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Projeto Luminotécnico: apartamento tipo e hall tipo

Esse projeto visa desenvolver e apresentar os resultados de um projeto luminotécnico básico para apartamentos tipos e halls coletivos de um conjunto residencial predial de médio porte.

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Pavimento_Tipo02

Building 4

Apartamento_Tipo

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Projeto Luminotécnico: apartamento tipo e hall tipo

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Projeto Luminotécnico: apartamento tipo e hall tipo

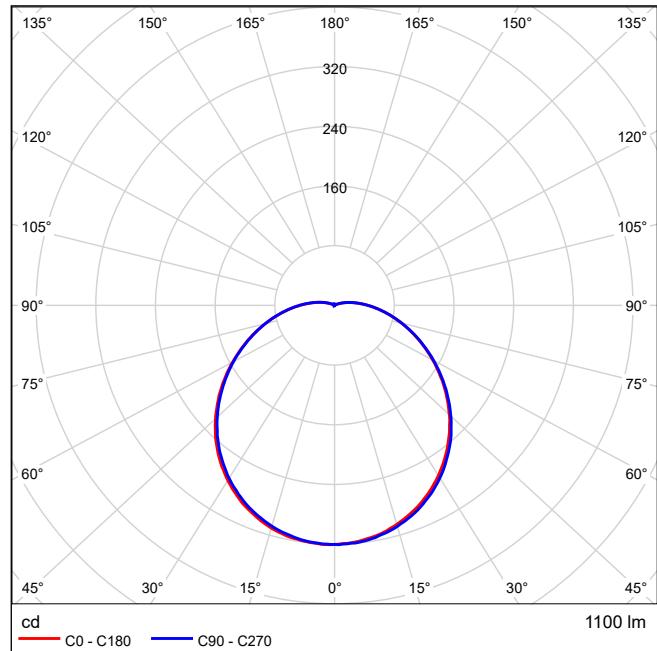
# Luminaire	Φ(Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
3 GE Lighting - 93055991 MPY4F-2040-7SB-STLT	2500	20.0	125.0
6 GE Lighting - 93057439 DDTW6-1530-7SB-STC	1500	15.0	100.0
2 GE Lighting - 93057445 DDTW8-2230-7SB-STC	2200	22.0	100.0
1 GE Lighting - 93066765 RSTA-D7-630-7SR-40	550	6.0	91.7
3 GE Lighting - 95939 BW271FWOPL	1100	12.5	88.0
3 PHILIPS CHLORIDE - PATRON LED SERIES - 6V AC ONLY W/FTR PATRON LED SERIES AC VERSION W/FORWARD THROW REFLECTOR	692	18.0	38.4
Total via all luminaires	26826	291.5	92.0

GE Lighting 95939 BW271FWOPL 1xLED

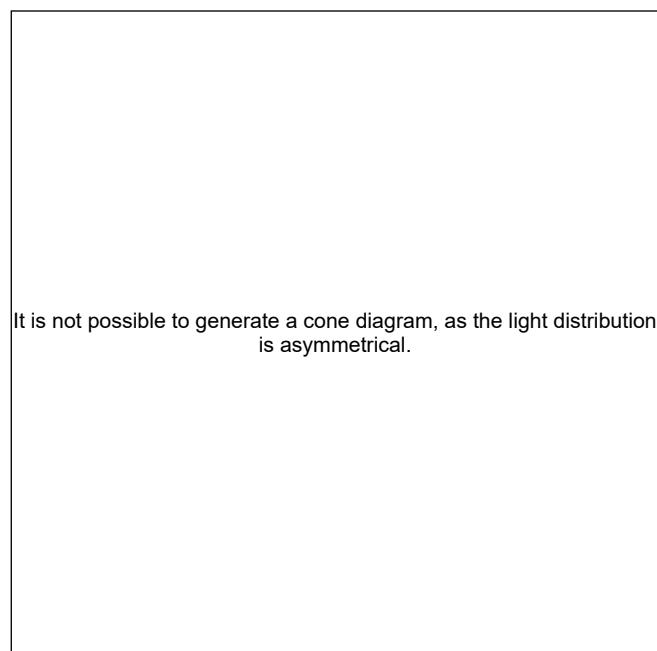
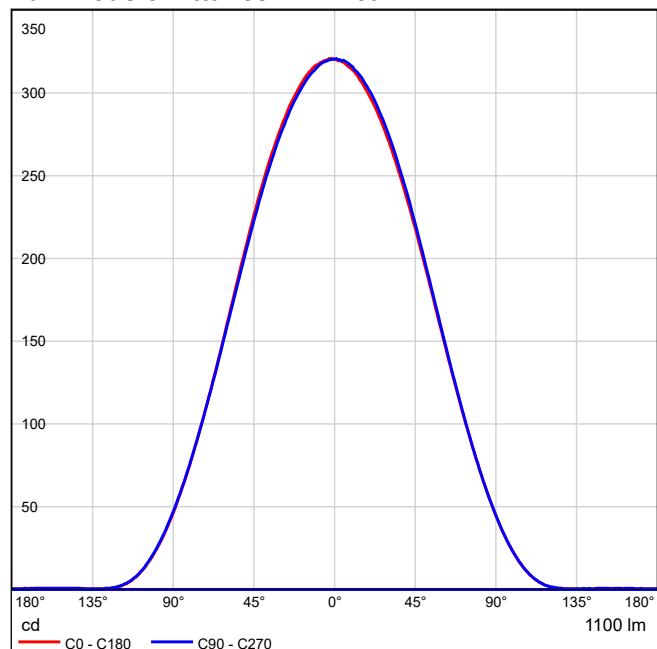


Absolute photometry
Luminaire luminous flux: 1100 lm
Power: 12.5 W
Luminous efficacy: 88.0 lm/W

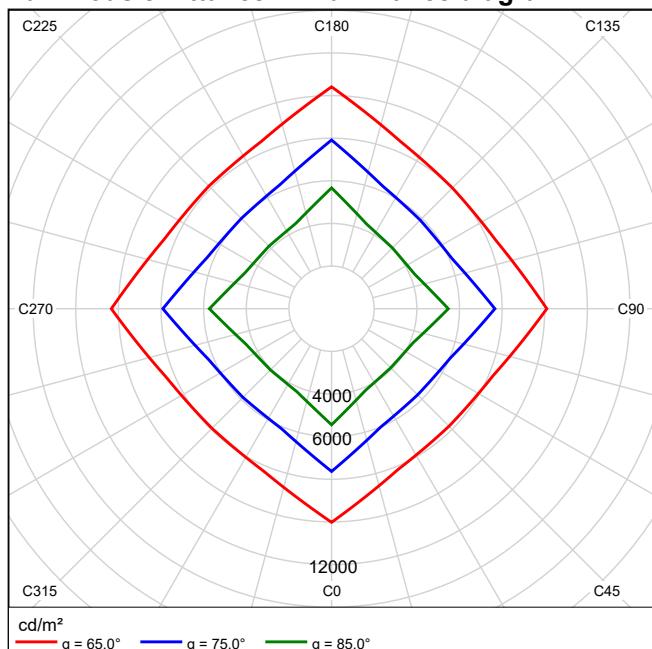
Luminous emittance 1 / Polar LDC



Luminous emittance 1 / Linear LDC



Luminous emittance 1 / Luminance diagram



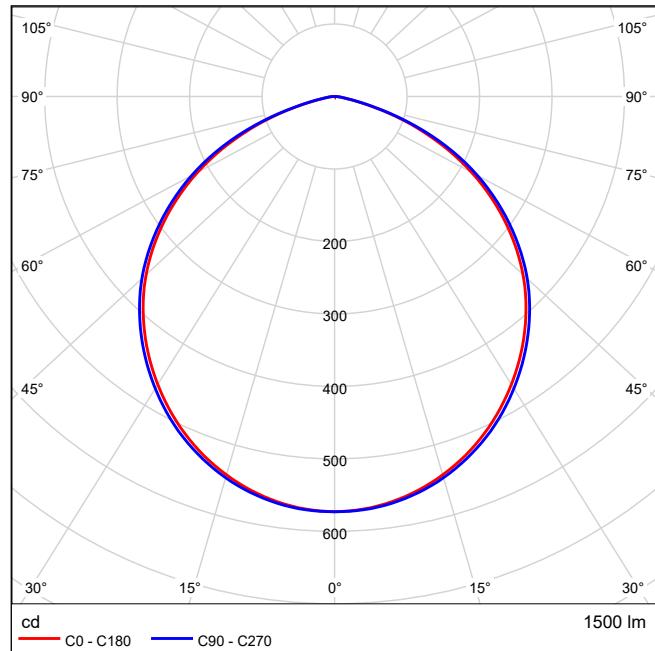
It is not possible to generate a UGR diagram, as the light distribution is asymmetrical.

GE Lighting 93057439 DDTW6-1530-7SB-STC 1xLED

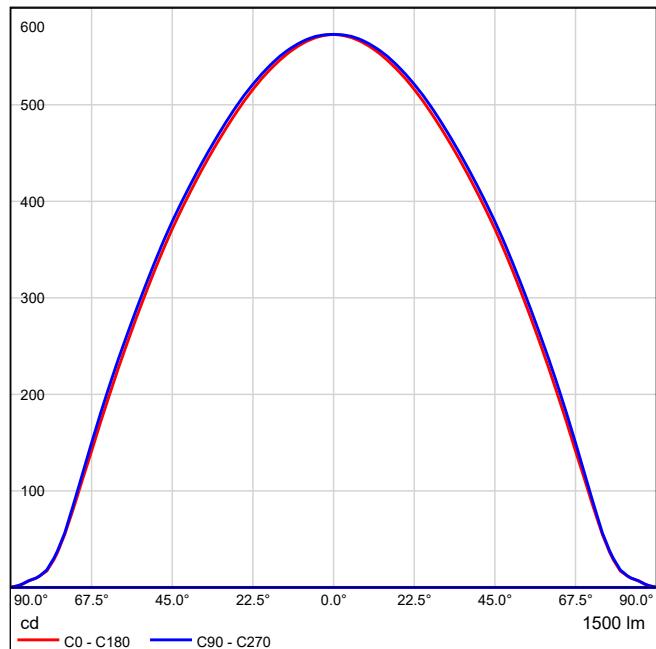


Absolute photometry
Luminaire luminous flux: 1500 lm
Power: 15.0 W
Luminous efficacy: 100.0 lm/W

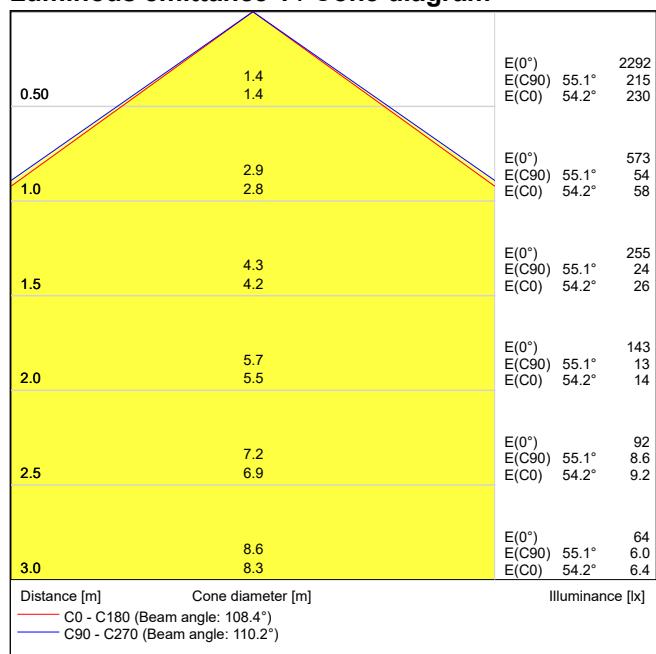
Luminous emittance 1 / Polar LDC



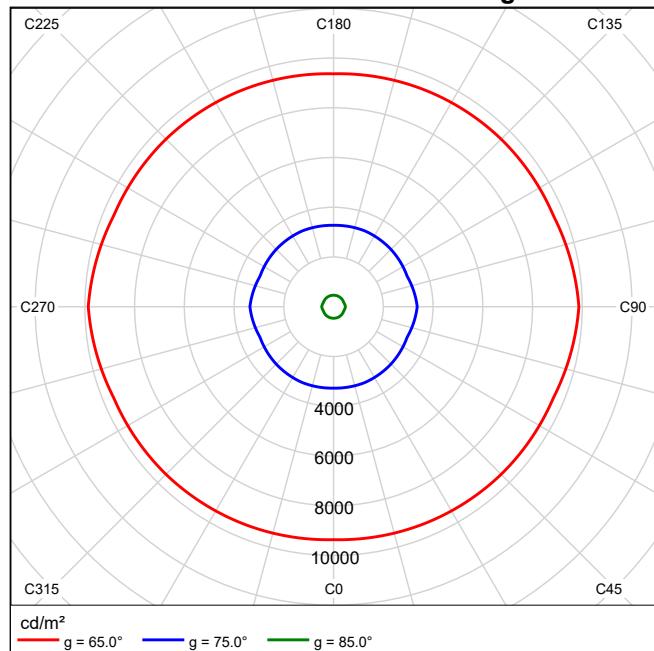
Luminous emittance 1 / Linear LDC



Luminous emittance 1 / Cone diagram



Luminous emittance 1 / Luminance diagram



Luminous emittance 1 / UGR diagram

Glare evaluation according to UGR											
ρ Ceiling	70	70	50	50	30	70	70	50	50	30	
ρ Walls	50	30	50	30	30	50	30	50	30	30	
ρ Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	22.0	23.3	22.3	23.5	23.7	22.1	23.4	22.4	23.6	23.8
	3H	22.8	23.9	23.1	24.2	24.4	22.9	24.0	23.2	24.3	24.6
	4H	22.9	24.0	23.2	24.2	24.5	23.0	24.1	23.3	24.4	24.6
	6H	22.9	23.8	23.2	24.1	24.5	23.0	24.0	23.3	24.3	24.6
	8H	22.8	23.8	23.2	24.1	24.4	23.0	23.9	23.3	24.2	24.5
	12H	22.8	23.7	23.2	24.0	24.3	22.9	23.8	23.3	24.1	24.5
4H	2H	22.5	23.5	22.8	23.8	24.1	22.5	23.6	22.9	23.9	24.2
	3H	23.3	24.2	23.7	24.6	24.9	23.4	24.3	23.8	24.7	25.0
	4H	23.5	24.3	23.9	24.6	25.0	23.6	24.4	24.0	24.7	25.1
	6H	23.5	24.2	23.9	24.5	24.9	23.6	24.3	24.0	24.6	25.0
	8H	23.5	24.1	23.9	24.5	24.9	23.6	24.2	24.0	24.6	25.0
	12H	23.4	24.0	23.9	24.4	24.8	23.5	24.1	24.0	24.5	24.9
8H	4H	23.5	24.1	23.9	24.5	24.9	23.6	24.2	24.0	24.6	25.0
	6H	23.5	24.0	24.0	24.4	24.9	23.6	24.1	24.1	24.5	25.0
	8H	23.5	23.9	24.0	24.4	24.9	23.6	24.0	24.1	24.5	25.0
	12H	23.5	23.8	24.0	24.3	24.8	23.6	23.9	24.1	24.4	24.9
	4H	23.5	24.0	23.9	24.4	24.9	23.6	24.1	24.0	24.5	25.0
	6H	23.5	23.9	24.0	24.4	24.9	23.6	24.0	24.1	24.5	24.9
12H	4H	23.5	23.8	24.0	24.3	24.8	23.6	23.9	24.1	24.4	24.9
	6H	23.5	23.9	24.0	24.4	24.9	23.6	24.0	24.1	24.5	24.9
	8H	23.5	23.8	24.0	24.3	24.8	23.6	23.9	24.1	24.4	24.9
	4H	23.5	24.0	23.9	24.4	24.9	23.6	24.1	24.0	24.5	25.0
	6H	23.5	23.9	24.0	24.4	24.9	23.6	24.0	24.1	24.5	24.9
	8H	23.5	23.8	24.0	24.3	24.8	23.6	23.9	24.1	24.4	24.9
Variation of the observer position for the luminaire distances S											
S = 1.0H	+0.3 / -0.4			+0.2 / -0.4							
S = 1.5H	+0.5 / -1.1			+0.5 / -1.0							
S = 2.0H	+1.2 / -2.1			+1.1 / -2.0							
Standard table	BK02			BK02							
Correction Summand	5.6			5.7							
Corrected glare indices referring to 1500lm Total luminous flux											

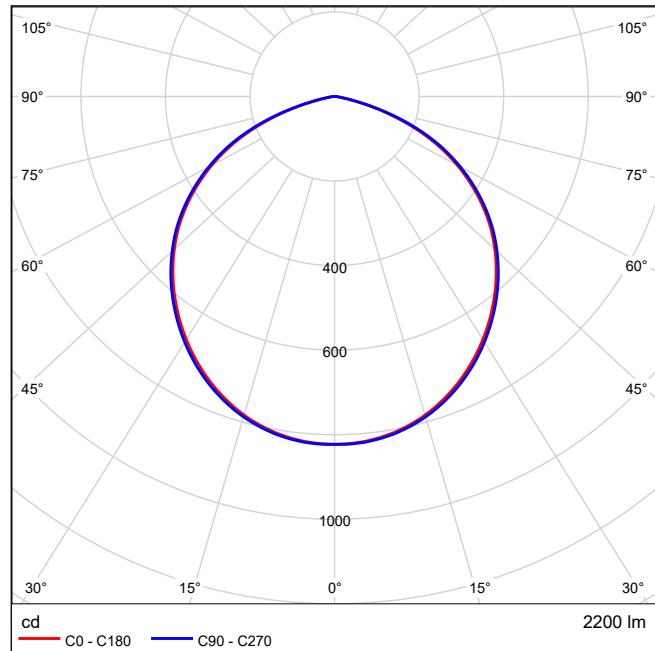
The UGR values are calculated in acc. with CIE Publ. 117. Spacing-to-height ratio = 0.25

GE Lighting 93057445 DDTW8-2230-7SB-STC 1xLED

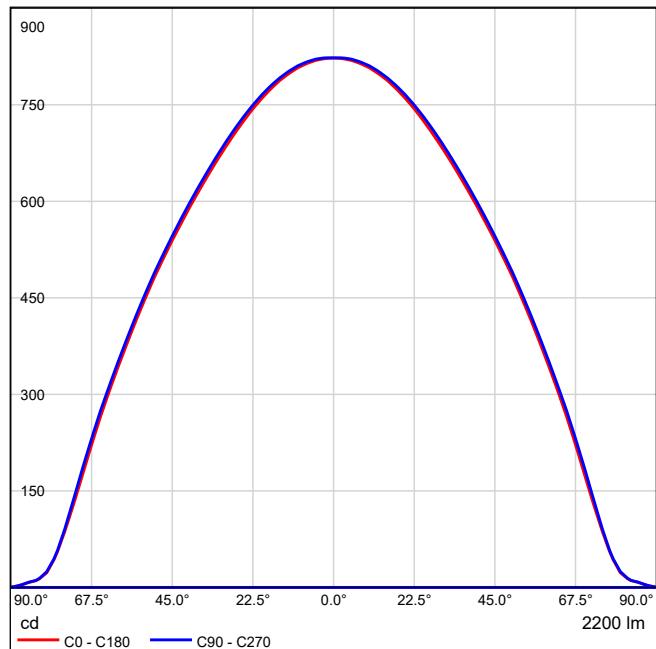


Absolute photometry
Luminaire luminous flux: 2200 lm
Power: 22.0 W
Luminous efficacy: 100.0 lm/W

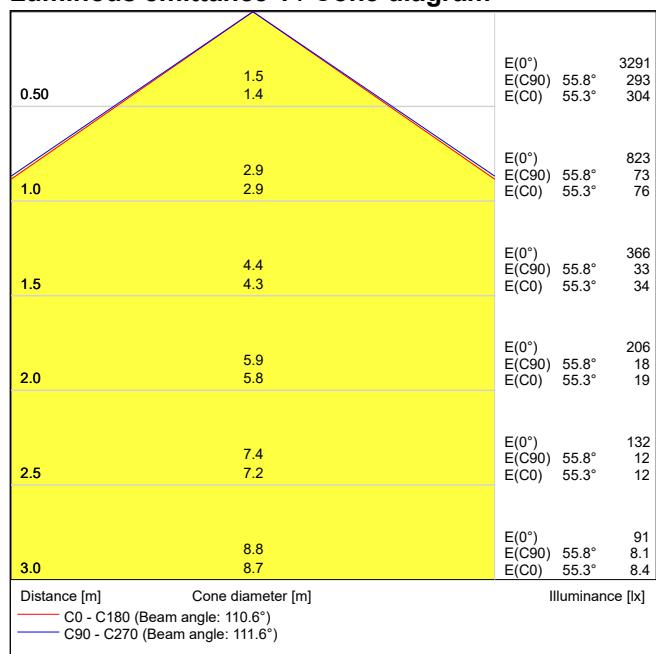
Luminous emittance 1 / Polar LDC



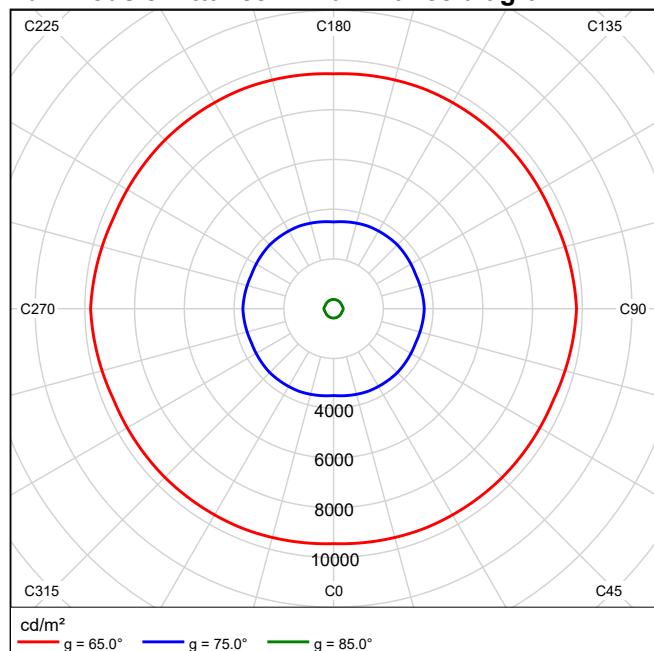
Luminous emittance 1 / Linear LDC



Luminous emittance 1 / Cone diagram



Luminous emittance 1 / Luminance diagram



Luminous emittance 1 / UGR diagram

Glare evaluation according to UGR											
ρ Ceiling	70	70	50	50	30	70	70	50	50	30	
ρ Walls	50	30	50	30	30	50	30	50	30	30	
ρ Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	21.8	23.1	22.1	23.3	23.6	21.9	23.1	22.2	23.4	23.6
	3H	22.7	23.9	23.0	24.1	24.4	22.8	23.9	23.1	24.2	24.5
	4H	22.9	23.9	23.2	24.2	24.5	22.9	24.0	23.3	24.3	24.6
	6H	22.8	23.8	23.2	24.1	24.4	22.9	23.9	23.3	24.2	24.5
	8H	22.8	23.8	23.2	24.1	24.4	22.9	23.8	23.2	24.1	24.5
	12H	22.8	23.7	23.1	24.0	24.3	22.8	23.8	23.2	24.1	24.4
4H	2H	22.3	23.4	22.7	23.7	24.0	22.4	23.4	22.7	23.7	24.0
	3H	23.3	24.2	23.7	24.6	24.9	23.4	24.3	23.8	24.6	25.0
	4H	23.5	24.3	23.9	24.7	25.0	23.6	24.4	24.0	24.7	25.1
	6H	23.5	24.2	23.9	24.6	25.0	23.6	24.3	24.0	24.7	25.1
	8H	23.5	24.1	23.9	24.5	24.9	23.6	24.2	24.0	24.6	25.0
	12H	23.5	24.0	23.9	24.4	24.9	23.5	24.1	24.0	24.5	24.9
8H	4H	23.6	24.2	24.0	24.6	25.0	23.6	24.3	24.1	24.7	25.1
	6H	23.6	24.1	24.0	24.5	25.0	23.6	24.1	24.1	24.6	25.0
	8H	23.5	24.0	24.0	24.4	24.9	23.6	24.1	24.1	24.5	25.0
	12H	23.5	23.9	24.0	24.4	24.9	23.6	24.0	24.1	24.4	24.9
12H	4H	23.5	24.1	24.0	24.5	24.9	23.6	24.2	24.0	24.6	25.0
	6H	23.5	24.0	24.0	24.4	24.9	23.6	24.1	24.1	24.5	25.0
	8H	23.5	23.9	24.0	24.4	24.9	23.6	24.0	24.1	24.4	24.9
Variation of the observer position for the luminaire distances S											
S = 1.0H	+0.2 / -0.3			+0.2 / -0.3							
S = 1.5H	+0.5 / -0.9			+0.5 / -0.8							
S = 2.0H	+1.0 / -1.8			+1.0 / -1.6							
Standard table	BK02			BK02							
Correction Summand	5.6			5.6							
Corrected glare indices referring to 2200lm Total luminous flux											

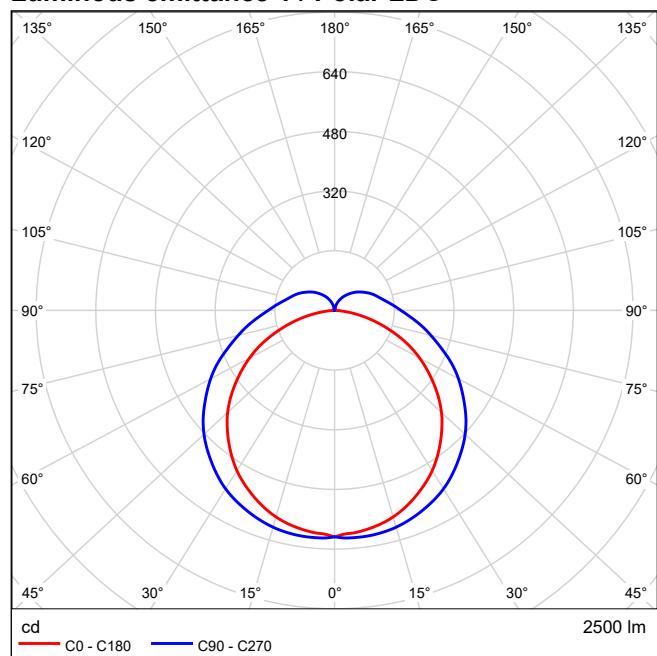
The UGR values are calculated in acc. with CIE Publ. 117. Spacing-to-height ratio = 0.25

GE Lighting 93055991 MPY4F-2040-7SB-STLT 1xLED

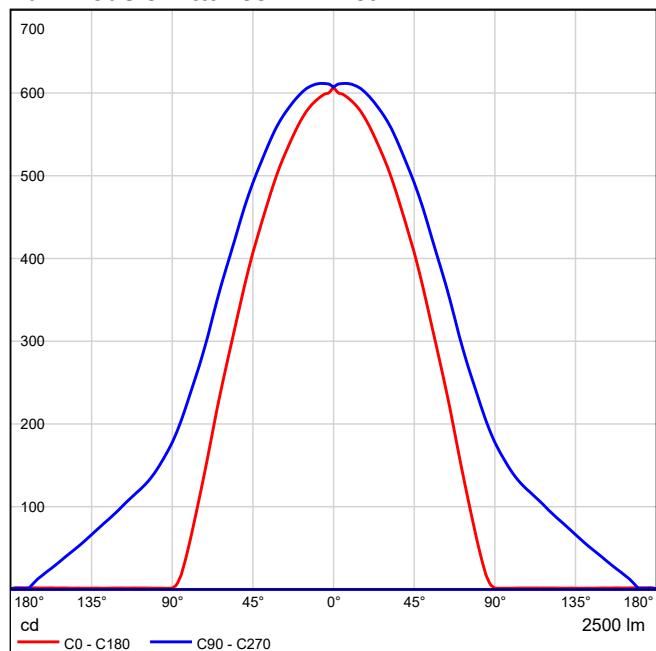


Absolute photometry
Luminaire luminous flux: 2500 lm
Power: 20.0 W
Luminous efficacy: 125.0 lm/W

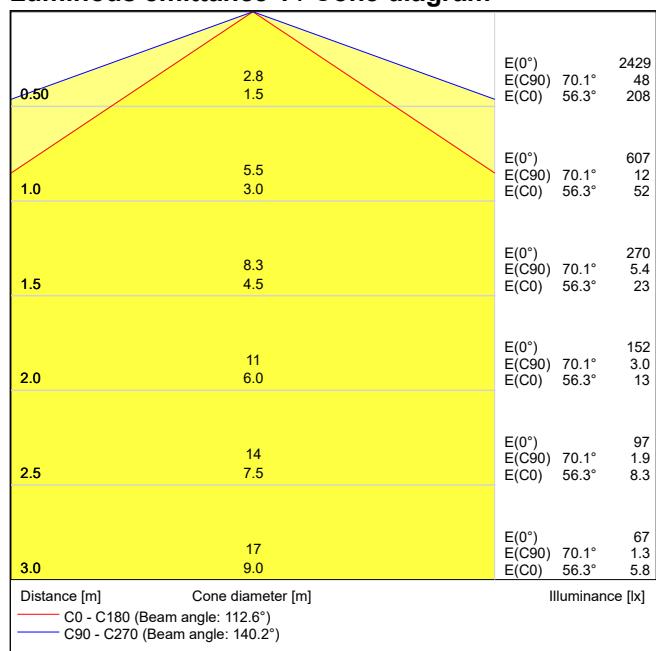
Luminous emittance 1 / Polar LDC



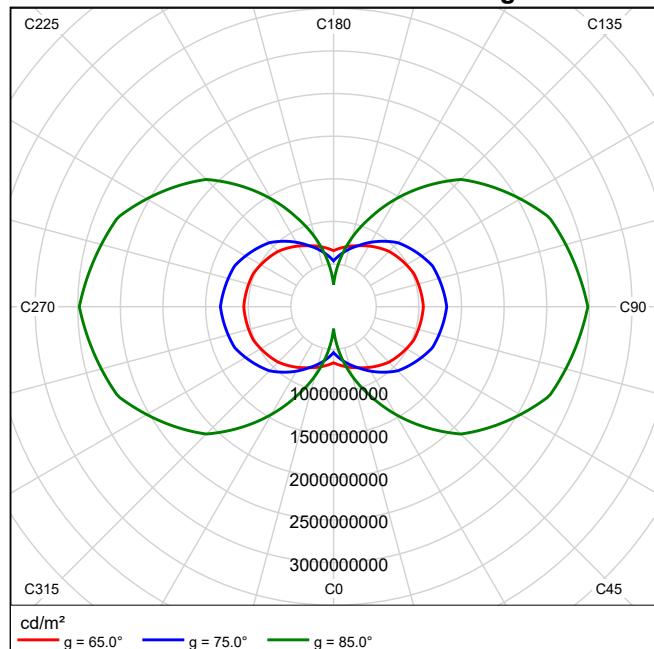
Luminous emittance 1 / Linear LDC



Luminous emittance 1 / Cone diagram



Luminous emittance 1 / Luminance diagram



Luminous emittance 1 / UGR diagram

Glare evaluation according to UGR											
ρ	Ceiling	70	70	50	50	30	70	70	50	50	30
ρ	Walls	50	30	50	30	30	50	30	50	30	30
ρ	Floor	20	20	20	20	20	20	20	20	20	20
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	58.5	59.7	58.9	60.2	60.7	59.9	61.1	60.4	61.6	62.1
	3H	60.0	61.1	60.5	61.6	62.2	62.2	63.3	62.7	63.8	64.4
	4H	60.6	61.6	61.1	62.2	62.7	63.4	64.5	64.0	65.0	65.6
	6H	61.0	62.0	61.5	62.5	63.1	64.8	65.8	65.3	66.3	66.9
	8H	61.1	62.0	61.6	62.6	63.2	65.5	66.5	66.1	67.0	67.6
	12H	61.1	62.0	61.7	62.6	63.2	66.4	67.3	66.9	67.8	68.5
4H	2H	59.5	60.6	60.0	61.1	61.6	60.5	61.6	61.1	62.1	62.7
	3H	61.3	62.2	61.8	62.7	63.4	63.1	64.0	63.7	64.6	65.2
	4H	62.0	62.9	62.6	63.4	64.1	64.5	65.3	65.1	65.9	66.5
	6H	62.6	63.3	63.2	63.9	64.6	66.1	66.8	66.7	67.4	68.1
	8H	62.8	63.5	63.4	64.1	64.8	66.9	67.6	67.5	68.2	68.9
	12H	62.9	63.5	63.5	64.1	64.9	67.9	68.5	68.5	69.1	69.9
8H	4H	62.8	63.5	63.5	64.1	64.8	64.9	65.5	65.5	66.1	66.9
	6H	63.7	64.3	64.4	64.9	65.7	66.7	67.3	67.4	67.9	68.6
	8H	64.1	64.6	64.8	65.2	66.0	67.8	68.3	68.4	68.9	69.7
	12H	64.3	64.8	65.0	65.5	66.2	69.0	69.4	69.7	70.1	70.9
	4H	63.1	63.7	63.7	64.3	65.0	64.9	65.5	65.5	66.1	66.9
	6H	64.1	64.6	64.8	65.3	66.1	66.8	67.3	67.5	68.0	68.7
12H	8H	64.6	65.1	65.3	65.8	66.5	68.0	68.4	68.7	69.1	69.9
	4H	63.7	64.3	64.4	64.9	65.7	66.7	67.3	67.4	67.9	68.6
	6H	64.1	64.6	64.8	65.2	66.0	67.8	68.3	68.4	68.9	69.7
	8H	64.6	65.1	65.3	65.8	66.5	69.0	69.4	69.7	70.1	70.9
	4H	63.1	63.7	63.7	64.3	65.0	64.9	65.5	65.5	66.1	66.9
	6H	64.1	64.6	64.8	65.3	66.1	66.8	67.3	67.5	68.0	68.7
Variation of the observer position for the luminaire distances S											
S = 1.0H	+0.1 / -0.1	+0.1 / -0.1	+0.1 / -0.1	+0.1 / -0.1	+0.1 / -0.1	+0.1 / -0.1	+0.1 / -0.1	+0.1 / -0.1	+0.1 / -0.1	+0.1 / -0.1	
S = 1.5H	+0.2 / -0.3	+0.2 / -0.3	+0.2 / -0.3	+0.2 / -0.3	+0.2 / -0.3	+0.2 / -0.3	+0.2 / -0.3	+0.2 / -0.3	+0.2 / -0.3	+0.2 / -0.3	
S = 2.0H	+0.4 / -0.6	+0.4 / -0.6	+0.4 / -0.6	+0.4 / -0.6	+0.4 / -0.6	+0.4 / -0.6	+0.4 / -0.6	+0.4 / -0.6	+0.4 / -0.6	+0.4 / -0.6	
Standard table	BK14	BK14	BK14	BK14	BK14	BK14	BK14	BK14	BK14	BK14	
Correction Summand	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	47.7	
Corrected glare indices referring to 2500lm Total luminous flux											

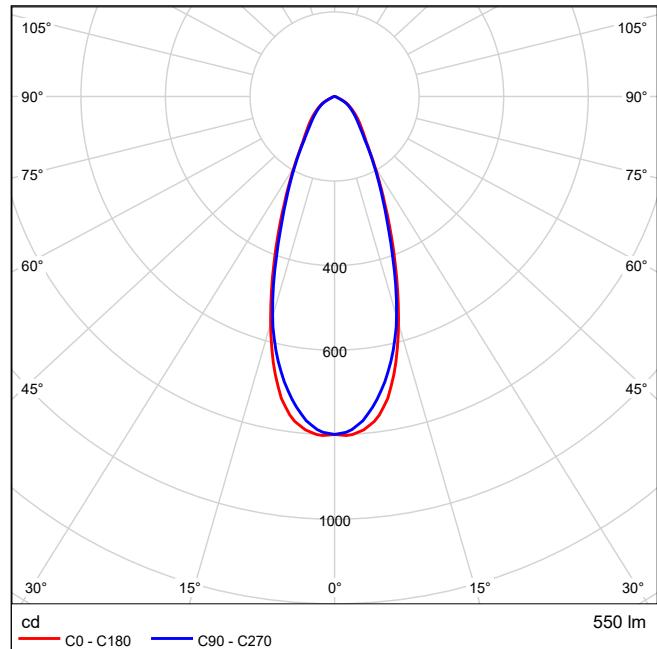
The UGR values are calculated in acc. with CIE Publ. 117. Spacing-to-height ratio = 0.25

GE Lighting 93066765 RSTA-D7-630-7SR-40 1xLED

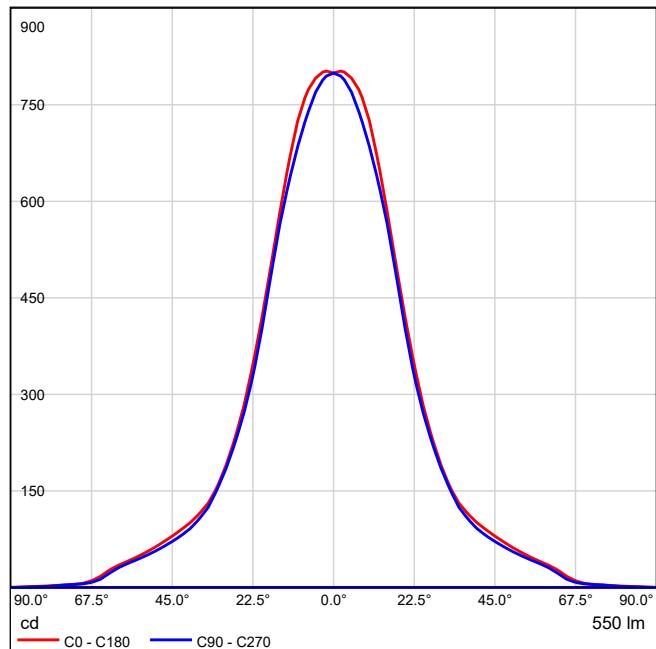


Absolute photometry
Luminaire luminous flux: 550 lm
Power: 6.0 W
Luminous efficacy: 91.7 lm/W

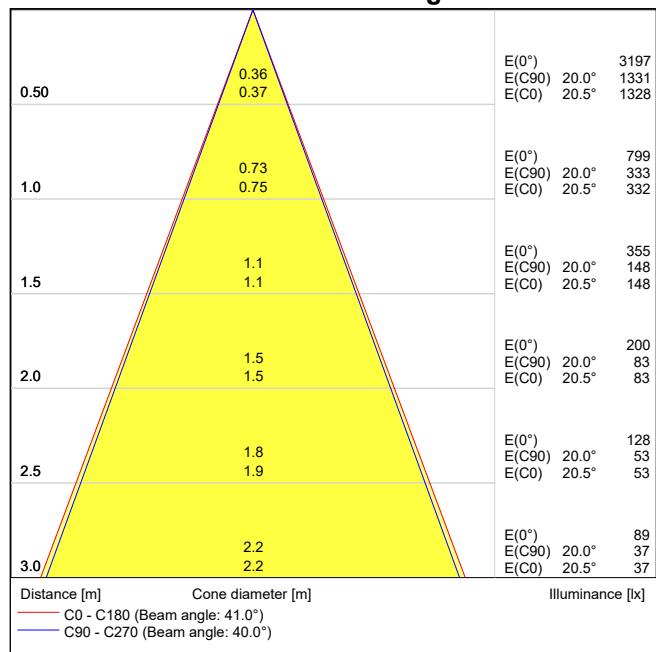
Luminous emittance 1 / Polar LDC



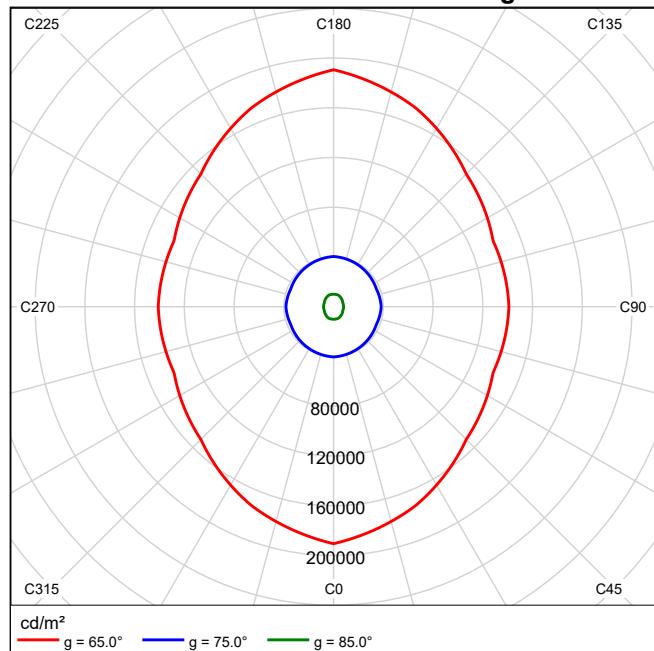
Luminous emittance 1 / Linear LDC



Luminous emittance 1 / Cone diagram



Luminous emittance 1 / Luminance diagram

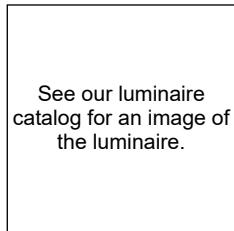


Luminous emittance 1 / UGR diagram

Glare evaluation according to UGR											
ρ	Ceiling	70	70	50	50	30	70	70	50	50	30
ρ	Walls	50	30	50	30	30	50	30	50	30	30
ρ	Floor	20	20	20	20	20	20	20	20	20	20
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	33.1	34.0	33.4	34.2	34.4	32.6	33.5	32.9	33.7	33.9
	3H	33.1	33.9	33.4	34.1	34.4	32.6	33.4	32.9	33.6	33.9
	4H	33.0	33.8	33.4	34.0	34.3	32.5	33.3	32.9	33.5	33.8
	6H	33.0	33.7	33.3	33.9	34.2	32.5	33.2	32.8	33.4	33.7
	8H	32.9	33.6	33.3	33.9	34.2	32.4	33.1	32.8	33.4	33.7
	12H	32.9	33.5	33.3	33.8	34.2	32.4	33.0	32.8	33.3	33.7
4H	2H	33.1	33.9	33.4	34.1	34.4	32.7	33.4	33.0	33.7	34.0
	3H	33.1	33.7	33.5	34.1	34.4	32.7	33.3	33.0	33.6	33.9
	4H	33.1	33.6	33.5	34.0	34.3	32.6	33.2	33.0	33.5	33.8
	6H	33.0	33.5	33.4	33.9	34.2	32.6	33.0	33.0	33.4	33.8
	8H	33.0	33.4	33.4	33.8	34.2	32.5	32.9	32.9	33.3	33.7
	12H	33.0	33.3	33.4	33.7	34.2	32.5	32.9	32.9	33.3	33.7
8H	4H	33.0	33.4	33.4	33.8	34.2	32.5	32.9	32.9	33.3	33.7
	6H	32.9	33.3	33.4	33.7	34.1	32.5	32.8	32.9	33.2	33.7
	8H	32.9	33.2	33.4	33.6	34.1	32.4	32.7	32.9	33.1	33.6
	12H	32.9	33.1	33.3	33.6	34.0	32.4	32.6	32.9	33.1	33.6
12H	4H	33.0	33.3	33.4	33.7	34.1	32.5	32.9	32.9	33.3	33.7
	6H	32.9	33.2	33.4	33.6	34.1	32.4	32.7	32.9	33.1	33.6
	8H	32.9	33.1	33.3	33.5	34.0	32.4	32.6	32.9	33.1	33.6
Variation of the observer position for the luminaire distances S											
S = 1.0H	+1.4 / -1.8			+1.7 / -1.8							
S = 1.5H	+3.0 / -3.8			+3.3 / -4.5							
S = 2.0H	+4.8 / -8.5			+5.0 / -9.2							
Standard table	BK00			BK00							
Correction Summand	14.7			14.2							
Corrected glare indices referring to 550lm Total luminous flux											

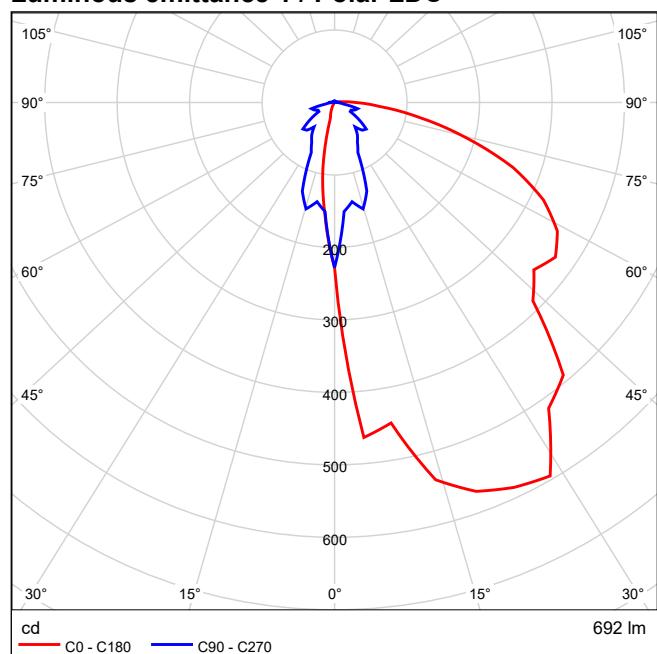
The UGR values are calculated in acc. with CIE Publ. 117. Spacing-to-height ratio = 0.25

PHILIPS CHLORIDE PATRON LED SERIES - 6V AC ONLY W/FTR PATRON LED SERIES AC VERSION W/FORWARD THROW REFLECTOR 1x24WLED

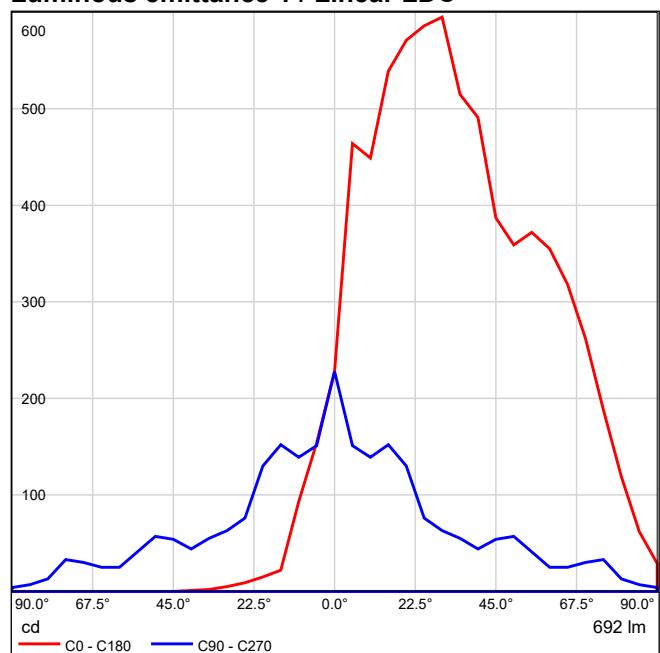


Absolute photometry
Luminaire luminous flux: 692 lm
Power: 18.0 W
Luminous efficacy: 38.4 lm/W

Luminous emittance 1 / Polar LDC

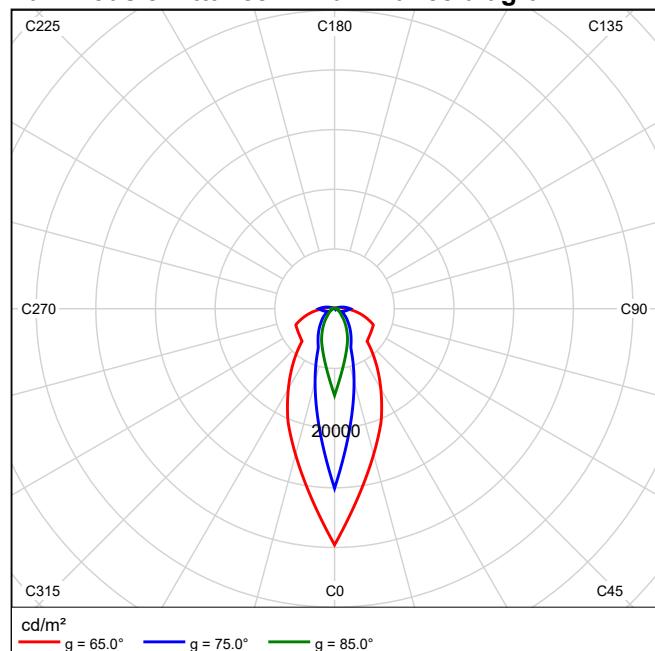


Luminous emittance 1 / Linear LDC

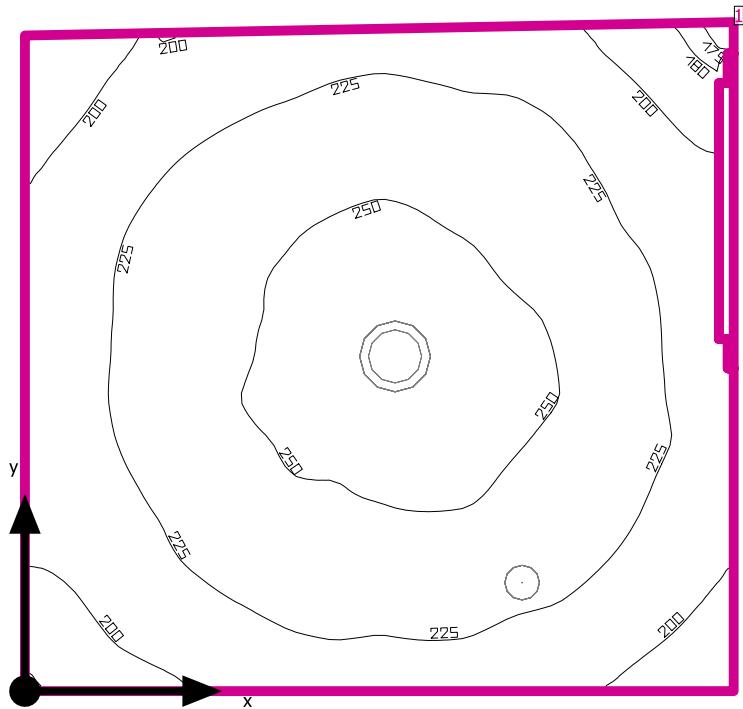


It is not possible to generate a cone diagram, as the light distribution is asymmetrical.

Luminous emittance 1 / Luminance diagram



Banheiro



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 69.9%, Floor 75.6%, Light loss factor: 0.80

Workplane

Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 6 Perpendicular illuminance (adaptive) [lx]	228 (≥ 500) Height: 0.800 m, Wall zone: 0.000 m	228	172	260	0.75	0.66

# Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
1 GE Lighting - 93057439 DDTW6-1530-7SB-STC	1500	15.0	100.0
Total via all luminaires	1500	15.0	100.0

Lighting power density: 4.95 W/m² = 2.18 W/m²/100 lx (Floor area of room 3.03 m²)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 36 - 58 kWh/a of maximum 150 kWh/a

Banheiro

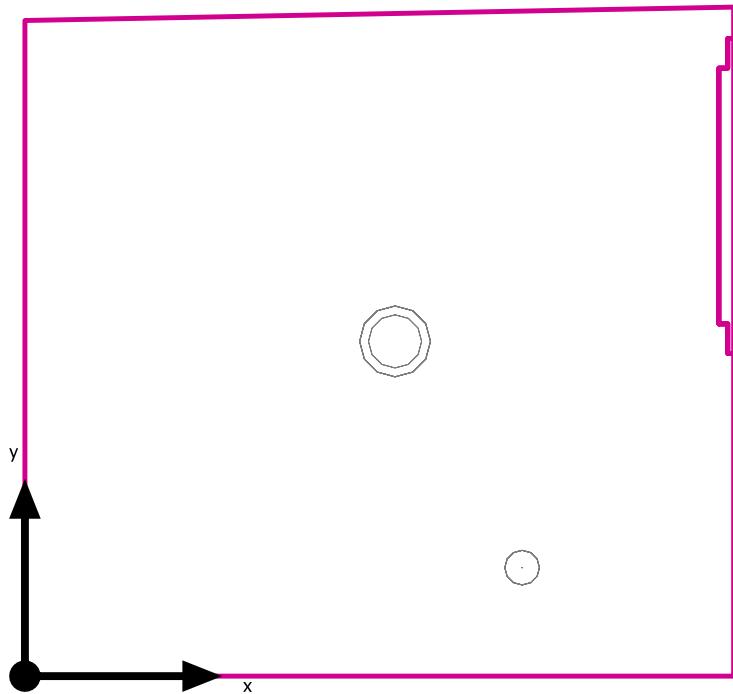
Banheiro(1)



Banheiro(3)



Workplane 6 / Banheiro / Perpendicular illuminance (adaptive)

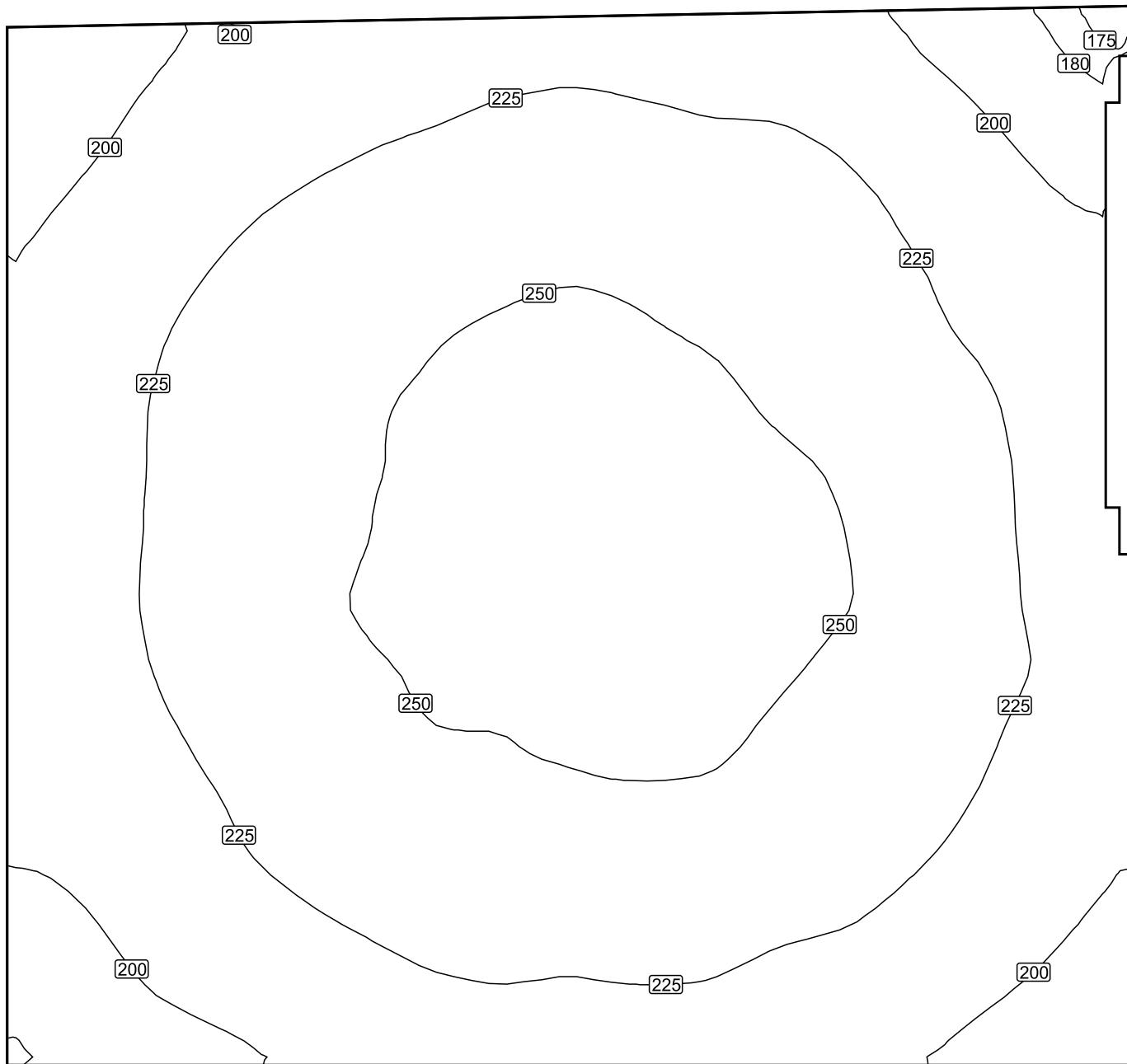


Workplane 6: Perpendicular illuminance (adaptive) (Surface)

Light scene: Banheiro

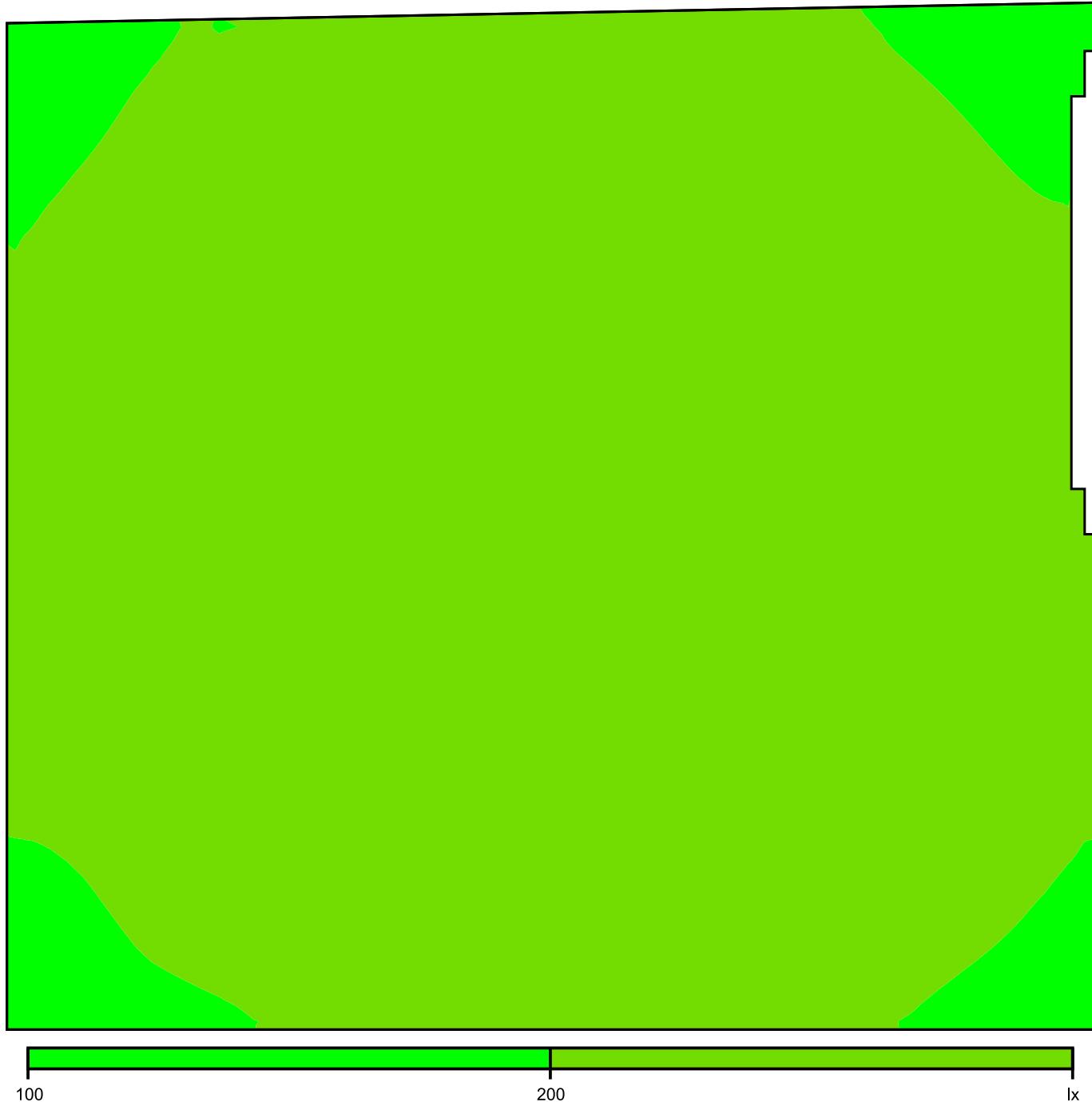
Average: 228 lx (Target: ≥ 500 lx), Min: 172 lx, Max: 260 lx, Min/average: 0.75, Min/max: 0.66
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



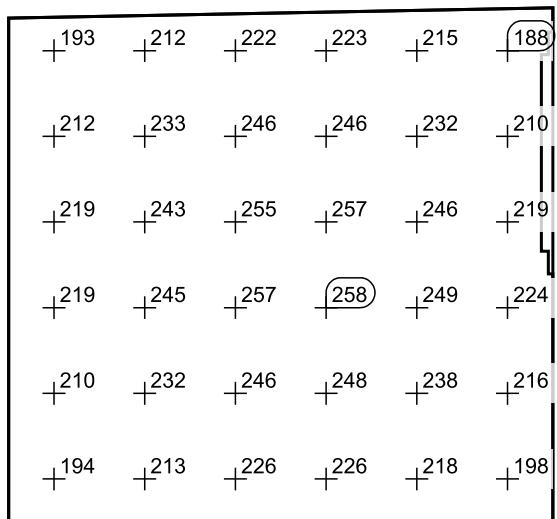
Scale: 1 : 10

False colors [lx]



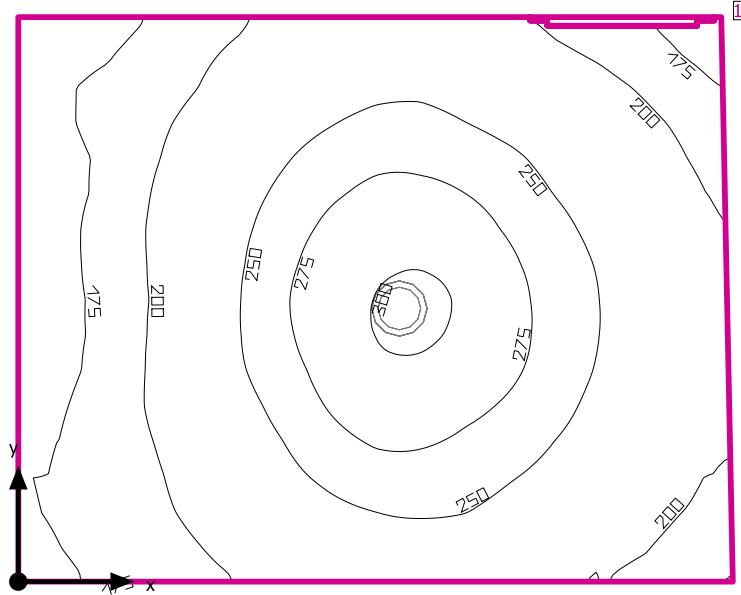
Scale: 1 : 10

Value grid [lx]



Scale: 1 : 25

Dormitório 01



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 77.9%, Floor 75.6%, Light loss factor: 0.80

Workplane

Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 7 Perpendicular illuminance (adaptive) [lx]	227 (≥ 500) Height: 0.800 m, Wall zone: 0.000 m	227	161	304	0.71	0.53

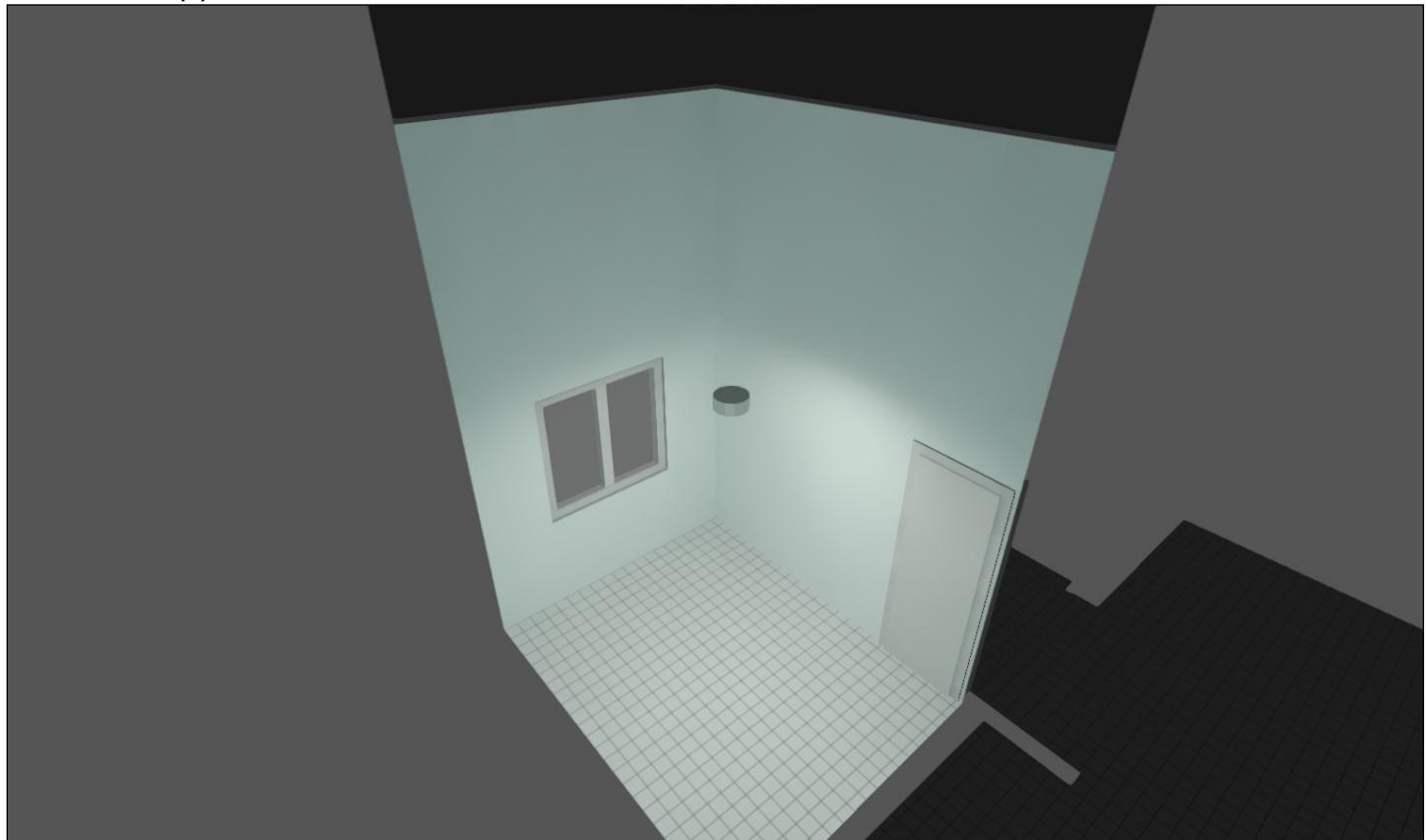
#	Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
1	GE Lighting - 93057445 DDTW8-2230-7SB-STC	2200	22.0	100.0
	Total via all luminaires	2200	22.0	100.0

Lighting power density: $2.92 \text{ W/m}^2 = 1.29 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 7.53 m^2)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 38 - 61 kWh/a of maximum 300 kWh/a

Dormitório 01

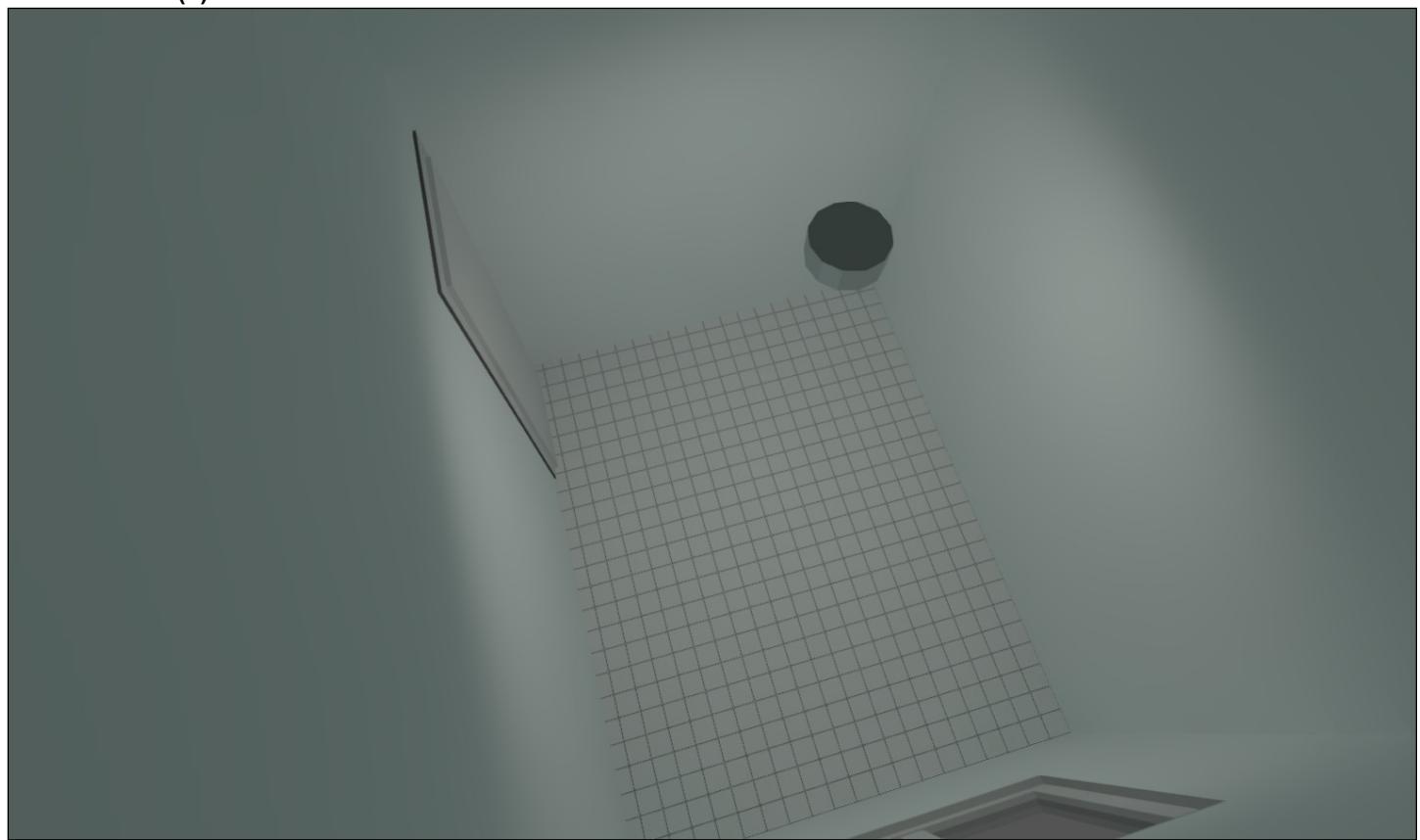
Dormitório 01(1)



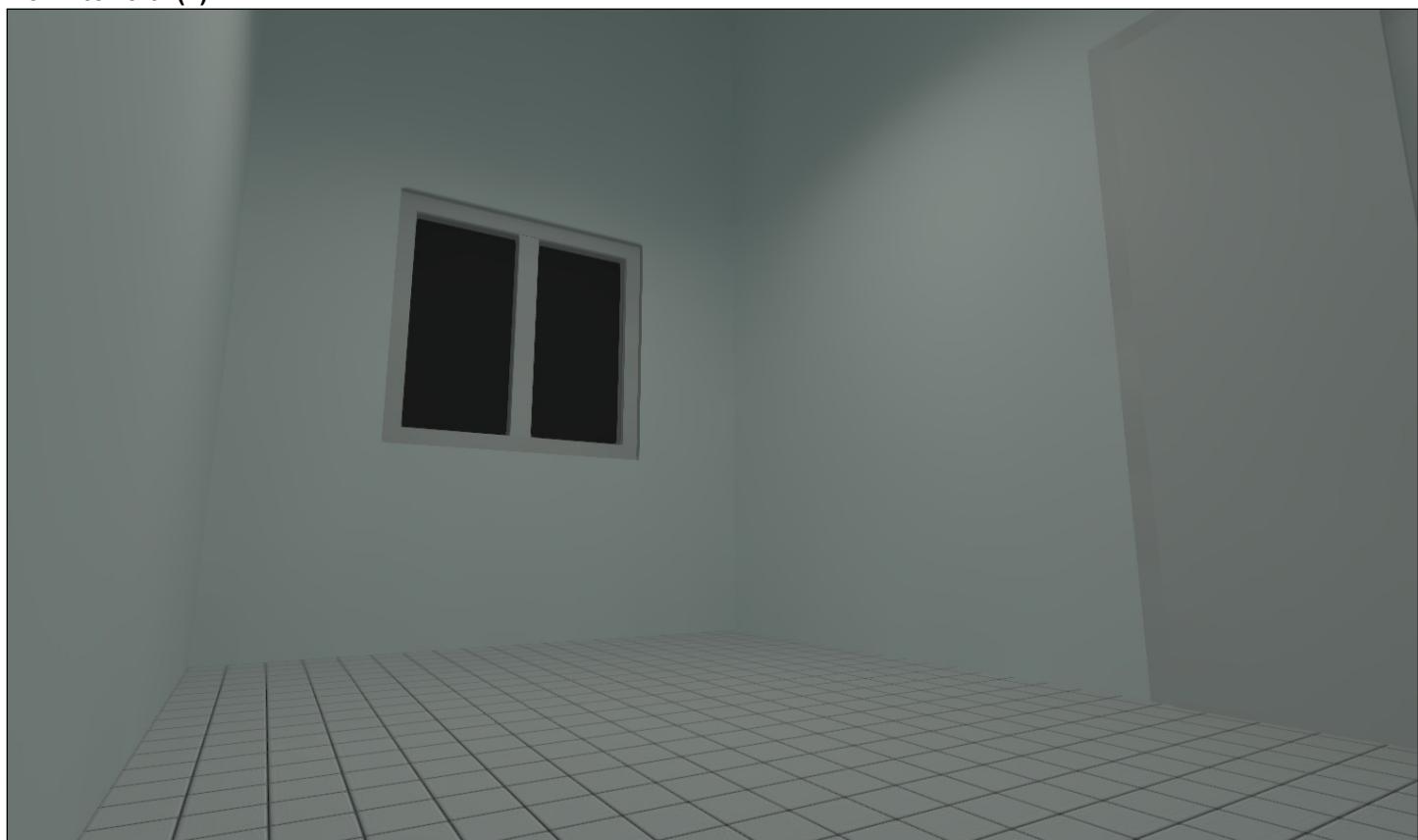
Dormitório 01(2)



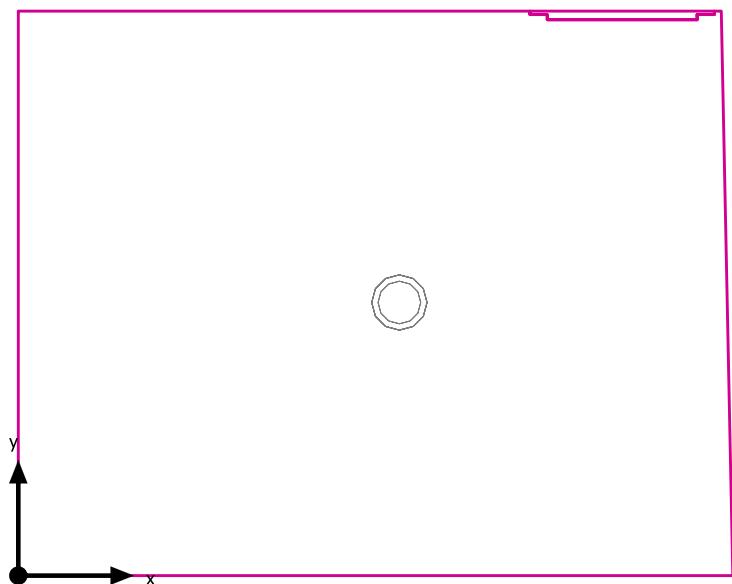
Dormitório 01(3)



Dormitório 01(4)



Workplane 7 / Dormitório 01 / Perpendicular illuminance (adaptive)



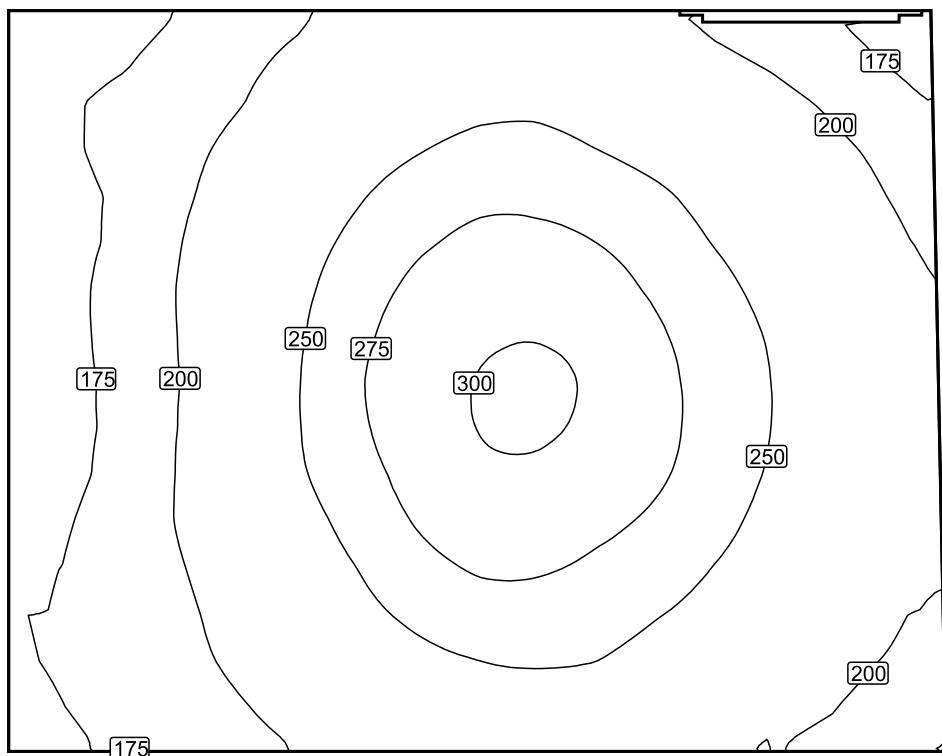
Workplane 7: Perpendicular illuminance (adaptive) (Surface)

Light scene: Dormitório 01

Average: 227 lx (Target: ≥ 500 lx), Min: 161 lx, Max: 304 lx, Min/average: 0.71, Min/max: 0.53

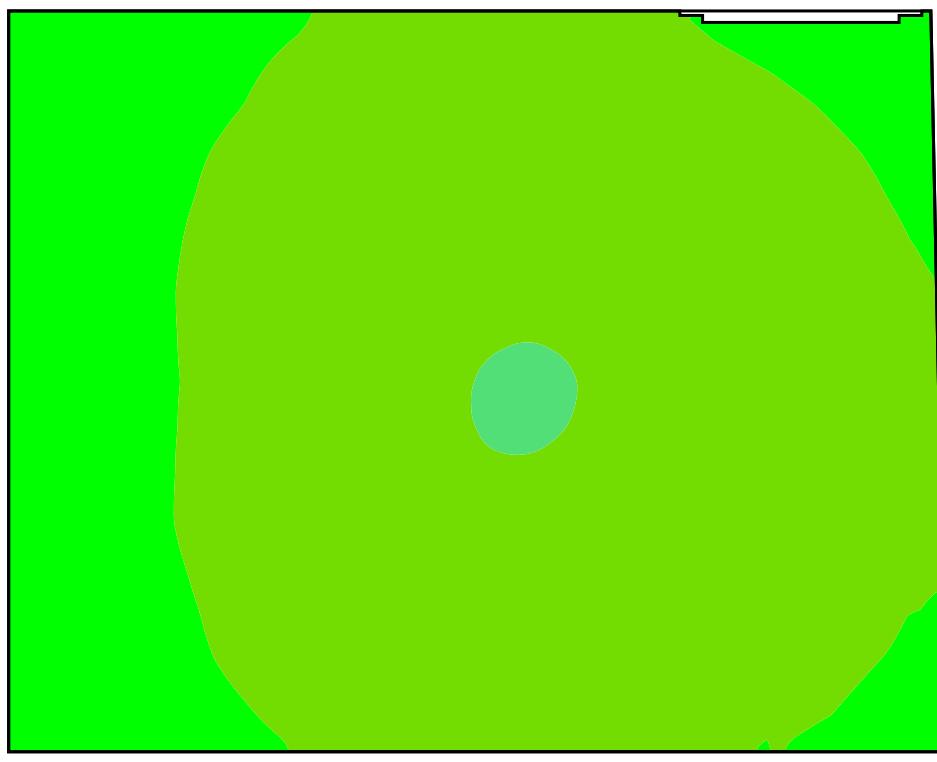
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



Scale: 1 : 25

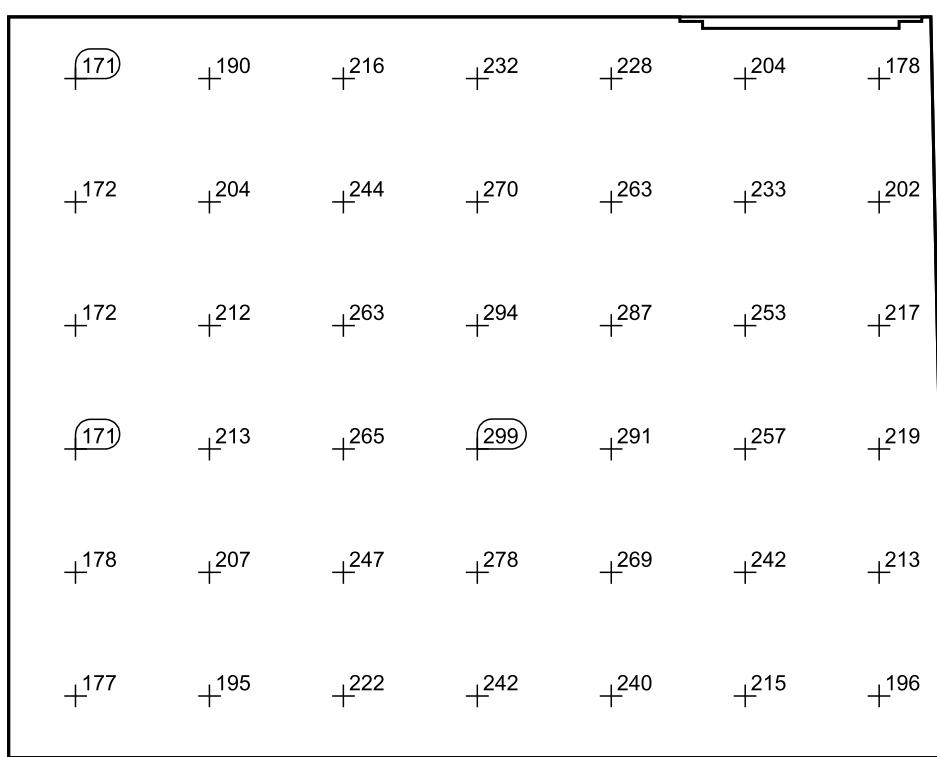
False colors [lx]



100 200 300 lx

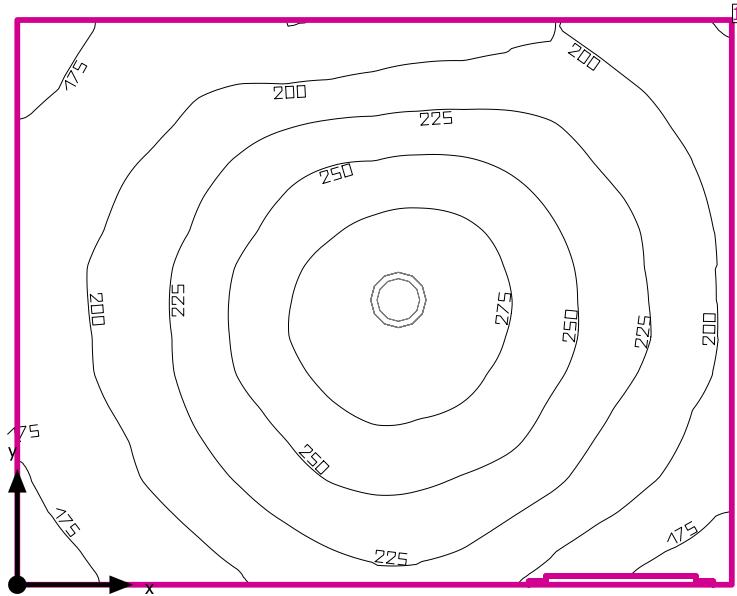
Scale: 1 : 25

Value grid [lx]



Scale: 1 : 25

Dormitório 02



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 77.9%, Floor 75.6%, Light loss factor: 0.80

Workplane

Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 5 Perpendicular illuminance (adaptive) [lx]	223 (≥ 500) Height: 0.800 m, Wall zone: 0.000 m	223	159	298	0.71	0.53

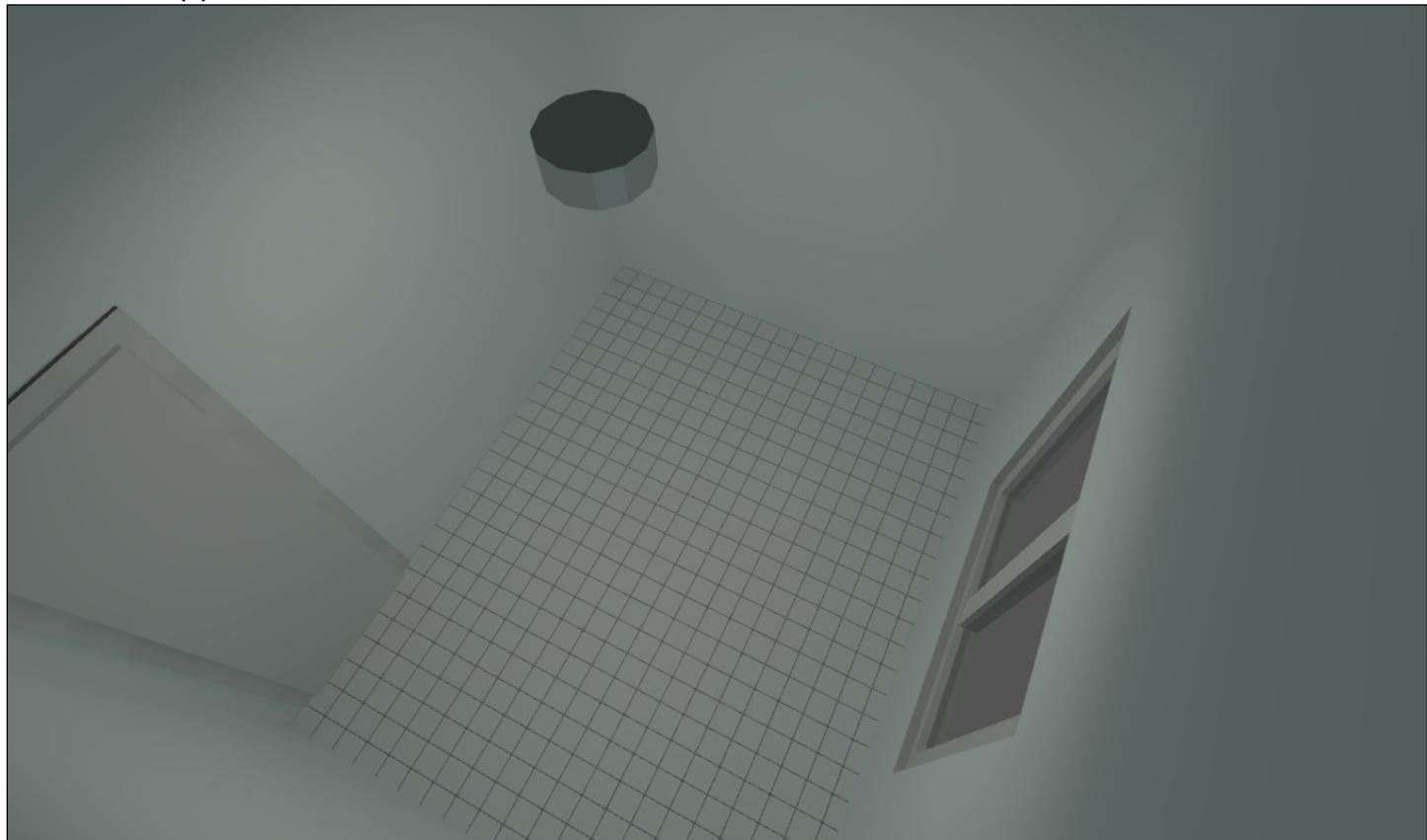
#	Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
1	GE Lighting - 93057445 DDTW8-2230-7SB-STC	2200	22.0	100.0
	Total via all luminaires	2200	22.0	100.0

Lighting power density: $2.90 \text{ W/m}^2 = 1.30 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 7.60 m^2)

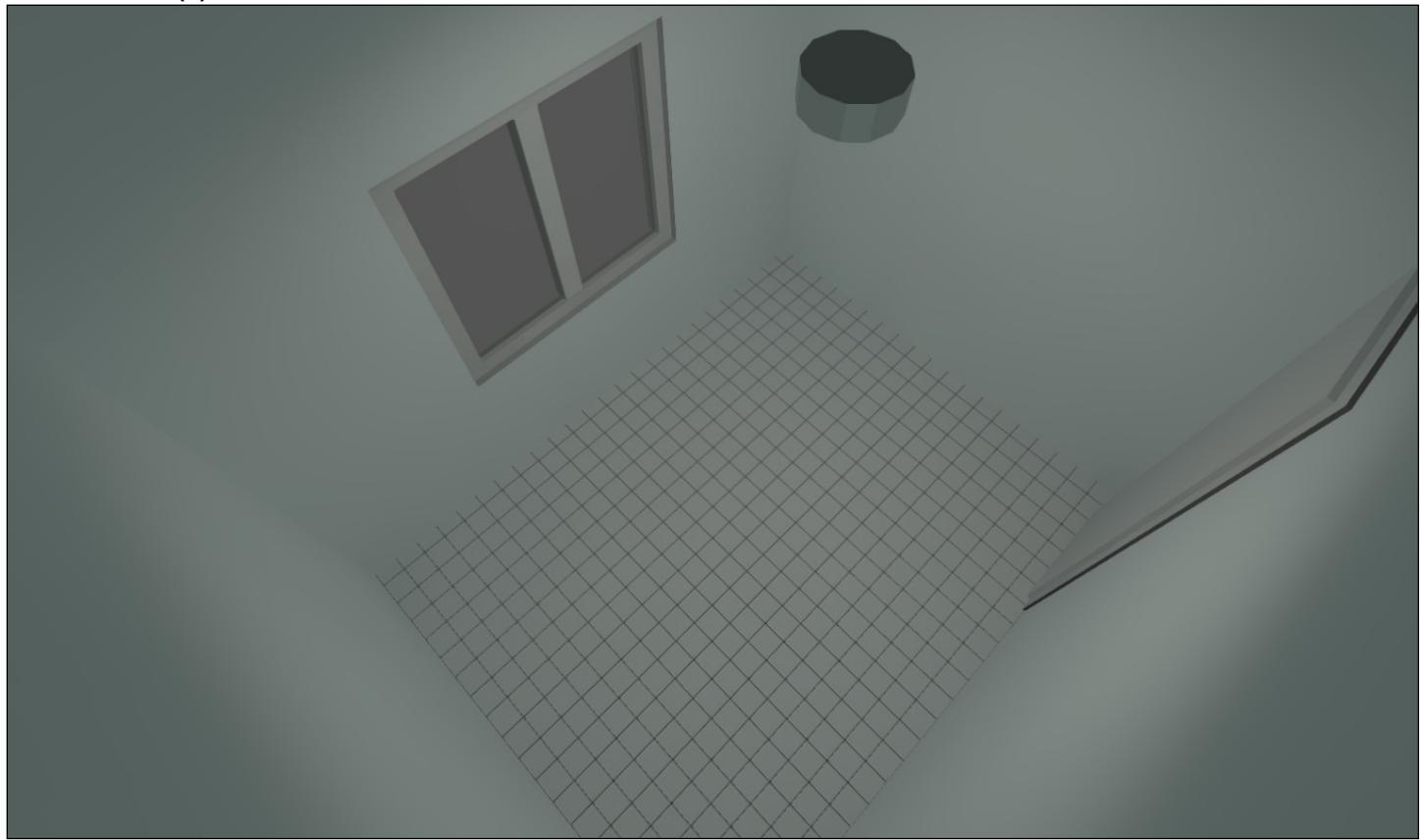
The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 38 - 61 kWh/a of maximum 300 kWh/a

Dormitório 02

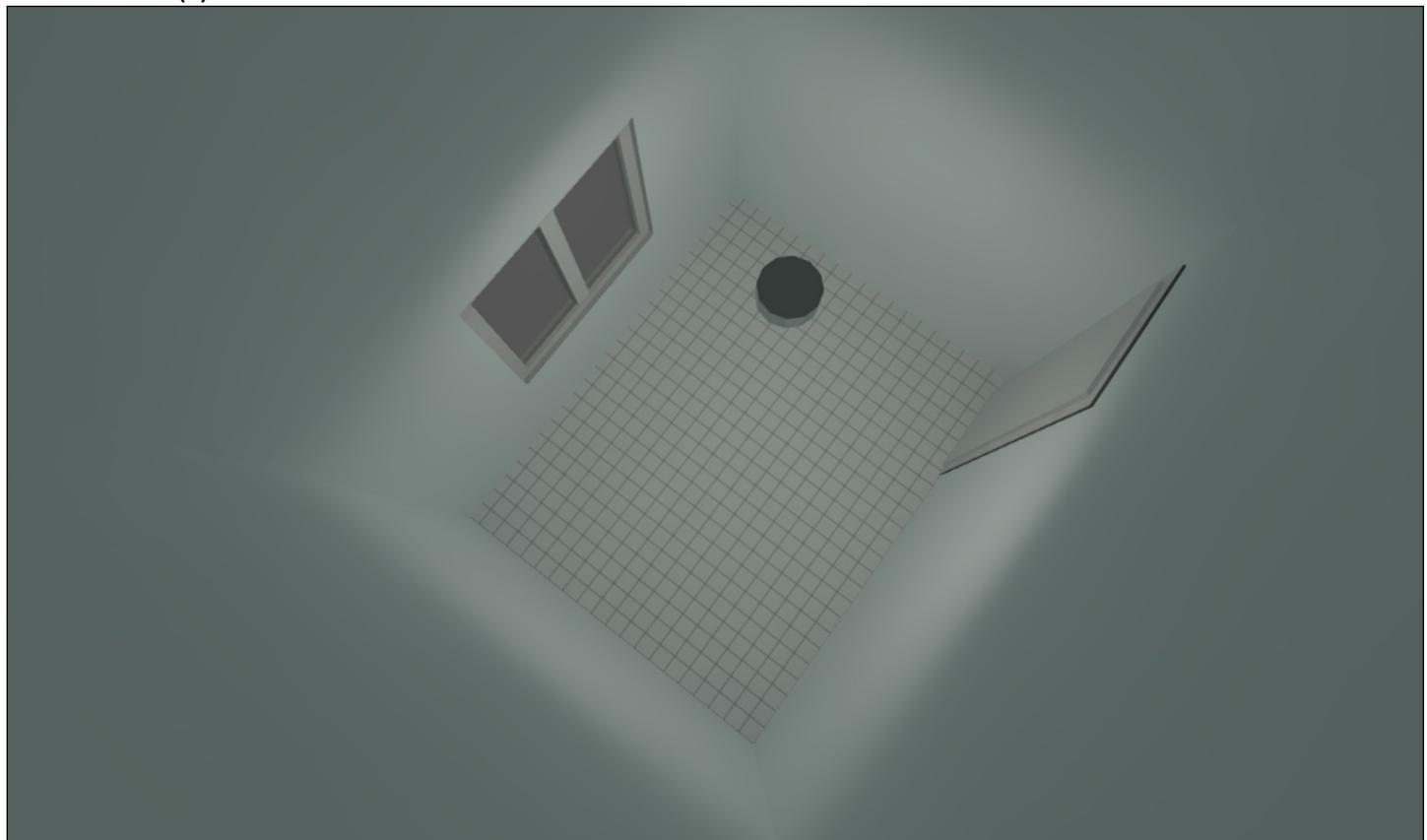
Dormitório 02(1)



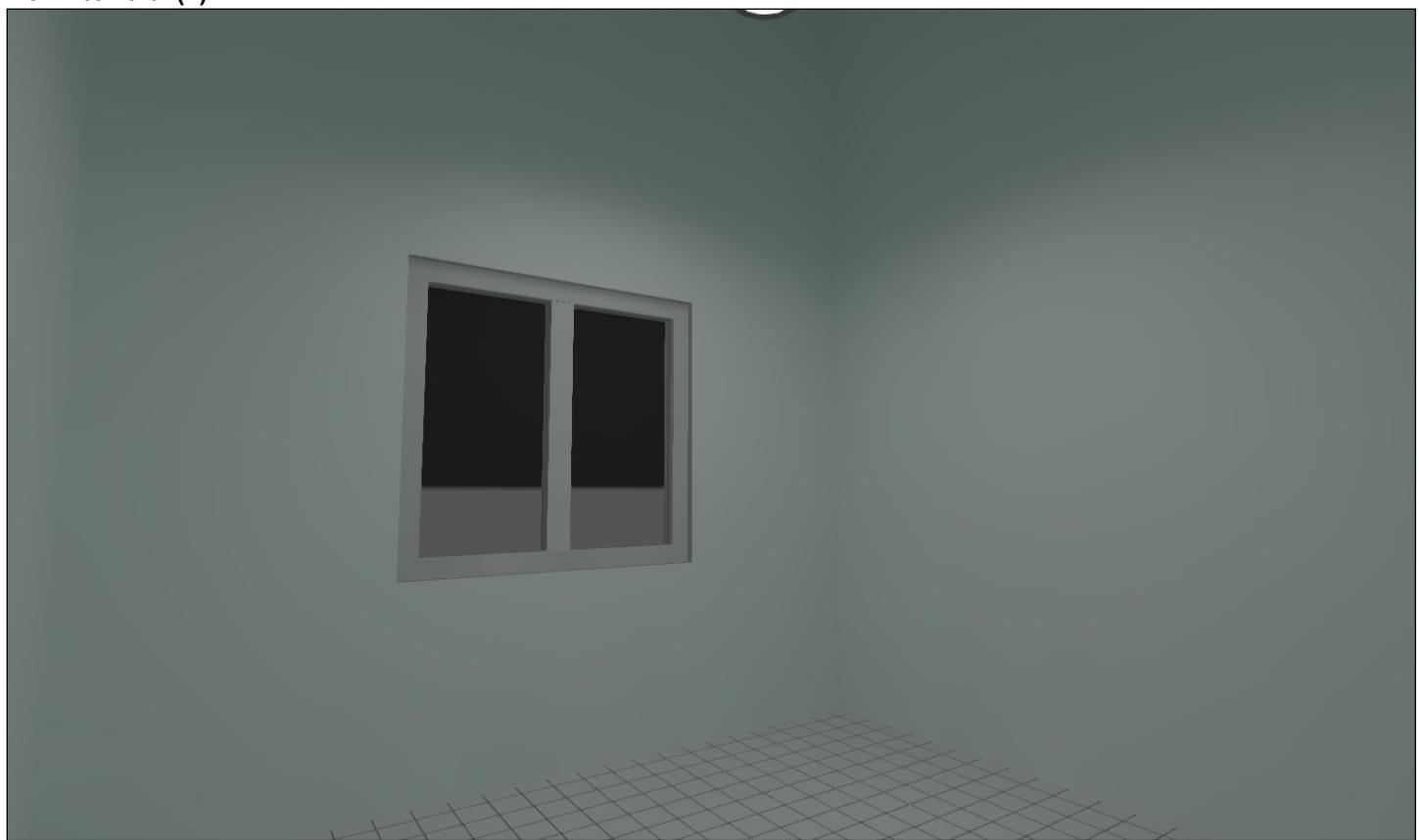
Dormitório 02(2)



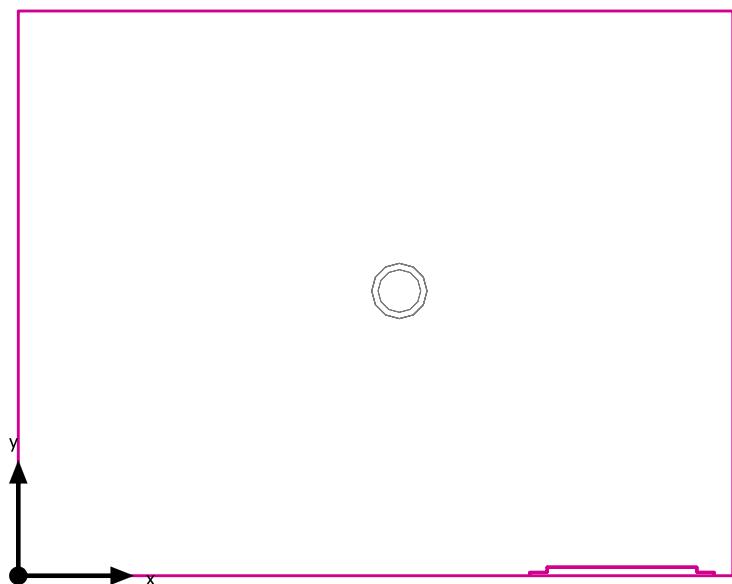
Dormitório 02(3)



Dormitório 02(4)



Workplane 5 / Dormitório 02 / Perpendicular illuminance (adaptive)



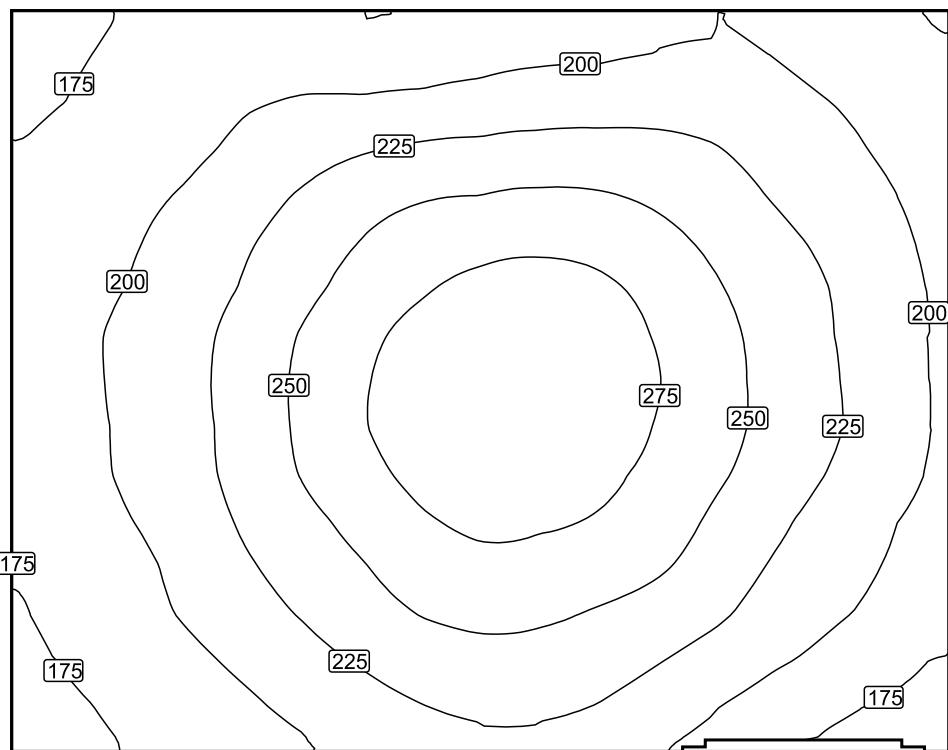
Workplane 5: Perpendicular illuminance (adaptive) (Surface)

Light scene: Dormitório 02

Average: 223 lx (Target: ≥ 500 lx), Min: 159 lx, Max: 298 lx, Min/average: 0.71, Min/max: 0.53

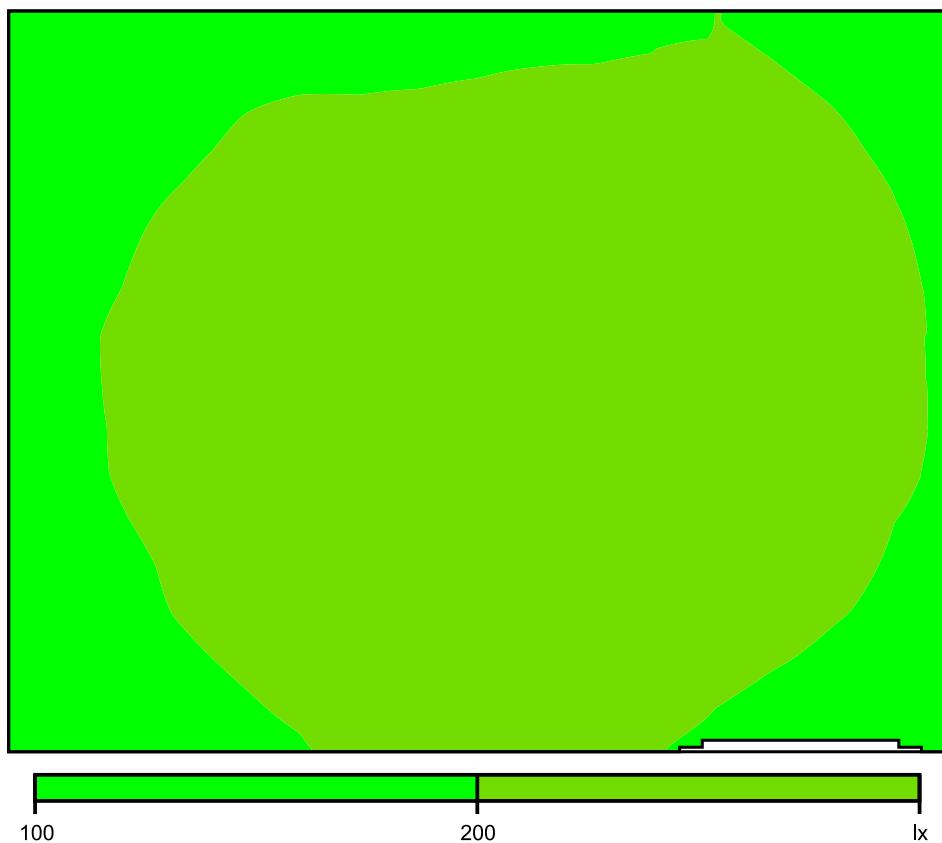
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



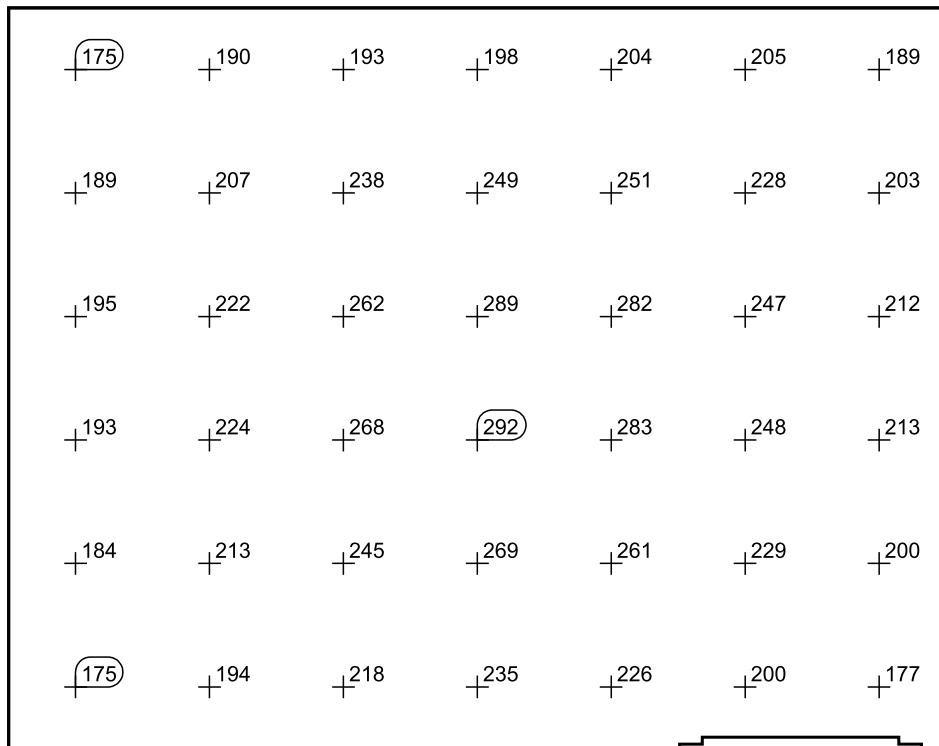
Scale: 1 : 25

False colors [lx]



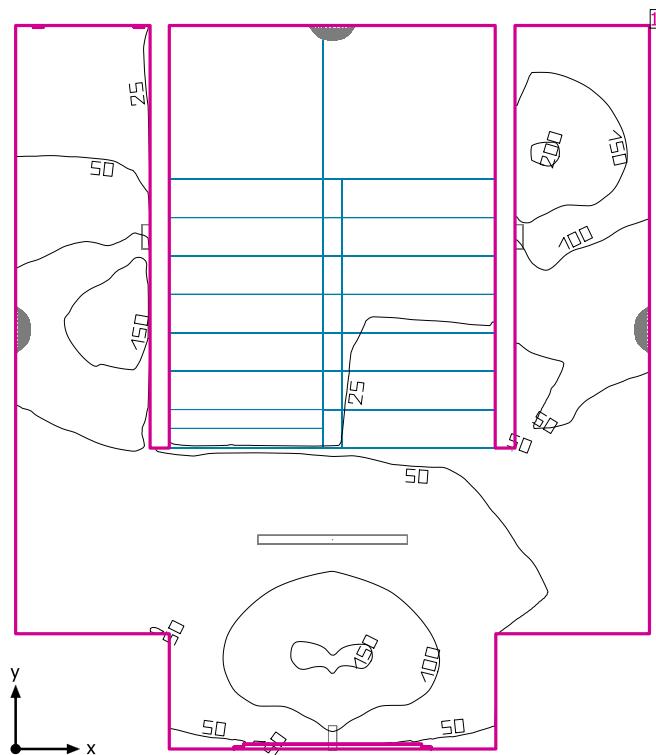
Scale: 1 : 25

Value grid [lx]



Scale: 1 : 25

Hall



Clearance height: 2.600 m to 5.350 m, Reflection factors: Ceiling 70.0%, Walls 86.0%, Floor 75.2%, Light loss factor: 0.80

Workplane

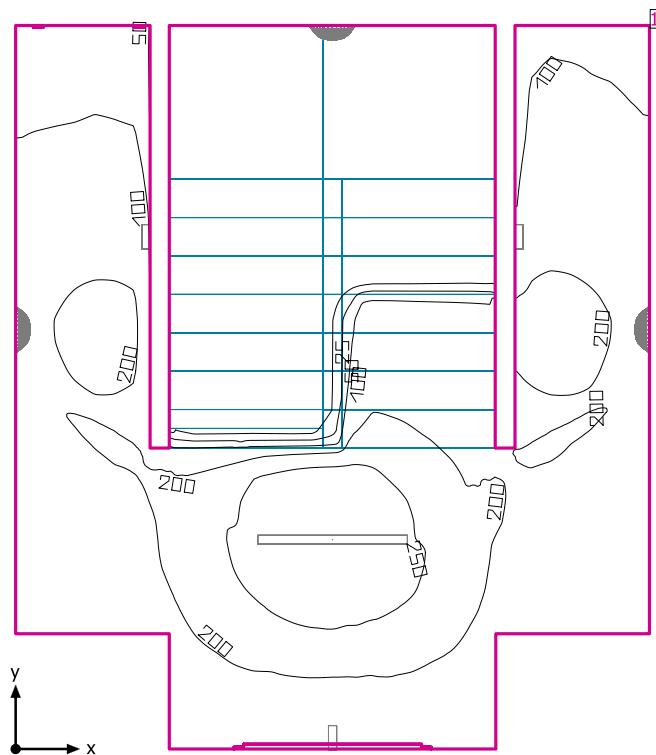
Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 14	Perpendicular illuminance (adaptive) [lx] 57.7 (≥ 500) Height: 0.800 m, Wall zone: 0.000 m	57.7	0.00	206	0.00	0.00

# Luminaire	Φ(Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
3 PHILIPS CHLORIDE - PATRON LED SERIES - 6V AC ONLY W/FTR PATRON LED SERIES AC VERSION W/FORWARD THROW REFLECTOR	692	18.0	38.4
Total via all luminaires	2076	54.0	38.4

Lighting power density: $2.18 \text{ W/m}^2 = 3.77 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 24.80 m^2)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 360 kWh/a of maximum 900 kWh/a

Hall



Clearance height: 2.600 m to 5.350 m, Reflection factors: Ceiling 70.0%, Walls 86.0%, Floor 75.2%, Light loss factor: 0.80

Workplane

Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 14	Perpendicular illuminance (adaptive) [lx] 129 (≥ 500) Height: 0.800 m, Wall zone: 0.000 m	129	0.00	291	0.00	0.00

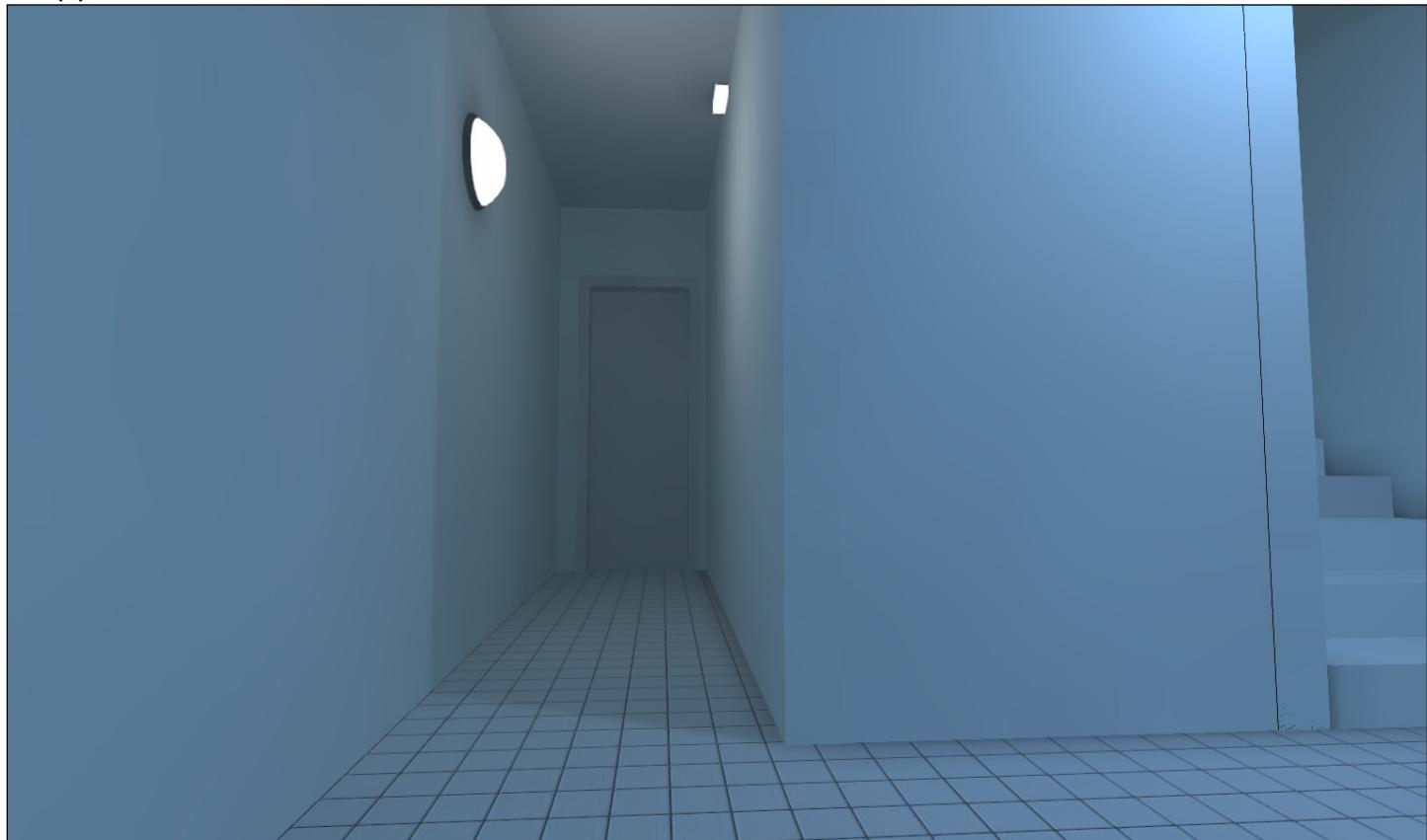
# Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
2 GE Lighting - 93055991 MPY4F-2040-7SB-STLT	2500	20.0	125.0
3 GE Lighting - 95939 BW271FWOPL	1100	12.5	88.0
Total via all luminaires	8300	77.5	107.1

Lighting power density: $3.12 \text{ W/m}^2 = 2.42 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 24.80 m^2)

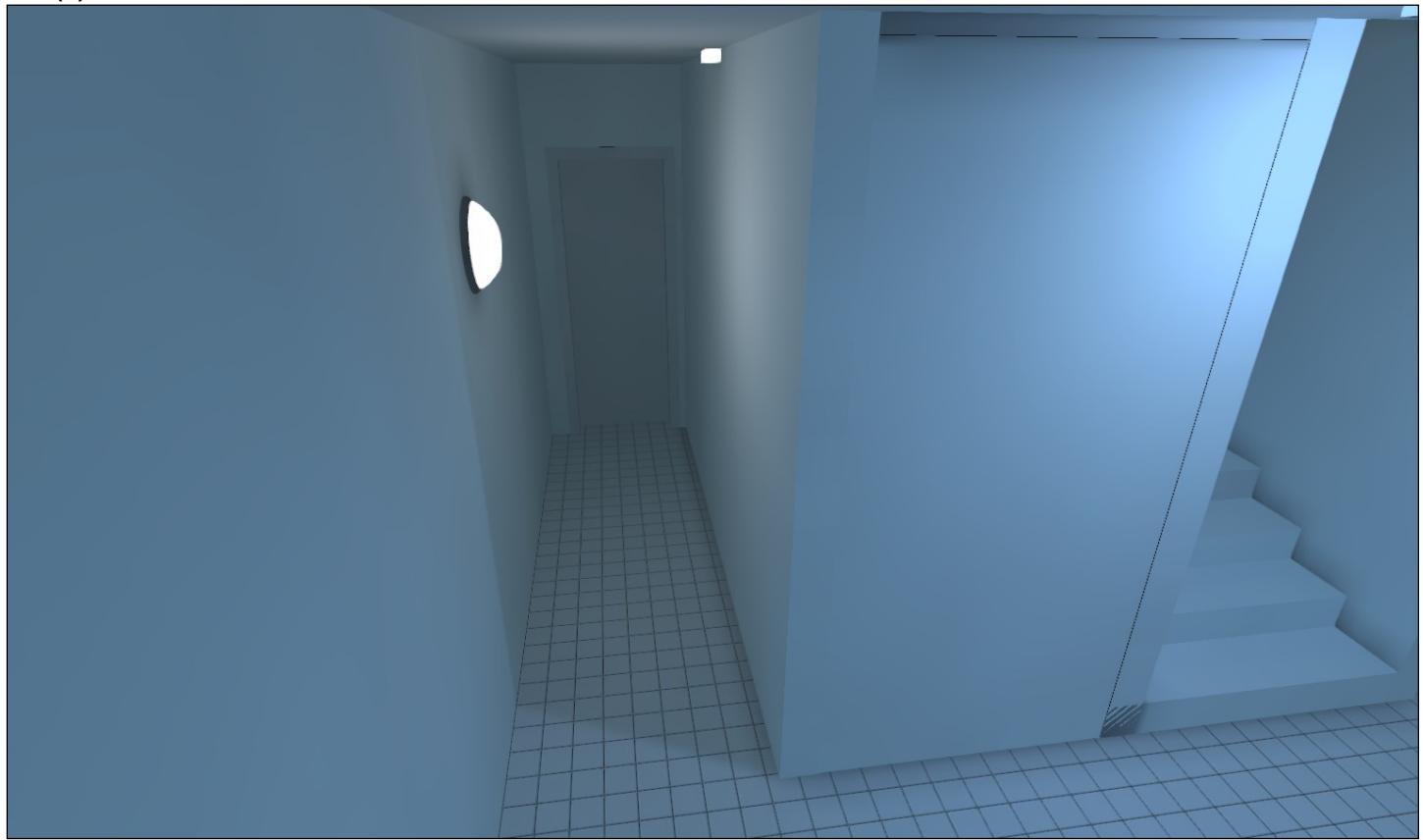
The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 360 kWh/a of maximum 900 kWh/a

Hall

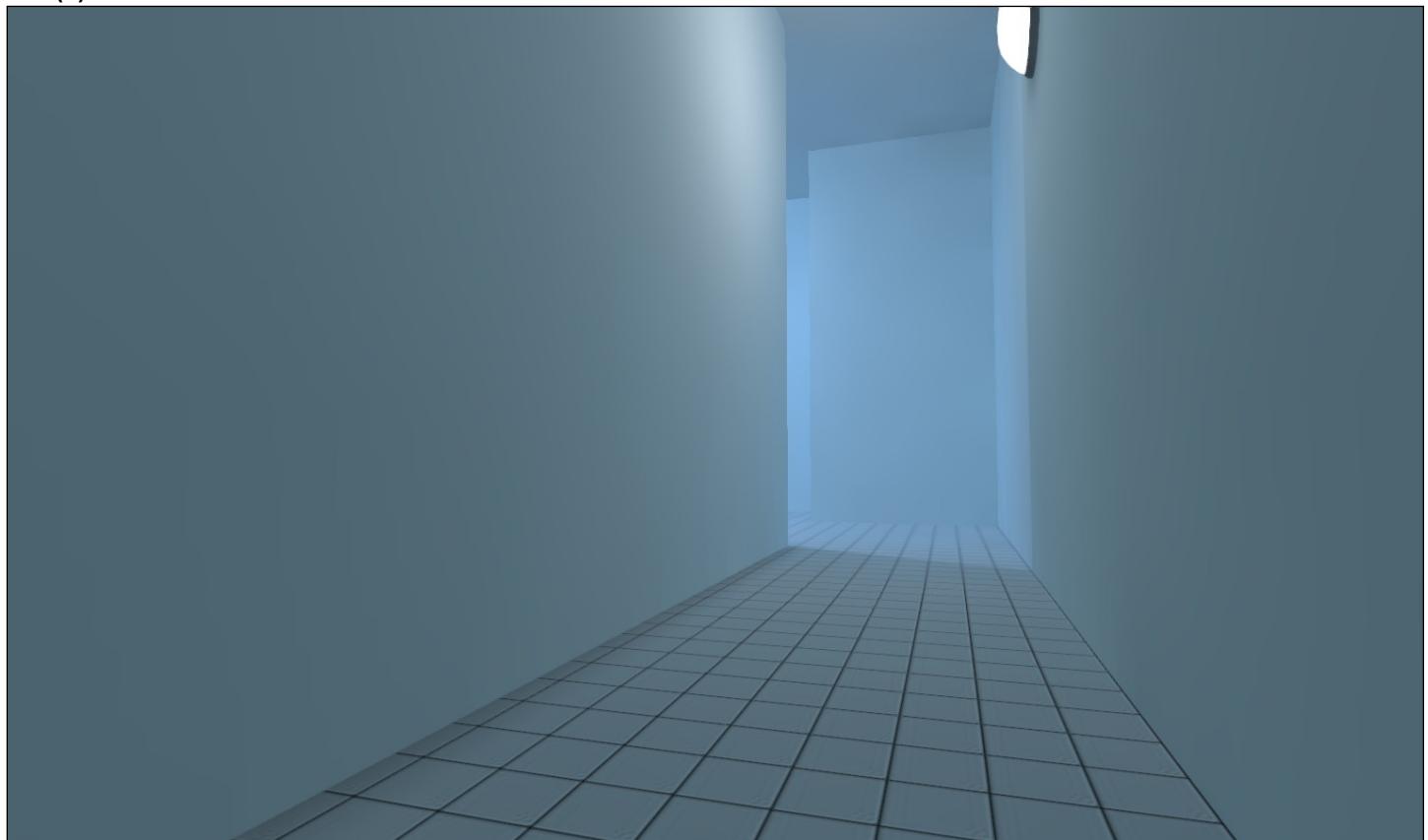
Hall(1)



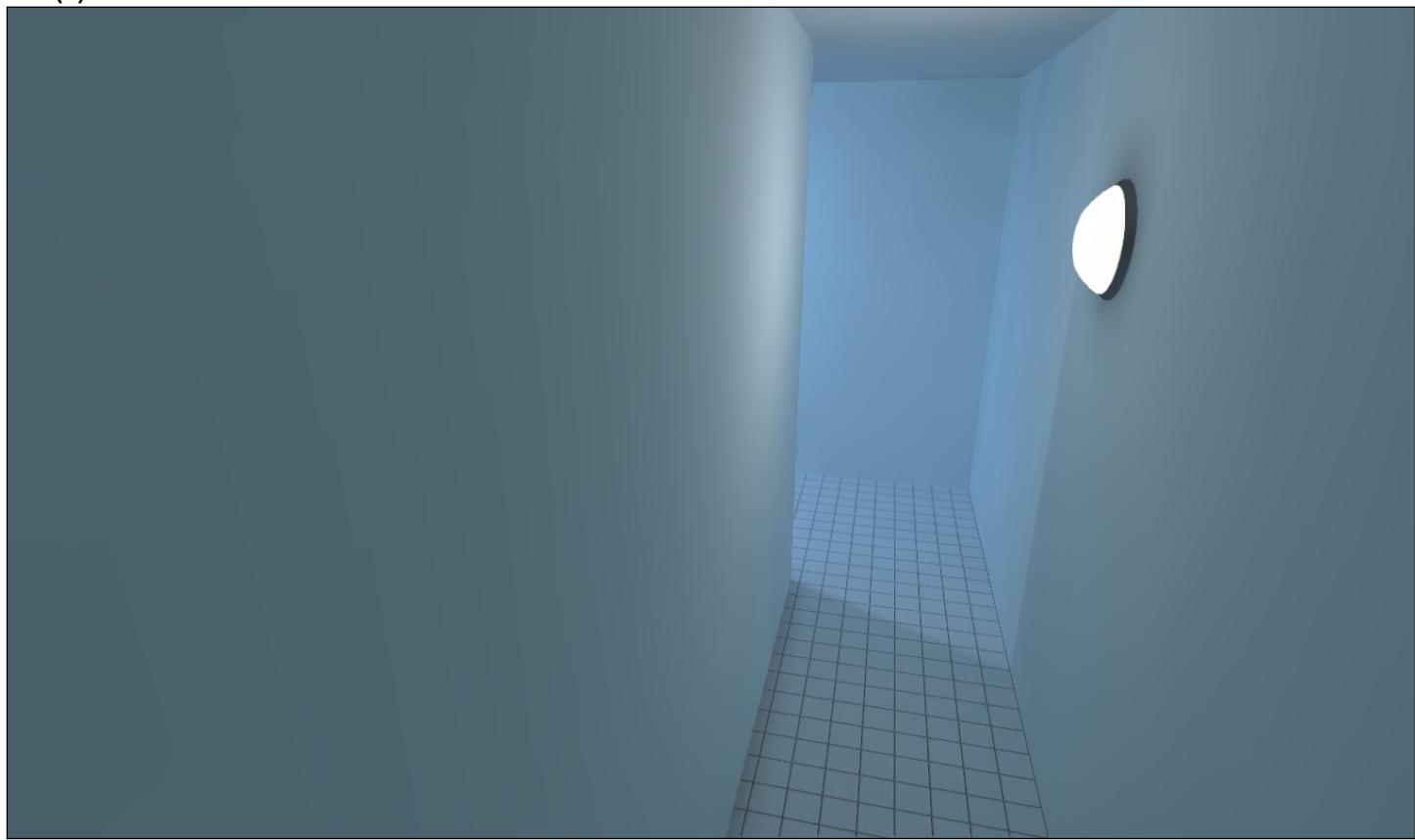
Hall(2)



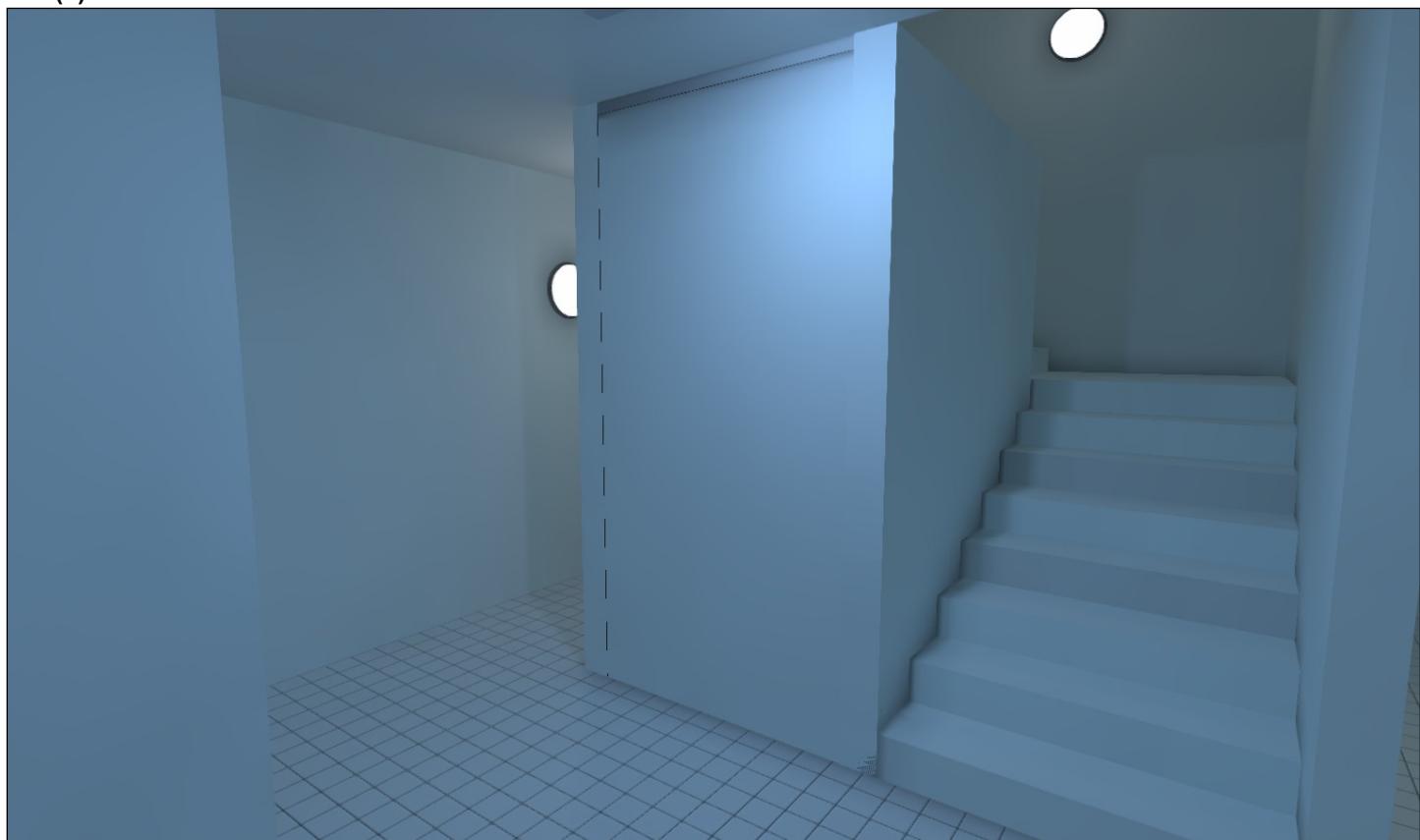
Hall(3)



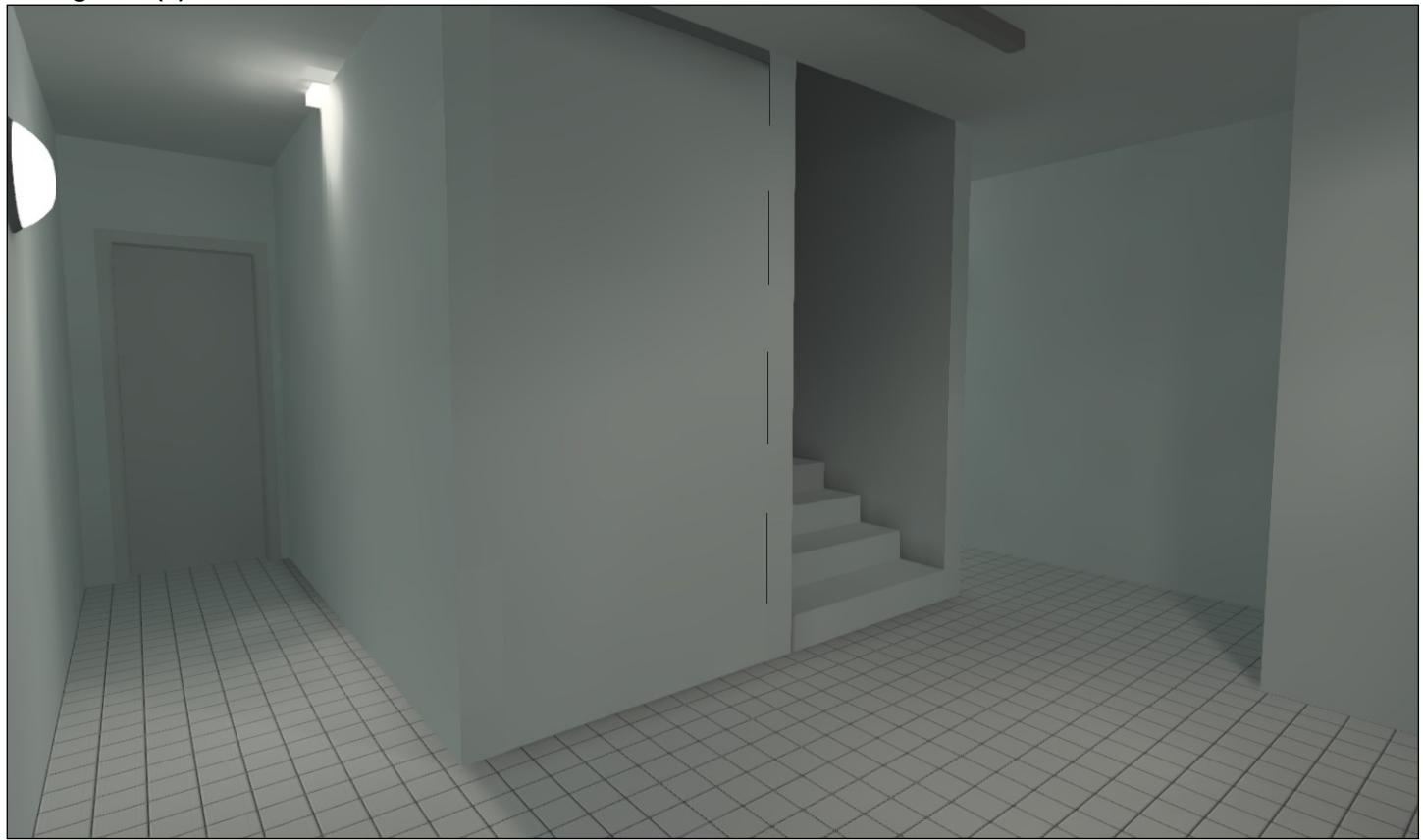
Hall(4)



Hall(5)



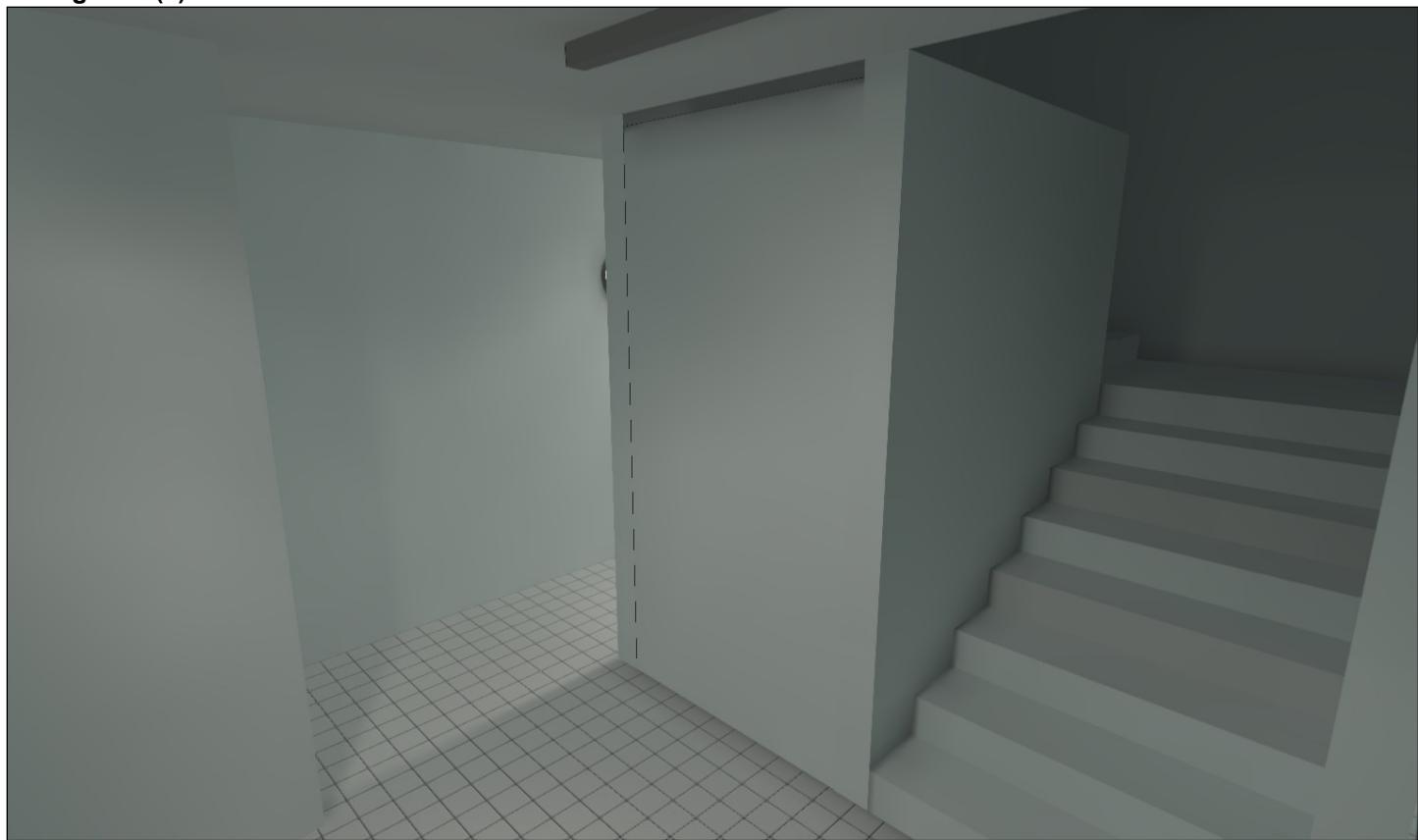
Emergência(1)



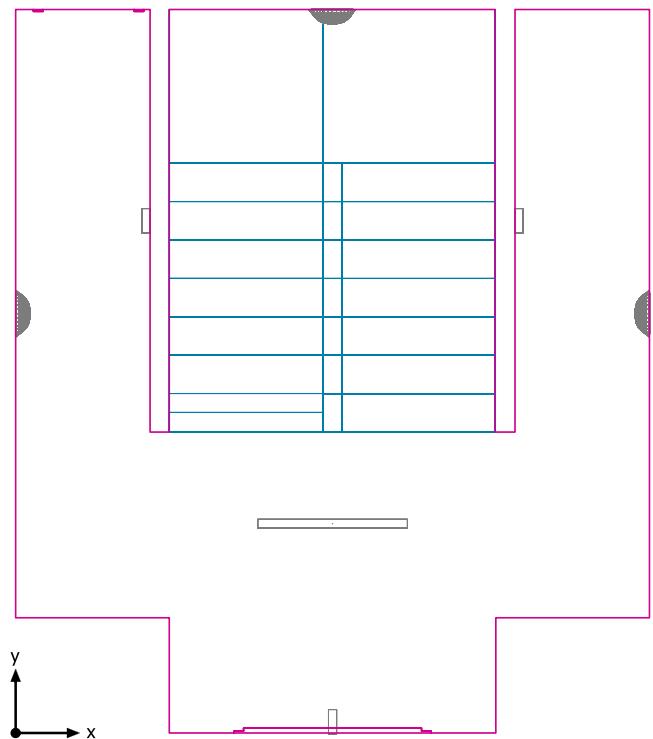
Emergência(2)



Emergência(3)



Workplane 14 / Emergência / Perpendicular illuminance (adaptive)



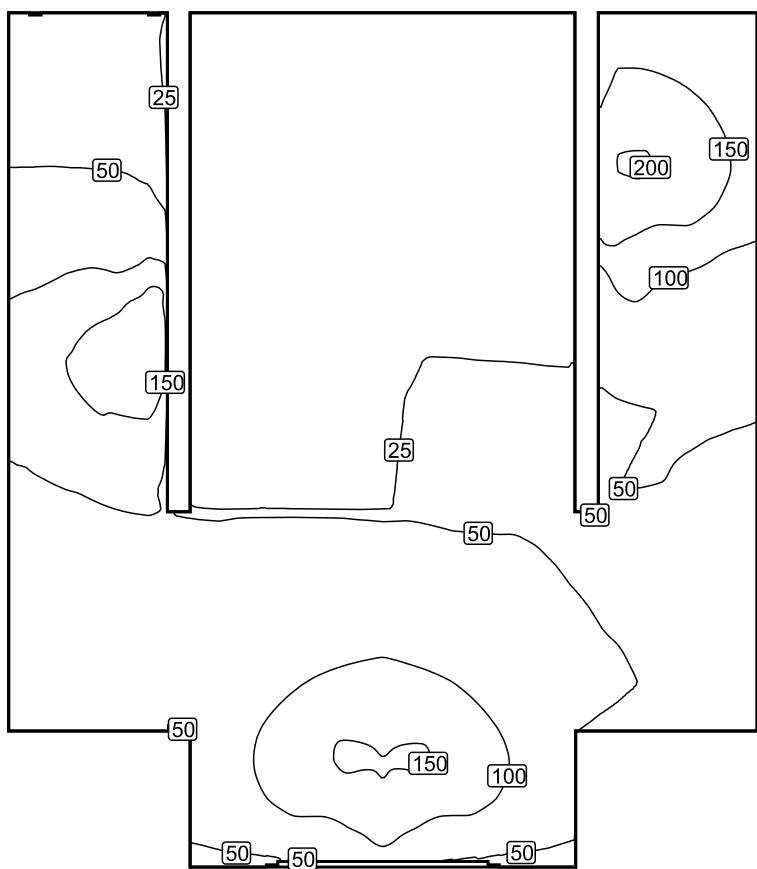
Workplane 14: Perpendicular illuminance (adaptive) (Surface)

Light scene: Emergência

Average: 57.7 lx (Target: ≥ 500 lx), Min: 0.00 lx, Max: 206 lx, Min/average: 0.00, Min/max: 0.00

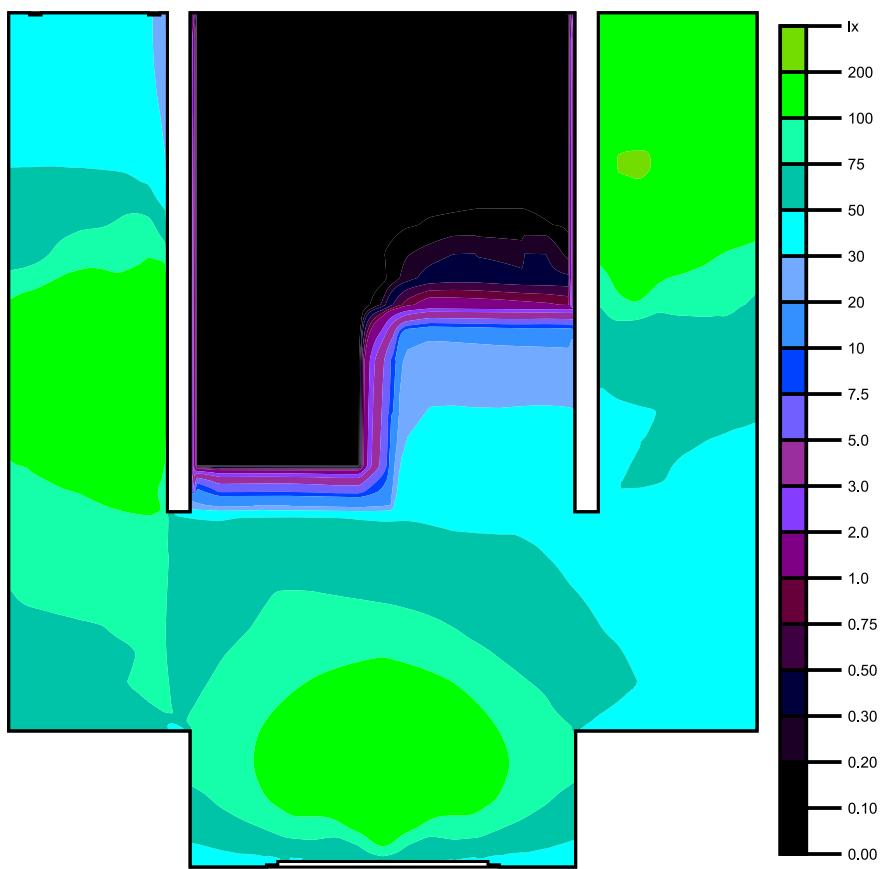
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



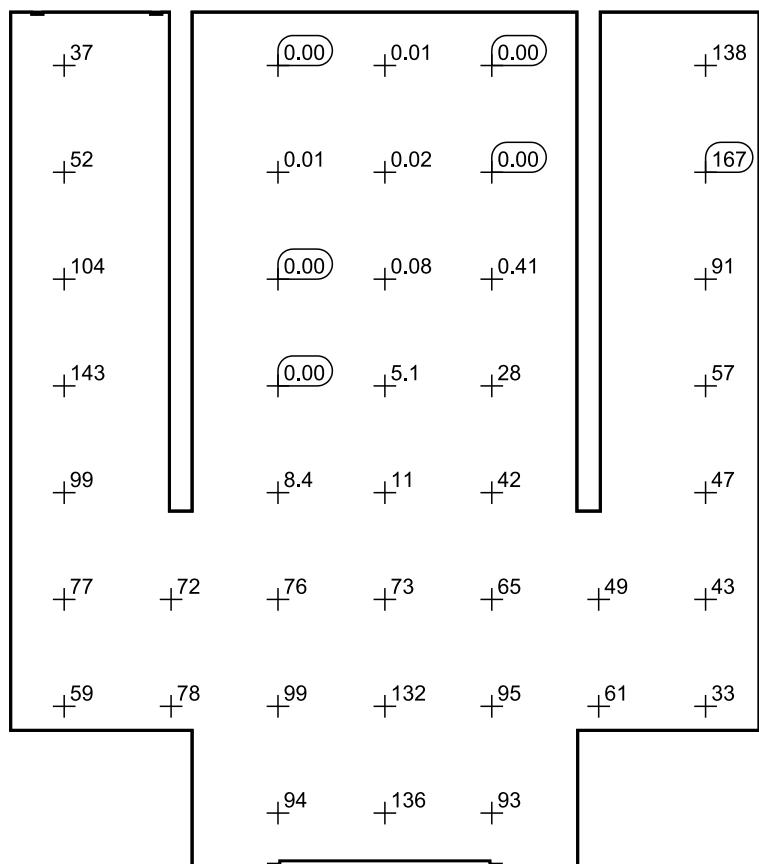
Scale: 1 : 50

False colors [lx]



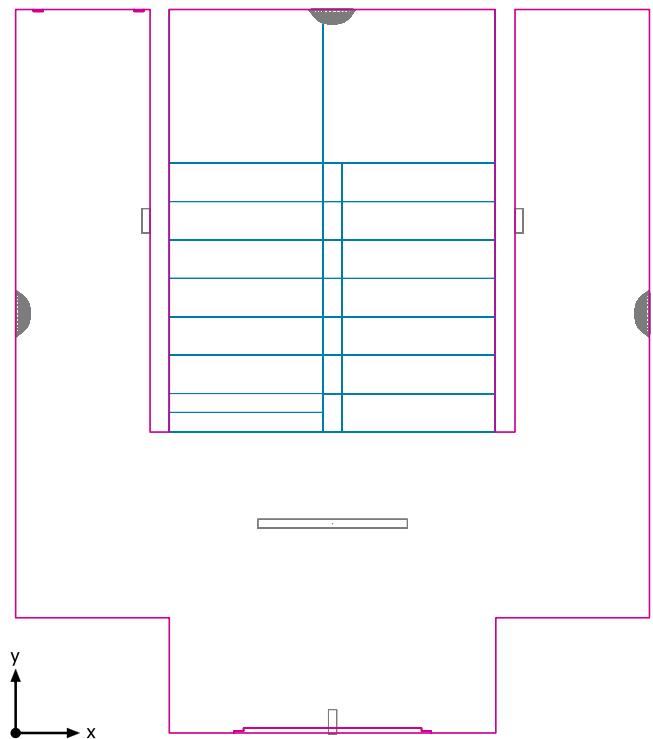
Scale: 1 : 50

Value grid [lx]



Scale: 1 : 50

Workplane 14 / Hall / Perpendicular illuminance (adaptive)



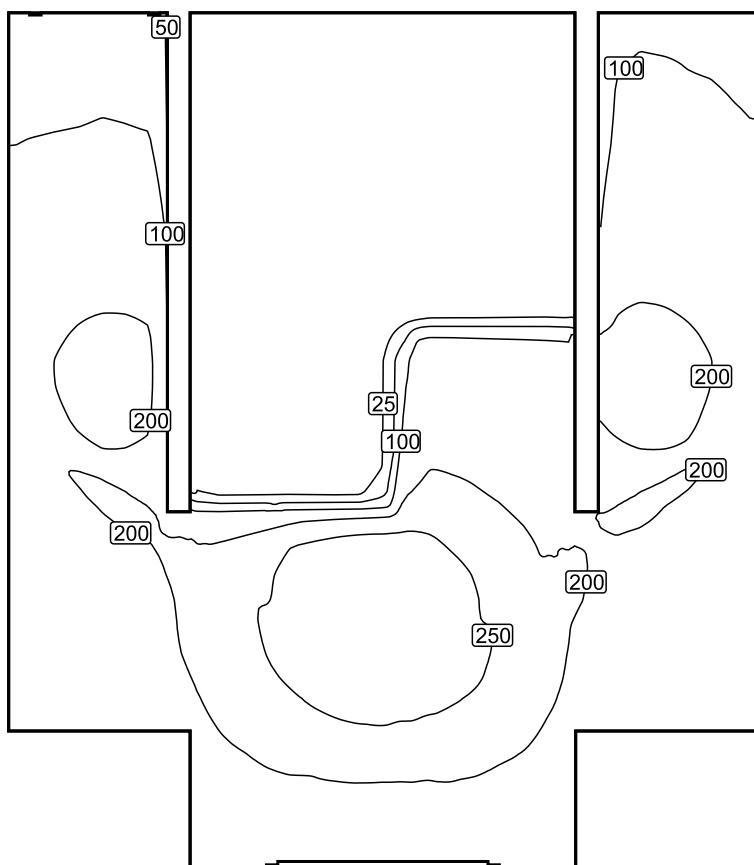
Workplane 14: Perpendicular illuminance (adaptive) (Surface)

Light scene: Hall

Average: 129 lx (Target: ≥ 500 lx), Min: 0.00 lx, Max: 291 lx, Min/average: 0.00, Min/max: 0.00

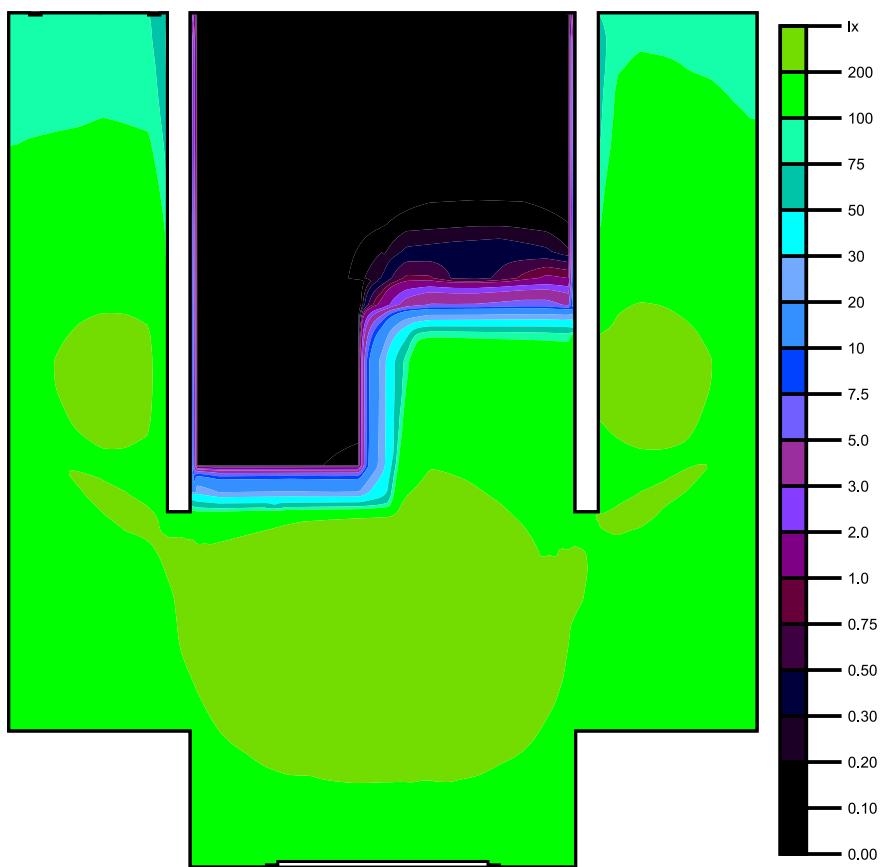
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



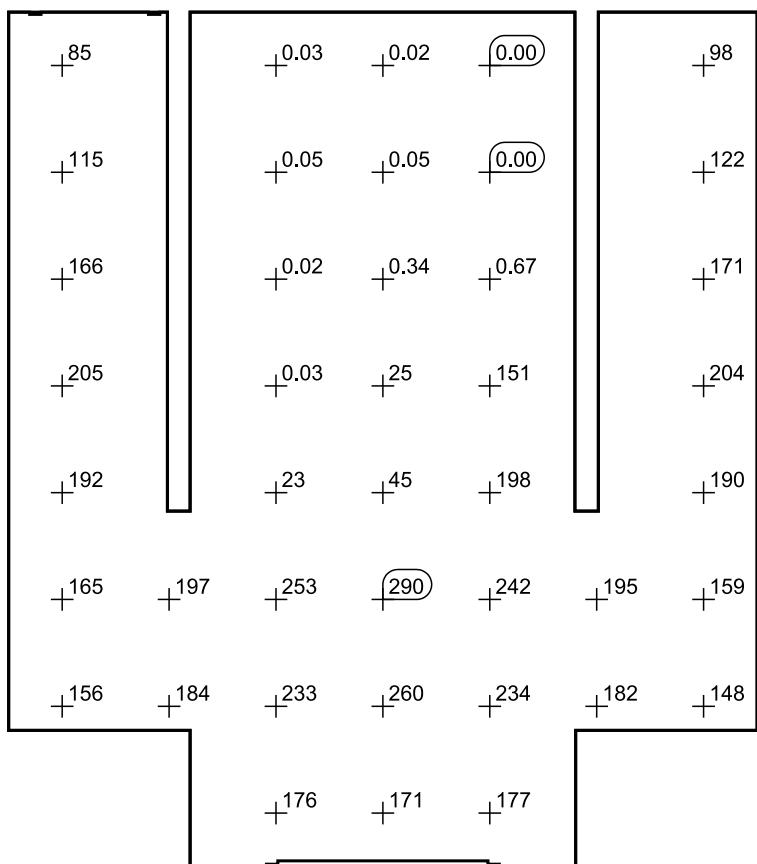
Scale: 1 : 50

False colors [lx]



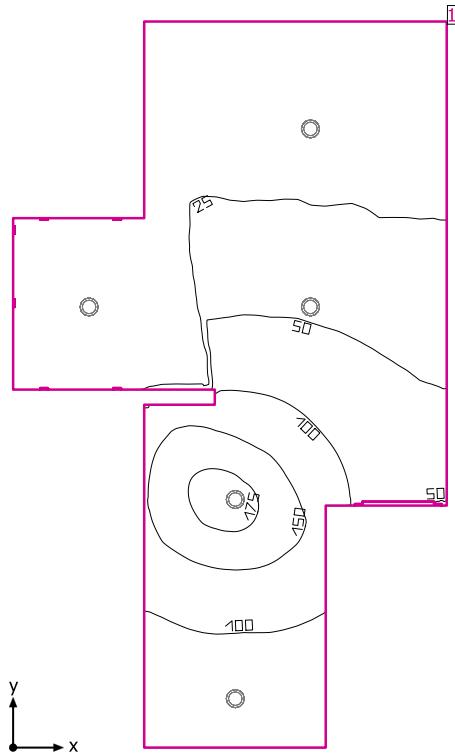
Scale: 1 : 50

Value grid [lx]



Scale: 1 : 50

Sala/Cozinha/Serviço



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 74.8%, Floor 75.6%, Light loss factor: 0.80

Workplane

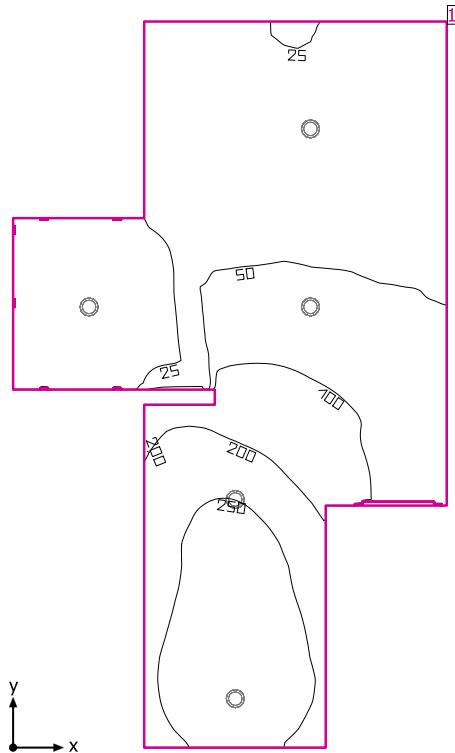
Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 8	Perpendicular illuminance (adaptive) [lx] Height: 0.800 m, Wall zone: 0.000 m	56.8 (≥ 500)	10.1	182	0.18	0.06

# Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
1 GE Lighting - 93057439 DDTW6-1530-7SB-STC	1500	15.0	100.0
Total via all luminaires	1500	15.0	100.0

Lighting power density: $0.72 \text{ W/m}^2 = 1.27 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 20.83 m^2)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 150 - 210 kWh/a of maximum 750 kWh/a

Sala/Cozinha/Serviço



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 74.8%, Floor 75.6%, Light loss factor: 0.80

Workplane

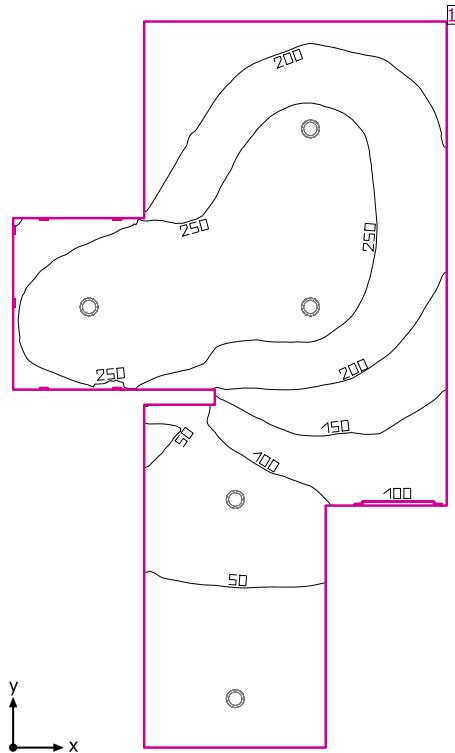
Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 8	Perpendicular illuminance (adaptive) [lx] Height: 0.800 m, Wall zone: 0.000 m	102 (≥ 500)	16.2	292	0.16	0.06

# Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
2 GE Lighting - 93057439 DDTW6-1530-7SB-STC	1500	15.0	100.0
Total via all luminaires	3000	30.0	100.0

Lighting power density: $1.44 \text{ W/m}^2 = 1.41 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 20.83 m^2)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 150 - 210 kWh/a of maximum 750 kWh/a

Sala/Cozinha/Serviço



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 74.8%, Floor 75.6%, Light loss factor: 0.80

Workplane

Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 8	Perpendicular illuminance (adaptive) [lx]	178 (≥ 500)	33.9	294	0.19	0.12

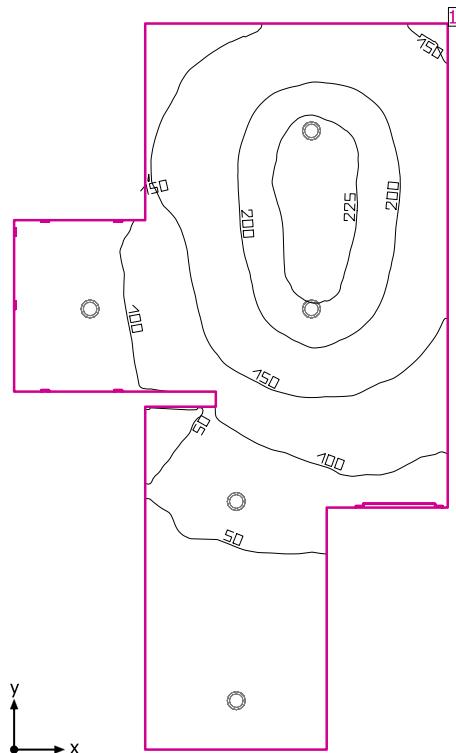
Height: 0.800 m, Wall zone: 0.000 m

# Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
3 GE Lighting - 93057439 DDTW6-1530-7SB-STC	1500	15.0	100.0
Total via all luminaires	4500	45.0	100.0

Lighting power density: $2.16 \text{ W/m}^2 = 1.21 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 20.83 m^2)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 150 - 210 kWh/a of maximum 750 kWh/a

Sala/Cozinha/Serviço



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 74.8%, Floor 75.6%, Light loss factor: 0.80

Workplane

Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 8	Perpendicular illuminance (adaptive) [lx]	127 (≥ 500)	26.9	239	0.21	0.11

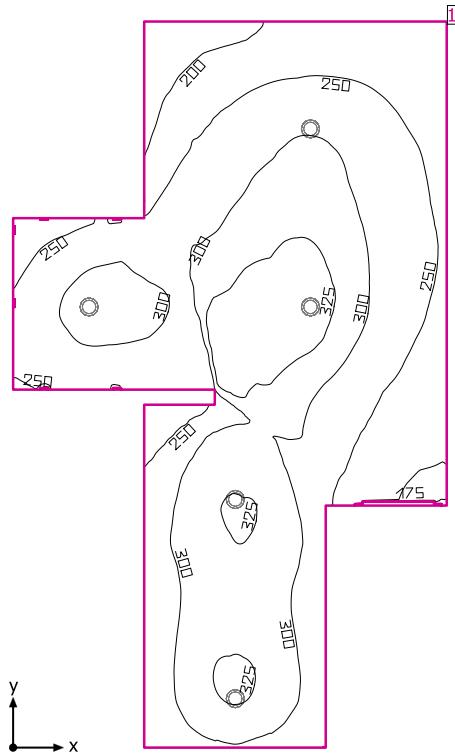
Height: 0.800 m, Wall zone: 0.000 m

# Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
2 GE Lighting - 93057439 DDTW6-1530-7SB-STC	1500	15.0	100.0
Total via all luminaires	3000	30.0	100.0

Lighting power density: $1.44 \text{ W/m}^2 = 1.14 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 20.83 m^2)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 150 - 210 kWh/a of maximum 750 kWh/a

Sala/Cozinha/Serviço



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 74.8%, Floor 75.6%, Light loss factor: 0.80

Workplane

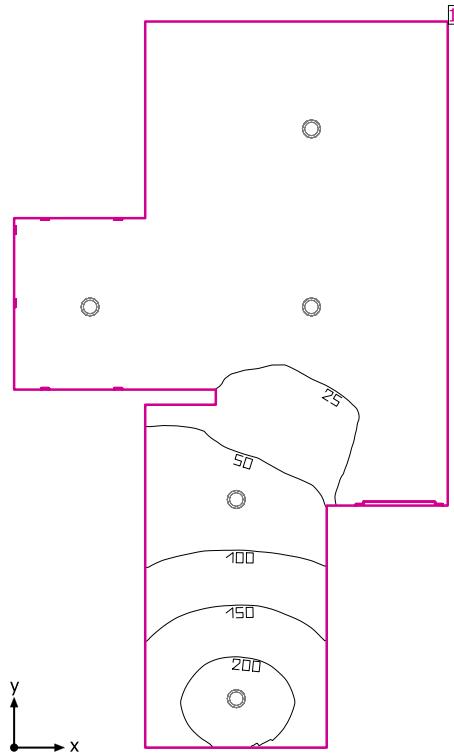
Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 8	Perpendicular illuminance (adaptive) [lx] Height: 0.800 m, Wall zone: 0.000 m	280 (≥ 500)	170	338	0.61	0.50

# Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
5 GE Lighting - 93057439 DDTW6-1530-7SB-STC	1500	15.0	100.0
Total via all luminaires	7500	75.0	100.0

Lighting power density: $3.60 \text{ W/m}^2 = 1.29 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 20.83 m^2)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels. Consumption: 150 - 210 kWh/a of maximum 750 kWh/a

Sala/Cozinha/Serviço



Clearance height: 4.200 m, Reflection factors: Ceiling 70.0%, Walls 74.8%, Floor 75.6%, Light loss factor: 0.80

Workplane

Surface	Result	Average (Target)	Min	Max	Min/average	Min/max
1 Workplane 8	Perpendicular illuminance (adaptive) [lx] Height: 0.800 m, Wall zone: 0.000 m	45.1 (≥ 500)	6.07	220	0.13	0.03

# Luminaire	Φ (Luminaire) [lm]	Power [W]	Luminous efficacy [lm/W]
1 GE Lighting - 93057439 DDTW6-1530-7SB-STC	1500	15.0	100.0
Total via all luminaires	1500	15.0	100.0

Lighting power density: $0.72 \text{ W/m}^2 = 1.60 \text{ W/m}^2/100 \text{ lx}$ (Floor area of room 20.83 m^2)

The energy consumption quantities refer to the lights planned for the room without taking into account light scenes and their dimming levels.
Consumption: 150 - 210 kWh/a of maximum 750 kWh/a

Sala/Cozinha/Serviço

Cozinha(1)



Cozinha(2)



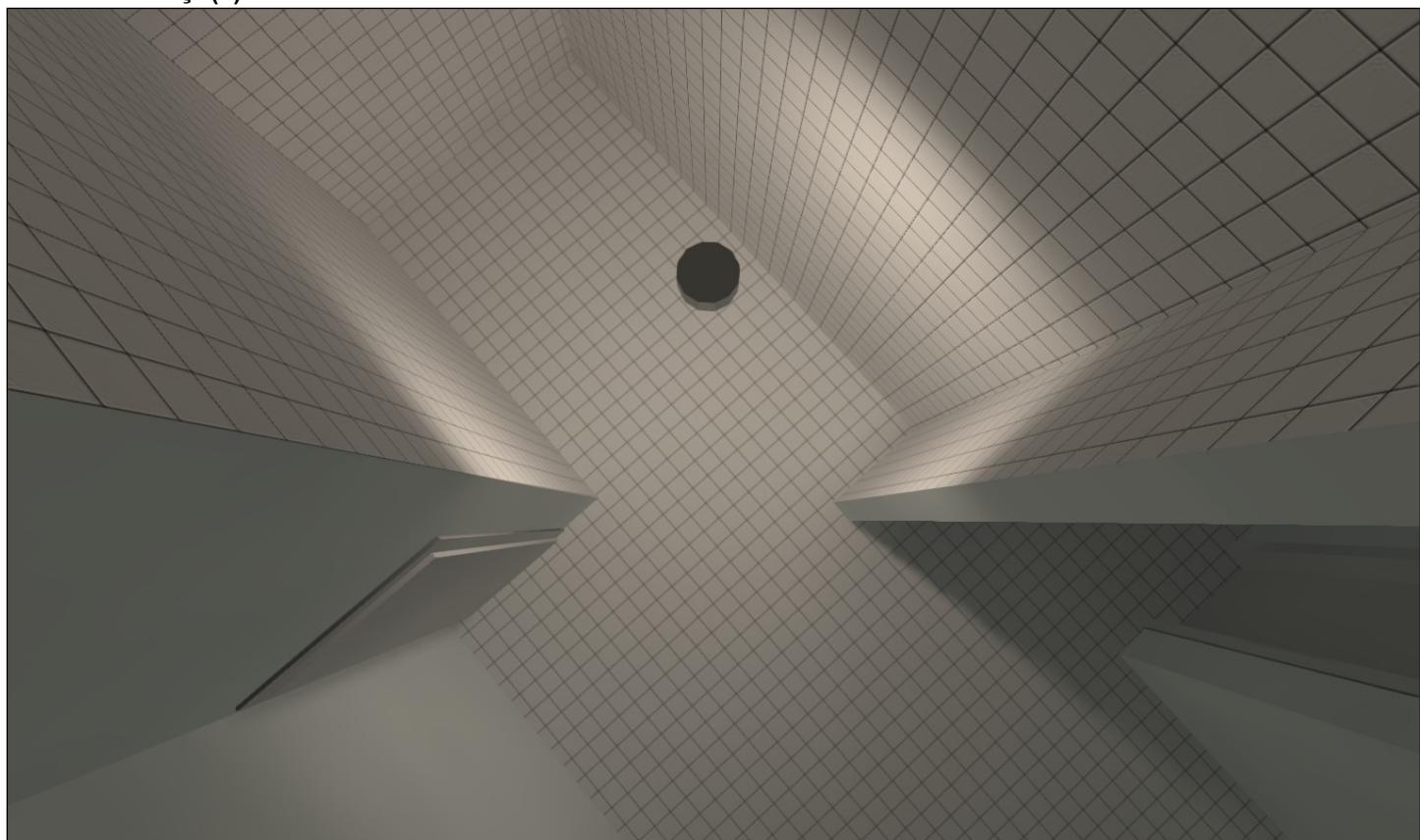
Cozinha/Serviço(1)



Cozinha/Serviço(2)



Cozinha/Serviço(3)



Sala(1)



Sala(2)



Sala(3)



Sala(4)



Sala(5)



Sala(meio)(1)



Sala(meio)(2)



Sala(corredor)(1)



Sala(corredor)(2)



Sala(corredor)(3)



Sala/Cozinha/Serviço(1)



Sala/Cozinha/Serviço(2)



Sala/Cozinha/Serviço(3)



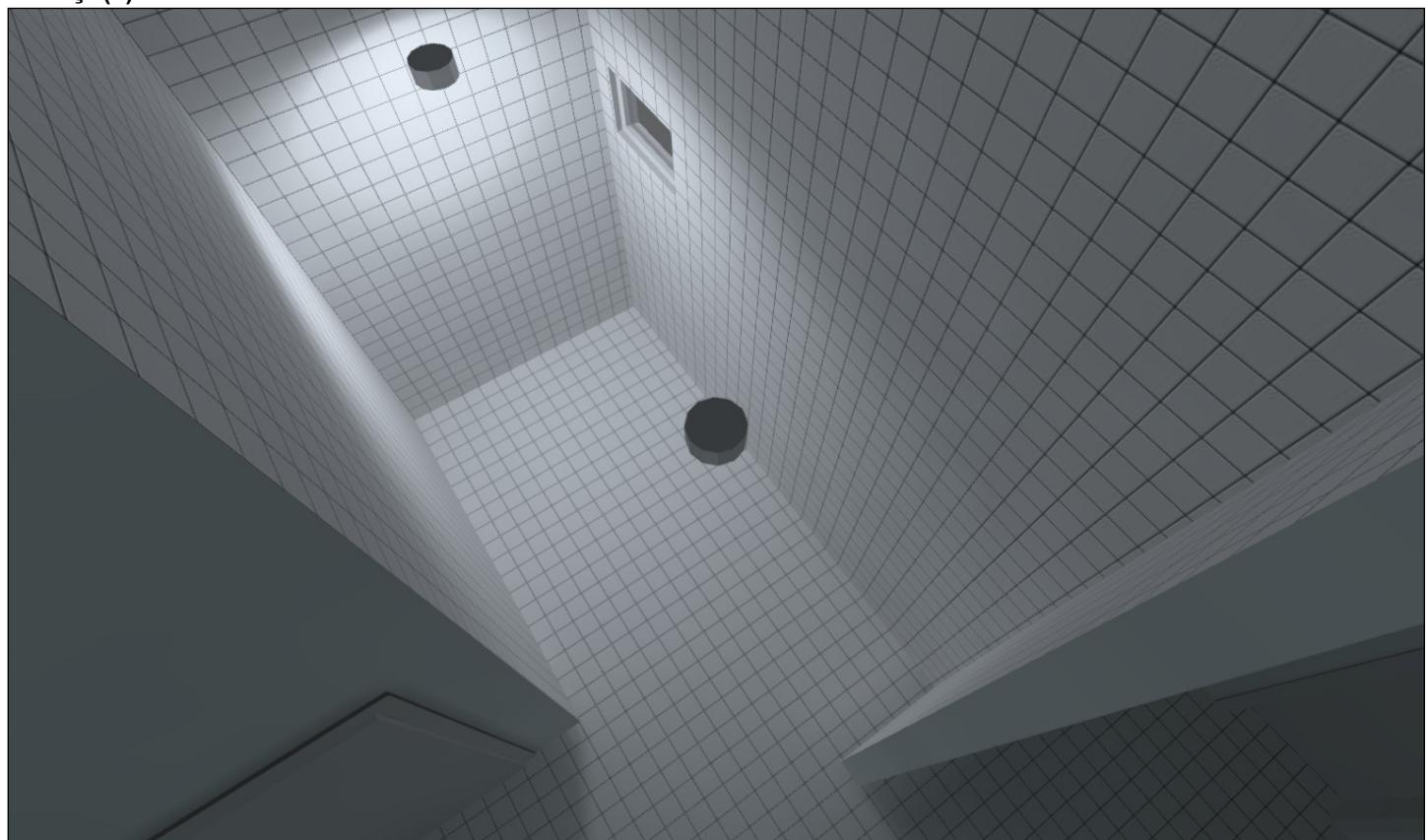
Sala/Cozinha/Serviço(4)



Sala/Cozinha/Serviço(5)



Serviço(1)



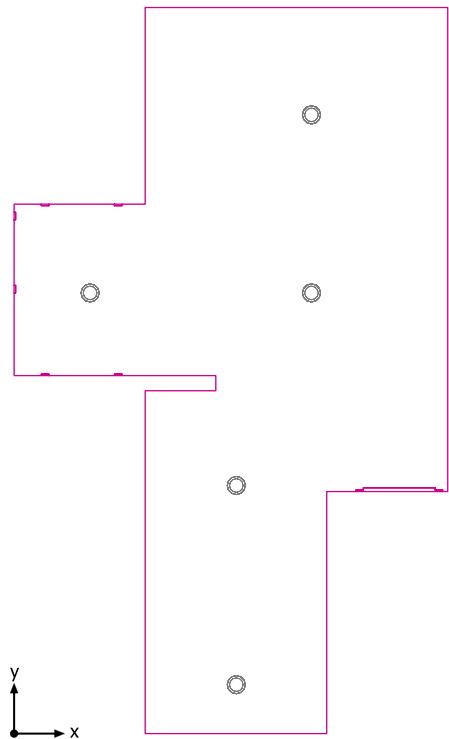
Serviço(2)



Serviço(3)



Workplane 8 / Cozinha / Perpendicular illuminance (adaptive)



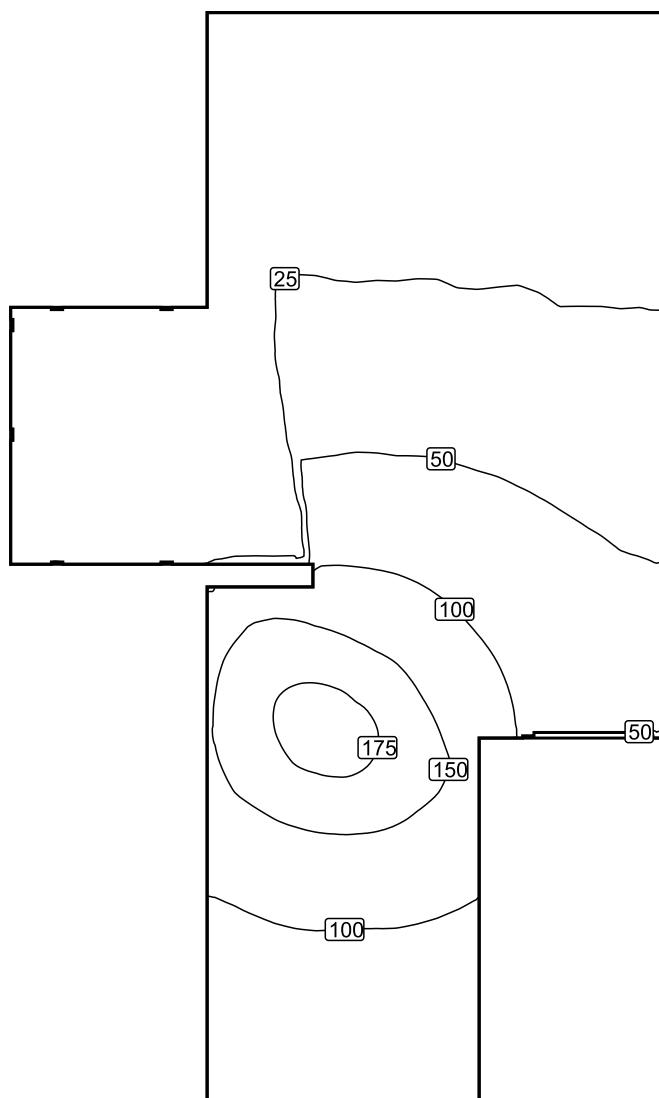
Workplane 8: Perpendicular illuminance (adaptive) (Surface)

Light scene: Cozinha

Average: 56.8 lx (Target: ≥ 500 lx), Min: 10.1 lx, Max: 182 lx, Min/average: 0.18, Min/max: 0.06

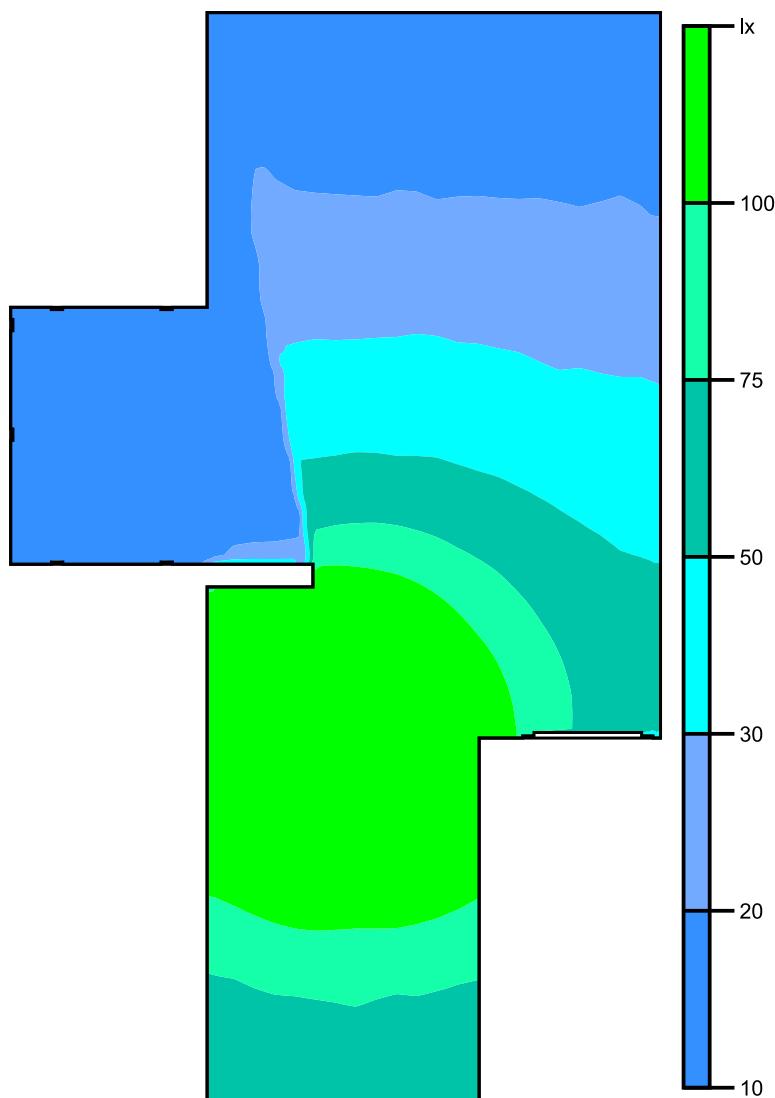
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



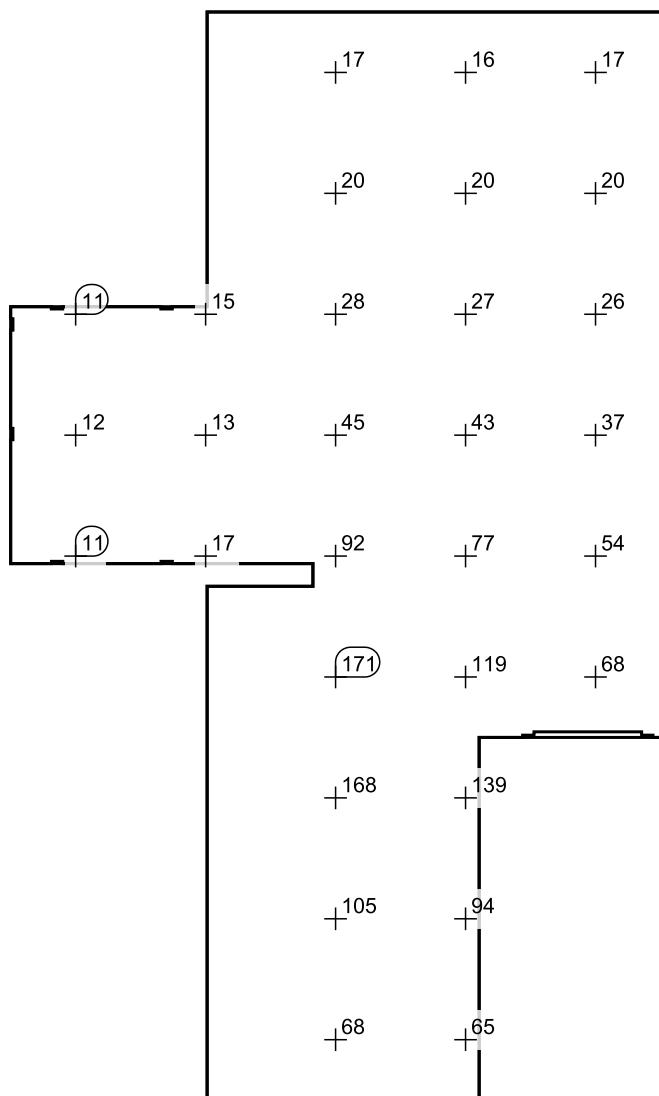
Scale: 1 : 50

False colors [lx]



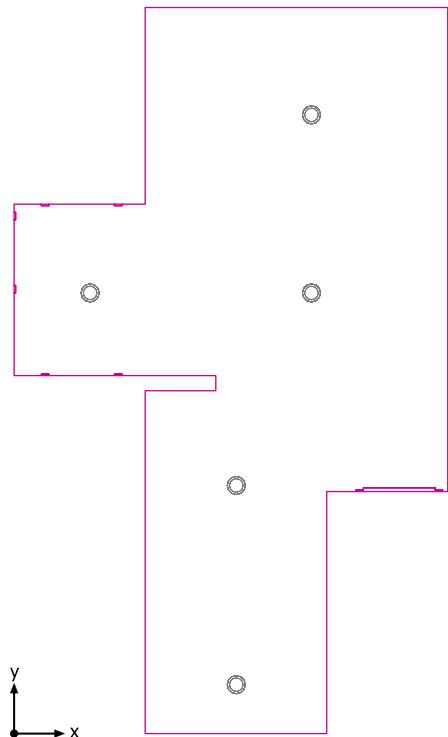
Scale: 1 : 50

Value grid [lx]



Scale: 1 : 50

Workplane 8 / Cozinha/Serviço / Perpendicular illuminance (adaptive)



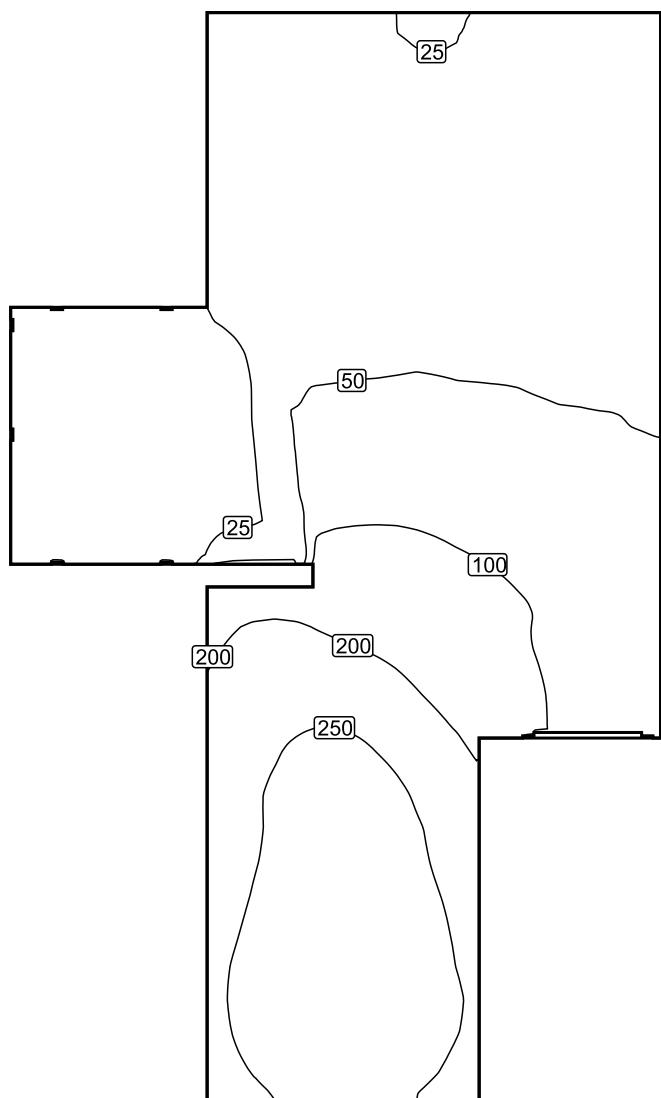
Workplane 8: Perpendicular illuminance (adaptive) (Surface)

Light scene: Cozinha/Serviço

Average: 102 lx (Target: ≥ 500 lx), Min: 16.2 lx, Max: 292 lx, Min/average: 0.16, Min/max: 0.06

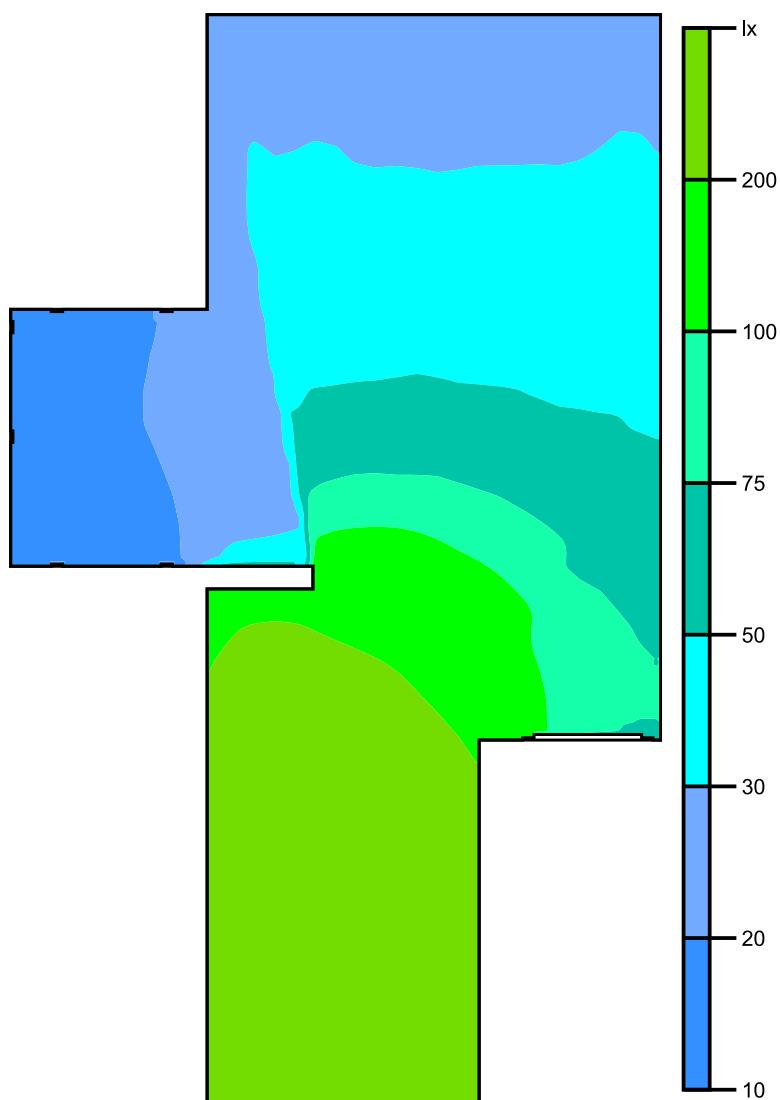
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



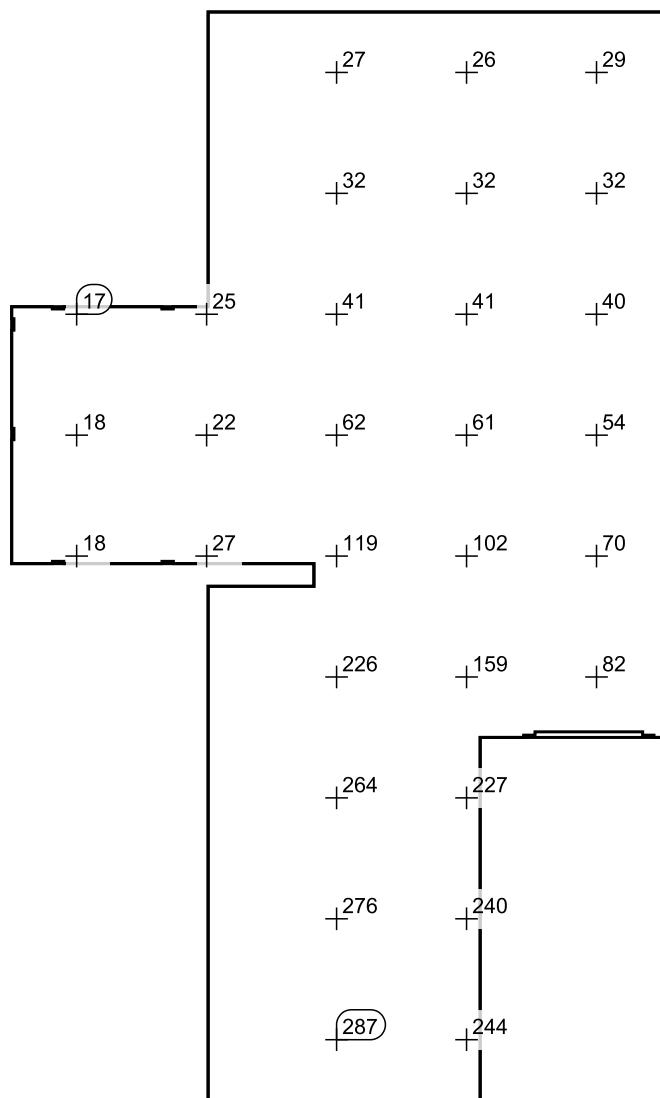
Scale: 1 : 50

False colors [lx]



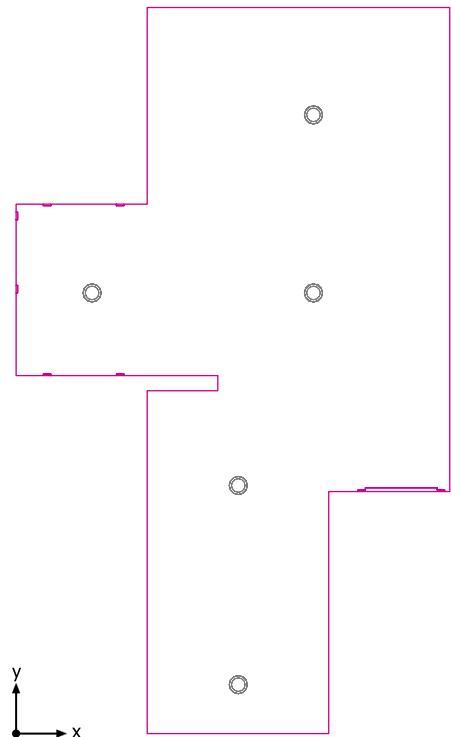
Scale: 1 : 50

Value grid [lx]



Scale: 1 : 50

Workplane 8 / Sala / Perpendicular illuminance (adaptive)



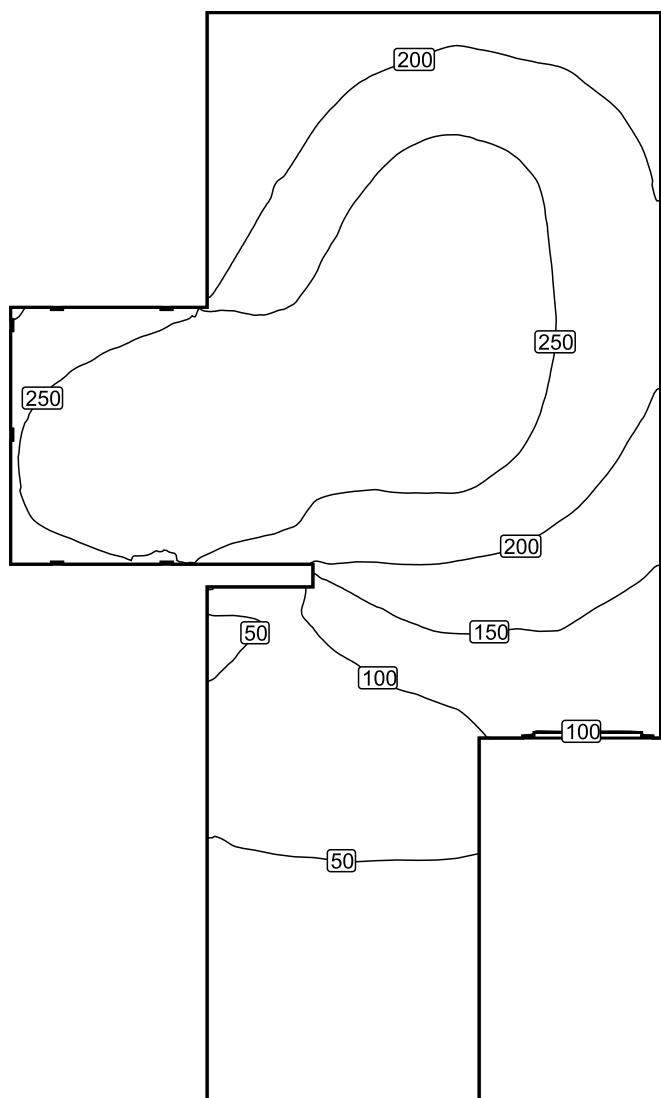
Workplane 8: Perpendicular illuminance (adaptive) (Surface)

Light scene: Sala

Average: 178 lx (Target: ≥ 500 lx), Min: 33.9 lx, Max: 294 lx, Min/average: 0.19, Min/max: 0.12

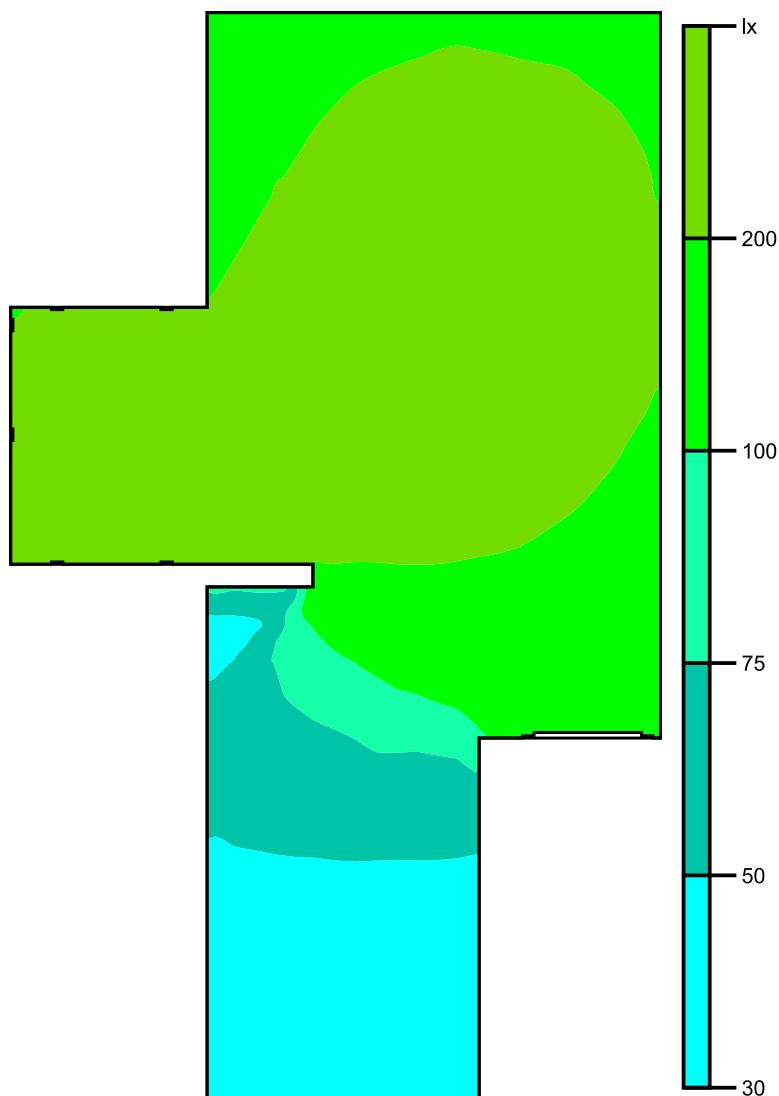
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



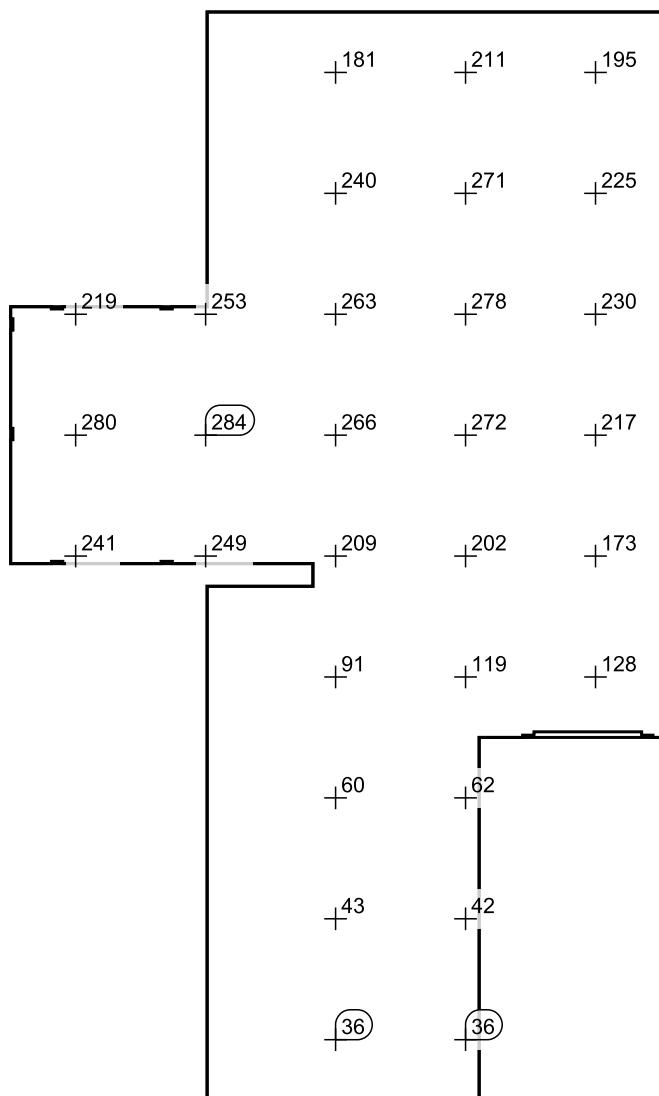
Scale: 1 : 50

False colors [lx]



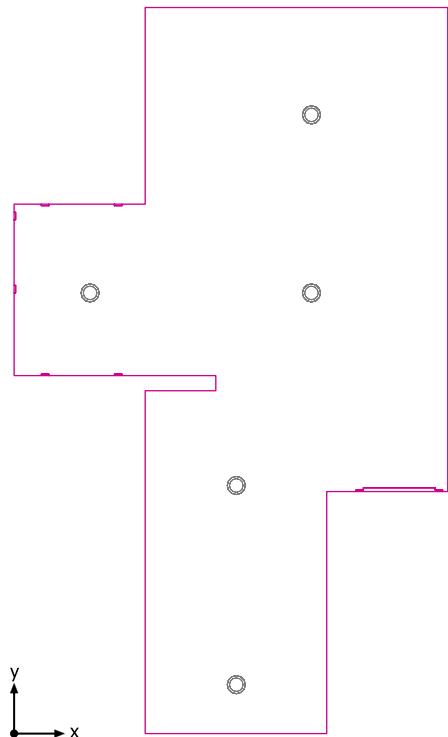
Scale: 1 : 50

Value grid [lx]



Scale: 1 : 50

Workplane 8 / Sala (meio) / Perpendicular illuminance (adaptive)



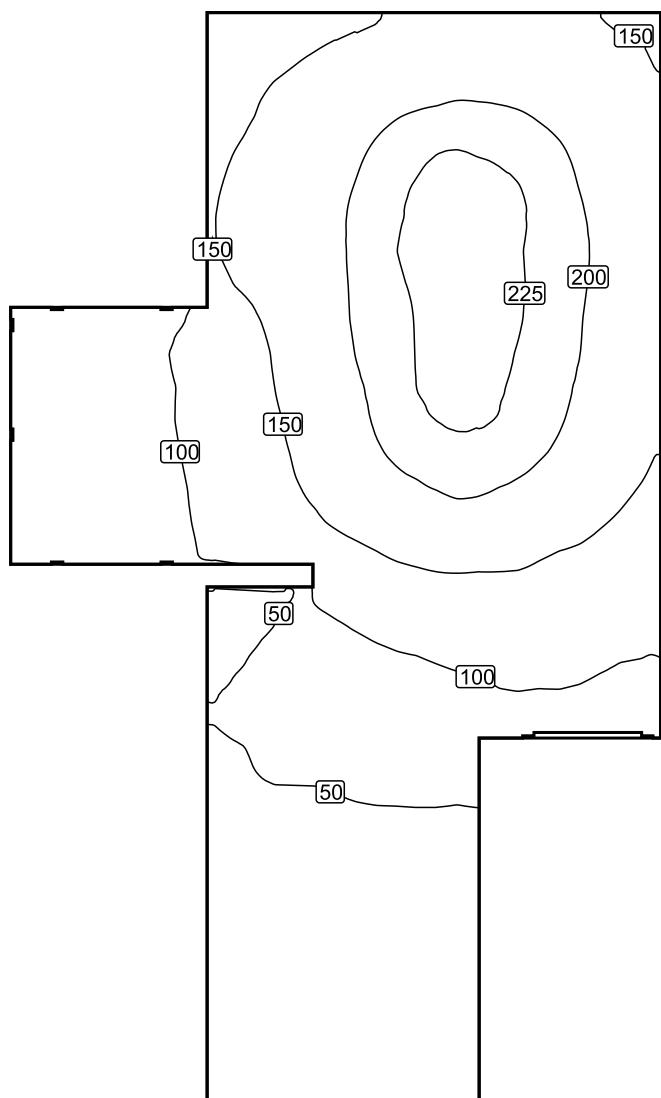
Workplane 8: Perpendicular illuminance (adaptive) (Surface)

Light scene: Sala (meio)

Average: 127 lx (Target: ≥ 500 lx), Min: 26.9 lx, Max: 239 lx, Min/average: 0.21, Min/max: 0.11

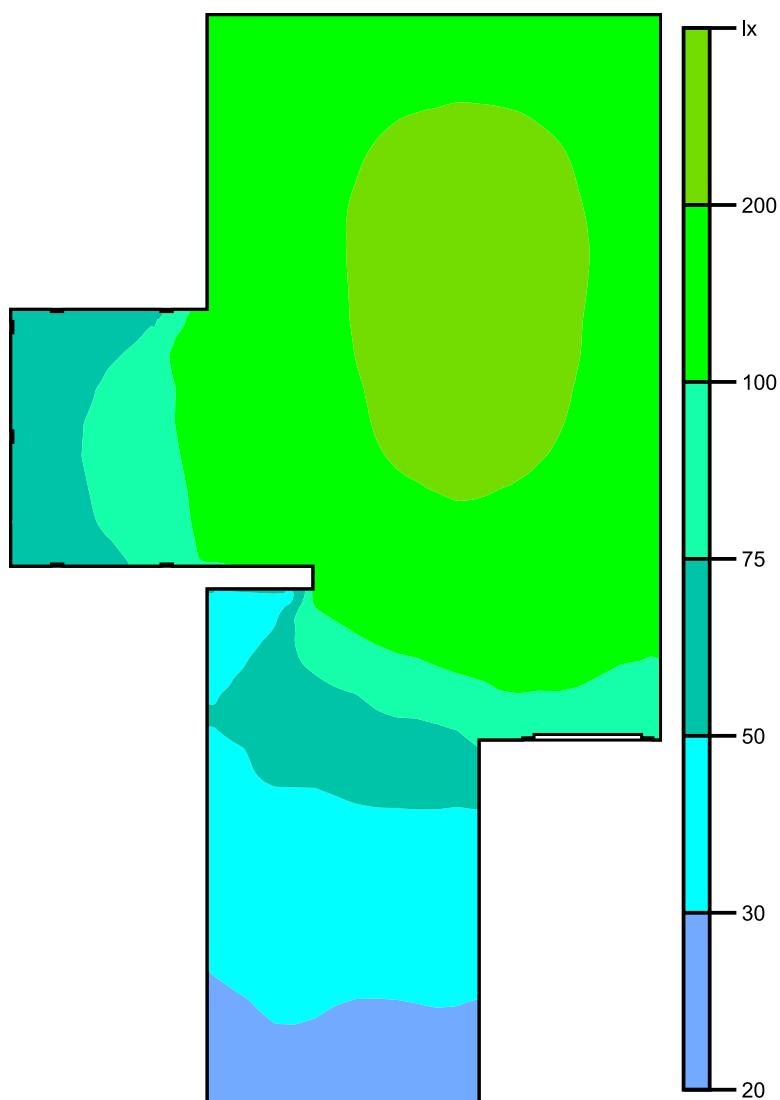
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



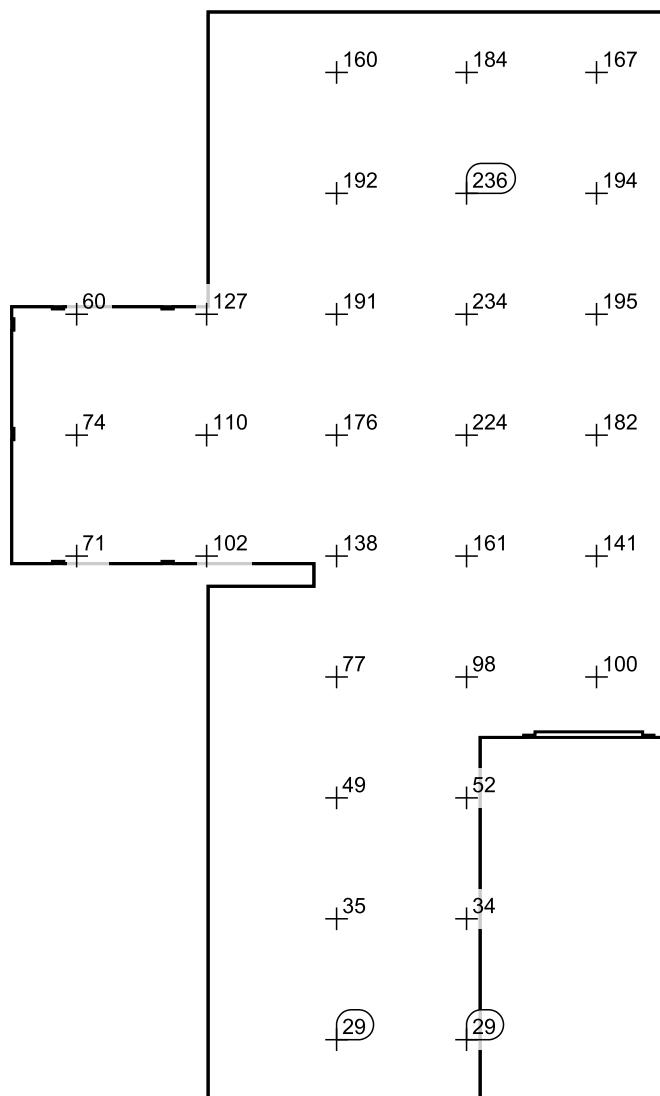
Scale: 1 : 50

False colors [lx]



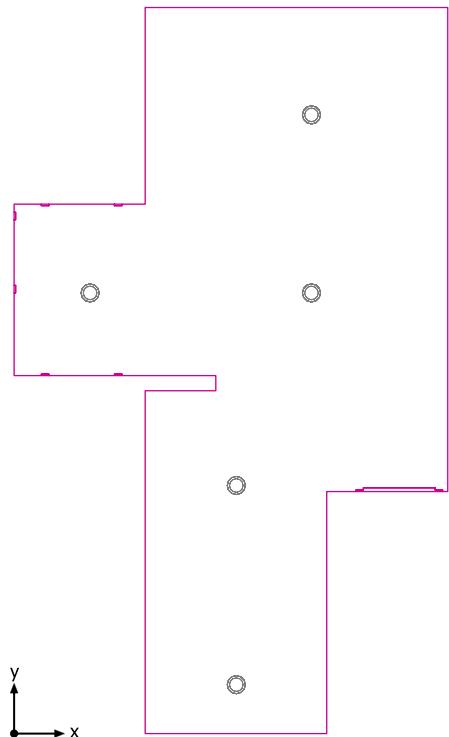
Scale: 1 : 50

Value grid [lx]



Scale: 1 : 50

Workplane 8 / Sala/Cozinha/Serviço / Perpendicular illuminance (adaptive)



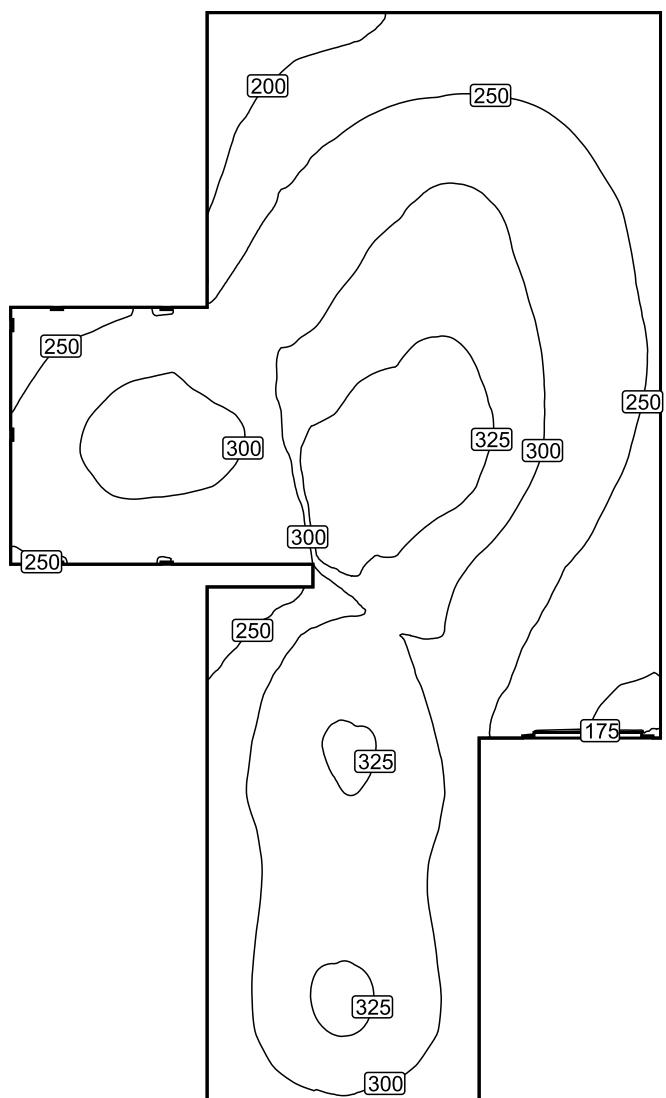
Workplane 8: Perpendicular illuminance (adaptive) (Surface)

Light scene: Sala/Cozinha/Serviço

Average: 280 lx (Target: ≥ 500 lx), Min: 170 lx, Max: 338 lx, Min/average: 0.61, Min/max: 0.50

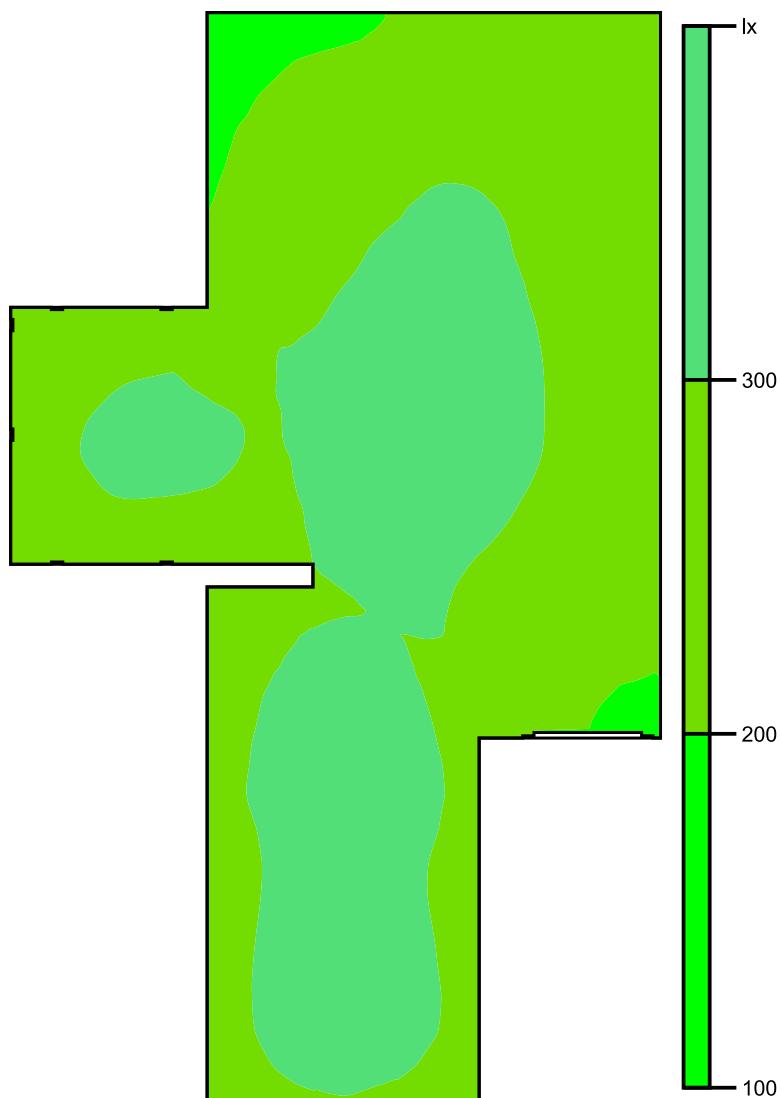
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



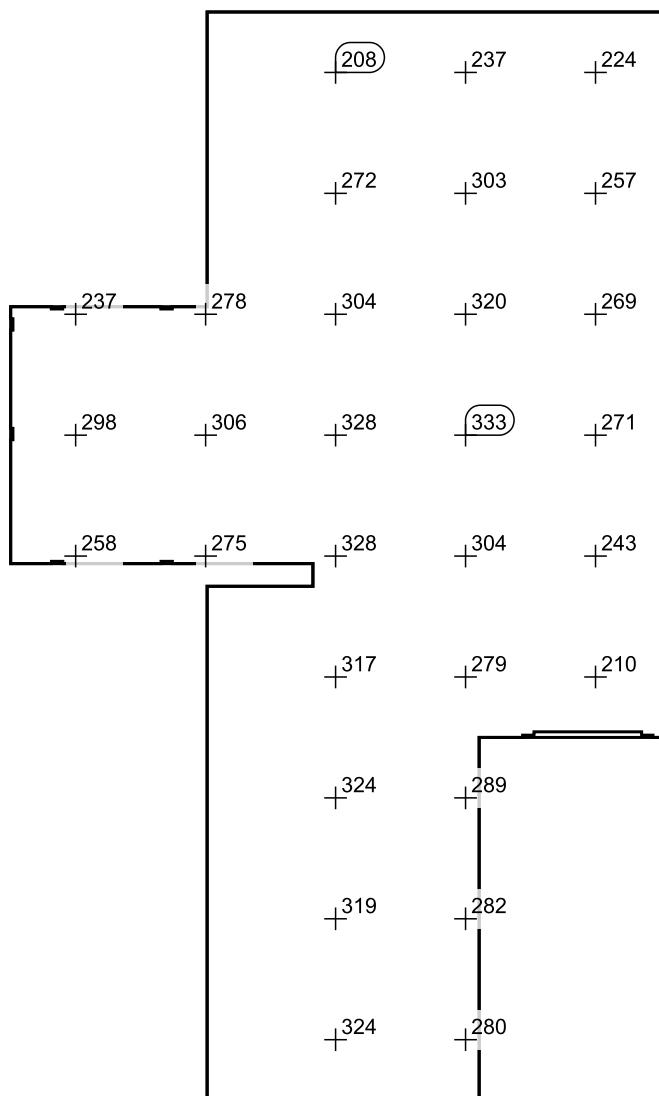
Scale: 1 : 50

False colors [lx]



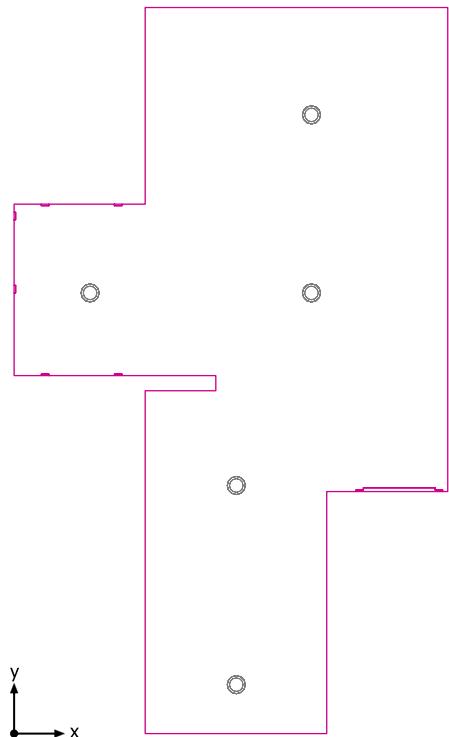
Scale: 1 : 50

Value grid [lx]



Scale: 1 : 50

Workplane 8 / Serviço / Perpendicular illuminance (adaptive)



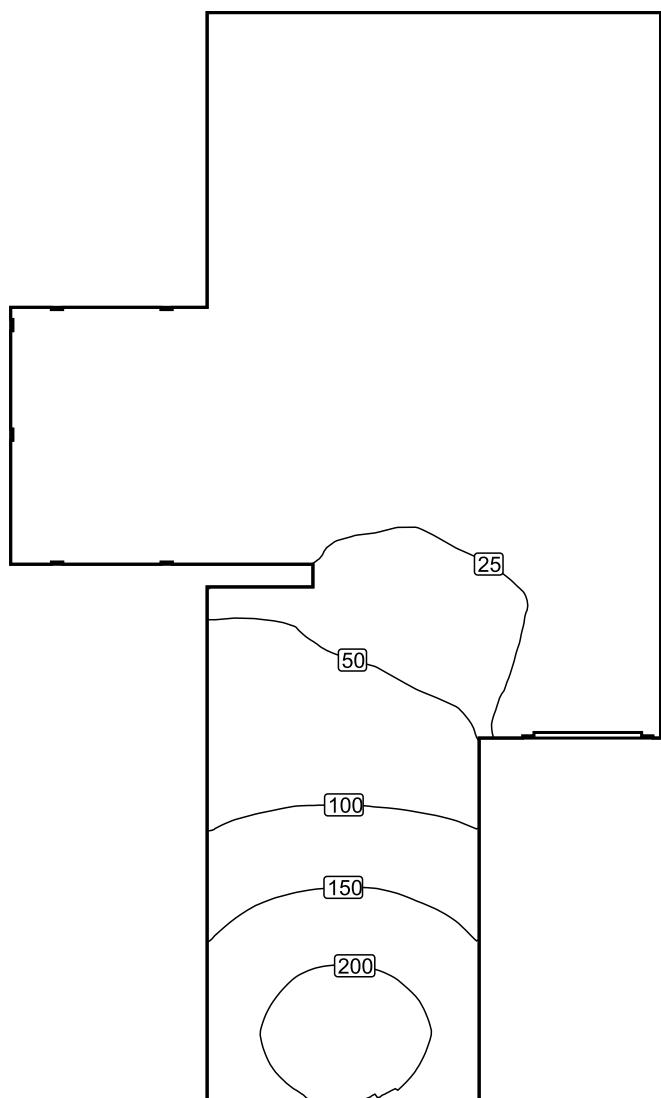
Workplane 8: Perpendicular illuminance (adaptive) (Surface)

Light scene: Serviço

Average: 45.1 lx (Target: ≥ 500 lx), Min: 6.07 lx, Max: 220 lx, Min/average: 0.13, Min/max: 0.03

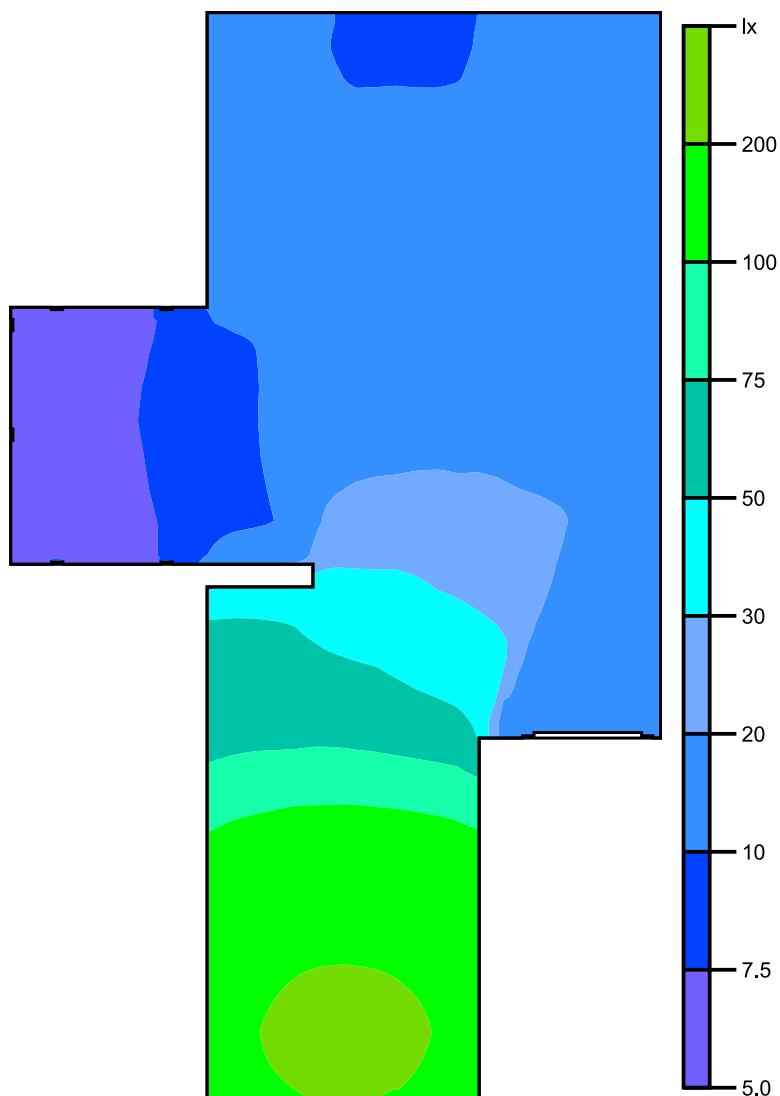
Height: 0.800 m, Wall zone: 0.000 m

Isolines [lx]



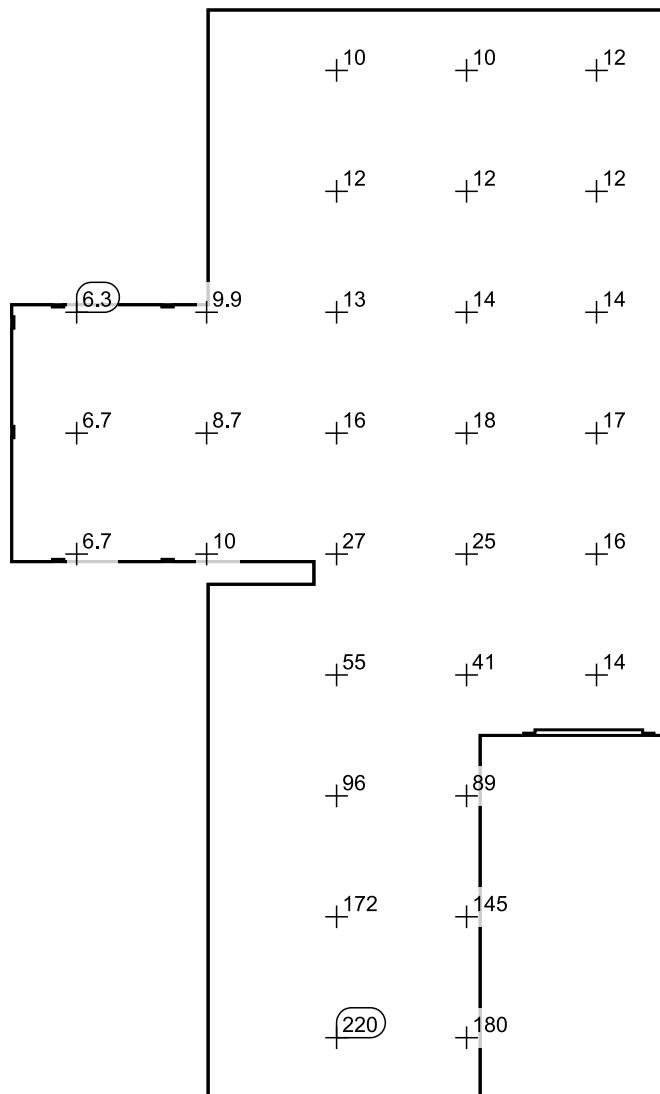
Scale: 1 : 50

False colors [lx]



Scale: 1 : 50

Value grid [lx]



Scale: 1 : 50