-31.507 m	10.000 m	3
-34.094 m	-15.811 m	10.000 m	4
62.264 m	-16.653 m	8.000 m	5
62.264 m	-1.218 m	8.000 m	6
47.675 m	-16.651 m	8.000 m	7
47.675 m	-1.216 m	8.000 m	8
25.062 m	-16.653 m	8.000 m	9
25.062 m	-1.218 m	8.000 m	10
10.768 m	-16.651 m	8.000 m	11
10.768 m	-1.216 m	8.000 m	12
-2.041 m	-16.646 m	10.000 m	13
-2.041 m	-32.405 m	10.000 m	14
-34.094 m	-32.353 m	10.000 m	15
-34.094 m	-16.594 m	10.000 m	16

(Light scene 1)

### Calculation objects





(Light scene 1)

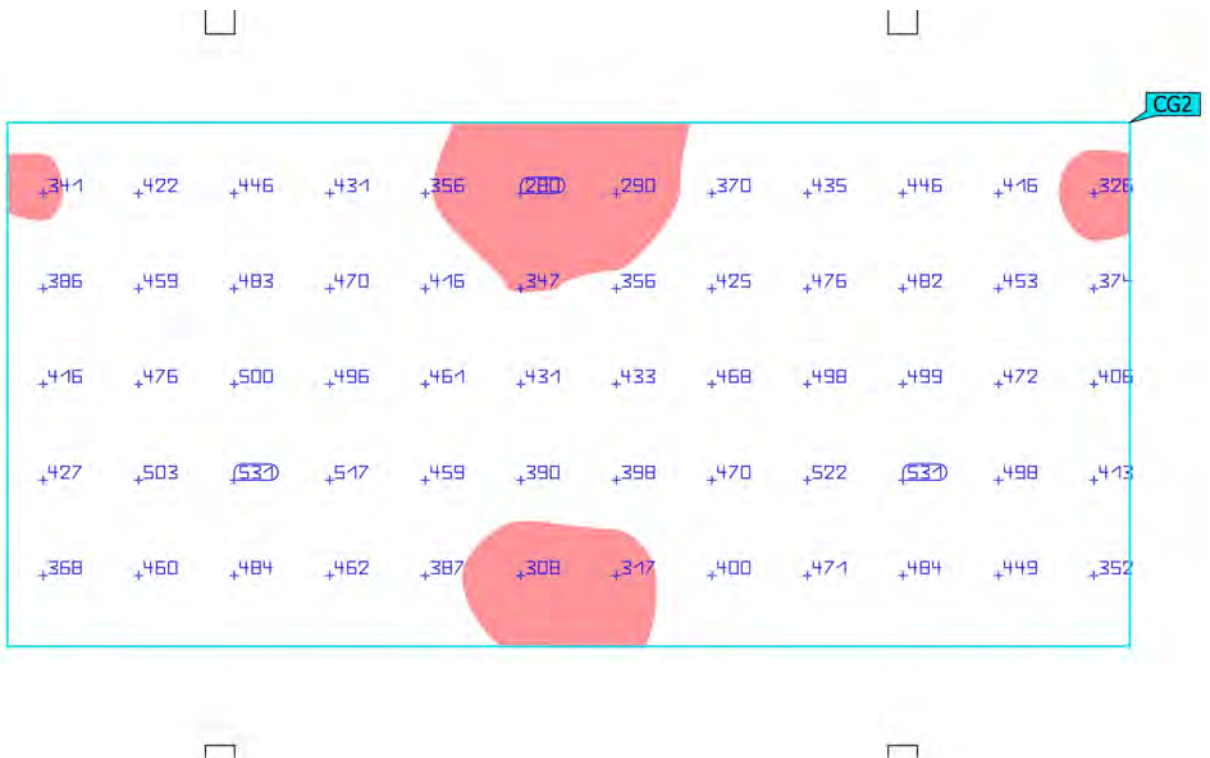
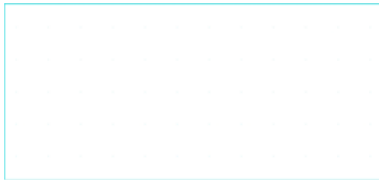
## Calculation objects

### Calculation surfaces

Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
COURT 2 PPA Perpendicular illuminance Height: 1.000 m	430 lx	279 lx	530 lx	0.65	0.53	CG1
COURT 1 PPA Perpendicular illuminance Height: 1.000 m	431 lx	280 lx	531 lx	0.65	0.53	CG2
COURT 1 TPA Perpendicular illuminance Height: 1.000 m	261 lx	93.7 lx	409 lx	0.36	0.23	CG3
COURT 2 TPA Perpendicular illuminance Height: 1.000 m	260 lx	101 lx	406 lx	0.39	0.25	CG4
COURT 3 PPA Perpendicular illuminance Height: 1.000 m	358 lx	219 lx	457 lx	0.61	0.48	CG5
COURT 4 PPA Perpendicular illuminance Height: 1.000 m	350 lx	210 lx	454 lx	0.60	0.46	CG6
COURT 3 TPA Perpendicular illuminance Height: 1.000 m	251 lx	99.4 lx	440 lx	0.40	0.23	CG7
Light pollution 1 Horizontal illuminance Height: 1.000 m	0.011 lx	0.001 lx	0.072 lx	0.091	0.014	CG8
Light pollution 3 Horizontal illuminance Height: 1.000 m	0.24 lx	0.031 lx	2.10 lx	0.13	0.015	CG9
River Perpendicular illuminance Height: -0.100 m	0.021 lx	0.003 lx	0.069 lx	0.14	0.043	CG10
Light pollution 2 Horizontal illuminance Height: 1.000 m	0.29 lx	0.001 lx	1.89 lx	0.003	0.001	CG11

(Light scene 1)

**COURT 1 PPA**



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
COURT 1 PPA Perpendicular illuminance Height: 1.000 m	431 lx	280 lx	531 lx	0.65	0.53	CG2

(Light scene 1)

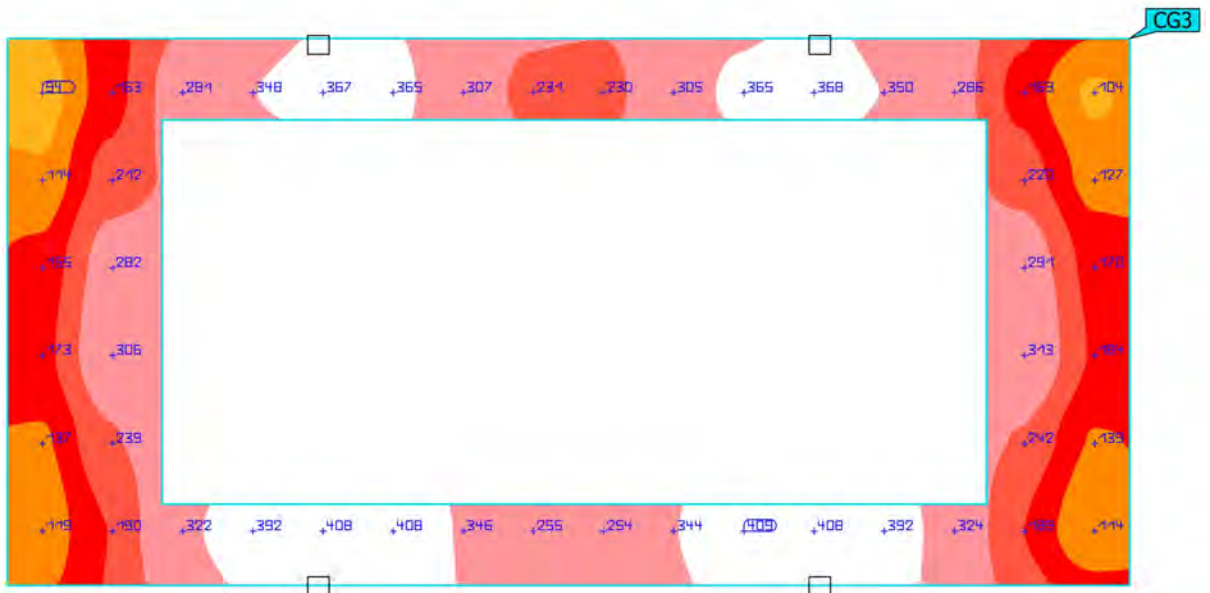
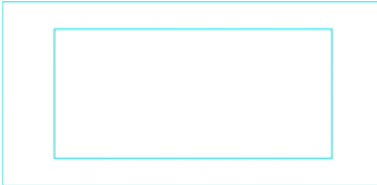
**COURT 2 PPA**



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
COURT 2 PPA Perpendicular illuminance Height: 1.000 m	430 lx	279 lx	530 lx	0.65	0.53	CG1

(Light scene 1)

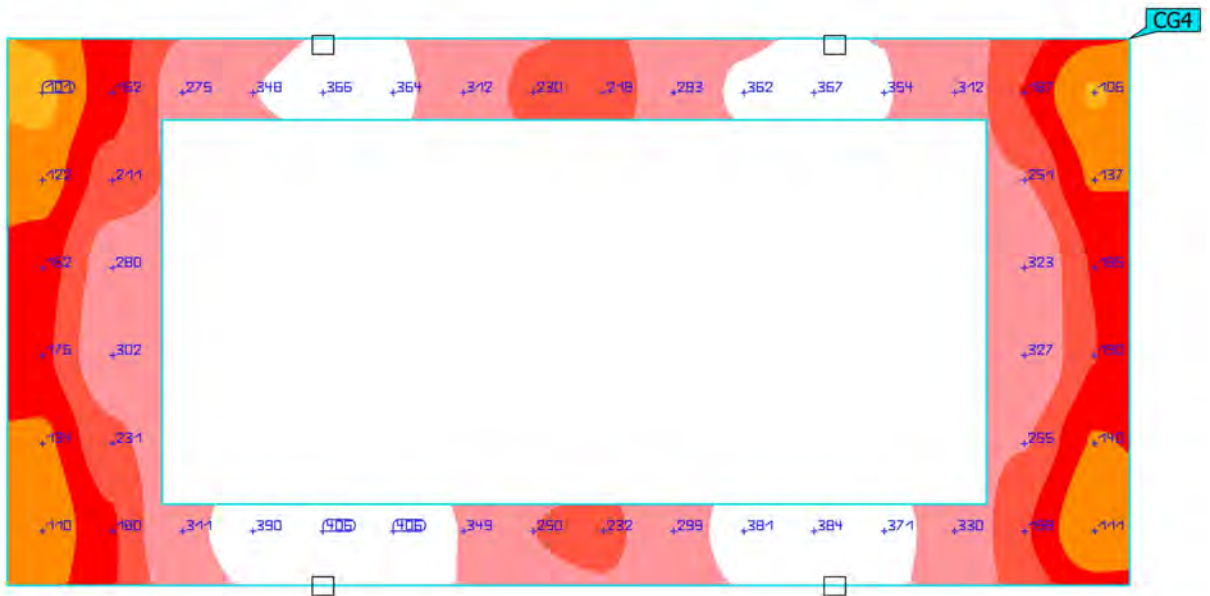
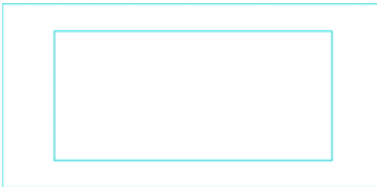
**COURT 1 TPA**



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
COURT 1 TPA Perpendicular illuminance Height: 1.000 m	261 lx	93.7 lx	409 lx	0.36	0.23	CG3

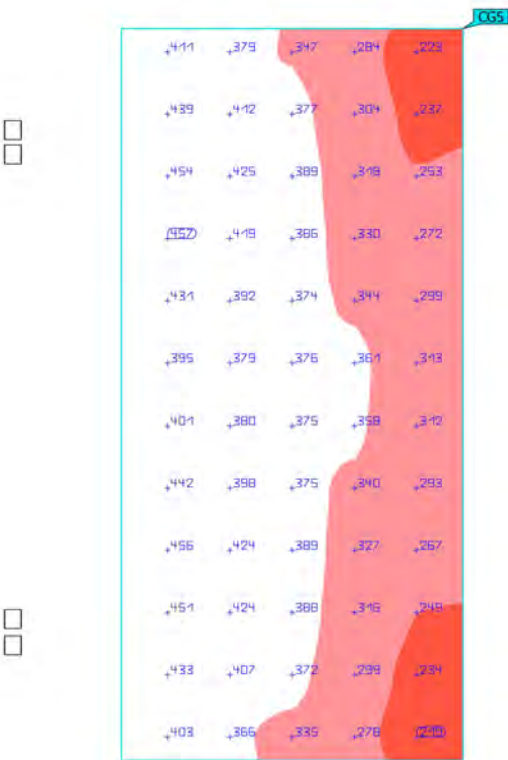
(Light scene 1)

**COURT 2 TPA**



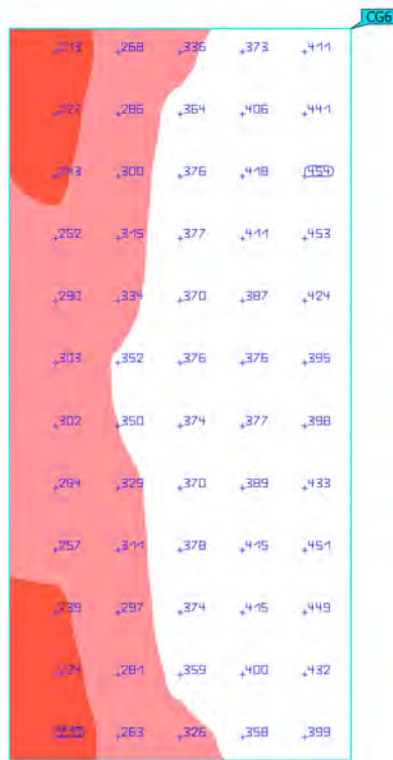
Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
COURT 2 TPA Perpendicular illuminance Height: 1.000 m	260 lx	101 lx	406 lx	0.39	0.25	CG4

Tennis courts (Light scene 1)  
**COURT 3 PPA**



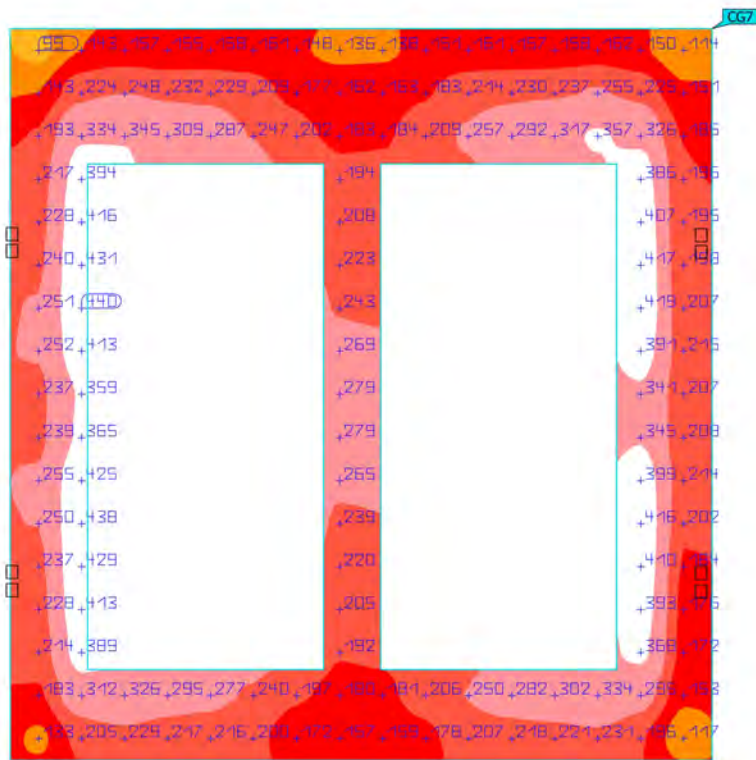
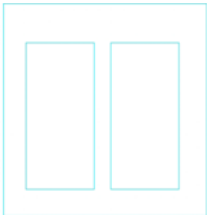
Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
COURT 3 PPA Perpendicular illuminance Height: 1.000 m	358 lx	219 lx	457 lx	0.61	0.48	CG5

Tennis courts (Light scene 1)  
**COURT 4 PPA**



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
COURT 4 PPA Perpendicular illuminance Height: 1.000 m	350 lx	210 lx	454 lx	0.60	0.46	CG6

Tennis courts (Light scene 1)  
**COURT 3 TPA**



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
COURT 3 TPA Perpendicular illuminance Height: 1.000 m	251 lx	99.4 lx	440 lx	0.40	0.23	CG7

Tennis courts (Light scene 1)  
**Light pollution 1**

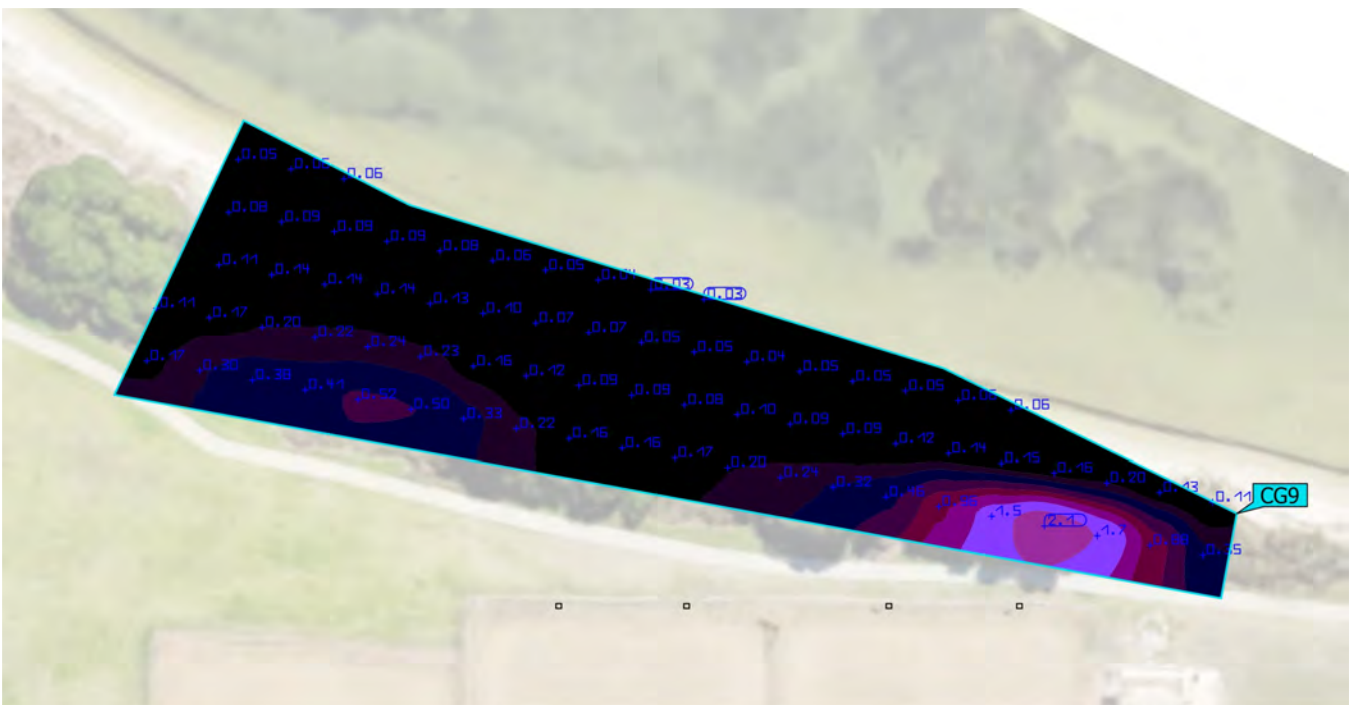
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0.10 [lx]

Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
Light pollution 1 Horizontal illuminance Height: 1.000 m	0.011 lx	0.001 lx	0.072 lx	0.091	0.014	CG8

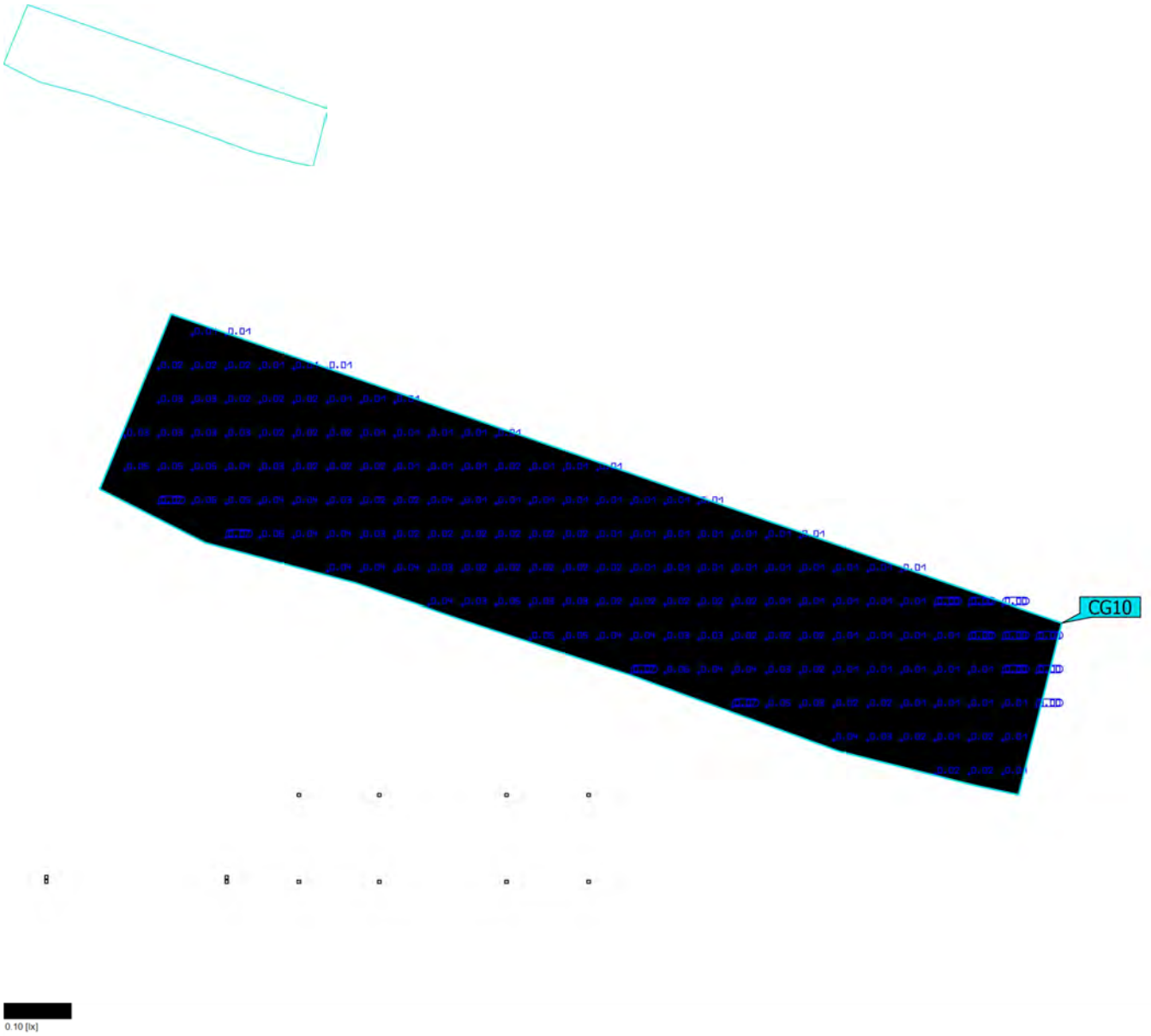
Tennis courts (Light scene 1)  
**Light pollution 3**



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
Light pollution 3 Horizontal illuminance Height: 1.000 m	0.24 lx	0.031 lx	2.10 lx	0.13	0.015	CG9



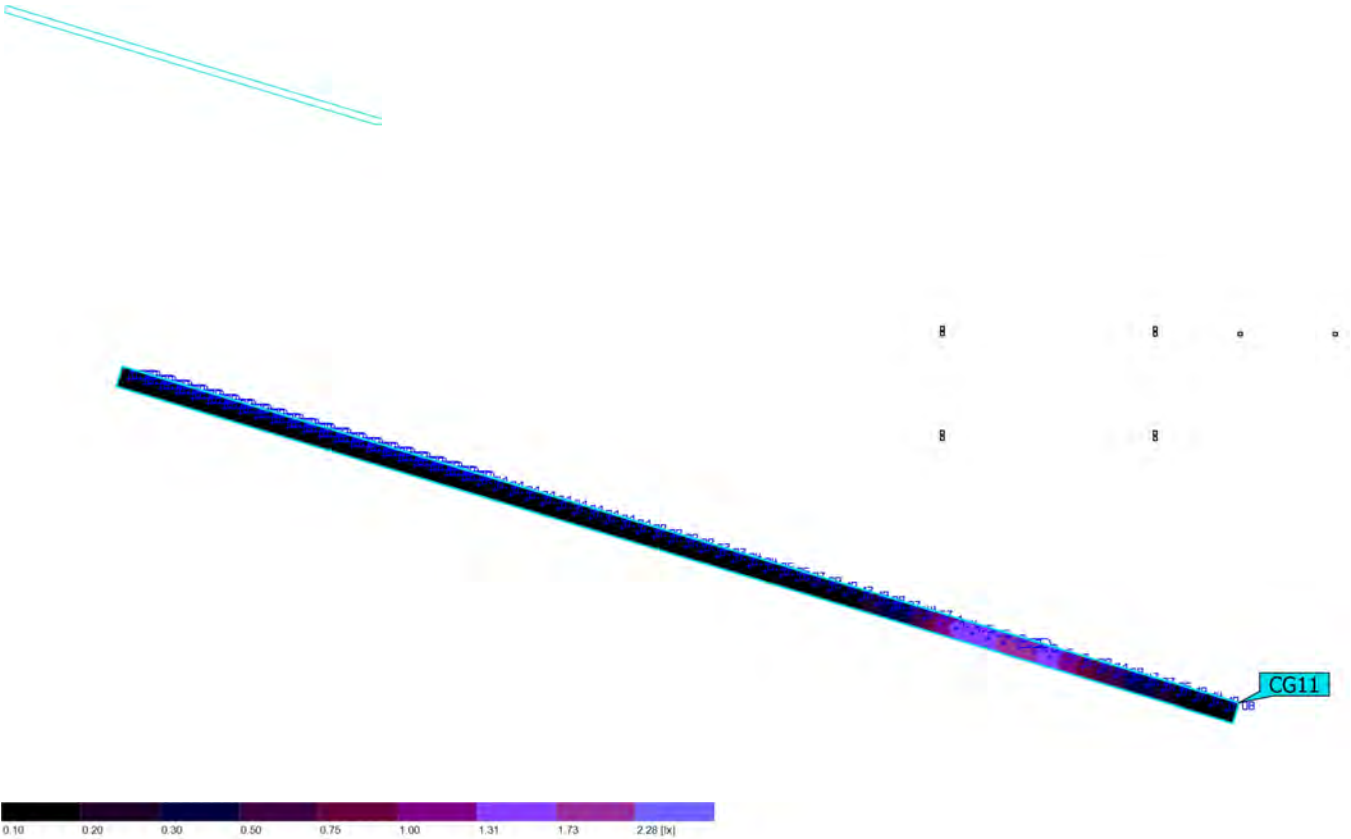
Tennis courts (Light scene 1)  
**River**



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
River Perpendicular illuminance Height: -0.100 m	0.021 lx	0.003 lx	0.069 lx	0.14	0.043	CG10



Tennis courts (Light scene 1)  
**Light pollution 2**



Properties	$\bar{E}$	$E_{min}$	$E_{max}$	$g_1$	$g_2$	Index
Light pollution 2 Horizontal illuminance Height: 1.000 m	0.29 lx	0.001 lx	1.89 lx	0.003	0.001	CG11

**Notes Regarding Light Pollution**

Maximums values of 10 Lux allowed for light parameters (LUX) before curfew hrs.  
 (Vertical viewing plane @1.0m)  
 Max achieved 1.89 Lux for Property line (PASS) - CG11  
 Max achieved 2.10 Lux on Vegetation Line (PASS) - CG9