



Stoney Ridge Care Home External

Installation : New Lighting plan

Project number : QUO-83697-P2F8D6
Customer : The Electrical Network
Processed by : Amy Smith
Date : 19.03.2024 Rev D

Project description:

All room/exterior area dimensions to be checked on-site prior to ordering.

Calculation based on standard reflectance values as 70/50/20 and Maintenance Factor 0.8.

Lighting designed to CIBSE guidelines where applicable and/or client requirements, all stated lux values are for overall averages across the room reference plane.

It is the responsibility of the customer to ensure any scheme provided by Ansell meets all requirements of the end uses.

Please note - This design has been completed using the fittings requested by the customer, we do not currently have the information for the Bulkhead with the eyelid so the standard fittings have been used. No emergency lighting has been included in this design as it is unknown as to where the escape route is. Please ensure all information is checked before ordering.

Rev A - This design has been revised to include a option that meets the recommendations of the Bats and Artificial Lighting in the UK guidelines, we have changed the fittings to be Warm White (3000K) and to some of our IDA Dark sky approved fittings as these produce minimal upwards light.

Rev B - As per the customers request the wall packs have been changed to a directional wall light, please note that the above IDA Dark sky approved fittings no longer apply to the wildlife friendly design.

Rev C - This design has now been changed point for point for the wall light, due to this the desired uniformity and lux levels can not be achieved. please ensure all information is checked before ordering.

Rev D - added in additional references for the front section of the building as per the customers request, please note due the fittings used and limited mounting positions the desired uniformity can not be achieved.

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.



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1 Luminaire data

1.1 ANSELL, STREETLIGHTS - Magna Street... (AMAGLED/1/WW)

1.1.1 Data sheet

Manufacturer: ANSELL



AMAGLED/1/WW Post Top Lantern STREETLIGHTS - Magna Street Light
 AMAGLED/1/WW
 FLOODLIGHTING
 Magna LED Street Light

Supplied c/w Integral Driver

- Die-cast aluminium construction for optimal heat dissipation and performance
- UV stabilized polycarbonate cover
- Toolless gear tray removal for ease of maintenance
- Built in anti-tamper isolation facility
- Compatible with post top or side entry utility 76mm spigot
- Advanced lens technology providing optimum performance and control.
- G3 Glare Rating
- Surge protection
- Available in standard, complete with photocell option
- LED lifespan L80 B10 54,000 hours

Operating Temp -30°C to 50°C

- 5 Year Product Warranty
- IP66

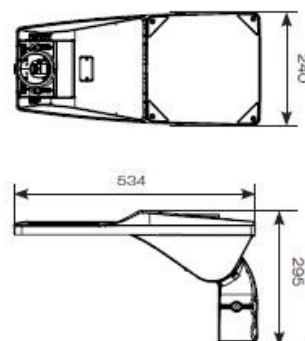
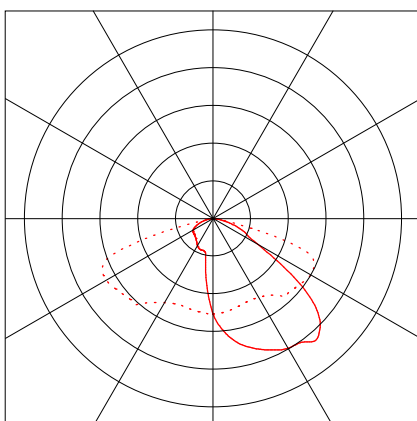
Luminaire data

Absolute Photometry : 150.26 lm/W
 Luminaire efficacy : A30 ↓100.0% ↑0.0%
 Classification : 37 75 97 100 100
 CIE Flux Codes : 31.9 / 37.0
 UGR 4H 8H : Electronic ballast
 Control gear : 31 W
 Power : 4658 lm
 Luminous flux

Equipped with

Quantity : 1
 Designation : LED
 Colour : --
 Socket : --

Dimensions : 534 mm x 240 mm x 95 mm





1 Luminaire data

1.2 ANSELL, WALL LIGHTS - Reef Direc... (AREELEDWLD - CW)

1.2.1 Data sheet

Manufacturer: ANSELL



AREELEDWLD - CW Ceiling mounted luminaire WALL LIGHTS - Reef Directional

AREELEDWLD
 AMENITY
 Reef LED CCT Directional Wall Light
 Supplied c/w Integral Driver

- Durable outdoor directional wall light
 - Installation in either upward or downward orientation
 - Only suitable for semi commercial applications
 - Polycarbonate construction ideal for coastal applications
 - CCT selectable between 3000K, 4000K and 5700K
 - Unique lockable installation base plate with push fit loop-in loop-out terminals for ease of installation
 - LED lifespan L70 54,000 hours
 - Non-dimmable
- Suitable for both internal and external use
 - 3 Year Product Warranty
 - IP65

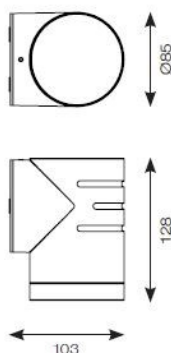
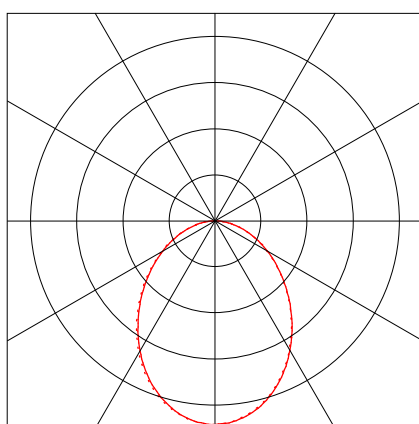
Luminaire data

Absolute Photometry
 Luminaire efficacy : 77.89 lm/W
 Classification : A40 ↓100.0% ↑0.0%
 CIE Flux Codes : 53 82 96 100 100
 UGR 4H 8H : 26.6 / 26.8
 Control gear : Electronic ballast
 Power : 5.7 W
 Luminous flux : 444 lm

Equipped with

Quantity : 1
 Designation : LED single 840
 Colour : 4000K
 Socket : --
 Colour reproduction : --

Dimensions : Ø85 mm x 128 mm

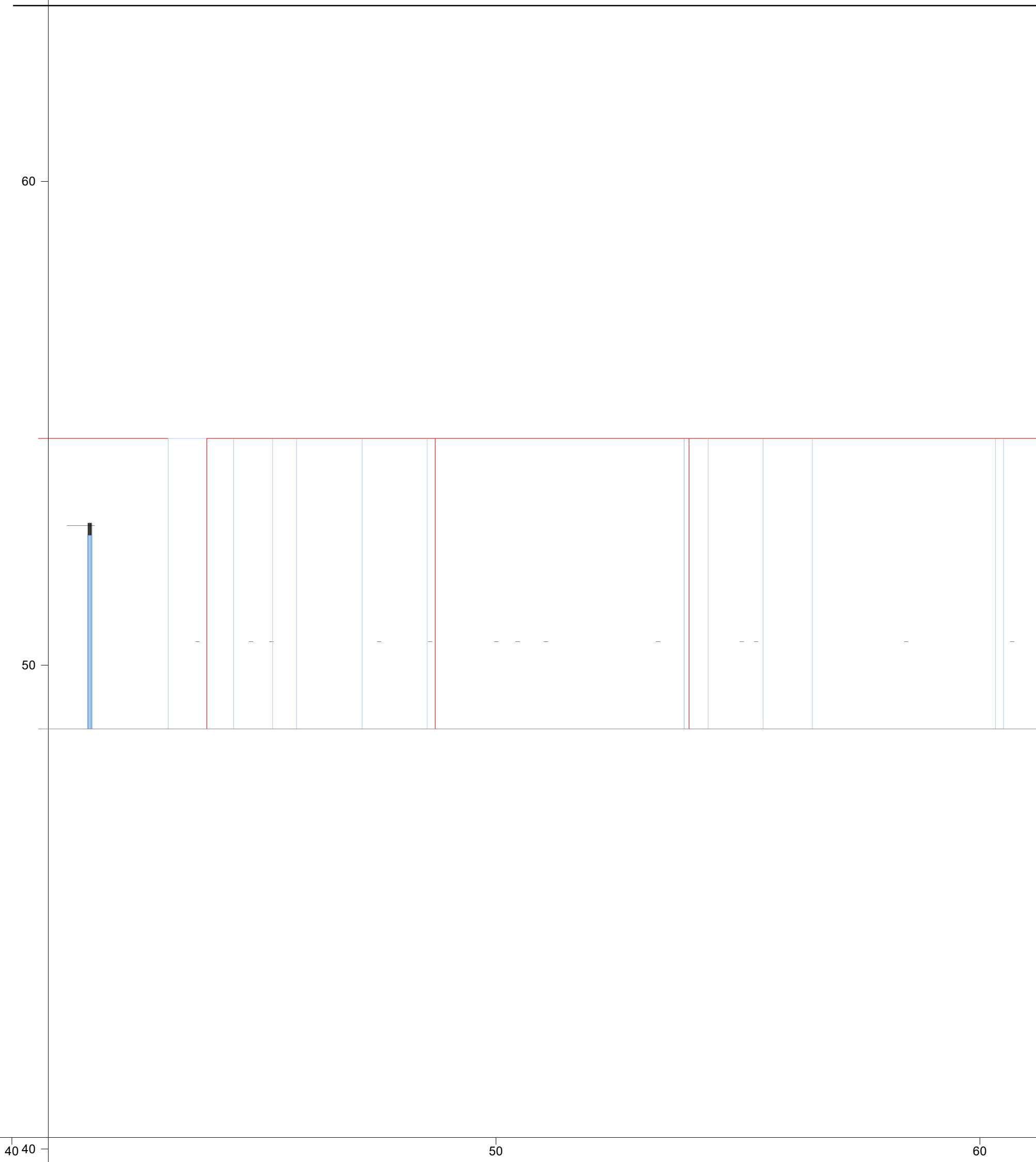




2 Stoney Ridge Care Home External - Wildlife friendly Design

2.1 Description, Stoney Ridge Care Home External - Wildlife friendly Design

2.1.1 Floor plan





2 Stoney Ridge Care Home External - Wildlife friendly Design

2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.1 Result overview, Car Park





General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux	40824 lm
Total power	351.3 W
Total power per area (11775.79 m ²)	0.03 W/m ² (0.17 W/m ² /100lx)
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	Em	17.5 lx
Minimum illuminance	Emin	2.91 lx
Maximum illuminance	Emax	67 lx
Uniformity Uo	Emin/Em	1:6.01 (0.17)
Diversity Ud	Emin/Emax	1:23 (0.04)

Type No./Make

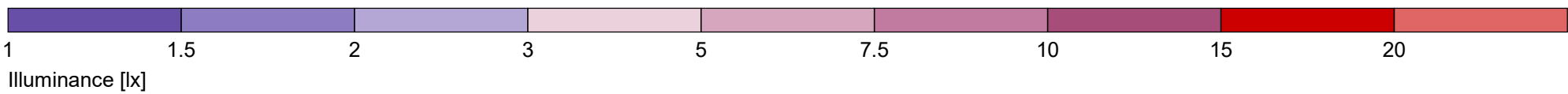
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	Luminaire name	: STREETLIGHTS - Magna Street Light
	Equipment	: 1 x LED 31 W / 4658 lm
2	29 x	
	Order No.	: AREELEDWLD - CW
	Luminaire name	: WALL LIGHTS - Reef Directional
	Equipment	: 1 x LED single 840 5.7 W / 444 lm

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.2 Result overview, Main Entrance



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux	40824 lm
Total power	351.3 W
Total power per area (11775.79 m ²)	0.03 W/m ² (0.38 W/m ² /100lx)
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	Em	7.89 lx
Minimum illuminance	Emin	1.47 lx
Maximum illuminance	Emax	27.6 lx
Uniformity Uo	Emin/Em	1:5.36 (0.19)
Diversity Ud	Emin/Emax	1:18.7 (0.05)

Type No. Make

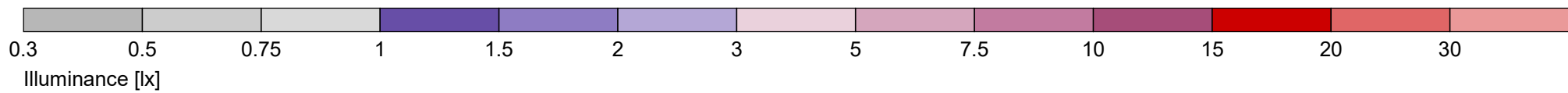
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		Order No.	: AMAGLED/1/WW
		Luminaire name	: STREETLIGHTS - Magna Street Light
		Equipment	: 1 x LED 31 W / 4658 lm
2	29 x		
		Order No.	: AREELEDWLD - CW
		Luminaire name	: WALL LIGHTS - Reef Directional
		Equipment	: 1 x LED single 840 5.7 W / 444 lm

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.3 Result overview, Perimeter Walkway



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux	40824 lm
Total power	351.3 W
Total power per area (11775.79 m ²)	0.03 W/m ² (0.58 W/m ² /100lx)
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	Em	5.15 lx
Minimum illuminance	Emin	0.33 lx
Maximum illuminance	Emax	31.9 lx
Uniformity Uo	Emin/Em	1:15.6 (0.06)
Diversity Ud	Emin/Emax	1:96.8 (0.01)

Type No. Make

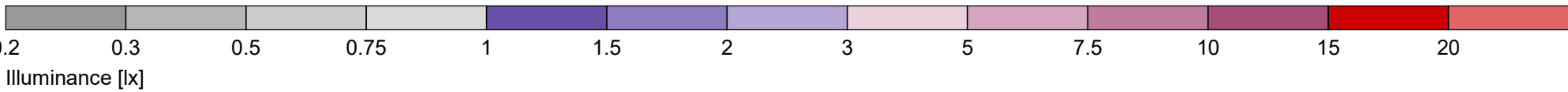
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		Luminaire name	: STREETLIGHTS - Magna Street Light
		Equipment	: 1 x LED 31 W / 4658 lm
2	29 x		
		Order No.	: AREELEDWLD - CW
		Luminaire name	: WALL LIGHTS - Reef Directional
		Equipment	: 1 x LED single 840 5.7 W / 444 lm

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.4 Result overview, Light Spill A



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	40824 lm
Total power	351.3 W
Total power per area (11775.79 m ²)	0.03 W/m ²
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	Em	2.67 lx
Minimum illuminance	Emin	0.28 lx
Maximum illuminance	E _{max}	26.8 lx
Uniformity U _o	E _{min} /E _m	1:9.37 (0.11)
Diversity U _d	E _{min} /E _{max}	1:94.1 (0.01)

Type No. Make

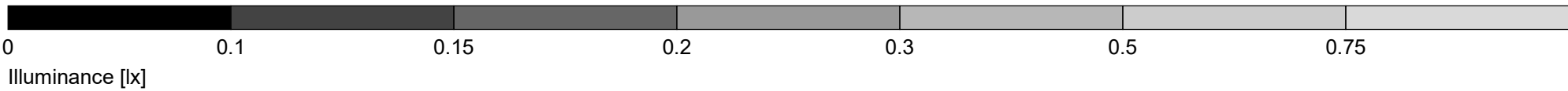
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		Order No.	: AMAGLED/1/WW
		Luminaire name	: STREETLIGHTS - Magna Street Light
		Equipment	: 1 x LED 31 W / 4658 lm
2	29 x		
		Order No.	: AREELEDWLD - CW
		Luminaire name	: WALL LIGHTS - Reef Directional
		Equipment	: 1 x LED single 840 5.7 W / 444 lm

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.5 Result overview, Light Spill B



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	40824 lm
Total power	351.3 W
Total power per area (11775.79 m ²)	0.03 W/m ²
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	Em	0.25 lx
Minimum illuminance	Emin	0.09 lx
Maximum illuminance	Emax	0.83 lx
Uniformity Uo	Emin/Em	1:2.95 (0.34)
Diversity Ud	Emin/Emax	1:9.64 (0.1)

Type No./Make

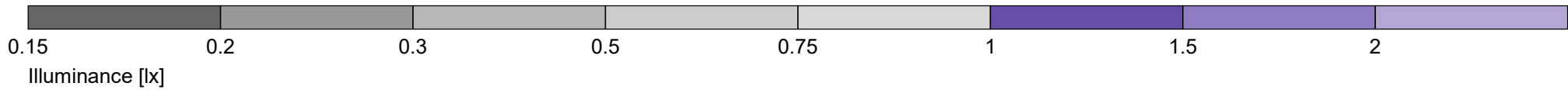
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		Equipment	: 1 x LED 31 W / 4658 lm
2	29 x	Order No.	: AREELEDWLD - CW
		Luminaire name	: WALL LIGHTS - Reef Directional
		Equipment	: 1 x LED single 840 5.7 W / 444 lm

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.6 Result overview, Light Spill C



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	40824 lm
Total power	351.3 W
Total power per area (11775.79 m ²)	0.03 W/m ²
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	Em	0.65 lx
Minimum illuminance	Emin	0.15 lx
Maximum illuminance	Emax	2.51 lx
Uniformity Uo	Emin/Em	1:4.31 (0.23)
Diversity Ud	Emin/Emax	1:16.6 (0.06)

Type No. Make

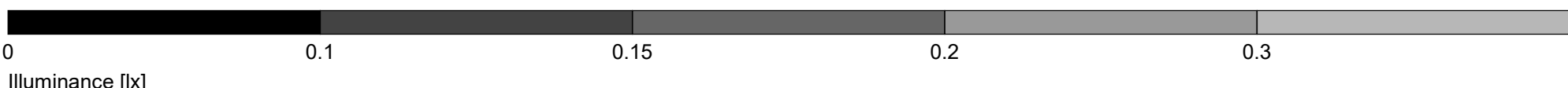
1	6 x	ANSELL	
		Order No.	: AMAGLED/1/WW
		Luminaire name	: STREETLIGHTS - Magna Street Light
		Equipment	: 1 x LED 31 W / 4658 lm
2	29 x		
		Order No.	: AREELEDWLD - CW
		Luminaire name	: WALL LIGHTS - Reef Directional
		Equipment	: 1 x LED single 840 5.7 W / 444 lm

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.7 Result overview, Light Spill D



General		
Calculation algorithm used		Average indirect fraction
Maintenance factor		0.80
Total luminous flux		40824 lm
Total power		351.3 W
Total power per area (11775.79 m ²)		0.03 W/m ²
Upward light ratio (ULR)		0.00

Illuminance			
Average illuminance	Em		0.11 lx
Minimum illuminance	Emin		0.06 lx
Maximum illuminance	Emax		0.43 lx
Uniformity Uo	Emin/Em		1:1.89 (0.53)
Diversity Ud	Emin/Emax		1:7.62 (0.13)

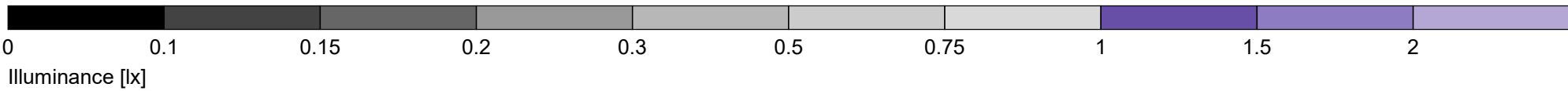
Type No. Make			
1	6 x	ANSELL	
		Order No.	: AMAGLED/1/WW
		Luminaire name	: STREETLIGHTS - Magna Street Light
		Equipment	: 1 x LED 31 W / 4658 lm
2	29 x		
		Order No.	: AREELEDWLD - CW
		Luminaire name	: WALL LIGHTS - Reef Directional
		Equipment	: 1 x LED single 840 5.7 W / 444 lm

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.8 Result overview, Light Spill E





General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux	40824 lm
Total power	351.3 W
Total power per area (11775.79 m ²)	0.03 W/m ²
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	Em	0.66 lx
Minimum illuminance	Emin	0.04 lx
Maximum illuminance	Emax	2.62 lx
Uniformity U _o	Emin/Em	1:17.7 (0.06)
Diversity U _d	Emin/Emax	1:70.4 (0.01)

Type No./Make

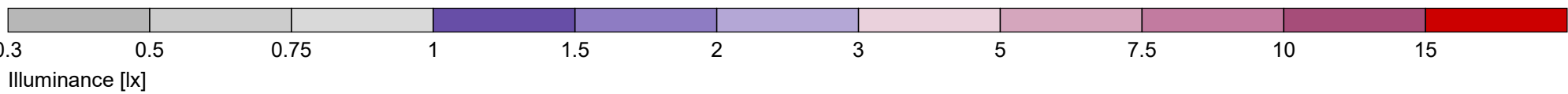
1	6 x	ANSELL	
		Order No. : AMAGLED/1/WW	
		Luminaire name : STREETLIGHTS - Magna Street Light	
		Equipment : 1 x LED 31 W / 4658 lm	
2	29 x		
		Order No. : AREELEDWLD - CW	
		Luminaire name : WALL LIGHTS - Reef Directional	
		Equipment : 1 x LED single 840 5.7 W / 444 lm	

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design


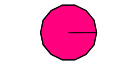
2.2.9 Result overview, Light Spill F



General		
Calculation algorithm used		Average indirect fraction
Maintenance factor		0.80
Total luminous flux		40824 lm
Total power		351.3 W
Total power per area (11775.79 m ²)		0.03 W/m ²
Upward light ratio (ULR)		0.00

Illuminance			
Average illuminance	Em		2.74 lx
Minimum illuminance	Emin		0.37 lx
Maximum illuminance	Emax		18.7 lx
Uniformity Uo	Emin/Em		1:7.32 (0.14)
Diversity Ud	Emin/Emax		1:49.8 (0.02)

Type No. Make

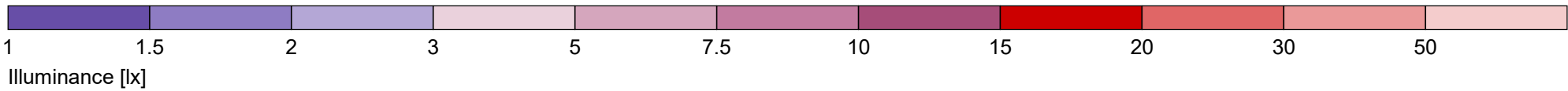
- | | | | |
|---|-------------|----------------|-------------------------------------|
| 1 | 6 x | ANSELL | |
|  | | Order No. | : AMAGLED/1/WW |
| | | Luminaire name | : STREETLIGHTS - Magna Street Light |
| | | Equipment | : 1 x LED 31 W / 4658 lm |
| 2 | 29 x | | |
|  | | Order No. | : AREELEDWLD - CW |
| | | Luminaire name | : WALL LIGHTS - Reef Directional |
| | | Equipment | : 1 x LED single 840 5.7 W / 444 lm |

The ULR value has been calculated without obstruction by other objects.



2.2 Summary, Stoney Ridge Care Home External - Wildlife friendly Design

2.2.10 Result overview, Front of building



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.00 m
Maintenance factor	0.80
Total luminous flux	40824 lm
Total power	351.3 W
Total power per area (11775.79 m ²)	0.03 W/m ² (0.21 W/m ² /100lx)
Upward light ratio (ULR)	0.00

Illuminance

Average illuminance	Em	14 lx
Minimum illuminance	Emin	1.04 lx
Maximum illuminance	Emax	57.4 lx
Uniformity Uo	Emin/Em	1:13.5 (0.07)
Diversity Ud	Emin/Emax	1:55.3 (0.02)

Type No. Make

1	6 x	ANSELL	
		Order No.	: AMAGLED/1/WW
		Luminaire name	: STREETLIGHTS - Magna Street Light
		Equipment	: 1 x LED 31 W / 4658 lm
2	29 x		
		Order No.	: AREELEDWLD - CW
		Luminaire name	: WALL LIGHTS - Reef Directional
		Equipment	: 1 x LED single 840 5.7 W / 444 lm

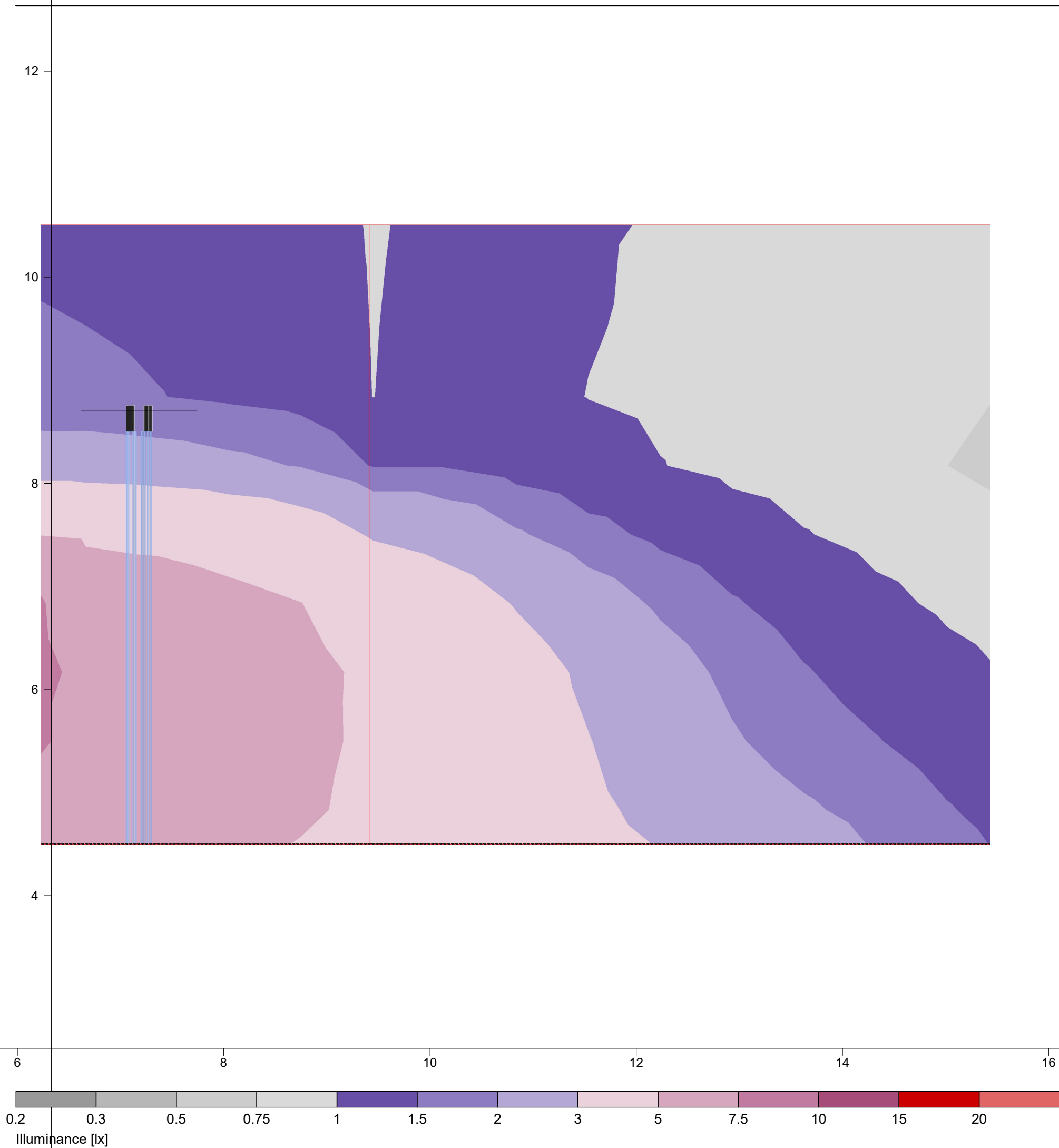
The ULR value has been calculated without obstruction by other objects.



2 Stoney Ridge Care Home External - Wildlife friendly Design

2.3 Calculation results, Stoney Ridge Care Home External - Wildlife friendly Design

2.3.1 Pseudo colours, Light Spill A (E)

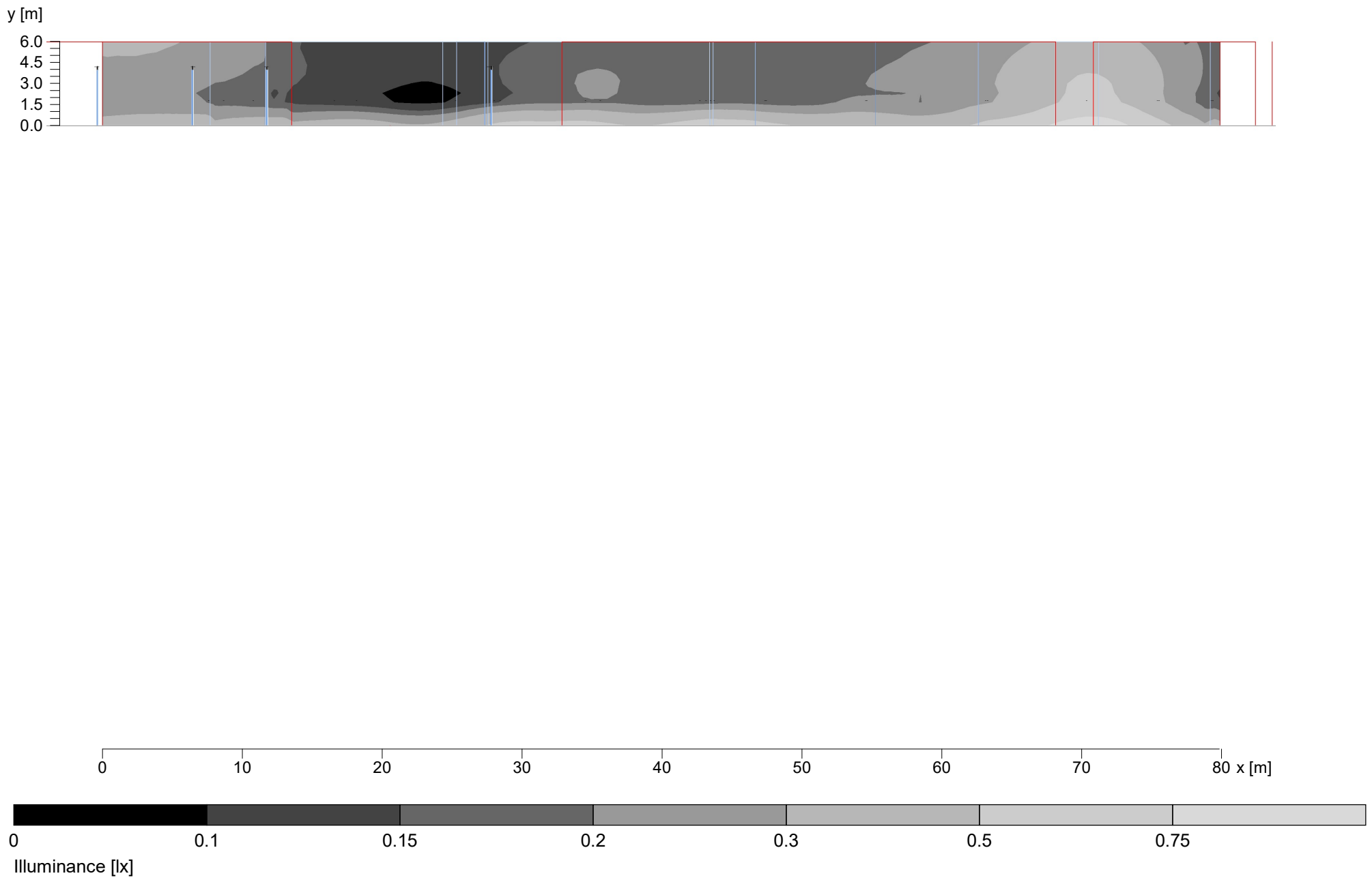


Average illuminance	Em	: 2.7 lx
Minimum illuminance	Emin	: 0.3 lx
Maximum illuminance	Emax	: 26.8 lx
Uniformity Uo	Emin/Em	: 1 : 9.37 (0.11)
Diversity Ud	Emin/Emax	: 1 : 94.05 (0.01)



2.3 Calculation results, Stoney Ridge Care Home External - Wildlife friendly Design

2.3.2 Pseudo colours, Light Spill B (E)

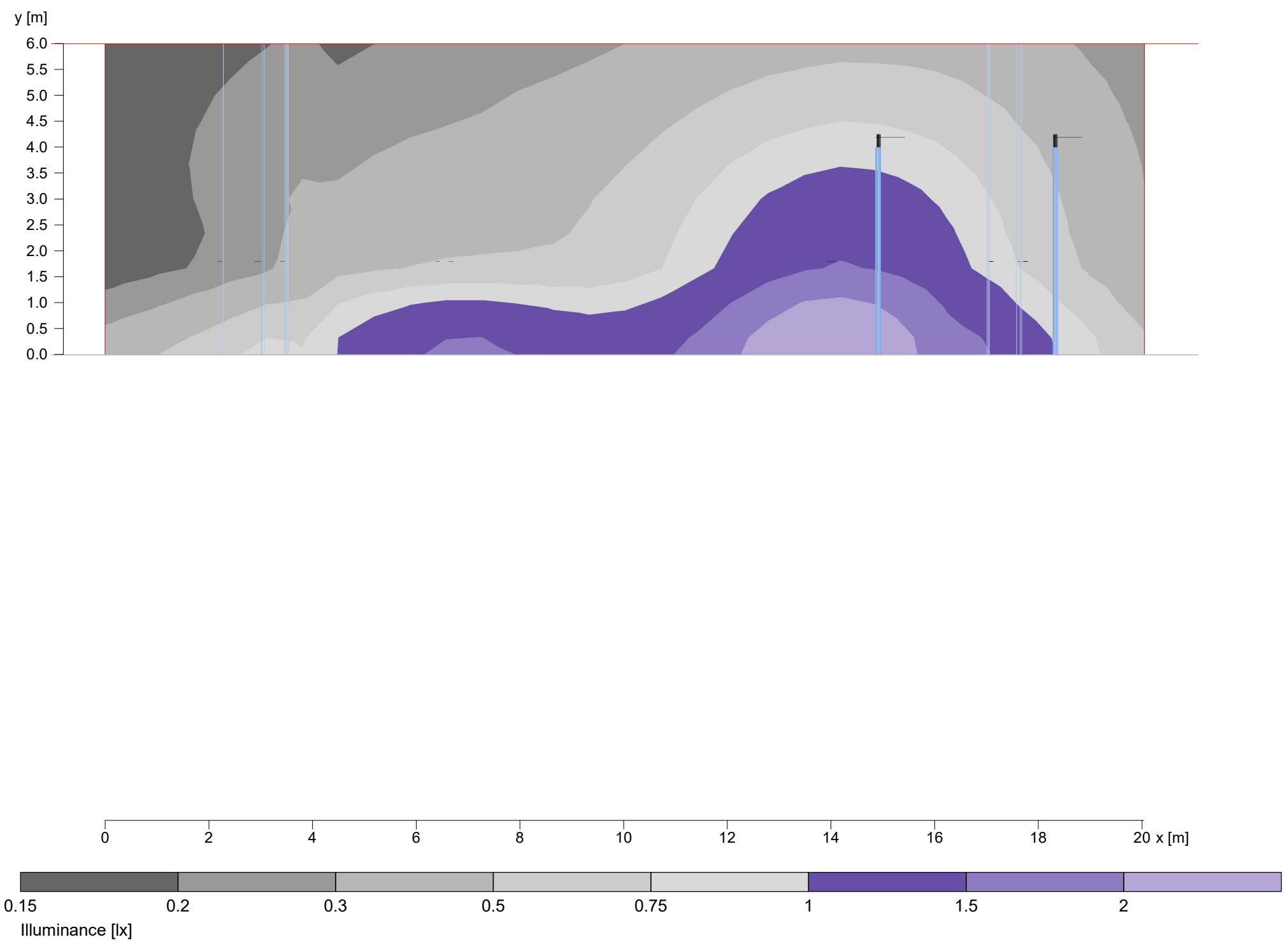


Average illuminance	Em	: 0.25 lx
Minimum illuminance	Emin	: 0.09 lx
Maximum illuminance	Emax	: 0.83 lx
Uniformity Uo	Emin/Em	: 1 : 2.95 (0.34)
Diversity Ud	Emin/Emax	: 1 : 9.64 (0.10)



2.3 Calculation results, Stoney Ridge Care Home External - Wildlife friendly Design

2.3.3 Pseudo colours, Light Spill C (E)

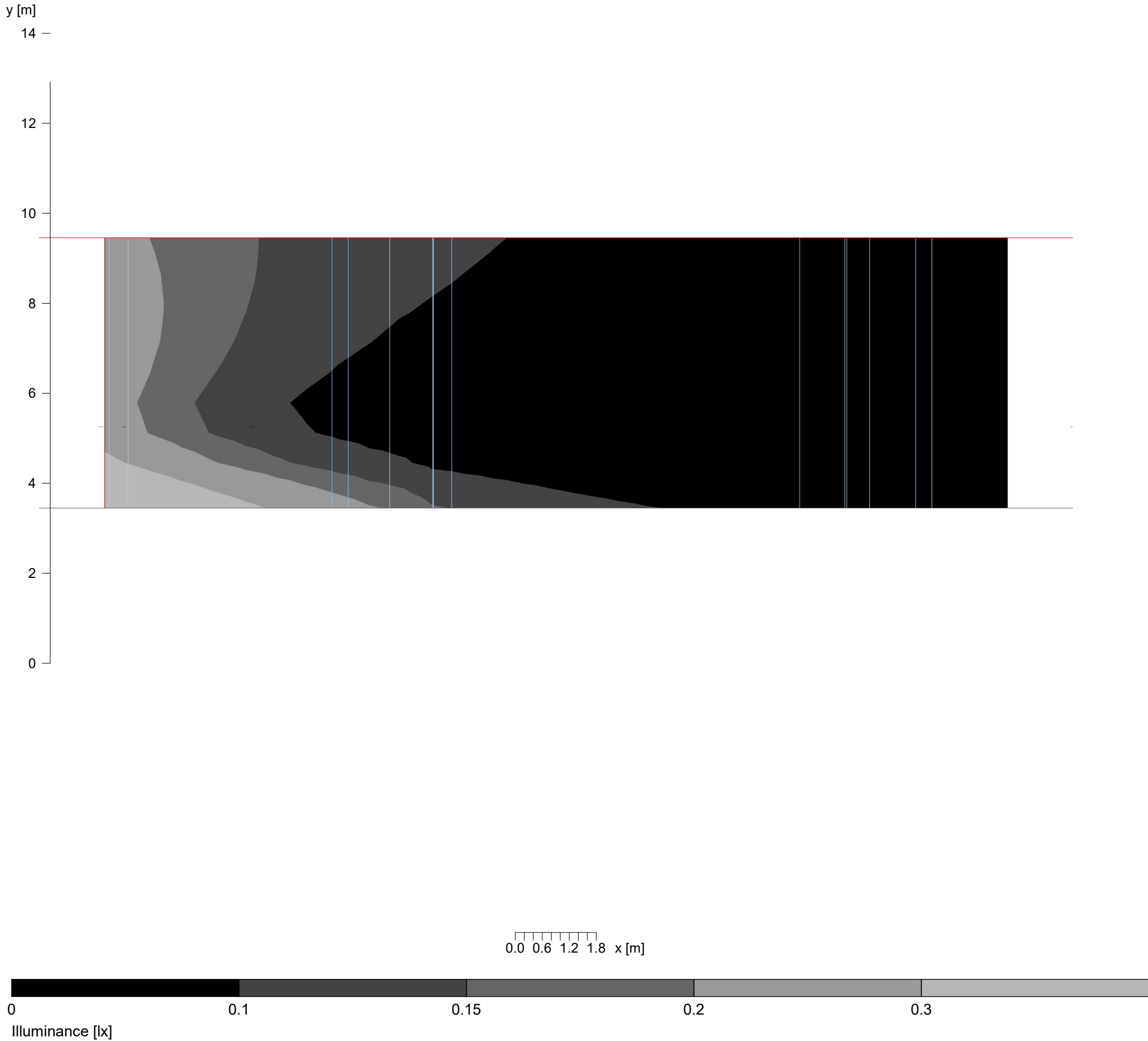


Average illuminance	Em	: 0.65 lx
Minimum illuminance	Emin	: 0.15 lx
Maximum illuminance	Emax	: 2.51 lx
Uniformity Uo	Emin/Em	: 1 : 4.31 (0.23)
Diversity Ud	Emin/Emax	: 1 : 16.59 (0.06)



2.3 Calculation results, Stoney Ridge Care Home External - Wildlife friendly Design

2.3.4 Pseudo colours, Light Spill D (E)

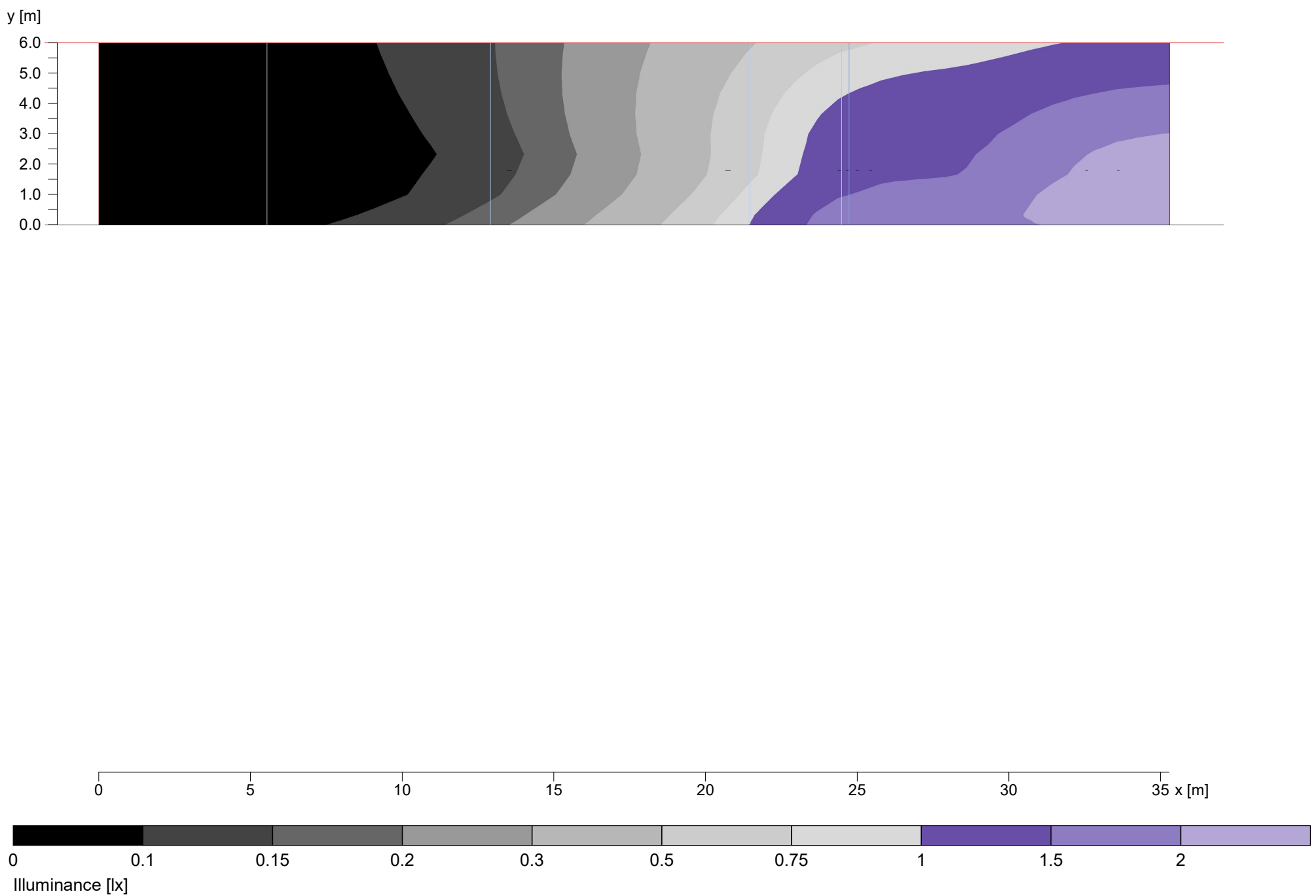


Average illuminance	Em	: 0.11 lx
Minimum illuminance	Emin	: 0.06 lx
Maximum illuminance	Emax	: 0.43 lx
Uniformity Uo	Emin/Em	: 1 : 1.89 (0.53)
Diversity Ud	Emin/Emax	: 1 : 7.62 (0.13)



2.3 Calculation results, Stoney Ridge Care Home External - Wildlife friendly Design

2.3.5 Pseudo colours, Light Spill E (E)

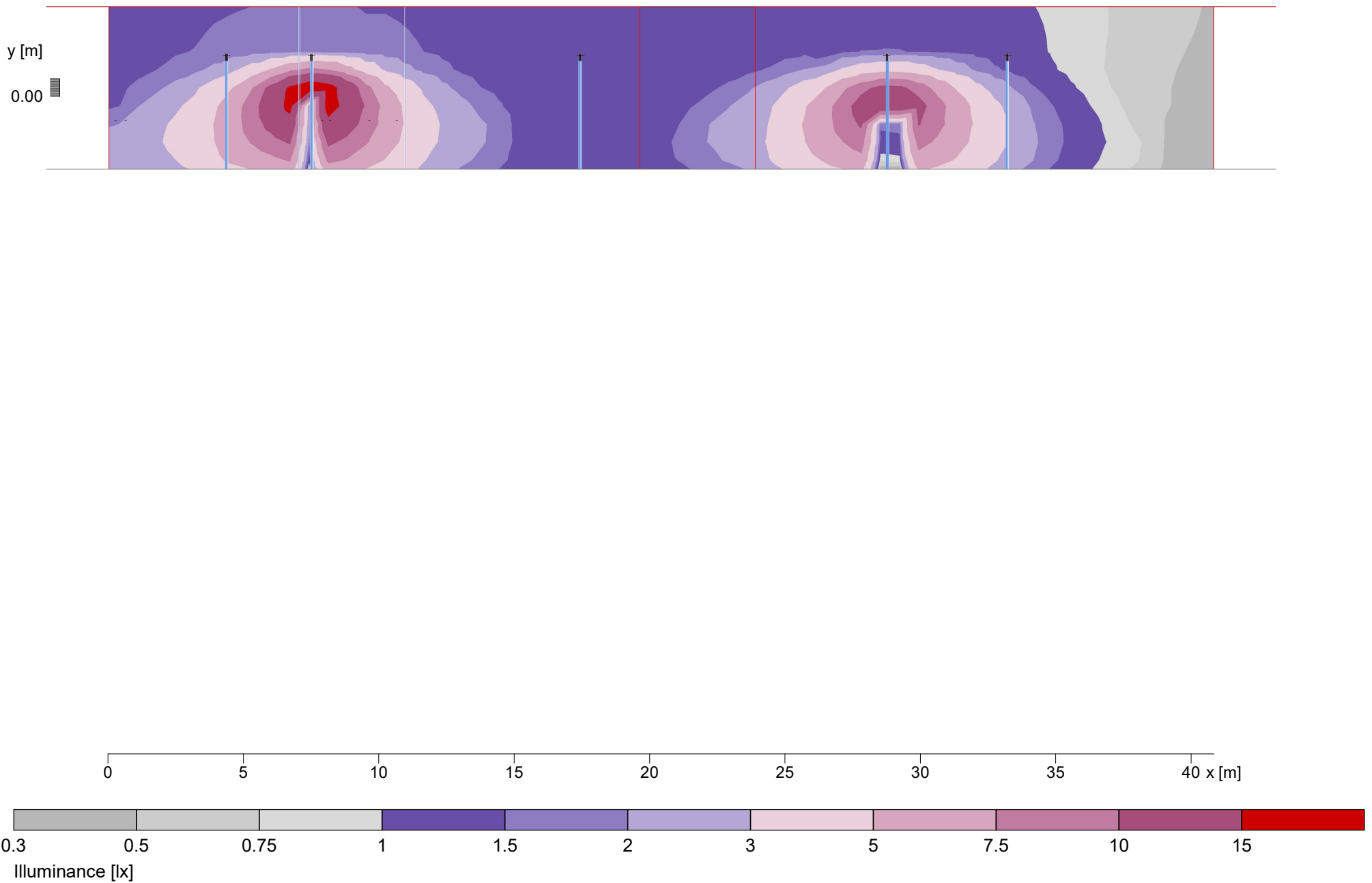


Average illuminance	Em	: 0.66 lx
Minimum illuminance	Emin	: 0.04 lx
Maximum illuminance	Emax	: 2.62 lx
Uniformity Uo	Emin/Em	: 1 : 17.73 (0.06)
Diversity Ud	Emin/Emax	: 1 : 70.39 (0.01)



2.3 Calculation results, Stoney Ridge Care Home External - Wildlife friendly Design

2.3.6 Pseudo colours, Light Spill F (E)



Average illuminance	Em	: 2.7 lx
Minimum illuminance	Emin	: 0.4 lx
Maximum illuminance	Emax	: 18.7 lx
Uniformity Uo	Emin/Em	: 1 : 7.32 (0.14)
Diversity Ud	Emin/Emax	: 1 : 49.85 (0.02)



2.3 Calculation results, Stoney Ridge Care Home External - Wildlife friendly Design

2.3.7 3D luminance, View 1

