Table of contents

1 Luminaire data

1.1 BSI, iRuta-R 20W BOLLARD 30... (!iRuta-R 20W BO...)

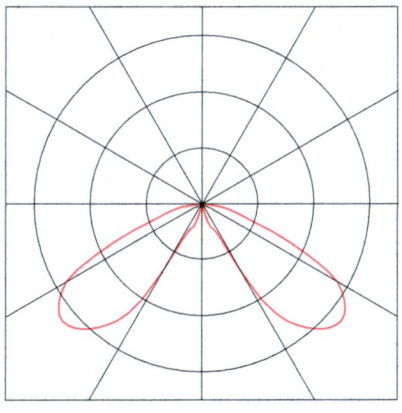
1.1.1 Data sheet

Manufacturer: BSI

!iRuta-R 20W BOLLARD 3000K.ldt **iRuta-R 20W BOLLARD 3000K**

Luminaire data		
Luminaire efficiency	:	100%
Luminaire efficacy	:	110 lm/W
Classification	:	A21 ↓98.0% ↑2.0%
CIE Flux Codes	:	22 72 96 98 100
UGR 4H 8H	:	30.3 / 30.3
Power	:	20 W
Luminous flux	:	2200 lm
Dimensions	:	Ø160 mm x 100 mm

Equipped with		
Quantity	:	1
Designation	:	LED
Colour	:	3000K
Luminous flux	:	2200 lm
Colour reproduction	:	80



1 Luminaire data

1.2 BSI, iENNA 54W 3000K (!iENNA 54W 3000K.ldt)

1.2.1 Data sheet

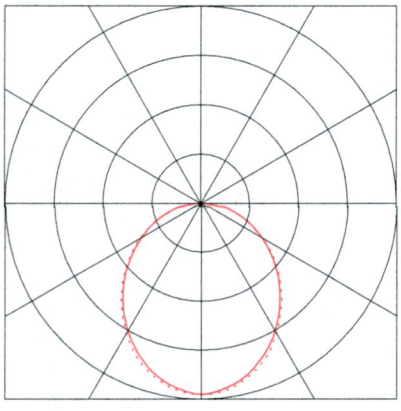
Manufacturer: BSI

!iENNA 54W 3000K.ldt **iENNA 54W 3000K**

Luminaire data		
Luminaire efficiency	:	100%
Luminaire efficacy	:	96 lm/W
Classification	:	A40 ↓99.9% ↑0.1%
CIE Flux Codes	:	49 79 95 100 100
UGR 4H 8H	:	26.4 / 26.4
Power	:	54 W
Luminous flux	:	5184 lm

Equipped with		
Quantity	:	1
Designation	:	LED
Colour	:	3000K
Luminous flux	:	5184 lm
Colour reproduction	:	80

Dimensions : 1000 mm x 100 mm x 1 mm



1 Luminaire data

1.3 BSI, iCAVA 5015 12W 3000K... (!iCAVA 5015 12W 3...)

1.3.1 Data sheet

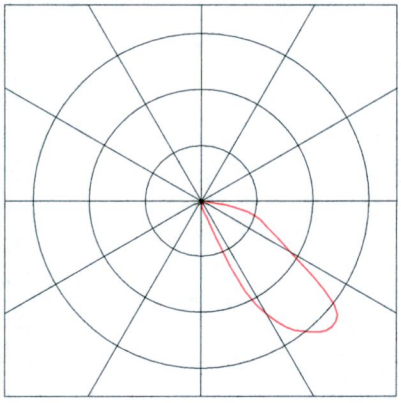
Manufacturer: BSI

!iCAVA 5015 12W 3000K.ldt **iCAVA 5015 12W 3000K**

Luminaire data		
Luminaire efficiency	:	100%
Luminaire efficacy	:	70.29 lm/W
Classification	:	A20 ↓99.9% ↑0.1%
CIE Flux Codes	:	24 70 95 100 100
UGR 4H 8H	:	46.7 / 36.5
Power	:	14 W
Luminous flux	:	984 lm

Equipped with		
Quantity	:	1
Designation	:	24W
Colour	:	3000K
Luminous flux	:	984 lm
Colour reproduction	:	80

Dimensions : 250 mm x 5 mm x 250 mm



2 Exterior 1

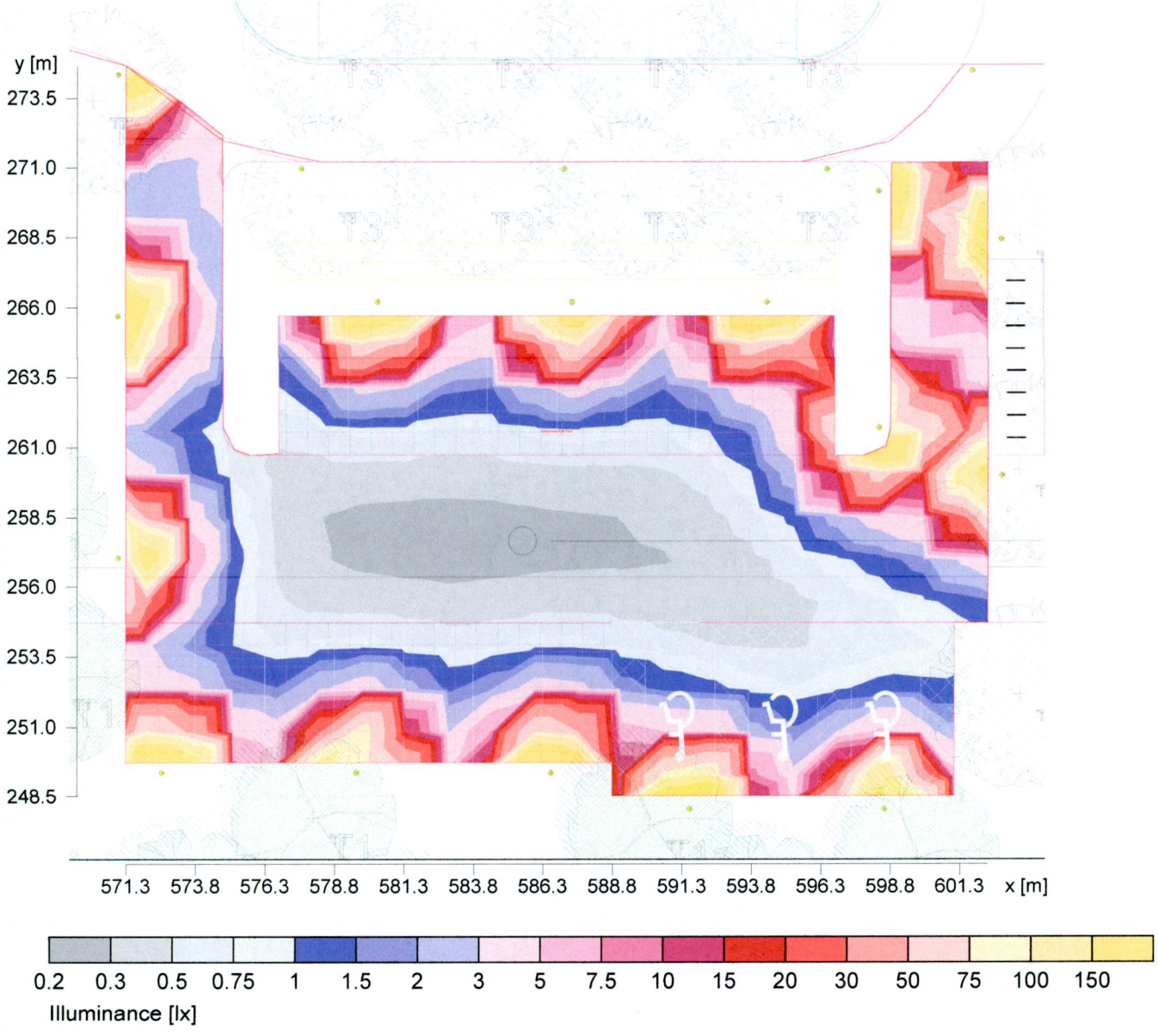
2.1 Description, Exterior 1

2.1.1 Floor plan

2 Exterior 1

2.2 Calculation results, Exterior 1

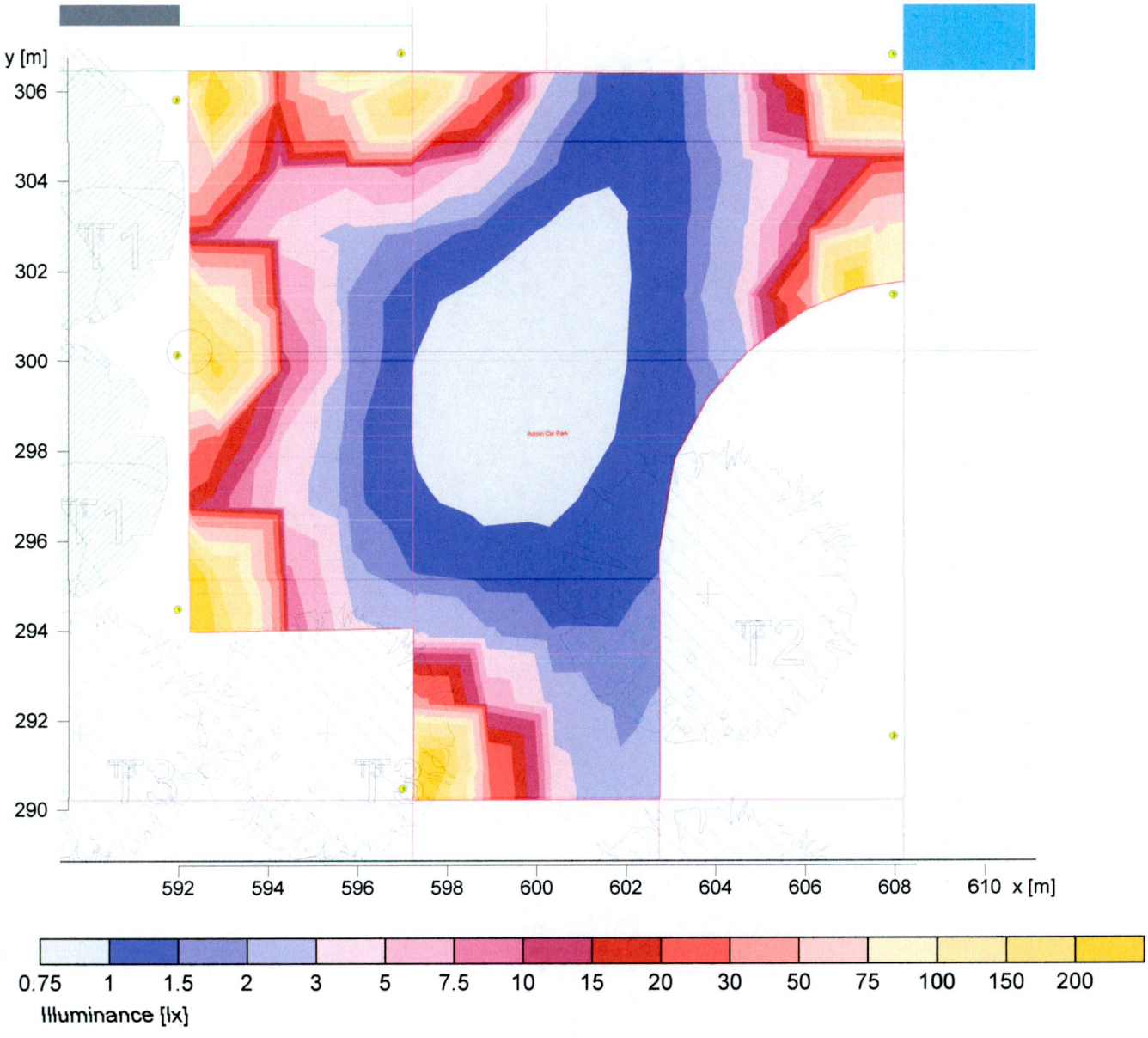
2.2.1 Pseudo colours, Ceremony Car Park (E)



Average illuminance	Em	: 13 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 197 lx
Uniformity Uo	Emin/Em	: 1 : 54.96 (0.02)
Diversity Ud	Emin/Emax	: 1 : 806.27 (0.00)

2.2 Calculation results, Exterior 1

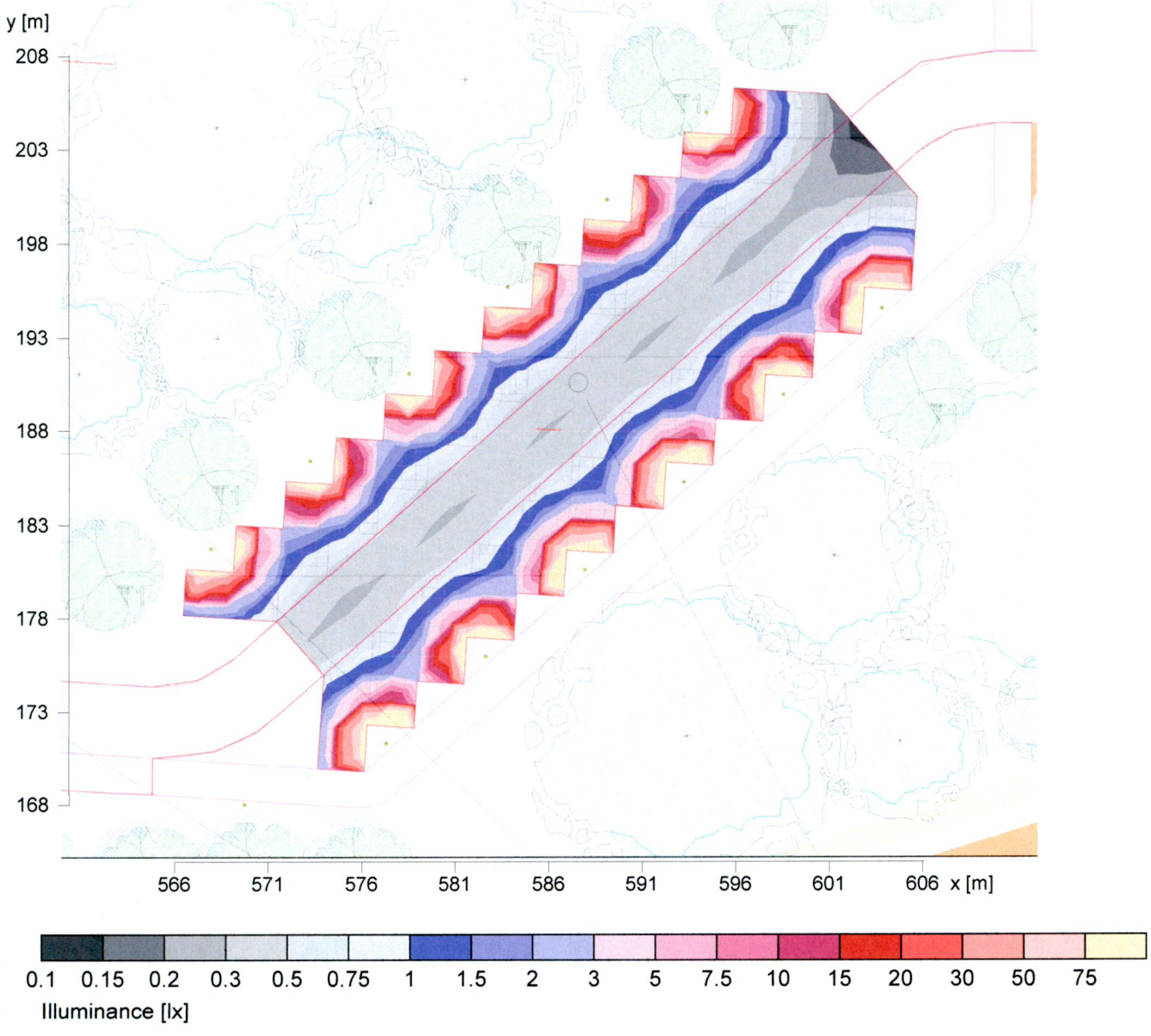
2.2.2 Pseudo colours, Admin Car Park (E)



Height reference plane		: 0.00 m
Average illuminance	Em	: 24 lx
Minimum illuminance	Emin	: 1 lx
Maximum illuminance	Emax	: 292 lx
Uniformity Uo	Emin/Em	: 1 : 31.33 (0.03)
Diversity Ud	Emin/Emax	: 1 : 384.72 (0.00)

2.2 Calculation results, Exterior 1

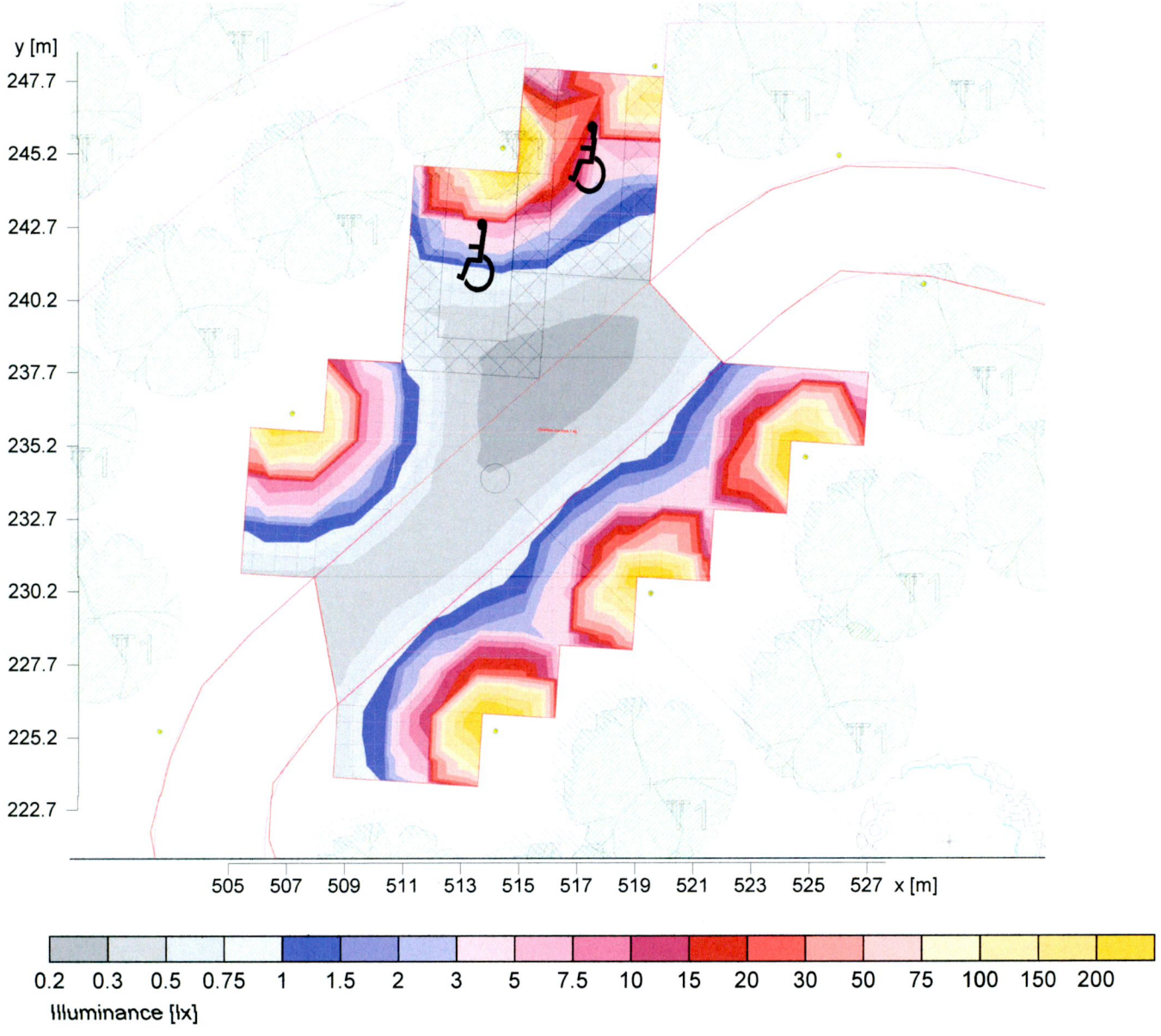
2.2.3 Pseudo colours, Overflow Car Park 1 #1 (E)



Height reference plane		: 0.00 m
Average illuminance	Em	: 7.4 lx
Minimum illuminance	Emin	: 0.1 lx
Maximum illuminance	Emax	: 98.8 lx
Uniformity Uo	Emin/Em	: 1 : 49.60 (0.02)
Diversity Ud	Emin/Emax	: 1 : 665.72 (0.00)

2.2 Calculation results, Exterior 1

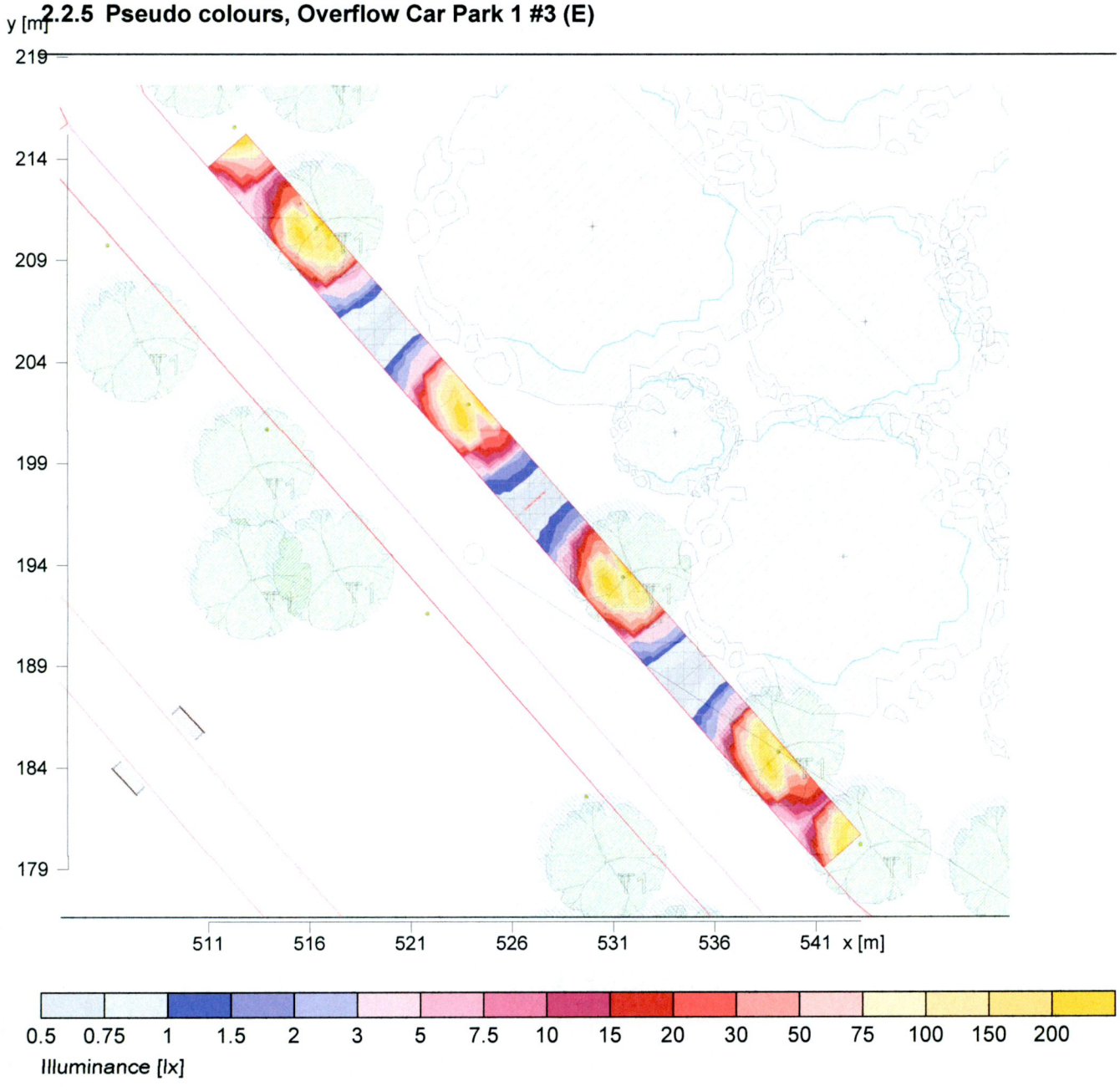
2.2.4 Pseudo colours, Overflow Car Park 1 #2 (E)



Height reference plane		: 0.00 m
Average illuminance	Em	: 17 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 254 lx
Uniformity Uo	Emin/Em	: 1 : 78.97 (0.01)
Diversity Ud	Emin/Emax	: 1 : 1169.84 (0.00)

2.2 Calculation results, Exterior 1

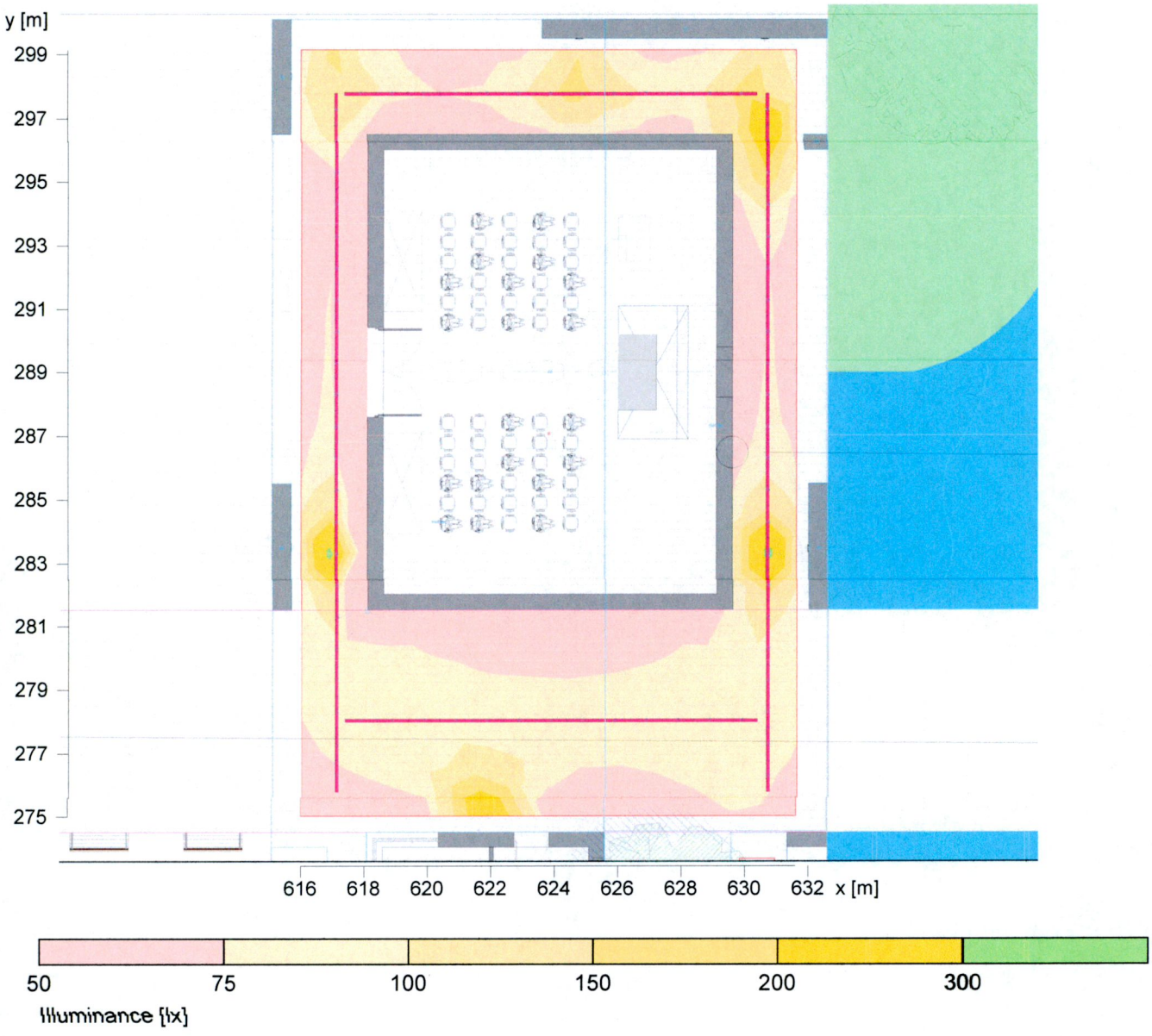
2.2.5 Pseudo colours, Overflow Car Park 1 #3 (E)



Height reference plane		: 0.00 m
Average illuminance	Em	: 40 lx
Minimum illuminance	Emin	: 1 lx
Maximum illuminance	Emax	: 269 lx
Uniformity Uo	Emin/Em	: 1 : 72.45 (0.01)
Diversity Ud	Emin/Emax	: 1 : 490.64 (0.00)

2.2 Calculation results, Exterior 1

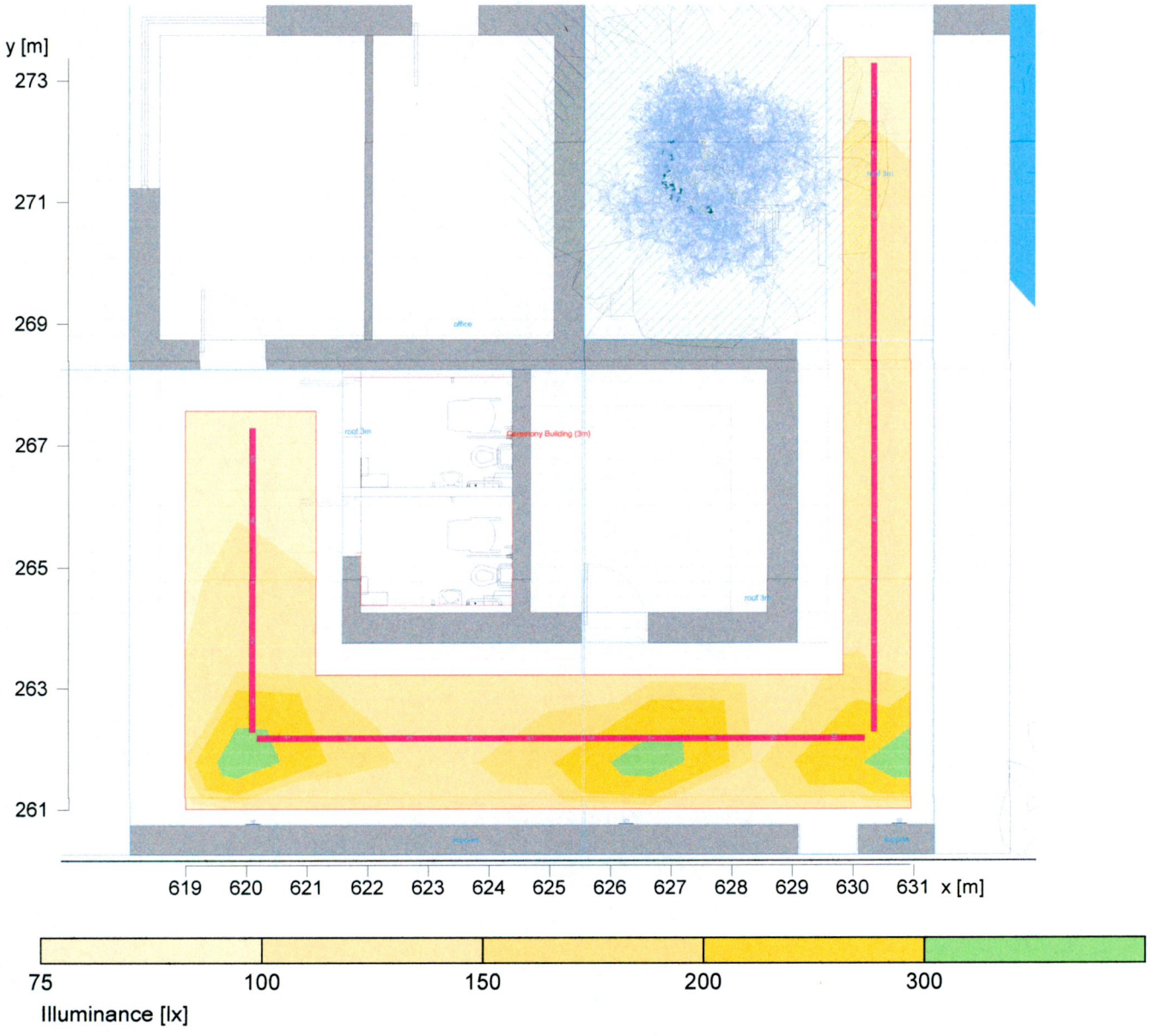
2.2.6 Pseudo colours, Ceremony Building (5m) (E)



Height reference plane		: 0.00 m
Average illuminance	Em	: 96 lx
Minimum illuminance	Emin	: 59 lx
Maximum illuminance	Emax	: 306 lx
Uniformity Uo	Emin/Em	: 1 : 1.63 (0.61)
Diversity Ud	Emin/Emax	: 1 : 5.19 (0.19)

2.2 Calculation results, Exterior 1

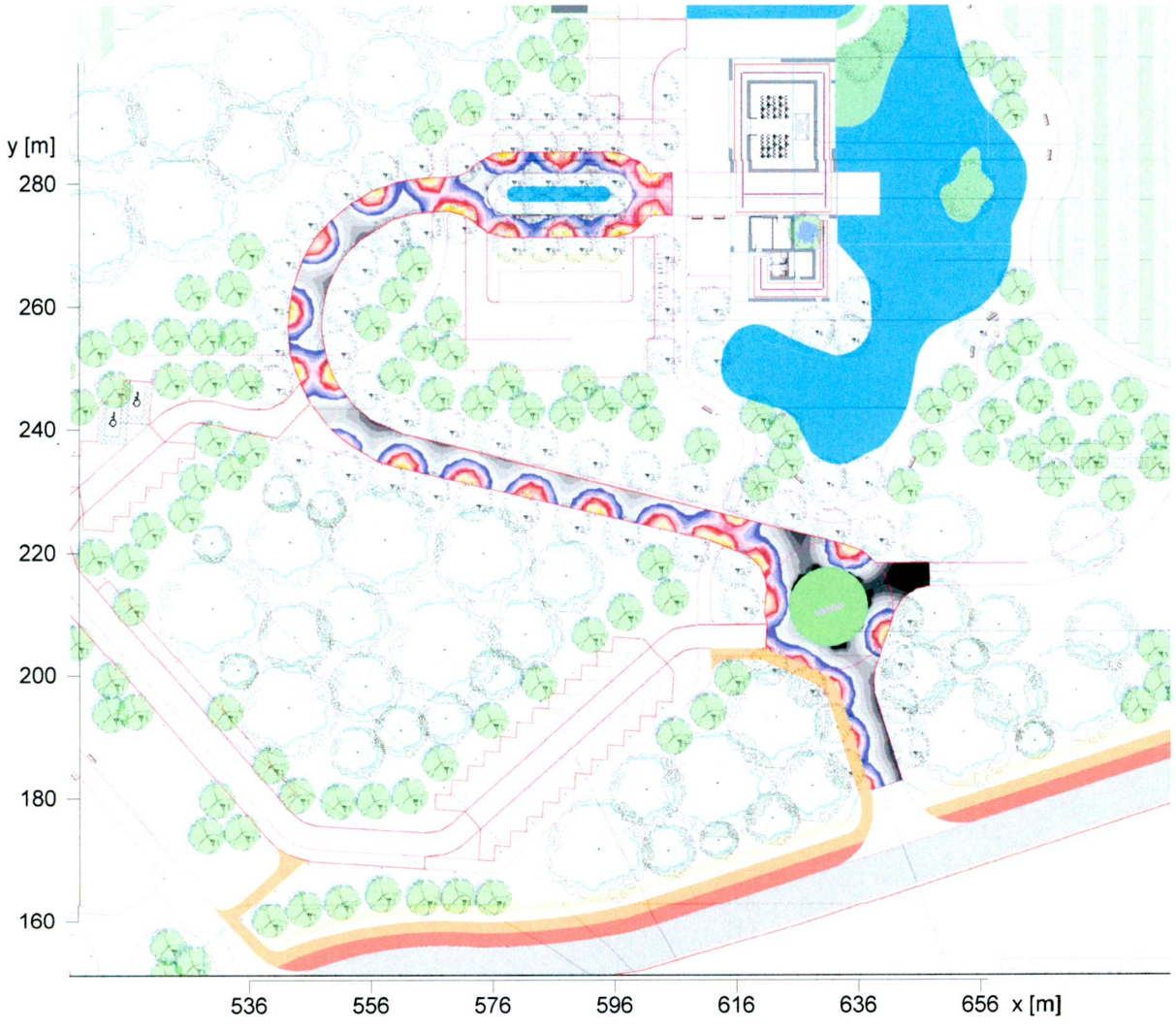
2.2.7 Pseudo colours, Ceremony Building (3m) (E)

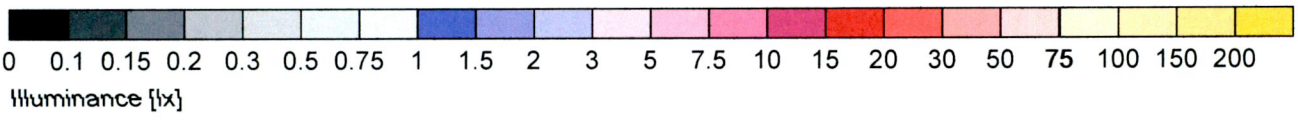


Height reference plane		: 0.00 m
Average illuminance	Em	: 171 lx
Minimum illuminance	Emin	: 88 lx
Maximum illuminance	Emax	: 394 lx
Uniformity Uo	Emin/Em	: 1 : 1.95 (0.51)
Diversity Ud	Emin/Emax	: 1 : 4.49 (0.22)

2.2 Calculation results, Exterior 1

2.2.8 Pseudo colours, Main Driveway To Ceremony Building (E)

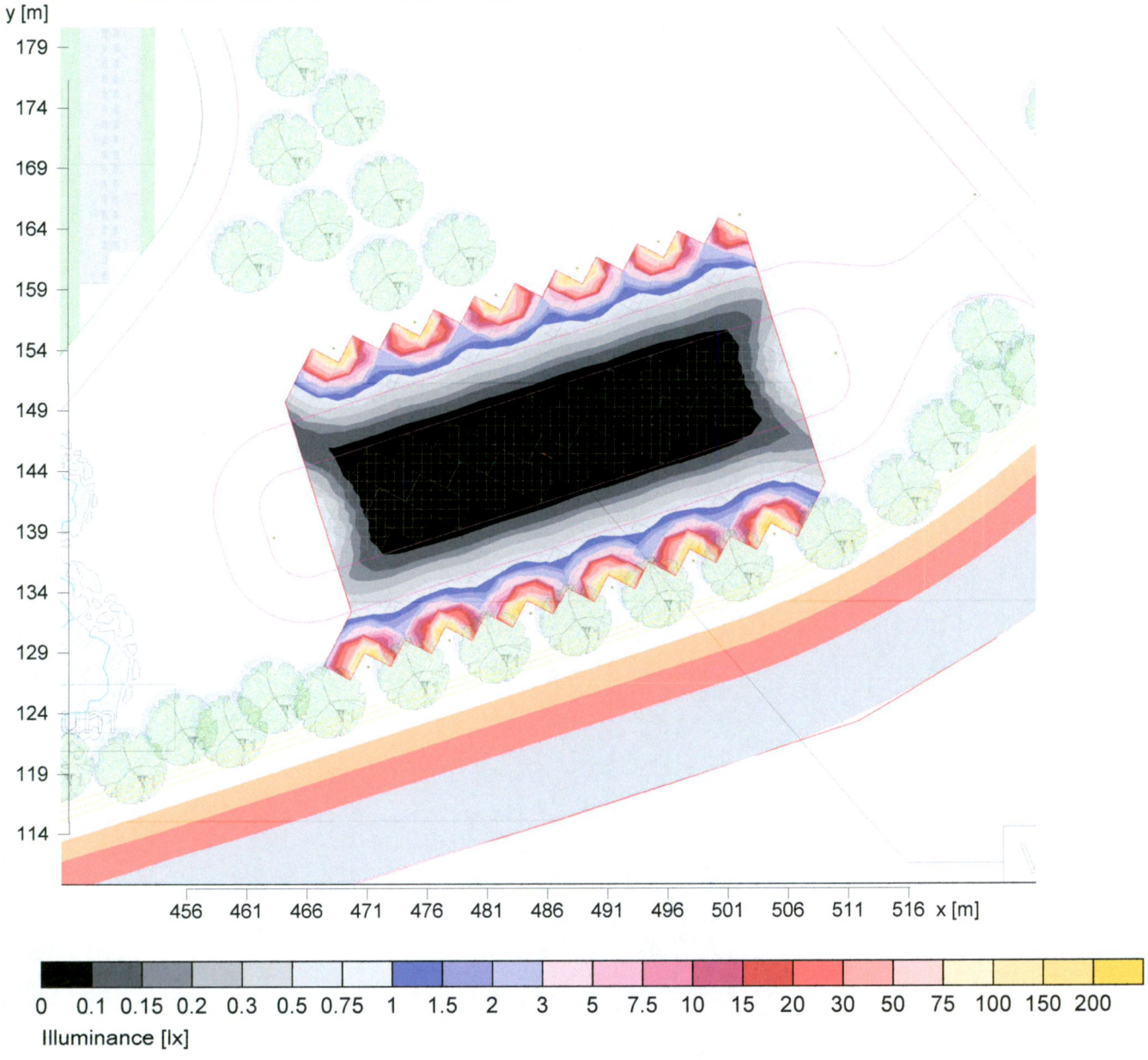




Height reference plane		: 0.00 m
Average illuminance	Em	: 15 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 294 lx
Uniformity Uo	Emin/Em	: 1 : 2767.44 (0.00)
Diversity Ud	Emin/Emax	: 1 : 55076.35 (0.00)

2.2 Calculation results, Exterior 1

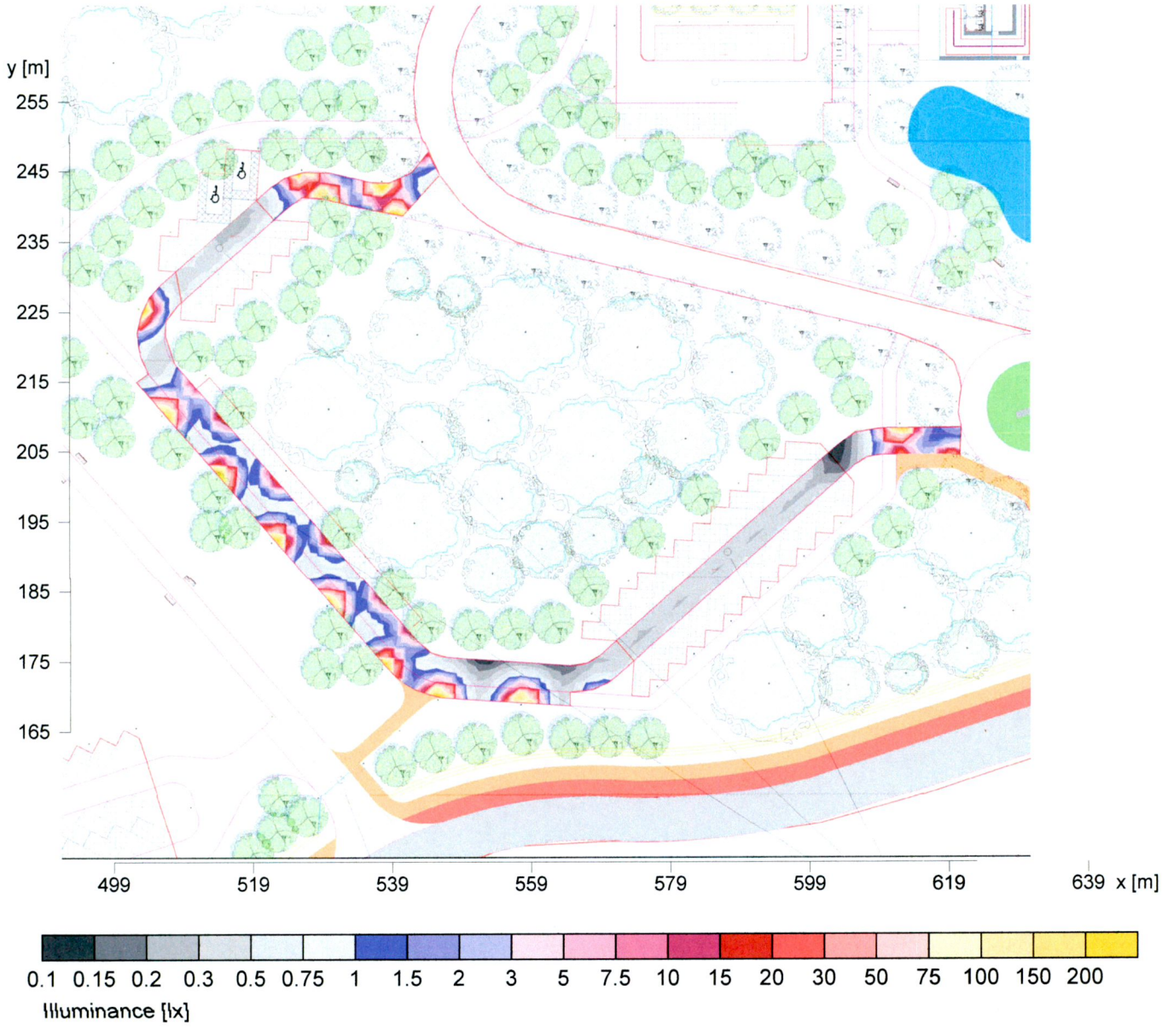
2.2.9 Pseudo colours, Overflow Car Park 2 (E)



Height reference plane		: 0.00 m
Average illuminance	Em	: 6 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 242 lx
Uniformity Uo	Emin/Em	: 1 : 159.02 (0.01)
Diversity Ud	Emin/Emax	: 1 : 6604.91 (0.00)

2.2 Calculation results, Exterior 1

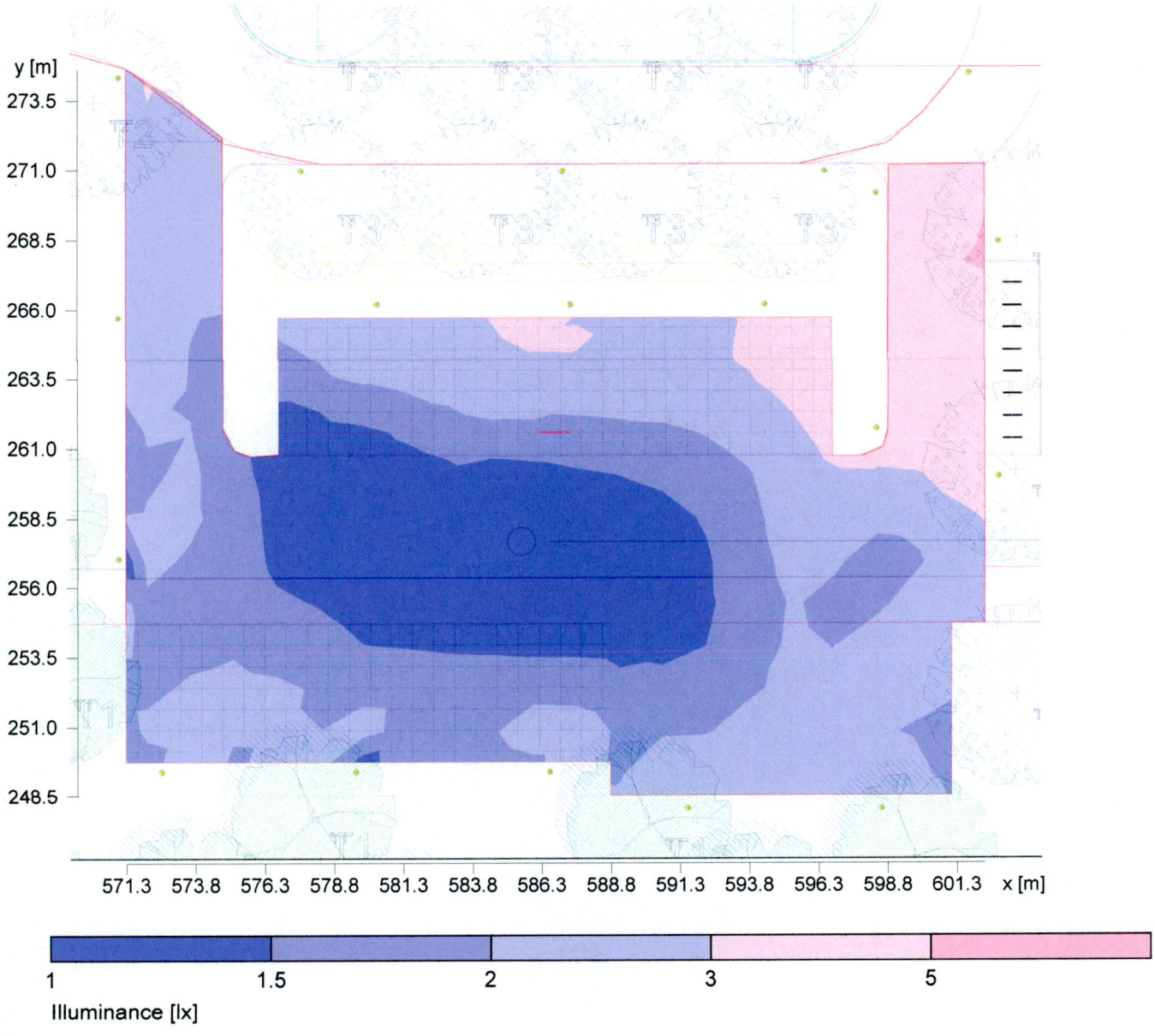
2.2.10 Pseudo colours, Roadway/ Walkway around Overflow Car Parks 1 (E)



Height reference plane		: 0.00 m
Average illuminance	Em	: 8 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 288 lx
Uniformity Uo	Emin/Em	: 1 : 62.49 (0.02)
Diversity Ud	Emin/Emax	: 1 : 2277.06 (0.00)

2.2 Calculation results, Exterior 1

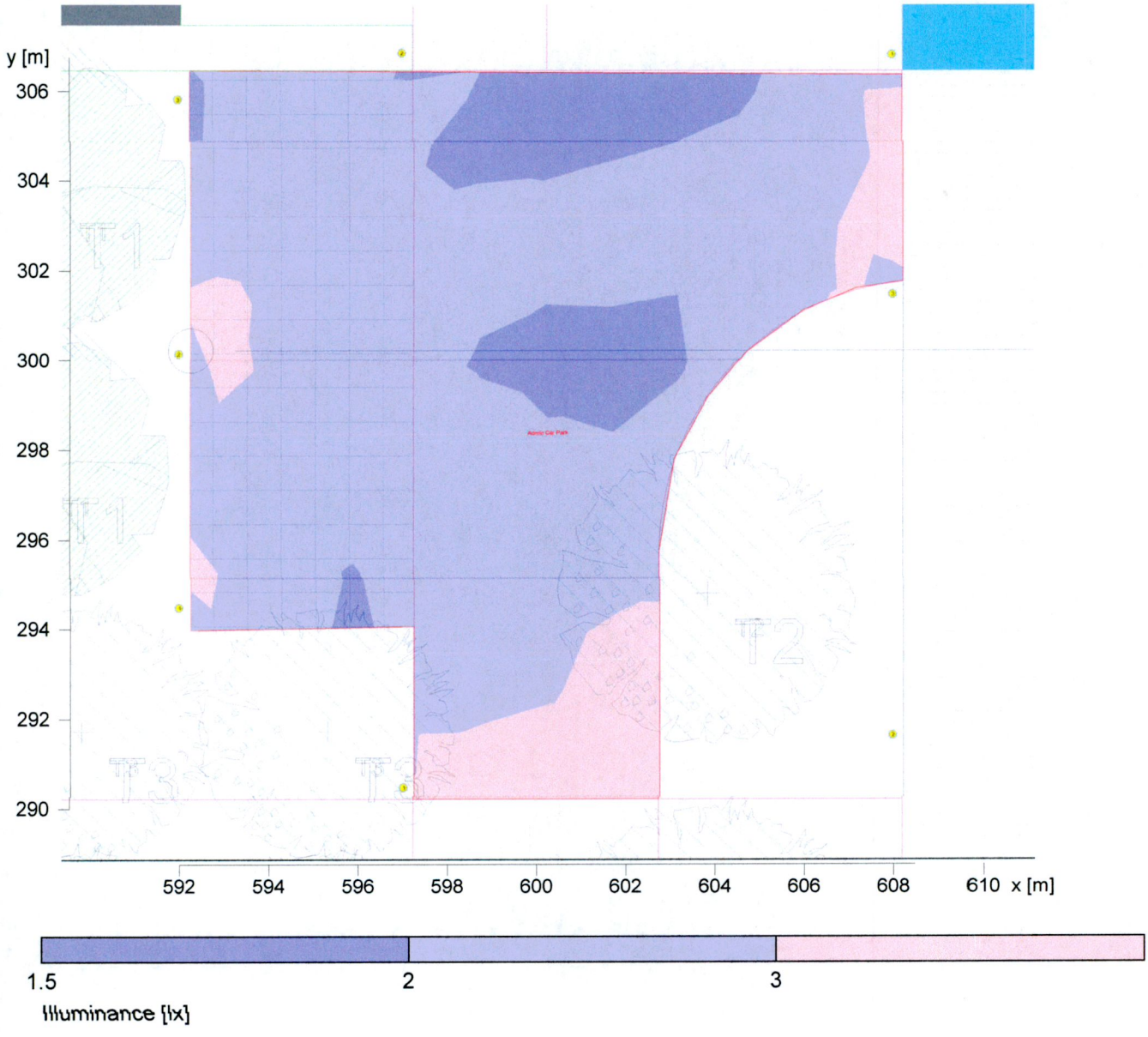
2.2.11 Pseudo colours, Ceremony Car Park (Ec)



Cylindrical illuminance		
Average illuminance	Em	: 2.1 lx
Minimum illuminance	Emin	: 1.18 lx
Maximum illuminance	Emax	: 5.01 lx
Uniformity Uo	Emin/Em	: 1 : 1.78 (0.56)
Diversity Ud	Emin/Emax	: 1 : 4.25 (0.24)

2.2 Calculation results, Exterior 1

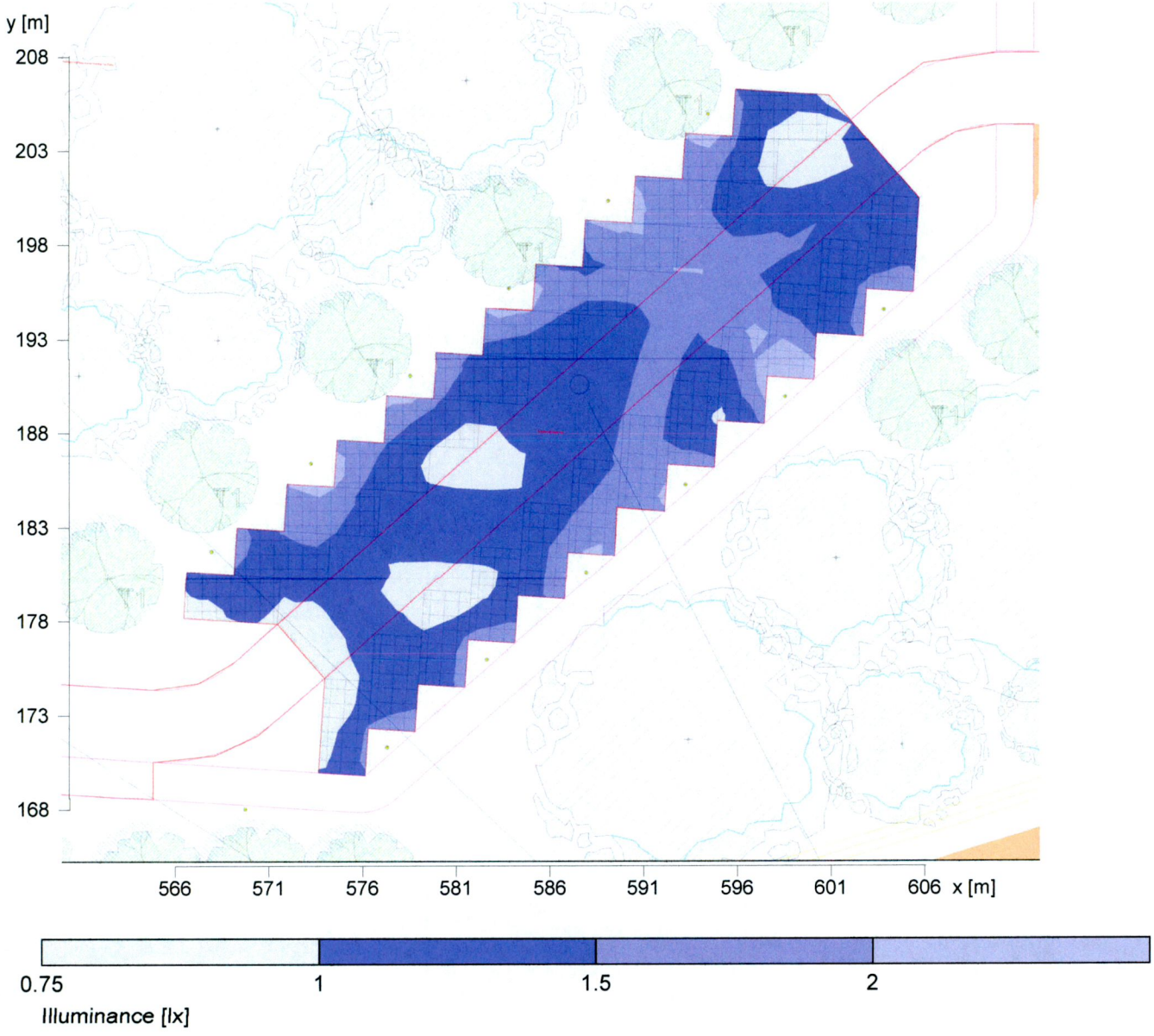
2.2.12 Pseudo colours, Admin Car Park (Ec)



Cylindrical illuminance		
Height reference plane		: 1.60 m
Average illuminance	Em	: 2.44 lx
Minimum illuminance	Emin	: 1.57 lx
Maximum illuminance	Emax	: 3.75 lx
Uniformity Uo	Emin/Em	: 1 : 1.56 (0.64)
Diversity Ud	Emin/Emax	: 1 : 2.39 (0.42)

2.2 Calculation results, Exterior 1

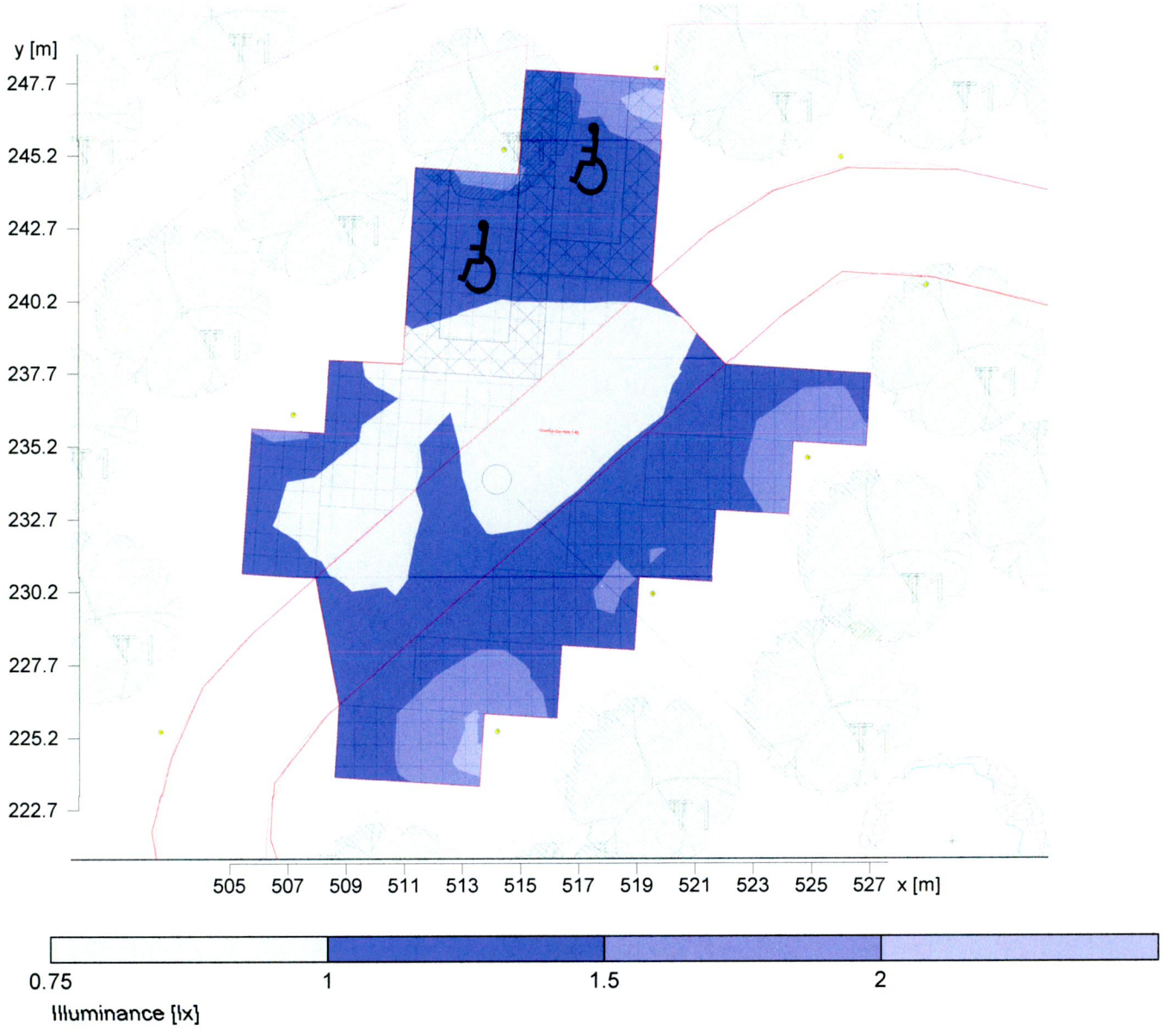
2.2.13 Pseudo colours, Overflow Car Park 1 #1 (Ec)



Cylindrical illuminance		
Height reference plane		: 1.60 m
Average illuminance	Em	: 1.34 lx
Minimum illuminance	Emin	: 0.77 lx
Maximum illuminance	Emax	: 2.6 lx
Uniformity Uo	Emin/Em	: 1 : 1.74 (0.57)
Diversity Ud	Emin/Emax	: 1 : 3.36 (0.30)

2.2 Calculation results, Exterior 1

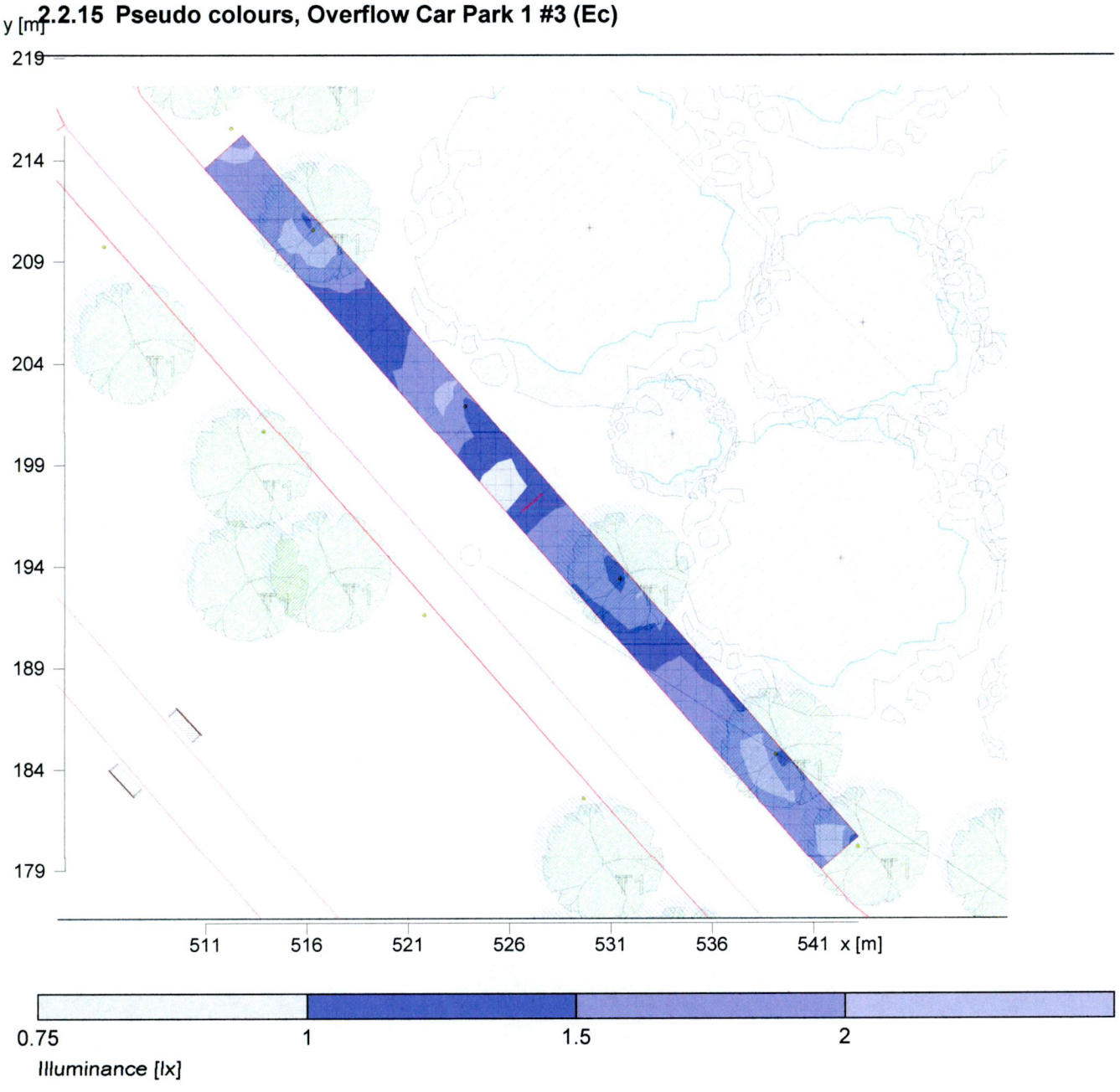
2.2.14 Pseudo colours, Overflow Car Park 1 #2 (Ec)



Cylindrical illuminance		
Height reference plane		: 1.60 m
Average illuminance	Em	: 1.19 lx
Minimum illuminance	Emin	: 0.78 lx
Maximum illuminance	Emax	: 2.37 lx
Uniformity Uo	Emin/Em	: 1 : 1.52 (0.66)
Diversity Ud	Emin/Emax	: 1 : 3.04 (0.33)

2.2 Calculation results, Exterior 1

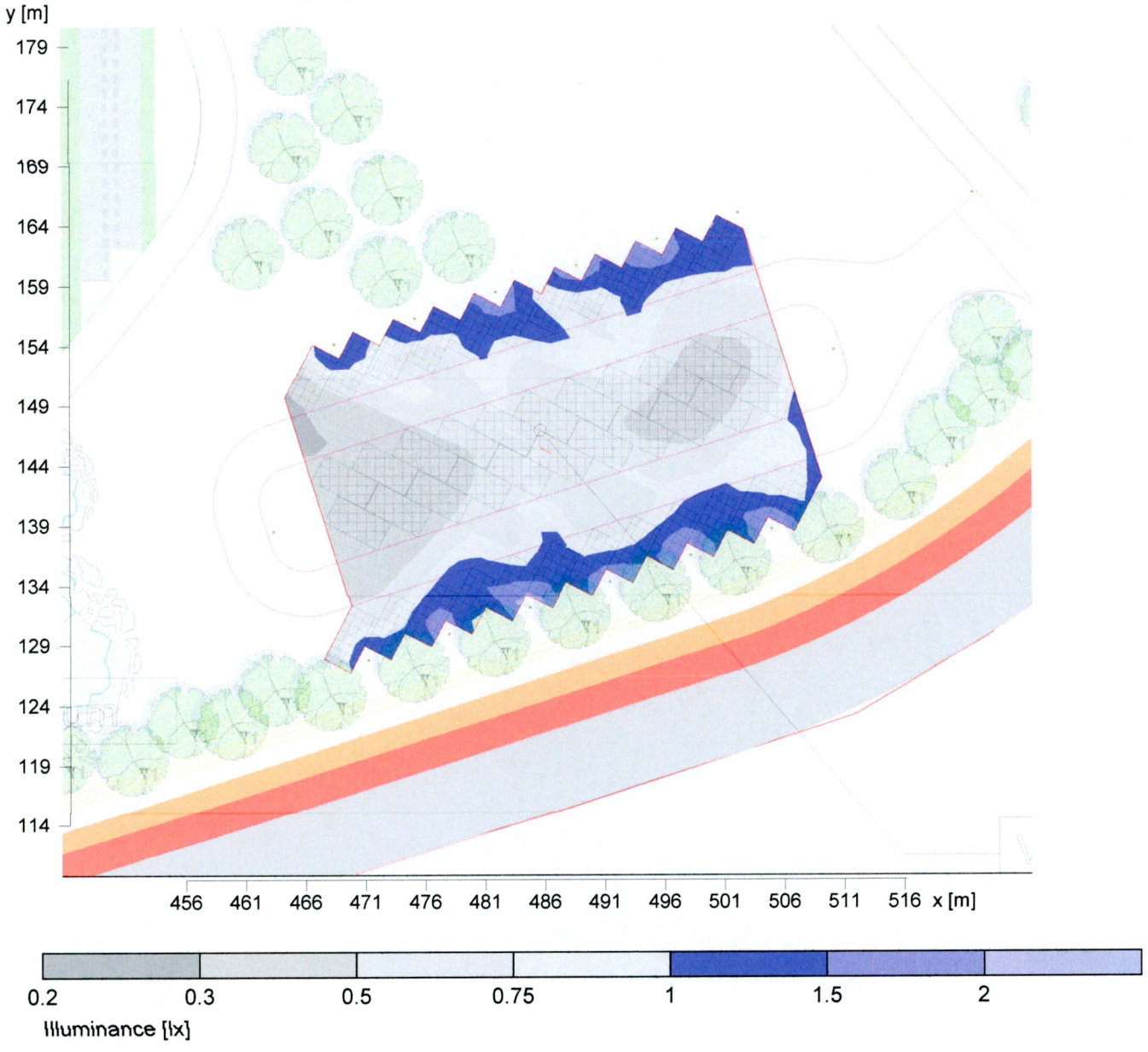
2.2.15 Pseudo colours, Overflow Car Park 1 #3 (Ec)



Cylindrical illuminance		
Height reference plane		: 1.60 m
Average illuminance	Em	: 1.64 lx
Minimum illuminance	Emin	: 0.92 lx
Maximum illuminance	Emax	: 2.34 lx
Uniformity Uo	Emin/Em	: 1 : 1.79 (0.56)
Diversity Ud	Emin/Emax	: 1 : 2.55 (0.39)

2.2 Calculation results, Exterior 1

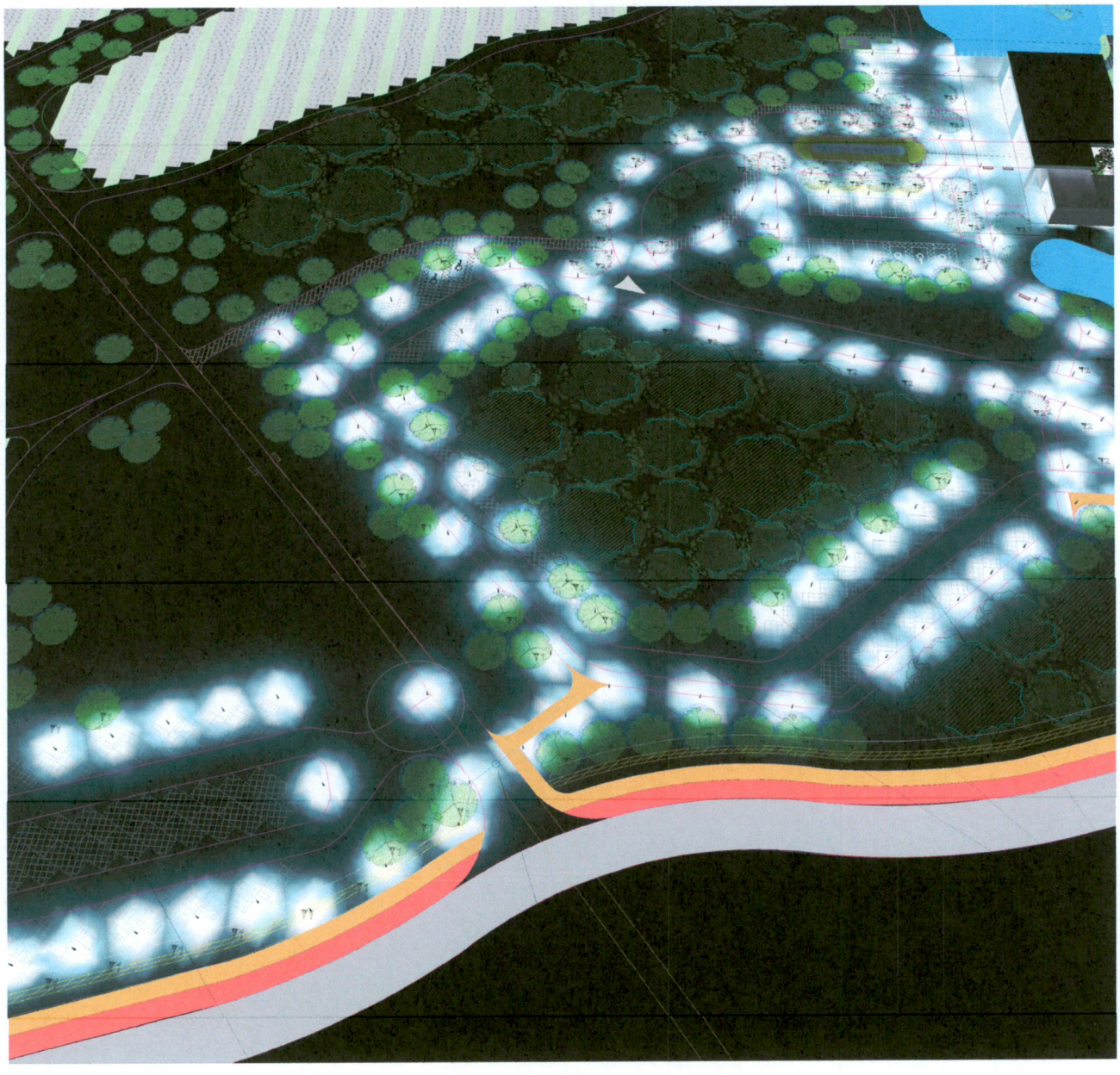
2.2.16 Pseudo colours, Overflow Car Park 2 (Ec)



Cylindrical illuminance		
Height reference plane		: 1.60 m
Average illuminance	Em	: 0.78 lx
Minimum illuminance	Emin	: 0.27 lx
Maximum illuminance	Emax	: 2.1 lx
Uniformity Uo	Emin/Em	: 1 : 2.82 (0.35)
Diversity Ud	Emin/Emax	: 1 : 7.63 (0.13)

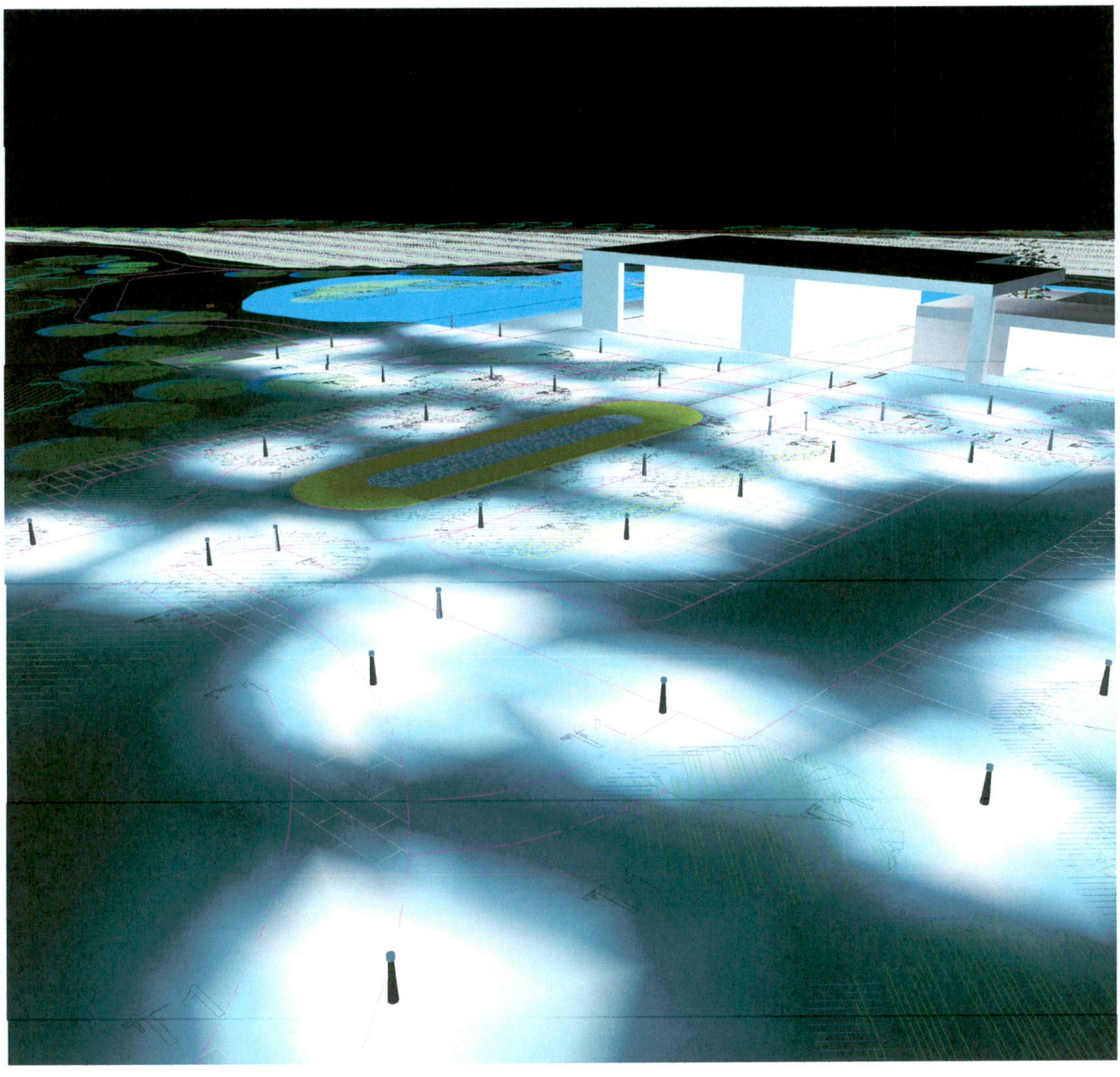
2.2 Calculation results, Exterior 1

2.2.17 3D luminance, View 1



2.2 Calculation results, Exterior 1

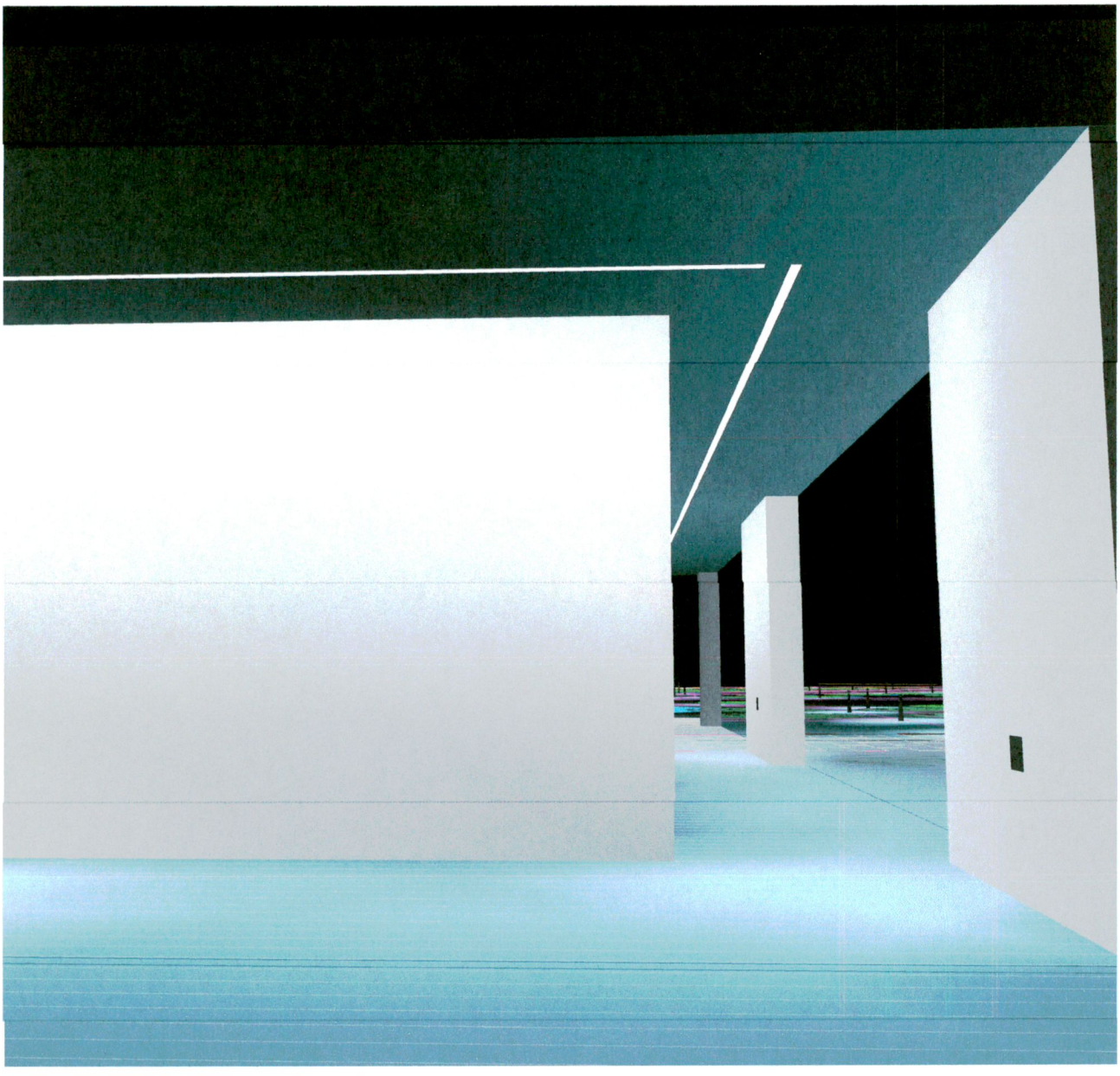
2.2.18 3D luminance, View 2



3 Exterior 1 (2)

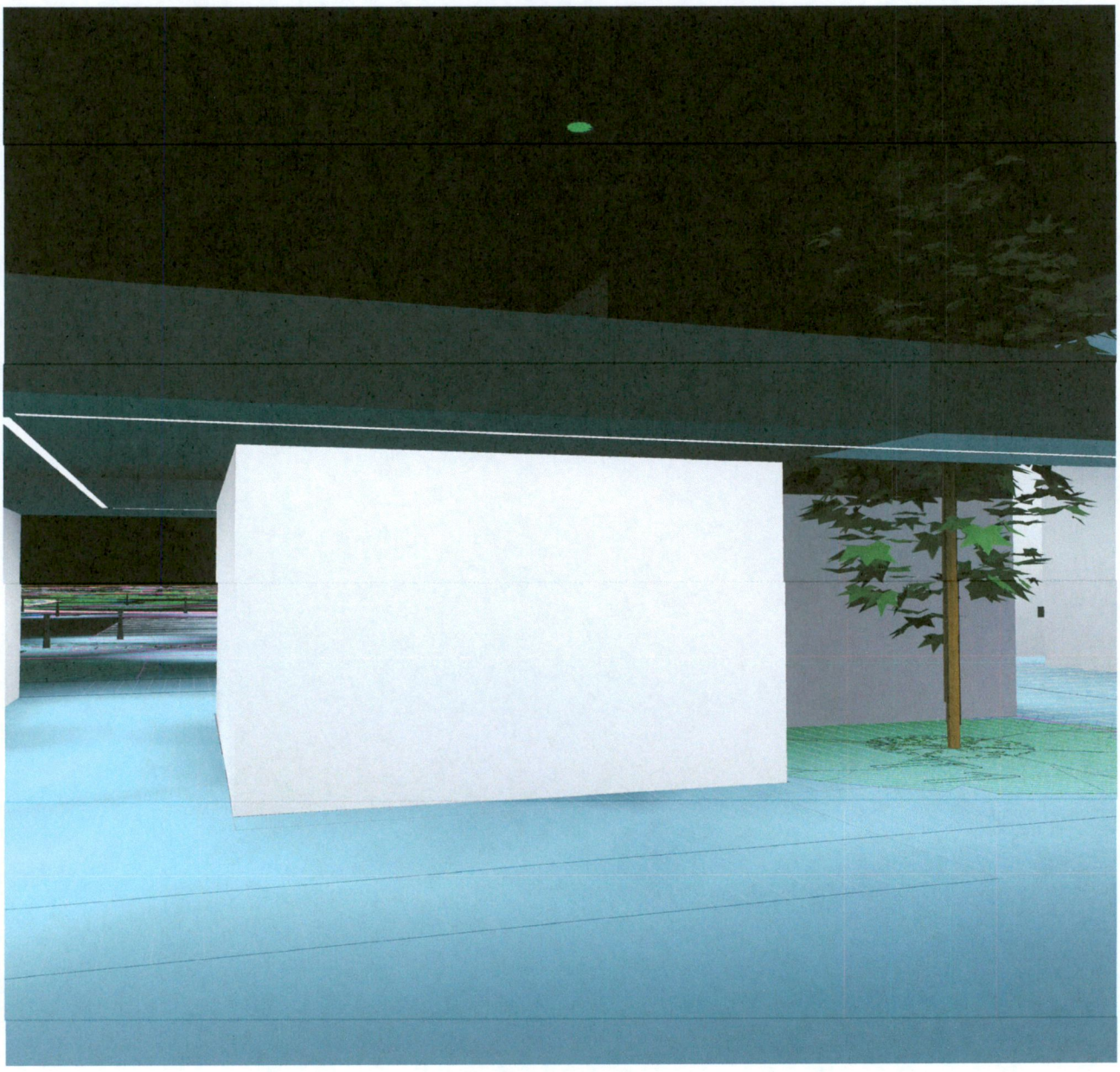
3.1 Calculation results, Exterior 1 (2)

3.1.1 3D luminance, View 3



3.1 Calculation results, Exterior 1 (2)

3.1.2 3D luminance, View 4



ALD22180 Citywest Cemetery, Exterior Lighting Schedule

10/11/2022 V1.

QTY	Type Code	Type	Product Code
127	X1	iRuta R 20W Bollard Luminaire	L2765/3K
10	X2	iCava 12W Recessed Wall Luminaire	AC5015
96	X3	iEnna Recessed Linear System with LEDs to suit the lighting levels required (in metres)	IC6306

ALUMINA
LIGHTING

ALD22180

Citywest Cemetery

Parking Areas and Building

Luminaire Data V1

Renaissance Engineering

Alumina Lighting, Unit 21 Redleaf Business Park, Turvey, Donabate, Co. Dublin

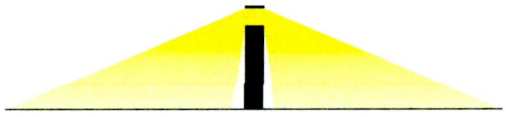
iRuta R

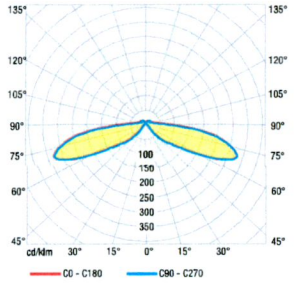
Minimal design bollard, iRUTA R is ideal for discrete illumination of walkways and residential areas. Offers glare-free illumination and visual comfort, creating a welcoming atmosphere.

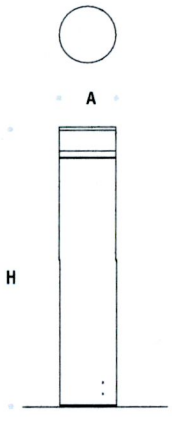
Designed to last in extremely harsh environments.

CODE	POWER CONSUMPTION	LUMEN OUTPUT (lm) 3000K / 4000K	COLOUR TEMPERATURE	A (mm)	H (mm)
LB2763	18W	1350 / 1530	3000K / 4000K	160	1000
LB2765	20W	2025 / 2295	3000K / 4000K	200	1000

LED Type	High efficiency LEDs, available in 2700K, 3000K, 4000K, 5000K, 6500K CCT tolerance within a 3-step MacAdams ellipse and LM80 compliant.
Nominal Voltage	220V-240V AC, 50/60Hz
Color Rendering Index	CRI> 80 standard and CRI>90 on request.
Optics	Symmetrical downward light beam with 360° light emission.
Materials	Corrosion resistant double layer polyester powder coated paint finish die cast aluminium housing, aluminium extruded column (EN AW-6060) with stainless steel screws (A4 grade) and silicone gaskets. Power unit is built in. Available in anthracite gray as a standard finish or any desired RAL colour.
Optional Coating	Marine grade.
Diffuser	Shockproof PMMA UV Stabilised Diffuser.
LED Specification	L90B50 > 100000 hours life time.
Energy Efficiency Class (EEC)	A++
Operating Temperature	-40°C / +55°C
Power Factor	>0.95
Protection Class	IP65
Impact Resistance	IK09
Insulation Class	Class I
Conformity	Complies with European Standards EN 60598 and CE certified.





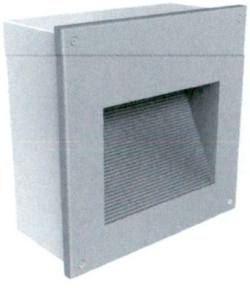


Type X2

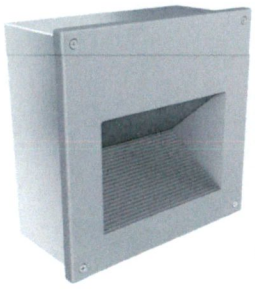
iCava

Compact recessed wall lights, producing a clearly defined wash of light. Adapted to illuminate ground surfaces with downward orientation of light.

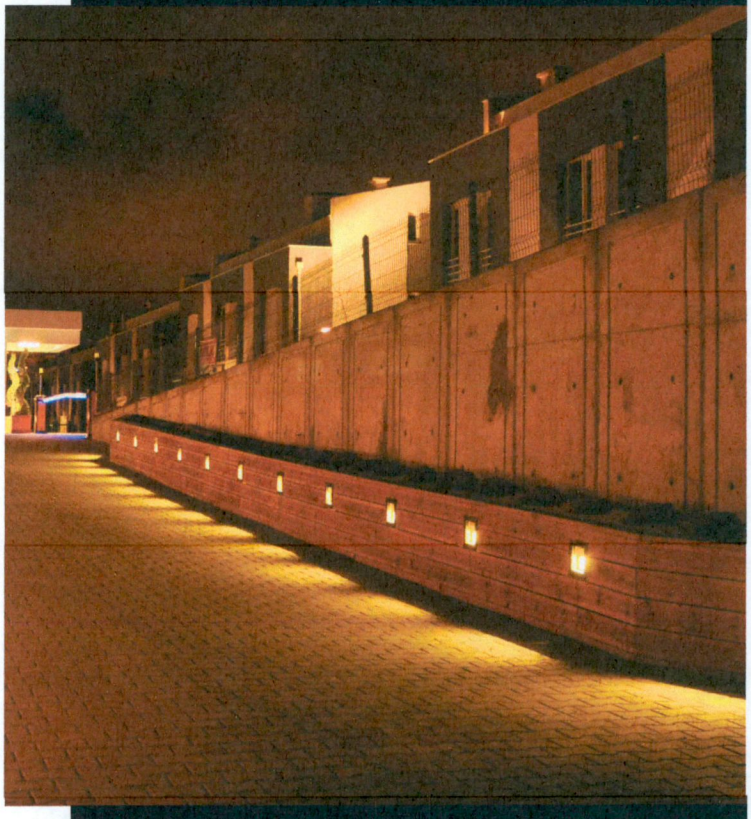
Designed to last in extremely harsh environments.



AC5013 - AC5015

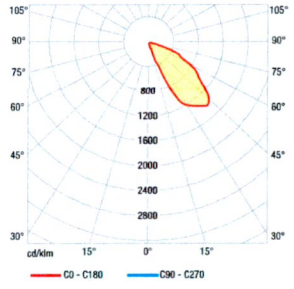


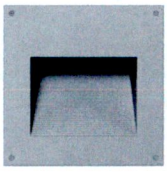
AC5014 - AC5016

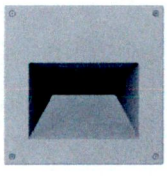


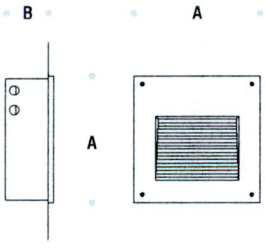
CODE	POWER CONSUMPTION	LUMEN OUTPUT (lm) 3000K / 4000K	COLOUR TEMPERATURE	A (mm)	B (mm)
AC5013	24W	1800 / 2040	3000K / 4000K	300	116
AC5014	24W	1800 / 2040	3000K / 4000K	300	116
AC5015	12W	900 / 1020	3000K / 4000K	250	116
AC5016	12W	900 / 1020	3000K / 4000K	250	116

LED Type	High efficiency LEDs, available in 2700K, 3000K, 4000K, 5000K, 6500K CCT tolerance within a 3-step MacAdams ellipse and LM80 compliant.
Nominal Voltage	220V-240V AC, 50/60Hz
Color Rendering Index	CRI> 80 standard and CRI>90 on request.
Optics	Directed downwards light.
Materials	Corrosion resistant double layer polyester powder coated paint fnish die cast aluminium housing with stainless steel screws (A4 grade) and silicone gaskets. Power unit is built in. Available in anthracite gray as a standard finish or any desired RAL colour. Includes recessing box.
Optional Coating	Marine grade.
Diffuser	Thermal-shock resistant tempered glass.
LED Specification	L90B50 > 100000 hours life time.
Energy Efficiency Class (EEC)	A++
Operating Temperature	-40°C / +55°C
Power Factor	>0.95
Protection Class	IP65
Impact Resistance	IK09
Insulation Class	Class I
Installation	Connection via junction boxes.
Conformity	Complies with European Standards EN 60598 and CE certified.

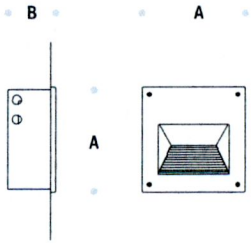








AC5013 - AC5015



AC5014 - AC5016

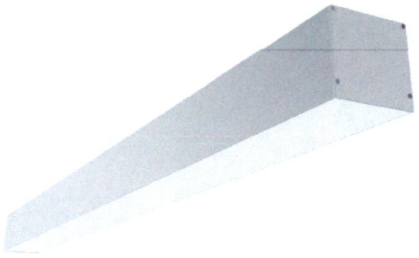
Type X3

iEnna

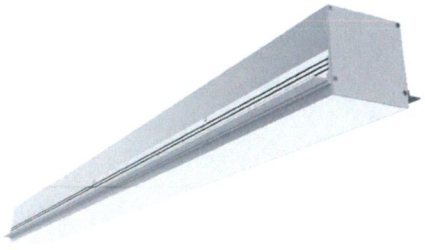
Recessed, ceiling surface or suspended modular system in continuous line, with a visible light. With clear shapes, cutting edge LED technology and true sophistication. Smart construction and simple installation allow high impact effect.

Designed to last in extremely harsh environments.

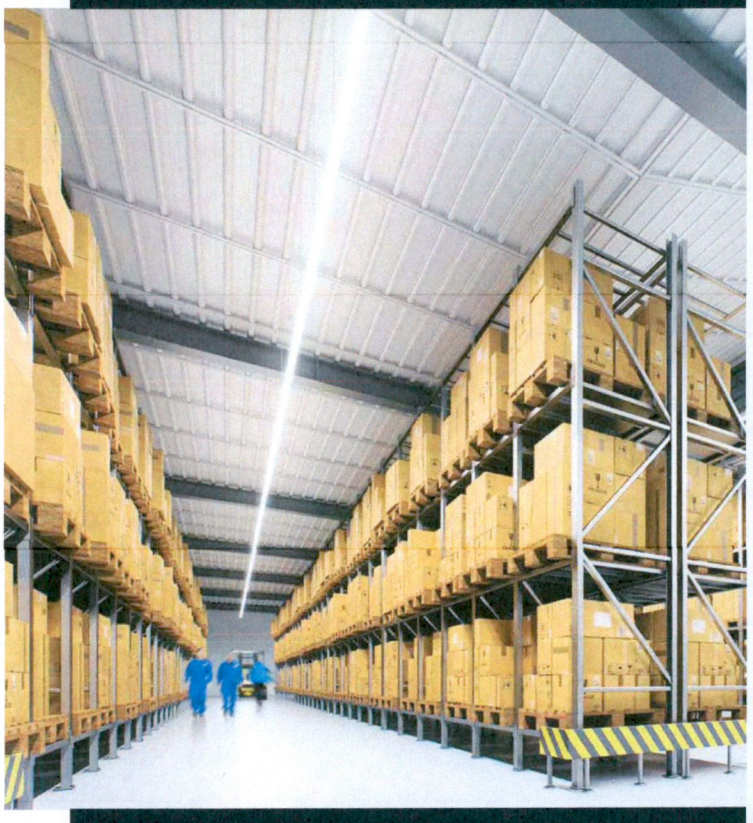
IC6302



IC6304

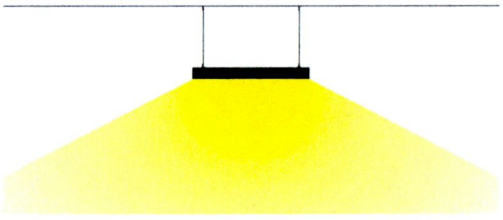


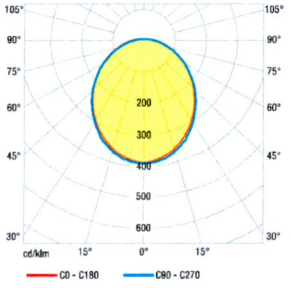
IC6306



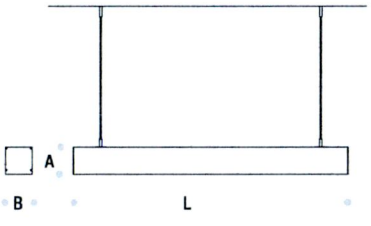
CODE	POWER CONSUMPTION	LUMEN OUTPUT (lm) 3000K / 4000K	COLOUR TEMPERATURE	A (mm)	B (mm)	L (mm)
IC6302 SUSPENDED	54W	5940 / 6480	3000K / 4000K	100	100	1000
IC6304 SURFACE	54W	5940 / 6480	3000K / 4000K	100	100	1000
IC6306 RECESSED	54W	5940 / 6480	3000K / 4000K	100	100	1000

LED Type	High efficiency LEDs, available in 2700K, 3000K, 4000K, 5000K, 6500K CCT tolerance within a 3-step MacAdams ellipse and LM80 compliant.
Nominal Voltage	220V-240V AC, 50/60Hz
Color Rendering Index	CRI> 80 standard and CRI>90 on request.
Optics	Diffused beam for high uniform light distribution.
Materials	Corrosion resistant double layer polyester powder coated paint finish extruded aluminium housing with stainless steel screws (A4 grade) and silicone gaskets. Power unit is built in. Available in anthracite gray as a standard finish or any desired RAL colour. BSITECH® LED Module.
Optional Coating	Marine grade.
Diffuser	High impact and heat resistant polycarbonate with UV protection.
LED Specification	L90B50 > 100000 hours life time.
Energy Efficiency Class (EEC)	A++
Operating Temperature	-40°C / +55°C
Power Factor	>0.95
Control Systems	1-10V DIM, DALI Interface.
Protection Class	IP54
Impact Resistance	IK08
Insulation Class	Class I
Installation	Connection via junction boxes.
Conformity	Complies with European Standards EN 60598 and CE certified.

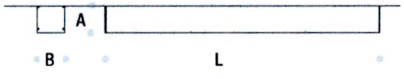




IC6302



IC6304



IC6306