



**ESTEL ENGENHARIA**

**PROJETO LUMINOTÉCNICO PARA CONSTRUÇÃO DE PRÉDIO ADMINISTRATIVO ANEXO A  
SEDE DA PREFEITURA MUNICIPAL DE PARANAGUÁ**

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**Contratante:** Município de Paranaguá-PR

Unidade de Gerenciamento do Programa – UGP

# **MEMORIAL LUMINOTÉCNICO**

Projeto Elétrico

NOVEMBRO/2016

Rua José Quirino, 147 - CEP: 88305- 060 - Itajaí - SC – Tel.: +55 47 3046 2001

e-mail: [estel@estelengenharia.com.br](mailto:estel@estelengenharia.com.br) - [www.estelengenharia.com.br](http://www.estelengenharia.com.br)



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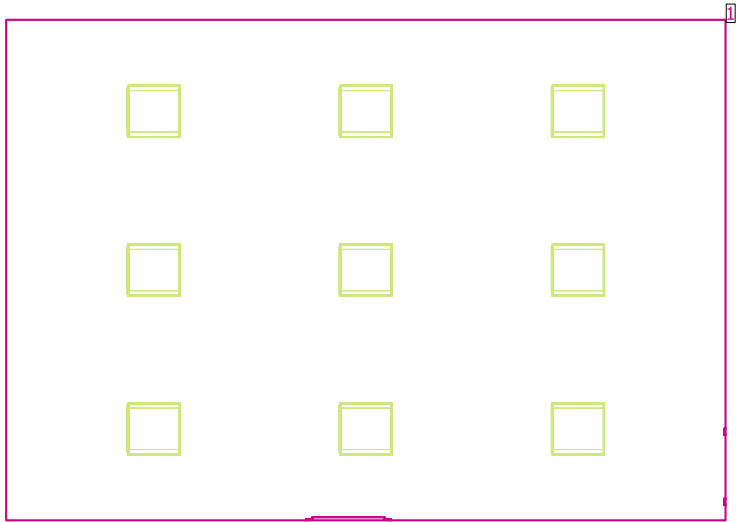


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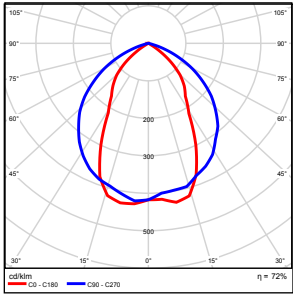

Sala de Segurança



Height of room: 3.000 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Sala de Segurança	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	471 (500)	161	653	0.34	0.25

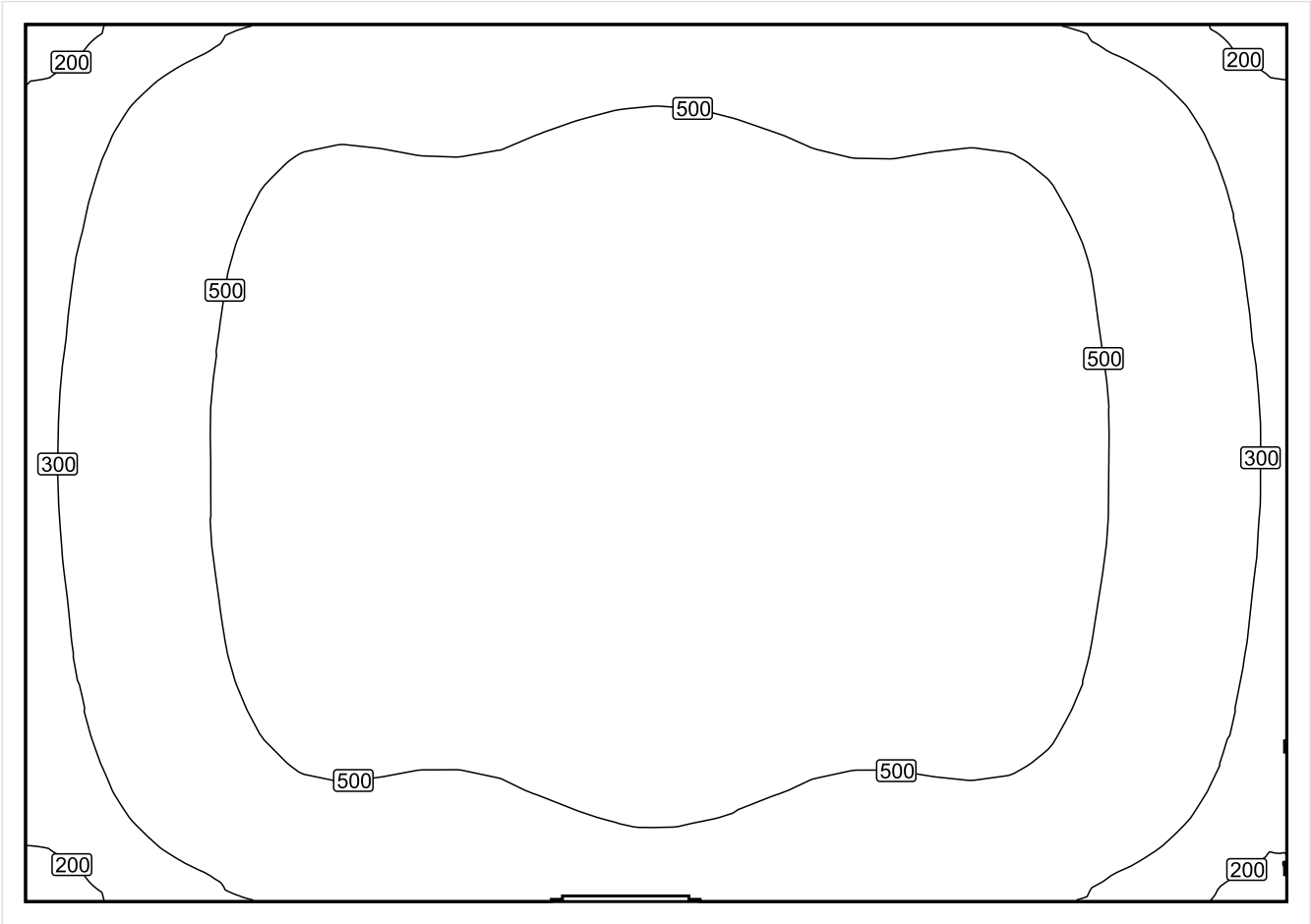
No.	Quantity		
1	9	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 43200 lm, Total luminaire luminous flux: 31275 lm, Total Load: 594.0 W, Light yield: 52.7 lm/W

Lighting power density: 11.87 W/m² = 2.52 W/m²/100 lx (Ground area 50.03 m²)

Consumption: 1650 kWh/a of maximum 1800 kWh/a

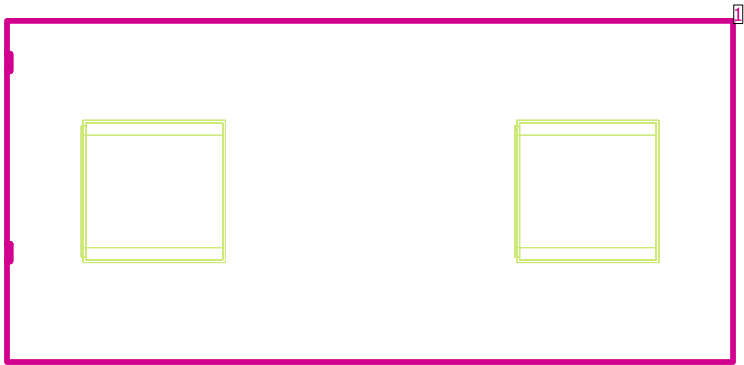
Sala de Segurança



Scale: 1 : 50

Perpendicular illuminance (Surface)  
Mean (actual): 471 lx, Min: 161 lx, Max: 653 lx, Min/average: 0.34, Min/max: 0.25  
Height of working plane: 0.800 m, Wall zone: 0.000 m

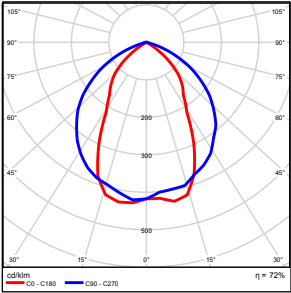

Almoxarifado



Height of room: 3.000 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Almoxarifado	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	542 (500)	410	605	0.76	0.68

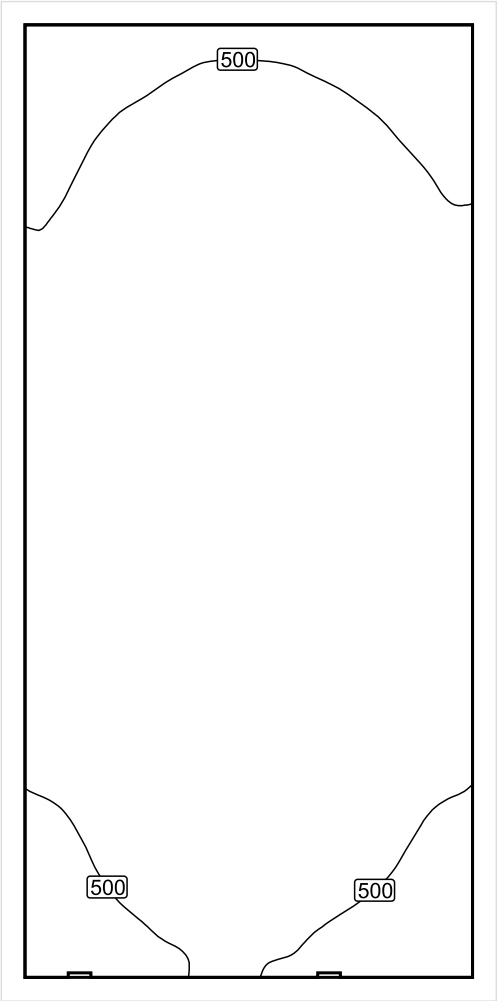
No.	Quantity		
1	2	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6950 lm, Total Load: 132.0 W, Light yield: 52.7 lm/W

Lighting power density: 28.31 W/m² = 5.22 W/m²/100 lx (Ground area 4.66 m²)

Consumption: 350 kWh/a of maximum 200 kWh/a

Almoxarifado

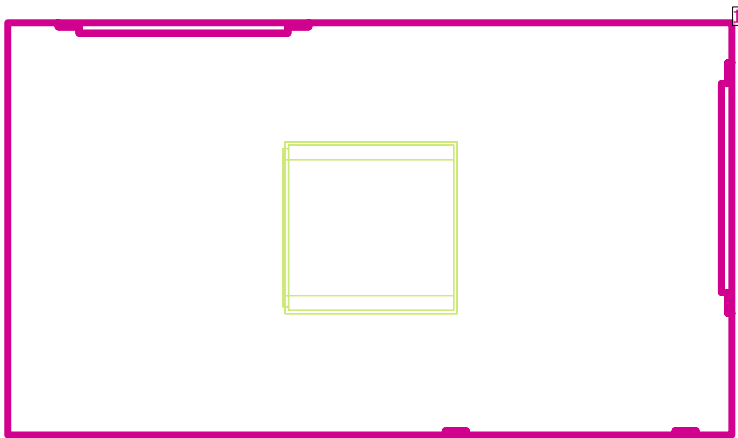


Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 542 lx, Min: 410 lx, Max: 605 lx, Min/average: 0.76, Min/max: 0.68  
Height of working plane: 0.800 m, Wall zone: 0.000 m



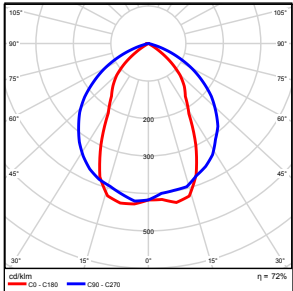

Corta-Som



Height of room: 3.000 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

	Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1	Corta-Som	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	350 (500)	229	425	0.65	0.54

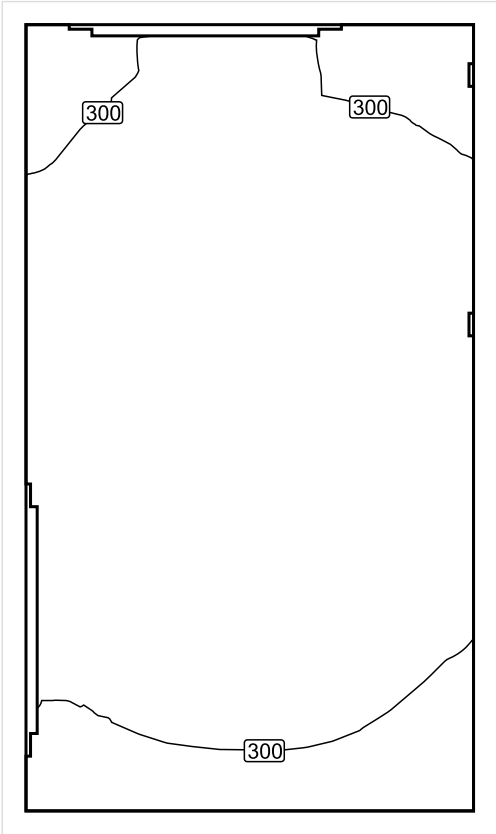
No.	Quantity		
1	1	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 4800 lm, Total luminaire luminous flux: 3475 lm, Total Load: 66.0 W, Light yield: 52.7 lm/W

Lighting power density: 17.15 W/m² = 4.90 W/m²/100 lx (Ground area 3.85 m²)

Consumption: 200 kWh/a of maximum 150 kWh/a

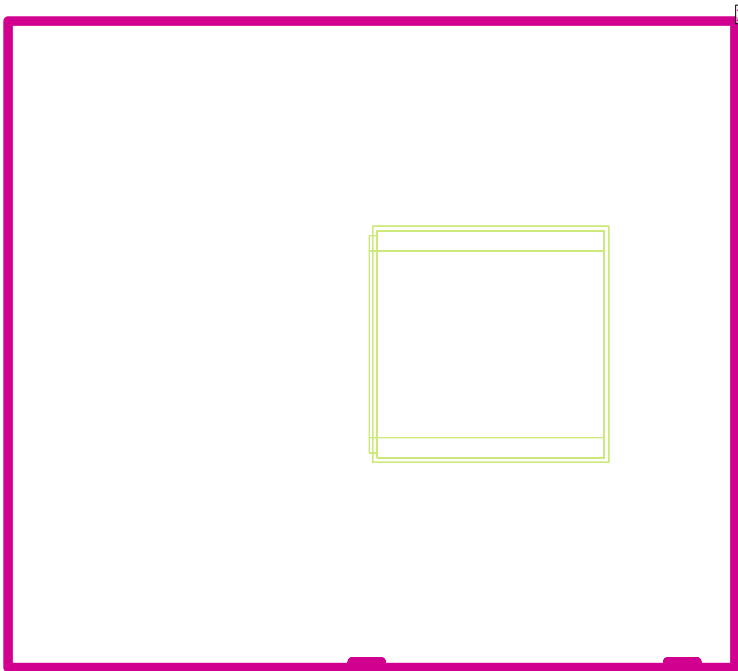
Corta-Som



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 350 lx, Min: 229 lx, Max: 425 lx, Min/average: 0.65, Min/max: 0.54  
Height of working plane: 0.800 m, Wall zone: 0.000 m

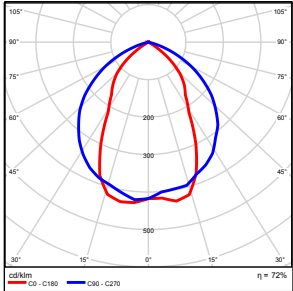

BWC Feminino



Height of room: 3.000 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Feminino	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	360 (500)	236	434	0.66	0.54

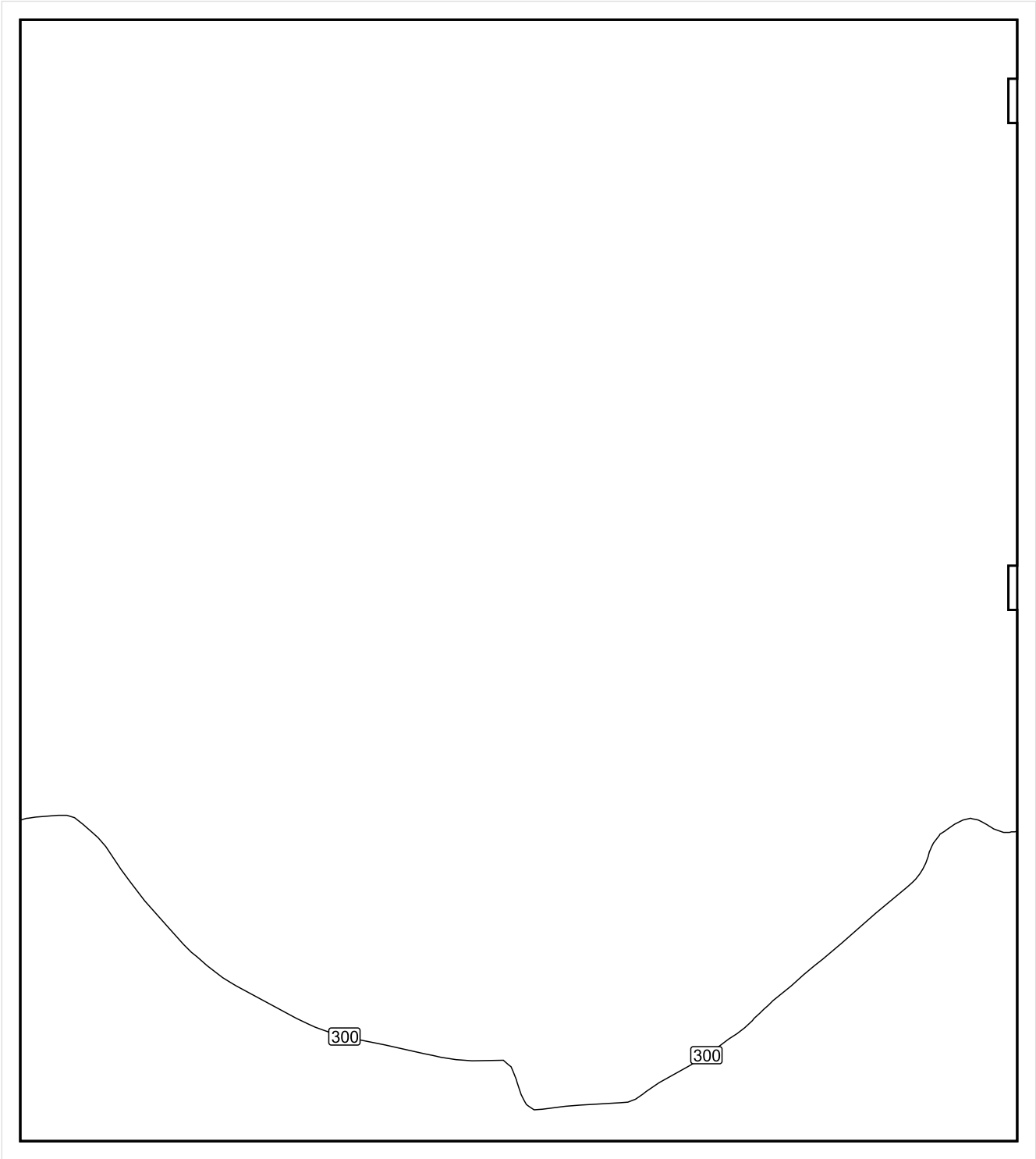
No.	Quantity		
1	1	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 4800 lm, Total luminaire luminous flux: 3475 lm, Total Load: 66.0 W, Light yield: 52.7 lm/W

Lighting power density: 20.55 W/m² = 5.71 W/m²/100 lx (Ground area 3.21 m²)

Consumption: 200 kWh/a of maximum 150 kWh/a

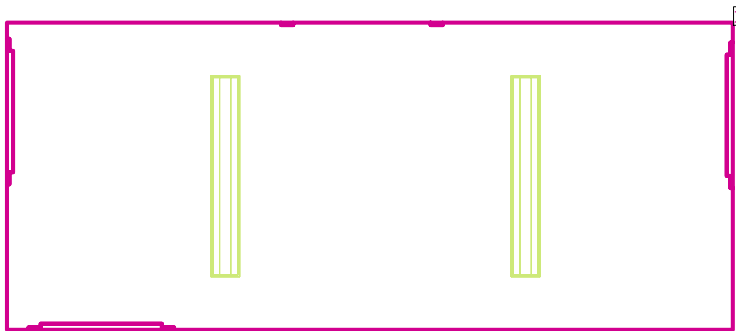
BWC Feminino



Scale: 1 : 10

Perpendicular illuminance (Surface)  
Mean (actual): 360 lx, Min: 236 lx, Max: 434 lx, Min/average: 0.66, Min/max: 0.54  
Height of working plane: 0.800 m, Wall zone: 0.000 m

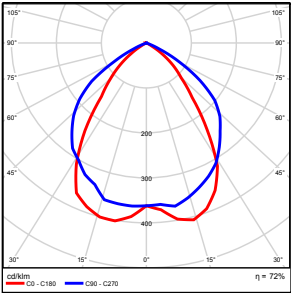
Armários



Height of room: 3.000 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

	Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1	Armários	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	220 (500)	107	308	0.49	0.35

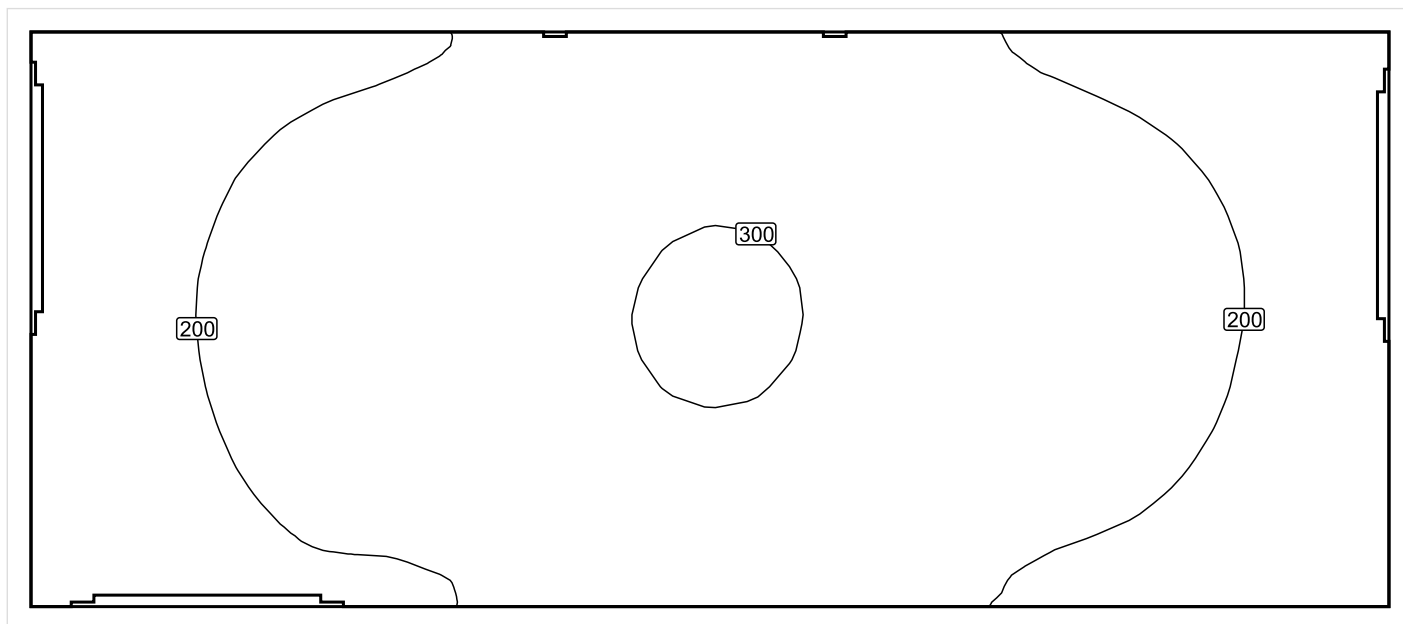
No.	Quantity		
1	2	Lumicenter Lighting CAA01-E132 Light output ratio: 72.25% Lamp luminous flux: 2700 lm Luminaire luminous flux: 1951 lm Power: 36.0 W Light yield: 54.2 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 5400 lm, Total luminaire luminous flux: 3902 lm, Total Load: 72.0 W, Light yield: 54.2 lm/W

Lighting power density: 8.44 W/m² = 3.84 W/m²/100 lx (Ground area 8.53 m²)

Consumption: 200 kWh/a of maximum 300 kWh/a

## Armários



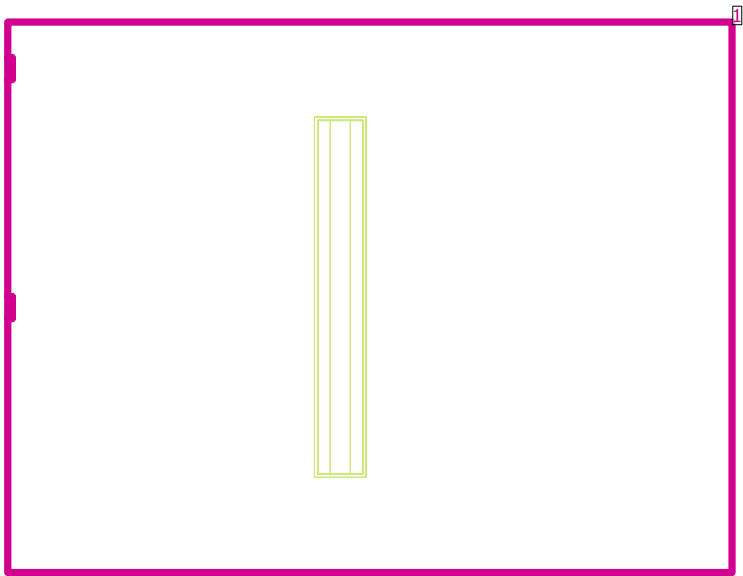
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 220 lx, Min: 107 lx, Max: 308 lx, Min/average: 0.49, Min/max: 0.35

Height of working plane: 0.800 m, Wall zone: 0.000 m

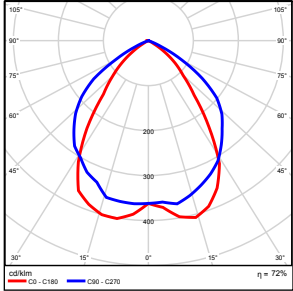

BWC Masculino



Height of room: 3.000 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Masculino	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	169 (500)	103	204	0.61	0.50

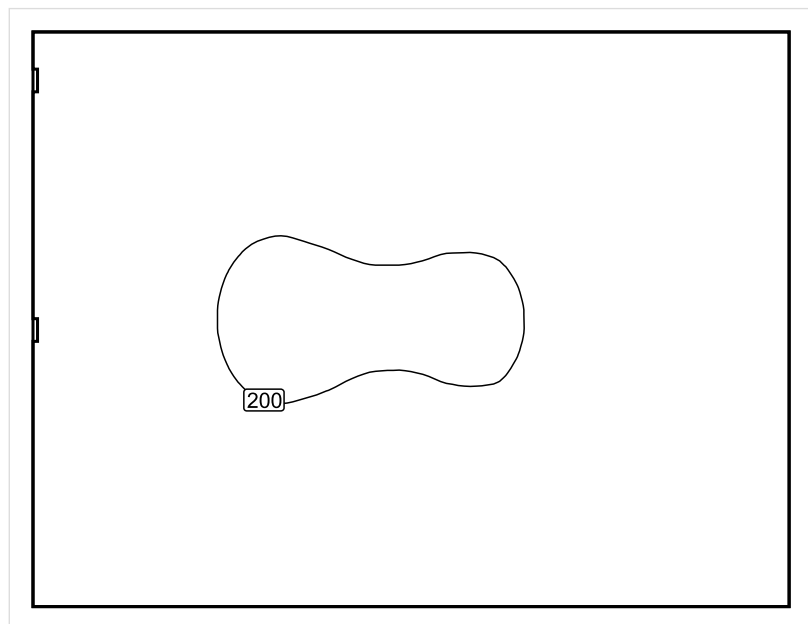
No.	Quantity		
1	1	<div>Lumicenter Lighting CAA01-E132 Light output ratio: 72.25% Lamp luminous flux: 2700 lm Luminaire luminous flux: 1951 lm Power: 36.0 W Light yield: 54.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 2700 lm, Total luminaire luminous flux: 1951 lm, Total Load: 36.0 W, Light yield: 54.2 lm/W

Lighting power density: 7.58 W/m² = 4.48 W/m²/100 lx (Ground area 4.75 m²)

Consumption: 100 kWh/a of maximum 200 kWh/a

## BWC Masculino



Scale: 1 : 25

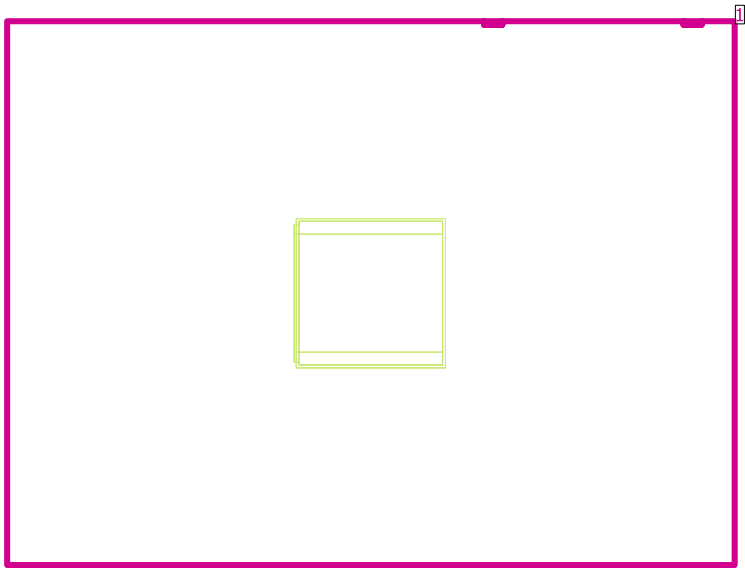
Perpendicular illuminance (Surface)

Mean (actual): 169 lx, Min: 103 lx, Max: 204 lx, Min/average: 0.61, Min/max: 0.50

Height of working plane: 0.800 m, Wall zone: 0.000 m



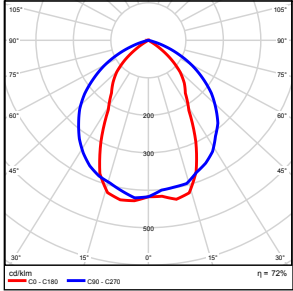

Copa



Height of room: 3.000 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Copa	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	264 (500)	134	378	0.51	0.35

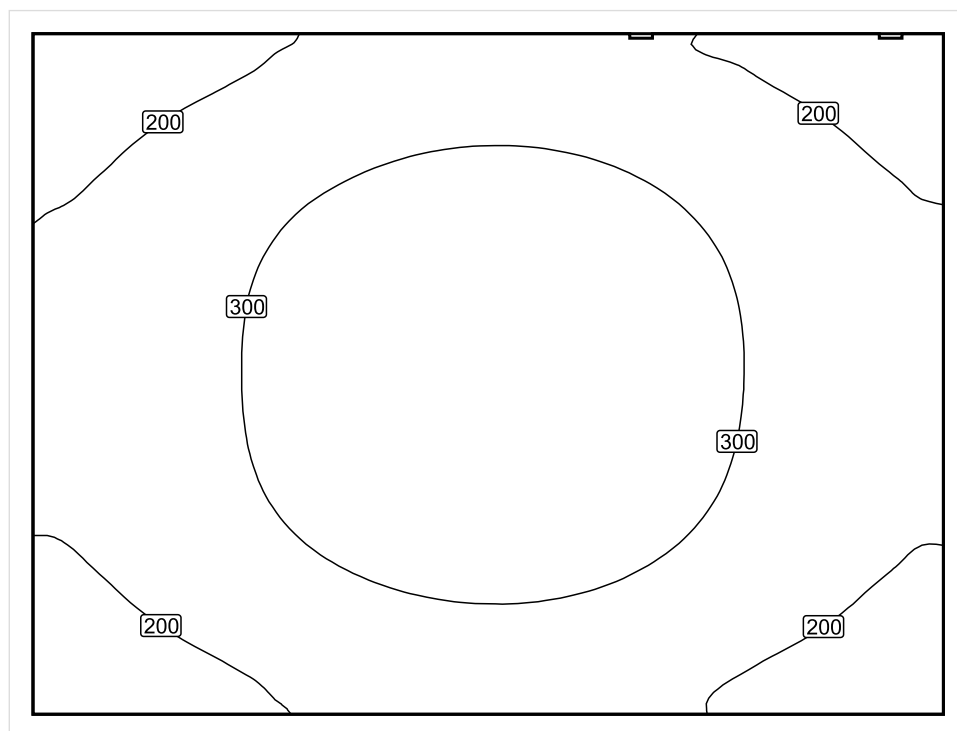
No.	Quantity		
1	1	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 4800 lm, Total luminaire luminous flux: 3475 lm, Total Load: 66.0 W, Light yield: 52.7 lm/W

Lighting power density:  $9.75 \text{ W/m}^2 = 3.70 \text{ W/m}^2/100 \text{ lx}$  (Ground area  $6.77 \text{ m}^2$ )

Consumption: 200 kWh/a of maximum 250 kWh/a

## Copa



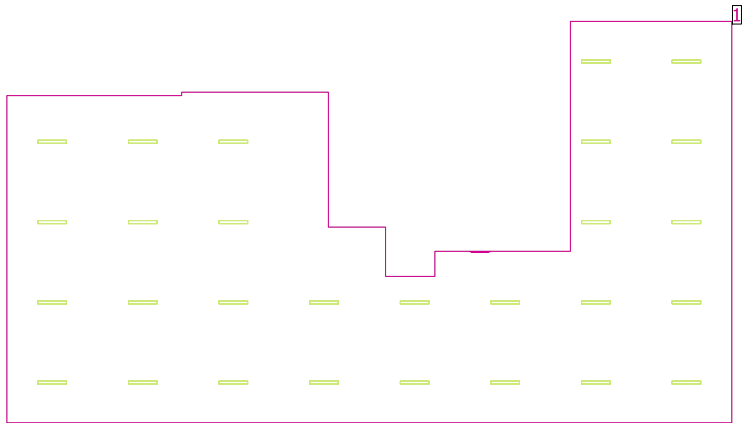
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 264 lx, Min: 134 lx, Max: 378 lx, Min/average: 0.51, Min/max: 0.35

Height of working plane: 0.800 m, Wall zone: 0.000 m

Estacionamento



Height of room: 3.000 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Estacionamento	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	185 (500)	38.7	270	0.21	0.14

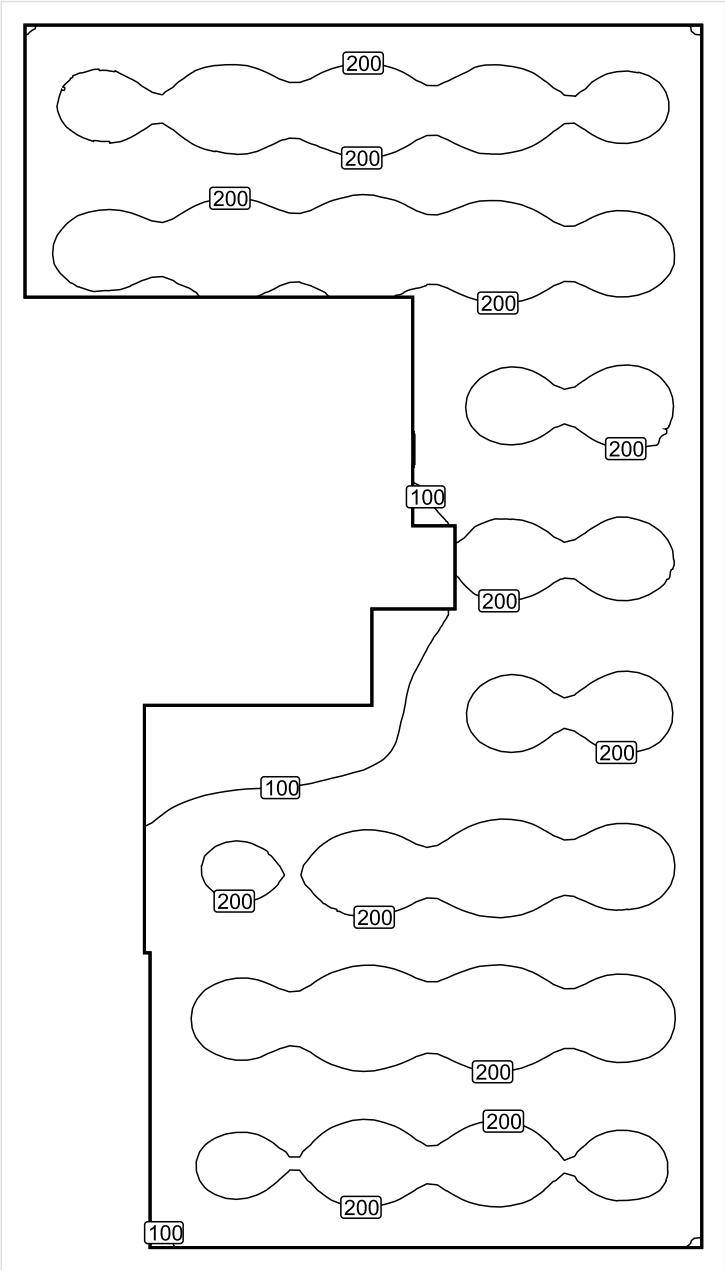
No.	Quantity		
1	28	Philips Lighting TCW060 2x36W TL-D/840 HF Light output ratio: 62.88% Lamp luminous flux: 6500 lm Luminaire luminous flux: 4087 lm Power: 72.0 W Light yield: 56.8 lm/W Colour temperature: 3000 K Colour rendering index: 100	<div><div>See our luminaire catalog for an image of the luminaire.</div><div></div></div>

Total lamp luminous flux: 182000 lm, Total luminaire luminous flux: 114436 lm, Total Load: 2016.0 W, Light yield: 56.8 lm/W

Lighting power density: 4.77 W/m² = 2.59 W/m²/100 lx (Ground area 422.35 m²)

Consumption: 5550 kWh/a of maximum 14800 kWh/a

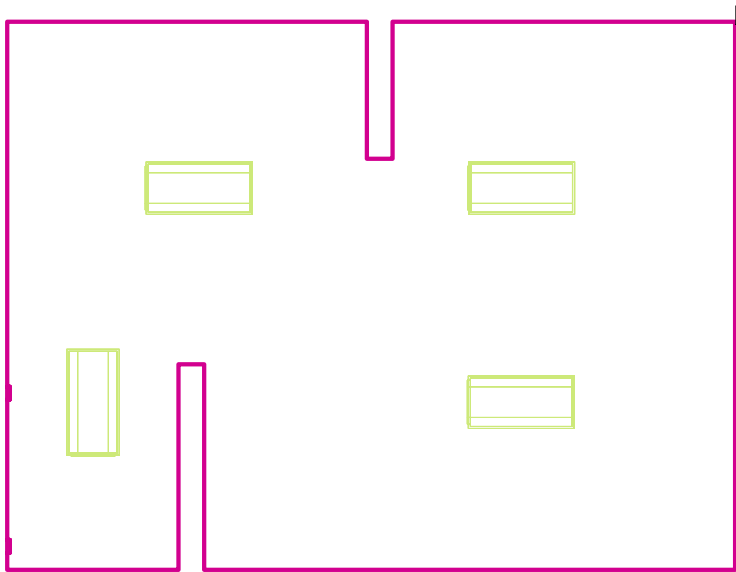
Estacionamiento



Scale: 1 : 200

Perpendicular illuminance (Surface)  
Mean (actual): 185 lx, Min: 38.7 lx, Max: 270 lx, Min/average: 0.21, Min/max: 0.14  
Height of working plane: 0.800 m, Wall zone: 0.000 m


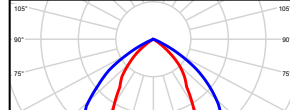
BWC Masculino



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Masculino	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	257 (500)	86.8	394	0.34	0.22

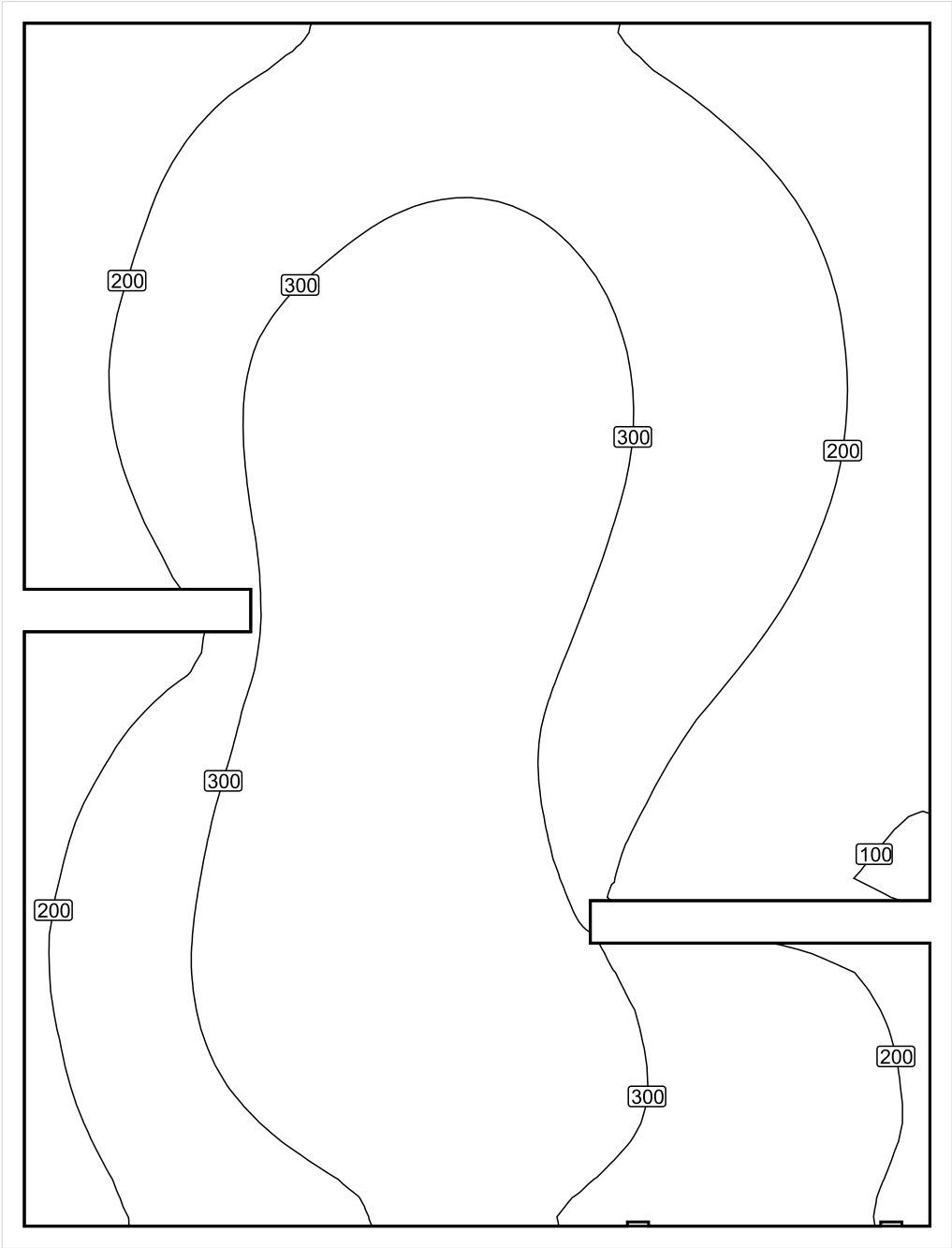
No.	Quantity		
1	4	<div><div>Lumicenter Lighting 25 CAA01-E216 Light output ratio: 66.27% Lamp luminous flux: 2400 lm Luminaire luminous flux: 1590 lm Power: 33.0 W Light yield: 48.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div><div></div><div></div></div>	

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6360 lm, Total Load: 132.0 W, Light yield: 48.2 lm/W

Lighting power density: 9.92 W/m² = 3.87 W/m²/100 lx (Ground area 13.30 m²)

Consumption: 250 - 350 kWh/a of maximum 500 kWh/a

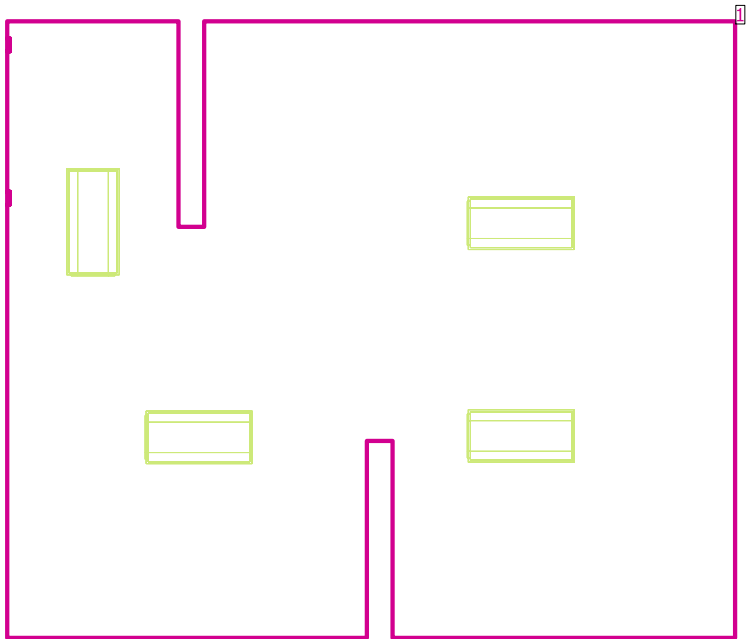
BWC Masculino



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 257 lx, Min: 86.8 lx, Max: 394 lx, Min/average: 0.34, Min/max: 0.22  
Height of working plane: 0.800 m, Wall zone: 0.000 m

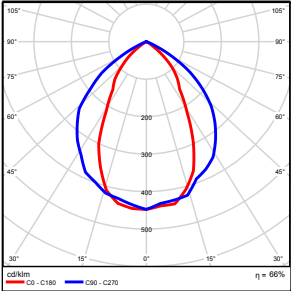

BWC Feminino



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Feminino	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	238 (500)	70.9	387	0.30	0.18

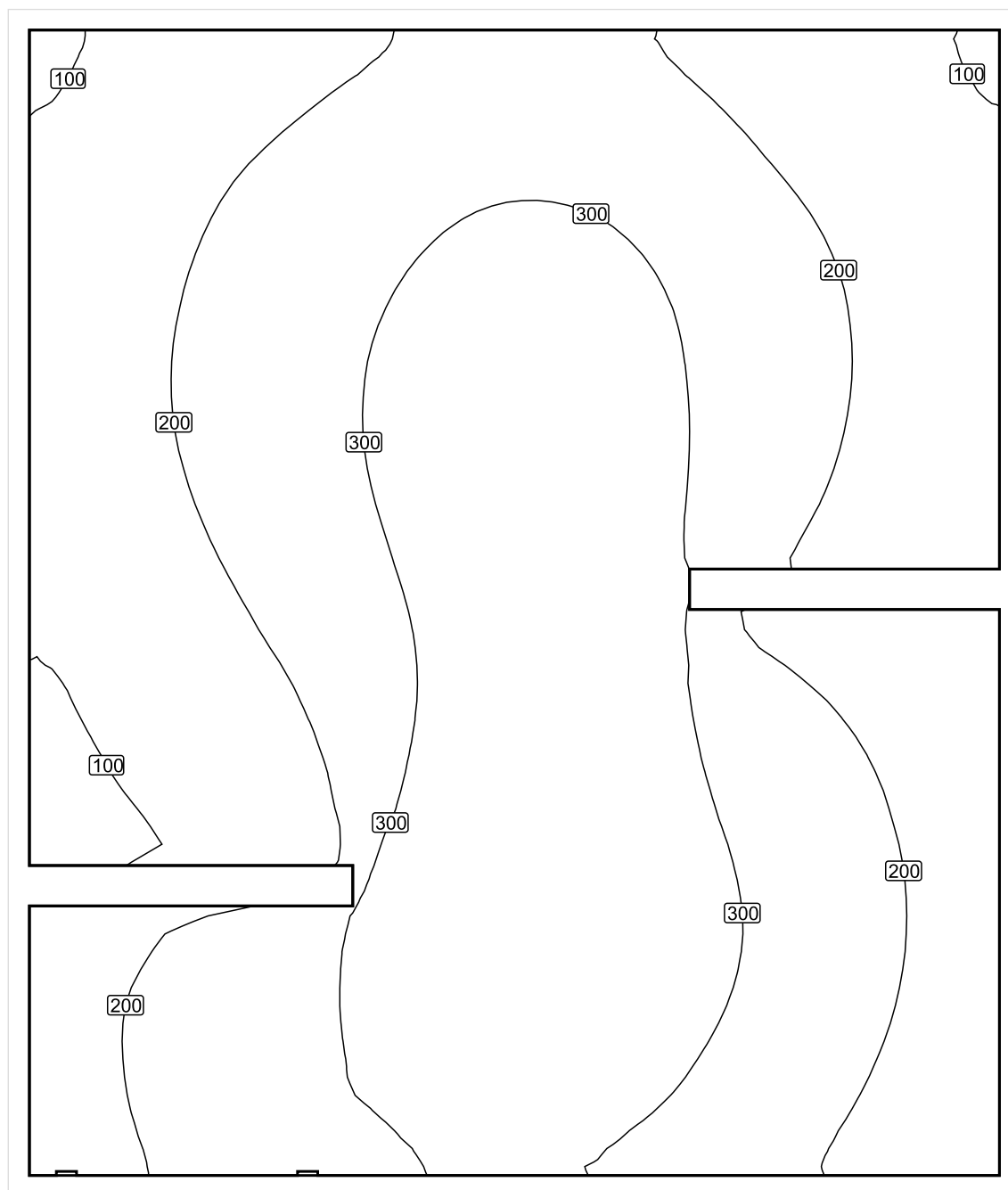
No.	Quantity		
1	4	<div>Lumicenter Lighting 25 CAA01-E216 Light output ratio: 66.27% Lamp luminous flux: 2400 lm Luminaire luminous flux: 1590 lm Power: 33.0 W Light yield: 48.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6360 lm, Total Load: 132.0 W, Light yield: 48.2 lm/W

Lighting power density:  $8.83 \text{ W/m}^2 = 3.71 \text{ W/m}^2/100 \text{ lx}$  (Ground area 14.95 m²)

Consumption: 250 - 350 kWh/a of maximum 550 kWh/a

## BWC Feminino



Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 238 lx, Min: 70.9 lx, Max: 387 lx, Min/average: 0.30, Min/max: 0.18

Height of working plane: 0.800 m, Wall zone: 0.000 m



DML



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

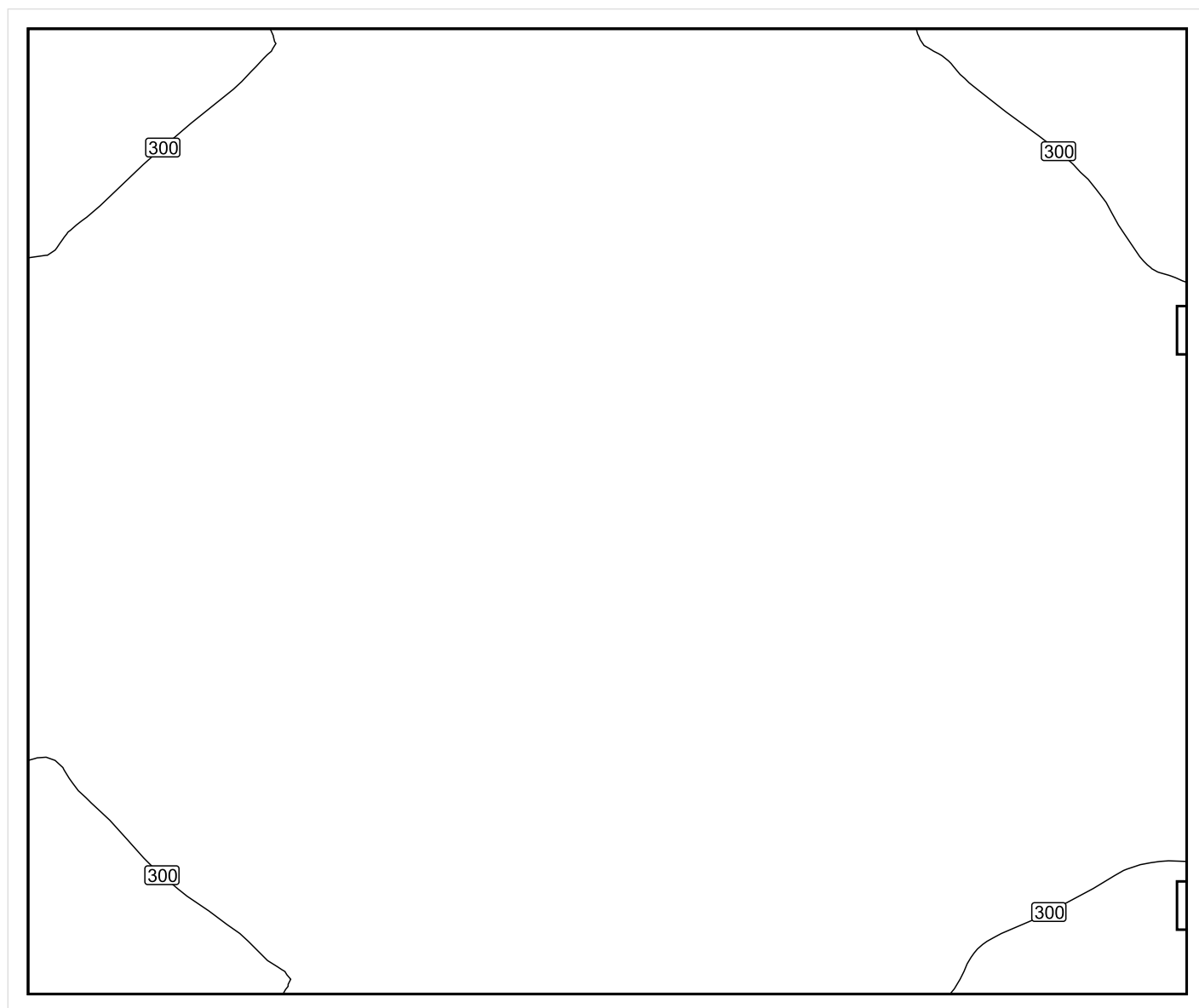
Workplane

	Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1	DML	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	342 (500)	249	392	0.73	0.64

Lighting power density: 0.00 W/m² = 0.00 W/m²/100 lx (Ground area 2.70 m²)

Consumption: 0 kWh/a of maximum 100 kWh/a

## DML



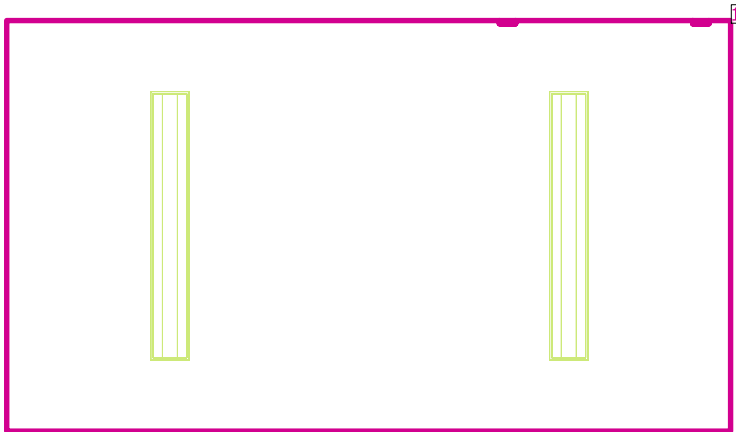
Scale: 1 : 10

Perpendicular illuminance (Surface)

Mean (actual): 342 lx, Min: 249 lx, Max: 392 lx, Min/average: 0.73, Min/max: 0.64

Height of working plane: 0.800 m, Wall zone: 0.000 m

Copa



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

	Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1	Copa	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	250 (500)	174	320	0.70	0.54

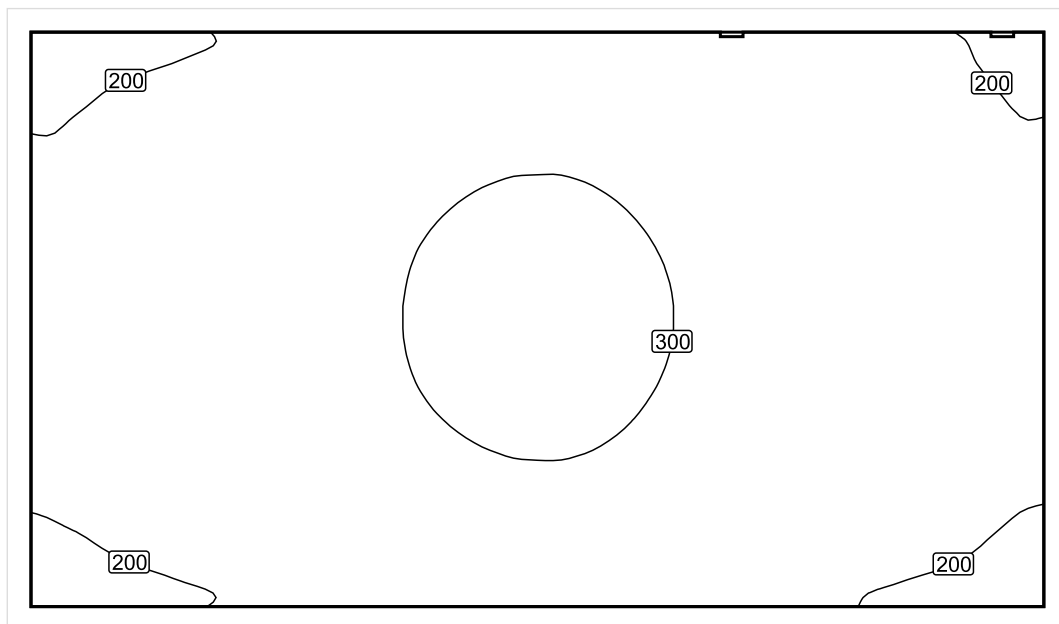
No.	Quantity			
1	2	Lumicenter Lighting CAA01-E132 Light output ratio: 72.25% Lamp luminous flux: 2700 lm Luminaire luminous flux: 1951 lm Power: 36.0 W Light yield: 54.2 lm/W Colour temperature: 3000 K Colour rendering index: 79		

Total lamp luminous flux: 5400 lm, Total luminaire luminous flux: 3902 lm, Total Load: 72.0 W, Light yield: 54.2 lm/W

Lighting power density: 11.31 W/m² = 4.52 W/m²/100 lx (Ground area 6.36 m²)

Consumption: 100 - 200 kWh/a of maximum 250 kWh/a

## Copa



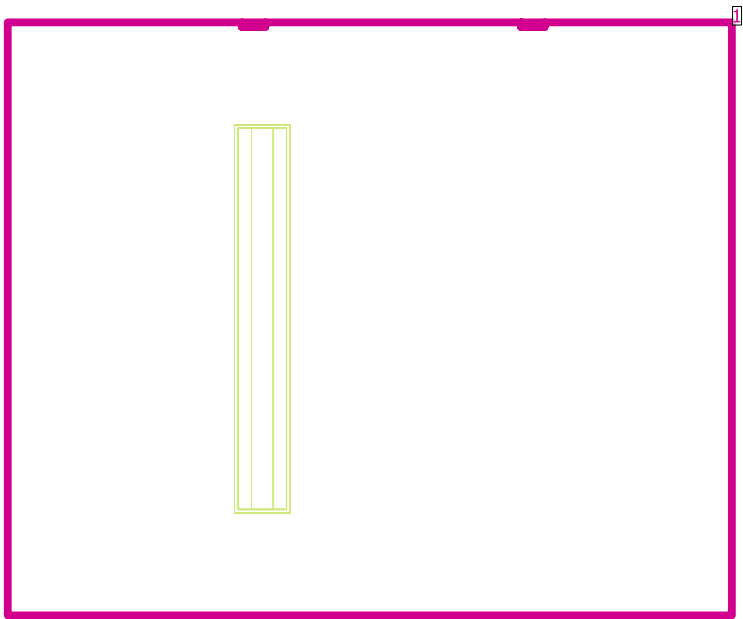
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 250 lx, Min: 174 lx, Max: 320 lx, Min/average: 0.70, Min/max: 0.54

Height of working plane: 0.800 m, Wall zone: 0.000 m

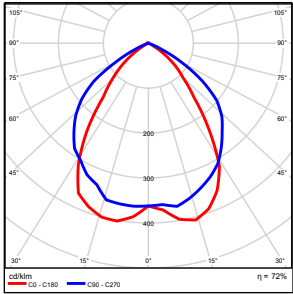

BWC Def. Físico



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Def. Físico	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	171 (500)	89.6	212	0.52	0.42

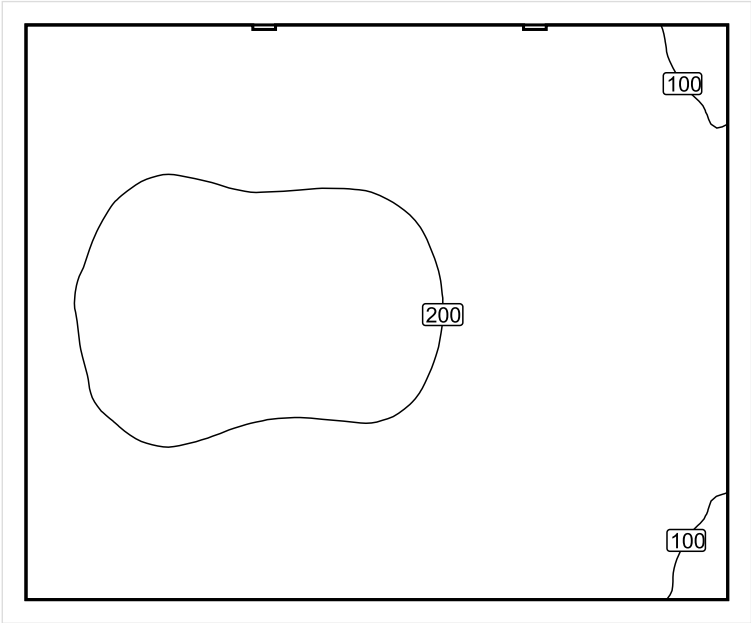
No.	Quantity		
1	1	<div>Lumicenter Lighting CAA01-E132 Light output ratio: 72.25% Lamp luminous flux: 2700 lm Luminaire luminous flux: 1951 lm Power: 36.0 W Light yield: 54.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 2700 lm, Total luminaire luminous flux: 1951 lm, Total Load: 36.0 W, Light yield: 54.2 lm/W

Lighting power density: 8.17 W/m² = 4.77 W/m²/100 lx (Ground area 4.41 m²)

Consumption: 100 kWh/a of maximum 200 kWh/a

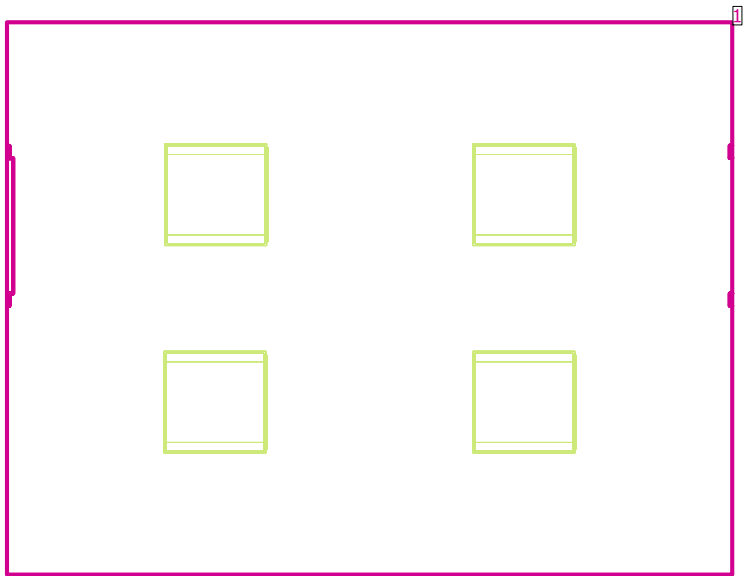
BWC Def. Físico



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 171 lx, Min: 89.6 lx, Max: 212 lx, Min/average: 0.52, Min/max: 0.42  
Height of working plane: 0.800 m, Wall zone: 0.000 m

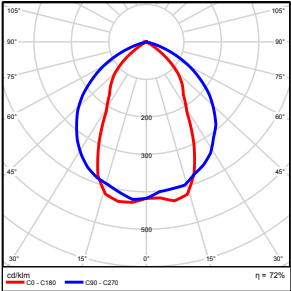

DERIM



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

	Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1	DERIM	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	581 (500)	280	866	0.48	0.32

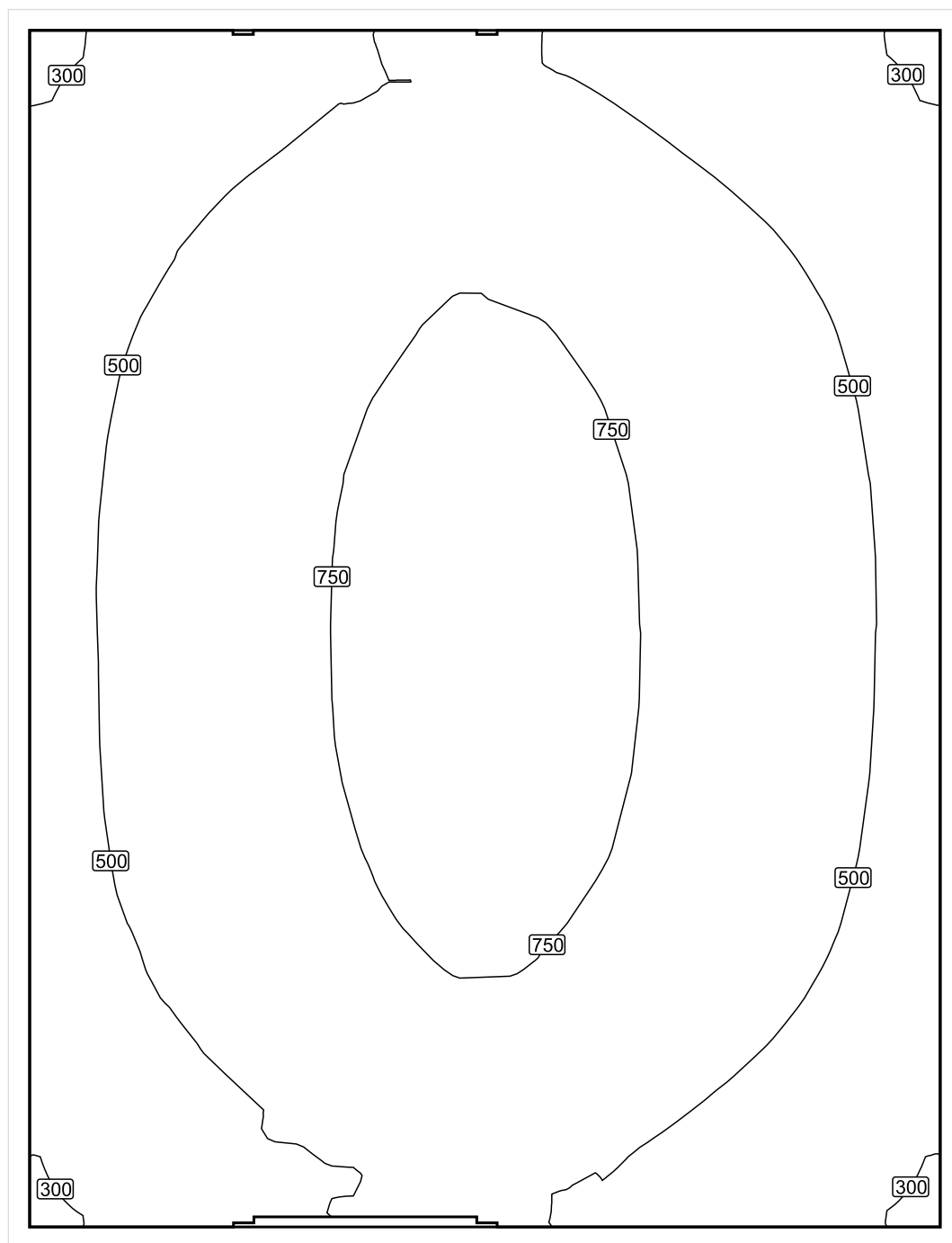
No.	Quantity		
1	4	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 19200 lm, Total luminaire luminous flux: 13900 lm, Total Load: 264.0 W, Light yield: 52.7 lm/W

Lighting power density: 17.91 W/m² = 3.09 W/m²/100 lx (Ground area 14.74 m²)

Consumption: 450 - 750 kWh/a of maximum 550 kWh/a

## DERIM



Scale: 1 : 25

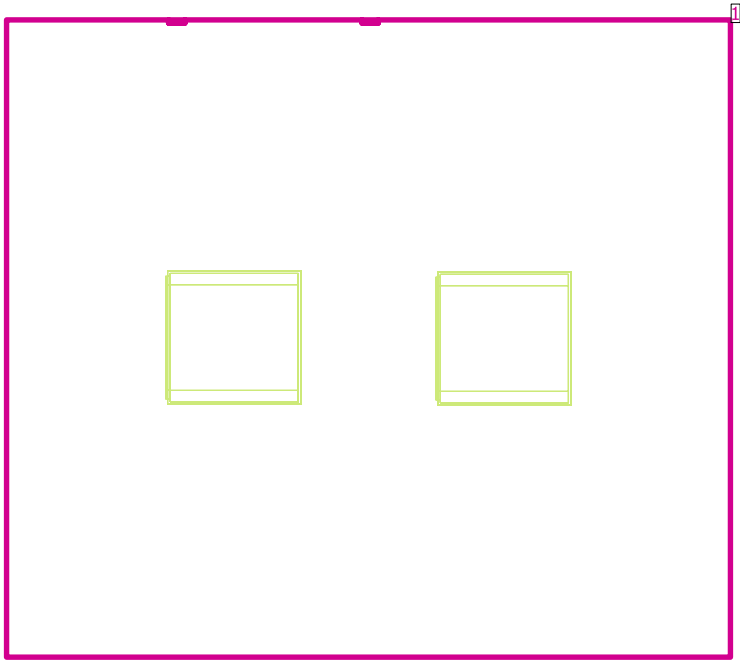
Perpendicular illuminance (Surface)

Mean (actual): 581 lx, Min: 280 lx, Max: 866 lx, Min/average: 0.48, Min/max: 0.32

Height of working plane: 0.800 m, Wall zone: 0.000 m



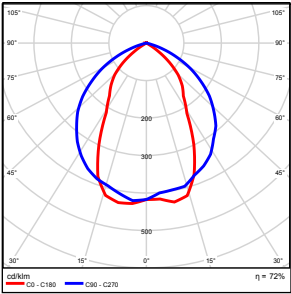

Diretor DERIM



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Diretor DERIM	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	397 (500)	172	615	0.43	0.28

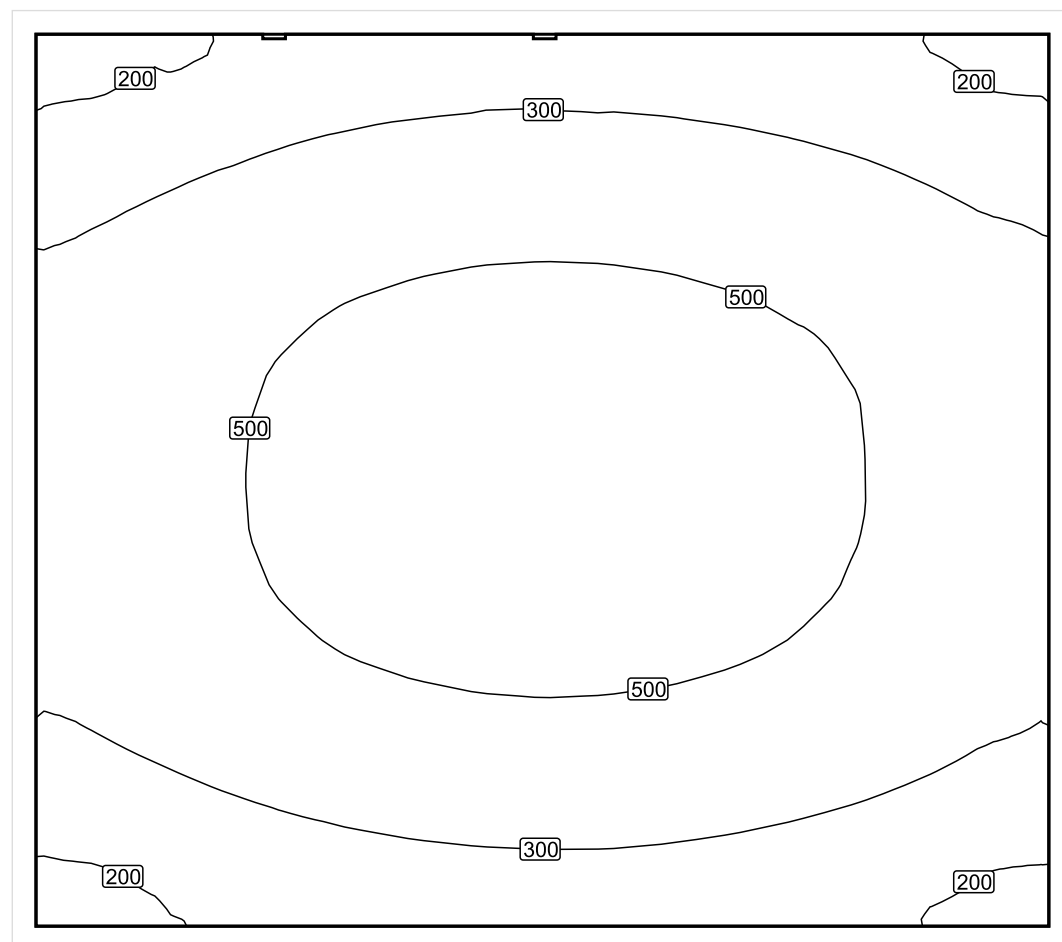
No.	Quantity		
1	2	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6950 lm, Total Load: 132.0 W, Light yield: 52.7 lm/W

Lighting power density: 13.36 W/m² = 3.36 W/m²/100 lx (Ground area 9.88 m²)

Consumption: 250 - 350 kWh/a of maximum 350 kWh/a

## Diretor DERIM



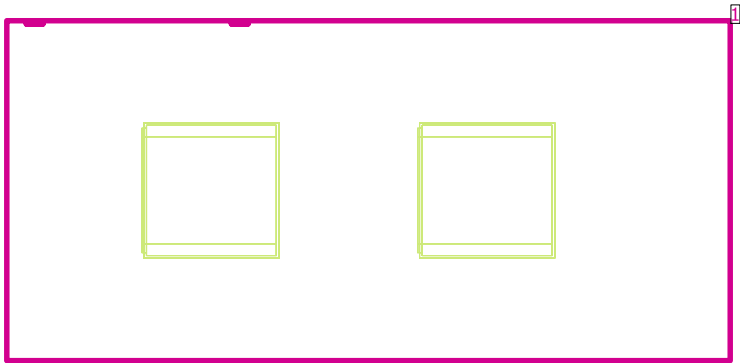
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 397 lx, Min: 172 lx, Max: 615 lx, Min/average: 0.43, Min/max: 0.28

Height of working plane: 0.800 m, Wall zone: 0.000 m

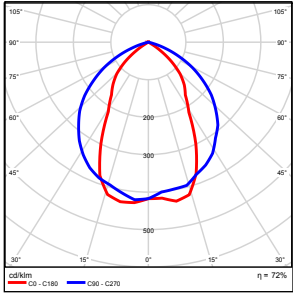

Gerência Bancária 02



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Gerência Bancária 02	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	559 (500)	362	690	0.65	0.52

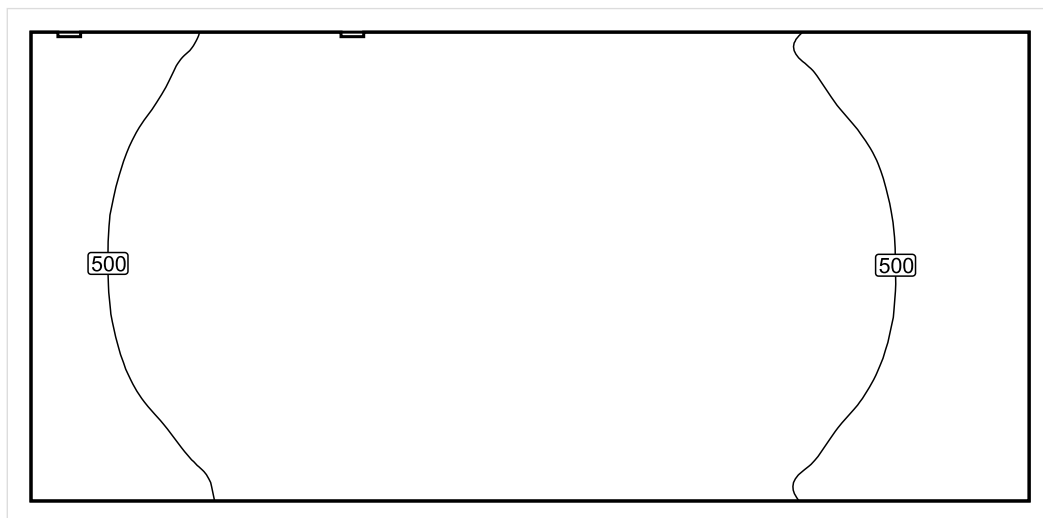
No.	Quantity		
1	2	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6950 lm, Total Load: 132.0 W, Light yield: 52.7 lm/W

Lighting power density: 25.81 W/m² = 4.62 W/m²/100 lx (Ground area 5.11 m²)

Consumption: 350 kWh/a of maximum 200 kWh/a

## Gerência Bancária 02



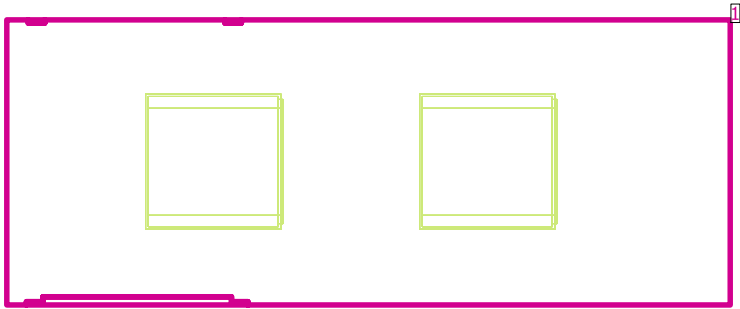
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 559 lx, Min: 362 lx, Max: 690 lx, Min/average: 0.65, Min/max: 0.52

Height of working plane: 0.800 m, Wall zone: 0.000 m

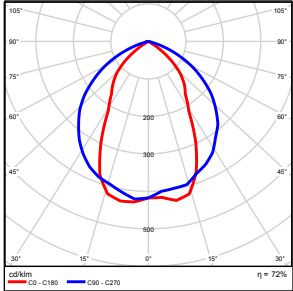

Gerência Bancária 01



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Gerência Bancária 01	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	596 (500)	380	723	0.64	0.53

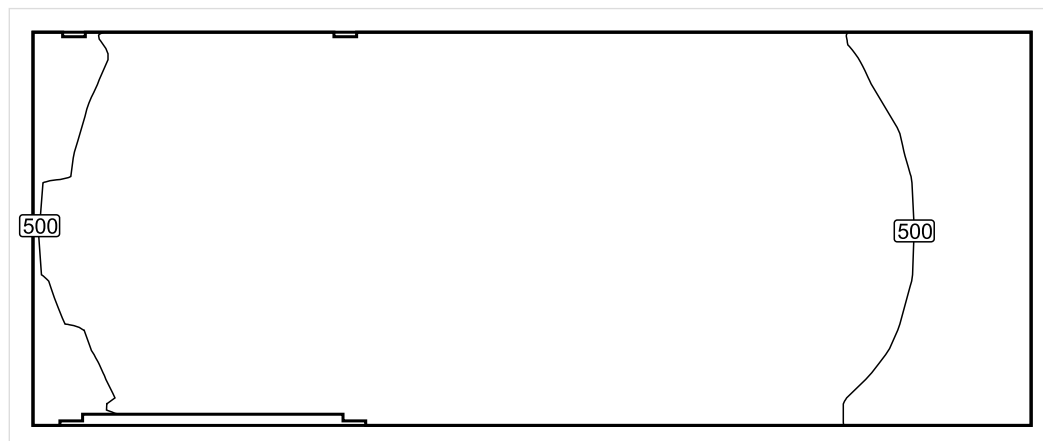
No.	Quantity		
1	2	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6950 lm, Total Load: 132.0 W, Light yield: 52.7 lm/W

Lighting power density: 30.77 W/m² = 5.17 W/m²/100 lx (Ground area 4.29 m²)

Consumption: 350 kWh/a of maximum 200 kWh/a

## Gerência Bancária 01



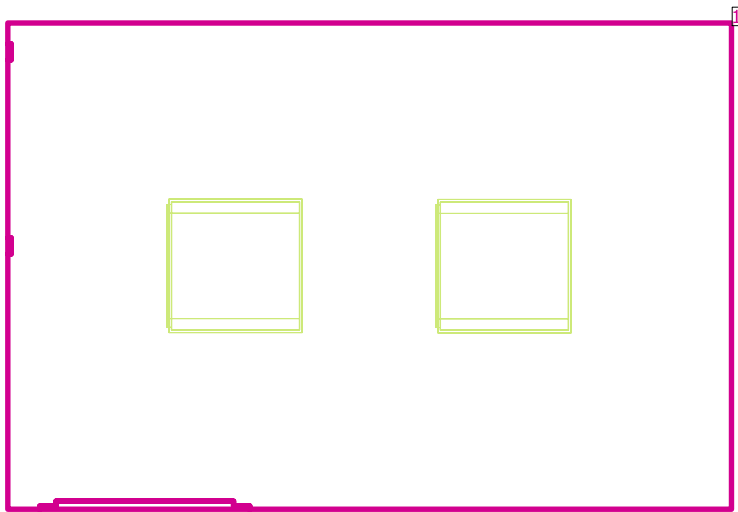
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 596 lx, Min: 380 lx, Max: 723 lx, Min/average: 0.64, Min/max: 0.53

Height of working plane: 0.800 m, Wall zone: 0.000 m

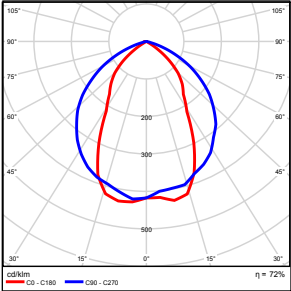

Agência Bancária



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Workplane 12	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	476 (500)	242	645	0.51	0.38

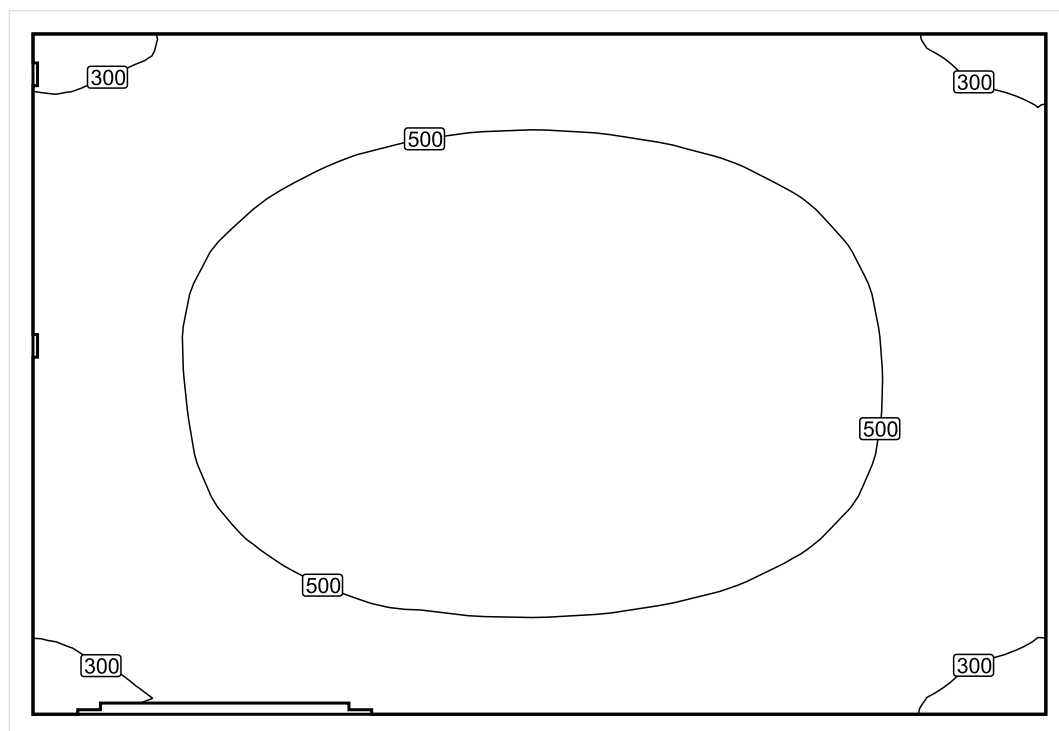
No.	Quantity		
1	2	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6950 lm, Total Load: 132.0 W, Light yield: 52.7 lm/W

Lighting power density: 17.51 W/m² = 3.68 W/m²/100 lx (Ground area 7.54 m²)

Consumption: 250 - 350 kWh/a of maximum 300 kWh/a

## Workplane 12



Scale: 1 : 25

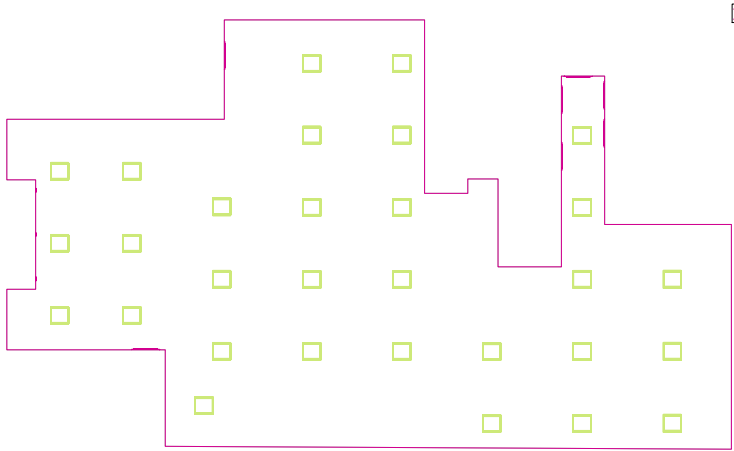
Perpendicular illuminance (Surface)

Mean (actual): 476 lx, Min: 242 lx, Max: 645 lx, Min/average: 0.51, Min/max: 0.38

Height of working plane: 0.800 m, Wall zone: 0.000 m



Saguão e Recepção



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Workplane 13	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	353 (500)	39.6	523	0.11	0.08

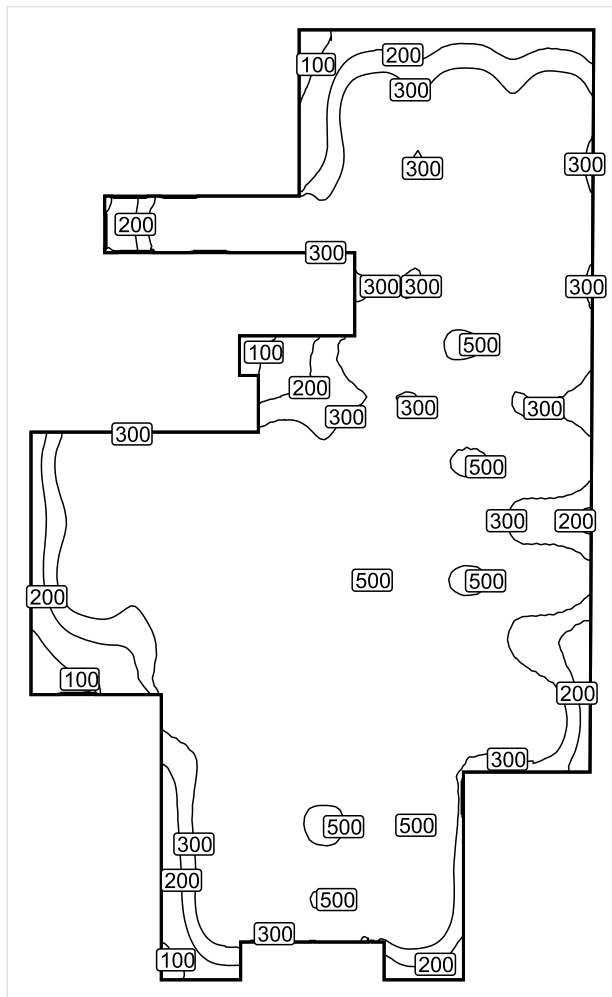
No.	Quantity			
1	30	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79		

Total lamp luminous flux: 144000 lm, Total luminaire luminous flux: 104250 lm, Total Load: 1980.0 W, Light yield: 52.7 lm/W

Lighting power density: 7.70 W/m² = 2.18 W/m²/100 lx (Ground area 257.09 m²)

Consumption: 3450 - 5450 kWh/a of maximum 9000 kWh/a

## Workplane 13



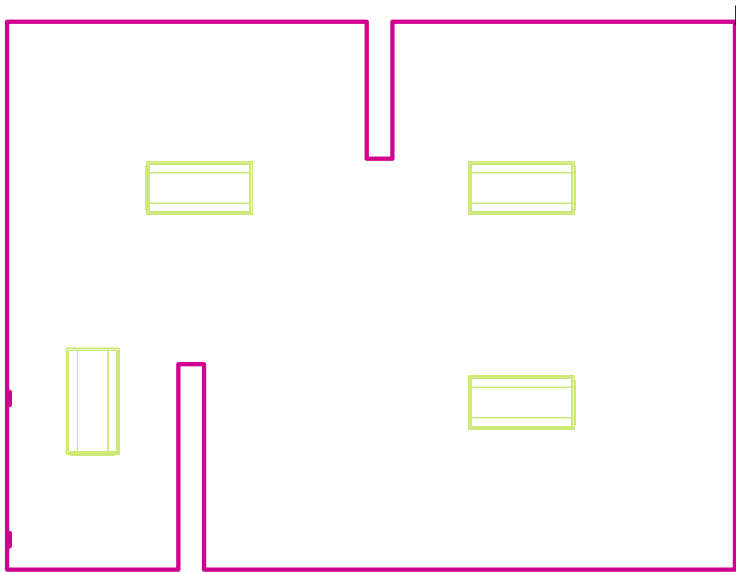
Scale: 1 : 200

Perpendicular illuminance (Surface)

Mean (actual): 353 lx, Min: 39.6 lx, Max: 523 lx, Min/average: 0.11, Min/max: 0.08

Height of working plane: 0.800 m, Wall zone: 0.000 m

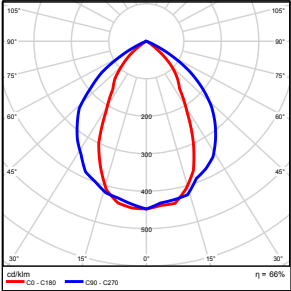

BWC Masculino



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Masculino	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	256 (500)	85.7	393	0.33	0.22

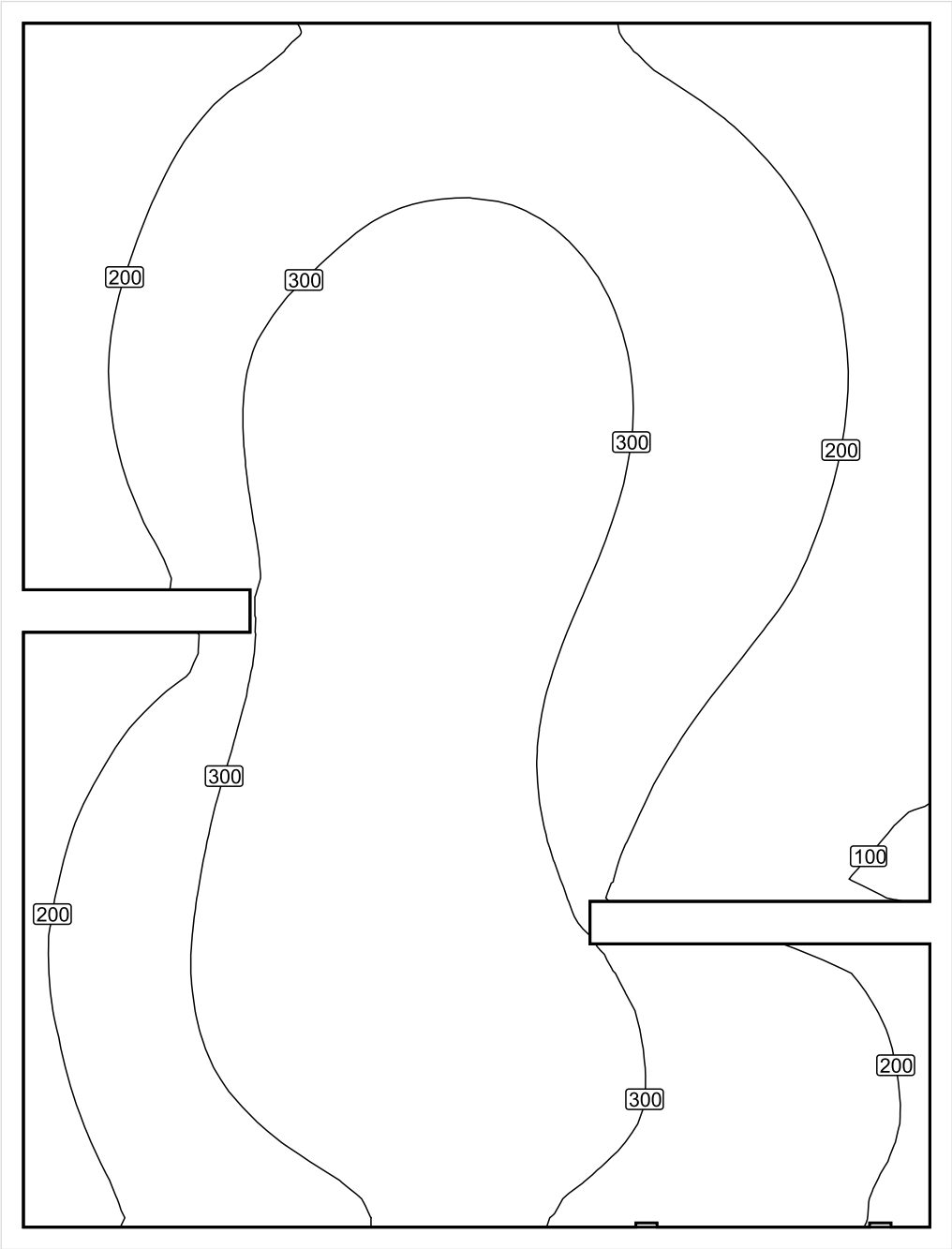
No.	Quantity		
1	4	<div>Lumicenter Lighting 25 CAA01-E216 Light output ratio: 66.27% Lamp luminous flux: 2400 lm Luminaire luminous flux: 1590 lm Power: 33.0 W Light yield: 48.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6360 lm, Total Load: 132.0 W, Light yield: 48.2 lm/W

Lighting power density: 9.92 W/m² = 3.87 W/m²/100 lx (Ground area 13.30 m²)

Consumption: 250 - 350 kWh/a of maximum 500 kWh/a

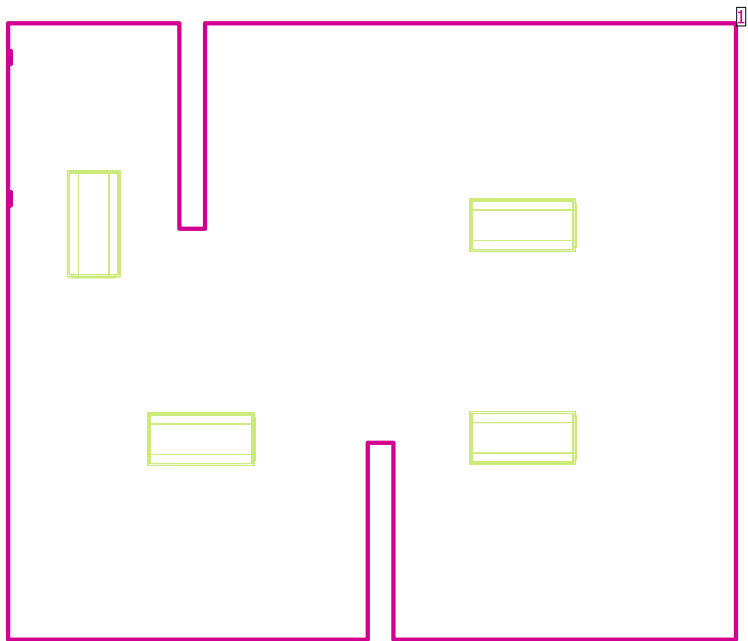
BWC Masculino



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 256 lx, Min: 85.7 lx, Max: 393 lx, Min/average: 0.33, Min/max: 0.22  
Height of working plane: 0.800 m, Wall zone: 0.000 m

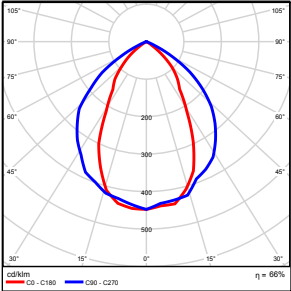

BWC Feminino



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Feminino	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	238 (500)	70.7	387	0.30	0.18

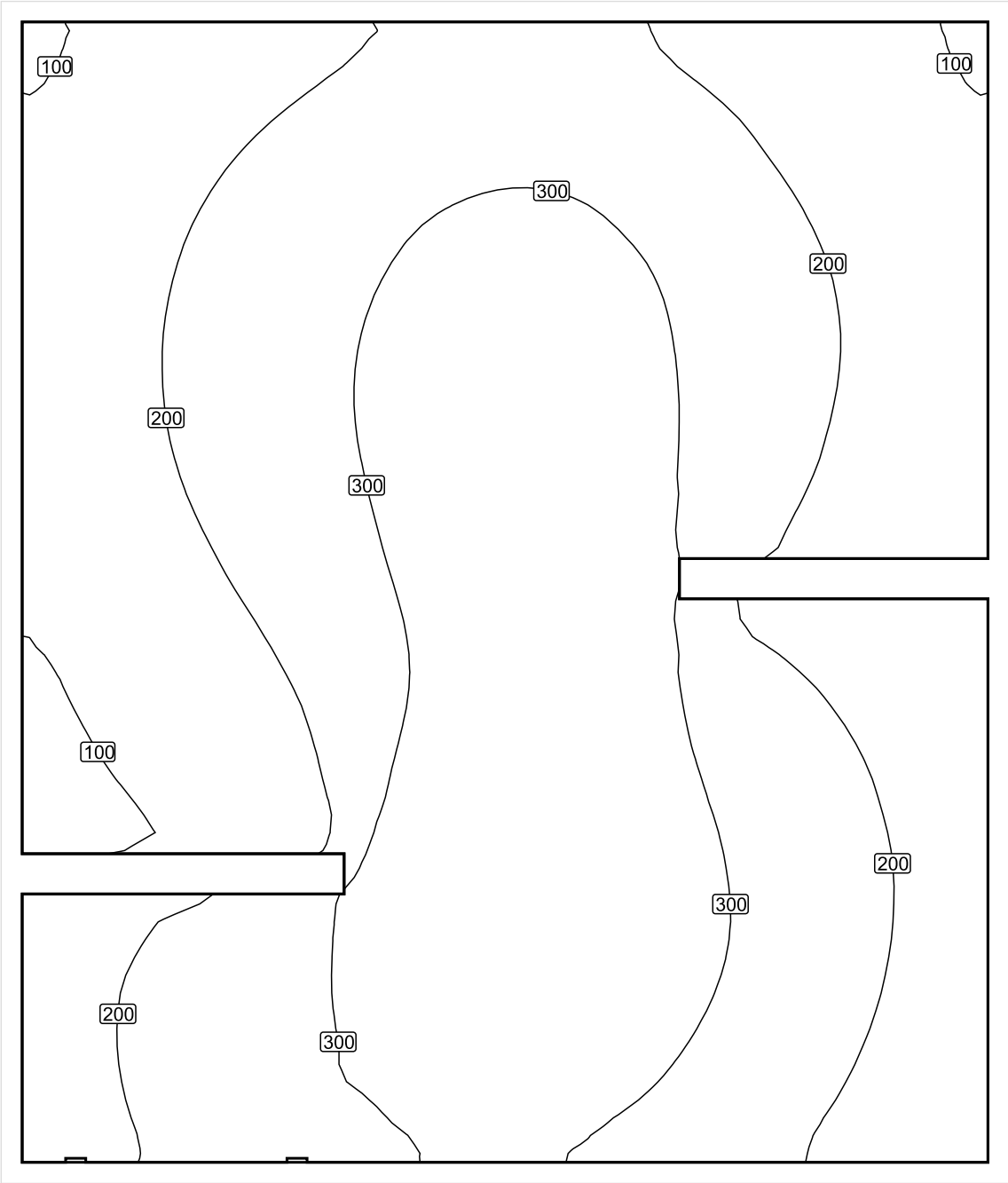
No.	Quantity		
1	4	<div>Lumicenter Lighting 25 CAA01-E216 Light output ratio: 66.27% Lamp luminous flux: 2400 lm Luminaire luminous flux: 1590 lm Power: 33.0 W Light yield: 48.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6360 lm, Total Load: 132.0 W, Light yield: 48.2 lm/W

Lighting power density: 8.83 W/m² = 3.72 W/m²/100 lx (Ground area 14.95 m²)

Consumption: 350 kWh/a of maximum 550 kWh/a

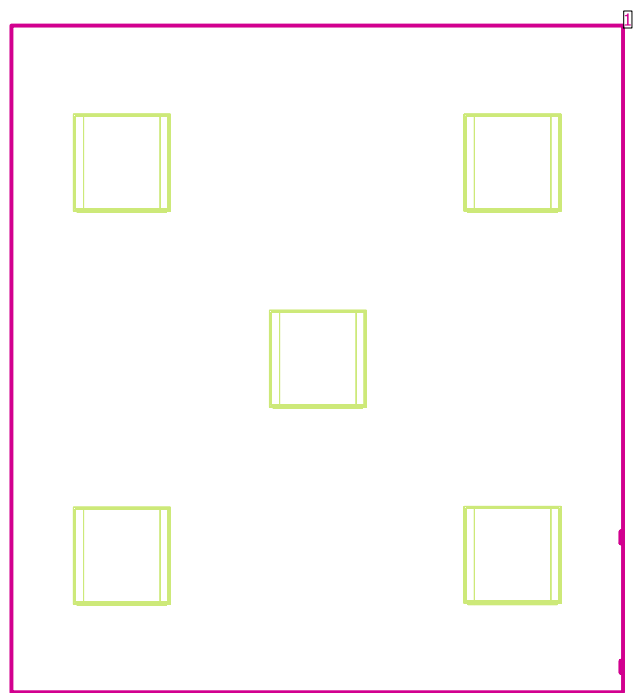
BWC Feminino



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 238 lx, Min: 70.7 lx, Max: 387 lx, Min/average: 0.30, Min/max: 0.18  
Height of working plane: 0.800 m, Wall zone: 0.000 m

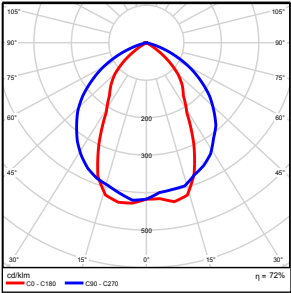

Sala de Reuniões



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Sala de Reuniões	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	594 (500)	389	763	0.65	0.51

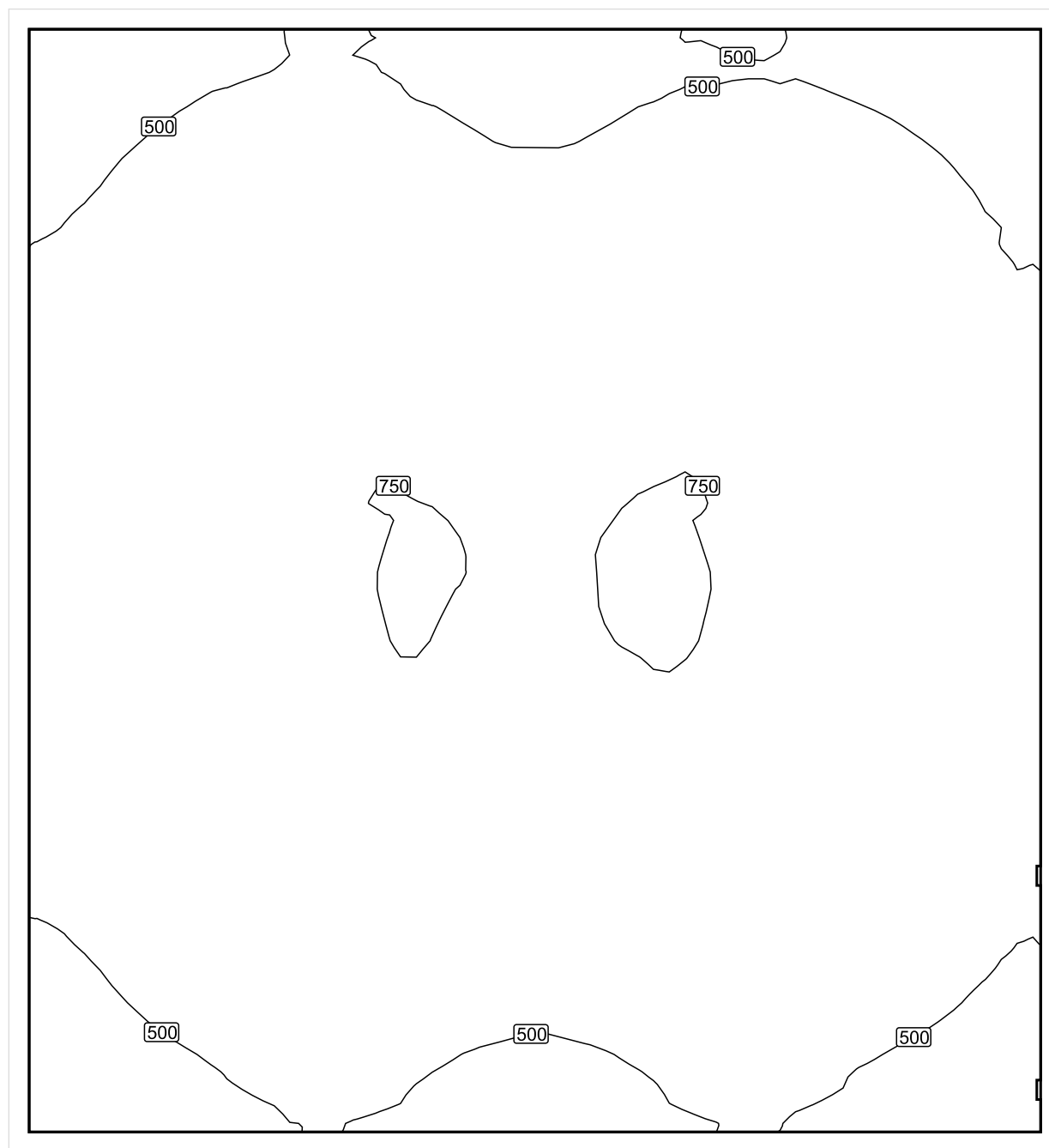
No.	Quantity		
1	5	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 24000 lm, Total luminaire luminous flux: 17375 lm, Total Load: 330.0 W, Light yield: 52.7 lm/W

Lighting power density: 19.91 W/m² = 3.35 W/m²/100 lx (Ground area 16.57 m²)

Consumption: 900 kWh/a of maximum 600 kWh/a

## Sala de Reuniões



Scale: 1 : 25

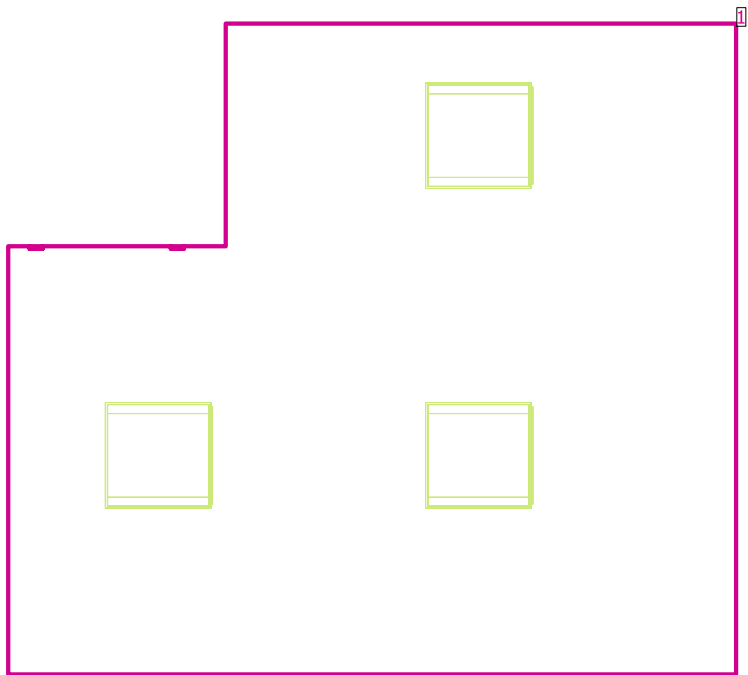
Perpendicular illuminance (Surface)

Mean (actual): 594 lx, Min: 389 lx, Max: 763 lx, Min/average: 0.65, Min/max: 0.51

Height of working plane: 0.800 m, Wall zone: 0.000 m



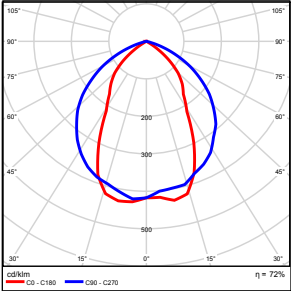

Secretário da Fazenda



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Secretário da Fazenda	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	416 (500)	167	578	0.40	0.29

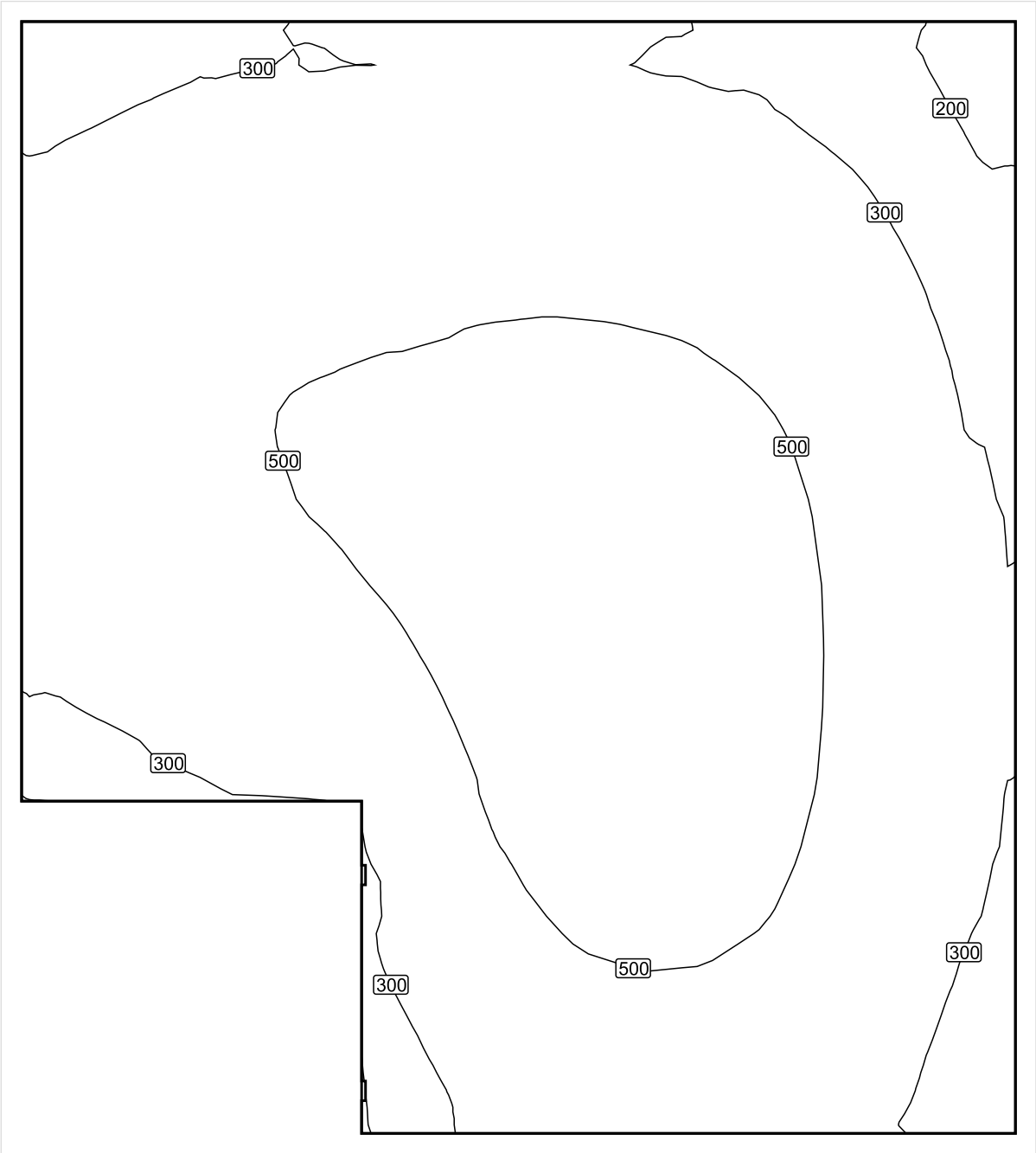
No.	Quantity		
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 13.66 W/m² = 3.28 W/m²/100 lx (Ground area 14.50 m²)

Consumption: 550 kWh/a of maximum 550 kWh/a

Secretário da Fazenda



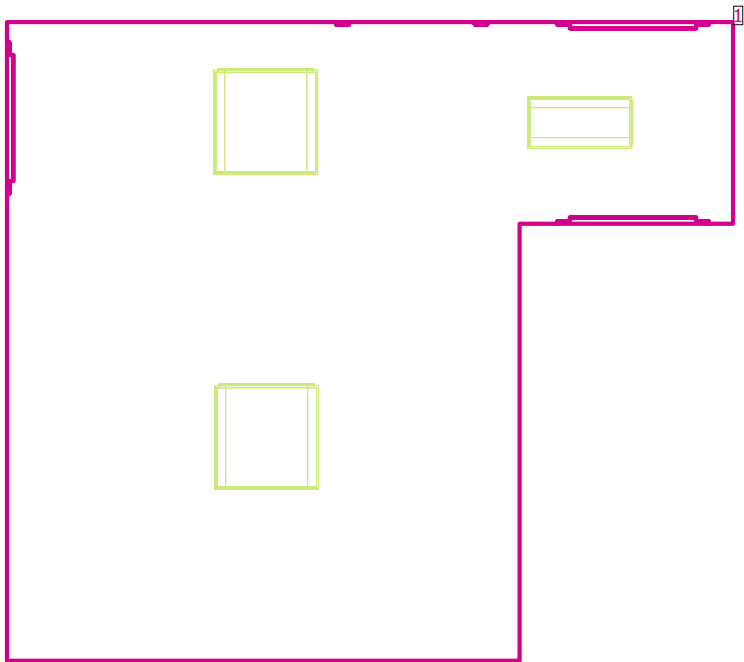
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 416 lx, Min: 167 lx, Max: 578 lx, Min/average: 0.40, Min/max: 0.29

Height of working plane: 0.800 m, Wall zone: 0.000 m

Secretária e Espera



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Secretária e Espera	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	366 (500)	133	585	0.36	0.23

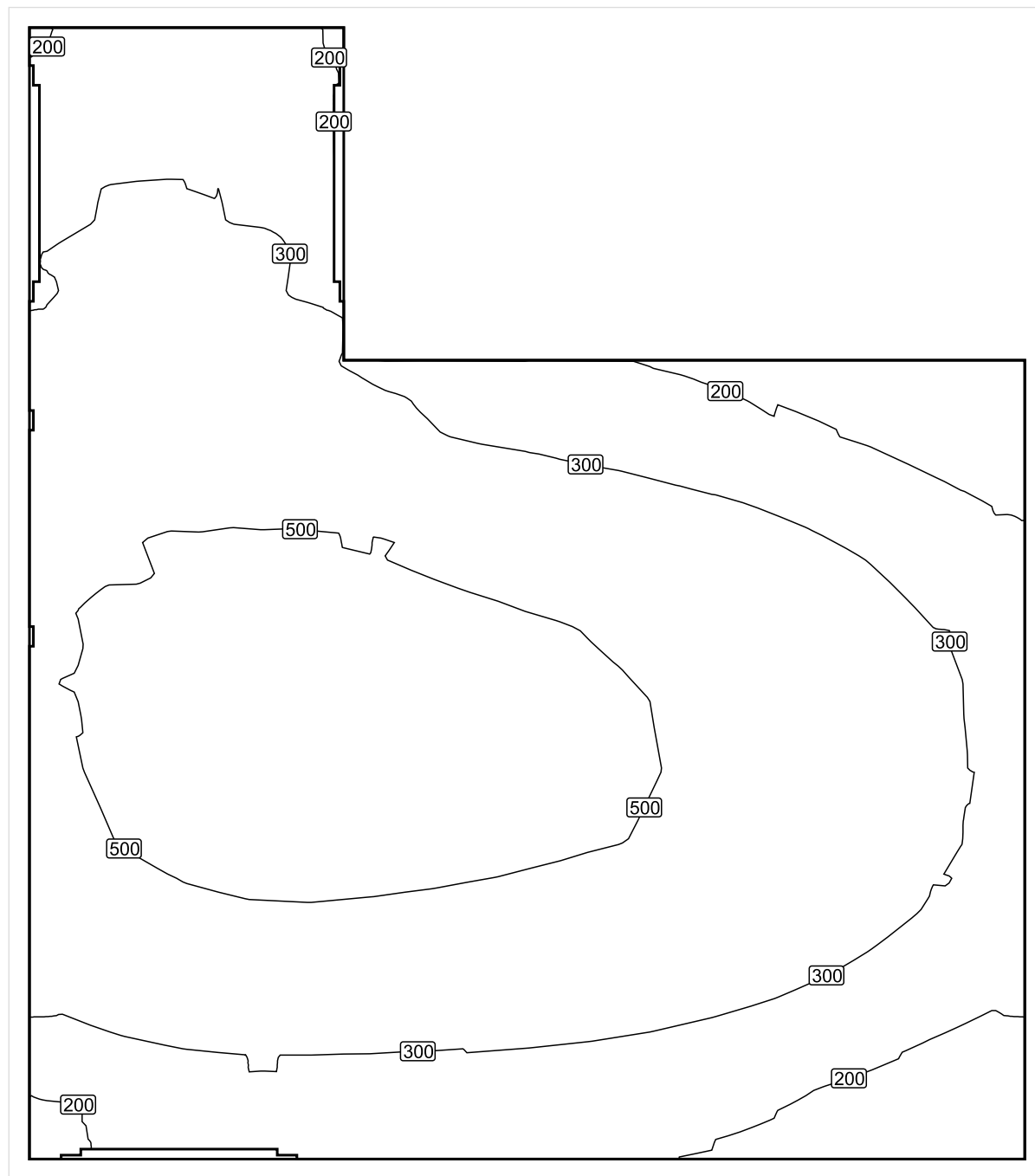
No.	Quantity			
1	2	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79		
2	1	Lumicenter Lighting 25 CAA01-E216 Light output ratio: 66.27% Lamp luminous flux: 2400 lm Luminaire luminous flux: 1590 lm Power: 33.0 W Light yield: 48.2 lm/W Colour temperature: 3000 K Colour rendering index: 79		

Total lamp luminous flux: 12000 lm, Total luminaire luminous flux: 8540 lm, Total Load: 165.0 W, Light yield: 51.8 lm/W

Lighting power density:  $12.58 \text{ W/m}^2 = 3.43 \text{ W/m}^2/100 \text{ lx}$  (Ground area  $13.11 \text{ m}^2$ )

Consumption: 300 - 450 kWh/a of maximum 500 kWh/a

## Secretária e Espera



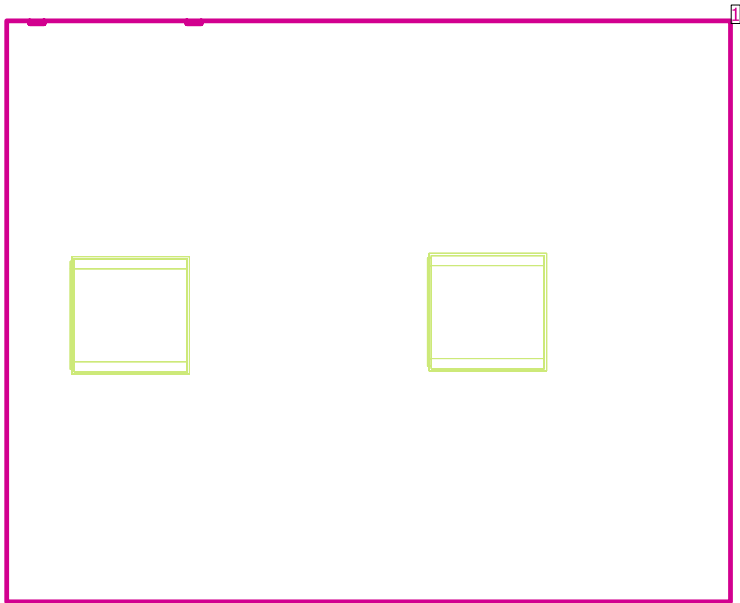
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 366 lx, Min: 133 lx, Max: 585 lx, Min/average: 0.36, Min/max: 0.23

Height of working plane: 0.800 m, Wall zone: 0.000 m

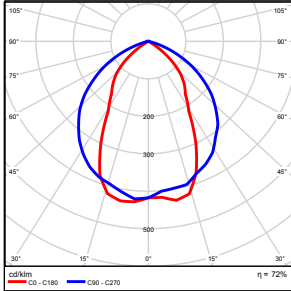

Superintendente DECAR e DERIM



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Superintendente DECAR e DERIM	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	345 (500)	136	521	0.39	0.26

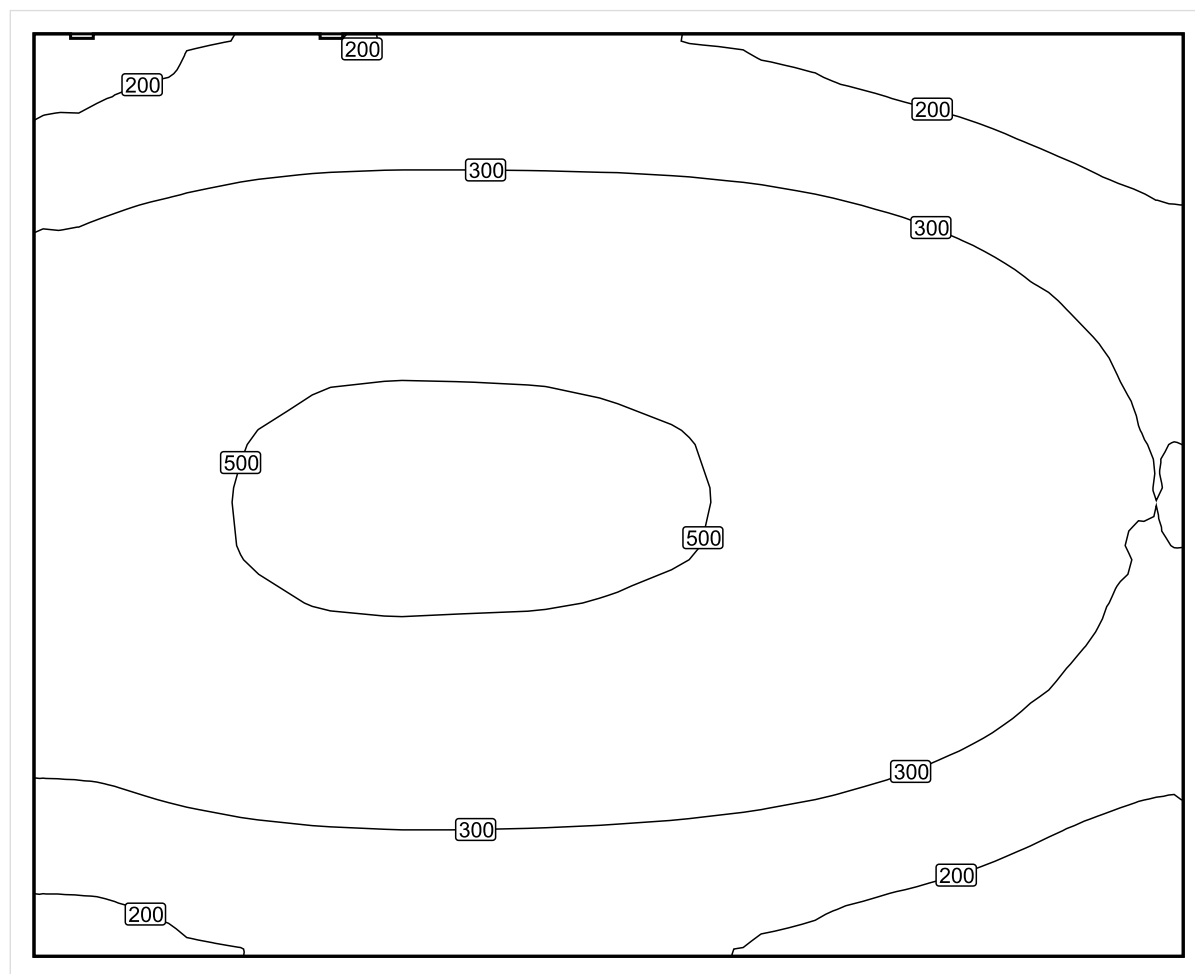
No.	Quantity		
1	2	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6950 lm, Total Load: 132.0 W, Light yield: 52.7 lm/W

Lighting power density: 11.39 W/m² = 3.30 W/m²/100 lx (Ground area 11.59 m²)

Consumption: 250 - 350 kWh/a of maximum 450 kWh/a

## Superintendente DECAR e DERIM



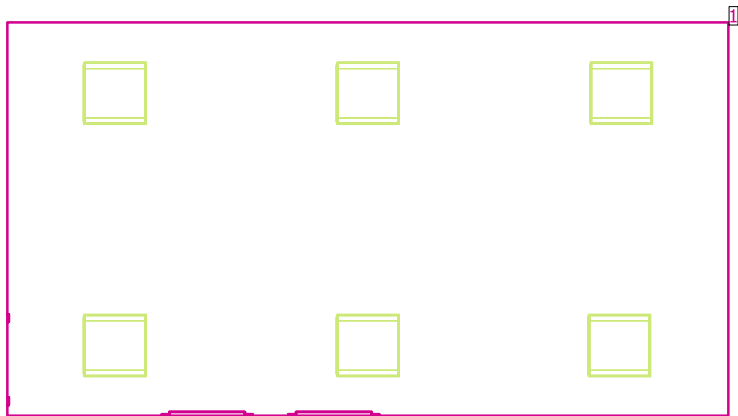
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 345 lx, Min: 136 lx, Max: 521 lx, Min/average: 0.39, Min/max: 0.26

Height of working plane: 0.800 m, Wall zone: 0.000 m

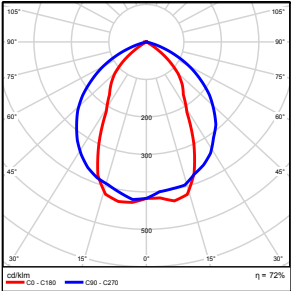

Tesouraria



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Tesouraria	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	461 (500)	301	561	0.65	0.54

No.	Quantity		
1	6	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

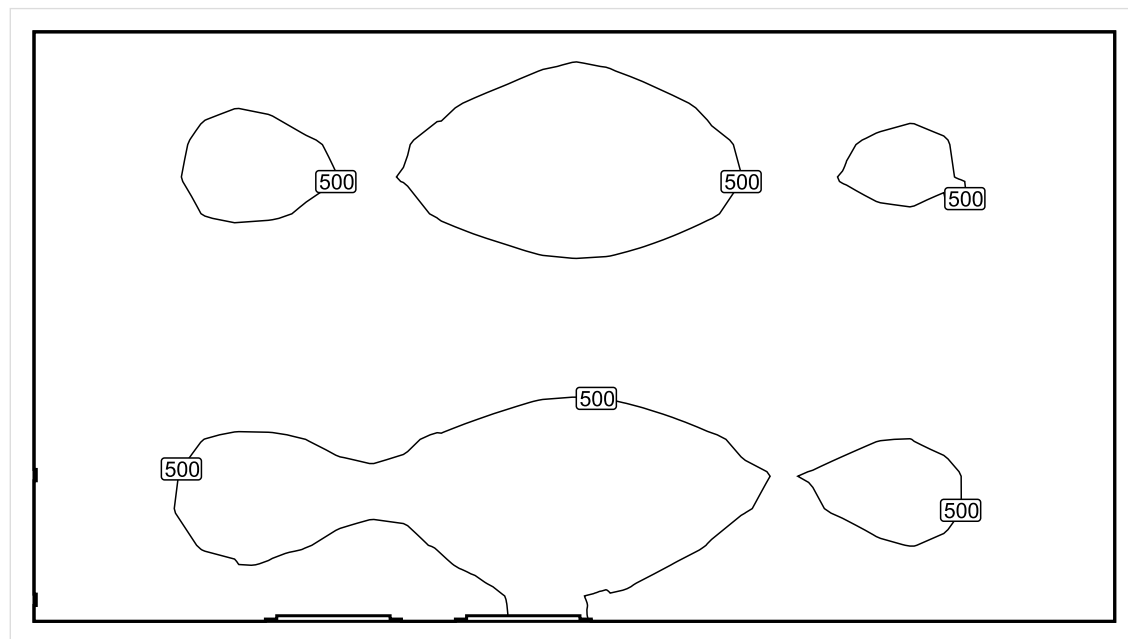
Total lamp luminous flux: 28800 lm, Total luminaire luminous flux: 20850 lm, Total Load: 396.0 W, Light yield: 52.7 lm/W

Lighting power density: 14.20 W/m² = 3.08 W/m²/100 lx (Ground area 27.89 m²)

Consumption: 700 - 1100 kWh/a of maximum 1000 kWh/a



## Tesouraria



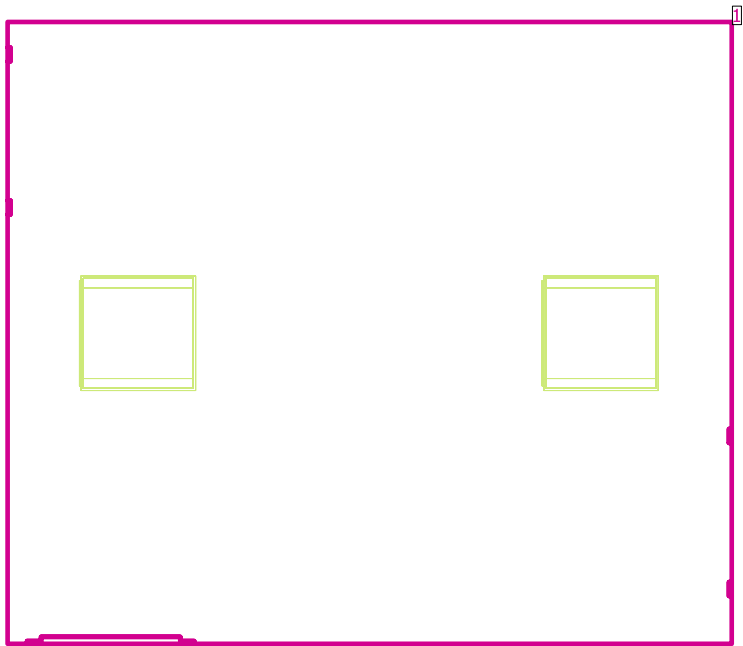
Scale: 1 : 50

Perpendicular illuminance (Surface)

Mean (actual): 461 lx, Min: 301 lx, Max: 561 lx, Min/average: 0.65, Min/max: 0.54

Height of working plane: 0.800 m, Wall zone: 0.000 m

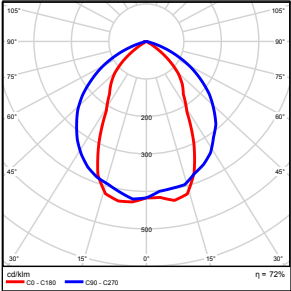

Recepção Contabilidade



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Recepção Contabilidade	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	306 (500)	127	450	0.42	0.28

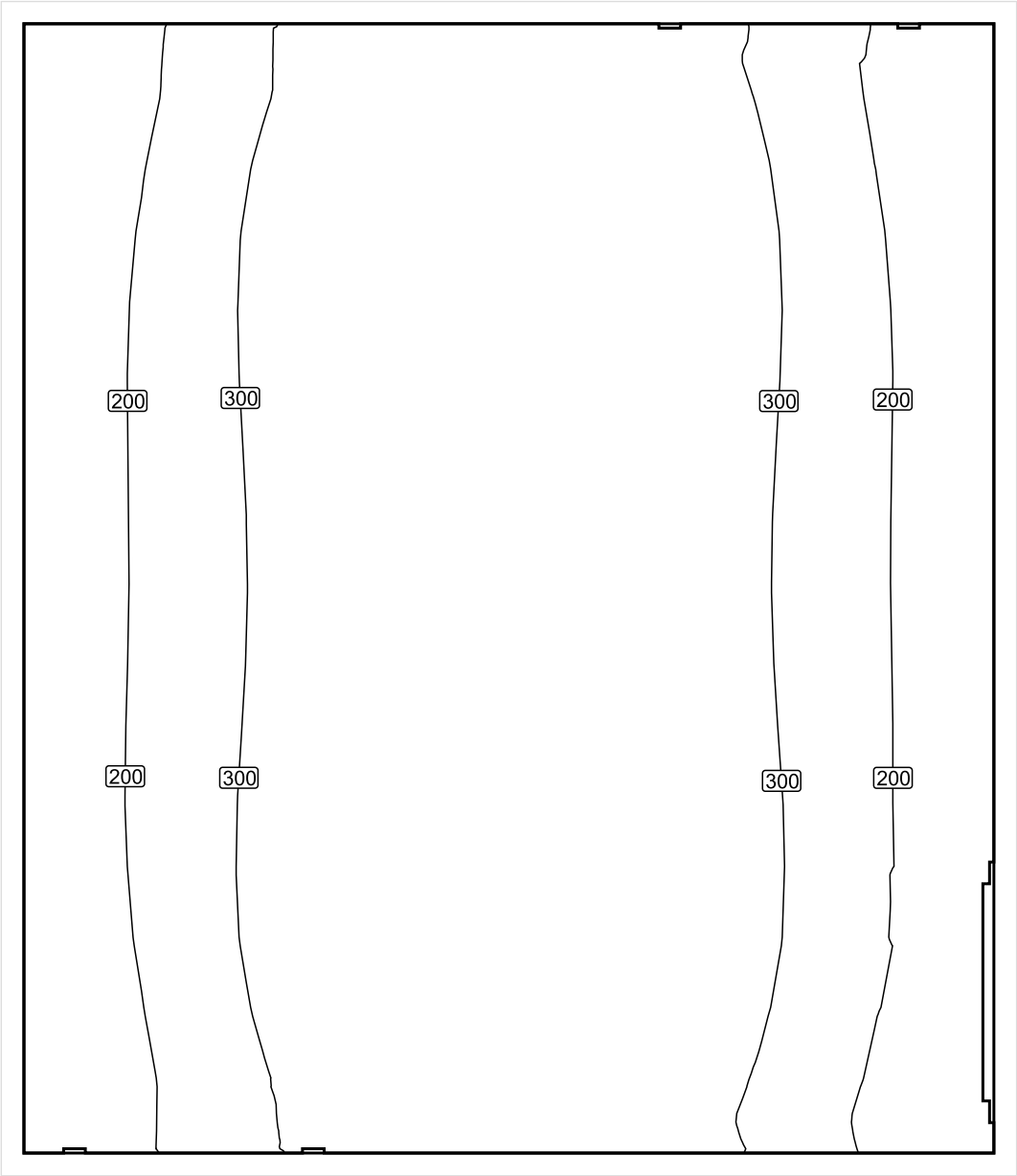
No.	Quantity		
1	2	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6950 lm, Total Load: 132.0 W, Light yield: 52.7 lm/W

Lighting power density:  $10.10 \text{ W/m}^2 = 3.30 \text{ W/m}^2/100 \text{ lx}$  (Ground area 13.06 m²)

Consumption: 350 kWh/a of maximum 500 kWh/a

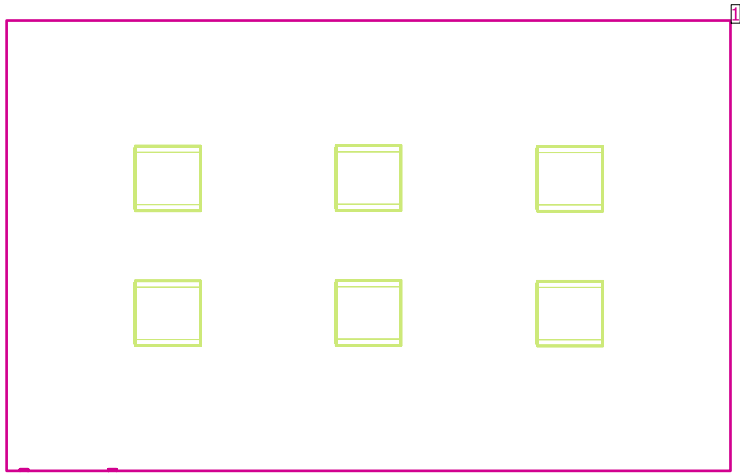
Recepção Contabilidade



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 306 lx, Min: 127 lx, Max: 450 lx, Min/average: 0.42, Min/max: 0.28  
Height of working plane: 0.800 m, Wall zone: 0.000 m

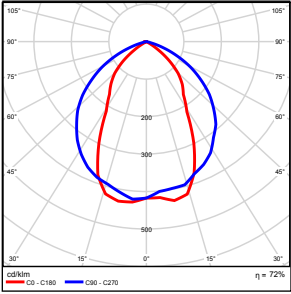

Arquivo



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Arquivo	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	529 (500)	152	956	0.29	0.16

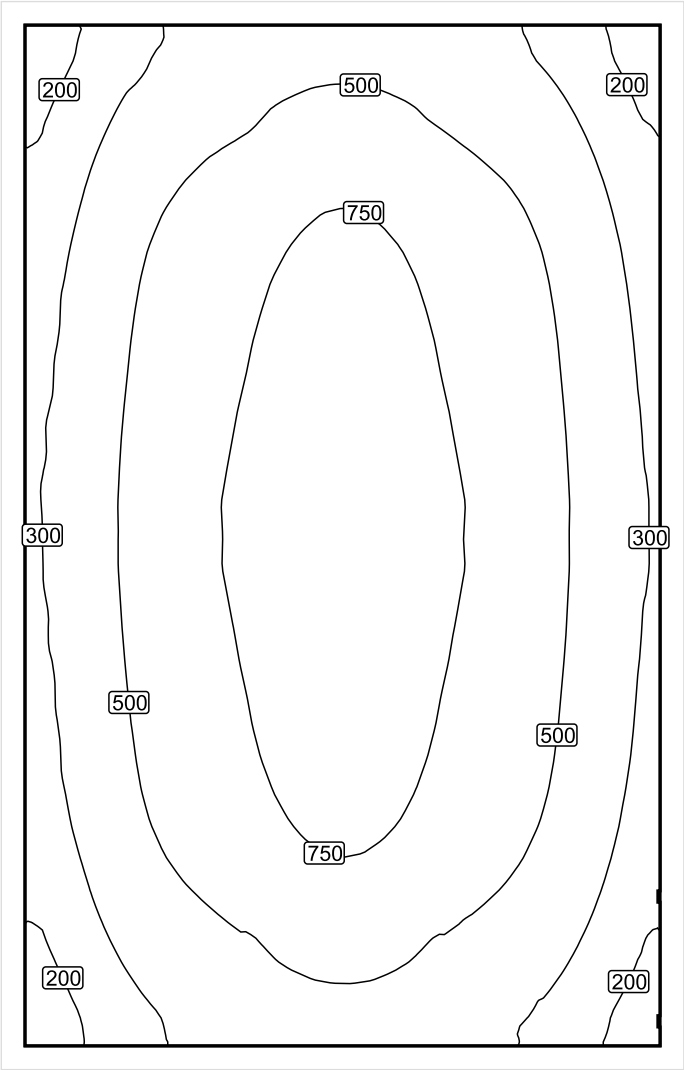
No.	Quantity		
1	6	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 28800 lm, Total luminaire luminous flux: 20850 lm, Total Load: 396.0 W, Light yield: 52.7 lm/W

Lighting power density: 13.97 W/m² = 2.64 W/m²/100 lx (Ground area 28.35 m²)

Consumption: 700 - 1100 kWh/a of maximum 1000 kWh/a

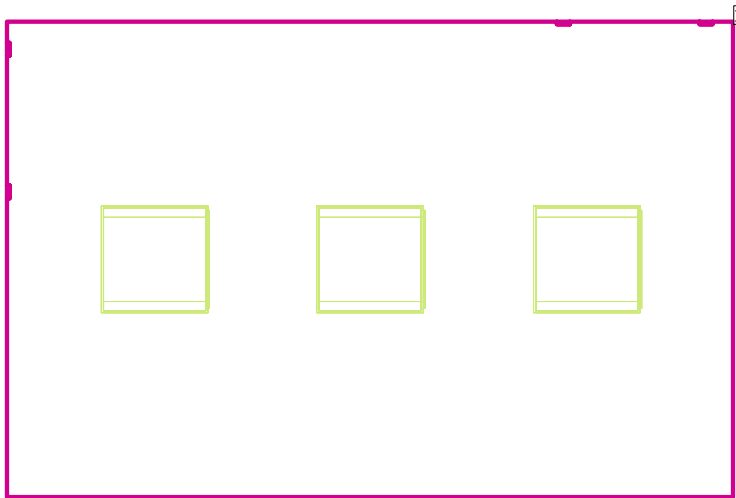
Arquivo



Scale: 1 : 50

Perpendicular illuminance (Surface)  
Mean (actual): 529 lx, Min: 152 lx, Max: 956 lx, Min/average: 0.29, Min/max: 0.16  
Height of working plane: 0.800 m, Wall zone: 0.000 m

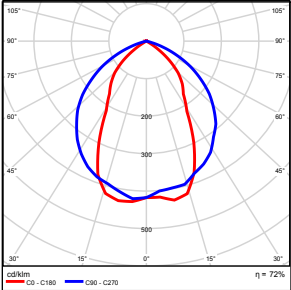

Sala de Reuniões



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Sala de Reuniões	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	527 (500)	238	773	0.45	0.31

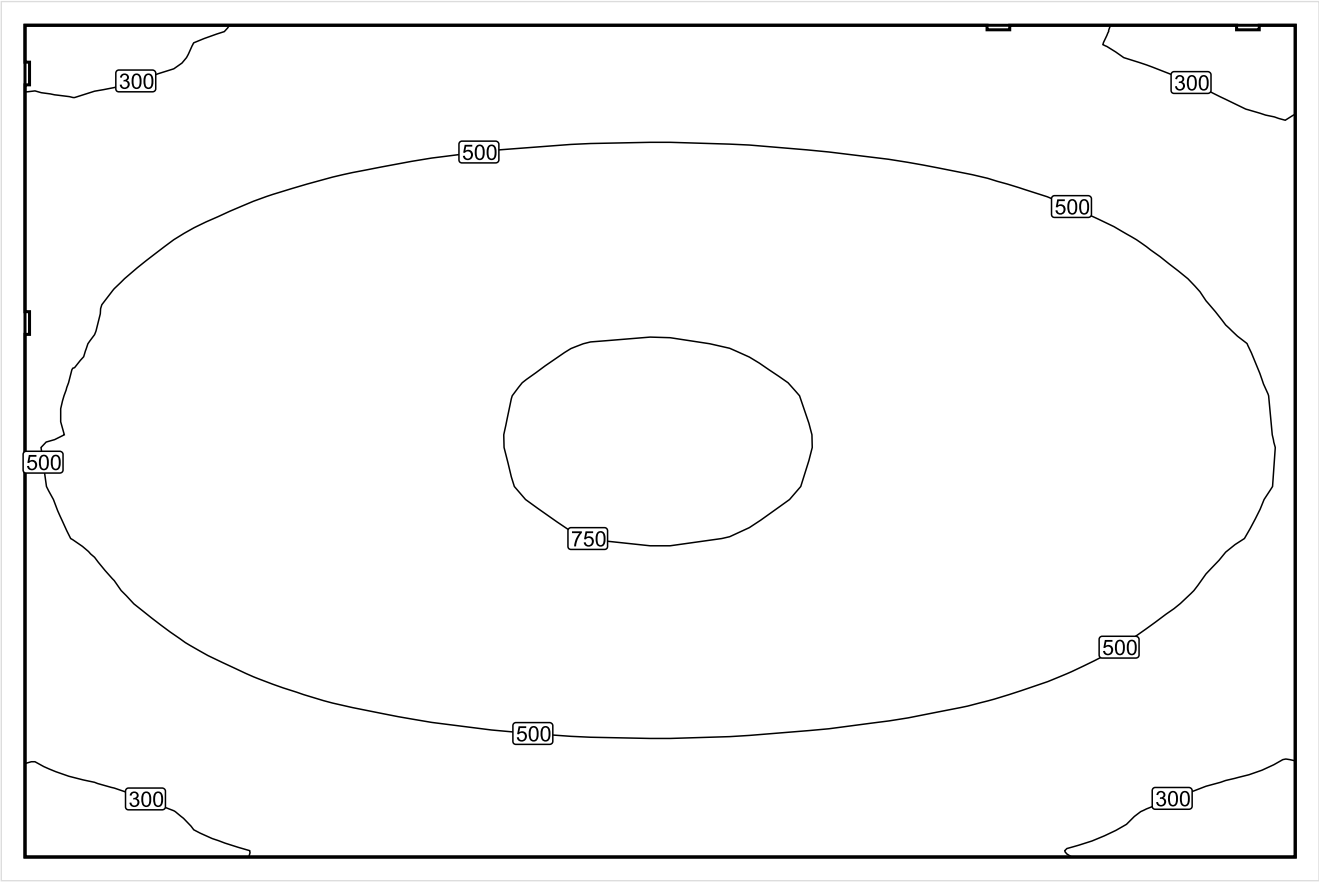
No.	Quantity		
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 17.14 W/m² = 3.25 W/m²/100 lx (Ground area 11.55 m²)

Consumption: 550 kWh/a of maximum 450 kWh/a

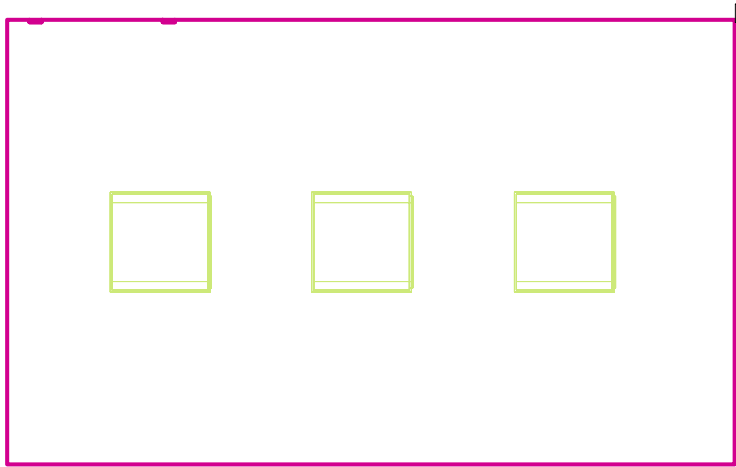
Sala de Reuniões



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 527 lx, Min: 238 lx, Max: 773 lx, Min/average: 0.45, Min/max: 0.31  
Height of working plane: 0.800 m, Wall zone: 0.000 m


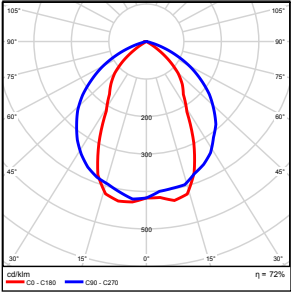
Diretoria da Tesouraria



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Diretoria da Tesouraria	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	501 (500)	215	759	0.43	0.28

No.	Quantity		
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	 

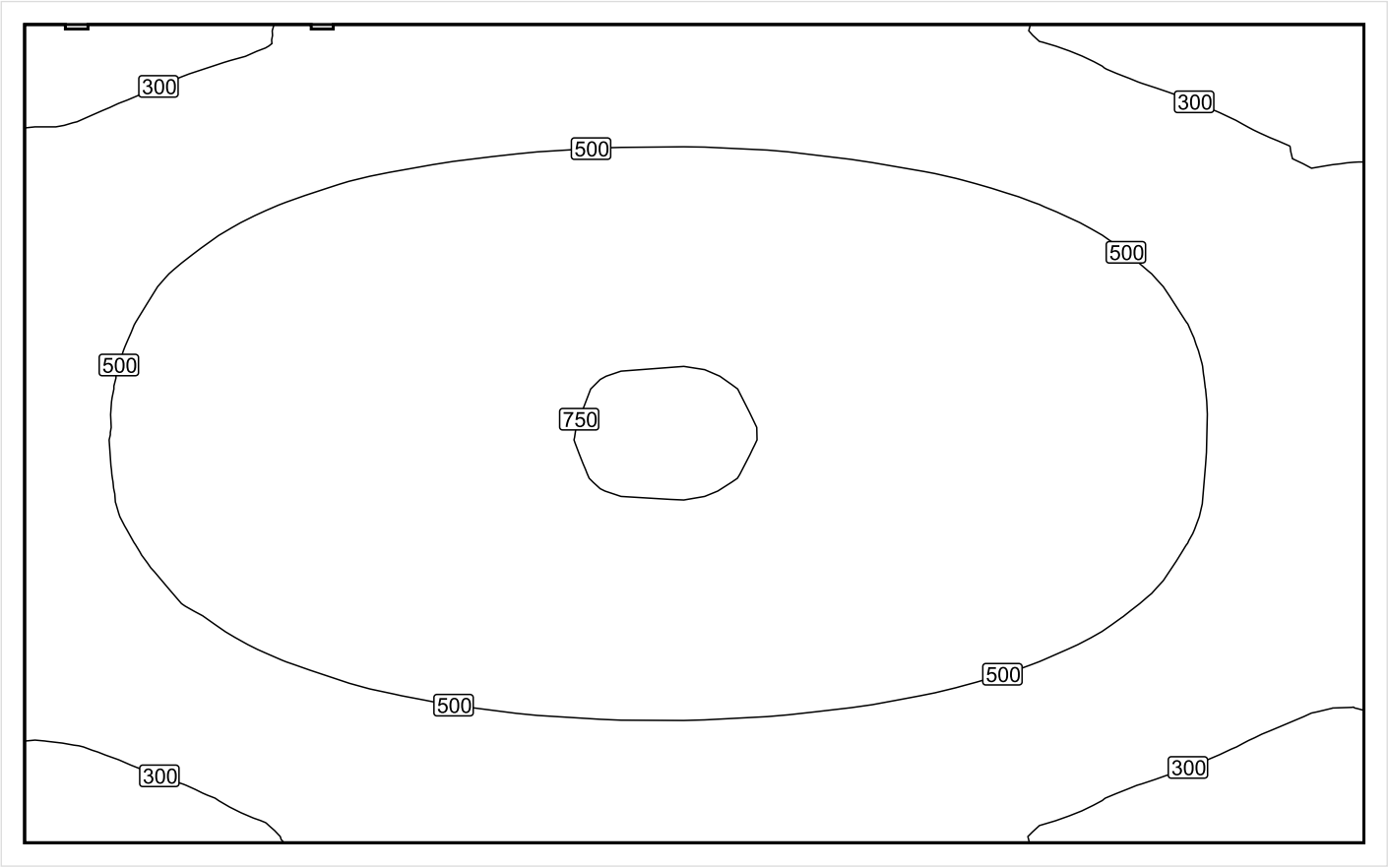
Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 16.00 W/m² = 3.20 W/m²/100 lx (Ground area 12.38 m²)

Consumption: 350 - 550 kWh/a of maximum 450 kWh/a



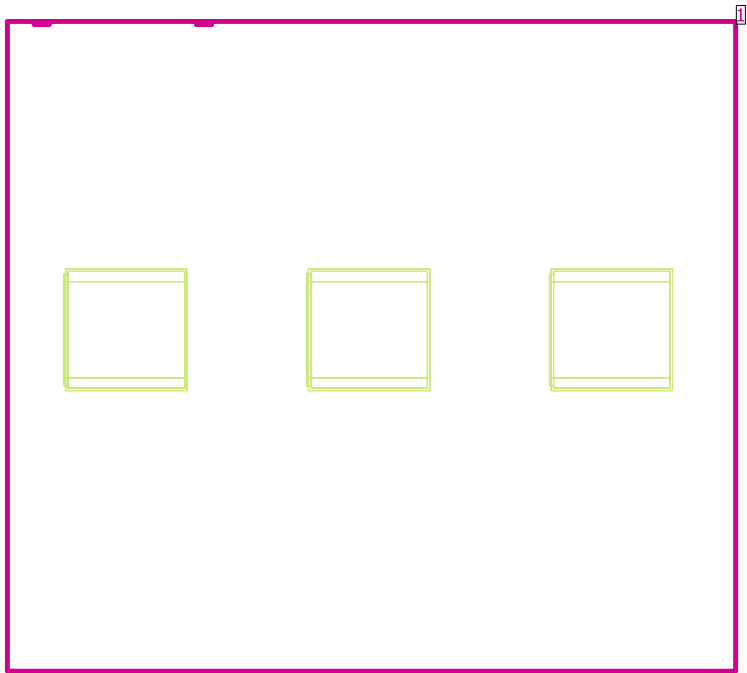
Diretoria da Tesouraria



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 501 lx, Min: 215 lx, Max: 759 lx, Min/average: 0.43, Min/max: 0.28  
Height of working plane: 0.800 m, Wall zone: 0.000 m

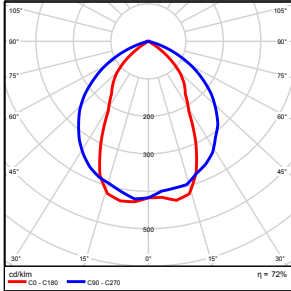

SIM. AM.



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 SIM. AM.	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	488 (500)	183	772	0.38	0.24

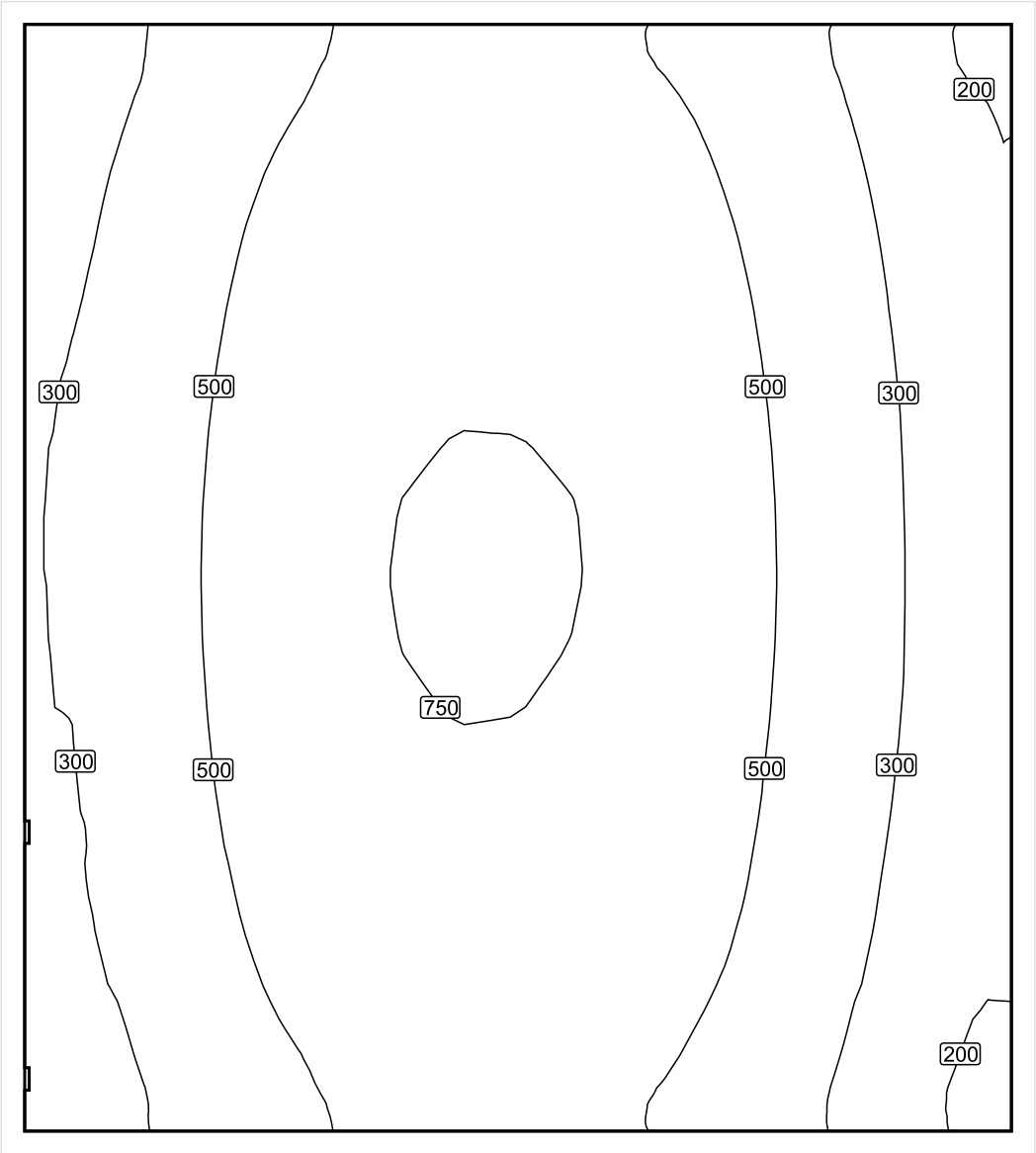
No.	Quantity		
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 16.22 W/m² = 3.32 W/m²/100 lx (Ground area 12.21 m²)

Consumption: 350 - 550 kWh/a of maximum 450 kWh/a

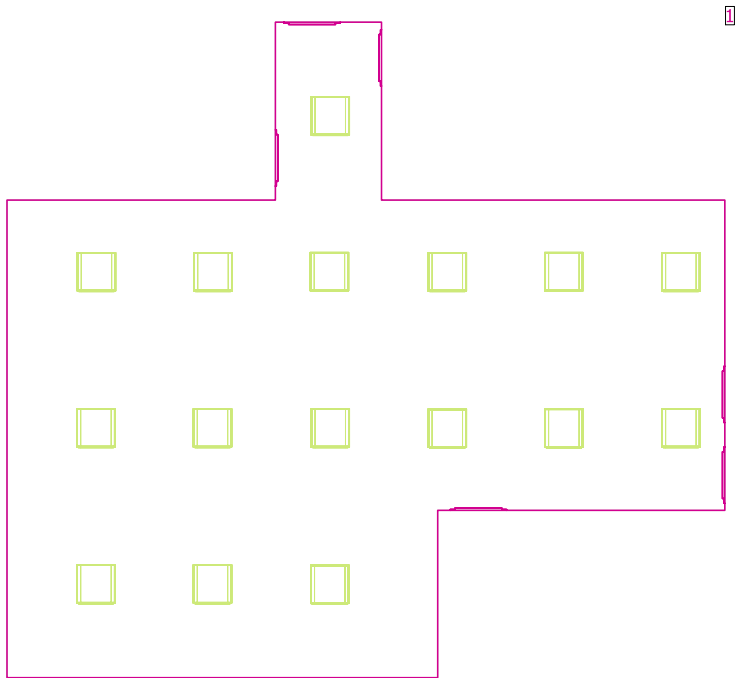
SIM. AM.



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 488 lx, Min: 183 lx, Max: 772 lx, Min/average: 0.38, Min/max: 0.24  
Height of working plane: 0.800 m, Wall zone: 0.000 m

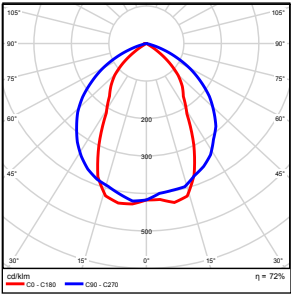

Contabilidade, Receita



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Contabilidade, Receita	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	506 (500)	105	661	0.21	0.16

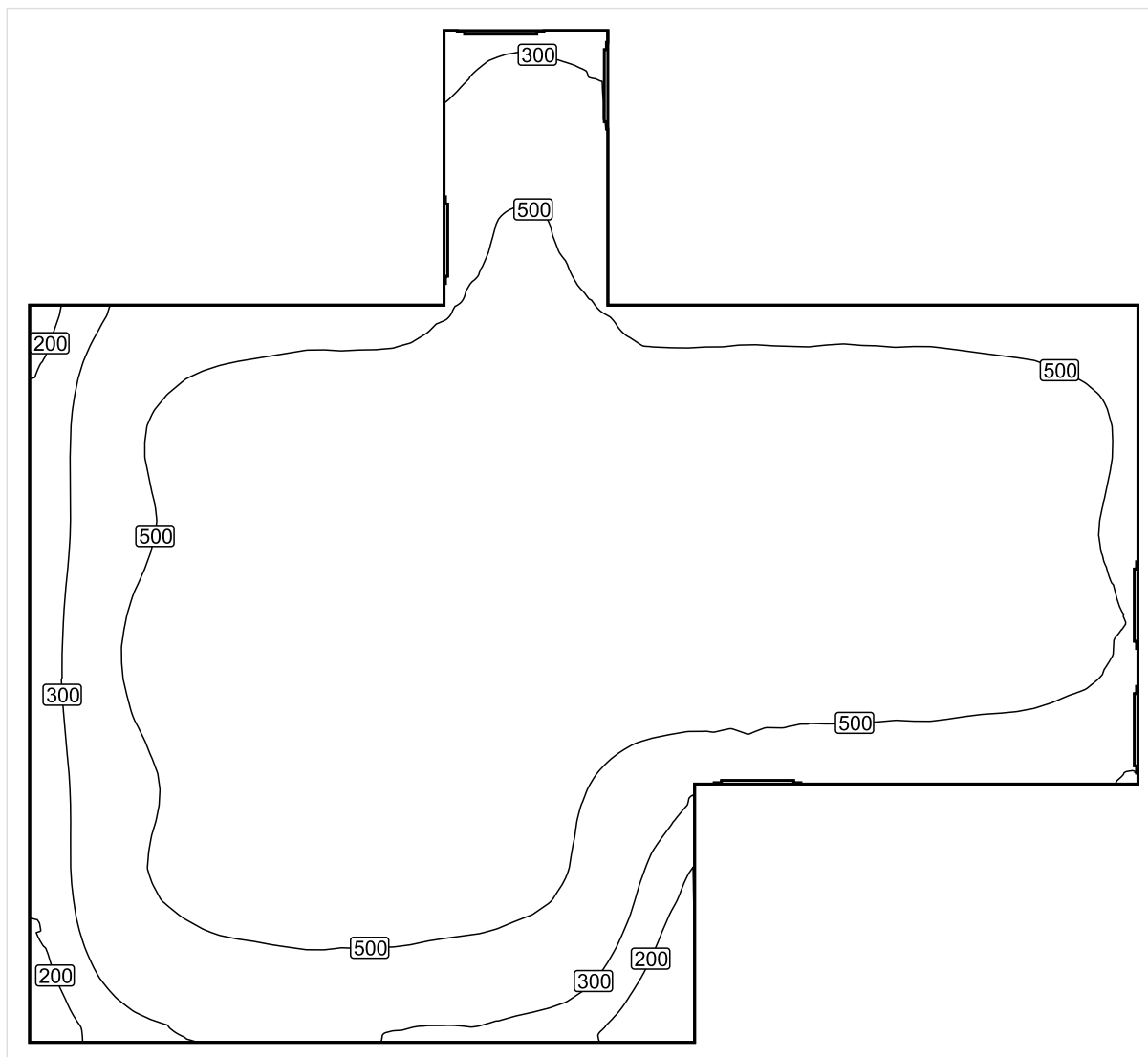
No.	Quantity		
1	16	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 76800 lm, Total luminaire luminous flux: 55600 lm, Total Load: 1056.0 W, Light yield: 52.7 lm/W

Lighting power density: 13.12 W/m² = 2.59 W/m²/100 lx (Ground area 80.49 m²)

Consumption: 1850 - 2900 kWh/a of maximum 2850 kWh/a

## Contabilidade, Receita



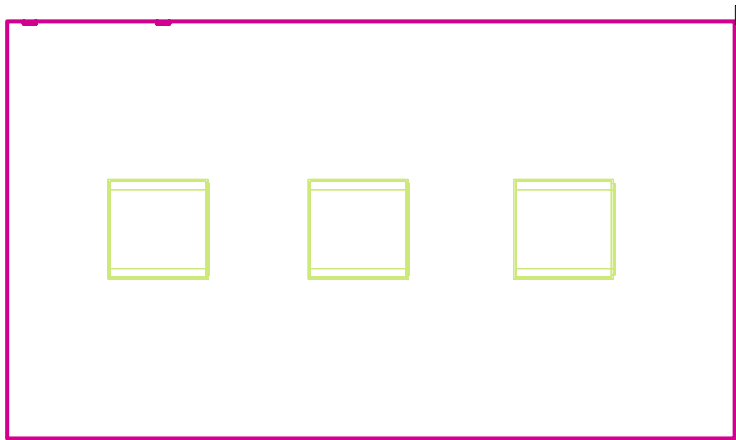
Scale: 1 : 75

Perpendicular illuminance (Surface)

Mean (actual): 506 lx, Min: 105 lx, Max: 661 lx, Min/average: 0.21, Min/max: 0.16

Height of working plane: 0.800 m, Wall zone: 0.000 m

Superintendente Contab.



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Superintendente Contab.	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	512 (500)	222	754	0.43	0.29

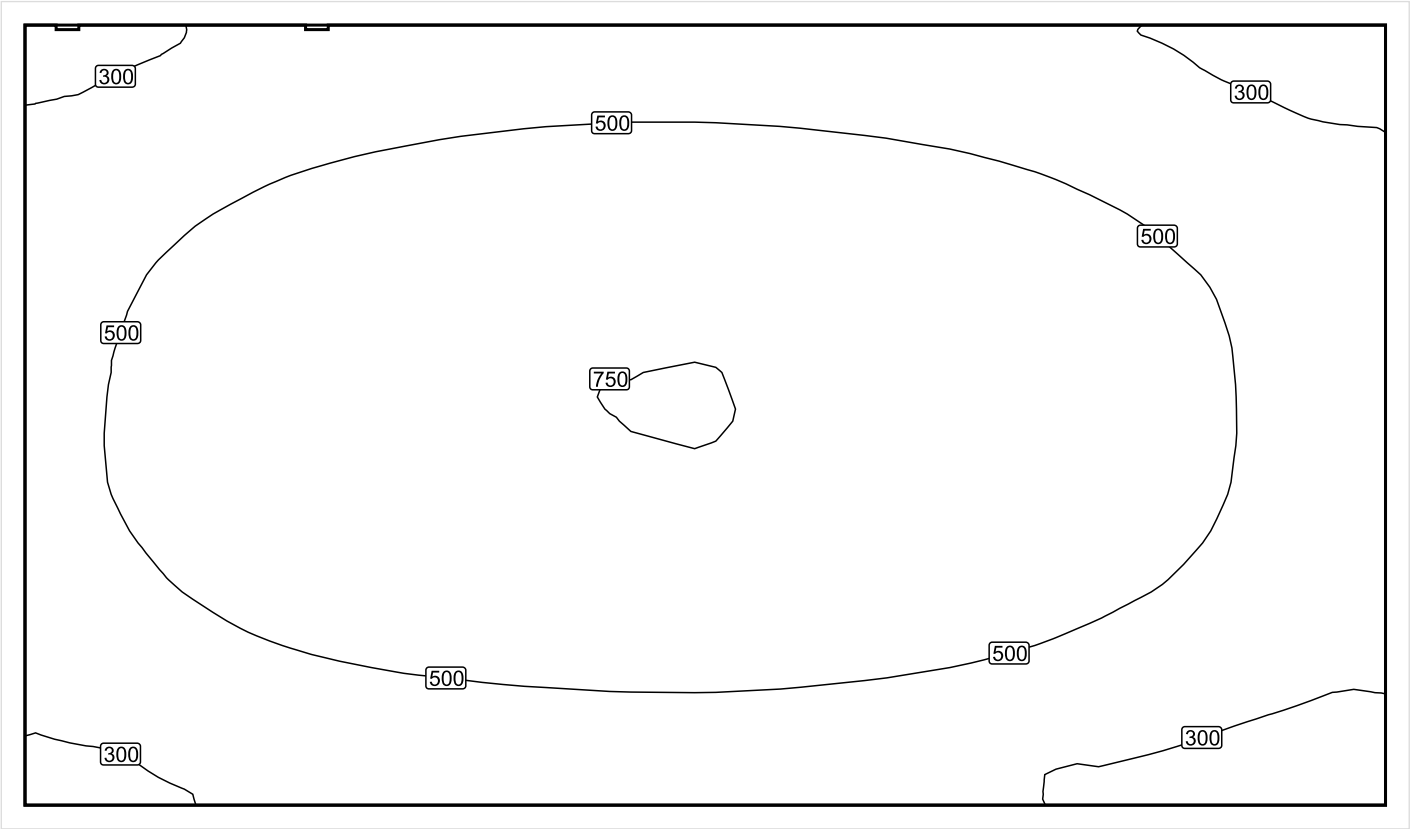
No.	Quantity			
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79		

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 17.05 W/m² = 3.33 W/m²/100 lx (Ground area 11.61 m²)

Consumption: 350 - 550 kWh/a of maximum 450 kWh/a

Superintendente Contab.



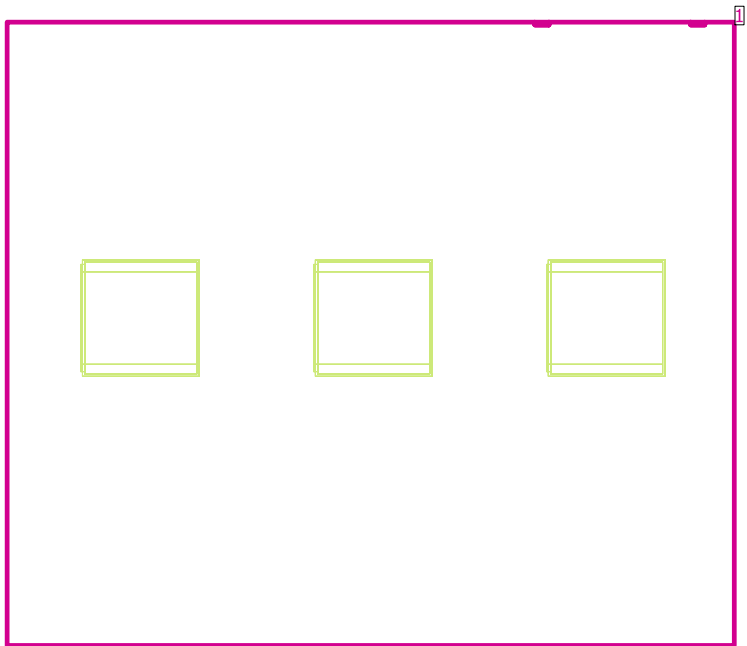
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 512 lx, Min: 222 lx, Max: 754 lx, Min/average: 0.43, Min/max: 0.29

Height of working plane: 0.800 m, Wall zone: 0.000 m

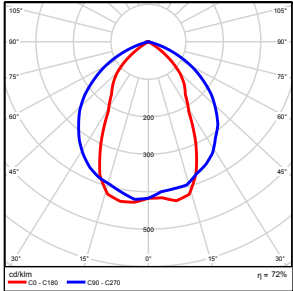

Empenho



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Empenho	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	483 (500)	182	770	0.38	0.24

No.	Quantity		
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

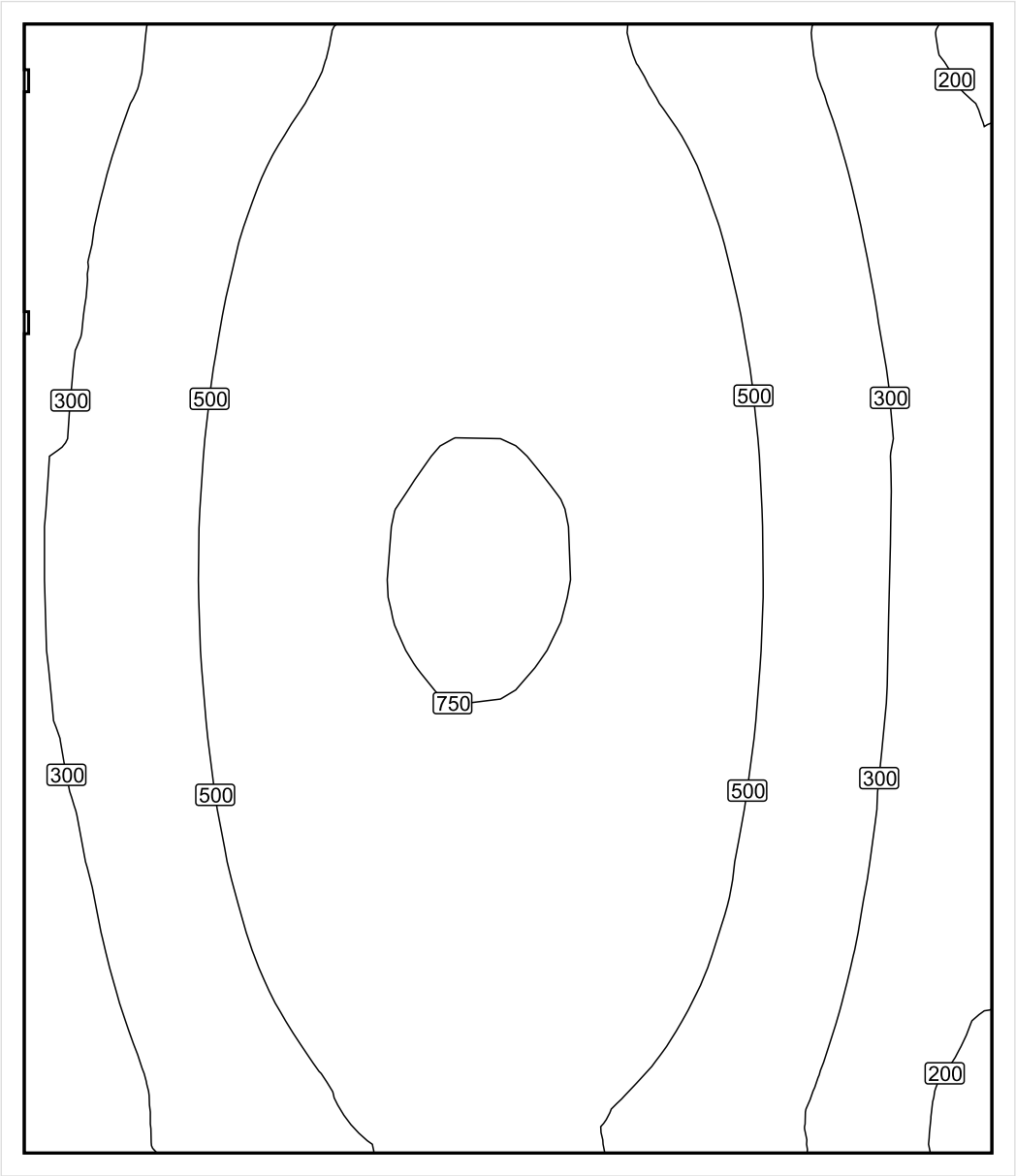
Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 15.58 W/m² = 3.23 W/m²/100 lx (Ground area 12.70 m²)

Consumption: 350 - 550 kWh/a of maximum 450 kWh/a



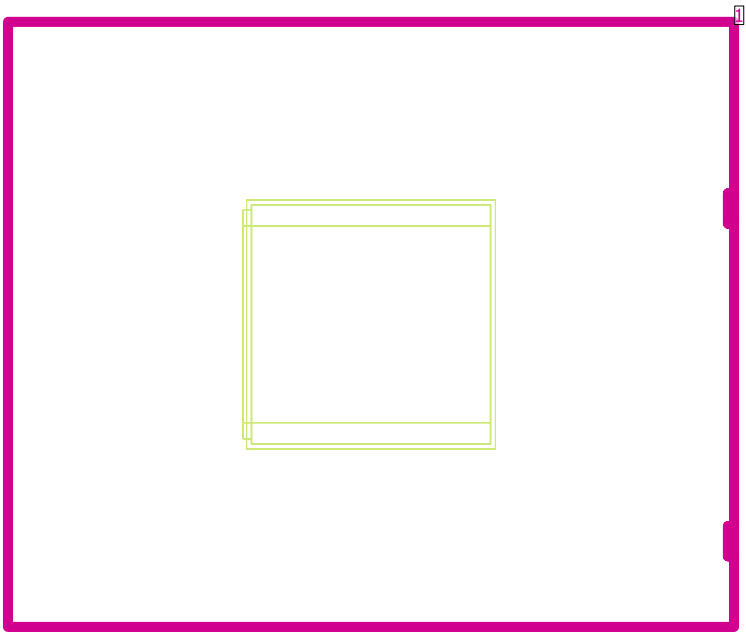
Empenho



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 483 lx, Min: 182 lx, Max: 770 lx, Min/average: 0.38, Min/max: 0.24  
Height of working plane: 0.800 m, Wall zone: 0.000 m

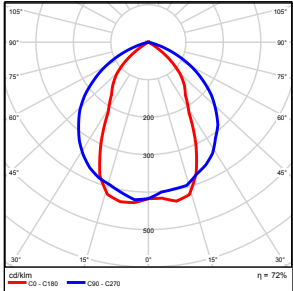

DML



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 DML	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	390 (500)	308	445	0.79	0.69

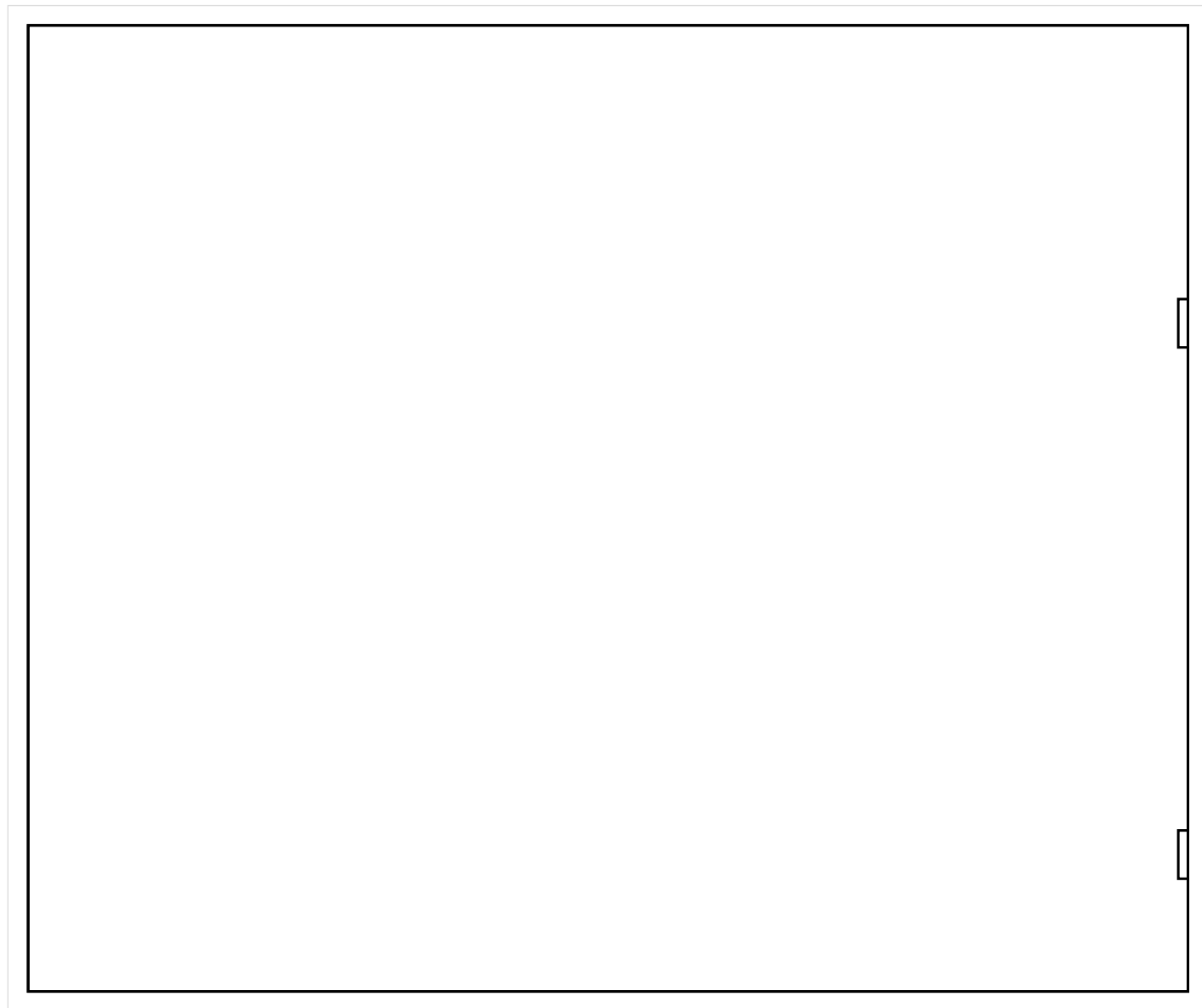
No.	Quantity		
1	1	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 4800 lm, Total luminaire luminous flux: 3475 lm, Total Load: 66.0 W, Light yield: 52.7 lm/W

Lighting power density: 24.44 W/m² = 6.26 W/m²/100 lx (Ground area 2.70 m²)

Consumption: 100 - 200 kWh/a of maximum 100 kWh/a

## DML



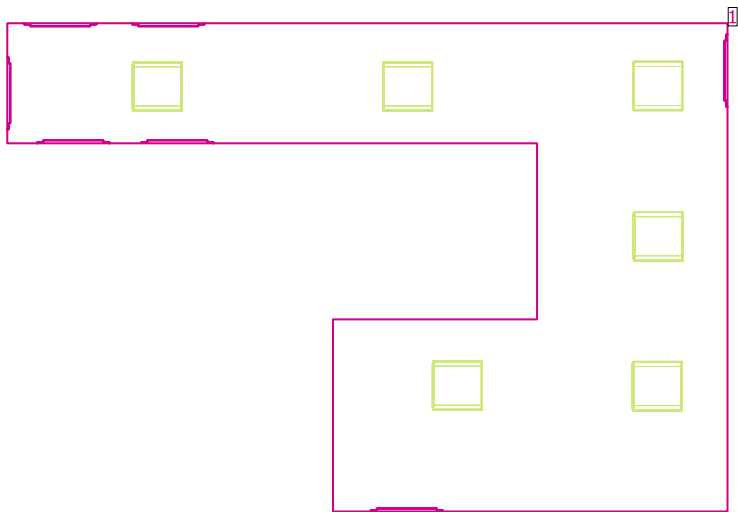
Scale: 1 : 10

Perpendicular illuminance (Surface)

Mean (actual): 390 lx, Min: 308 lx, Max: 445 lx, Min/average: 0.79, Min/max: 0.69

Height of working plane: 0.800 m, Wall zone: 0.000 m

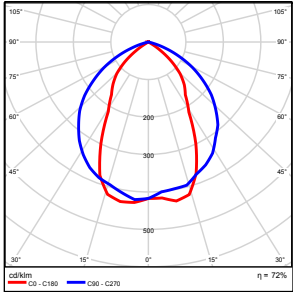

Circulação



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Circulação	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	387 (500)	109	537	0.28	0.20

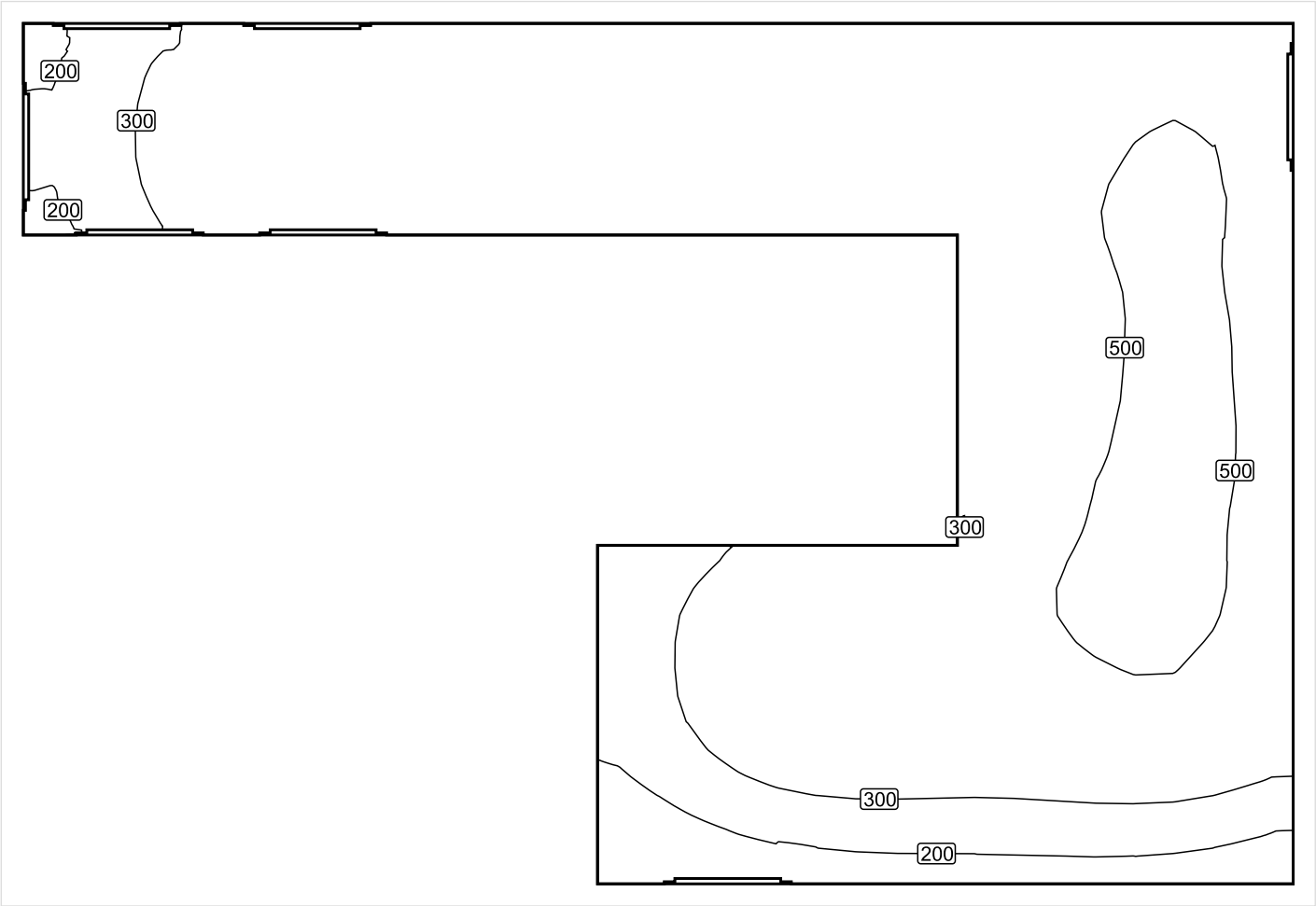
No.	Quantity		
1	6	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 28800 lm, Total luminaire luminous flux: 20850 lm, Total Load: 396.0 W, Light yield: 52.7 lm/W

Lighting power density: 12.95 W/m² = 3.35 W/m²/100 lx (Ground area 30.57 m²)

Consumption: 1100 kWh/a of maximum 1100 kWh/a

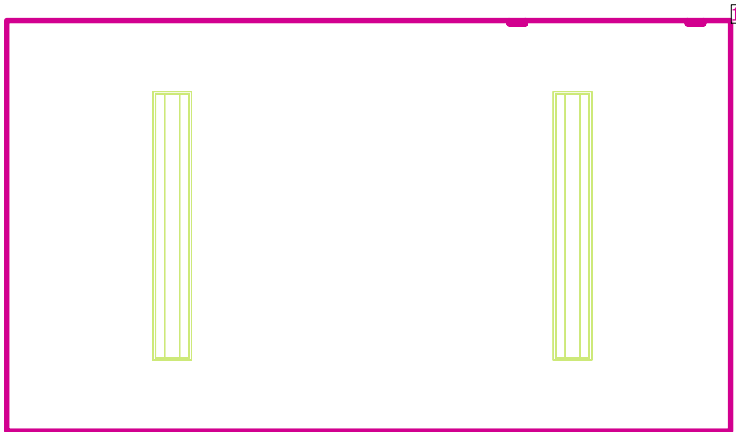
Circulação



Scale: 1 : 50

Perpendicular illuminance (Surface)  
Mean (actual): 387 lx, Min: 109 lx, Max: 537 lx, Min/average: 0.28, Min/max: 0.20  
Height of working plane: 0.800 m, Wall zone: 0.000 m

Copa



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

	Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1	Copa	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	248 (500)	171	317	0.69	0.54

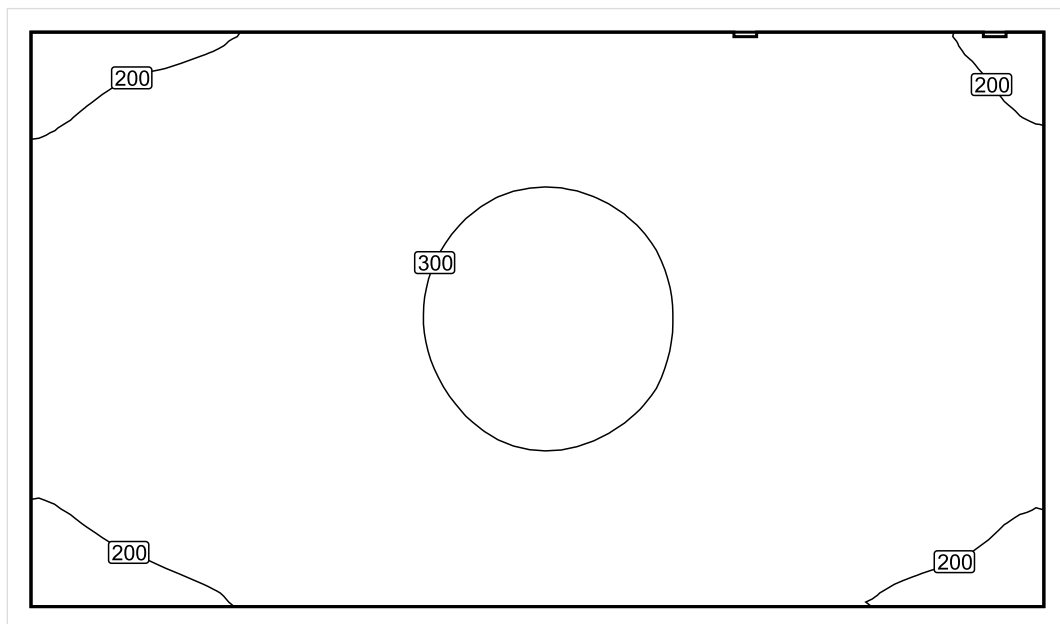
No.	Quantity			
1	2	Lumicenter Lighting CAA01-E132 Light output ratio: 72.25% Lamp luminous flux: 2700 lm Luminaire luminous flux: 1951 lm Power: 36.0 W Light yield: 54.2 lm/W Colour temperature: 3000 K Colour rendering index: 79		

Total lamp luminous flux: 5400 lm, Total luminaire luminous flux: 3902 lm, Total Load: 72.0 W, Light yield: 54.2 lm/W

Lighting power density: 11.31 W/m² = 4.56 W/m²/100 lx (Ground area 6.37 m²)

Consumption: 100 - 200 kWh/a of maximum 250 kWh/a

## Copa



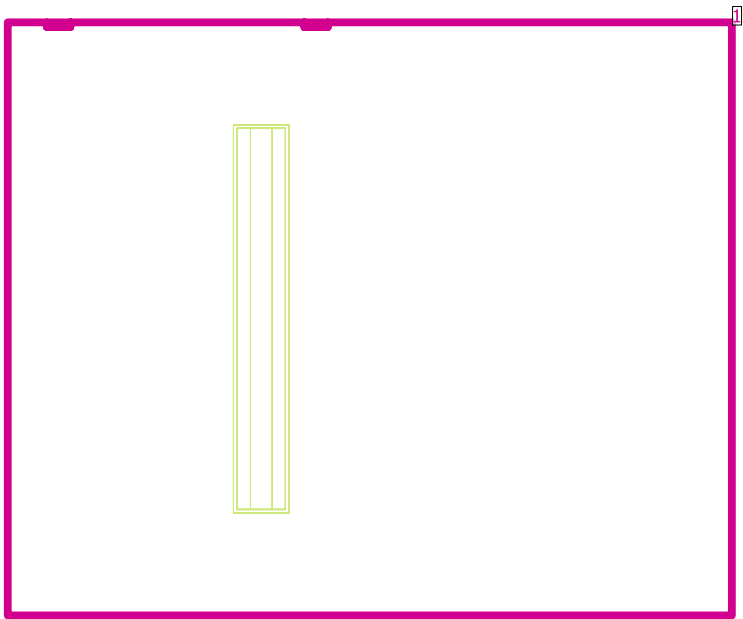
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 248 lx, Min: 171 lx, Max: 317 lx, Min/average: 0.69, Min/max: 0.54

Height of working plane: 0.800 m, Wall zone: 0.000 m

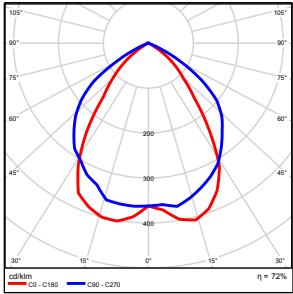

BWC Def. Físico



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Def. Físico	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	171 (500)	90.0	212	0.53	0.42

No.	Quantity		
1	1	<div>Lumicenter Lighting CAA01-E132 Light output ratio: 72.25% Lamp luminous flux: 2700 lm Luminaire luminous flux: 1951 lm Power: 36.0 W Light yield: 54.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

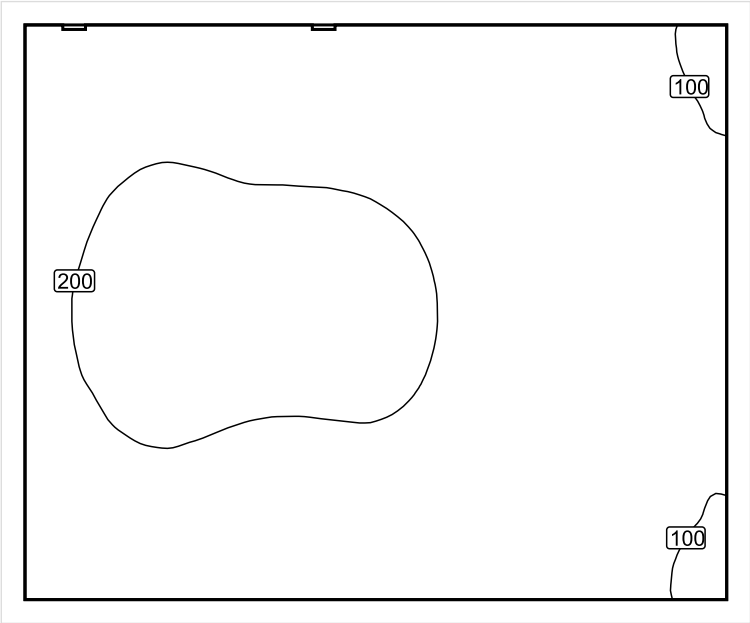
Total lamp luminous flux: 2700 lm, Total luminaire luminous flux: 1951 lm, Total Load: 36.0 W, Light yield: 54.2 lm/W

Lighting power density: 8.17 W/m² = 4.78 W/m²/100 lx (Ground area 4.41 m²)

Consumption: 100 kWh/a of maximum 200 kWh/a



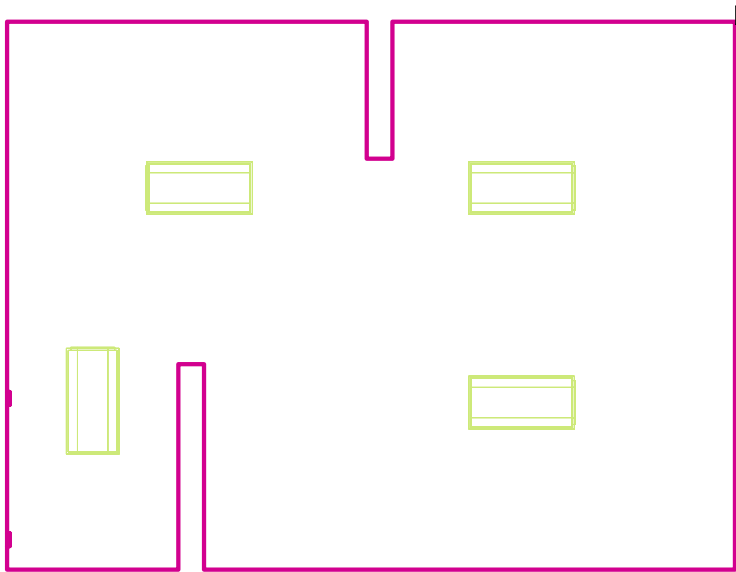
BWC Def. Físico



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 171 lx, Min: 90.0 lx, Max: 212 lx, Min/average: 0.53, Min/max: 0.42  
Height of working plane: 0.800 m, Wall zone: 0.000 m

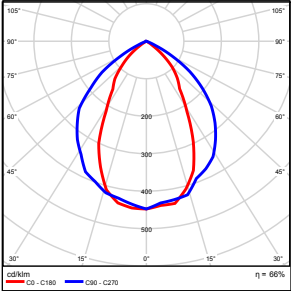

BWC Masculino



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Masculino	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	257 (500)	86.2	394	0.34	0.22

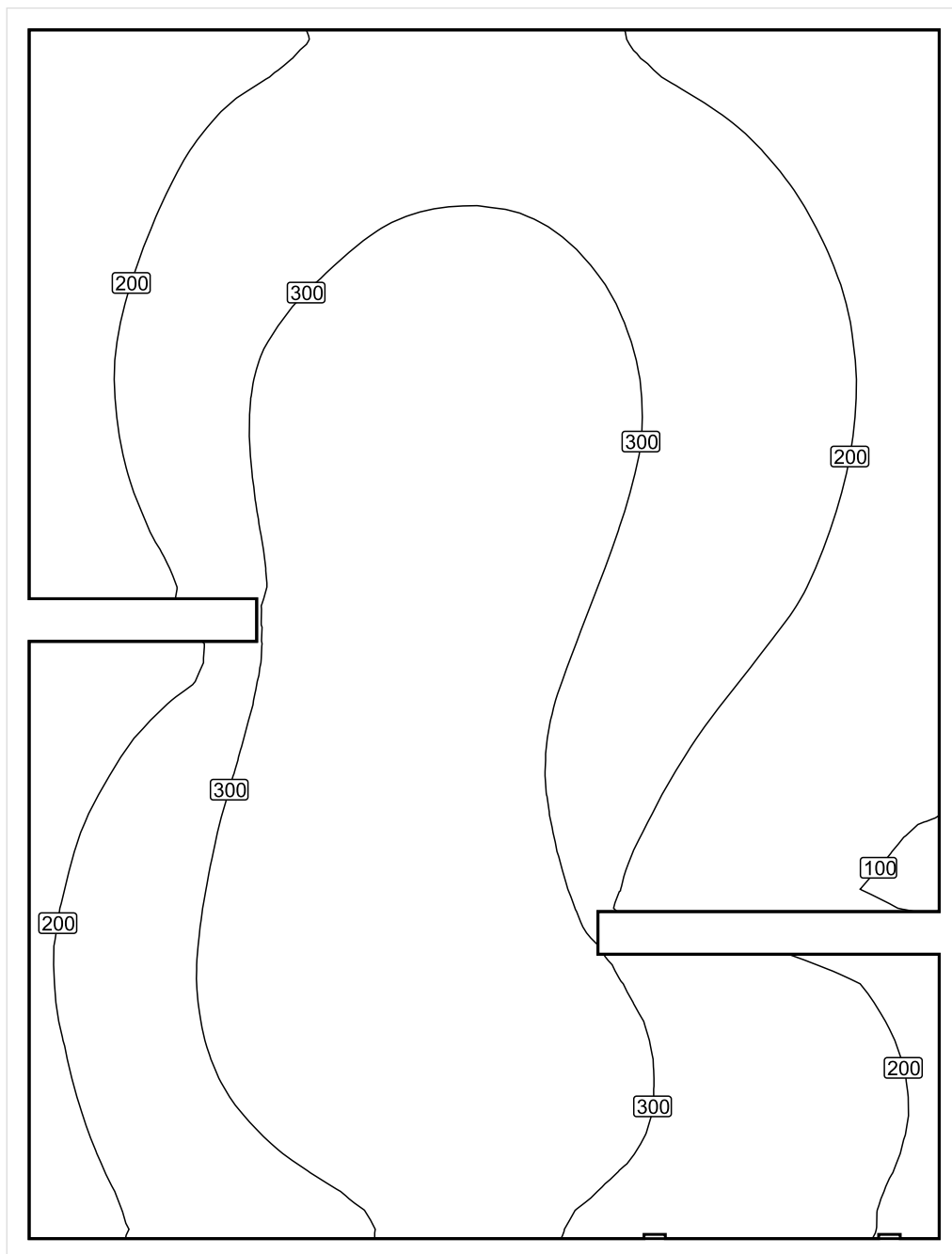
No.	Quantity		
1	4	<div>Lumicenter Lighting 25 CAA01-E216 Light output ratio: 66.27% Lamp luminous flux: 2400 lm Luminaire luminous flux: 1590 lm Power: 33.0 W Light yield: 48.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6360 lm, Total Load: 132.0 W, Light yield: 48.2 lm/W

Lighting power density: 9.92 W/m² = 3.87 W/m²/100 lx (Ground area 13.30 m²)

Consumption: 250 - 350 kWh/a of maximum 500 kWh/a

## BWC Masculino



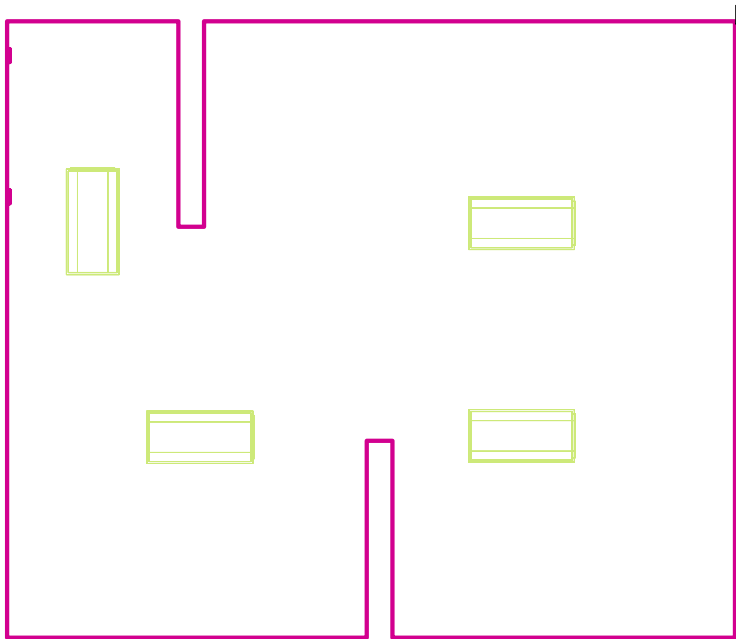
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 257 lx, Min: 86.2 lx, Max: 394 lx, Min/average: 0.34, Min/max: 0.22

Height of working plane: 0.800 m, Wall zone: 0.000 m

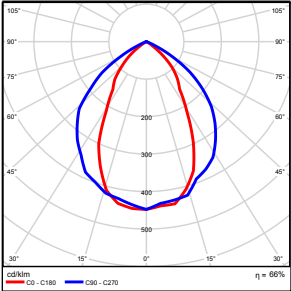

BWC Feminino



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Feminino	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	237 (500)	70.9	387	0.30	0.18

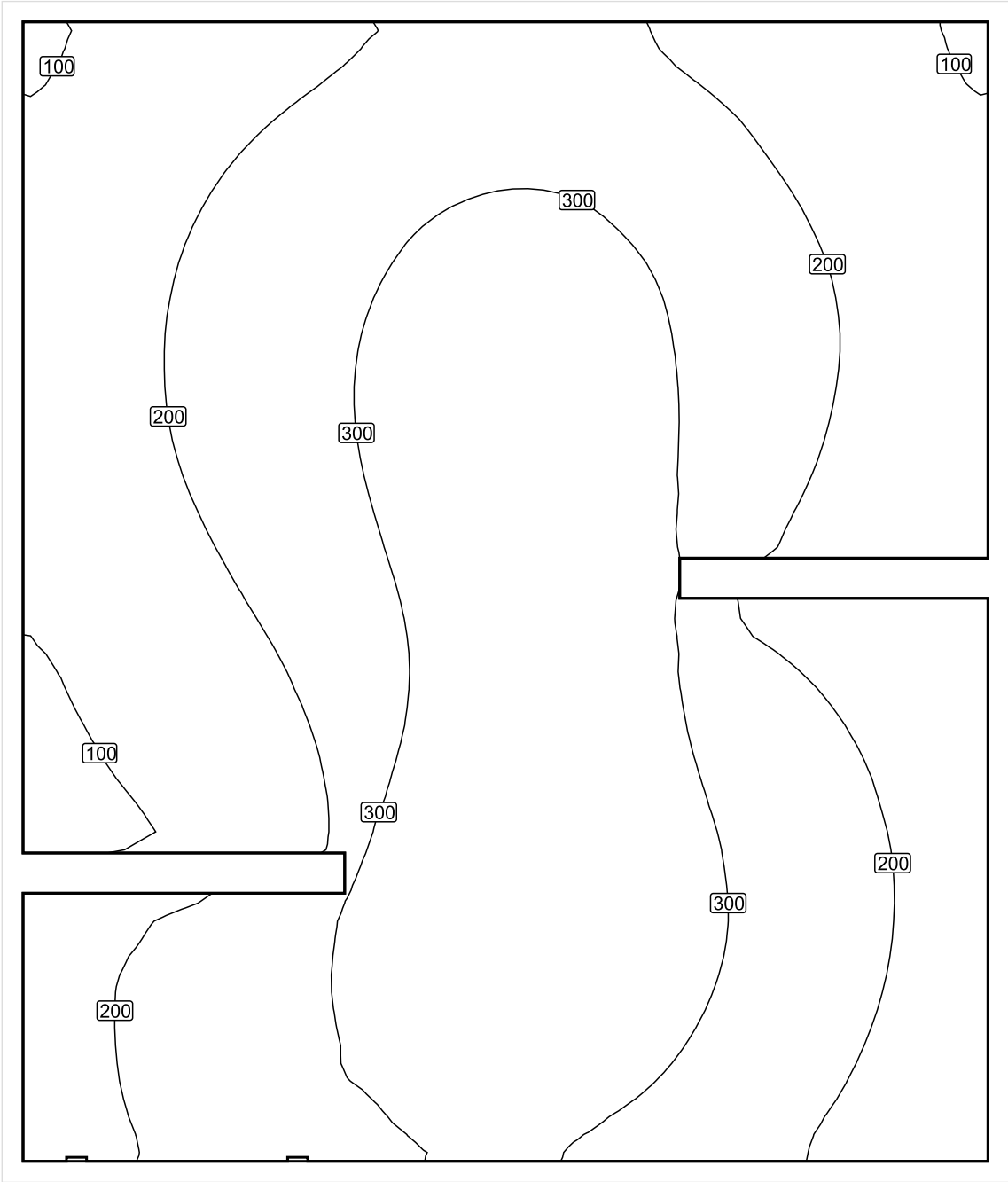
No.	Quantity		
1	4	<div>Lumicenter Lighting 25 CAA01-E216 Light output ratio: 66.27% Lamp luminous flux: 2400 lm Luminaire luminous flux: 1590 lm Power: 33.0 W Light yield: 48.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6360 lm, Total Load: 132.0 W, Light yield: 48.2 lm/W

Lighting power density: 8.83 W/m² = 3.72 W/m²/100 lx (Ground area 14.95 m²)

Consumption: 350 kWh/a of maximum 550 kWh/a

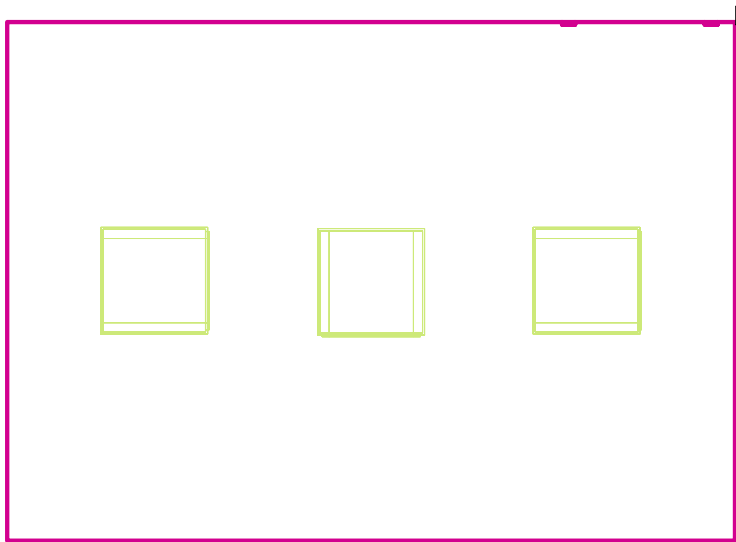
BWC Feminino



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 237 lx, Min: 70.9 lx, Max: 387 lx, Min/average: 0.30, Min/max: 0.18  
Height of working plane: 0.800 m, Wall zone: 0.000 m

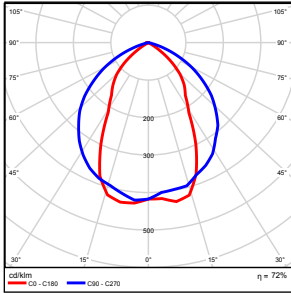

Diretor Projetos



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Diretor Projetos	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	474 (500)	170	755	0.36	0.23

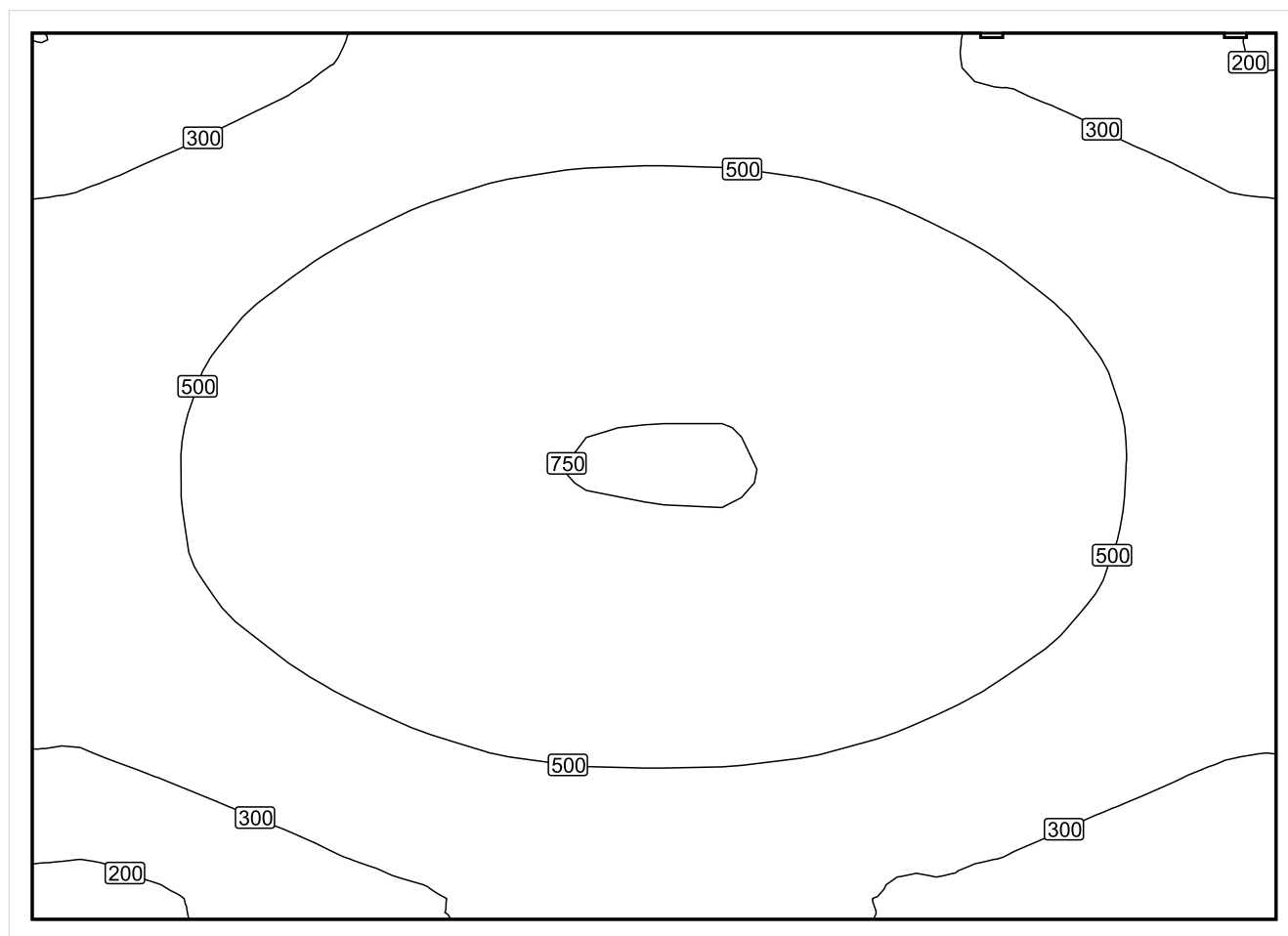
No.	Quantity		
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 15.68 W/m² = 3.31 W/m²/100 lx (Ground area 12.63 m²)

Consumption: 350 - 550 kWh/a of maximum 450 kWh/a

## Diretor Projetos



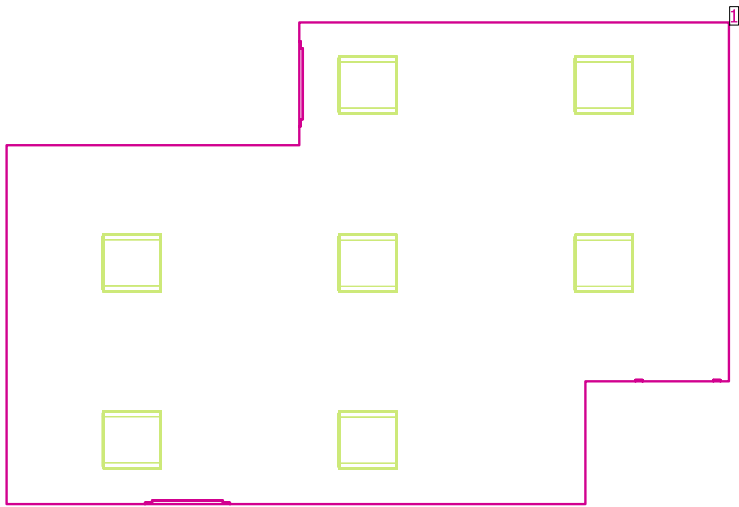
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 474 lx, Min: 170 lx, Max: 755 lx, Min/average: 0.36, Min/max: 0.23

Height of working plane: 0.800 m, Wall zone: 0.000 m

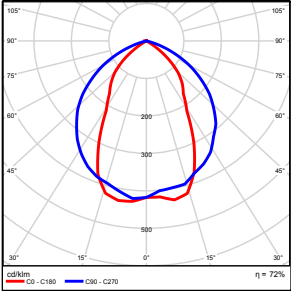

Projetos



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Projetos	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	479 (500)	165	630	0.34	0.26

No.	Quantity		
1	7	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

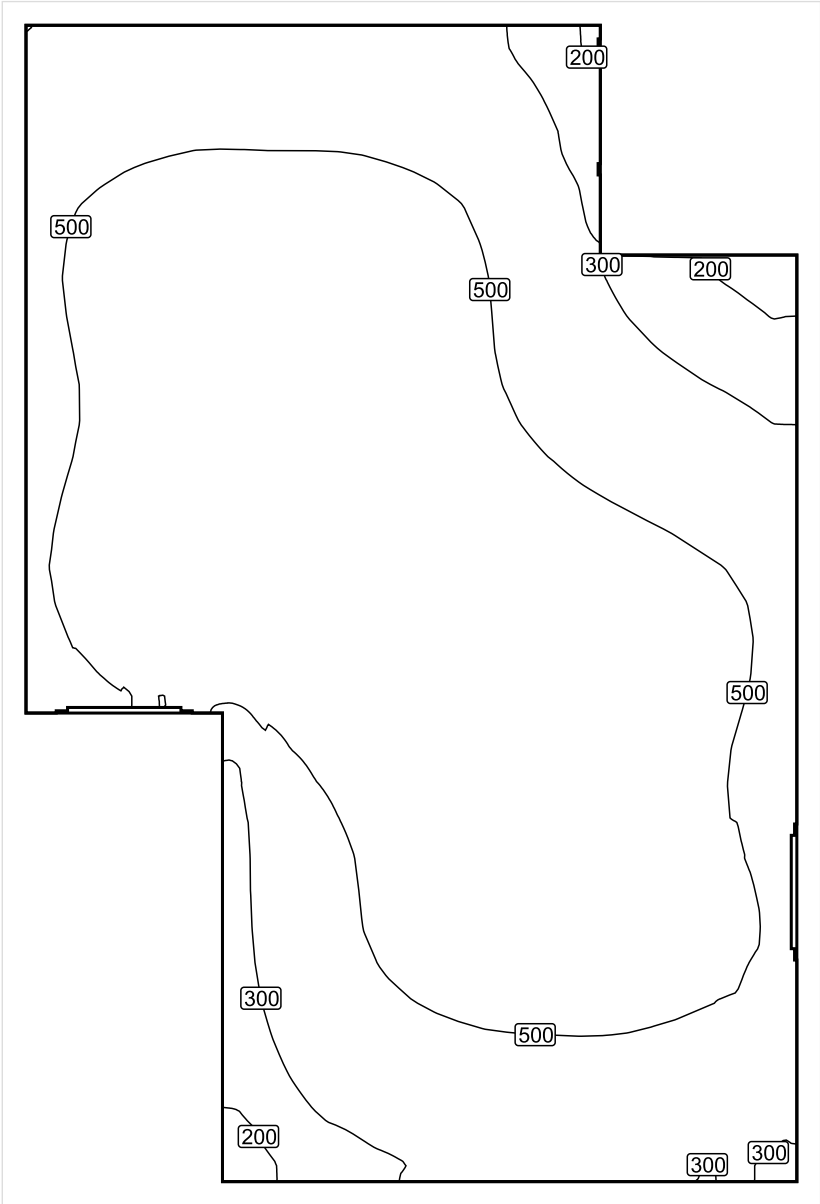
Total lamp luminous flux: 33600 lm, Total luminaire luminous flux: 24325 lm, Total Load: 462.0 W, Light yield: 52.7 lm/W

Lighting power density: 14.00 W/m² = 2.92 W/m²/100 lx (Ground area 33.01 m²)

Consumption: 800 - 1250 kWh/a of maximum 1200 kWh/a



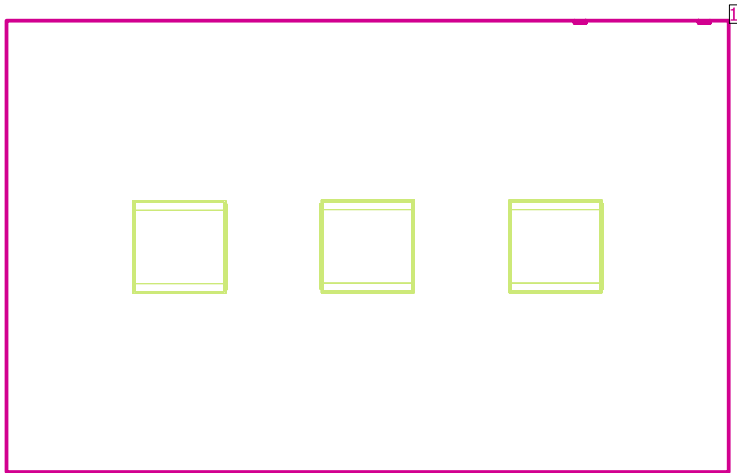
Projetos



Scale: 1 : 50

Perpendicular illuminance (Surface)  
Mean (actual): 479 lx, Min: 165 lx, Max: 630 lx, Min/average: 0.34, Min/max: 0.26  
Height of working plane: 0.800 m, Wall zone: 0.000 m

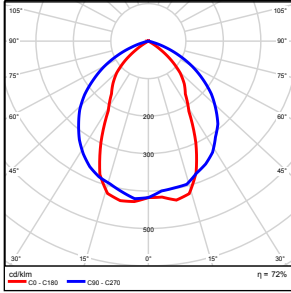

Secretário Planejamento



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Secretário Planejamento	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	453 (500)	173	742	0.38	0.23

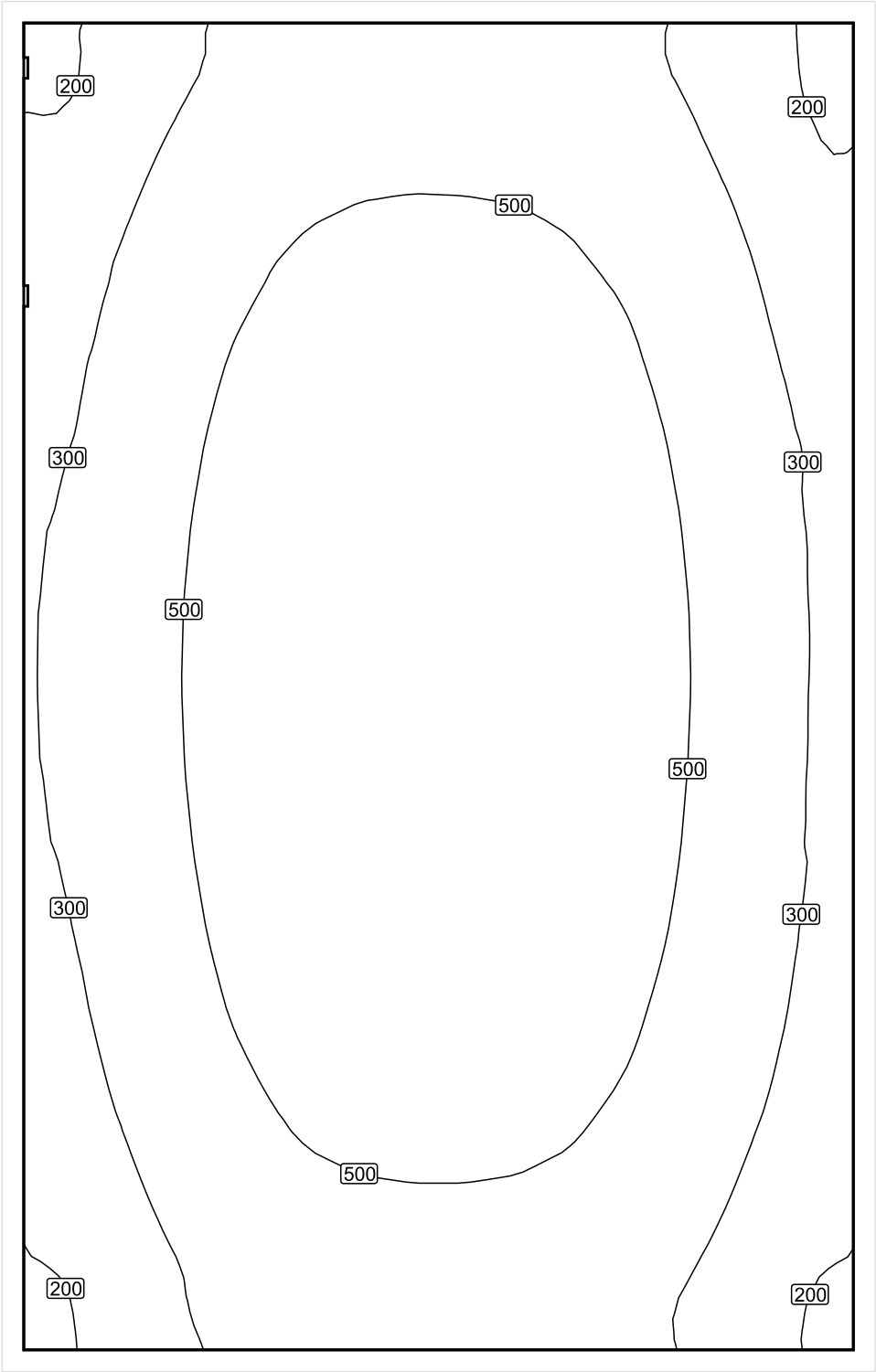
No.	Quantity		
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 13.75 W/m² = 3.04 W/m²/100 lx (Ground area 14.40 m²)

Consumption: 350 - 550 kWh/a of maximum 550 kWh/a

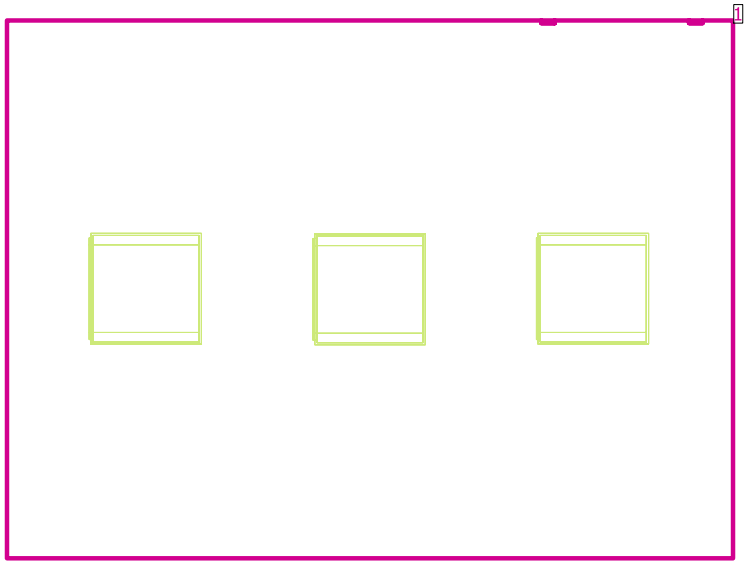
Secretário Planejamento



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 453 lx, Min: 173 lx, Max: 742 lx, Min/average: 0.38, Min/max: 0.23  
Height of working plane: 0.800 m, Wall zone: 0.000 m

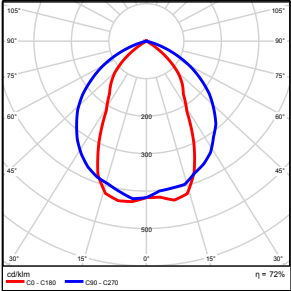

Processos de Financiamento



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Processos de Financiamento	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	503 (500)	219	766	0.44	0.29

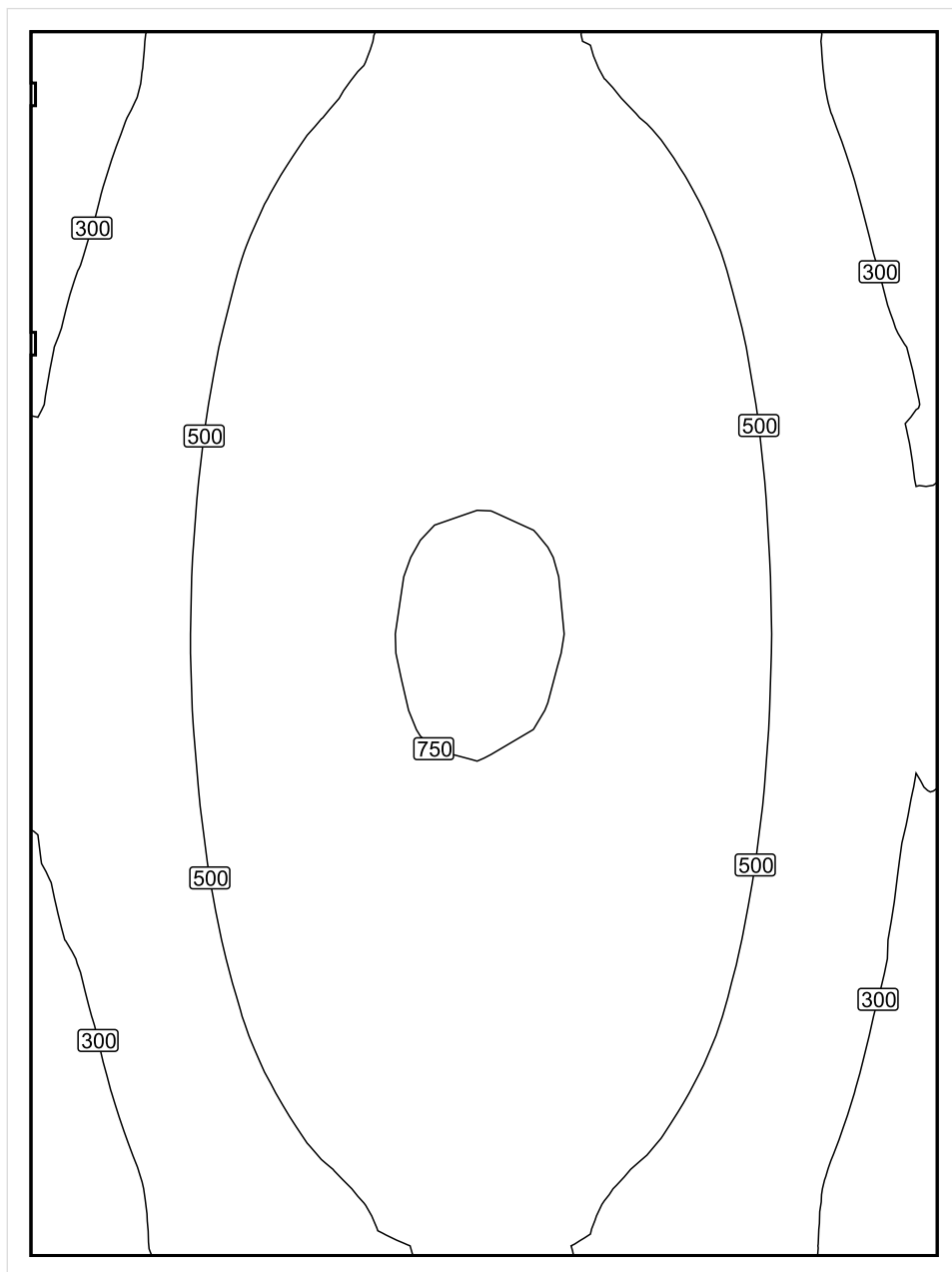
No.	Quantity		
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 16.30 W/m² = 3.24 W/m²/100 lx (Ground area 12.15 m²)

Consumption: 350 - 550 kWh/a of maximum 450 kWh/a

## Processos de Financiamento



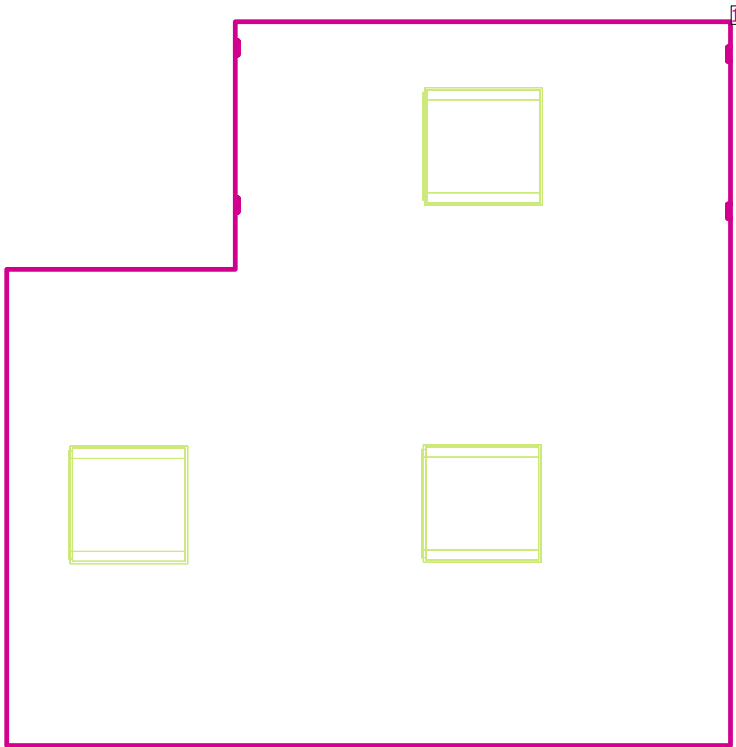
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 503 lx, Min: 219 lx, Max: 766 lx, Min/average: 0.44, Min/max: 0.29

Height of working plane: 0.800 m, Wall zone: 0.000 m

Planejamento



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Planejamento	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	448 (500)	200	597	0.45	0.34

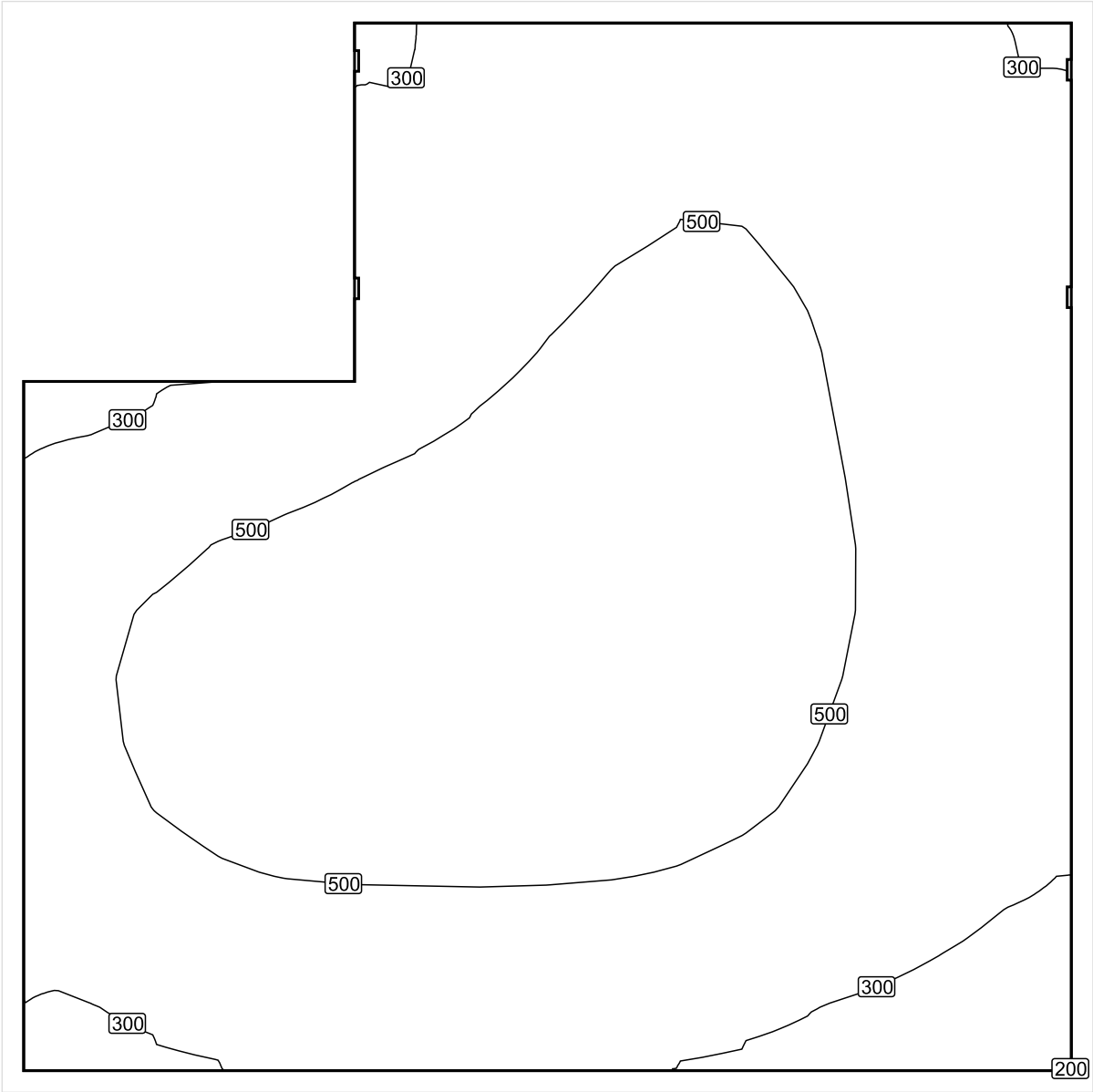
No.	Quantity			
1	3	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79		

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 15.37 W/m² = 3.43 W/m²/100 lx (Ground area 12.88 m²)

Consumption: 550 kWh/a of maximum 500 kWh/a

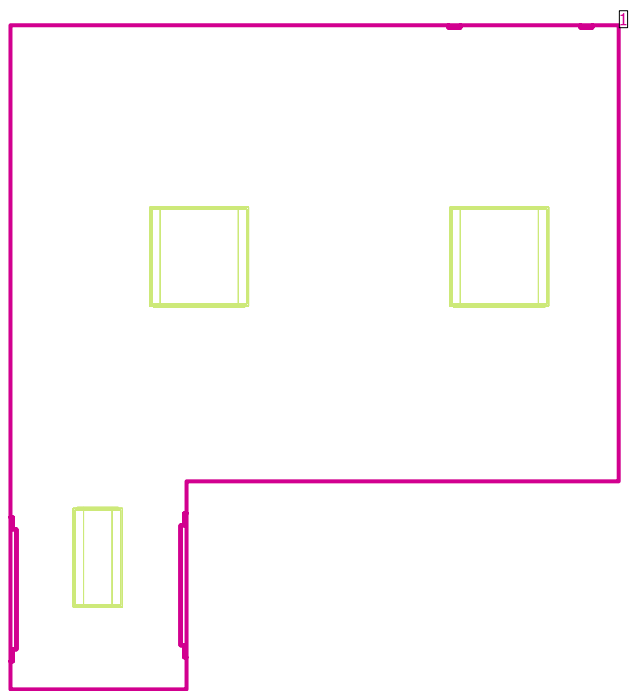
Planejamento



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 448 lx, Min: 200 lx, Max: 597 lx, Min/average: 0.45, Min/max: 0.34  
Height of working plane: 0.800 m, Wall zone: 0.000 m

Recepção CPD



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Recepção CPD	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	374 (500)	180	497	0.48	0.36

No.	Quantity			
1	2	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79		
2	1	Lumicenter Lighting 25 CAA01-E216 Light output ratio: 66.27% Lamp luminous flux: 2400 lm Luminaire luminous flux: 1590 lm Power: 33.0 W Light yield: 48.2 lm/W Colour temperature: 3000 K Colour rendering index: 79		

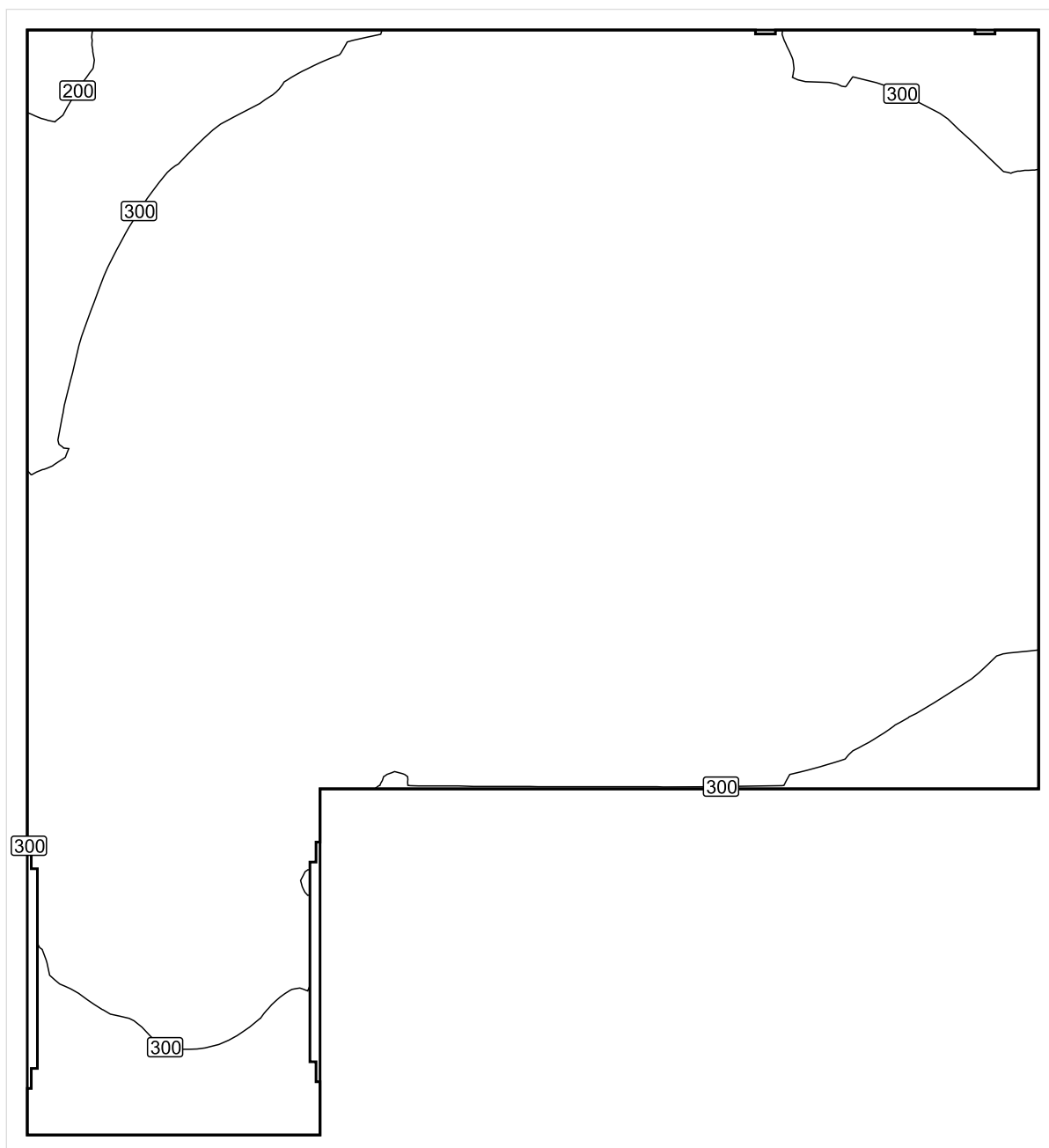


Total lamp luminous flux: 12000 lm, Total luminaire luminous flux: 8540 lm, Total Load: 165.0 W, Light yield: 51.8 lm/W

Lighting power density:  $13.46 \text{ W/m}^2 = 3.60 \text{ W/m}^2/100 \text{ lx}$  (Ground area  $12.26 \text{ m}^2$ )

Consumption: 450 kWh/a of maximum 450 kWh/a

## Recepção CPD



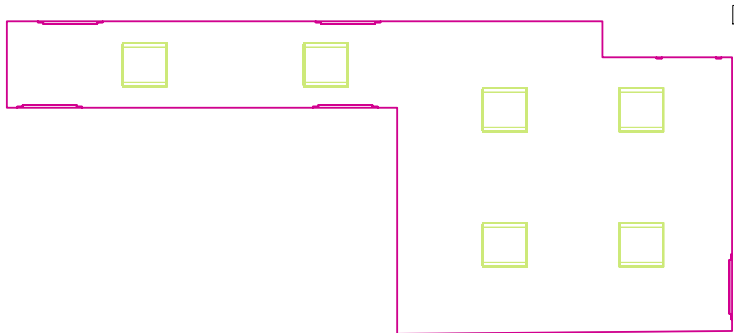
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 374 lx, Min: 180 lx, Max: 497 lx, Min/average: 0.48, Min/max: 0.36

Height of working plane: 0.800 m, Wall zone: 0.000 m

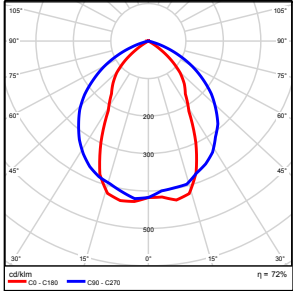

Recepção/Planejamento



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Recepção/Planejamento	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	475 (500)	181	658	0.38	0.28

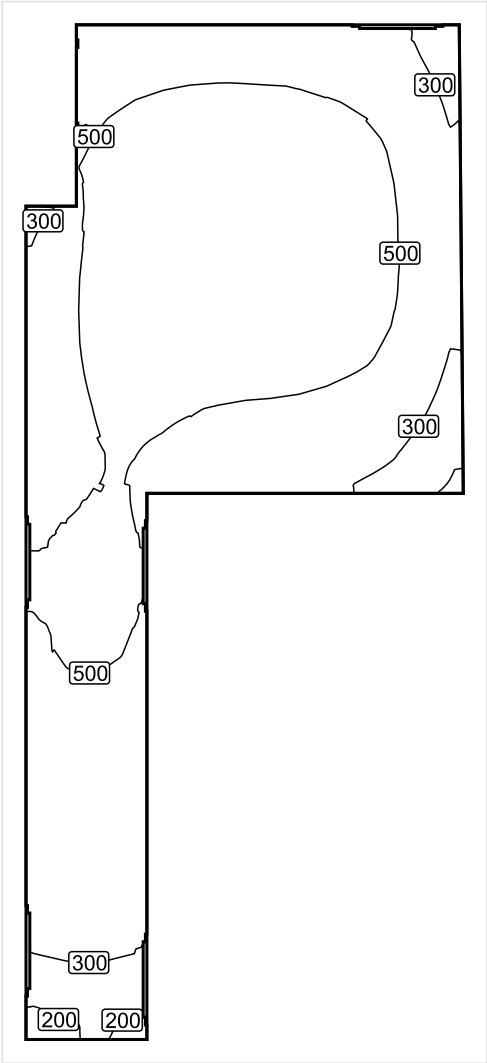
No.	Quantity		
1	6	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 28800 lm, Total luminaire luminous flux: 20850 lm, Total Load: 396.0 W, Light yield: 52.7 lm/W

Lighting power density: 15.41 W/m² = 3.25 W/m²/100 lx (Ground area 25.69 m²)

Consumption: 800 - 1100 kWh/a of maximum 950 kWh/a

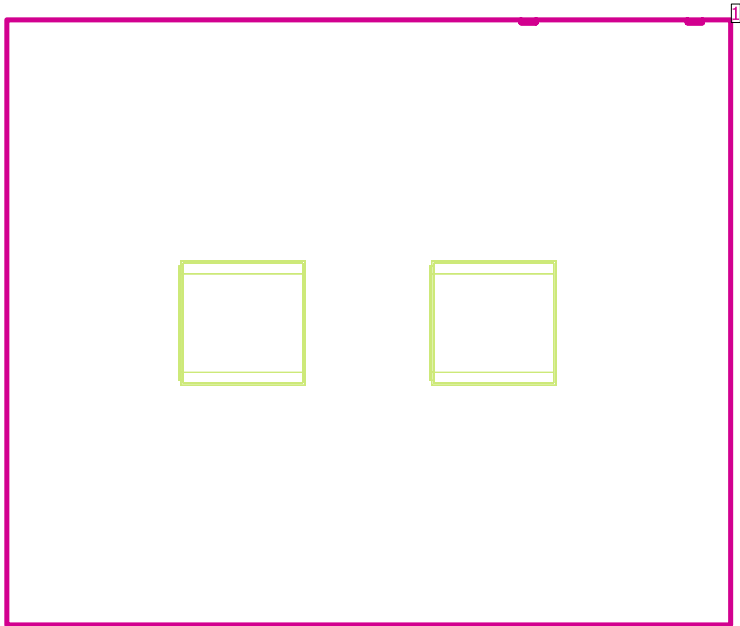
Recepção/Planejamento



Scale: 1 : 75

Perpendicular illuminance (Surface)  
Mean (actual): 475 lx, Min: 181 lx, Max: 658 lx, Min/average: 0.38, Min/max: 0.28  
Height of working plane: 0.800 m, Wall zone: 0.000 m

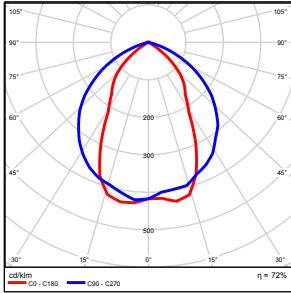

Diretoria CPD



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Diretoria CPD	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	377 (500)	152	606	0.40	0.25

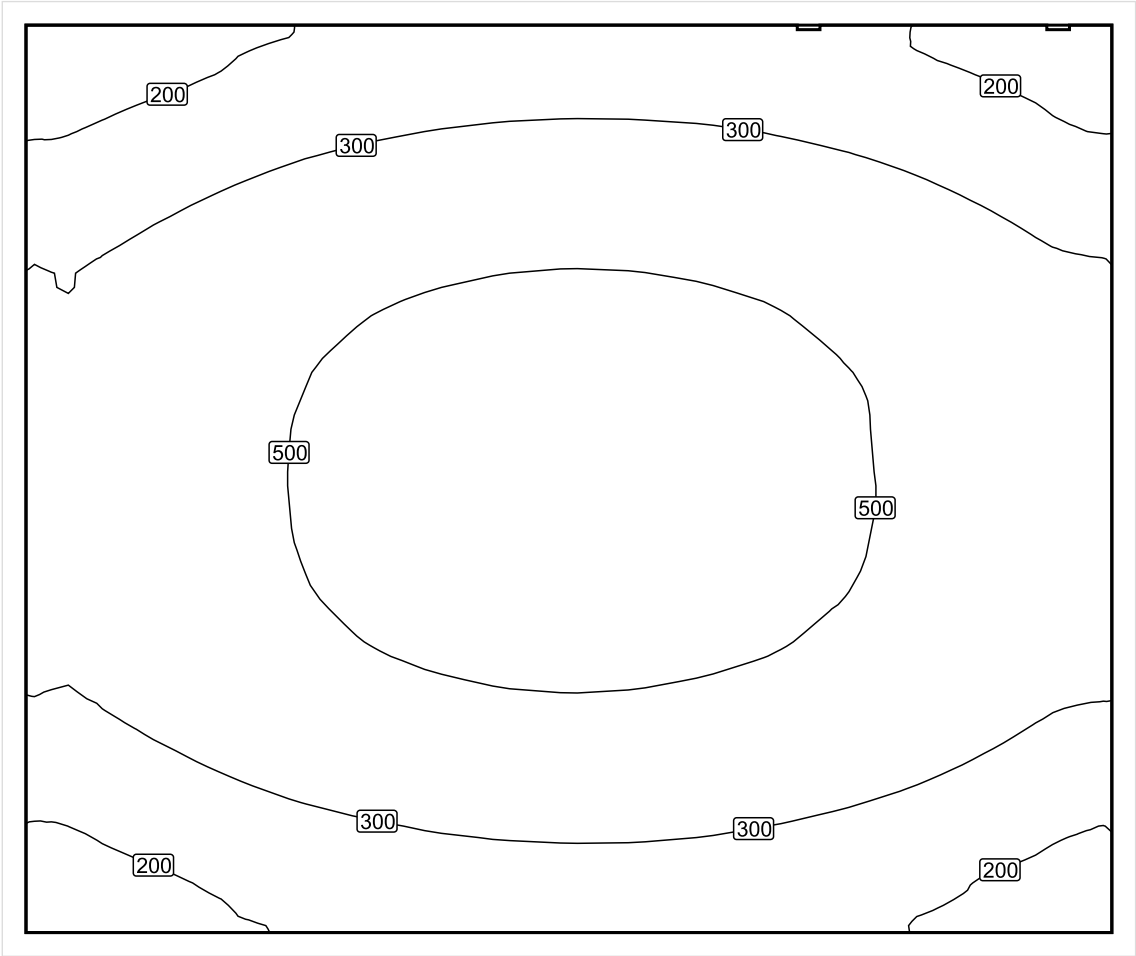
No.	Quantity		
1	2	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 9600 lm, Total luminaire luminous flux: 6950 lm, Total Load: 132.0 W, Light yield: 52.7 lm/W

Lighting power density: 12.26 W/m² = 3.25 W/m²/100 lx (Ground area 10.77 m²)

Consumption: 250 - 350 kWh/a of maximum 400 kWh/a

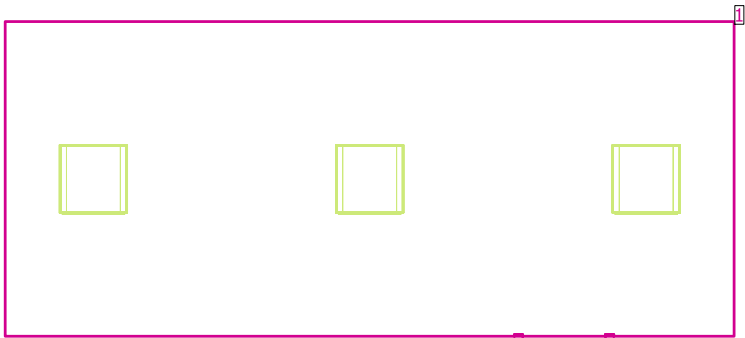
Diretoria CPD



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 377 lx, Min: 152 lx, Max: 606 lx, Min/average: 0.40, Min/max: 0.25  
Height of working plane: 0.800 m, Wall zone: 0.000 m

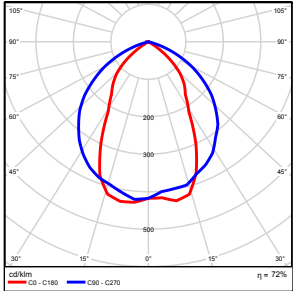

Servidor



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max	
1	Servidor	Perpendicular illuminance [lx]	317 (500)	206	427	0.65	0.48
	Height of working plane: 0.800 m, Wall zone: 0.000 m						

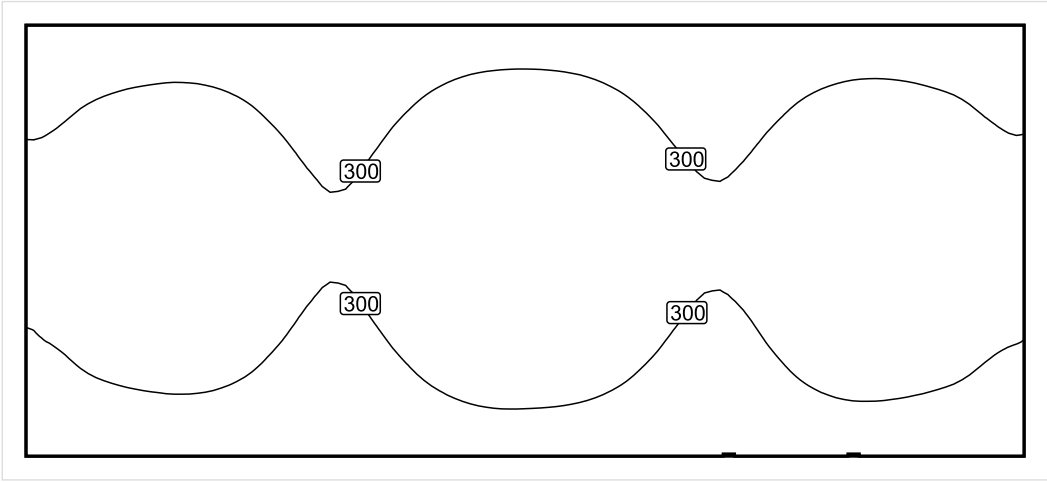
No.	Quantity		
1	3	<div>Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 14400 lm, Total luminaire luminous flux: 10425 lm, Total Load: 198.0 W, Light yield: 52.7 lm/W

Lighting power density: 10.53 W/m² = 3.32 W/m²/100 lx (Ground area 18.81 m²)

Consumption: 350 - 550 kWh/a of maximum 700 kWh/a

Servidor

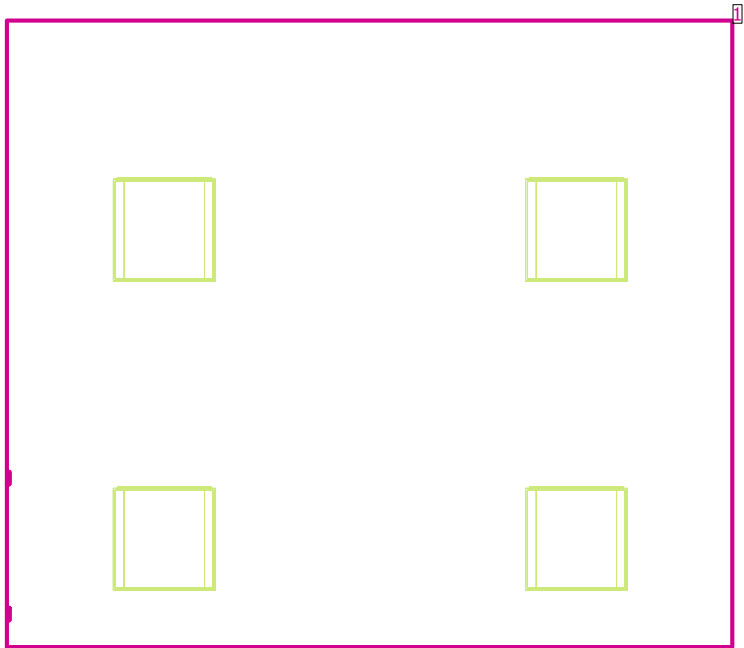


Scale: 1 : 50

Perpendicular illuminance (Surface)  
Mean (actual): 317 lx, Min: 206 lx, Max: 427 lx, Min/average: 0.65, Min/max: 0.48  
Height of working plane: 0.800 m, Wall zone: 0.000 m



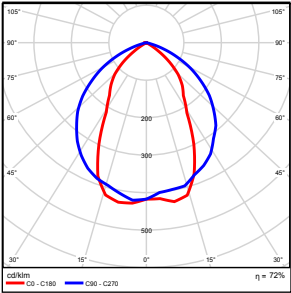

Orçamento



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Orçamento	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	473 (500)	264	589	0.56	0.45

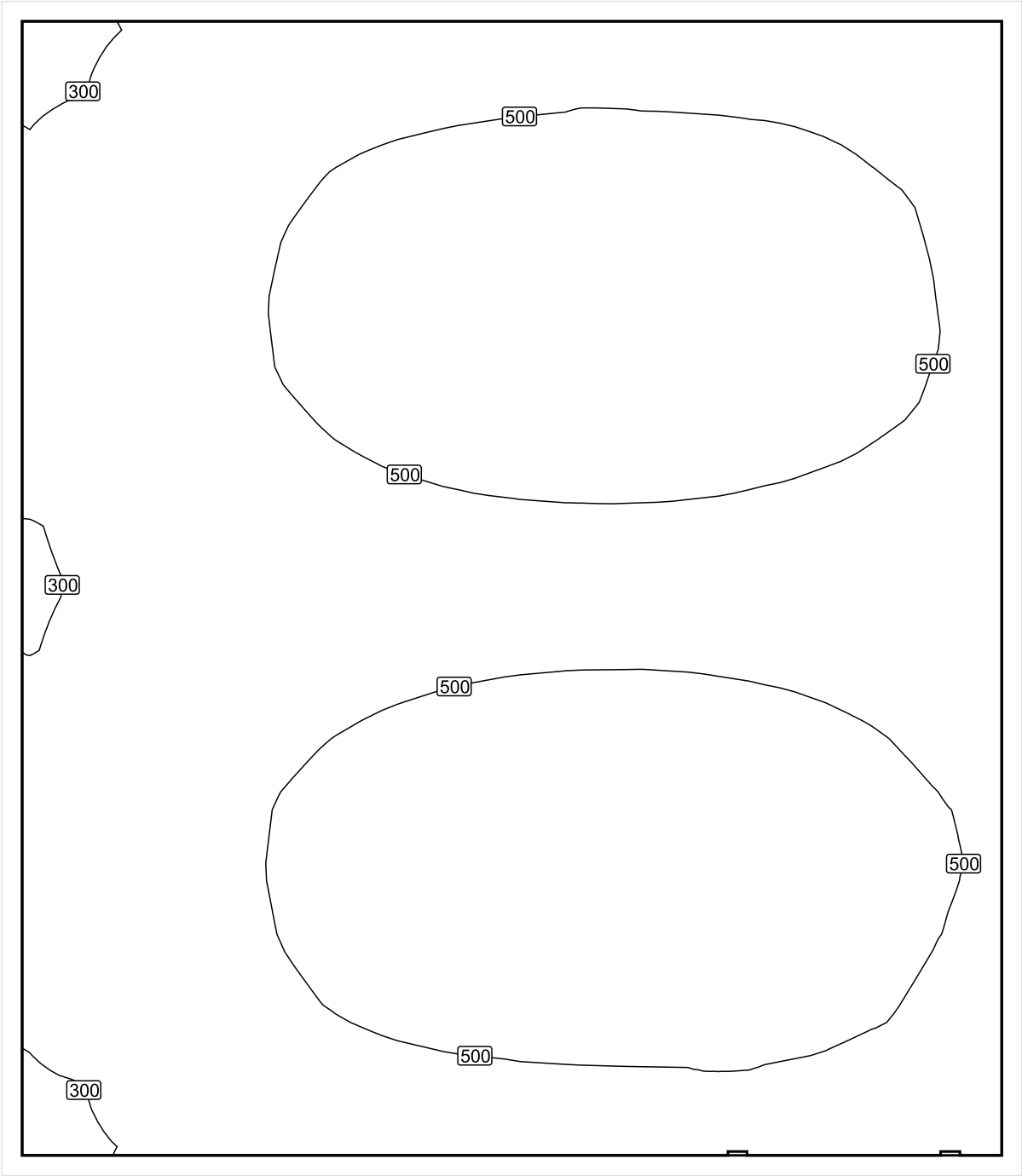
No.	Quantity		
1	4	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 19200 lm, Total luminaire luminous flux: 13900 lm, Total Load: 264.0 W, Light yield: 52.7 lm/W

Lighting power density: 15.79 W/m² = 3.34 W/m²/100 lx (Ground area 16.72 m²)

Consumption: 600 - 750 kWh/a of maximum 600 kWh/a

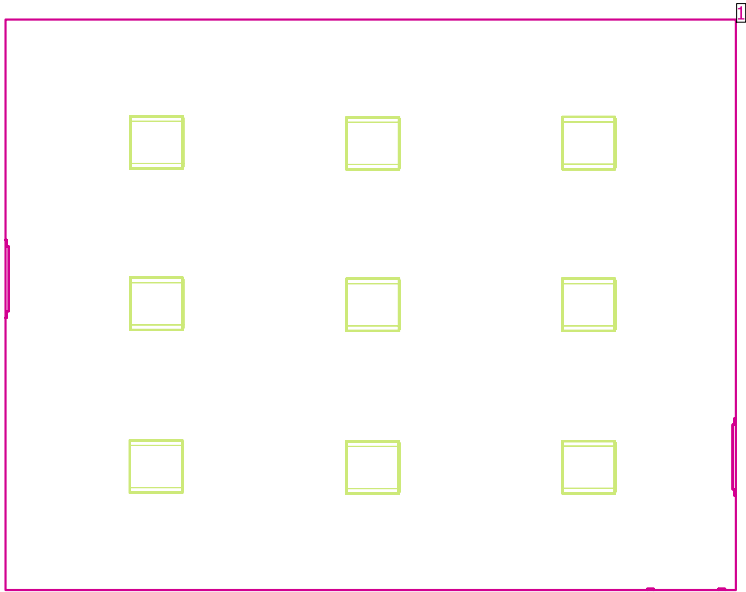
Orçamento



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 473 lx, Min: 264 lx, Max: 589 lx, Min/average: 0.56, Min/max: 0.45  
Height of working plane: 0.800 m, Wall zone: 0.000 m

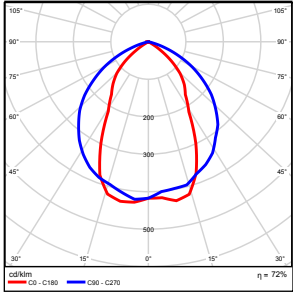

CPD



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

	Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1	CPD	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	433 (500)	118	644	0.27	0.18

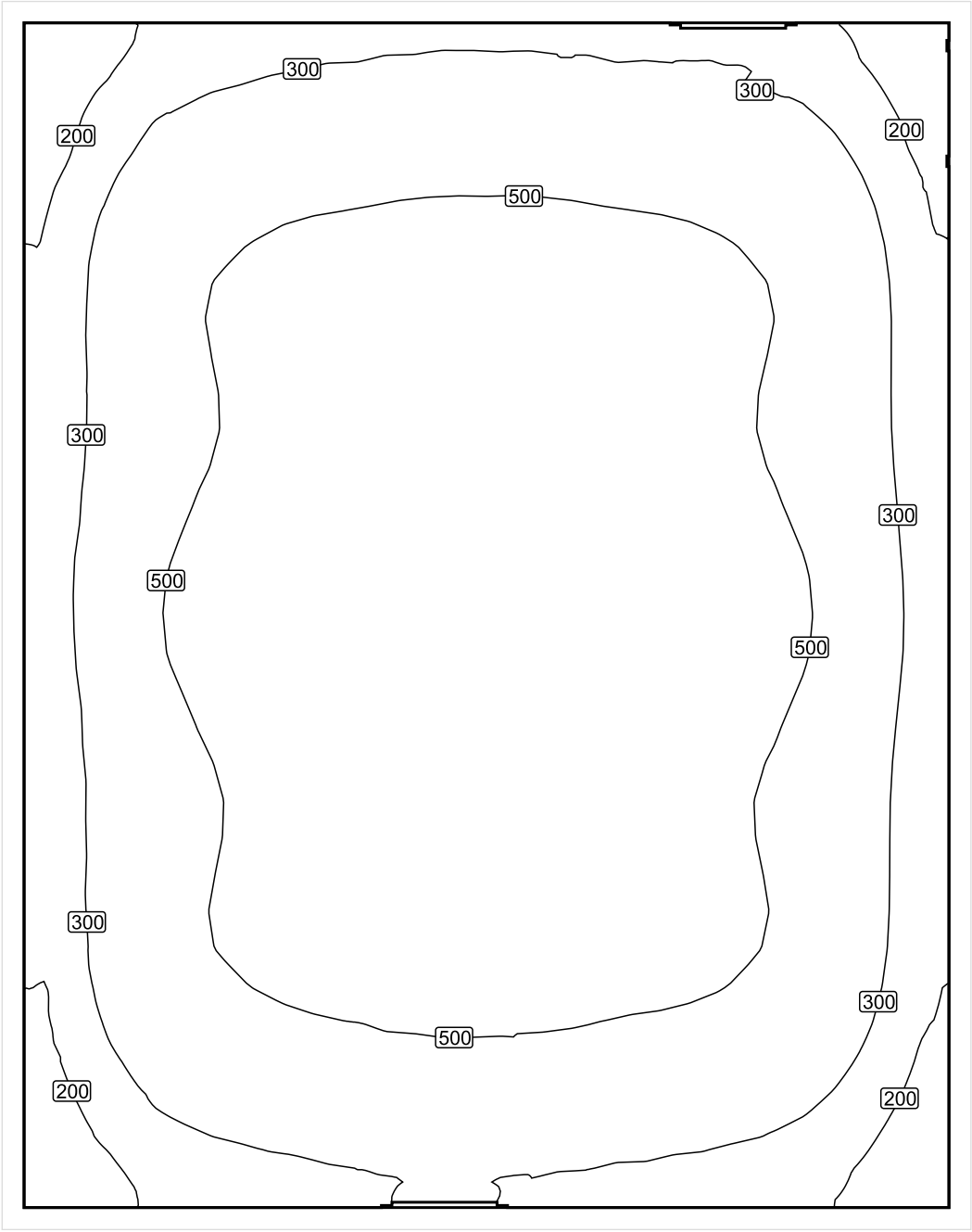
No.	Quantity		
1	9	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 43200 lm, Total luminaire luminous flux: 31275 lm, Total Load: 594.0 W, Light yield: 52.7 lm/W

Lighting power density: 10.65 W/m² = 2.46 W/m²/100 lx (Ground area 55.77 m²)

Consumption: 1050 - 1650 kWh/a of maximum 2000 kWh/a

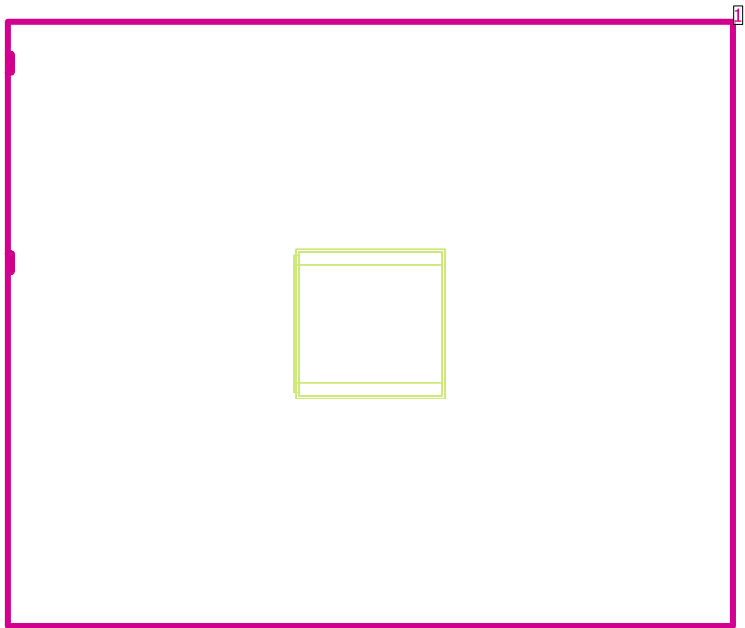
CPD



Scale: 1 : 50

Perpendicular illuminance (Surface)  
Mean (actual): 433 lx, Min: 118 lx, Max: 644 lx, Min/average: 0.27, Min/max: 0.18  
Height of working plane: 0.800 m, Wall zone: 0.000 m

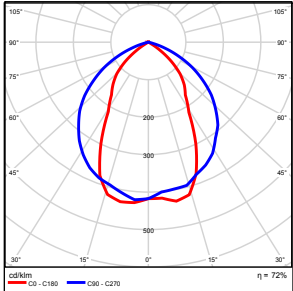

Almoxarifado



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Almoxarifado	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	246 (500)	116	367	0.47	0.32

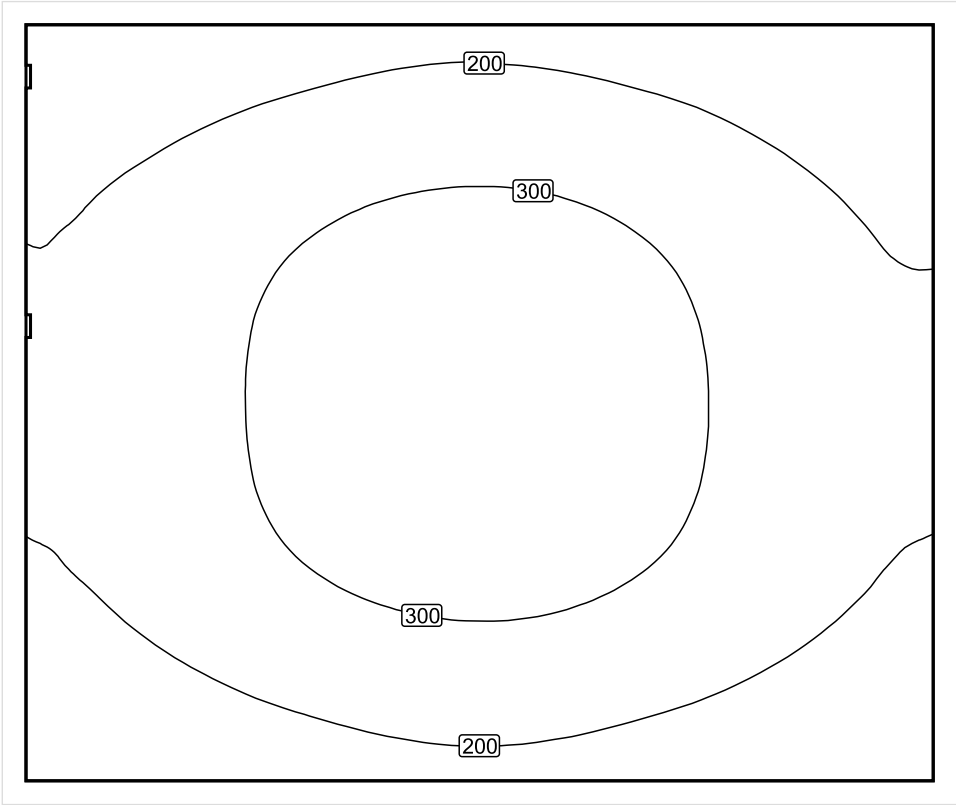
No.	Quantity		
1	1	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 4800 lm, Total luminaire luminous flux: 3475 lm, Total Load: 66.0 W, Light yield: 52.7 lm/W

Lighting power density: 8.80 W/m² = 3.58 W/m²/100 lx (Ground area 7.50 m²)

Consumption: 100 - 200 kWh/a of maximum 300 kWh/a

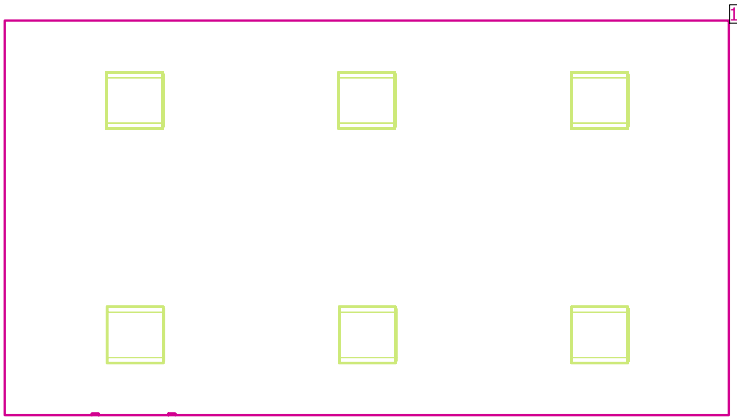
Almoxarifado



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 246 lx, Min: 116 lx, Max: 367 lx, Min/average: 0.47, Min/max: 0.32  
Height of working plane: 0.800 m, Wall zone: 0.000 m

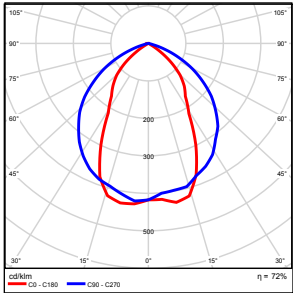

Controladora



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Controladora	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	415 (500)	236	533	0.57	0.44

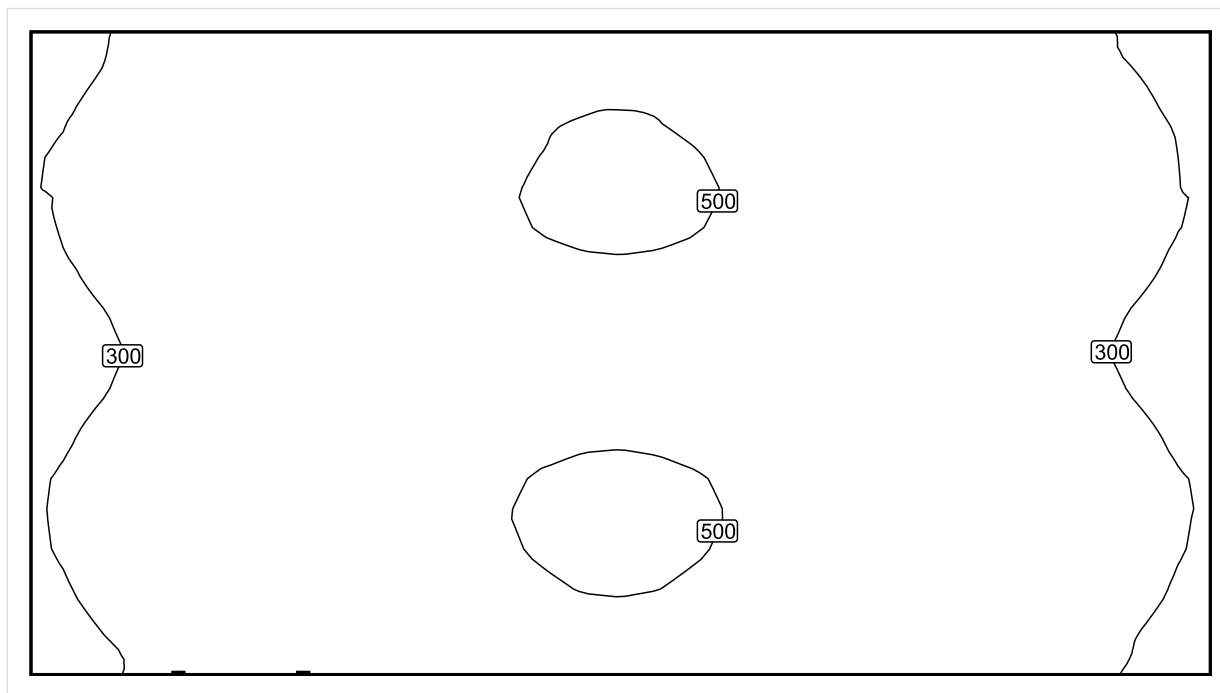
No.	Quantity		
1	6	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 28800 lm, Total luminaire luminous flux: 20850 lm, Total Load: 396.0 W, Light yield: 52.7 lm/W

Lighting power density: 11.95 W/m² = 2.88 W/m²/100 lx (Ground area 33.15 m²)

Consumption: 700 - 1100 kWh/a of maximum 1200 kWh/a

## Controladoria



Scale: 1 : 50

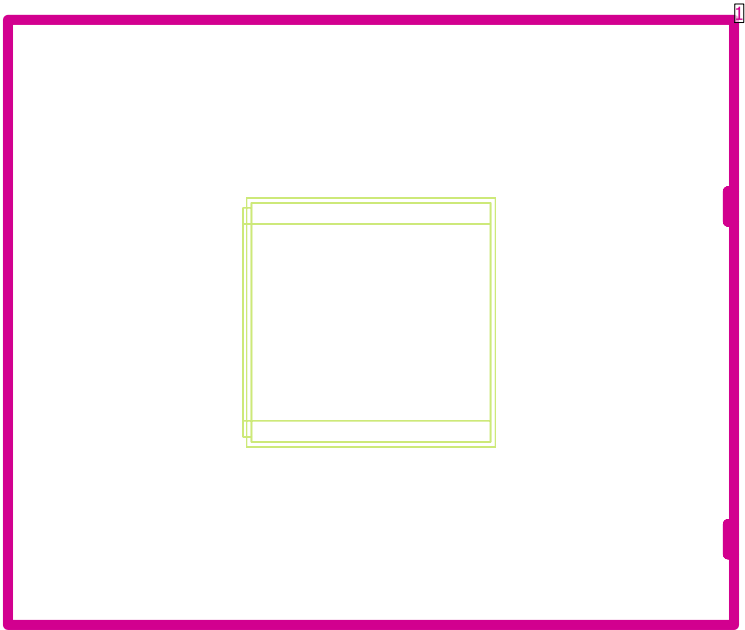
Perpendicular illuminance (Surface)

Mean (actual): 415 lx, Min: 236 lx, Max: 533 lx, Min/average: 0.57, Min/max: 0.44

Height of working plane: 0.800 m, Wall zone: 0.000 m



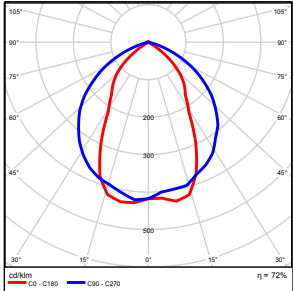

DML



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 DML	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	391 (500)	309	447	0.79	0.69

No.	Quantity		
1	1	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 4800 lm, Total luminaire luminous flux: 3475 lm, Total Load: 66.0 W, Light yield: 52.7 lm/W

Lighting power density: 24.44 W/m² = 6.25 W/m²/100 lx (Ground area 2.70 m²)

Consumption: 100 - 200 kWh/a of maximum 100 kWh/a

## DML



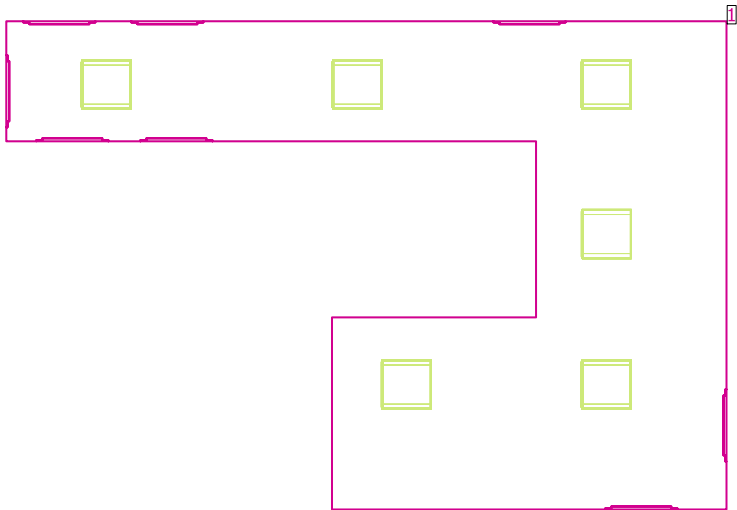
Scale: 1 : 10

Perpendicular illuminance (Surface)

Mean (actual): 391 lx, Min: 309 lx, Max: 447 lx, Min/average: 0.79, Min/max: 0.69

Height of working plane: 0.800 m, Wall zone: 0.000 m

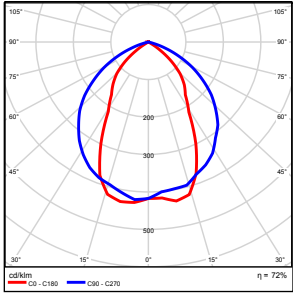

Circulação



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Circulação	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	387 (500)	120	522	0.31	0.23

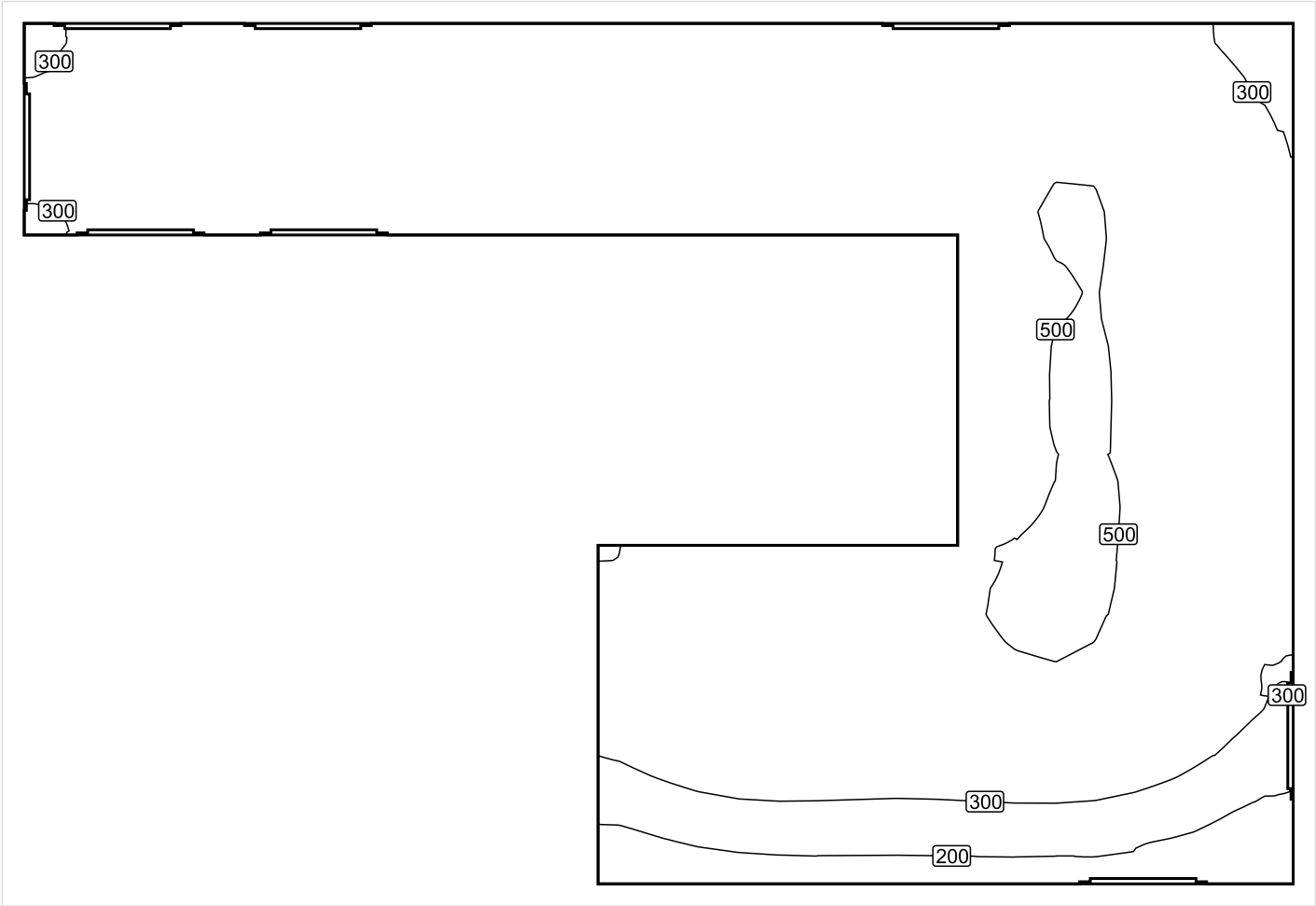
No.	Quantity		
1	6	Lumicenter Lighting CAA01-E416 Light output ratio: 72.40% Lamp luminous flux: 4800 lm Luminaire luminous flux: 3475 lm Power: 66.0 W Light yield: 52.7 lm/W Colour temperature: 3000 K Colour rendering index: 79	<div></div>

Total lamp luminous flux: 28800 lm, Total luminaire luminous flux: 20850 lm, Total Load: 396.0 W, Light yield: 52.7 lm/W

Lighting power density: 12.95 W/m² = 3.34 W/m²/100 lx (Ground area 30.57 m²)

Consumption: 1100 kWh/a of maximum 1100 kWh/a

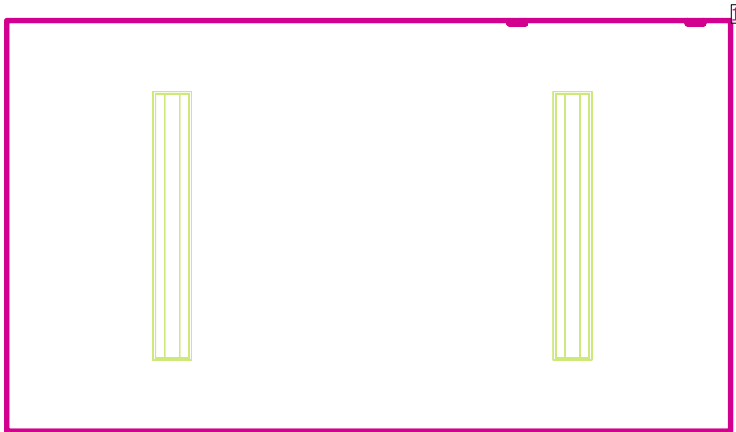
Circulação



Scale: 1 : 50

Perpendicular illuminance (Surface)  
Mean (actual): 387 lx, Min: 120 lx, Max: 522 lx, Min/average: 0.31, Min/max: 0.23  
Height of working plane: 0.800 m, Wall zone: 0.000 m

Copa



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

	Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1	Copa	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	248 (500)	172	317	0.69	0.54

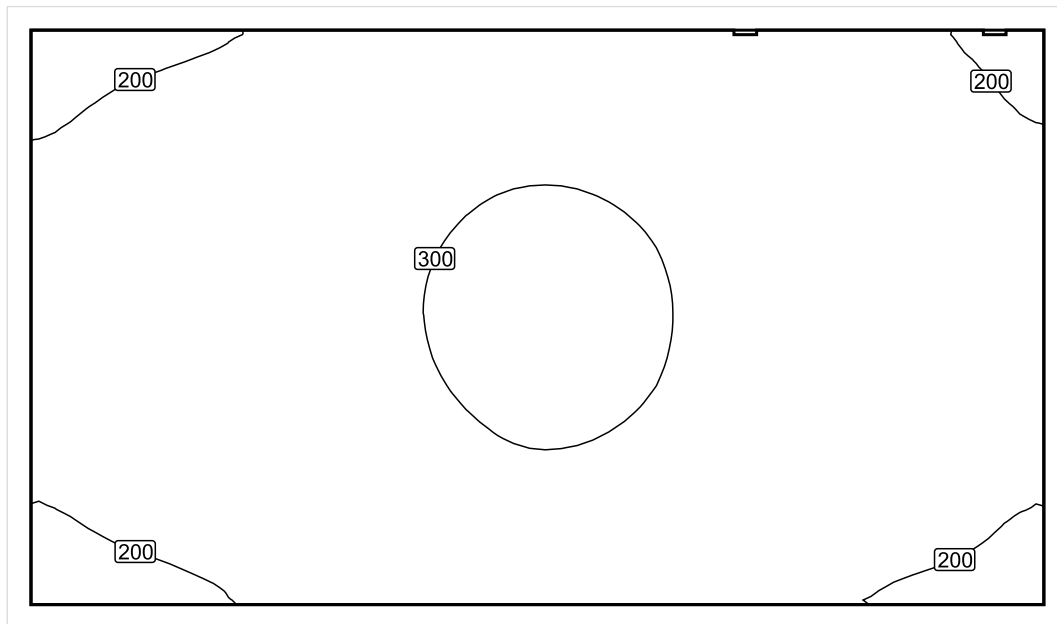
No.	Quantity			
1	2	Lumicenter Lighting CAA01-E132 Light output ratio: 72.25% Lamp luminous flux: 2700 lm Luminaire luminous flux: 1951 lm Power: 36.0 W Light yield: 54.2 lm/W Colour temperature: 3000 K Colour rendering index: 79		

Total lamp luminous flux: 5400 lm, Total luminaire luminous flux: 3902 lm, Total Load: 72.0 W, Light yield: 54.2 lm/W

Lighting power density: 11.31 W/m² = 4.55 W/m²/100 lx (Ground area 6.37 m²)

Consumption: 100 - 200 kWh/a of maximum 250 kWh/a

## Copa



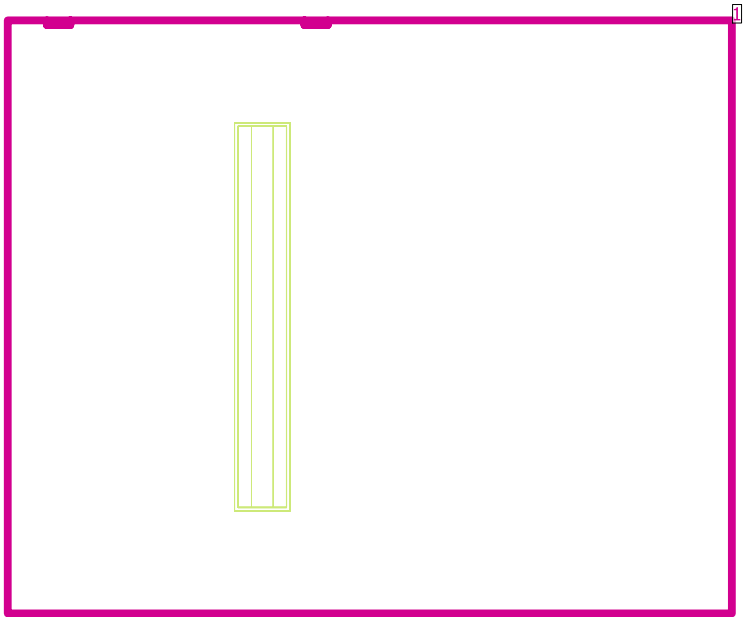
Scale: 1 : 25

Perpendicular illuminance (Surface)

Mean (actual): 248 lx, Min: 172 lx, Max: 317 lx, Min/average: 0.69, Min/max: 0.54

Height of working plane: 0.800 m, Wall zone: 0.000 m

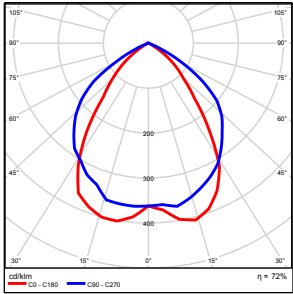

BWC Def. Físico



Height of room: 4.050 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 BWC Def. Físico	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	171 (500)	89.9	213	0.53	0.42

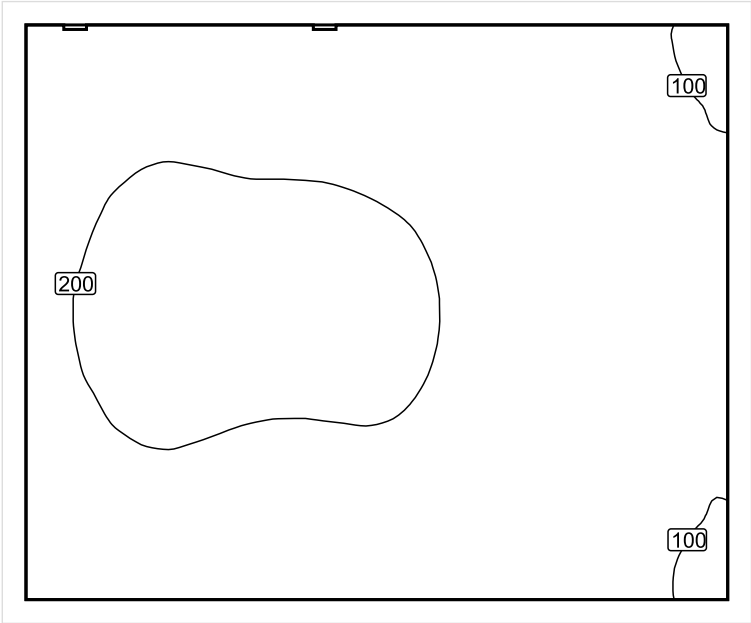
No.	Quantity		
1	1	<div>Lumicenter Lighting CAA01-E132 Light output ratio: 72.25% Lamp luminous flux: 2700 lm Luminaire luminous flux: 1951 lm Power: 36.0 W Light yield: 54.2 lm/W Colour temperature: 3000 K Colour rendering index: 79</div>	<div></div>

Total lamp luminous flux: 2700 lm, Total luminaire luminous flux: 1951 lm, Total Load: 36.0 W, Light yield: 54.2 lm/W

Lighting power density: 8.17 W/m² = 4.77 W/m²/100 lx (Ground area 4.41 m²)

Consumption: 100 kWh/a of maximum 200 kWh/a

BWC Def. Físico

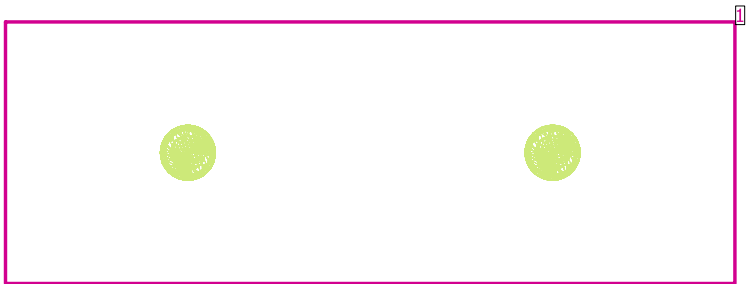


Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 171 lx, Min: 89.9 lx, Max: 213 lx, Min/average: 0.53, Min/max: 0.42  
Height of working plane: 0.800 m, Wall zone: 0.000 m



Máquinas de Ar Condicionado



Height of room: 2.800 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Máquinas de Ar Condicionado	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	82.0 (500)	44.7	109	0.55	0.41

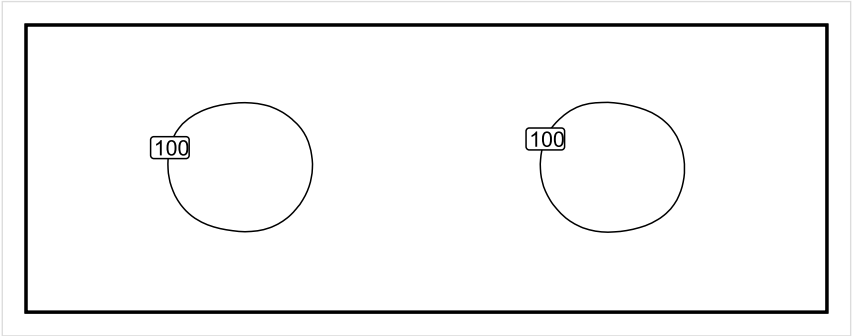
No.	Quantity		
1	2	Lumicenter Lighting 14 PF103-S1LED4K Light output ratio: 100% Lamp luminous flux: 1070 lm Luminaire luminous flux: 1070 lm Power: 17.0 W Light yield: 62.9 lm/W Colour temperature: 3000 K Colour rendering index: 84	<div></div>

Total lamp luminous flux: 2140 lm, Total luminaire luminous flux: 2140 lm, Total Load: 34.0 W, Light yield: 62.9 lm/W

Lighting power density: 3.38 W/m² = 4.12 W/m²/100 lx (Ground area 10.07 m²)

Consumption: 100 kWh/a of maximum 400 kWh/a

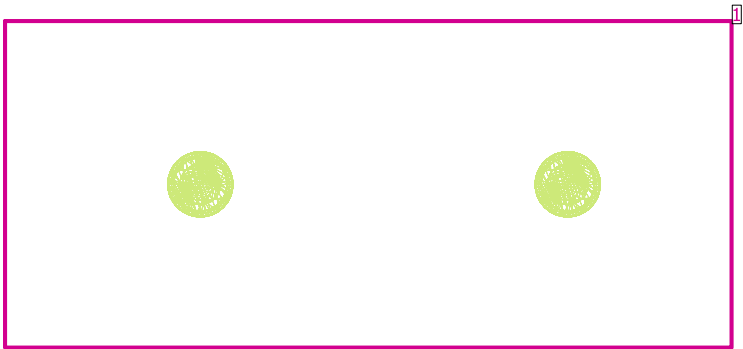
Máquinas de Ar Condicionado



Scale: 1 : 50

Perpendicular illuminance (Surface)  
Mean (actual): 82.0 lx, Min: 44.7 lx, Max: 109 lx, Min/average: 0.55, Min/max: 0.41  
Height of working plane: 0.800 m, Wall zone: 0.000 m

Casa de Máquinas



Height of room: 2.800 m, Reflection factors: Ceiling 70.0%, Walls 50.0%, Floor 20.0%, Maintenance factor: 0.80

Workplane

Surface	Result	Mean (target)	Min	Max	Min/average	Min/max
1 Casa de Máquinas	Perpendicular illuminance [lx] Height of working plane: 0.800 m, Wall zone: 0.000 m	90.6 (500)	50.0	116	0.55	0.43

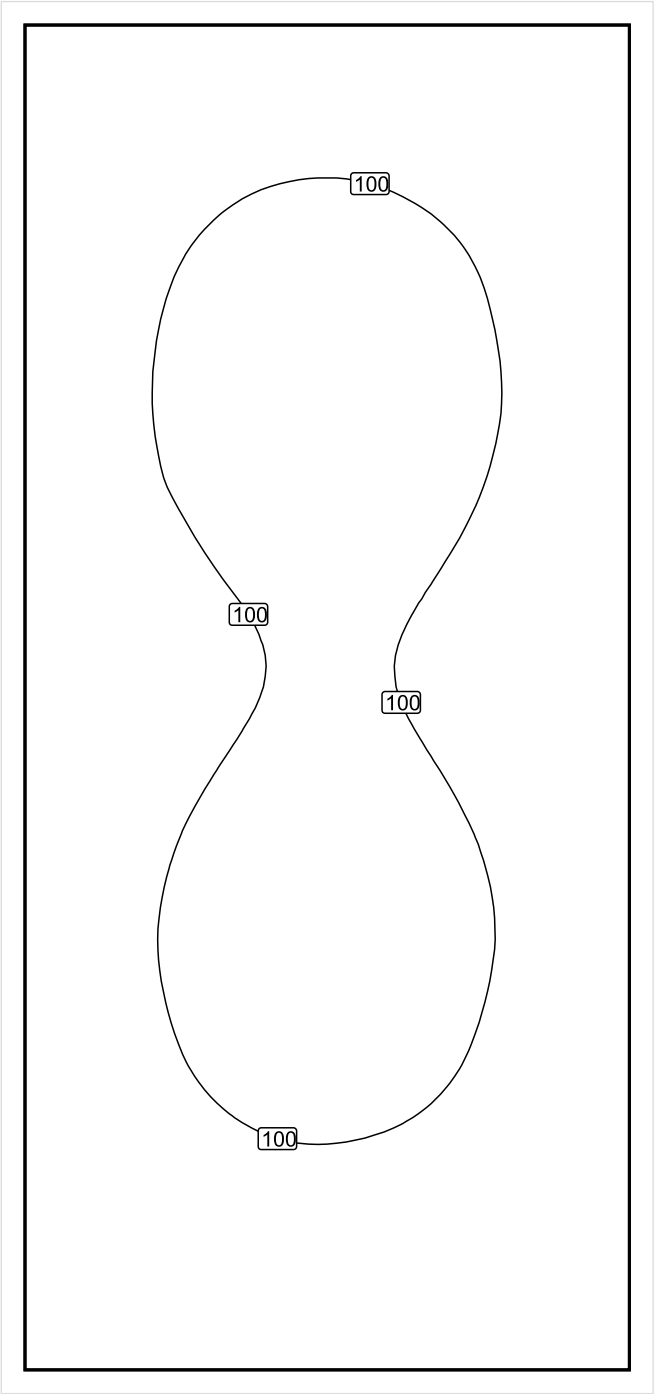
No.	Quantity		
1	2	Lumicenter Lighting 14 PF103-S1LED4K Light output ratio: 100% Lamp luminous flux: 1070 lm Luminaire luminous flux: 1070 lm Power: 17.0 W Light yield: 62.9 lm/W Colour temperature: 3000 K Colour rendering index: 84	<div></div>

Total lamp luminous flux: 2140 lm, Total luminaire luminous flux: 2140 lm, Total Load: 34.0 W, Light yield: 62.9 lm/W

Lighting power density: 3.82 W/m² = 4.22 W/m²/100 lx (Ground area 8.90 m²)

Consumption: 50 - 100 kWh/a of maximum 350 kWh/a

Casa de Máquinas



Scale: 1 : 25

Perpendicular illuminance (Surface)  
Mean (actual): 90.6 lx, Min: 50.0 lx, Max: 116 lx, Min/average: 0.55, Min/max: 0.43  
Height of working plane: 0.800 m, Wall zone: 0.000 m