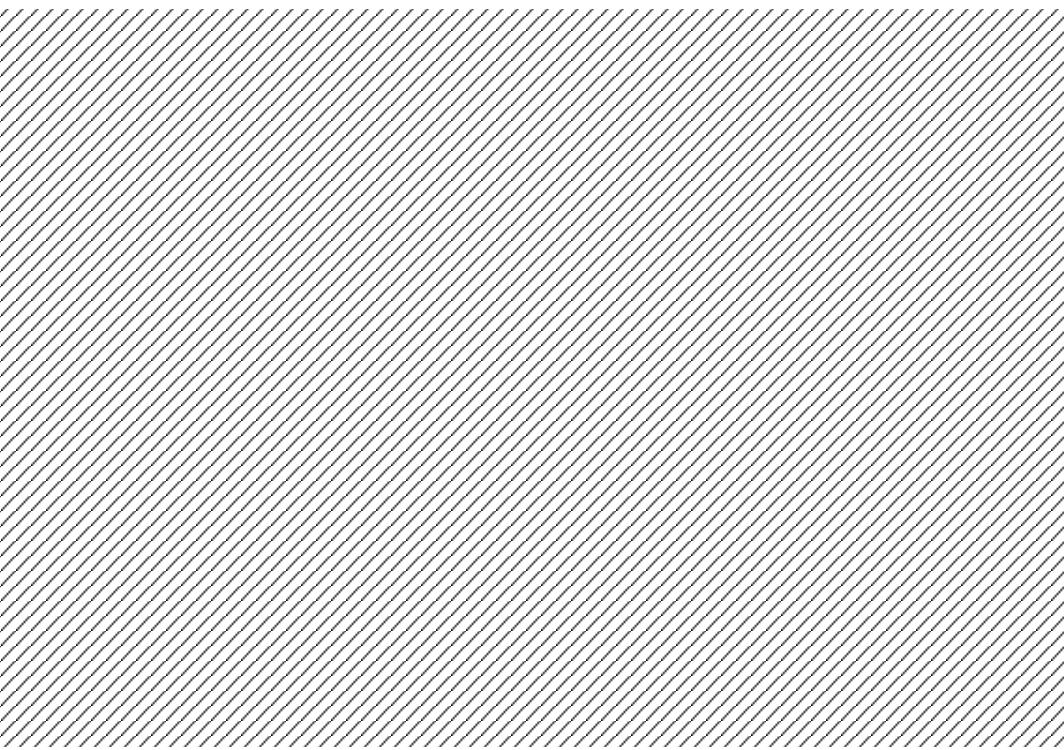


Date

16/08/2024



COFFé -SHOP

Preliminary remarks

Notes on planning:

The energy consumption quantities do not take into account light scenes and their dimming levels.

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cuisine

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toillete1

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couloir

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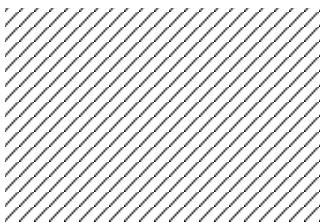
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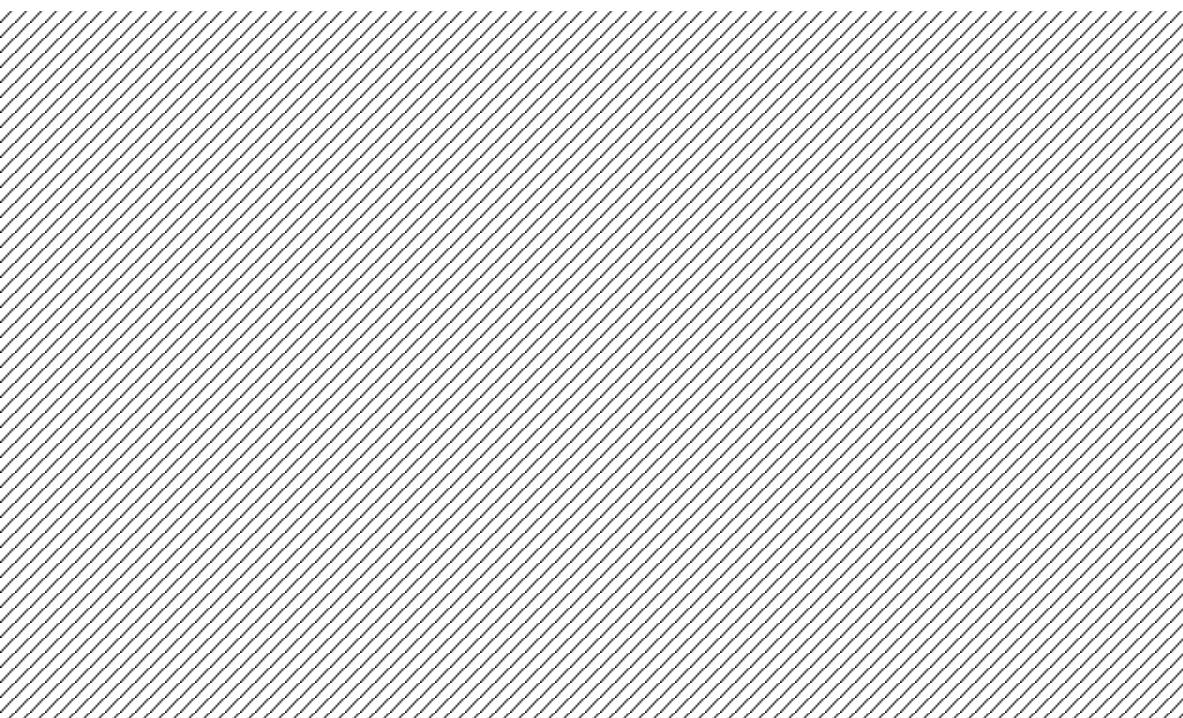
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Contacts



TBEEB
YASMINE

AFPA
MEUDON



Description

TBEEB
YASMINE

AFPA
MEUDON

Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
139625 lm	1488.0 W	93.8 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
36	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W
15	Thorn	96632397	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]	27.0 W	2800 lm	103.7 lm/W
11	Thorn	96633218	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]	33.0 W	3799 lm	115.1 lm/W

Product data sheet

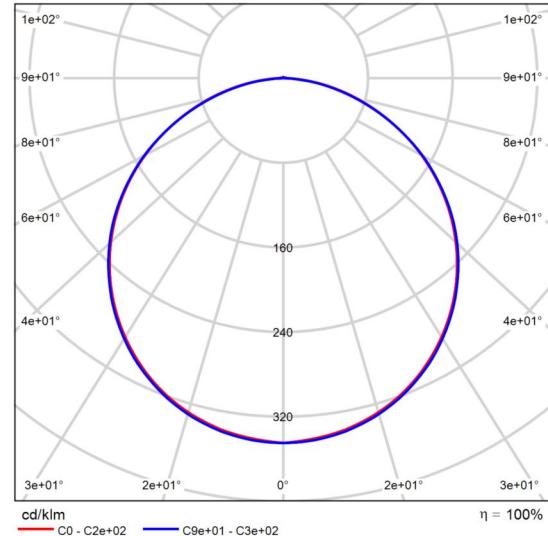
Thorn BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]



Article No.	96633218
P	33.0 W
Φ_{Lamp}	3800 lm
$\Phi_{Luminaire}$	3799 lm
η	99.97 %
Luminous efficacy	115.1 lm/W
CCT	4000 K
CRI	80

Une dalle encastrée LED avec un cadre de 14 mm d'épaisseur.
 Driver, gradable DALI. Classe électrique II, IP65, IK06. Corps: tôle d'acier, blanc (similaire à RAL9016). Diffuseur: opale. Livré avec LED 4 000 K.

Dimensions : 596 x 596 x 14 mm
 Puissance du luminaire: 33 W
 Flux lumineux du luminaire: 3800 lm
 Efficacité lumineuse du luminaire: 115 lm/W
 Poids : 4,2 kg



Polar LDC

Glare evaluation according to UGR											
ρ	Ceiling	70	70	50	50	30	70	70	50	50	30
ρ	Walls	50	30	50	30	30	50	30	50	30	30
ρ	Floor	20	20	20	20	20	20	20	20	20	20
X	Y	Viewing direction at right angles to lamp axis									Viewing direction parallel to lamp axis
2H	2H	17.7	19.1	18.0	19.3	19.6	17.7	19.1	18.0	19.3	19.6
3H	19.3	20.6	19.6	20.8	21.1	19.3	20.5	19.6	20.8	21.1	21.1
4H	20.0	21.1	20.3	21.4	21.7	19.9	21.1	20.3	21.4	21.7	21.7
6H	20.5	21.6	20.8	21.9	22.2	20.4	21.5	20.7	21.8	22.1	22.1
8H	20.6	21.7	21.0	22.0	22.3	20.5	21.6	20.9	21.9	22.2	22.2
12H	20.7	21.7	21.1	22.1	22.4	20.6	21.6	20.9	21.9	22.2	22.2
4H	18.4	19.6	18.8	19.9	20.2	18.4	19.6	18.8	19.9	20.2	20.2
3H	20.2	21.2	20.6	21.5	21.9	20.2	21.2	20.6	21.5	21.8	21.8
4H	21.0	21.9	21.4	22.2	22.6	20.9	21.8	21.3	22.2	22.6	22.6
6H	21.6	22.4	22.0	22.8	23.2	21.5	22.3	21.9	22.7	23.1	23.1
8H	21.8	22.6	22.3	23.0	23.4	21.7	22.4	22.1	22.8	23.2	23.2
12H	22.0	22.6	22.4	23.1	23.5	21.8	22.4	22.2	22.9	23.3	23.3
8H	4H	21.3	22.0	21.7	22.4	22.8	21.2	22.0	21.7	22.4	22.8
6H	22.1	22.7	22.5	23.1	23.6	21.9	22.5	22.4	23.0	23.4	23.4
8H	22.4	22.9	22.8	23.4	23.8	22.2	22.7	22.7	23.2	23.7	23.7
12H	22.6	23.0	23.1	23.5	24.0	22.4	22.8	22.9	23.3	23.8	23.8
12H	4H	21.3	22.0	21.8	22.4	22.8	21.2	21.9	21.7	22.3	22.8
6H	22.1	22.7	22.6	23.1	23.6	22.0	22.5	22.5	23.0	23.5	23.5
8H	22.5	22.9	23.0	23.4	23.9	22.3	22.8	22.8	23.2	23.8	23.8
Variation of the observer position for the luminaire distances S											
S = 1.0H	+0.1 / -0.1										+0.1 / -0.1
S = 1.5H	+0.2 / -0.3										+0.2 / -0.3
S = 2.0H	+0.4 / -0.6										+0.4 / -0.6
Standard table	BK06										BK06
Correction Summand	5.2										5.1
Corrected glare indices referring to 3800lm Total luminous flux											

UGR diagram (SHR: 0.25)

Product data sheet

Thorn GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]



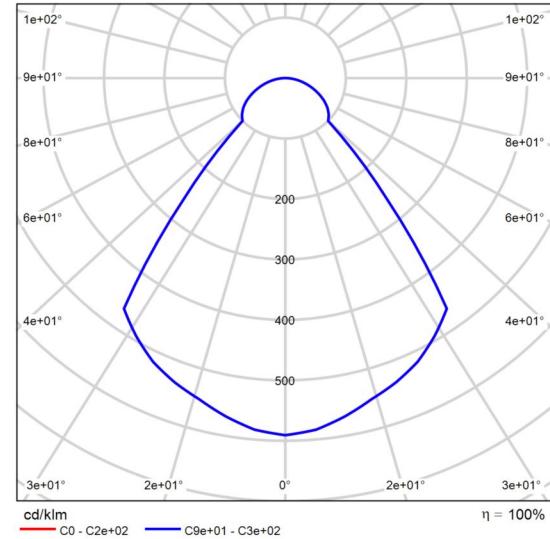
Article No.	96632397
P	27.0 W
Φ_{Lamp}	2800 lm
$\Phi_{\text{Luminaire}}$	2800 lm
η	100.00 %
Luminous efficacy	103.7 lm/W
CCT	3000 K
CRI	80

A modern and efficient LED pendant luminaire. DALI dimmable control gear suitable for central battery emergency installations. Housing: die-cast aluminium with satin black finish. Reflector: black aluminium with easy bayonet mount connection to housing. Class I electrical, IP20. Suspended via adjustable quick-lock 2.5m single wire suspension (supplied). Pre-wired with braided, flame retardant silicone cable, 5 x 0.75mm². Complete with 3000K LED

Dimensions: Ø340/140 x 485 mm

Luminaire input power: 27 W

Weight: 4.8 kg



Polar LDC

Glare evaluation according to UGR											
ρ	Ceiling	70	70	50	50	30	70	70	50	50	30
ρ	Walls	50	30	50	30	30	50	30	50	30	30
ρ	Floor	20	20	20	20	20	20	20	20	20	20
X	Y	Viewing direction at right angles to lamp axis									Viewing direction parallel to lamp axis
2H	2H	16.9	17.9	17.2	18.2	18.4	16.9	17.9	17.2	18.2	18.4
3H	3H	18.0	19.0	18.3	19.2	19.5	18.0	19.0	18.3	19.2	19.5
4H	4H	18.6	19.5	18.9	19.7	20.0	18.6	19.5	18.9	19.7	20.0
6H	6H	19.0	19.9	19.4	20.2	20.5	19.0	19.9	19.4	20.2	20.5
8H	8H	19.2	20.0	19.5	20.3	20.6	19.2	20.0	19.5	20.3	20.6
12H	12H	19.3	20.1	19.7	20.4	20.7	19.3	20.1	19.7	20.4	20.7
4H	2H	17.3	18.2	17.6	18.5	18.8	17.3	18.2	17.6	18.5	18.8
3H	3H	18.7	19.5	19.1	19.8	20.1	18.7	19.5	19.1	19.8	20.1
4H	4H	19.4	20.1	19.8	20.4	20.8	19.4	20.1	19.8	20.4	20.8
6H	6H	20.0	20.6	20.4	21.0	21.4	20.0	20.6	20.4	21.0	21.4
8H	8H	20.2	20.8	20.7	21.2	21.6	20.2	20.8	20.7	21.2	21.6
12H	12H	20.4	20.9	20.8	21.3	21.8	20.4	20.9	20.8	21.3	21.8
8H	4H	19.7	20.2	20.1	20.6	21.0	19.7	20.2	20.1	20.6	21.0
6H	20.4	20.9	20.9	21.3	21.8	20.4	20.9	20.9	21.3	21.8	
8H	21.2	21.2	21.2	21.6	22.1	20.8	21.2	21.2	21.6	22.1	
12H	21.0	21.4	21.5	21.8	22.3	21.0	21.4	21.5	21.8	22.3	
12H	4H	19.7	20.2	20.1	20.6	21.0	19.7	20.2	20.1	20.6	21.0
6H	20.5	20.9	21.0	21.3	21.8	20.5	20.9	21.0	21.3	21.8	
8H	20.9	21.2	21.4	21.7	22.2	20.9	21.2	21.4	21.7	22.2	
Variation of the observer position for the luminaire distances S											
S = 1.0H	+0.7 / -0.4				+0.7 / -0.4						
S = 1.5H	+1.4 / -0.6				+1.4 / -0.6						
S = 2.0H	+2.3 / -0.9				+2.3 / -0.9						
Standard table	BK05				BK05						
Correction Summand	3.1				3.1						
Corrected glare indices referring to 2800lm Total luminous flux											

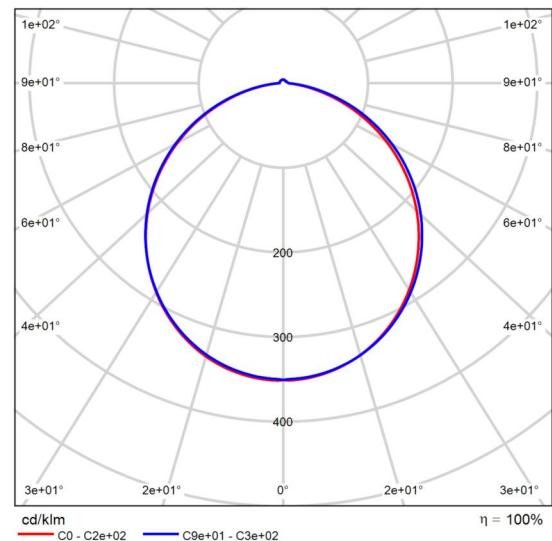
UGR diagram (SHR: 0.25)

Product data sheet

Thorn OMEGA C LED1500-830 HF R300 [STD]



Article No.	96631488
P	20.0 W
Φ_{Lamp}	1551 lm
$\Phi_{Luminaire}$	1551 lm
η	100.00 %
Luminous efficacy	77.5 lm/W
CCT	3000 K
CRI	80



Polar LDC

A versatile, circular edge lit panel for recessed mounting in a Ø200mm cutout. Electronic, fixed output control gear. Class I electrical, IP20. Body: aluminium and steel, white (RAL 9016). Diffuser: acrylic opal. Complete with 3000K LED.

Dimensions: Ø300 x 55 mm

Luminaire input power: 19.5 W

Luminaire luminous flux: 1551 lm

Luminaire efficacy: 80 lm/W

Weight: 2.5 kg

Site 1

Luminaire layout plan

Site 1

Luminaire layout plan

Manufacturer	Thorn
Article No.	96632397
Article name	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]

Individual luminaires

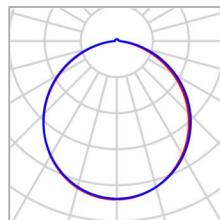
X	Y	Mounting height	Luminaire
44.018 m	17.021 m	3.500 m	[1]
45.768 m	17.002 m	3.500 m	[2]
47.532 m	16.972 m	3.500 m	[3]
48.714 m	15.250 m	3.500 m	[4]
46.955 m	15.195 m	3.500 m	[5]
45.163 m	15.220 m	3.500 m	[6]
43.382 m	15.201 m	3.500 m	[7]
45.766 m	12.794 m	3.500 m	[8]
42.717 m	12.741 m	3.300 m	[9]
49.316 m	12.794 m	3.500 m	[10]
39.739 m	16.992 m	3.500 m	[11]
49.347 m	21.756 m	3.500 m	[12]
51.768 m	21.792 m	3.500 m	[13]
49.371 m	17.029 m	3.500 m	[39]

Site 1

Luminaire layout plan

X	Y	Mounting height	Luminaire
42.179 m	16.934 m	3.500 m	44

Site 1

Luminaire layout plan

Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

4 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	44.500 m / 20.000 m / 3.300 m	44.500 m	20.000 m	3.300 m	[14]
X-direction	2 pcs., Center - center, 2.355 m	46.400 m	20.000 m	3.300 m	[15]
Y-direction	2 pcs., Center - center, 1.970 m	44.500 m	21.800 m	3.300 m	[16]
		46.400 m	21.800 m	3.300 m	[17]
Arrangement	A1				

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	42.148 m / 21.568 m / 2.648 m	42.148 m	21.568 m	2.648 m	[18]
X-direction	3 pcs., Center - center, 1.663 m	40.485 m	21.568 m	2.648 m	[37]
Y-direction	1 pcs., Center - center, 1.560 m	38.821 m	21.568 m	2.648 m	[38]
Arrangement	A2				

Site 1

Luminaire layout plan

2 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	39.237 m / 19.648 m / 2.700 m	39.237 m	19.648 m	2.700 m	[19]
X-direction	2 pcs., Center - center, 2.495 m	41.732 m	19.648 m	2.700 m	[20]
Y-direction	1 pcs., Center - center, 1.680 m				
Arrangement	A3				

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	33.960 m / 17.260 m / 2.596 m	33.960 m	17.260 m	2.596 m	[21]
X-direction	1 pcs., Center - center, 2.320 m				
Y-direction	1 pcs., Center - center, 2.156 m				
Arrangement	A4				

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	33.960 m / 17.260 m / 3.948 m	33.960 m	17.260 m	3.948 m	[22]
X-direction	1 pcs., Center - center, 2.320 m				
Y-direction	1 pcs., Center - center, 2.156 m				
Arrangement	A5				

Site 1

Luminaire layout plan

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	31.475 m / 17.258 m / 3.948 m	31.475 m	17.258 m	3.948 m	[23]
X-direction	1 pcs., Center - center, 2.450 m				
Y-direction	1 pcs., Center - center, 2.160 m				
Arrangement	A6				

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	36.325 m / 17.258 m / 2.648 m	36.325 m	17.258 m	2.648 m	[24]
X-direction	1 pcs., Center - center, 2.210 m				
Y-direction	1 pcs., Center - center, 2.160 m				
Arrangement	A7				

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	36.325 m / 17.258 m / 2.648 m	36.325 m	17.258 m	2.648 m	[25]
X-direction	1 pcs., Center - center, 2.210 m				
Y-direction	1 pcs., Center - center, 2.160 m				
Arrangement	A8				

Site 1

Luminaire layout plan

2 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	51.715 m / 19.415 m / 3.300 m	51.715 m	19.415 m	3.300 m	[26]
X-direction	2 pcs., Center - center, Distances not equal	49.320 m	19.375 m	3.300 m	[27]
Arrangement					A9

2 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	35.635 m / 15.255 m / 3.948 m	35.635 m	15.255 m	3.948 m	[42]
X-direction	2 pcs., Center - center, 3.590 m	32.045 m	15.255 m	3.948 m	[43]
Arrangement					A12

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	39.718 m / 14.575 m / 3.300 m	39.718 m	14.575 m	3.300 m	[47]
X-direction	3 pcs., Center - center, Distances not equal	39.718 m	13.342 m	3.300 m	[48]
		39.718 m	12.192 m	3.300 m	[49]
Arrangement					A13

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire

Site 1

Luminaire layout plan

1st luminaire (X/Y/Z)	51.757 m / 12.191 m / 3.300 m	X	Y	Mounting height	Luminaire
X-direction	3 pcs., Center - center, Distances not equal	51.757 m	12.191 m	3.300 m	[51]
		51.757 m	13.411 m	3.300 m	[52]
Arrangement	A14	51.757 m	14.554 m	3.300 m	[53]

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	38.599 m / 12.149 m / 3.300 m	38.599 m	12.149 m	3.300 m	[54]
X-direction	3 pcs., Center - center, 1.233 m	38.599 m	13.382 m	3.300 m	[55]
Arrangement	A15	38.599 m	14.616 m	3.300 m	[56]

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	50.557 m / 14.554 m / 3.300 m	50.557 m	14.554 m	3.300 m	[57]
X-direction	3 pcs., Center - center, Distances not equal	50.557 m	13.411 m	3.300 m	[58]
Arrangement	A16	50.557 m	12.191 m	3.300 m	[59]

2 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	31.550 m / 15.255 m / 2.648 m	31.550 m	15.255 m	2.648 m	[60]
X-direction	2 pcs., Center - center, 3.590 m	36.150 m	15.255 m	2.648 m	[61]

Site 1

Luminaire layout plan

Y-direction	1 pcs., Center - center, 1.647 m
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Arrangement	A17
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1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	31.475 m / 17.258 m / 2.648 m	31.475 m	17.258 m	2.648 m	[62]
X-direction	1 pcs., Center - center, 2.450 m				
Y-direction	1 pcs., Center - center, 2.160 m				
Arrangement	A18				

Individual luminaires

X	Y	Mounting height	Luminaire
51.779 m	20.634 m	3.948 m	[45]
49.379 m	20.634 m	3.948 m	[46]
51.150 m	17.275 m	3.948 m	[50]

Site 1

Luminaire layout plan

Manufacturer	Thorn
Article No.	96633218
Article name	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]

9 x Thorn Lighting BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	36.731 m / 21.863 m / 2.705 m	36.731 m	21.863 m	2.705 m	[28]
X-direction	3 pcs., Center - center, 2.473 m	33.807 m	21.863 m	2.705 m	[29]
Y-direction	3 pcs., Center - center, 1.370 m	30.883 m	21.863 m	2.705 m	[30]
Arrangement	A10	36.731 m	20.493 m	2.705 m	[31]
		33.807 m	20.493 m	2.705 m	[32]
		30.883 m	20.493 m	2.705 m	[33]
		36.731 m	19.123 m	2.705 m	[34]
		33.807 m	19.123 m	2.705 m	[35]
		30.883 m	19.123 m	2.705 m	[36]

2 x Thorn Lighting BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	40.750 m / 24.148 m / 3.800 m	40.750 m	24.148 m	3.800 m	[40]

Site 1

Luminaire layout plan

X-direction	2 pcs., Center - center, 1.840 m	X	Y	Mounting height	Luminaire
Y-direction	1 pcs., Center - center, 3.000 m	38.910 m	24.148 m	3.800 m	41
Arrangement	A11				

Site 1

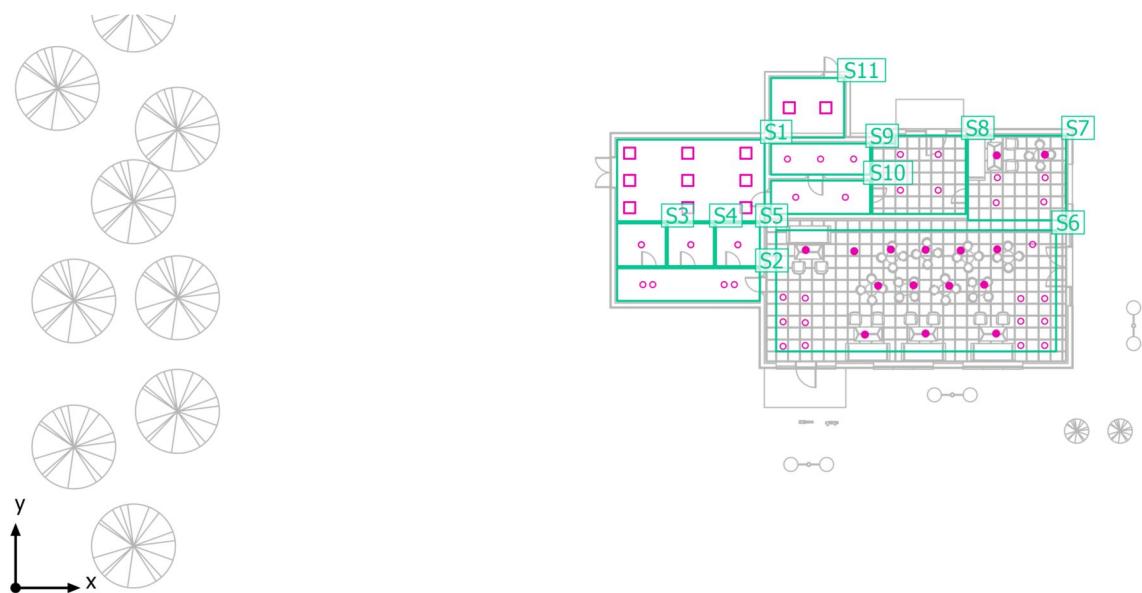
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
139625 lm	1488.0 W	93.8 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
36	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W
15	Thorn	96632397	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]	27.0 W	2800 lm	103.7 lm/W
11	Thorn	96633218	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]	33.0 W	3799 lm	115.1 lm/W

Site 1

Calculation objects



Site 1

Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (cuisine) Perpendicular illuminance (adaptive) Height: 0.800 m, Wall zone: 0.000 m	545 lx (≥ 50.0 lx) 	327 lx	692 lx	0.60	0.47	S1
Workplane (lavabo) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	233 lx (≥ 50.0 lx) 	122 lx	329 lx	0.52	0.37	S2
Workplane (toilette1) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	315 lx (≥ 50.0 lx) 	200 lx	420 lx	0.63	0.48	S3
Workplane (toilette2) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	381 lx (≥ 50.0 lx) 	295 lx	462 lx	0.77	0.64	S4
Workplane (toilette3) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	400 lx (≥ 50.0 lx) 	327 lx	464 lx	0.82	0.70	S5
Workplane (Grande salle a manger) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.500 m	359 lx (≥ 50.0 lx) 	142 lx	583 lx	0.40	0.24	S6
Workplane (petite salle a manger) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	250 lx (≥ 50.0 lx) 	125 lx	321 lx	0.50	0.39	S7
Workplane (service au volant) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	209 lx (≥ 50.0 lx) 	140 lx	294 lx	0.67	0.48	S8
Workplane (local technique) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	306 lx (≥ 50.0 lx) 	210 lx	414 lx	0.69	0.51	S9
Workplane (couloir) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	306 lx (≥ 50.0 lx) 	228 lx	423 lx	0.75	0.54	S10
Workplane (Groupe électrogène) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	208 lx (≥ 50.0 lx) 	120 lx	311 lx	0.58	0.39	S11

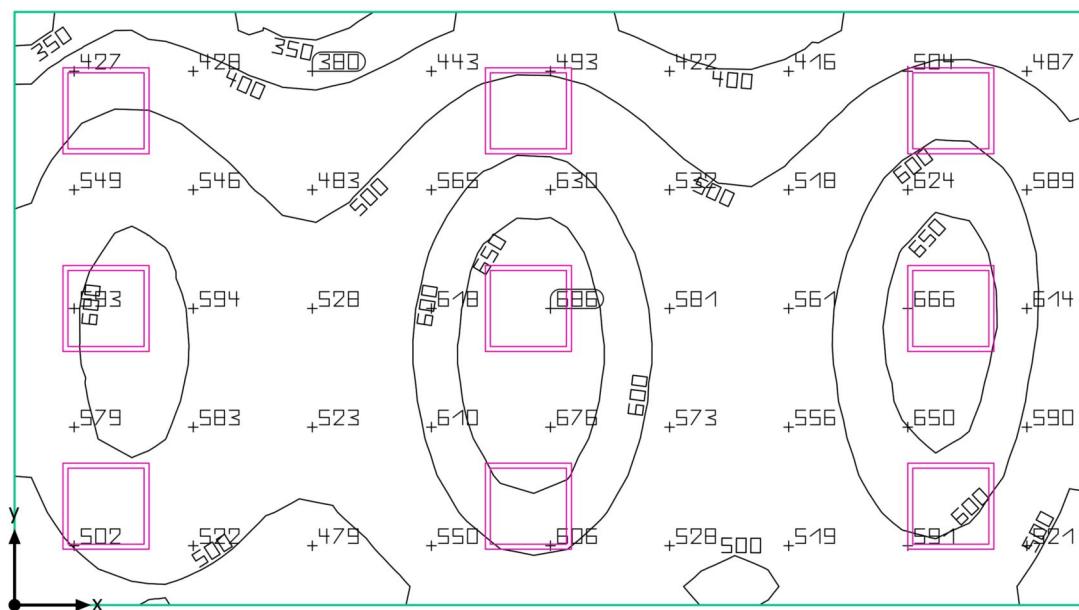
Site 1

Calculation objects

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

cuisine

Summary



cuisine

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	545 lx	$\geq 50.0 \text{ lx}$	✓
	g_1	0.60	-	-
Consumption values	Consumption	2600 kWh/a	max. 1100 kWh/a	✗
Lighting power density	Room	9.74 W/m ²	-	-
		1.79 W/m ² /100 lx	-	-

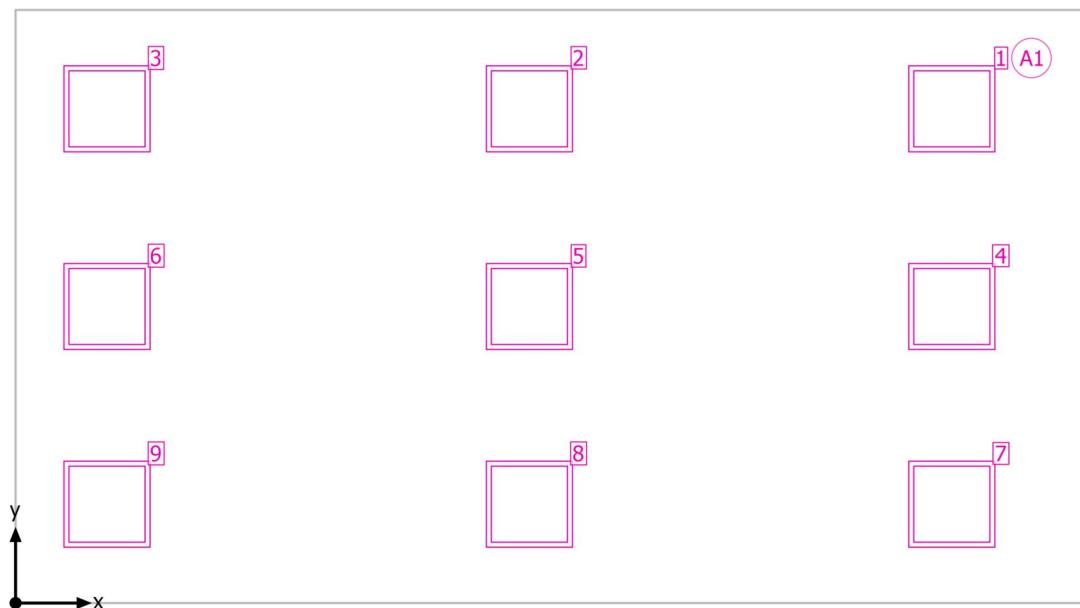
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

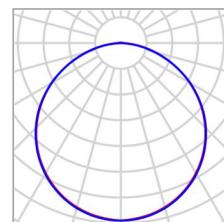
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
9	Thorn	96633218	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]	33.0 W	3799 lm	115.1 lm/W

cuisine

Luminaire layout plan



cuisine

Luminaire layout plan

Manufacturer	Thorn
Article No.	96633218
Article name	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]

9 x Thorn Lighting BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	6.481 m / 3.425 m / 2.705 m	6.481 m	3.425 m	2.705 m	[1]
X-direction	3 pcs., Center - center, 2.473 m	3.557 m	3.425 m	2.705 m	[2]
Y-direction	3 pcs., Center - center, 1.370 m	0.633 m	3.425 m	2.705 m	[3]
Arrangement	A1	6.481 m	2.055 m	2.705 m	[4]
		3.557 m	2.055 m	2.705 m	[5]
		0.633 m	2.055 m	2.705 m	[6]
		6.481 m	0.685 m	2.705 m	[7]
		3.557 m	0.685 m	2.705 m	[8]
		0.633 m	0.685 m	2.705 m	[9]

cuisine

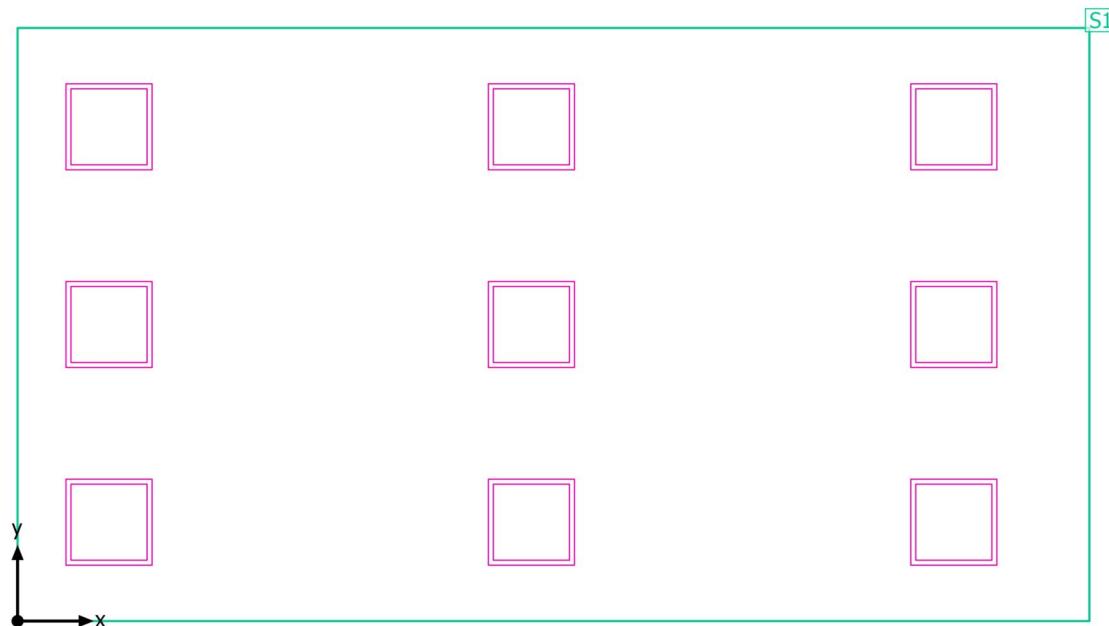
Luminaire list

Φ_{total} 34191 lm	P_{total} 297.0 W	Luminous efficacy 115.1 lm/W
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pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
9	Thorn	96633218	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]	33.0 W	3799 lm	115.1 lm/W

cuisine

Calculation objects



cuisine

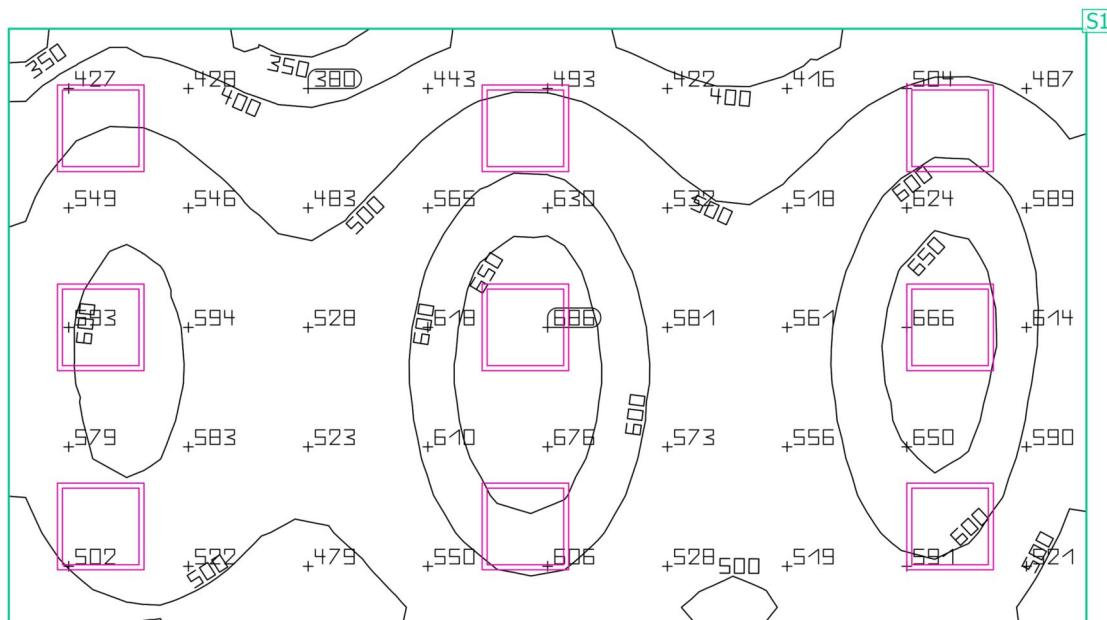
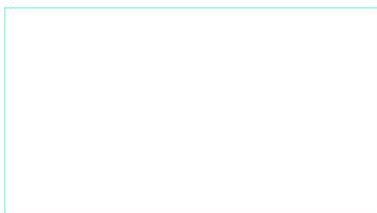
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (cuisine)	545 lx	327 lx	692 lx	0.60	0.47	S1
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.800 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

cuisine

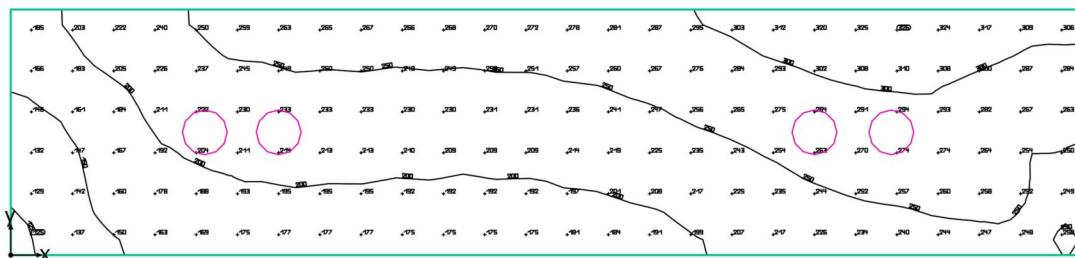
Workplane (cuisine)

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (cuisine)	545 lx (≥ 50.0 lx)	327 lx	692 lx	0.60	0.47	S1
Perpendicular illuminance (adaptive)						
Height: 0.800 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

lavabo

Summary



lavabo

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	233 lx	≥ 50.0 lx	✓
	g_1	0.52	-	-
Consumption values	Consumption	700 kWh/a	max. 450 kWh/a	✗
Lighting power density	Room	6.77 W/m ²	-	-
		2.90 W/m ² /100 lx	-	-

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

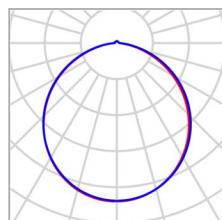
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

lavabo

Luminaire layout plan



lavabo

Luminaire layout plan

Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

2 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	5.385 m / 0.823 m / 3.948 m	5.385 m	0.823 m	3.948 m	[1]
X-direction	2 pcs., Center - center, 3.590 m	1.795 m	0.823 m	3.948 m	[2]
Arrangement	A1				

2 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.300 m / 0.823 m / 2.648 m	1.300 m	0.823 m	2.648 m	[3]
X-direction	2 pcs., Center - center, 3.590 m	5.900 m	0.823 m	2.648 m	[4]
Y-direction	1 pcs., Center - center, 1.647 m				
Arrangement	A2				

lavabo

Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
6204 lm	80.0 W	77.6 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

lavabo

Calculation objects



lavabo

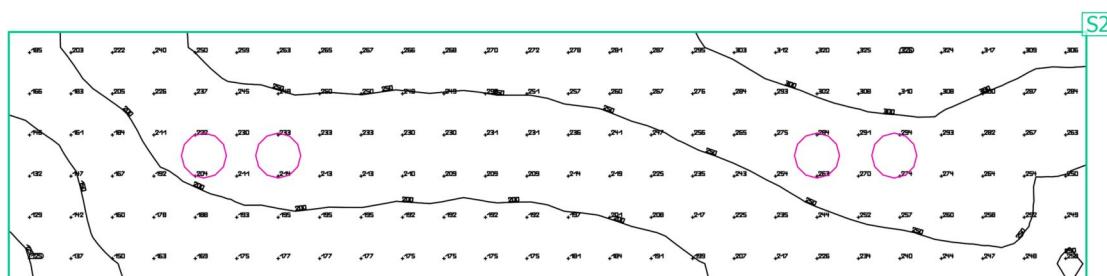
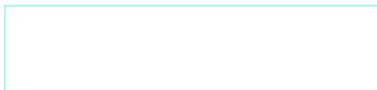
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (lavabo)	233 lx	122 lx	329 lx	0.52	0.37	S2
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

lavabo

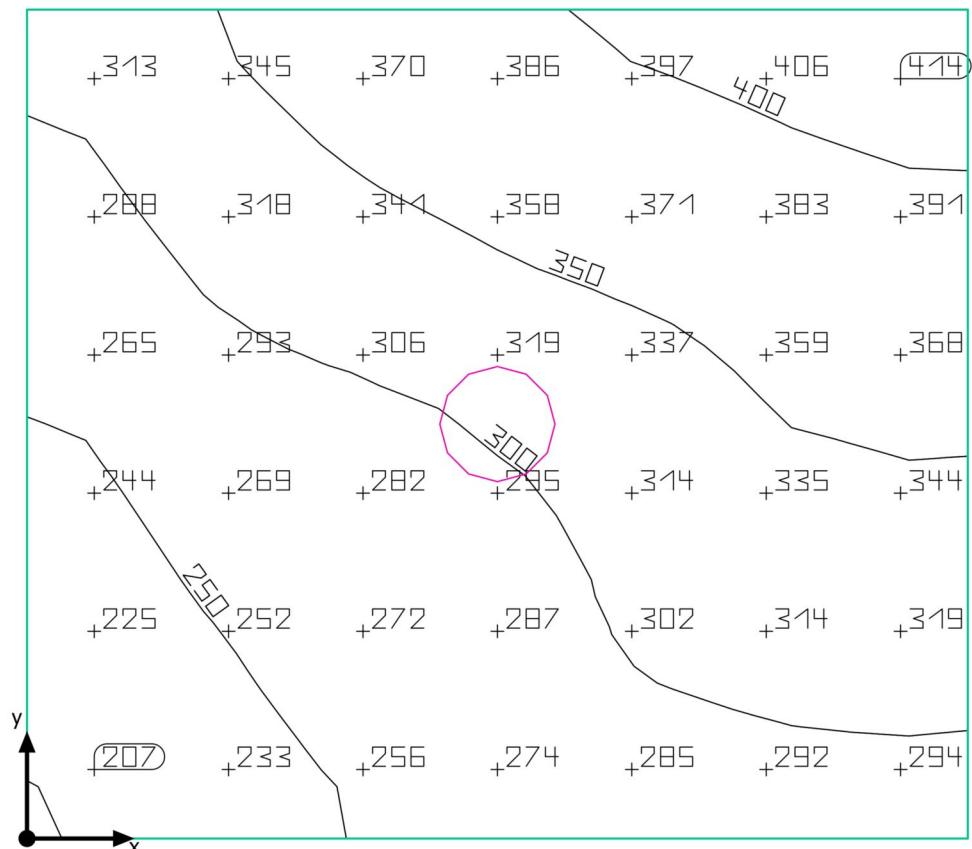
Workplane (lavabo)

Properties	\bar{E} (Target)	E_{\min}	E_{\max}	g_1	g_2	Index
Workplane (lavabo)	233 lx	122 lx	329 lx	0.52	0.37	S2
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

toilette1

Summary



toilette1

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	315 lx	$\geq 50.0 \text{ lx}$	✓
	g_1	0.63	-	-
Consumption values	Consumption	350 kWh/a	max. 200 kWh/a	✗
Lighting power density	Room	7.56 W/m ²	-	-
		2.40 W/m ² /100 lx	-	-

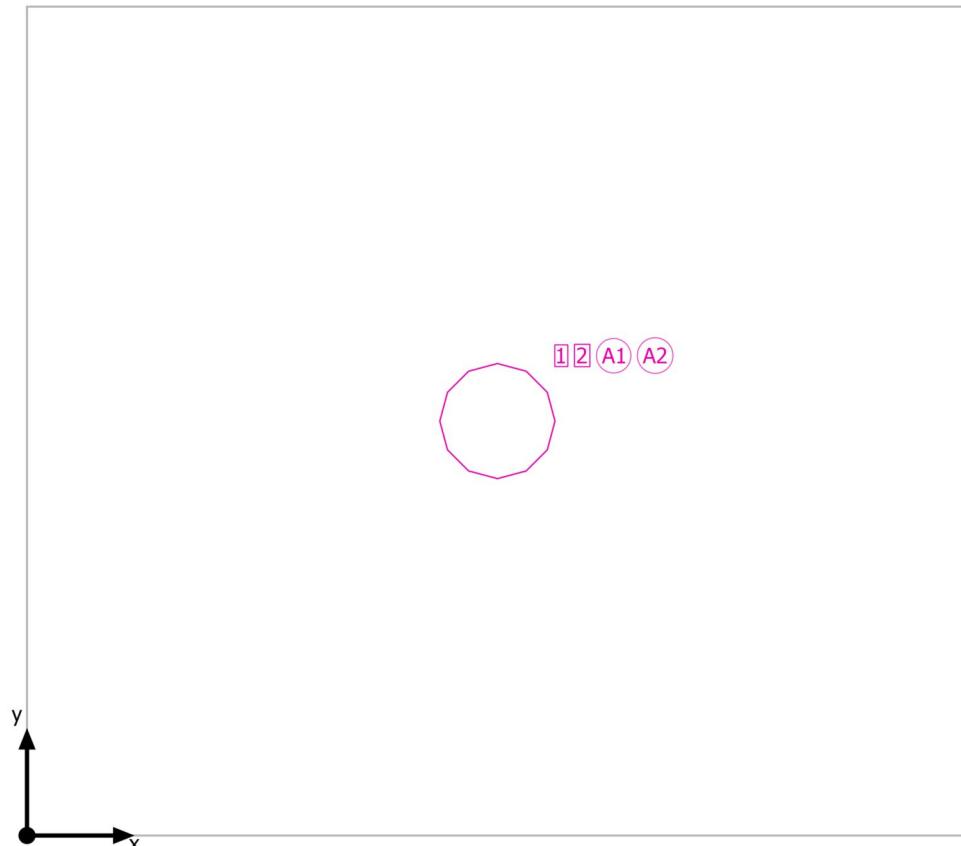
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

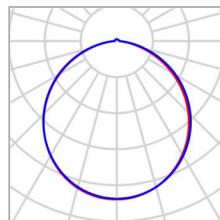
toillete1

Luminaire layout plan



toilette1

Luminaire layout plan



Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.225 m / 1.080 m / 3.948 m	1.225 m	1.080 m	3.948 m	[1]
X-direction	1 pcs., Center - center, 2.450 m				
Y-direction	1 pcs., Center - center, 2.160 m				
Arrangement	A1				

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.225 m / 1.080 m / 2.648 m	1.225 m	1.080 m	2.648 m	[2]
X-direction	1 pcs., Center - center, 2.450 m				
Y-direction	1 pcs., Center - center, 2.160 m				
Arrangement	A2				

toillete1

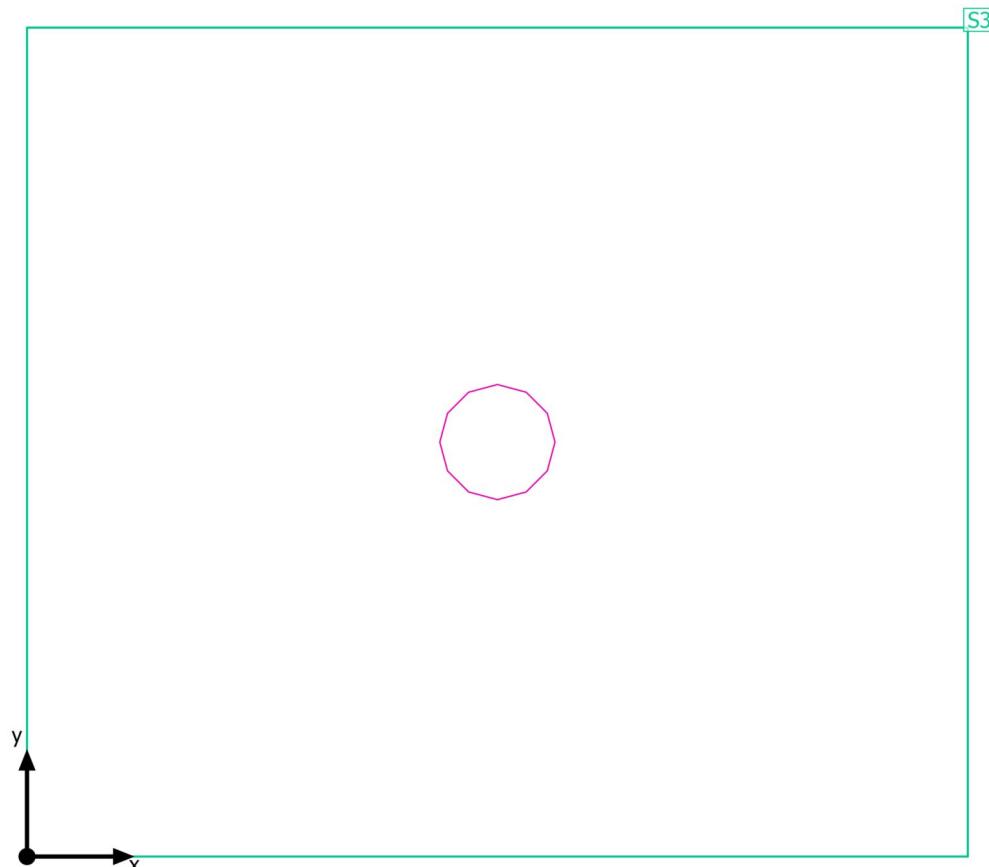
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
3102 lm	40.0 W	77.6 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

toillete1

Calculation objects



toillete1

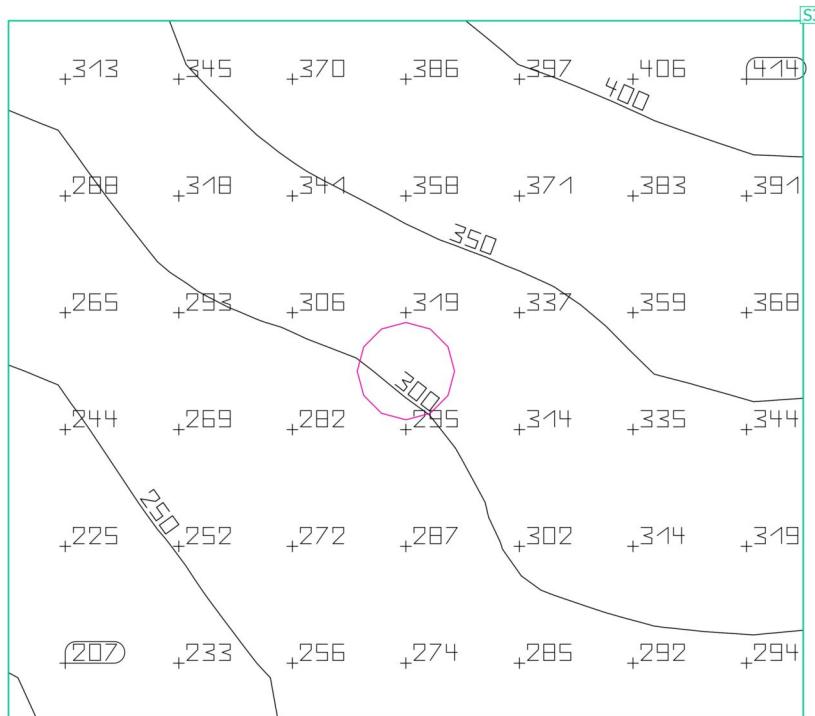
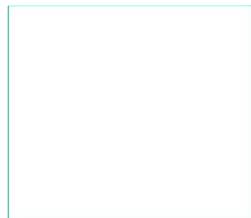
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (toillete1)	315 lx	200 lx	420 lx	0.63	0.48	S3
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

toillete1

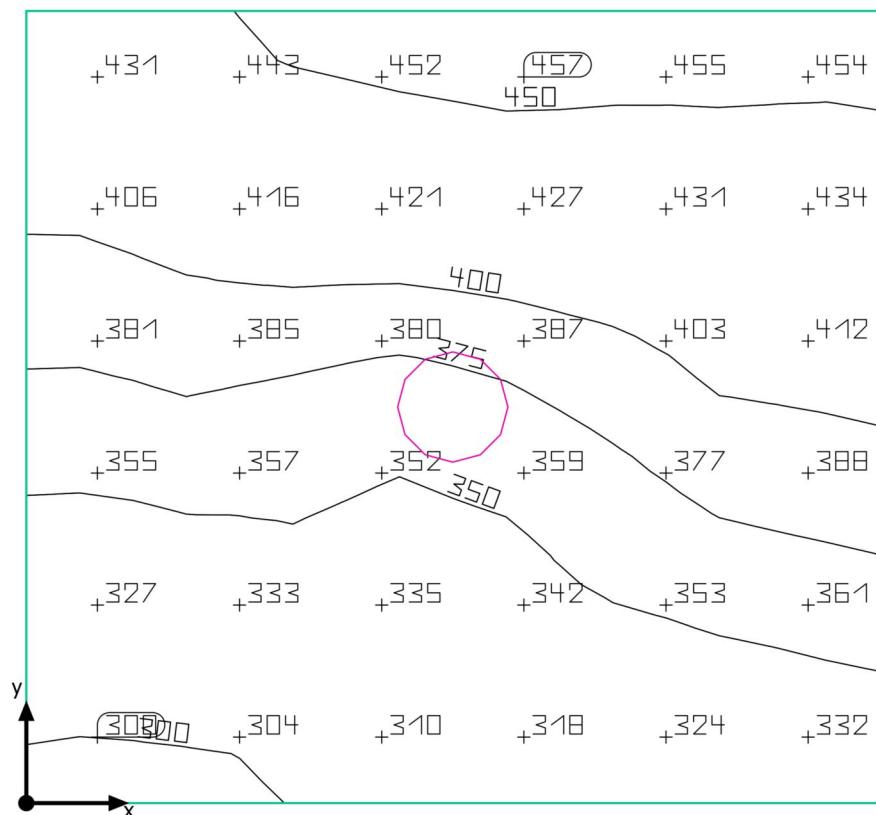
Workplane (toillete1)

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (toillete1)	315 lx	200 lx	420 lx	0.63	0.48	S3
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

toilette2

Summary



toilette2

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	381 lx	≥ 50.0 lx	✓
	g_1	0.77	-	-
Consumption values	Consumption	350 kWh/a	max. 200 kWh/a	✗
Lighting power density	Room	8.00 W/m ²	-	-
		2.10 W/m ² /100 lx	-	-

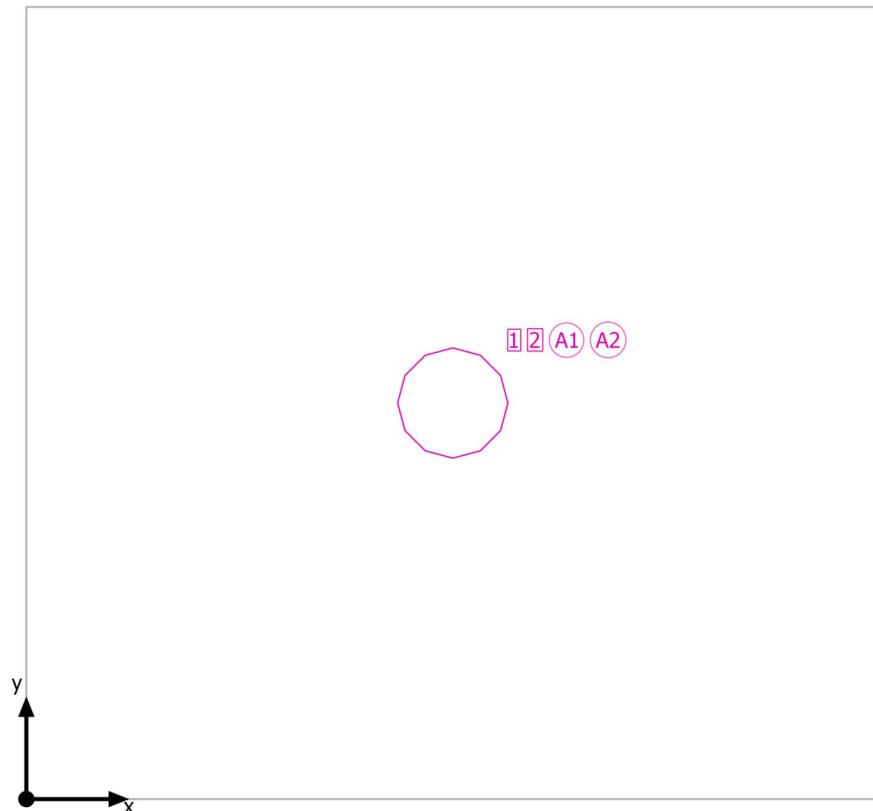
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

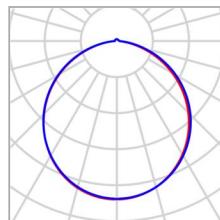
toilette2

Luminaire layout plan



toilette2

Luminaire layout plan



Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.160 m / 1.078 m / 2.596 m	1.160 m	1.078 m	2.596 m	1
X-direction	1 pcs., Center - center, 2.320 m				
Y-direction	1 pcs., Center - center, 2.156 m				
Arrangement	A1				

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.160 m / 1.078 m / 3.948 m	1.160 m	1.078 m	3.948 m	2
X-direction	1 pcs., Center - center, 2.320 m				
Y-direction	1 pcs., Center - center, 2.156 m				
Arrangement	A2				

toilette2

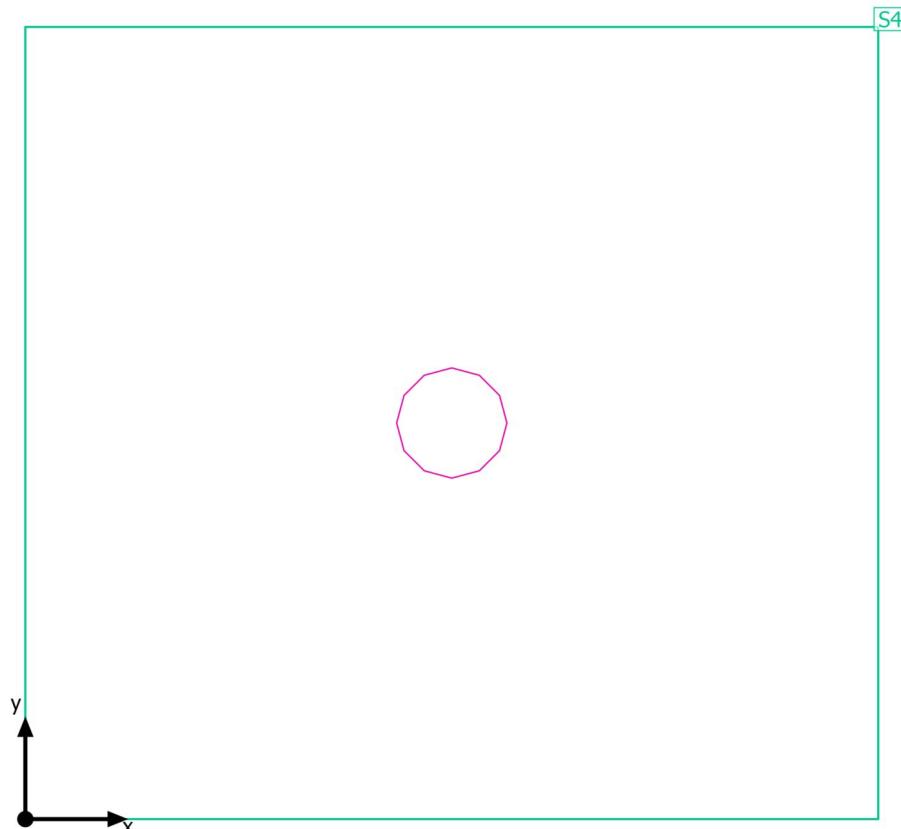
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
3102 lm	40.0 W	77.6 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

toilette2

Calculation objects



toilette2

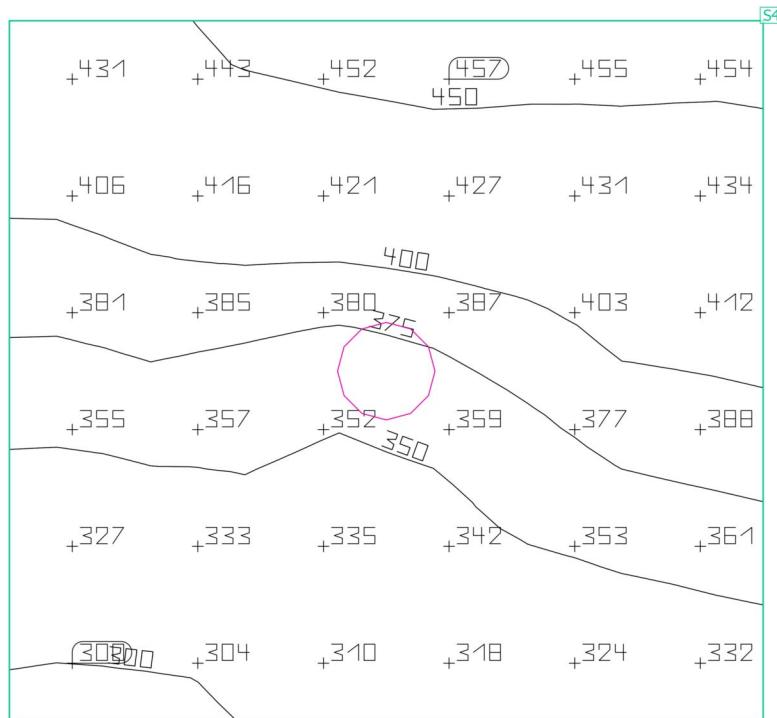
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (toilette2)	381 lx	295 lx	462 lx	0.77	0.64	S4
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

toilette2

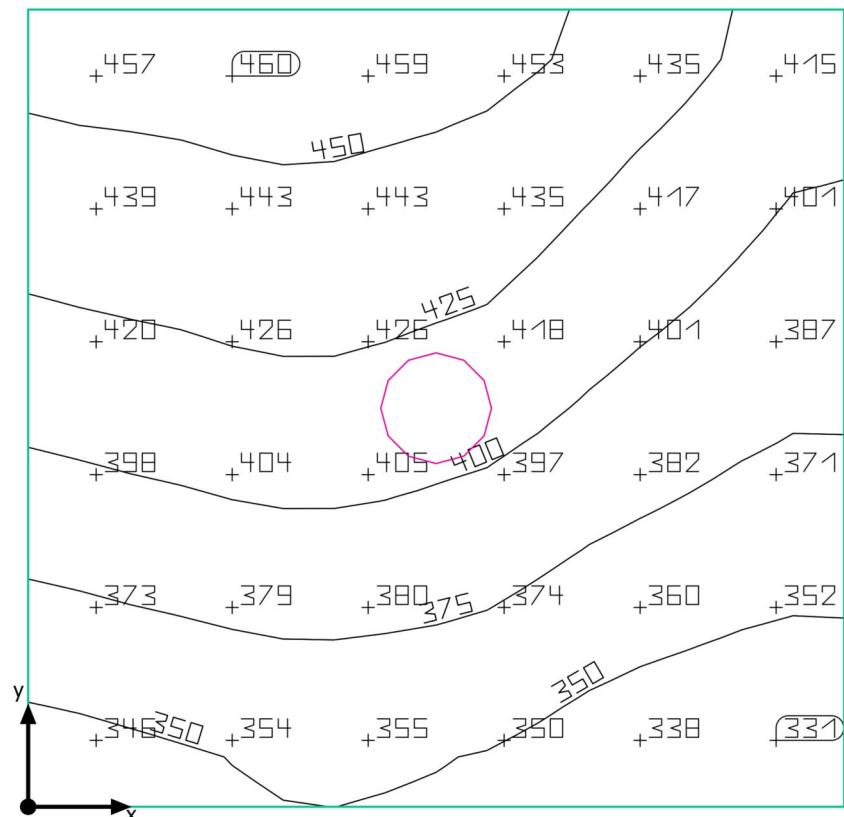
Workplane (toilette2)

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (toilette2)	381 lx	295 lx	462 lx	0.77	0.64	S4
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

toilette3

Summary



toilette3

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	400 lx	$\geq 50.0 \text{ lx}$	✓
	g_1	0.82	-	-
Consumption values	Consumption	350 kWh/a	max. 200 kWh/a	✗
Lighting power density	Room	8.38 W/m ²	-	-
		2.10 W/m ² /100 lx	-	-

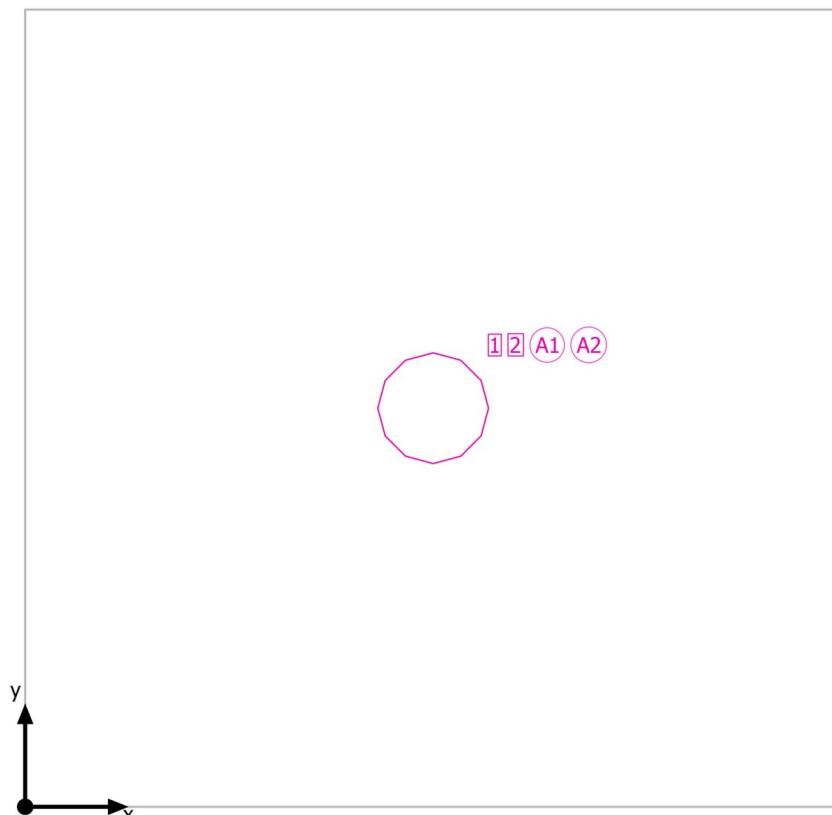
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

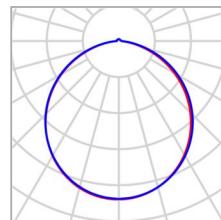
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

toilette3

Luminaire layout plan



toilette3

Luminaire layout plan

Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.105 m / 1.080 m / 2.648 m	1.105 m	1.080 m	2.648 m	[1]
X-direction	1 pcs., Center - center, 2.210 m				
Y-direction	1 pcs., Center - center, 2.160 m				
Arrangement	A1				

1 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.105 m / 1.080 m / 2.648 m	1.105 m	1.080 m	2.648 m	[2]
X-direction	1 pcs., Center - center, 2.210 m				
Y-direction	1 pcs., Center - center, 2.160 m				
Arrangement	A2				

toilette3

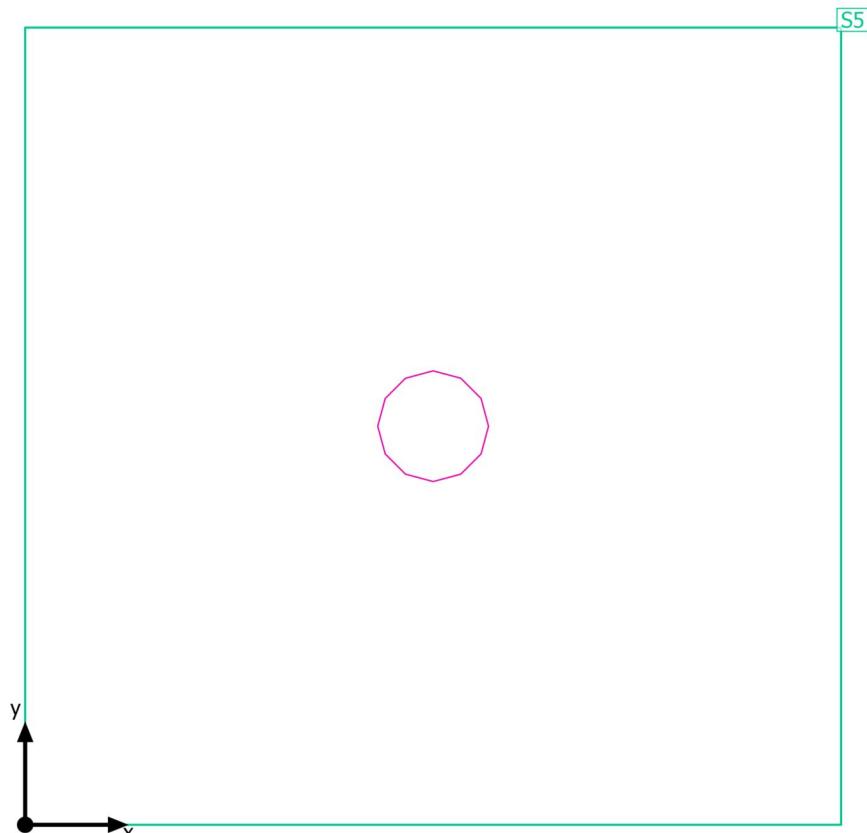
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
3102 lm	40.0 W	77.6 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

toilette3

Calculation objects



toilette3

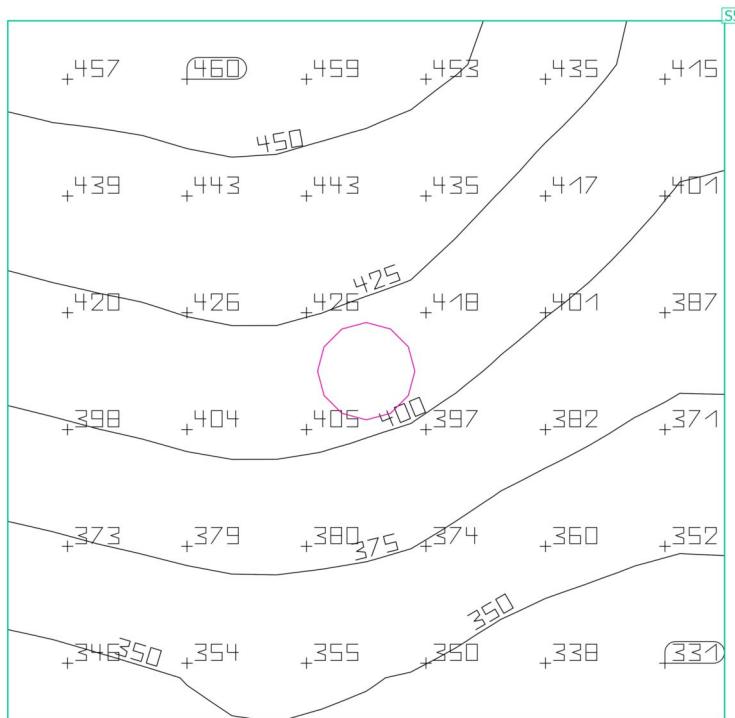
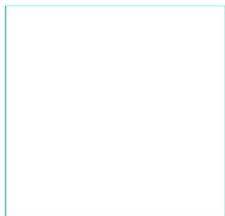
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (toilette3)	400 lx	327 lx	464 lx	0.82	0.70	S5
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

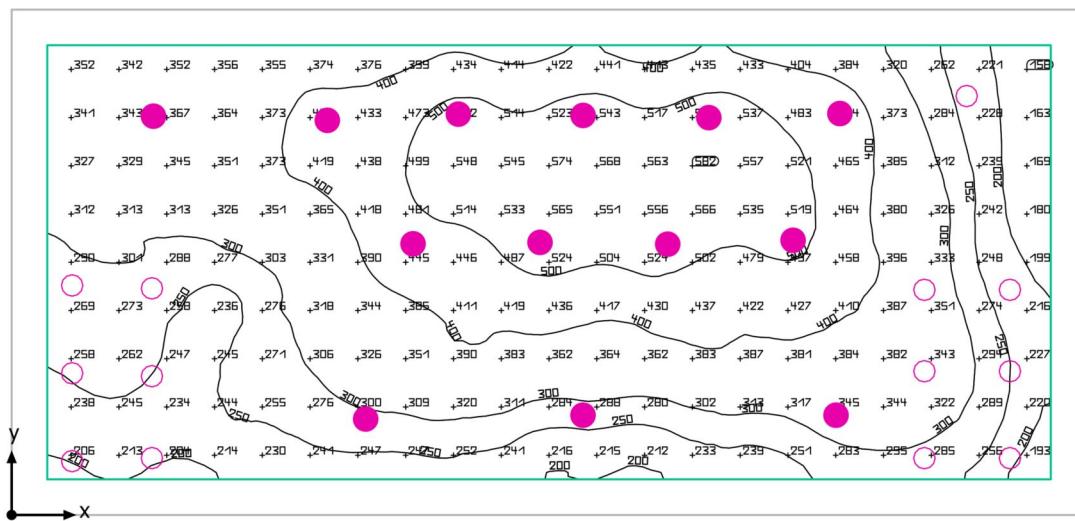
toilette3

Workplane (toilette3)

Properties	\bar{E} (Target)	E_{\min}	E_{\max}	g_1	g_2	Index
Workplane (toilette3)	400 lx	327 lx	464 lx	0.82	0.70	<input checked="" type="checkbox"/> S5
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Grande salle a manger

Summary

Grande salle a manger

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	359 lx	≥ 50.0 lx	✓
	g_1	0.40	-	-
Consumption values	Consumption	5350 kWh/a	max. 3750 kWh/a	✗
Lighting power density	Room	5.71 W/m ²	-	-
	Workplane	7.12 W/m ²	-	-
		1.98 W/m ² /100 lx	-	-

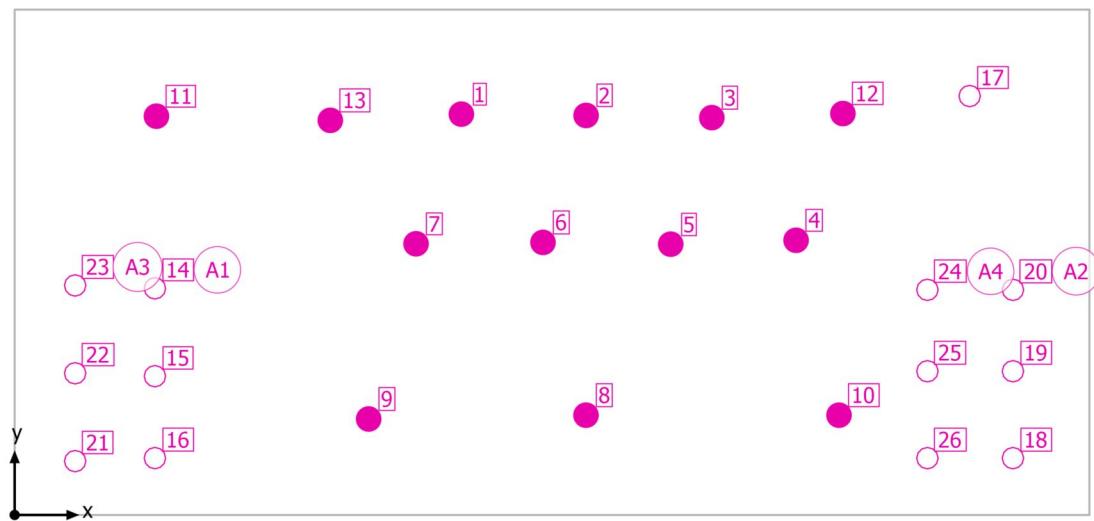
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
13	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W
13	Thorn	96632397	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]	27.0 W	2800 lm	103.7 lm/W

Grande salle a manger

Luminaire layout plan



Grande salle a manger

Luminaire layout plan

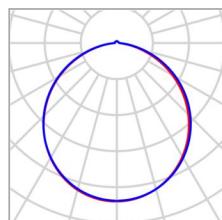


Manufacturer	Thorn
Article No.	96632397
Article name	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]

Individual luminaires

X	Y	Mounting height	Luminaire
6.268 m	5.628 m	3.500 m	[1]
8.018 m	5.609 m	3.500 m	[2]
9.782 m	5.579 m	3.500 m	[3]
10.964 m	3.857 m	3.500 m	[4]
9.205 m	3.802 m	3.500 m	[5]
7.413 m	3.827 m	3.500 m	[6]
5.632 m	3.807 m	3.500 m	[7]
8.017 m	1.401 m	3.500 m	[8]
4.967 m	1.348 m	3.300 m	[9]
11.567 m	1.401 m	3.500 m	[10]
1.989 m	5.599 m	3.500 m	[11]
11.621 m	5.636 m	3.500 m	[12]
4.429 m	5.541 m	3.500 m	[13]

Grande salle a manger

Luminaire layout plan

Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.968 m / 3.182 m / 3.300 m	1.968 m	3.182 m	3.300 m	[14]
X-direction	3 pcs., Center - center, Distances not equal	1.968 m	1.949 m	3.300 m	[15]
		1.968 m	0.799 m	3.300 m	[16]
Arrangement	A1				

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	14.007 m / 0.798 m / 3.300 m	14.007 m	0.798 m	3.300 m	[18]
X-direction	3 pcs., Center - center, Distances not equal	14.007 m	2.018 m	3.300 m	[19]
		14.007 m	3.161 m	3.300 m	[20]
Arrangement	A2				

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire

Grande salle a manger

Luminaire layout plan

1st luminaire (X/Y/Z)	0.849 m / 0.756 m / 3.300 m	X	Y	Mounting height	Luminaire
X-direction	3 pcs., Center - center, 1.233 m	0.849 m	0.756 m	3.300 m	[21]
Arrangement	A3	0.849 m	1.989 m	3.300 m	[22]
		0.849 m	3.223 m	3.300 m	[23]

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	12.807 m / 3.161 m / 3.300 m	12.807 m	3.161 m	3.300 m	[24]
X-direction	3 pcs., Center - center, Distances not equal	12.807 m	2.018 m	3.300 m	[25]
Arrangement	A4	12.807 m	0.798 m	3.300 m	[26]

Individual luminaires

X	Y	Mounting height	Luminaire
13.400 m	5.882 m	3.948 m	[17]

Grande salle a manger

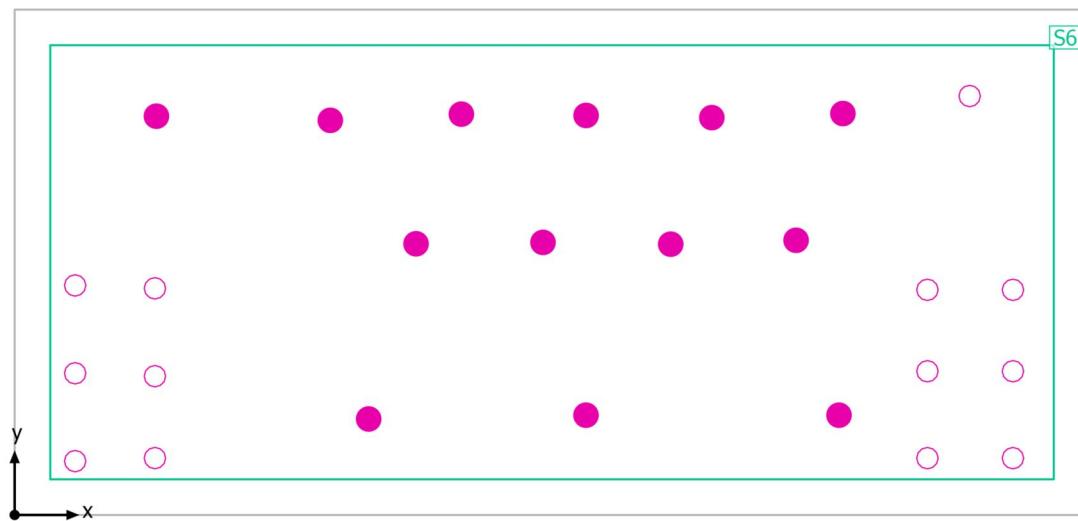
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
56563 lm	611.0 W	92.6 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
13	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W
13	Thorn	96632397	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]	27.0 W	2800 lm	103.7 lm/W

Grande salle a manger

Calculation objects



Grande salle a manger

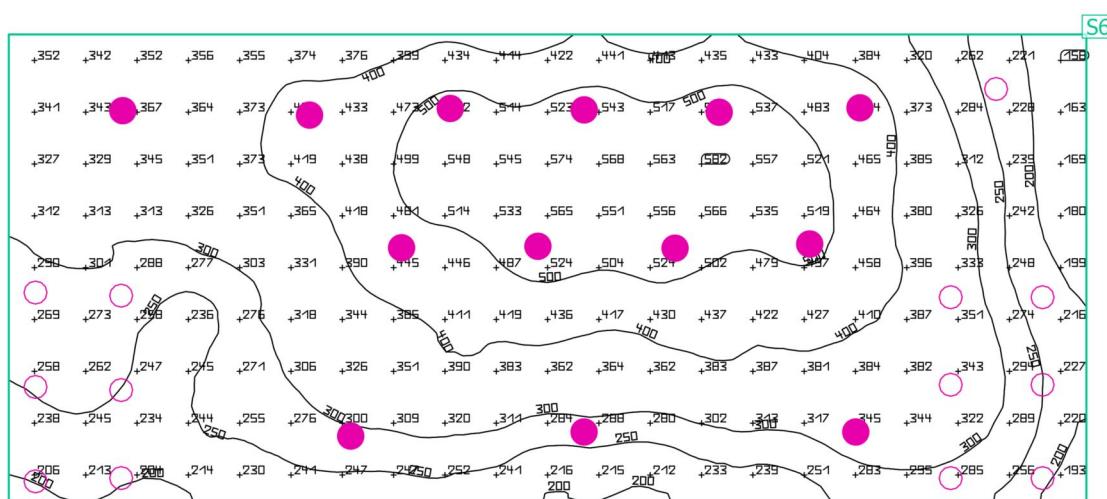
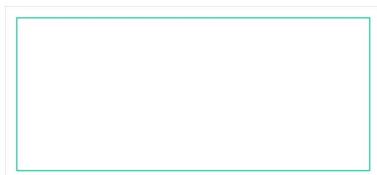
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (Grande salle a manger)	359 lx	142 lx	583 lx	0.40	0.24	S6
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.500 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Grande salle a manger

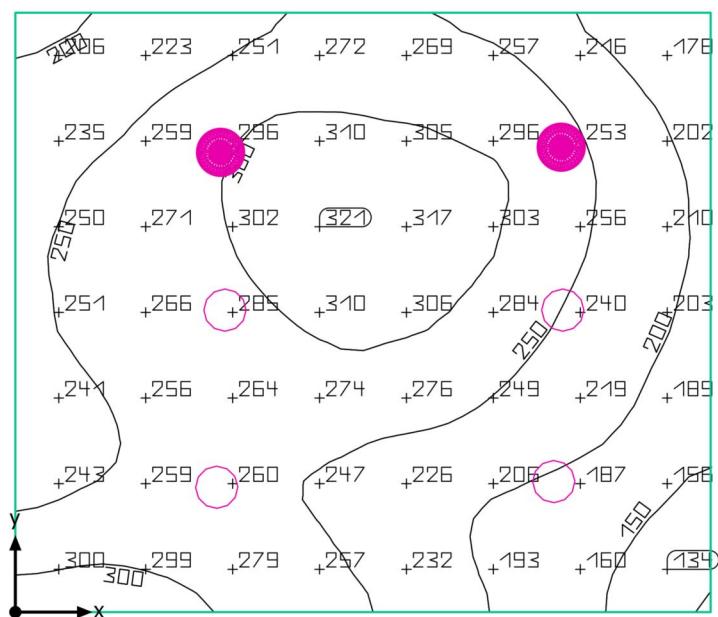
Workplane (Grande salle a manger)

Properties	\bar{E} (Target)	E_{\min}	E_{\max}	g_1	g_2	Index
Workplane (Grande salle a manger)	359 lx	142 lx	583 lx	0.40	0.24	S6
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.500 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

petite salle a manger

Summary



petite salle a manger

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	250 lx	≥ 50.0 lx	✓
	g_1	0.50	-	-
Consumption values	Consumption	1150 kWh/a	max. 750 kWh/a	✗
Lighting power density	Room	6.37 W/m ²	-	-
		2.54 W/m ² /100 lx	-	-

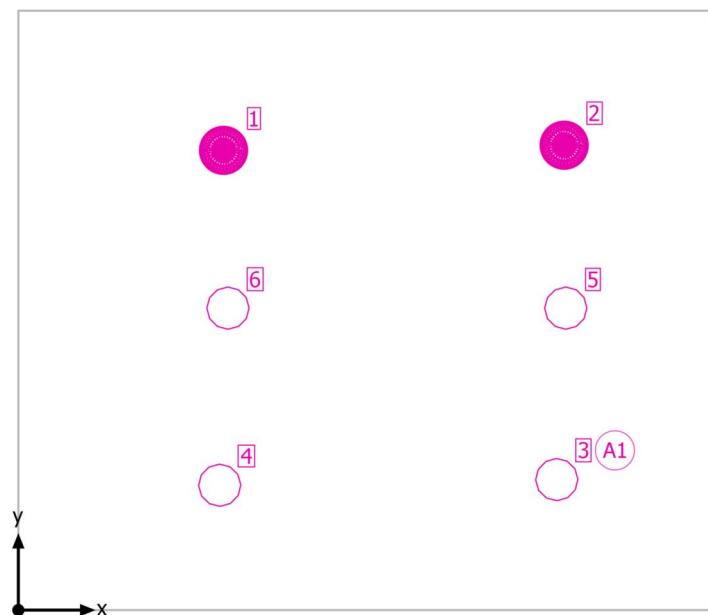
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W
2	Thorn	96632397	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]	27.0 W	2800 lm	103.7 lm/W

petite salle a manger

Luminaire layout plan



petite salle a manger

Luminaire layout plan



Manufacturer	Thorn
Article No.	96632397
Article name	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]

Individual luminaires

X	Y	Mounting height	Luminaire
1.458 m	3.269 m	3.500 m	[1]
3.878 m	3.305 m	3.500 m	[2]

petite salle a manger

Luminaire layout plan



Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

2 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Line arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	3.825 m / 0.928 m / 3.300 m	3.825 m	0.928 m	3.300 m	[3]
X-direction	2 pcs., Center - center, Distances not equal	1.431 m	0.888 m	3.300 m	[4]

Arrangement	A1
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Individual luminaires

X	Y	Mounting height	Luminaire
3.889 m	2.147 m	3.948 m	[5]
1.489 m	2.147 m	3.948 m	[6]

petite salle a manger

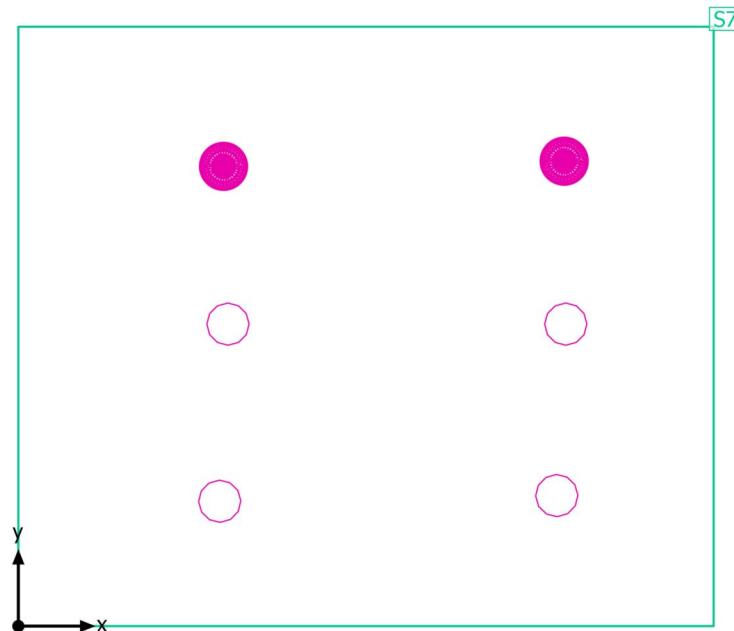
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
11804 lm	134.0 W	88.1 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W
2	Thorn	96632397	GLAC2 L LED3 3000-830 HFIX EC BK AL BK [STD]	27.0 W	2800 lm	103.7 lm/W

petite salle a manger

Calculation objects



petite salle a manger

Calculation objects

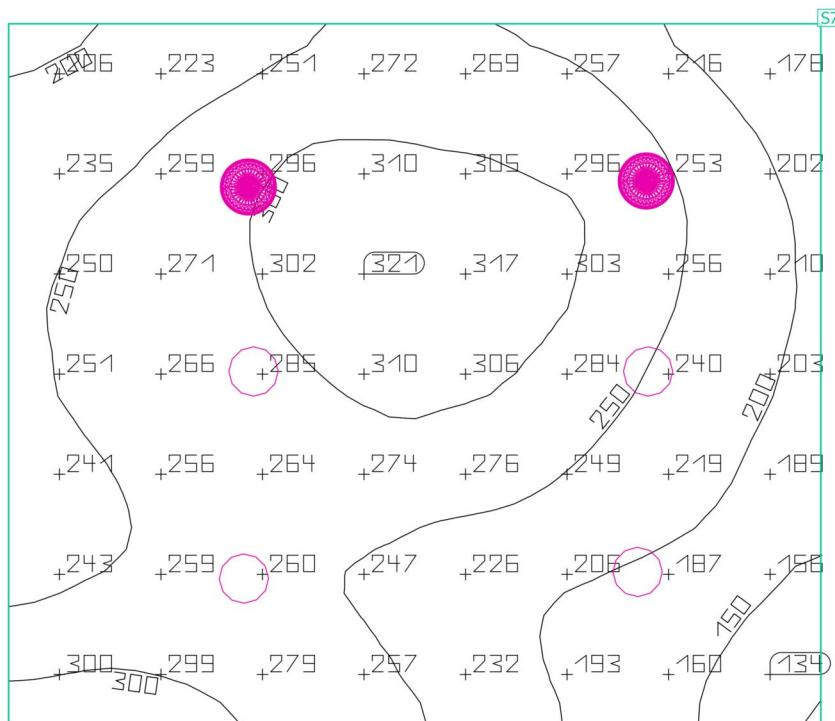
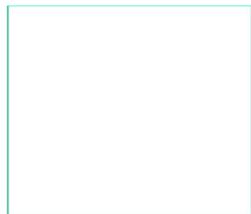
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (petite salle a manger)	250 lx	125 lx	321 lx	0.50	0.39	S7
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

petite salle a manger

Workplane (petite salle a manger)

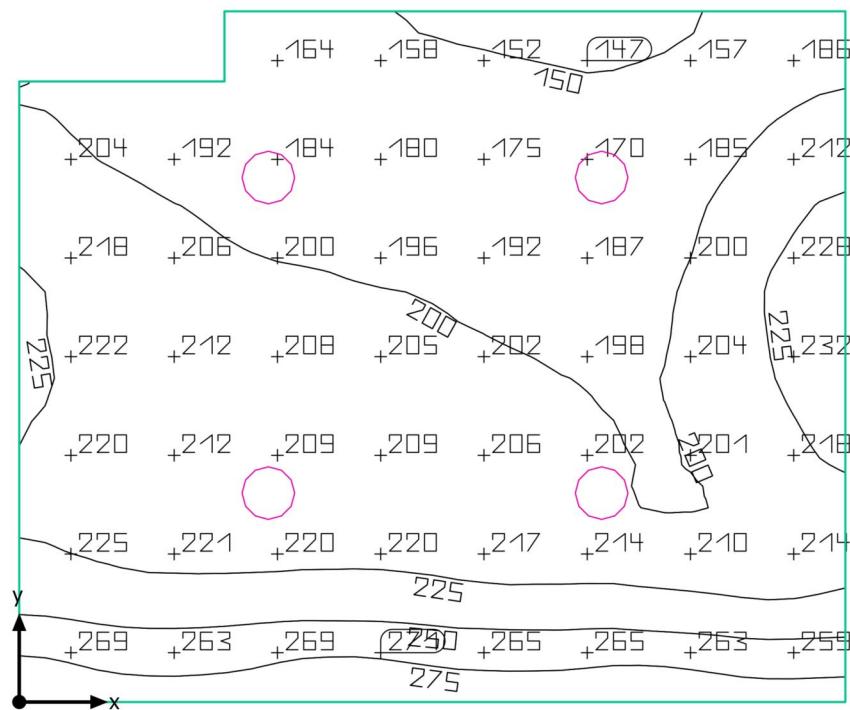


Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (petite salle a manger) Perpendicular illuminance (adaptive) Height: 0.000 m, Wall zone: 0.000 m	250 lx (≥ 50.0 lx) 	125 lx	321 lx	0.50	0.39	S7

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

service au volant

Summary



service au volant

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	209 lx	$\geq 50.0 \text{ lx}$	✓
	g_1	0.67	-	-
Consumption values	Consumption	700 kWh/a	max. 650 kWh/a	✗
Lighting power density	Room	4.42 W/m ²	-	-
		2.11 W/m ² /100 lx	-	-

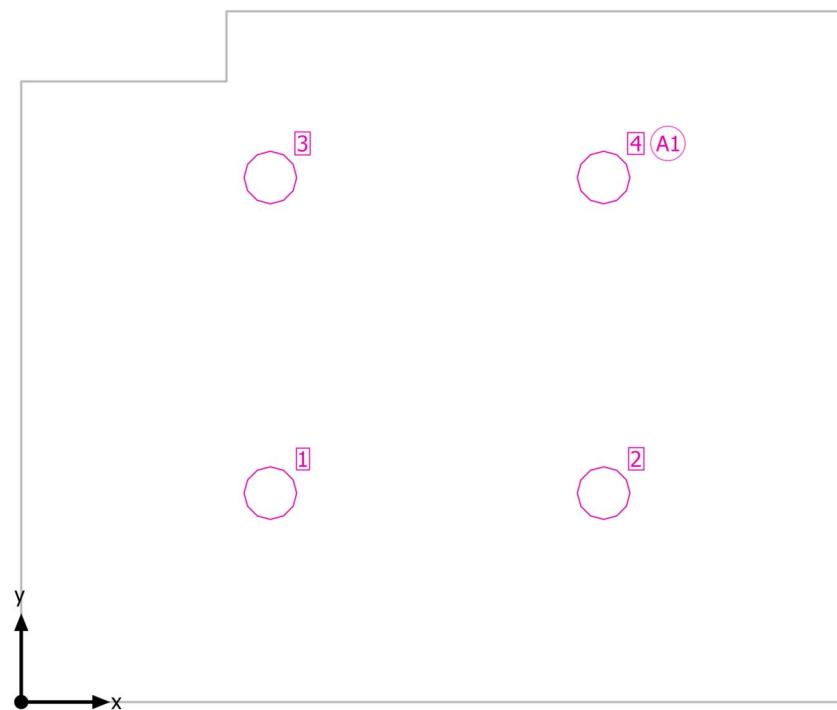
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

service au volant

Luminaire layout plan



service au volant

Luminaire layout plan



Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

4 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.420 m / 1.192 m / 3.300 m	1.420 m	1.192 m	3.300 m	[1]
X-direction	2 pcs., Center - center, 2.355 m	3.320 m	1.192 m	3.300 m	[2]
Y-direction	2 pcs., Center - center, 1.970 m	1.420 m	2.992 m	3.300 m	[3]
Arrangement	A1	3.320 m	2.992 m	3.300 m	[4]

service au volant

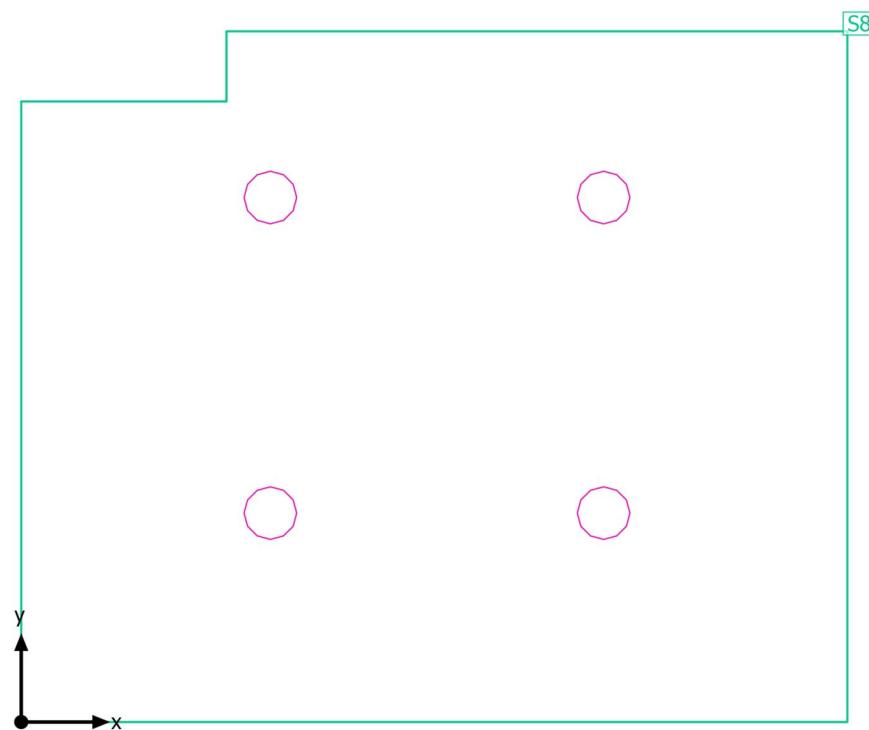
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
6204 lm	80.0 W	77.6 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
4	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

service au volant

Calculation objects



service au volant

Calculation objects

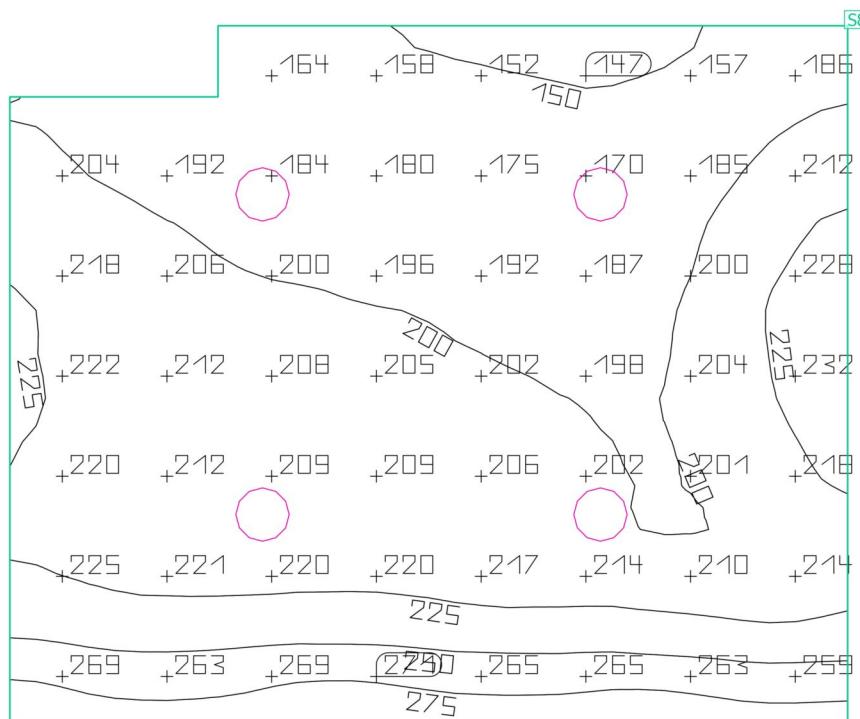
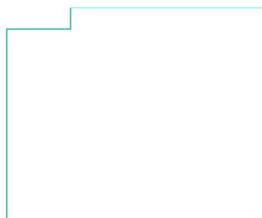
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (service au volant)	209 lx	140 lx	294 lx	0.67	0.48	S8
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

service au volant

Workplane (service au volant)

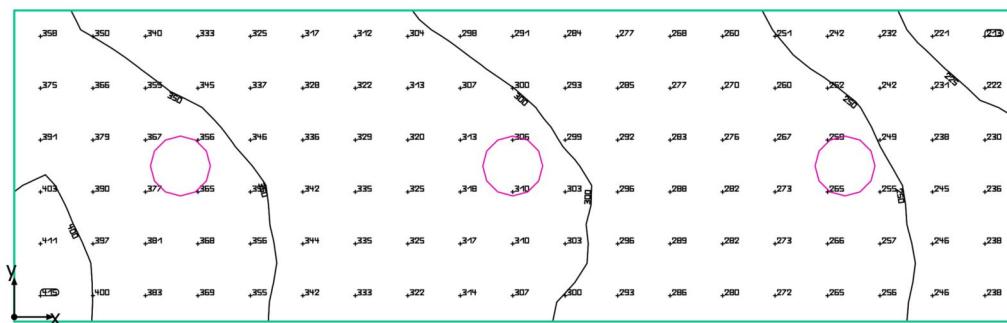


Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (service au volant)	209 lx	140 lx	294 lx	0.67	0.48	S8
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

local technique

Summary



local technique

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	306 lx	$\geq 50.0 \text{ lx}$	✓
	g_1	0.69	-	-
Consumption values	Consumption	530 kWh/a	max. 300 kWh/a	✗
Lighting power density	Room	7.71 W/m ²	-	-
		2.52 W/m ² /100 lx	-	-

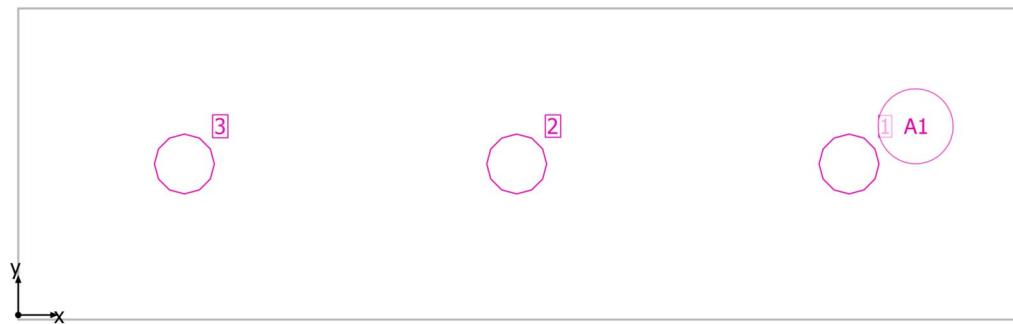
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

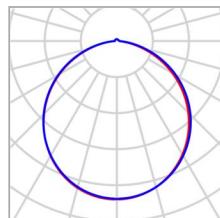
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

local technique

Luminaire layout plan



local technique

Luminaire layout plan

Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

3 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	4.158 m / 0.757 m / 2.648 m	4.158 m	0.757 m	2.648 m	[1]
X-direction	3 pcs., Center - center, 1.663 m	2.495 m	0.757 m	2.648 m	[2]
Y-direction	1 pcs., Center - center, 1.560 m	0.832 m	0.757 m	2.648 m	[3]
Arrangement	A1				

local technique

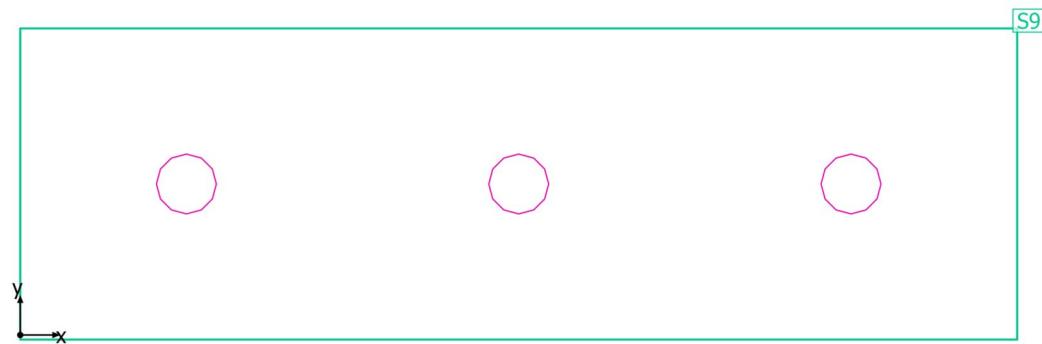
Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
4653 lm	60.0 W	77.6 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
3	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

local technique

Calculation objects



local technique

Calculation objects

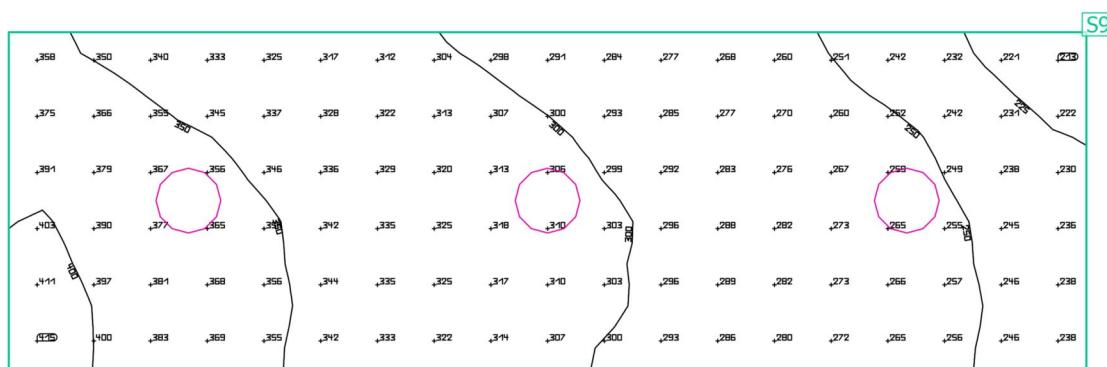
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (local technique)	306 lx	210 lx	414 lx	0.69	0.51	S9
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

local technique

Workplane (local technique)

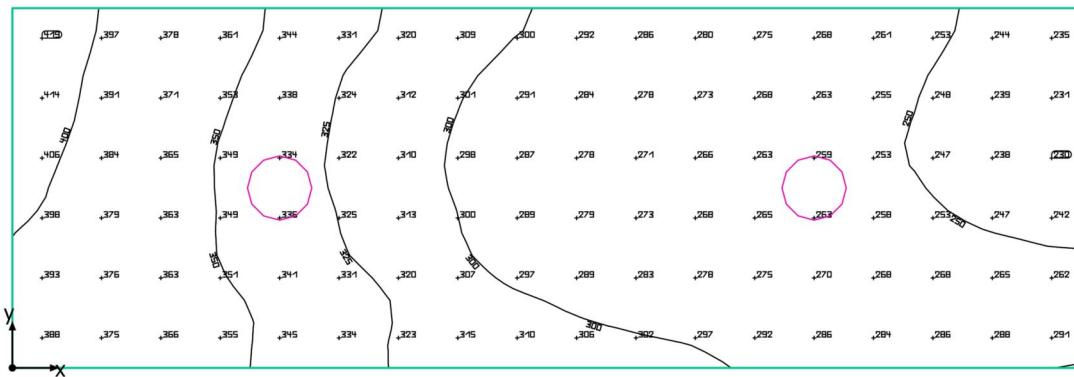


Properties	\bar{E} (Target)	E_{\min}	E_{\max}	g_1	g_2	Index
Workplane (local technique)	306 lx	210 lx	414 lx	0.69	0.51	S9
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

couloir

Summary



couloir

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	306 lx	≥ 50.0 lx	✓
	g_1	0.75	-	-
Consumption values	Consumption	350 kWh/a	max. 300 kWh/a	✗
Lighting power density	Room	4.77 W/m ²	-	-
		1.56 W/m ² /100 lx	-	-

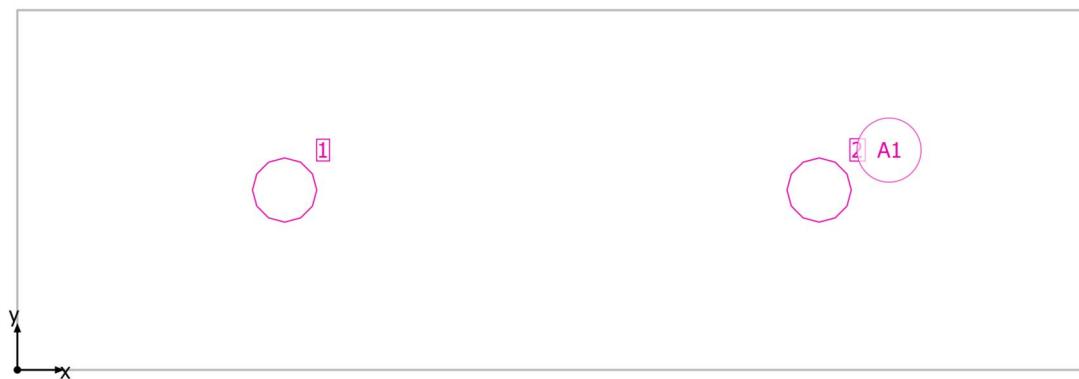
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

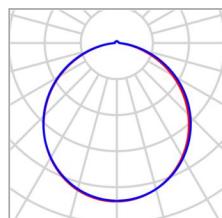
pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

couloir

Luminaire layout plan



couloir

Luminaire layout plan

Manufacturer	Thorn
Article No.	96631488
Article name	OMEGA C LED1500-830 HF R300 [STD]

2 x Thorn Lighting OMEGA C LED1500-830 HF R300 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	1.248 m / 0.840 m / 2.700 m	1.248 m	0.840 m	2.700 m	[1]
X-direction	2 pcs., Center - center, 2.495 m	3.743 m	0.840 m	2.700 m	[2]
Y-direction	1 pcs., Center - center, 1.680 m				
Arrangement	A1				

couloir

Luminaire list

Φ_{total}	P_{total}	Luminous efficacy
3102 lm	40.0 W	77.6 lm/W

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96631488	OMEGA C LED1500-830 HF R300 [STD]	20.0 W	1551 lm	77.5 lm/W

couloir

Calculation objects



couloir

Calculation objects

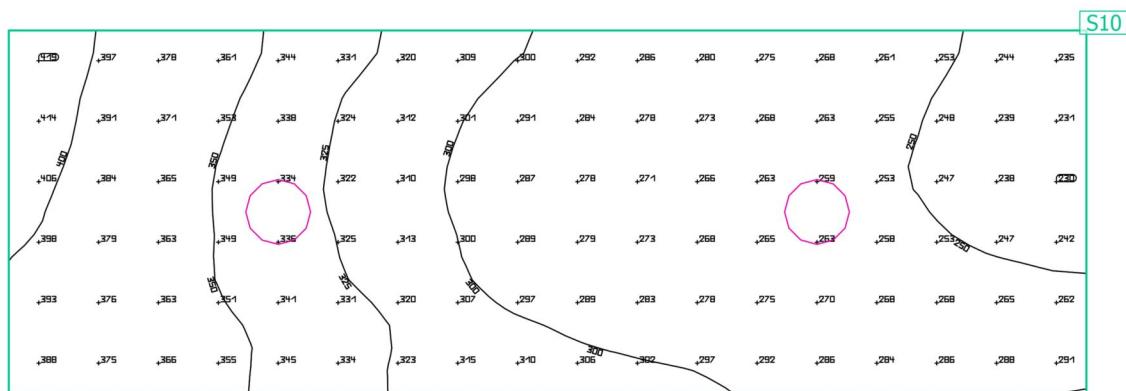
Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (couloir)	306 lx	228 lx	423 lx	0.75	0.54	S10
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

couloir

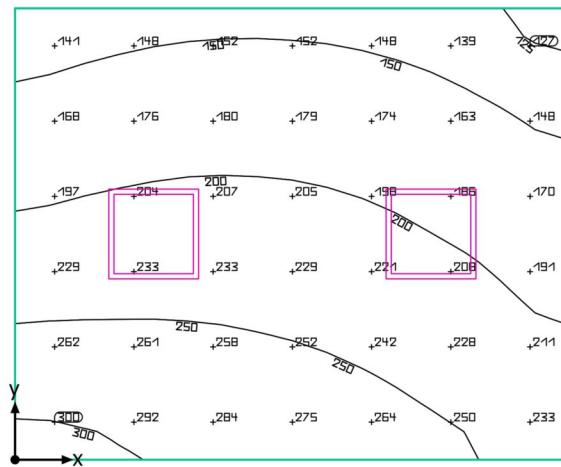
Workplane (couloir)



Properties	\bar{E} (Target)	E_{\min}	E_{\max}	g_1	g_2	Index
Workplane (couloir)	306 lx	228 lx	423 lx	0.75	0.54	S10
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Groupe électrogene

Summary

Groupe électrogene

Summary

Results

	Symbol	Calculated	Target	Check
Workplane	\bar{E}	208 lx	≥ 50.0 lx	✓
	g_1	0.58	-	-
Consumption values	Consumption	580 kWh/a	max. 400 kWh/a	✗
Lighting power density	Room	5.98 W/m ²	-	-
		2.88 W/m ² /100 lx	-	-

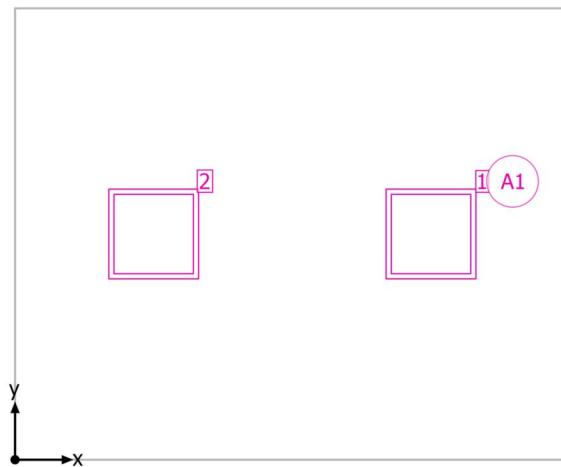
Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Luminaire list

pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96633218	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]	33.0 W	3799 lm	115.1 lm/W

Groupe électrogene

Luminaire layout plan



Groupe électrogene

Luminaire layout plan



Manufacturer	Thorn
Article No.	96633218
Article name	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]

2 x Thorn Lighting BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]

Type	Field Arrangement	X	Y	Mounting height	Luminaire
1st luminaire (X/Y/Z)	2.760 m / 1.500 m / 3.800 m	2.760 m	1.500 m	3.800 m	[1]
X-direction	2 pcs., Center - center, 1.840 m	0.920 m	1.500 m	3.800 m	[2]
Y-direction	1 pcs., Center - center, 3.000 m				
Arrangement	A1				

Groupe électrogene

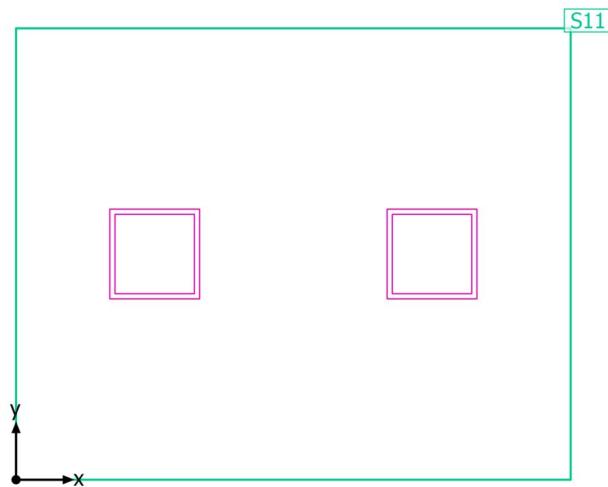
Luminaire list

Φ_{total} 7598 lm	P_{total} 66.0 W	Luminous efficacy 115.1 lm/W
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pcs.	Manufacturer	Article No.	Article name	P	Φ	Luminous efficacy
2	Thorn	96633218	BETA 2 LED3800-840 HFIX OP IP65 Q600 [STD]	33.0 W	3799 lm	115.1 lm/W

Groupe électrogene

Calculation objects



Groupe électrogene

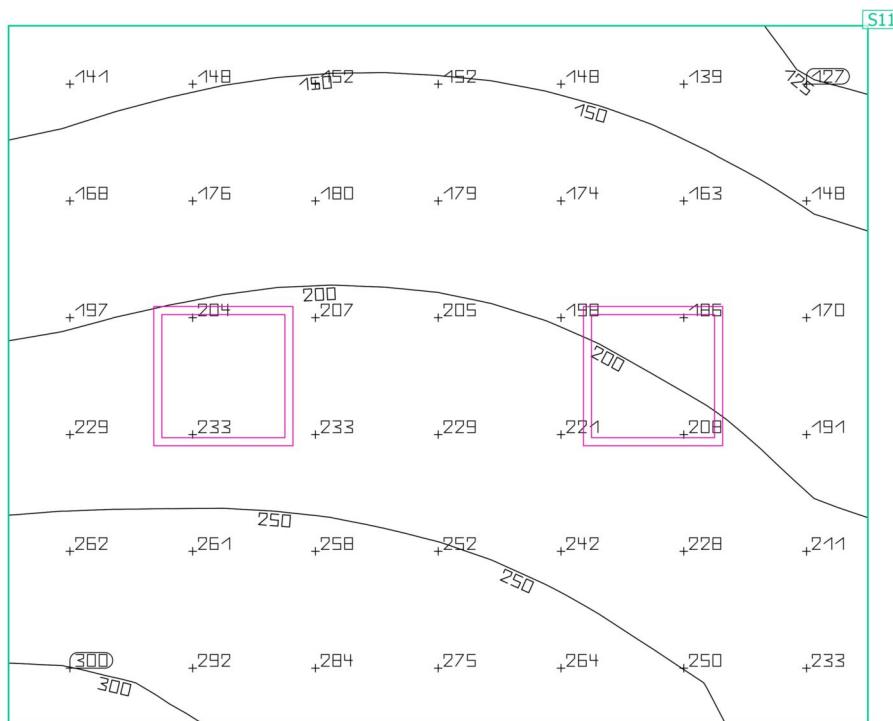
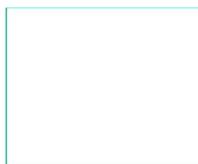
Calculation objects

Work planes

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (Groupe électrogene)	208 lx	120 lx	311 lx	0.58	0.39	S11
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Groupe électrogene

Workplane (Groupe électrogène)

Properties	\bar{E} (Target)	E_{min}	E_{max}	g_1	g_2	Index
Workplane (Groupe électrogène)	208 lx	120 lx	311 lx	0.58	0.39	S11
Perpendicular illuminance (adaptive)	(≥ 50.0 lx)					
Height: 0.000 m, Wall zone: 0.000 m	✓					

Utilisation profile: DIALux presetting, Standard (outdoor transportation area)

Glossary

A

A

Formula symbol for a surface in the geometry

B

Background area

The background area borders the direct ambient area according to DIN EN 12464-1 and reaches up to the borders of the room. In larger rooms, the background area is at least 3 m wide. It is located horizontally at floor level.

C

CCT

(Engl. correlated color temperature)

Body temperature of a thermal radiator that serves to describe its light color. Unit: Kelvin [K]. The lesser the numerical value the redder; the greater the numerical value the bluer the light color. The color temperature of gas-discharge lamps and semi-conductors are termed "correlated color temperature" in contrast to the color temperature of thermal radiators.

Allocation of the light colors to the color temperature ranges acc. to EN 12464-1:

Light color - color temperature [K]

warm white (ww) < 3,300 K

neutral white (nw) ≥ 3,300 – 5,300 K

daylight white (dw) > 5,300 K

Clearance height

The designation for the distance between upper edge of the floor and bottom edge of the ceiling (in the completely furnished status of room).

CRI

(Engl. color rendering index)

Designation for the color rendering index of a luminaire or a lamp acc. to DIN 6169: 1976 or CIE 13.3: 1995.

The general color rendering index Ra (or CRI) is a dimensionless figure that describes the quality of a white light source in regards to its similarity with the remission spectra of defined 8 test colors (see DIN 6169 or CIE 1974) to a reference light source.

D

Daylight factor

Ratio of the illuminance achieved solely by daylight incidence at a point in the inside to the horizontal illuminance in the outer area under an unobstructed sky.

Formula symbol: D (Engl. daylight factor)

Unit: %

Glossary

Daylight quotient effective area	A calculation surface within which the daylight quotient is calculated.
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E

Eta (η)	(light output ratio) The light output ratio describes what percentage of the luminous flux of a free radiating lamp (or LED module) is emitted by the luminaire when installed. Unit: %
----------------	---

G

g1	Often also Uo (Engl. overall uniformity) Designates the overall uniformity of the illuminance on a surface. It is the quotient from Emin to \bar{E} and is required, for instance, in standards for illumination of workstations.
g2	Actually it designates the "non-uniformity" of the illuminance on a surface. It is the quotient of Emin to Emax and is generally only relevant for certifying the emergency lighting acc. to EN 1838.

I

Illuminance	Describes the ratio of the luminous flux that strikes a certain surface to the size of this surface ($\text{lm/m}^2 = \text{lx}$). The illuminance is not tied to an object surface. It can be determined anywhere in space (inside or outside). The illuminance is not a product feature because it is a recipient value. Luxometers are used for measuring. Unit: Lux Abbreviation: lx Formula symbol: E
Illuminance, adaptive	For the determining of the middle adaptive illuminance on a surface, this is rastered "adaptively". In the area of large illuminance differences within the surface, the raster is subdivided finer; within lesser differences, a rougher classification is made.
Illuminance, horizontal	Illuminance that is calculated or measured on a horizontal (level) surface (this can be for example a table top or the floor). The horizontal illuminance is usually identified by the formula letter Eh.
Illuminance, perpendicular	Illuminance that is calculated or measured plumb-vertical to a surface. This needs to be taken into account for tilted surfaces. If the surface is horizontal or vertical, then there is no difference between the perpendicular and the horizontal or vertical illuminance.

Glossary

Illuminance, vertical	Illuminance that is calculated or measured on a vertical surface (this can be for example the front of some shelves). The vertical illuminance is usually identified by the formula letter E_v .
------------------------------	--

L

LENI	(Engl. lighting energy numeric indicator) Lighting energy numeric indicator acc. to EN 15193 Unit: kWh/m ² year
Light loss factor	See MF
LLMF	(Engl. lamp lumen maintenance factor)/acc. to CIE 97: 2005 Lamp flux maintenance factor that takes the luminous flux reduction into account of a luminaire or an LED module in the course of the operating time. The lamp flux maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no luminous flux reduction existing).
LMF	(Engl. luminaire maintenance factor)/acc. to CIE 97: 2005 Luminaire maintenance factor that takes the soiling into account of the luminaire in the course of the operating time. The luminaire maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no soiling existing).
LSF	(Engl. lamp survival factor)/acc. to CIE 97: 2005 Lamp survival factor that takes the total failure into account of a luminaire in the course of the operating time. The lamp survival factor is specified as a decimal digit and can have a maximum value of 1 (no failures existing within the time concerned or prompt replacement after the failure).
Luminance	Dimension for the "brightness impression" that the human eye has of a surface. The surface itself can emit light thereby or light striking it can be reflected (emitter value). It is the only photometric value that the human eye can perceive. Unit: Candela per square meter Abbreviation: cd/m ² Formula symbol: L
Luminous efficacy	Ratio of the emitted luminous flux Φ [lm] to the absorbed electrical power P [W] Unit: lm/W. This ratio can be formed for the lamp or LED module (lamp or module light output), the lamp or module with control gear (system light output) and the complete luminaire (luminaire light output).

Glossary

Luminous flux Dimension for the total light output that is emitted from one light source in all directions. It is thus an "emitter value" that specifies the entire emitting output. The luminous flux of a light source can only be determined in a laboratory. A difference is made between the lamp or LED module luminous flux and the luminaire luminous flux.

Unit: Lumen
Abbreviation: lm
Formula symbol: Φ

Luminous intensity Describes the intensity of the light in a certain direction (emitter value). The luminous intensity is a matter of the luminous flux Φ that is emitted in a certain spherical angle Ω . The radiation characteristics of a light source are presented graphically in a light distribution curve (LDC). The luminous intensity is an SI base unit.

Unit: Candela
Abbreviation: cd
Formula symbol: I

M

MF (Engl. maintenance factor)/acc. to CIE 97: 2005 Maintenance factor as decimal number between 0 and 1 that describes the ratio of the new value of a photometric planning parameter (e.g. of the illuminance) to a maintenance value after a certain time. The maintenance factor takes into account the soiling of luminaires and rooms as well as the luminous flux reduction and the failure of light sources. The maintenance factor is taken into account either overall or determined in detail acc. to CIE 97: 2005 by the formula RMF x LMF x LLMF x LSF.

P

P (Engl. power)
Electric power consumption
Unit: watt
Abbreviation: W

R

Reflection factor The reflection degree of a surface describes how much of the striking light is reflected back. The reflection degree is defined by the color of the surface.

Glossary

RMF	(Engl. room surface maintenance factor)/acc. to CIE 97: 2005 Room surface maintenance factor that takes the soiling into account of the space encompassing surfaces in the course of the operating time. The room surface maintenance factor is specified as a decimal digit and can have a maximum value of 1 (no soiling existing).
S	
Surrounding area	The ambient area directly borders the area of the visual task and should be planned with a width of at least 0.5 m according to DIN EN 12464-1. It is at the same height as the area of the visual task.
U	
UGR (max)	(unified glare rating) Measure for the psychological glare effect in interiors. In addition to luminaire luminance, the UGR value also depends on the position of the observer, the viewing direction and the ambient luminance. Among other things, EN 12464-1 specifies maximum permissible UGR values for various indoor workplaces.
UGR observer	Calculation point in the room, for the DIALux the UGR value is determined. The location and height of the calculation point should correspond to the typical observer position (position and eye level of the user).
V	
Visual task area	The area that is needed for carrying out the visual task in accordance with DIN EN 12464-1. The height corresponds with the height at which the visual task is executed.
W	
Wall zone	Circumferential area between working plane and walls that is not taken into account for the calculation.
Workplane	Virtual measuring or calculation surface at the height of the visual task that generally follows the room geometry. The working plane may also feature a wall zone.

NOTE DE CALCUL cafe shop

LOGO
Entreprise

ETUDE

Société
Responsable
Adresse

Code Postal
Ville
Tél
Courriel

CLIENT

Société
Responsable
Adresse

Code Postal
Ville
Tél
Courriel

CONTROLE

Société
Responsable
Adresse

Code Postal
Ville
Tél
Courriel

Indice : A Avancement Non défini

Date : 19-08-24

ELIE^{BT}

cafe shop

Avis Technique 15L-601 AFFAIRE: 001

Folio

PLAN:

1 / 18

LOGO

Entreprise

NOTE DE CAI CUI cafe shop

Liste de folios

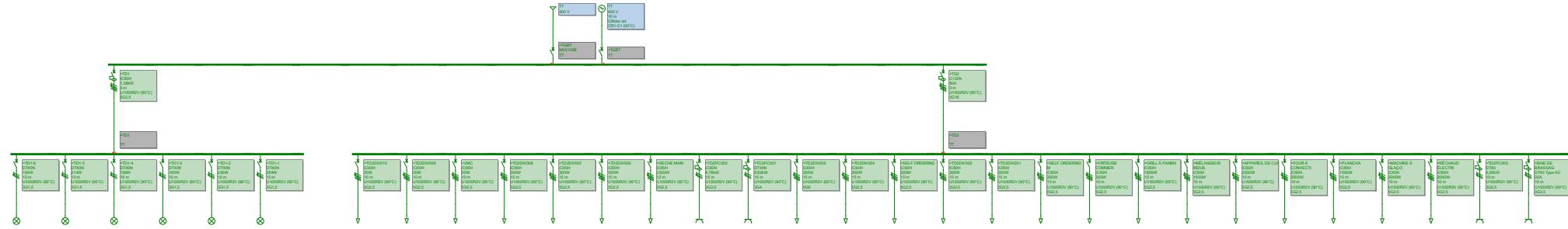
Avis Technique 15I-601



AFFAIRE: 001

Folio
2
18

Date : 19-08-24 Norme : C1510015



LOGO Entreprise

NOTE DE CALCUL cafe shop

Unifilaire général A4 Normal

		Avis Technique 15L-601	 BT
		AFFAIRE: 001	Folio
A			
Ind.	MODIFICATIONS		
Date : 19-08-24	Norme : C1510015	PLAN:	3 18

Liste des circuits TGBT

	Amont	Repère	Longueur	Type de câble	Câble	dU maxi	dU Total	dU circuit	Duree Incendie	Temp. Incendie	Longueur compartiment au feu	Circuit Vital
1	TGBT	TD1	3 m	U1000R2V (90°C)	5G2,5	3 %	0,39 %	0,02 %	0 mn	0 °C	0 m	
2	TGBT	TD2	3 m	U1000R2V (90°C)	5G16	5 %	0,48 %	0,12 %	0 mn	0 °C	0 m	
3	TD1	TD1-6	10 m	U1000R2V (90°C)	3G1,5	3 %	0,51 %	0,11 %	0 mn	0 °C	0 m	
4	TD1	TD1-5	10 m	U1000R2V (90°C)	3G1,5	3 %	0,52 %	0,13 %	0 mn	0 °C	0 m	
5	TD1	TD1-4	10 m	U1000R2V (90°C)	3G1,5	3 %	0,51 %	0,12 %	0 mn	0 °C	0 m	
6	TD1	TD1-3	10 m	U1000R2V (90°C)	3G1,5	3 %	0,45 %	0,06 %	0 mn	0 °C	0 m	
7	TD1	TD1-2	10 m	U1000R2V (90°C)	3G1,5	3 %	0,53 %	0,14 %	0 mn	0 °C	0 m	
8	TD1	TD1-1	10 m	U1000R2V (90°C)	3G1,5	3 %	0,55 %	0,16 %	0 mn	0 °C	0 m	
9	TD2	TD2DIV010	10 m	U1000R2V (90°C)	5G2,5	5 %	0,49 %	0,00 %	0 mn	0 °C	0 m	
10	TD2	TD2DIV009	10 m	U1000R2V (90°C)	5G2,5	5 %	0,49 %	0,00 %	0 mn	0 °C	0 m	
11	TD2	VMC	10 m	U1000R2V (90°C)	5G2,5	5 %	0,49 %	0,00 %	0 mn	0 °C	0 m	
12	TD2	TD2DIV008	15 m	U1000R2V (90°C)	5G2,5	5 %	0,51 %	0,03 %	0 mn	0 °C	0 m	
13	TD2	TD2DIV007	15 m	U1000R2V (90°C)	5G2,5	5 %	0,51 %	0,03 %	0 mn	0 °C	0 m	
14	TD2	TD2DIV006	15 m	U1000R2V (90°C)	5G2,5	5 %	0,51 %	0,03 %	0 mn	0 °C	0 m	
15	TD2	SECHE MAIN	12 m	U1000R2V (90°C)	5G2,5	5 %	0,65 %	0,16 %	0 mn	0 °C	0 m	
16	TD2	TD2PC002	15 m	U1000R2V (90°C)	3G2,5	5 %	3,03 %	2,55 %	0 mn	0 °C	0 m	
17	TD2	TD2PC001	15 m	U1000R2V (90°C)	3G4	5 %	2,69 %	2,21 %	0 mn	0 °C	0 m	
18	TD2	TD2DIV005	15 m	U1000R2V (90°C)	5G6	5 %	0,49 %	0,01 %	0 mn	0 °C	0 m	
19	TD2	TD2DIV004	15 m	U1000R2V (90°C)	5G2,5	5 %	0,51 %	0,03 %	0 mn	0 °C	0 m	
20	TD2	SELF ORDERING	15 m	U1000R2V (90°C)	5G2,5	5 %	0,51 %	0,03 %	0 mn	0 °C	0 m	
21	TD2	TD2DIV002	15 m	U1000R2V (90°C)	5G2,5	5 %	0,51 %	0,03 %	0 mn	0 °C	0 m	
22	TD2	TD2DIV001	15 m	U1000R2V (90°C)	5G2,5	5 %	0,51 %	0,03 %	0 mn	0 °C	0 m	
23	TD2	SELF ORDERING M	15 m	U1000R2V (90°C)	5G2,5	5 %	0,51 %	0,03 %	0 mn	0 °C	0 m	
24	TD2	FRITEUSE COMMER	10 m	U1000R2V (90°C)	5G2,5	5 %	0,50 %	0,02 %	0 mn	0 °C	0 m	
25	TD2	GRILL À PANINII	10 m	U1000R2V (90°C)	5G2,5	5 %	0,59 %	0,11 %	0 mn	0 °C	0 m	
26	TD2	MÉLANGEUR INDUS	10 m	U1000R2V (90°C)	5G2,5	5 %	0,57 %	0,09 %	0 mn	0 °C	0 m	
27	TD2	APPAREIL DE CUI	10 m	U1000R2V (90°C)	5G2,5	5 %	0,60 %	0,12 %	0 mn	0 °C	0 m	
28	TD2	FOUR À CONVECTI	10 m	U1000R2V (90°C)	5G2,5	5 %	0,66 %	0,18 %	0 mn	0 °C	0 m	
29	TD2	PLANCH	10 m	U1000R2V (90°C)	5G2,5	5 %	0,57 %	0,09 %	0 mn	0 °C	0 m	
30	TD2	MACHINE À GLAÇO	10 m	U1000R2V (90°C)	5G2,5	5 %	0,60 %	0,12 %	0 mn	0 °C	0 m	
31	TD2	RÉCHAUD ÉLECTRI	10 m	U1000R2V (90°C)	5G2,5	5 %	0,60 %	0,12 %	0 mn	0 °C	0 m	
32	TD2	TD2PC003	10 m	U1000R2V (90°C)	3G2,5	5 %	1,93 %	1,45 %	0 mn	0 °C	0 m	
33	TD2	BAIE DE BRASSAG	10 m	U1000R2V (90°C)	3G2,5	5 %	1,81 %	1,32 %	0 mn	0 °C	0 m	

LOGO
Entreprise

NOTE DE CALCUL cafe shop

Liste des circuits

A	MODIFICATIONS	
Date : 19-08-24	Norme :	C1510015

Avis Technique 15L-601

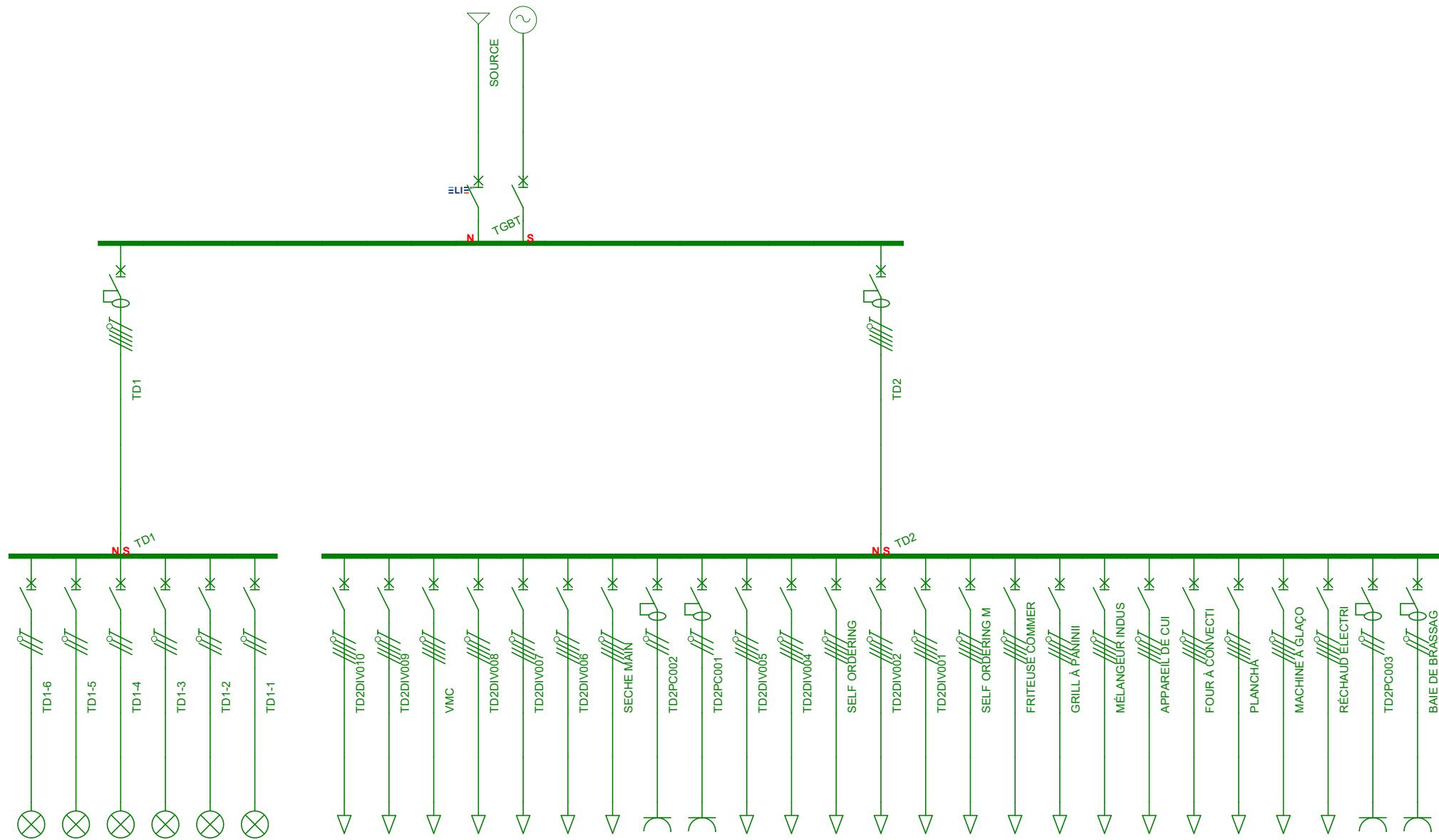
AFFAIRE: 001

PLAN:

ELIE^{BT}

Folio

4
18



NORMAL

RESEAU	SOURCE
Repère	SOURCE
Régime de N	TT
Norme	C1510015
Tension	400 V / 400 V
T Fonc HT max	
SkQ HT Max	
SKQ HT Min	
ΔU Origine	0,17 %
Sources HT en //	<input type="checkbox"/>
Contribution moteur(s)	<input type="checkbox"/>

SOURCE	LIAISON
Nature	Tableau par lk
Caract. d'après	
Fichier	
Puissance	
Ukr ou X'd/X o	/
Polarité	3P+N+PE
Couplage	
Nb Sources	Sources actives
	<input type="checkbox"/> 1 min <input type="checkbox"/> 1 max

LIAISON	
Longueur	
Type	
Ame/Dispo	
Pose	
Catalogue	
Fichier C/P	
K Symétrie fs	1,0
Neutre chargé	<input type="checkbox"/>
Taux harmonique	TH <= 15%

PROTECTION	Forcée <input type="checkbox"/>	NSX100B	TM100D				
Calibre	100 A	Ir	100 A	Im / Isd	800 A	IΔn	30 mA
		Tr	15 s	Tsd		Δt	60 ms
				Li On		Diff. séparé	<input type="checkbox"/>
				I ² t On/Off	I ² t Off		
Icu disjoncteur Vérifié	<input checked="" type="checkbox"/>	Sélectivité Logique	<input type="checkbox"/>	T1		T2	

IMPEDANCES forcées <input type="checkbox"/>	
R0 Ph/Ph	0,0051 Ω
R1 Ph/Ph	0,0058 Ω
Xmax Ph/Ph	0,0186 Ω
Xmin Ph	0,0098 Ω
Résistance de terre (TT)	
RA	<input type="checkbox"/>
Neutre Impédant (TN)	
RS	<input type="checkbox"/>
XS	<input type="checkbox"/>

RESULTATS Dimensionné sur		IN <input checked="" type="checkbox"/>	dU <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>
Forcée				
K temp.	<input type="checkbox"/>	Phase	<input type="checkbox"/>	x
K Prox.	1,00	PEN / Neutre	x	
K compl.	1,00	PE	x	
Fréq.	50 Hz	Sp0 ou Sht	<input type="checkbox"/>	x
Sth	Ib liaison (100,0 A)	Ik3 Max	25000 A	
dU	0,17 %	Ik2 Max	21651 A	Ik2 min 19531 A
	IN source 100 A	Ik1 Max	20000 A	Ik1 min 16000 A
	Ratio Ib/In 100,00 %	If Max		If

LOGO	NOTE DE CALCUL cafe shop
Entreprise	Fiche source N et S SOURCE/SECOURS

SECOURS

RESEAU	SOURCE	LIAISON
Repère	SECOURS	
Régime de N	TT	
Norme	C1510015	
Tension	400 V / 420 V	
T Fonc HT max		
SkQ HT Max		
SKQ HT Min		
ΔU Origine		
Sources HT en //	<input type="checkbox"/>	
Contribution moteur(s)	<input type="checkbox"/>	

PROTECTION	Forcée <input type="checkbox"/>	NSX160B	Micrologic 2.2				
Calibre	160 A	Ir	145,5 A	Im / Isd	291 A	IΔn	<input type="checkbox"/>
		Tr	16 s	Tsd	20 ms	Δt	<input type="checkbox"/>
				Li On	2400 A	Diff. séparé	<input type="checkbox"/>
				I ² t On/Off	I ² t Off		
Icu disjoncteur Vérifié	<input checked="" type="checkbox"/>	Sélectivité Logique	<input type="checkbox"/>	T1		T2	

IMPEDANCES forcées <input type="checkbox"/>	
R0 Ph/Ph	0,0106 Ω
R1 Ph/Ph	0,0135 Ω
Xmax Ph/Ph	0,8016 Ω
Xmin Ph	0,1608 Ω
Résistance de terre (TT)	
RA	<input type="checkbox"/>
Neutre Impédant (TN)	
RS	<input type="checkbox"/>
XS	<input type="checkbox"/>

RESULTATS Dimensionné sur		IN <input checked="" type="checkbox"/>	dU <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>
Forcée				
K temp.	<input type="checkbox"/>	Phase	<input type="checkbox"/>	x
K Prox.	Non 1,00	PEN / Neutre	x	
K compl.	Oui 0,82	PE	x	
Fréq.	1,00	Sp0 ou Sht	<input type="checkbox"/>	x
Sth	37 mm ²	Ib liaison	(144,3 A)	Ik3 Max 1579 A
dU	0,37 %	IN source	144,3 A	Ik2 Max 1367 A
		Ratio Ib/In	100,00 %	Ik1 Max 1806 A
				Ik1 min 730 A
				If Max 0 A
				If

A	MODIFICATIONS	Avis Technique 15L-601
Ind.		ELIE BT
Date : 19-08-24	Norme : C1510015	Folio
		6
		18
		PLAN:

RESEAU			Normal			Secours			FICHE DE CALCUL 3C									
Rég.de N	TT		I installée	62,01 A			62,01 A											
Tension	400 V		I Totale	100,00 A			144,34 A											
DISTRIBUTION			I Dispo	38,98 A			83,32 A											
Amont N	SOURCE SECOURS		Ik3 max	25000 A			1579 A											
Amont S			ΔU	0,17 %			0,37 %											
CIRCUIT			Circuit conforme				Circuit conforme											
Amont	Repère		IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input type="checkbox"/>	DU <input type="checkbox"/>	CI <input type="checkbox"/>	CC <input type="checkbox"/>				
JdB Amont	D.origine		TGBT				TD1				TGBT				TD2			
Style			Tableau								Tableau							
Contenu	Du Variateur		3P+N+PE								3P+N+PE							
Désignation																		
INFOS CABLES / RECEPTEUR																		
Nb	Conso	K Fois	Lieu géo.	1	1,38kW	1		1	60A	1								
Rep. Récepteur	JdB Aval	Rév.		TD1			A			TD2								
Cos φ	K Util.	UL	0,8	1			1	1										
Cos φ Dém.	ID/IN	ΔU Dém.																
η	Alimentation		1,00	N et S			1,00	N et S										
Polarité Récept.	Type	3P+N		3P+N			3P+N											
CABLE																		
Repère	Mode de pose						13				13							
Type	Ame	Pôle	U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi									
Long.	1er Récep.	L. Max	3 m		72 m (CC)		3 m		3 m (CC)									
ΔU Max	dU Circuit	ΔU Totale	3 %	0,02 %	0,39 %		5 %	0,12 %	0,48 %									
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,73	1,00	1,00	0,73	1,00	0,73	1,00	1,00	0,73				
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Icu Disjoncteur Vérifié								
Type	Prot. CI	Disjonct. C			Dif.30mA			Disjonct. C	Dif.300mA									
RESULTATS FORC.																		
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input checked="" type="checkbox"/>	1	16 mm²		forcé <input type="checkbox"/>							
	Nb	Neutre		1	2,5 mm²			1	16 mm²									
	Nb	PE/PEN		1	2,5 mm²			1	16 mm²									
Taux Harm.	N Chargé		TH <= 15%			Non	TH <= 15%			Non								
Protection			iC60H			C120N												
			Type AC			Type AC												
Calibre	Ir	Im/Isd/IN Fus.	16 A		153,6 A		63 A		630 A									
K/Cal.	Tr	Tempo	1				1											
Déclencheur	Li off	I _{Δn}	Standard (C)		30 mA		Standard (C)		300 mA									
Therm. Aval	Li	Δt	Sur circuit		0 ms		Sur circuit		0 ms									
RESULTATS																		
Câble	Neutre	PE/PEN	5G2,5				5G16											
Critère	IB		MINI	2,49 A			FORC	60,00 A										
S Th.	Iz		1,397 mm²	23,00 A			12,603 mm²	73,10 A										
Im / Isd Max	Ik Am/Av			25,0 kA	/ 9,5 kA			25,0 kA	/ 21,6 kA							/		
Sélectivité	Association	I<2,00kA		Avec		Nulle		Avec										
INFOS IK / PROTECTION																		
Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	4,47 kA		10 kA	25 kA	6,00 kA									
Tmax. Prot.	Déclencheur		5000 ms			4P4D	8 ms			4P4D								
Contacteur	Relais therm.																	
Constructeur				mg18fr1.dmi			mg18fr1.dmi											
SELECTIVITE																		
Limite	A partir de		2000 A															
Thermique	Différentielle		Avec			Sans objet		Non Calc		Sans objet								
Sélectivité logique			<input type="checkbox"/>				<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>					
T1	T2																	
IK EXTREMITE																		
Ik3 Max	Ik2 Min	If	9505 A	472 A		21647 A	474 A											
Ik2 Max	Ik1 Min		8231,7 A	710 A		18746,8 A	727 A											
Ik1 Max				5096 A			15339 A											
A			MODIFICATIONS							Avis Technique 15L-601								
			NOTE DE CALCUL cafe shop							Fiche de calcul 3 circuits TGBT TD1..TD2								
			Ind.							AFFAIRE: 001						Folio		
														PLAN:				
			Date : 19-08-24	Norme : C1510015	7		18											

RESEAU			Normal			Secours			FICHE DE CALCUL 3C									
Rég.de N	TT		I installée	1,85 A			1,85 A											
Tension	400 V		I Totale	2,49 A			2,49 A											
DISTRIBUTION			I Dispo	0,64 A			0,64 A											
Amont N	TD1	TD1	I _{k3} max	9505 A			1555 A											
Amont S	TD1	TD1	ΔU	0,19 %			0,39 %											
CIRCUIT			Circuit conforme			Circuit conforme			Circuit conforme									
Amont	Repère		IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>				
JdB Amont	D.origine		TD1			TD1-6			TD1			TD1-5			TD1		TD1-4	
Style			Eclairage						Eclairage						Eclairage			
Contenu	Du Variateur		P+N+PE						P+N+PE						P+N+PE			
Désignation																		
INFOS CABLES / RECEPTEUR																		
Nb	Conso	K Fois	Lieu géo.	1	194W	1		1	214W	1		1	199W	1				
Rep. Récepteur	JdB Aval	Rév.					A				A						A	
Cos φ	K Util.	UL	1	1				0,92	1			0,92	1					
Cos φ Dém.	ID/IN	ΔU Dém.	1	1,00		0,51 %		0,52	1,00		0,52 %	0,52	1,00				0,51 %	
η	Alimentation		1,00	N et S				1,00	N et S			1,00	N et S					
Polarité Récept.	Type	P+N						P+N				P+N						
CABLE																		
Repère	Mode de pose						13				13				13			
Type	Ame	Pôle	U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi/Uni					
Long.	1er Récep.	L. Max	10 m		66 m (CC)		10 m		66 m (CC)		10 m		40 m (CC)					
ΔU Max	dU Circuit	ΔU Totale	3 %	0,11 %	0,51 %		3 %	0,13 %	0,52 %		3 %	0,12 %	0,51 %					
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm. <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié				<input type="checkbox"/> Disp. de Vérif. Contrainte Therm. <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié				<input type="checkbox"/> Disp. de Vérif. Contrainte Therm. <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié					
Type	Prot. Cl	Disjonct. C		Prot Base	Disjonct. C		Prot Base	Disjonct. C		Prot Base	Disjonct. C		Prot Base					
RESULTATS FORC.																		
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	1,5 mm²		forcé <input type="checkbox"/>	1	1,5 mm²		forcé <input type="checkbox"/>	1	1,5 mm²					
	Nb	Neutre		1	1,5 mm²			1	1,5 mm²			1	1,5 mm²					
	Nb	PE/PEN		1	1,5 mm²			1	1,5 mm²			1	1,5 mm²					
Taux Harm.	N Chargé				Non				Non				Non					
Protection				DT40N			DT40N			DT40N								
Calibre	Ir	Im/Isd/IN Fus.	10 A		100 A		10 A		100 A		16 A		160 A					
K/Cal.	Tr	Tempo	1				1				1							
Déclencheur	Li off	I _{Δn}	Standard (C)				Standard (C)				Standard (C)							
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				Sur circuit							
RESULTATS																		
Câble	Neutre		PE/PEN	3G1,5			3G1,5			3G1,5			3G1,5					
Critère	IB			MINI	0,84 A		MINI	1,01 A		MINI	0,94 A							
S Th.	Iz			0,535 mm²	19,00 A		0,535 mm²	19,00 A		1,138 mm²	19,00 A							
Im / Isd Max	Ik Am/Av				5,1 kA	/ 0,9 kA		5,1 kA	/ 0,9 kA		5,1 kA	/ 0,9 kA						
Sélectivité	Association			Nulle	Sans		Nulle	Sans		Nulle	Sans							
INFOS IK / PROTECTION																		
Icu / Icm	Icu Assoc.	Ip	10 kA	10 kA	0,67 kA		10 kA	10 kA	0,67 kA		10 kA	10 kA	0,84 kA					
Tmax. Prot.	Déclencheur		2 ms		2P1D		2 ms		2P1D		2 ms		2P1D					
Contacteur	Relais therm.																	
Constructeur				mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi								
SELECTIVITE																		
Limite	A partir de																	
Thermique	Différentielle			Non Calc	Sans objet			Non Calc	Sans objet			Non Calc	Sans objet					
Sélectivité logique				<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>						
T1	T2																	
IK EXTREMITE																		
I _{k3} Max	I _{k2} Min	If																
I _{k2} Max	I _{k1} Min			447 A					447 A				447 A					
I _{k1} Max				860 A				860 A				860 A						
A			MODIFICATIONS									Avis Technique 15L-601						
												Fiche de calcul 3 circuits TD1 TD1-6..TD1-4						
												ELIE BT						
												AFFAIRE: 001						
												Folio						
									PLAN:									
									8									
									18									

RESEAU			Normal			Secours			FICHE DE CALCUL 3C														
Rég.de N	TT		I installée	1,85 A			1,85 A																
Tension	400 V		I Totale	2,49 A			2,49 A																
DISTRIBUTION			I Dispo	0,64 A			0,64 A																
Amont N	TD1	TD1	I _{k3} max	9505 A			1555 A																
Amont S	TD1	TD1	ΔU	0,19 %			0,39 %																
CIRCUIT			Circuit conforme			Circuit conforme											Circuit conforme						
Amont	Repère		IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>									
JdB Amont	D.origine		TD1			TD1-3			TD1			TD1-2			TD1		TD1-1						
Style			Eclairage						Eclairage						Eclairage								
Contenu	Du Variateur		P+N+PE						P+N+PE						P+N+PE								
Désignation																							
INFOS CABLES / RECEPTEUR																							
Nb	Conso	K Fois	Lieu géo.	1	100W		1			1	236W		1			1	264W		1				
Rep. Récepteur	JdB Aval	Rév.						A						A						A			
Cos φ	K Util.	UL	0,92	1			0,92	1			0,92	1			0,92	1			0,92	1			
Cos φ Dém.	ID/IN	ΔU Dém.	0,52	1,00		0,45 %	0,52	1,00		0,53 %	0,52	1,00		0,55 %	0,52	1,00		0,55 %	0,52	1,00			
η	Alimentation		1,00	N et S			1,00	N et S			1,00	N et S			1,00	N et S			1,00	N et S			
Polarité Récept.	Type	P+N					P+N				P+N				P+N				P+N				
CABLE																							
Repère	Mode de pose						13				13				13				13				
Type	Ame	Pôle	U1000R2V (90°C)	Cu		Multi/Uni	U1000R2V (90°C)	Cu		Multi/Uni	U1000R2V (90°C)	Cu		Multi/Uni	U1000R2V (90°C)	Cu		Multi/Uni	U1000R2V (90°C)	Cu		Multi/Uni	
Long.	1er Récep.	L. Max	10 m	40 m (CC)			10 m	40 m (CC)			10 m	66 m (CC)			10 m				10 m				
ΔU Max	dU Circuit	ΔU Totale	3 %	0,06 %		0,45 %	3 %	0,14 %		0,53 %	3 %	0,16 %		0,55 %	3 %			1,00	0,72		1,00	0,72	
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00	1,00	0,72	
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm. <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm. <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm. <input checked="" type="checkbox"/> Icu Disjoncteur Vérifié								
Type	Prot. Cl	Disjonct. C	Prot Base			Disjonct. C	Prot Base			Disjonct. C	Prot Base			Disjonct. C	Prot Base			Disjonct. C	Prot Base				
RESULTATS FORC.																							
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	1,5 mm²		forcé <input type="checkbox"/>	1	1,5 mm²		forcé <input type="checkbox"/>	1	1,5 mm²		forcé <input type="checkbox"/>	1	1,5 mm²						
	Nb	Neutre		1	1,5 mm²			1	1,5 mm²			1	1,5 mm²			1	1,5 mm²						
	Nb	PE/PEN		1	1,5 mm²			1	1,5 mm²			1	1,5 mm²			1	1,5 mm²						
Taux Harm.	N Chargé			Non				Non				Non				Non							
Protection				DT40N				DT40N				DT40N											
Calibre	Ir	Im/Isd/IN Fus.	16 A	160 A			16 A	160 A			10 A	100 A											
K/Cal.	Tr	Tempo	1				1				1				1								
Déclencheur	Li off	I _{Δn}	Standard (C)				Standard (C)				Standard (C)				Standard (C)								
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				Sur circuit				Sur circuit								
RESULTATS																							
Câble	Neutre	PE/PEN	3G1,5				3G1,5				3G1,5				3G1,5								
Critère	IB		MINI	0,47 A			MINI	1,11 A			MINI	1,24 A											
S Th.	Iz		1,138 mm²	19,00 A			1,138 mm²	19,00 A			0,535 mm²	19,00 A											
Im / Ird Max	Ik Am/Av			5,1 kA	/	0,9 kA		5,1 kA	/	0,9 kA		5,1 kA	/	0,9 kA									
Sélectivité	Association		Nulle	Sans			Nulle	Sans			Nulle	Sans			Nulle	Sans							
INFOS IK / PROTECTION																							
Icu / Icm	Icu Assoc.	Ip	10 kA	10 kA	0,84 kA		10 kA	10 kA	0,84 kA		10 kA	10 kA	0,67 kA		10 kA	10 kA	0,67 kA						
Tmax. Prot.	Déclencheur		2 ms	2P1D			2 ms	2P1D			2 ms	2P1D											
Contacteur	Relais therm.																						
Constructeur				mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi										
SELECTIVITE																							
Limite	A partir de																						
Thermique	Différentielle		Non Calc	Sans objet			Non Calc	Sans objet			Non Calc	Sans objet											
Sélectivité logique			<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>												
T1	T2																						
IK EXTREMITE																							
I _{k3} Max	I _{k2} Min	If																					
I _{k2} Max	I _{k1} Min			447 A				447 A				447 A											
I _{k1} Max				860 A			860 A			860 A			860 A										
A A Ind. NOTE DE CALCUL cafe shop Date : 19-08-24 Norme : C1510015			Avis Technique 15L-601																				
			Fiche de calcul 3 circuits TD1 TD1-3..TD1-1																				
			AFFAIRE: 001																				
			PLAN:																				
															Folio 9 18								

RESEAU			Normal			Secours			FICHE DE CALCUL 3C								
Rég.de N	TT		I installée	61,02 A			61,02 A										
Tension	400 V		I Totale	60,00 A			60,00 A										
DISTRIBUTION			I Dispo	-1,02 A			-1,02 A										
Amont N	TD2		I _{k3} max	21647 A			1575 A										
Amont S	TD2		ΔU	0,29 %			0,48 %										
CIRCUIT			Circuit conforme				Circuit conforme				Circuit conforme						
Amont	Repère		IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>			
JdB Amont	D.origine		TD2DIV010				TD2DIV009				TD2				VMC		
Style			Divers				Divers				Divers						
Contenu	Du Variateur		3P+N+PE				3P+N+PE				3P+N+PE						
Désignation																	
INFOS CABLES / RECEPTEUR																	
Nb	Conso	K Fois	Lieu géo.	1	20W	1		1	20W	1		1	20W	1			
Rep. Récepteur	JdB Aval	Rév.					A				A				A		
Cos φ	K Util.	UL	1	1				1	1			1	1				
Cos φ Dém.	ID/IN	ΔU Dém.	1	1,00	0,49 %			1	1,00	0,49 %		1	1,00	0,49 %			
η	Alimentation		1,00	N et S				1,00	N et S				1,00	N et S			
Polarité Récept.	Type	1P			1P			1P			1P			1P			
CABLE																	
Repère	Mode de pose			13				13				13					
Type	Ame	Pôle		U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi/Uni			
Long.	1er Récep.	L. Max		10 m		72 m (CC)		10 m		72 m (CC)		10 m		72 m (CC)			
ΔU Max	dU Circuit	ΔU Totale		5 %	0,00 %	0,49 %		5 %	0,00 %	0,49 %		5 %	0,00 %	0,49 %			
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00		
PROTECTION				<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié								
Type	Prot. Cl	Disjonct. C		Prot Base		Disjonct. C		Prot Base		Disjonct. C		Prot Base					
RESULTATS FORC.																	
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm²	forcé <input type="checkbox"/>	1	2,5 mm²	forcé <input type="checkbox"/>	1	2,5 mm²						
	Nb	Neutre		1	2,5 mm²		1	2,5 mm²		1	2,5 mm²						
	Nb	PE/PEN		1	2,5 mm²		1	2,5 mm²		1	2,5 mm²						
Taux Harm.	N Chargé		TH <= 15%			Non	TH <= 15%			Non	TH <= 15%			Non			
Protection			iC60H				iC60H				iC60H						
Calibre	Ir	Im/Isd/IN Fus.	16 A		153,6 A		16 A		153,6 A		16 A		153,6 A				
K/Cal.	Tr	Tempo	1				1				1						
Déclencheur	Li off	I _{Δn}	Standard (C)				Standard (C)				Standard (C)						
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				Sur circuit						
RESULTATS																	
Câble	Neutre		PE/PEN	5G2,5			5G2,5			5G2,5			5G2,5				
Critère	IB			MINI	0,03 A		MINI	0,03 A		MINI	0,03 A						
S Th.	Iz			1,428 mm²	22,68 A		1,428 mm²	22,68 A		1,428 mm²	22,68 A						
Im / Isd Max	Ik Am/Av				21,6 kA	/ 3,1 kA		21,6 kA	/ 3,1 kA		21,6 kA	/ 3,1 kA		21,6 kA	/ 3,1 kA		
Sélectivité	Association		I<0,95kA	Avec		I<0,95kA	Avec		I<0,95kA	Avec		I<0,95kA	Avec				
INFOS IK / PROTECTION																	
Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	2,27 kA	15 kA	25 kA	2,27 kA	15 kA	25 kA	2,27 kA	15 kA	25 kA	2,27 kA			
Tmax. Prot.	Déclencheur		1 ms	4P4D		1 ms	4P4D		1 ms	4P4D		1 ms	4P4D				
Contacteur	Relais therm.																
Constructeur				mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi				
SELECTIVITE																	
Limite	A partir de		950 A				950 A				950 A						
Thermique	Différentielle		Avec	Sans objet			Avec	Sans objet			Avec	Sans objet					
Sélectivité logique			<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>						
T1	T2																
IK EXTREMITE																	
I _{k3} Max	I _{k2} Min	If	3144 A	457 A		3144 A	457 A		3144 A	457 A		3144 A	457 A				
I _{k2} Max	I _{k1} Min		2723,2 A	594 A		2723,2 A	594 A		2723,2 A	594 A		2723,2 A	594 A				
I _{k1} Max				1593 A			1593 A			1593 A			1593 A				
A									Avis Technique 15L-601								
									Fiche de calcul 3 circuits TD2 TD2DIV010..VMC								
			Ind.	MODIFICATIONS					ELIE BT								
			NOTE DE CALCUL cafe shop						AFFAIRE: 001								
			Date : 19-08-24	Norme : C1510015							PLAN:						
									Folio								
									10 18								

RESEAU			Normal			Secours			FICHE DE CALCUL 3C																	
Rég.de N	TT		I installée	61,02 A			61,02 A																			
Tension	400 V		I Totale	60,00 A			60,00 A																			
DISTRIBUTION			I Dispo	-1,02 A			-1,02 A																			
Amont N	TD2	TD2	I _{k3} max	21647 A			1575 A																			
Amont S	TD2	TD2	ΔU	0,29 %			0,48 %																			
CIRCUIT			Circuit conforme				Circuit conforme				Circuit conforme															
Amont	Repère		IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>												
JdB Amont	D.origine		TD2				TD2DIV008				TD2				TD2DIV007				TD2				TD2DIV006			
Style			Divers								Divers								Divers							
Contenu	Du Variateur		3P+N+PE								3P+N+PE								3P+N+PE							
Désignation																										
INFOS CABLES / RECEPTEUR																										
Nb	Conso	K Fois	Lieu géo.	1	300W		1			1	300W		1			1	300W		1			A				
Rep. Récepteur	JdB Aval	Rév.																				A				
Cos φ	K Util.	UL	1	1			1			1	1			1			1	1			1					
Cos φ Dém.	ID/IN	ΔU Dém.	1	1,00		0,51 %	1			1	1,00		0,51 %	1			1	1,00		0,51 %						
η	Alimentation		1,00	N et S			1,00	N et S			1,00	N et S			1,00	N et S			1,00	N et S						
Polarité Récept.	Type	1P		1P			1P			1P				1P			1P									
CABLE																										
Repère	Mode de pose			13				13				13				13				13						
Type	Ame	Pôle		U1000R2V (90°C)	Cu		Multi/Uni		U1000R2V (90°C)	Cu		Multi/Uni		U1000R2V (90°C)	Cu		Multi/Uni		U1000R2V (90°C)	Cu		Multi/Uni				
Long.	1er Récep.	L. Max		15 m			72 m (CC)		15 m			72 m (CC)		15 m			72 m (CC)		15 m			72 m (CC)				
ΔU Max	dU Circuit	ΔU Totale		5 %	0,03 %		0,51 %		5 %	0,03 %		0,51 %		5 %	0,03 %		0,51 %		5 %	0,03 %		0,51 %				
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00	0,72					
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié																
Type	Prot. Cl	Disjonct. C	Prot Base		Disjonct. C	Prot Base		Disjonct. C	Prot Base		Disjonct. C	Prot Base		Disjonct. C	Prot Base		Disjonct. C	Prot Base								
RESULTATS FORC.																										
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	2,5 mm²									
	Nb	Neutre		1	2,5 mm²			1	2,5 mm²			1	2,5 mm²			1	2,5 mm²									
	Nb	PE/PEN		1	2,5 mm²			1	2,5 mm²			1	2,5 mm²			1	2,5 mm²									
Taux Harm.	N Chargé			TH <= 15%			Non		TH <= 15%			Non		TH <= 15%			Non		TH <= 15%			Non				
Protection				iC60H				iC60H				iC60H				iC60H				iC60H						
Calibre	Ir	Im/Isd/IN Fus.	16 A			153,6 A		16 A			153,6 A		16 A			153,6 A		16 A			153,6 A					
K/Cal.	Tr	Tempo	1				1				1				1				1							
Déclencheur	Li off	I _{Δn}	Standard (C)				Standard (C)				Standard (C)				Standard (C)				Standard (C)							
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				Sur circuit				Sur circuit				Sur circuit							
RESULTATS																										
Câble	Neutre		PE/PEN	5G2,5				5G2,5				5G2,5			5G2,5			5G2,5								
Critère	IB			MINI			0,43 A		MINI			0,43 A		MINI			0,43 A		MINI			0,43 A				
S Th.	Iz			1,428 mm²			22,68 A		1,428 mm²			22,68 A		1,428 mm²			22,68 A		1,428 mm²			22,68 A				
Im / Isd Max	Ik Am/Av						21,6 kA / 2,2 kA					21,6 kA / 2,2 kA					21,6 kA / 2,2 kA					21,6 kA / 2,2 kA				
Sélectivité	Association		I<0,95kA			Avec	I<0,95kA			Avec	I<0,95kA			Avec	I<0,95kA			Avec	I<0,95kA							
INFOS IK / PROTECTION																										
Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	1,74 kA		15 kA	25 kA	1,74 kA		15 kA	25 kA	1,74 kA		15 kA	25 kA	1,74 kA		15 kA	25 kA	1,74 kA					
Tmax. Prot.	Déclencheur		1 ms	4P4D				1 ms	4P4D				1 ms	4P4D				1 ms	4P4D							
Contacteur	Relais therm.																									
Constructeur				mg18fr1.dmi				mg18fr1.dmi				mg18fr1.dmi				mg18fr1.dmi				mg18fr1.dmi						
SELECTIVITE																										
Limite	A partir de		950 A				950 A				950 A				950 A				950 A							
Thermique	Différentielle		Avec			Sans objet	Avec			Sans objet	Avec			Sans objet	Avec			Sans objet	Avec							
Sélectivité logique			<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>							
T1	T2																									
IK EXTREMITE																										
I _{k3} Max	I _{k2} Min	If	2160 A	441 A		2160 A	441 A		2160 A	441 A		2160 A	441 A		2160 A	441 A										
I _{k2} Max	I _{k1} Min		1870,5 A	509 A		1870,5 A	509 A		1870,5 A	509 A		1870,5 A	509 A		1870,5 A	509 A										
I _{k1} Max				1089 A						1089 A						1089 A										
A			MODIFICATIONS NOTE DE CALCUL cafe shop												Avis Technique 15L-601											
															Fiche de calcul 3 circuits TD2 TD2DIV008..TD2DIV006											
															ELIE BT											
															AFFAIRE: 001											
															PLAN:											
Date : 19-08-24			Norme : C1510015			Folio																				
						11 / 18																				

RESEAU			Normal			Secours			FICHE DE CALCUL 3C														
Rég.de N	TT		I installée	61,02 A			61,02 A																
Tension	400 V		I Totale	60,00 A			60,00 A																
DISTRIBUTION			I Dispo	-1,02 A			-1,02 A																
Amont N	TD2		I _{k3} max	21647 A			1575 A																
Amont S	TD2		ΔU	0,29 %			0,48 %																
CIRCUIT			Circuit conforme				Circuit conforme				Circuit conforme												
Amont	Repère		TD2	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>								
JdB Amont	D.origine			SECHE MAIN				TD2				TD2PC002				TD2				TD2PC001			
Style			Divers					PC								PC							
Contenu	Du Variateur		3P+N+PE					P+N+PE								P+N+PE							
Désignation																							
INFOS CABLES / RECEPTEUR																							
Nb	Conso	K Fois	Lieu géo.	1	2300W		1			1	4,78kW		1			1	6,62kW		1				
Rep. Récepteur	JdB Aval	Rév.						A						A						A			
Cos φ	K Util.	UL	0,8	1					1	1					1	1							
Cos φ Dém.	ID/IN	ΔU Dém.	1	1,00		0,69 %																	
η	Alimentation		1,00	N et S			1,00		N et S			1,00		N et S			1,00		N et S				
Polarité Récept.	Type	1P					P+N					P+N					P+N						
CABLE																							
Repère	Mode de pose							13						13						13			
Type	Ame	Pôle		U1000R2V (90°C)	Cu		Multi/Uni			U1000R2V (90°C)	Cu		Multi/Uni			U1000R2V (90°C)	Cu		Multi/Uni				
Long.	1er Récep.	L. Max		12 m			64 m (DU)			15 m			26 m (DU)			15 m			30 m (DU)				
ΔU Max	dU Circuit	ΔU Totale		5 %	0,16 %		0,65 %			5 %	2,55 %		3,03 %			5 %	2,21 %		2,69 %				
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72				
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié													
Type	Prot. CI		Disjonct. C		Prot Base				Disjonct. C	Dif.30mA				Disjonct. C	Dif.30mA								
RESULTATS FORC.																							
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	4 mm²										
	Nb	Neutre		1	2,5 mm²				1	2,5 mm²				1	4 mm²								
	Nb	PE/PEN		1	2,5 mm²				1	2,5 mm²				1	4 mm²								
Taux Harm.	N Chargé		TH <= 15%			Non				Non						Non							
Protection			iC60H						iC60N						DT40N								
									Type AC						Type AC								
Calibre	Ir	Im/Isd/IN Fus.	16 A			153,6 A	25 A				240 A	32 A				320 A							
K/Cal.	Tr	Tempo	1				1					1											
Déclencheur	Li off	I _{Δn}	Standard (C)				Standard (C)				30 mA	Standard (C)				30 mA							
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				0 ms	Sur circuit				0 ms							
RESULTATS																							
Câble	Neutre		PE/PEN	5G2,5			3G2,5			3G4													
Critère	IB			MINI			4,15 A			MINI			20,70 A			IN!		28,67 A					
S Th.	Iz			1,428 mm²			22,68 A			2,330 mm²			26,12 A			3,463 mm²		35,01 A					
Im / Isd Max	Ik Am/Av						21,6 kA / 2,7 kA						15,3 kA / 1,1 kA					15,3 kA / 1,7 kA					
Sélectivité	Association		I<0,95kA	Avec			I<0,76kA			Avec			I<0,80kA			Avec							
INFOS IK / PROTECTION																							
Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	2,02 kA		10 kA	20 kA	1,63 kA		10 kA	20 kA	2,53 kA										
Tmax. Prot.	Déclencheur		1 ms	4P4D			1 ms			2P1D			1 ms			2P1D							
Contacteur	Relais therm.																						
Constructeur				mg18fr1.dmi			mg18fr1.dmi						mg18fr1.dmi										
SELECTIVITE																							
Limite	A partir de		950 A				760 A						800 A										
Thermique	Différentielle		Avec	Sans objet			Avec			Partielle			Non Calc			Partielle							
Sélectivité logique			<input type="checkbox"/>				<input type="checkbox"/>						<input type="checkbox"/>										
T1	T2																						
IK EXTREMITE																							
I _{k3} Max	I _{k2} Min	If	2660 A	451 A																			
I _{k2} Max	I _{k1} Min		2303,7 A	559 A					509 A					604 A									
I _{k1} Max				1344 A			1089 A						1690 A										
A			MODIFICATIONS										Avis Technique 15L-601										
			NOTE DE CALCUL cafe shop										Fiche de calcul 3 circuits TD2 SECHE MAIN..TD2PC001										
			Ind.										AFFAIRE:				001				Folio		
			Date :	19-08-24	Norme :	C1510015							PLAN:										
																				12			
																	18						

RESEAU			Normal			Secours			FICHE DE CALCUL 3C												
Rég.de N	TT		I installée	61,02 A			61,02 A														
Tension	400 V		I Totale	60,00 A			60,00 A														
DISTRIBUTION			I Dispo	-1,02 A			-1,02 A														
Amont N	TD2	TD2	I _{k3} max	21647 A			1575 A														
Amont S	TD2	TD2	ΔU	0,29 %			0,48 %														
CIRCUIT			Circuit conforme			Circuit conforme			Circuit conforme												
			IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>							
Amont	Repère		TD2			TD2DIV005			TD2			TD2DIV004			TD2		SELF ORDERING				
JdB Amont	D.origine																				
Style			Divers						Divers						Divers						
Contenu	Du Variateur		3P+N+PE						3P+N+PE						3P+N+PE						
Désignation																					
INFOS CABLES / RECEPTEUR																					
Nb	Conso	K Fois	Lieu géo.	1	300W	1		1	300W	1		1	300W	1		1	300W	1			
Rep. Récepteur	JdB Aval	Rév.					A				A								A		
Cos φ	K Util.	UL	1	1				1	1			1	1			1	1				
Cos φ Dém.	ID/IN	ΔU Dém.	1	1,00		0,49 %		1	1,00		0,51 %		1	1,00		1	1,00		0,51 %		
η	Alimentation		1,00	N et S				1,00	N et S				1,00	N et S				1,00	N et S		
Polarité Récept.	Type	1P						1P					1P			1P					
CABLE																					
Repère	Mode de pose			TD2DIV005				33A							13		SELF ORDERING			13	
Type	Ame	Pôle		U1000R2V (90°C)	Cu		Multi/Uni			U1000R2V (90°C)	Cu		Multi/Uni			U1000R2V (90°C)	Cu		Multi/Uni		
Long.	1er Récep.	L. Max		15 m			173 m (CC)			15 m			72 m (CC)			15 m			72 m (CC)		
ΔU Max	dU Circuit	ΔU Totale		5 %		0,01 %		0,49 %		5 %		0,03 %		0,51 %		5 %		0,03 %		0,51 %	
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,40	1,00	1,00	0,40	1,00	0,72	1,00	1,00	0,72		1,00	0,72	1,00	1,00	0,72	
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié											
Type	Prot. Cl	Disjonct. C		Prot Base	Disjonct. C		Prot Base	Disjonct. C		Prot Base	Disjonct. C		Prot Base								
RESULTATS FORC.																					
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	6 mm²		forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	2,5 mm²								
	Nb	Neutre		1	6 mm²			1	2,5 mm²			1	2,5 mm²								
	Nb	PE/PEN		1	6 mm²			1	2,5 mm²			1	2,5 mm²								
Taux Harm.	N Chargé		TH <= 15%			Non	TH <= 15%			Non	TH <= 15%			Non	TH <= 15%			Non			
Protection			iC60H				iC60H				iC60H				iC60H						
Calibre	Ir	Im/Isd/IN Fus.	16 A		153,6 A		16 A		153,6 A		16 A		153,6 A		16 A		153,6 A				
K/Cal.	Tr	Tempo	1				1				1			1							
Déclencheur	Li off	I _{Δn}	Standard (C)				Standard (C)				Standard (C)			Standard (C)							
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				Sur circuit			Sur circuit							
RESULTATS																					
Câble	Neutre		PE/PEN	5G6				5G2,5				5G2,5			5G2,5						
Critère	IB			IN!!		0,43 A		MINI		0,43 A		MINI		0,43 A							
S Th.	Iz			5,685 mm²		16,55 A		1,428 mm²		22,68 A		1,428 mm²		22,68 A							
Im / Isd Max	Ik Am/Av					21,6 kA / 4,7 kA				21,6 kA / 2,2 kA					21,6 kA / 2,2 kA						
Sélectivité	Association			I<0,95kA		Avec		I<0,95kA		Avec		I<0,95kA		Avec							
INFOS IK / PROTECTION																					
Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	2,98 kA		15 kA	25 kA	1,74 kA		15 kA	25 kA	1,74 kA								
Tmax. Prot.	Déclencheur		1 ms		4P4D		1 ms		4P4D		1 ms		4P4D								
Contacteur	Relais therm.																				
Constructeur				mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi								
SELECTIVITE																					
Limite	A partir de		950 A				950 A				950 A			950 A							
Thermique	Différentielle		Avec		Sans objet		Avec		Sans objet		Avec		Sans objet								
Sélectivité logique			<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>			<input type="checkbox"/>							
T1	T2																				
IK EXTREMITE																					
I _{k3} Max	I _{k2} Min	If	4749 A	465 A		2160 A	441 A		2160 A	441 A		2160 A	441 A								
I _{k2} Max	I _{k1} Min		4113,0 A	656 A		1870,5 A	509 A		1870,5 A	509 A		1870,5 A	509 A								
I _{k1} Max				2434 A			1089 A			1089 A			1089 A								
A A Ind. A Date : 19-08-24			MODIFICATIONS									FICHE DE CALCUL 3C Avis Technique 15L-601 Fiche de calcul 3 circuits TD2 TD2DIV005..SELF ORDERING ELIE BT AFFAIRE: 001 PLAN: Folio 13 18									

RESEAU			Normal			Secours			FICHE DE CALCUL 3C								
Rég.de N	TT		I installée		61,02 A		61,02 A										
Tension	400 V		I Totale		60,00 A		60,00 A										
DISTRIBUTION			I Dispo		-1,02 A		-1,02 A										
Amont N	TD2	TD2	Ik3 max		21647 A		1575 A										
Amont S	TD2	TD2	ΔU		0,29 %		0,48 %										
CIRCUIT			Circuit conforme				Circuit conforme				Circuit conforme						
			IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>			
Amont	Repère		TD2		TD2DIV002		TD2		TD2DIV001		TD2		SELF ORDERING M				
JdB Amont	D.origine																
Style			Divers				Divers				Divers						
Contenu	Du Variateur		3P+N+PE				3P+N+PE				3P+N+PE						
Désignation																	
INFOS CABLES / RECEPTEUR																	
Nb	Conso	K Fois	Lieu géo.	1	300W	1		1	300W	1		1	300W	1			
Rep. Récepteur	JdB Aval	Rév.					A				A				A		
Cos φ	K Util.	UL	1	1				1	1			1	1				
Cos φ Dém.	ID/IN	ΔU Dém.	1	1,00	0,51 %			1	1,00	0,51 %		1	1,00	0,51 %			
η	Alimentation		1,00	N et S				1,00	N et S				1,00	N et S			
Polarité Récept.	Type	1P						1P				1P					
CABLE																	
Repère	Mode de pose			13			13			13			13				
Type	Ame	Pôle	U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi/Uni				
Long.	1er Récep.	L. Max	15 m		72 m (CC)		15 m		72 m (CC)		15 m		72 m (CC)				
ΔU Max	dU Circuit	ΔU Totale	5 %	0,03 %	0,51 %		5 %	0,03 %	0,51 %		5 %	0,03 %	0,51 %				
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72			
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.										
					<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié										
Type	Prot. Cl	Disjonct. C	Prot Base		Disjonct. C	Prot Base		Disjonct. C	Prot Base		Disjonct. C	Prot Base					
RESULTATS FORC.																	
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm ²		forcé <input type="checkbox"/>	1	2,5 mm ²		forcé <input type="checkbox"/>	1	2,5 mm ²				
	Nb	Neutre		1	2,5 mm ²			1	2,5 mm ²			1	2,5 mm ²				
	Nb	PE/PEN		1	2,5 mm ²			1	2,5 mm ²			1	2,5 mm ²				
Taux Harm.	N Chargé		TH <= 15%			Non	TH <= 15%			Non	TH <= 15%			Non			
Protection			iC60H				iC60H				iC60H						
Calibre	Ir	Im/Isd/IN Fus.	16 A		153,6 A		16 A		153,6 A		16 A		153,6 A				
K/Cal.	Tr	Tempo	1				1				1						
Déclencheur	Li off	I _{An}	Standard (C)				Standard (C)				Standard (C)						
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				Sur circuit						
RESULTATS																	
Câble	Neutre		PE/PEN	5G2,5			5G2,5			5G2,5			5G2,5				
Critère	IB			MINI	0,43 A		MINI	0,43 A		MINI	0,43 A		MINI	0,43 A			
S Th.	Iz			1,428 mm ²	22,68 A		1,428 mm ²	22,68 A		1,428 mm ²	22,68 A		1,428 mm ²	22,68 A			
Im / Isd Max	Ik Am/Av				21,6 kA / 2,2 kA			21,6 kA / 2,2 kA			21,6 kA / 2,2 kA			21,6 kA / 2,2 kA			
Sélectivité	Association		I<0,95kA	Avec		I<0,95kA	Avec		I<0,95kA	Avec		I<0,95kA	Avec				
INFOS IK / PROTECTION																	
Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	1,74 kA		15 kA	25 kA	1,74 kA		15 kA	25 kA	1,74 kA				
Tmax. Prot.	Déclencheur		1 ms	4P4D			1 ms	4P4D			1 ms	4P4D					
Contacteur	Relais therm.																
Constructeur				mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi				
SELECTIVITE																	
Limite	A partir de		950 A			950 A			950 A			950 A					
Thermique	Différentielle		Avec	Sans objet		Avec	Sans objet		Avec	Sans objet							
Sélectivité logique			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>								
T1	T2																
IK EXTREMITE																	
Ik3 Max	Ik2 Min	If	2160 A	441 A		2160 A	441 A		2160 A	441 A		2160 A	441 A				
Ik2 Max	Ik1 Min		1870,5 A	509 A		1870,5 A	509 A		1870,5 A	509 A		1870,5 A	509 A				
Ik1 Max				1089 A			1089 A			1089 A			1089 A				
A			MODIFICATIONS						Avis Technique 15L-601								
									Fiche de calcul 3 circuits TD2 TD2DIV002..SELF ORDERING M								
									AFFAIRE: 001						Folio		
									PLAN:						14		
															18		
			Date : 19-08-24	Norme : C1510015													

RESEAU		Normal			Secours		FICHE DE CALCUL 3C													
Rég.de N	TT	I installée	61,02 A		61,02 A															
Tension	400 V	I Totale	60,00 A		60,00 A															
DISTRIBUTION		I Dispo	-1,02 A		-1,02 A															
Amont N	TD2	I _{k3} max	21647 A		1575 A															
Amont S	TD2	ΔU	0,29 %		0,48 %															

CIRCUIT			Circuit conforme				Circuit conforme				Circuit conforme			
			IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>
Amont	Repère	TD2	FRITEUSE COMMER			TD2	GRILL À PANINII			TD2	MÉLANGEUR INDUS			
JdB Amont	D.origine													
Style		Divers									Divers			
Contenu	Du Variateur	3P+N+PE					3P+N+PE				3P+N+PE			
Désignation														

INFOS CABLES / RECEPTEUR

Nb	Conso	K Fois	Lieu géo.	1	300W	1		1	1800W	1		1	1500W	1	
Rep. Récepteur	JdB Aval	Rév.	FRITEUSE COMMER			A		GRILL À PANINII		A		MÉLANGEUR INDUS		A	
Cos φ	K Util.	UL	1	1			0,8	1			0,8	1			
Cos φ Dém.	ID/IN	ΔU Dém.	1	1,00	0,5 %		0,3	1,00	0,59 %		0,3	1,00	0,57 %		
η	Alimentation	1,00	N et S				1,00	N et S			1,00	N et S			
Polarité Récept.	Type	3P+N					3P+N				3P+N				

CABLE

Repère	Mode de pose		FRITEUSE COMMER			13	GRILL À PANINII			13	MÉLANGEUR INDUS			13
Type	Ame	Pôle	U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi/Uni		U1000R2V (90°C)	Cu	Multi/Uni	
Long.	1er Récep.	L. Max	10 m		72 m (CC)		10 m		72 m (CC)		10 m		72 m (CC)	
ΔU Max	dU Circuit	ΔU Totale	5 %	0,02 %	0,50 %		5 %	0,11 %	0,59 %		5 %	0,09 %	0,57 %	
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72

PROTECTION

Disp. de Vérif. Contrainte Therm.
 Icu Disjoncteur Vérifié

Disp. de Vérif. Contrainte Therm.
 Icu Disjoncteur Vérifié

Disp. de Vérif. Contrainte Therm.
 Icu Disjoncteur Vérifié

Type	Prot. Cl	Disjonct. C	Prot Base	Disjonct. C	Prot Base	Disjonct. C	Prot Base
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RESULTATS FORC.

forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm²	forcé <input type="checkbox"/>	1	2,5 mm²	forcé <input type="checkbox"/>	1	2,5 mm²		
	Nb	Neutre		1	2,5 mm²		1	2,5 mm²		1	2,5 mm²		
	Nb	PE/PEN		1	2,5 mm²		1	2,5 mm²		1	2,5 mm²		
Taux Harm.	N Chargé		TH <= 15%		Non	TH <= 15%		Non	TH <= 15%		Non		
Protection			iC60H			iC60H			iC60H				
Calibre	Ir	Im/Isd/IN Fus.	16 A		153,6 A	16 A		153,6 A	16 A		153,6 A		
K/Cal.	Tr	Tempo	1			1			1				
Déclencheur	Li off	I _{Δn}	Standard (C)			Standard (C)			Standard (C)				
Therm. Aval	Li	Δt	Sur circuit			Sur circuit			Sur circuit				

RESULTATS

Câble	Neutre	PE/PEN	5G2,5			5G2,5			5G2,5		
Critère	IB		MINI		0,43 A	MINI		3,25 A	MINI		2,71 A
S Th.	Iz		1,428 mm²		22,68 A	1,428 mm²		22,68 A	1,428 mm²		22,68 A
Im / Isd Max	Ik Am/Av				21,6 kA / 3,1 kA			21,6 kA / 3,1 kA			21,6 kA / 3,1 kA
Sélectivité	Association		I<0,95kA		Avec	I<0,95kA		Avec	I<0,95kA		Avec

INFOS IK / PROTECTION

Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	2,27 kA	15 kA	25 kA	2,27 kA	15 kA	25 kA	2,27 kA
Tmax. Prot.	Déclencheur		1 ms		4P4D	1 ms		4P4D	1 ms		4P4D
Contacteur	Relais therm.										
Constructeur	mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi				

SELECTIVITE

Limite	A partir de		950 A			950 A			950 A		
Thermique	Différentielle		Avec		Sans objet	Avec		Sans objet	Avec		Sans objet
Sélectivité logique			<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>		
T1	T2										

IK EXTREMITE

Ik3 Max	Ik2 Min	If	3144 A	457 A		3144 A	457 A		3144 A	457 A	
Ik2 Max	Ik1 Min		2723,2 A	594 A		2723,2 A	594 A		2723,2 A	594 A	
Ik1 Max			1593 A			1593 A			1593 A		

	Avis Technique 15L-601		
	Fiche de calcul 3 circuits TD2 FRITEUSE COMMER..MÉLANGEUR		
	MODIFICATIONS		
	NOTE DE CALCUL cafe shop		
	Date : 19-08-24	Norme : C1510015	PLAN:
AFFAIRE: 001			
Folio			
15			
18			

RESEAU			Normal			Secours			FICHE DE CALCUL 3C														
Rég.de N	TT		I installée	61,02 A			61,02 A																
Tension	400 V		I Totale	60,00 A			60,00 A																
DISTRIBUTION			I Dispo	-1,02 A			-1,02 A																
Amont N	TD2	TD2	I _{k3} max	21647 A			1575 A																
Amont S	TD2	TD2	ΔU	0,29 %			0,48 %																
CIRCUIT			Circuit conforme			Circuit conforme			Circuit conforme														
			IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>									
Amont	Repère		TD2			APPAREIL DE CUI			TD2			FOUR À CONVECTI			TD2		PLANCH						
JdB Amont	D.origine																						
Style			Divers						Divers						Divers								
Contenu	Du Variateur		3P+N+PE						3P+N+PE						3P+N+PE								
Désignation																							
INFOS CABLES / RECEPTEUR																							
Nb	Conso	K Fois	Lieu géo.	1	2000W		1			1	3000W		1			1	1500W		1				
Rep. Récepteur	JdB Aval	Rév.		APPAREIL DE CUI				A						A						A			
Cos φ	K Util.	UL		0,8	1					0,8	1					0,8	1						
Cos φ Dém.	ID/IN	ΔU Dém.		0,3	1,00		0,6 %			0,3	1,00		0,66 %			0,3	1,00		0,57 %				
η	Alimentation			1,00	N et S					1,00	N et S					1,00	N et S						
Polarité Récept.	Type			3P+N						3P+N						3P+N							
CABLE																							
Repère	Mode de pose			APPAREIL DE CUI			13					13						13					
Type	Ame	Pôle		U1000R2V (90°C)	Cu		Multi/Uni		U1000R2V (90°C)	Cu		Multi/Uni		U1000R2V (90°C)	Cu		Multi/Uni						
Long.	1er Récep.	L. Max		10 m			72 m (CC)		10 m			72 m (CC)		10 m			72 m (CC)						
ΔU Max	dU Circuit	ΔU Totale		5 %	0,12 %		0,60 %		5 %	0,18 %		0,66 %		5 %	0,09 %		0,57 %						
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72				
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié													
Type	Prot. CI		Disjonct. C		Prot Base		Disjonct. C		Prot Base		Disjonct. C		Prot Base		Disjonct. C		Prot Base						
RESULTATS FORC.																							
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	2,5 mm²		forcé <input type="checkbox"/>	1	2,5 mm²						
Nb		Neutre		1	2,5 mm²			1	2,5 mm²			1	2,5 mm²			1	2,5 mm²						
Nb		PE/PEN		1	2,5 mm²			1	2,5 mm²			1	2,5 mm²			1	2,5 mm²						
Taux Harm.	N Chargé			TH <= 15%			Non	TH <= 15%			Non	TH <= 15%			Non	TH <= 15%			Non				
Protection				iC60H				iC60H				iC60H											
Calibre	Ir	Im/Isd/IN Fus.	16 A		153,6 A		16 A		153,6 A		16 A		153,6 A		16 A		153,6 A						
K/Cal.	Tr	Tempo	1				1				1				1								
Déclencheur	Li off	I _{Δn}	Standard (C)				Standard (C)				Standard (C)				Standard (C)								
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				Sur circuit				Sur circuit								
RESULTATS																							
Câble	Neutre		PE/PEN	5G2,5						5G2,5				5G2,5									
Critère	IB			MINI			3,61 A			MINI	5,41 A			MINI	2,71 A								
S Th.	Iz			1,428 mm²			22,68 A			1,428 mm²	22,68 A			1,428 mm²	22,68 A								
Im / Isd Max	Ik Am/Av						21,6 kA / 3,1 kA				21,6 kA / 3,1 kA							21,6 kA / 3,1 kA					
Sélectivité	Association		I<0,95kA	Avec			I<0,95kA			Avec	I<0,95kA			Avec									
INFOS IK / PROTECTION																							
Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	2,27 kA		15 kA	25 kA	2,27 kA		15 kA	25 kA	2,27 kA		15 kA	25 kA	2,27 kA						
Tmax. Prot.	Déclencheur		1 ms	4P4D			1 ms	4P4D			1 ms	4P4D			1 ms	4P4D							
Contacteur	Relais therm.																						
Constructeur				mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi										
SELECTIVITE																							
Limite	A partir de		950 A				950 A				950 A				950 A								
Thermique	Différentielle		Avec	Sans objet			Avec	Sans objet			Avec	Sans objet			Avec	Sans objet							
Sélectivité logique			<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>								
T1	T2																						
IK EXTREMITE																							
I _{k3} Max	I _{k2} Min	If	3144 A	457 A			3144 A	457 A			3144 A	457 A			3144 A	457 A							
I _{k2} Max	I _{k1} Min		2723,2 A	594 A			2723,2 A	594 A			2723,2 A	594 A			2723,2 A	594 A							
I _{k1} Max				1593 A			1593 A			1593 A			1593 A										
A			MODIFICATIONS NOTE DE CALCUL cafe shop									Avis Technique 15L-601											
												Fiche de calcul 3 circuits TD2 APPAREIL DE CUI..PLANCH											
												ELIE BT											
												AFFAIRE: 001											
												PLAN:											
Ind.												Folio											
												16											
												18											
												18											

RESEAU			Normal			Secours			FICHE DE CALCUL 3C											
Rég.de N	TT		I installée	61,02 A			61,02 A													
Tension	400 V		I Totale	60,00 A			60,00 A													
DISTRIBUTION			I Dispo	-1,02 A			-1,02 A													
Amont N	TD2	TD2	I _{k3} max	21647 A			1575 A													
Amont S	TD2	TD2	ΔU	0,29 %			0,48 %													
CIRCUIT			Circuit conforme			Circuit conforme			Circuit conforme											
			IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IN <input checked="" type="checkbox"/>	DU <input checked="" type="checkbox"/>	CI <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>						
Amont	Repère		TD2			MACHINE À GLAÇO			TD2			RÉCHAUD ÉLECTRI			TD2			TD2PC003		
JdB Amont	D.origine																			
Style			Divers						Divers						PC					
Contenu	Du Variateur		3P+N+PE						3P+N+PE						P+N+PE					
Désignation																				
INFOS CABLES / RECEPTEUR																				
Nb	Conso	K Fois	Lieu géo.	1	2000W	1		1	2000W	1		1	4,05kW	1						
Rep. Récepteur	JdB Aval	Rév.					A				A							A		
Cos φ	K Util.	UL	0,8		1			0,8		1		0,8		1						
Cos φ Dém.	ID/IN	ΔU Dém.	0,3		1,00		0,6 %	0,3		1,00		0,6 %								
η	Alimentation		1,00	N et S				1,00	N et S				1,00	N et S						
Polarité Récept.	Type	3P+N						3P+N					P+N							
CABLE																				
Repère	Mode de pose						13				13						13			
Type	Ame	Pôle	U1000R2V (90°C)	Cu		Multi/Uni		U1000R2V (90°C)	Cu		Multi/Uni		U1000R2V (90°C)	Cu		Multi/Uni				
Long.	1er Récep.	L. Max	10 m	72 m (CC)				10 m	72 m (CC)				10 m	31 m (DU)						
ΔU Max	dU Circuit	ΔU Totale	5 %	0,12 %		0,60 %		5 %	0,12 %		0,60 %		5 %	1,45 %		1,93 %				
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	1,00	0,72	1,00	0,72	1,00	0,72		
PROTECTION						<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié									
Type	Prot. Cl	Disjonct. C	Prot Base			Disjonct. C	Prot Base			Disjonct. C	Prot Base			Disjonct. C	Dif.30mA					
RESULTATS FORC.																				
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm²	forcé <input type="checkbox"/>	1	2,5 mm²	forcé <input type="checkbox"/>	1	2,5 mm²	forcé <input type="checkbox"/>	1	2,5 mm²						
	Nb	Neutre		1	2,5 mm²		1	2,5 mm²		1	2,5 mm²		1	2,5 mm²						
	Nb	PE/PEN		1	2,5 mm²		1	2,5 mm²		1	2,5 mm²		1	2,5 mm²						
Taux Harm.	N Chargé		TH <= 15%			Non	TH <= 15%			Non				Non						
Protection			iC60H			iC60H						DT40								
															Type AC					
Calibre	Ir	Im/Isd/IN Fus.	16 A	153,6 A			16 A	153,6 A			25 A	250 A								
K/Cal.	Tr	Tempo	1				1				1									
Déclencheur	Li off	I _{Δn}	Standard (C)				Standard (C)				Standard (C)				30 mA					
Therm. Aval	Li	Δt	Sur circuit				Sur circuit				Sur circuit				0 ms					
RESULTATS																				
Câble	Neutre		PE/PEN	5G2,5				5G2,5				3G2,5								
Critère	IB			MINI	3,61 A			MINI	3,61 A			MINI	21,92 A							
S Th.	Iz			1,428 mm²	22,68 A			1,428 mm²	22,68 A			2,330 mm²	26,12 A							
Im / Ird Max	Ik Am/Av				21,6 kA	/ 3,1 kA			21,6 kA	/ 3,1 kA			15,3 kA	/ 1,6 kA						
Sélectivité	Association		I<0,95kA	Avec			I<0,95kA	Avec			I<0,80kA	Avec								
INFOS IK / PROTECTION																				
Icu / Icm	Icu Assoc.	Ip	15 kA	25 kA	2,27 kA	15 kA	25 kA	2,27 kA	6 kA	20 kA	0,56 kA									
Tmax. Prot.	Déclencheur		1 ms	4P4D			1 ms	4P4D			1 ms	2P1D								
Contacteur	Relais therm.																			
Constructeur				mg18fr1.dmi			mg18fr1.dmi			mg18fr1.dmi										
SELECTIVITE																				
Limite	A partir de		950 A				950 A				800 A									
Thermique	Différentielle		Avec	Sans objet			Avec	Sans objet			Non Calc	Partielle								
Sélectivité logique			<input type="checkbox"/>				<input type="checkbox"/>				<input type="checkbox"/>									
T1	T2																			
IK EXTREMITE																				
I _{k3} Max	I _{k2} Min	If	3144 A	457 A		3144 A	457 A													
I _{k2} Max	I _{k1} Min		2723,2 A	594 A		2723,2 A	594 A													
I _{k1} Max				1593 A			1593 A			1593 A										
A			MODIFICATIONS NOTE DE CALCUL cafe shop									Avis Technique 15L-601								
												Fiche de calcul 3 circuits TD2 MACHINE À GLAÇO..TD2PC003								
												AFFAIRE: 001								
												PLAN:								
												Folio								
Ind.												17								
												18								
Date : 19-08-24			Norme : C1510015																	

RESEAU			Normal			Secours			FICHE DE CALCUL 3C														
Rég.de N	TT		I installée	61,02 A		61,02 A																	
Tension	400 V		I Totale	60,00 A		60,00 A																	
DISTRIBUTION			I Dispo	-1,02 A		-1,02 A																	
Amont N	TD2	TD2	I _{k3} max	21647 A		1575 A																	
Amont S	TD2	TD2	ΔU	0,29 %		0,48 %																	
CIRCUIT			Circuit conforme				IN <input checked="" type="checkbox"/> DU <input checked="" type="checkbox"/> CI <input checked="" type="checkbox"/> CC <input checked="" type="checkbox"/>				IN <input type="checkbox"/> DU <input type="checkbox"/> CI <input type="checkbox"/> CC <input type="checkbox"/>				IN <input type="checkbox"/> DU <input type="checkbox"/> CI <input type="checkbox"/> CC <input type="checkbox"/>								
Amont	Repère		TD2		BAIE DE BRASSAG																		
JdB Amont	D.origine																						
Style			PC																				
Contenu	Du Variateur		P+N+PE																				
Désignation																							
INFOS CABLES / RECEPTEUR																							
Nb	Conso	K Fois	Lieu géo.	1	20A	1																	
Rep. Récepteur	JdB Aval	Rév.					A																
Cos φ	K Util.	UL	0,8		1																		
Cos φ Dém.	ID/IN	ΔU Dém.																					
η	Alimentation		1,00	N et S																			
Polarité Récept.	Type	P+N																					
CABLE																							
Repère	Mode de pose			13																			
Type	Ame	Pôle	U1000R2V (90°C)	Cu	Multi/Uni																		
Long.	1er Récep.	L. Max	10 m		34 m (DU)																		
ΔU Max	dU Circuit	ΔU Totale	5 %	1,32 %	1,81 %																		
K T°	K prox	K Comp	Fs	K Cumul	1,00	0,72	1,00	1,00	0,72														
PROTECTION					<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input type="checkbox"/> Disp. de Vérif. Contrainte Therm.	<input checked="" type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Icu Disjoncteur Vérifié	<input type="checkbox"/> Icu Disjoncteur Vérifié													
Type	Prot. Cl	Disjonct. C	Dif.30mA																				
RESULTATS FORC.																							
forcé <input type="checkbox"/>	Nb	Phase	forcé <input type="checkbox"/>	1	2,5 mm²	forcé <input type="checkbox"/>																	
	Nb	Neutre		1	2,5 mm²																		
	Nb	PE/PEN		1	2,5 mm²																		
Taux Harm.	N Chargé				Non																		
Protection			DT40 Type AC																				
Calibre	Ir	Im/Isd/IN Fus.	20 A		280 A																		
K/Cal.	Tr	Tempo	1																				
Déclencheur	Li off	I _{Δn}	Standard (C)		30 mA																		
Therm. Aval	Li	Δt	Sur circuit		0 ms																		
RESULTATS																							
Câble	Neutre	PE/PEN	3G2,5																				
Critère	IB		MINI	20,00 A																			
S Th.	Iz		1,628 mm²	26,12 A																			
Im / Isd Max	Ik Am/Av			15,3 kA	/ 1,6 kA										/			/					
Sélectivité	Association	Fonct.	Avec																				
INFOS IK / PROTECTION																							
Icu / Icm	Icu Assoc.	Ip	6 kA	20 kA	1,33 kA																		
Tmax. Prot.	Déclencheur		1 ms	2P1D																			
Contacteur	Relais therm.																						
Constructeur			mg18fr1.dmi																				
SELECTIVITE																							
Limite	A partir de		1250 A	9 m																			
Thermique	Différentielle		Non Calc	Partielle																			
Sélectivité logique			<input type="checkbox"/>			<input type="checkbox"/>									<input type="checkbox"/>								
T1	T2																						
IK EXTREMITE																							
I _{k3} Max	I _{k2} Min	If																					
I _{k2} Max	I _{k1} Min			594 A																			
I _{k1} Max			1593 A																				
			Avis Technique 15L-601																				
			Fiche de calcul 3 circuits TD2 BAIE DE BRASSAG																				
			AFFAIRE: 001												Folio								
			PLAN:												18								
															18								
Date : 19-08-24			Norme : C1510015																				

Désignation local	désignation récepteur	Puissance	Nombre	Formule Nb x P x ...	P installée (kW)	Coef d'U simult. Des	P utilisation (kW)	Coef simult. Glob.	P Simult. (kW)	Coef d'extension	P (kW)	Intensité (A)
Grande salle a manger	THORN :GLAC2 L LED3 (27 W)	27	12	324,00	0,32	1	1,00	0,32				
	THORN:OMEGA C(20W)	20	14	280,00	0,28	1	1,00	0,28				
	Self ordering machine(300w)	300	6	1800,00	1,80	1	1,00	1,80				
	PC 16A/230V	3680	9	33120,00	33,12	1	0,20	6,62				
Petite salle a manger	THORN :GLAC2 L LED3 (27 W)	27	2	54,00	0,054	1	1	0,05				
	THORN:OMEGA C(20W)	20	4	80,00	0,08	1	1,00	0,08				
	PC 16A/230V	3680	4	14720,00	14,72	1	0,33	4,78				
Lavabo	THORN:OMEGA C(20W)	20	2	40,00	0,04	1	1,00	0,04				
	seche-main (2300W)	2300	3	6900,00	6,9	1	1,00	6,90				
Toilette 1	THORN:OMEGA C(20W)	20	1	20,00	0,02	1	1,00	0,02				
	aliza:VMC(20W)	20	1	20,00	0,02	1	1,00	0,02				
Toilette 2	THORN:OMEGA C(20W)	20	1	20,00	0,02	1	1,00	0,02				
	aliza:VMC(30W)	20	1	20,00	0,02	1	1,00	0,02				
Toilette 3	THORN:OMEGA C(20W)	20	1	20,00	0,02	1	1,00	0,02				
	aliza:VMC(20W)	20	1	20,00	0,02	1	1,00	0,02				
Couloir	THORN:OMEGA C(20W)	20	2	40,00	0,04	1	1,00	0,04				
	PC 16A/230V	3680	1	3680,00	3,68	1	1,00	3,68				
Cuisine	THORN:BETA 2 LED(33W)	33	9	297,00	0,30	1	1,00	0,30				
	friteuse commerciale(3000 Watts)	3000	1	3000,00	3,00	1	1,00	3,00				
	Grill à panini(1800Watts)	1800	1	1800,00	1,80	1	1,00	1,80				
	Mélangeur industriel(1500w)	1500	1	1500,00	1,50	1	1,00	1,50				
	Appareil de cuisson à induction : 2000 watts	2000	1	2000,00	2,00	1	1,00	2,00				
	Four à convection compact : 3000 watt	3000	1	3000,00	3,00	1	1,00	3,00				
	Plancha : 1500 watts	1500	1	1500,00	1,50	1	1,00	1,50				
	Machine à glaçons 2000 watts	2000	1	2000,00	2,00	1	1,00	2,00				
	Réchaud électrique 2000 watts	2000	1	2000,00	2,00	1	1,00	2,00				
Local technique	THORN:OMEGA C(20W)	20	3	60,00	0,06	1	1,00	0,06				
	PC 16A/230V	3680	2	7360,00	7,36	1	0,55	4,05				
Service au volant	THORN:OMEGA C(20W)	20	4	80,00	0,08	1	1,00	0,08				
	PC 16A/230V	3680	3	11040,00	11,04	1	0,40	4,42				
	Machine à café professionnelle 2000 watts	2000	1	2000,00	2,00	1	1,00	2,00				
	Grille-pain commercial 1800 watts	1800	1	1800,00	1,80	1	1,00	1,80				
	Machine à smoothie ou centrifugeuse 1500 w	1500	1	1500,00	1,50	1	1,00	1,50				
Groupe electrogene	THORN:BETA 2 LED(33W)	33	2	66,00	0,07	1	1,00	0,07				
	PC 16A/230V	3680	2	7360,00	7,36	1	0,55	4,05				
	bâie de brassage	4600	1	4600,00	4,60	1	1,00	4,60				

0,8 51,55 1,20 62 89