

CUKRARNA

Installation : JAZZ KLUB - MEDETAŽA

Project number : 416/16

Customer : SCAPELAB

Processed by : SCAPELAB

Date : 17.11.2016

The following values are based on exact calculations on calibrated lamps, luminaires and their arrangement. In practice, gradual divergences can occur.

Guarantee claims for luminaire data are excluded.

Relux and the luminaire manufacturers accept no liability for consequential damage and damage which is occasioned to the user or to third parties.

Object : CUKRARNA
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1 Luminaire data

1.1 ACDC LED Ltd, NOVUS Fixed white with... (ACDC1210-fxd-20...)

1.1.1 Data sheet

Manufacturer: ACDC LED Ltd

ACDC1210-fxd-2000-30-25R-WHI-NONE-IP20-SWT
engine - 3000K - 25R

NOVUS Fixed white with Large 2000 lumen

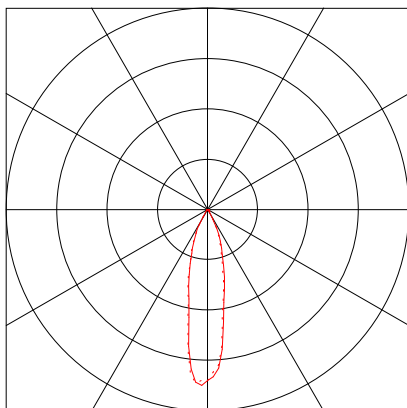
Luminaire data

Absolute Photometry
Luminaire efficacy : 83.2 lm/W
Classification : A80 ↓100.0% ↑0.0%
CIE Flux Codes : 94 98 99 100 100
UGR 4H 8H : 19.4 / 19.2
Power : 25 W
Luminous flux : 2080 lm

Equipped with

Quantity : 1
Designation :
Colour :

Dimensions : Ø80 mm x 1 mm



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1 Luminaire data

1.2 ACDC LED Ltd, NOVUS Fixed white with... (ACDC1210-fxd-20...)

1.2.1 Data sheet

Manufacturer: ACDC LED Ltd

ACDC1210-fxd-2000-40-33R-WHI-NONE-IP20-SWT
engine - 4000K - 33R

NOVUS Fixed white with Large 2000 lumen

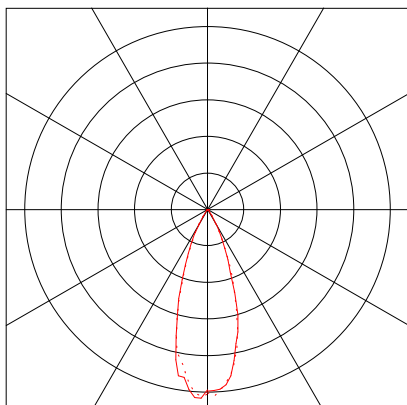
Luminaire data

Absolute Photometry
Luminaire efficacy : 86.56 lm/W
Classification : A80 ↓100.0% ↑0.0%
CIE Flux Codes : 97 99 100 100 100
UGR 4H 8H : 15.0 / 16.1
Power : 25 W
Luminous flux : 2164 lm

Equipped with

Quantity : 1
Designation :
Colour :

Dimensions : Ø80 mm x 1 mm



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1 Luminaire data

1.3 ZUMTOBEL, ONLITE ERI (70446584 (STD - Standard))

1.3.1 Data sheet

Manufacturer: ZUMTOBEL

70446584 (STD - Standard)

ONLITE ERI

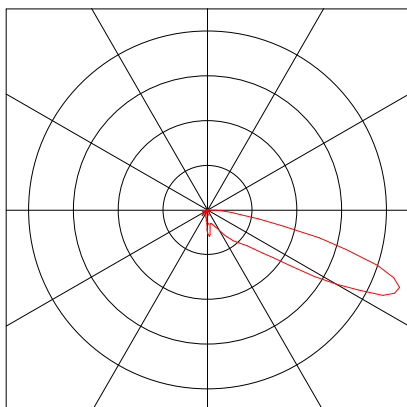
Luminaire data

Luminaire efficiency : 100%
Luminaire efficacy : 34 lm/W
Classification : A10 ↓99.6% ↑0.4%
CIE Flux Codes : 23 48 87 100 100
UGR 4H 8H : 47.8 / 20.8
Power : 1 W
Luminous flux : 34 lm

Equipped with

Quantity : 1
Designation : LED-Z396
0C8W
Colour :
Luminous flux : 34 lm

Dimensions : 15 mm x 15 mm x 2 mm



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1 Luminaire data

1.4 Zumtobel, RESCLITE C ANTIPANIC AD NSI WH ... (42180404)

1.4.1 Data sheet

Manufacturer: Zumtobel

42180404 surface mounted RESCLITE C ANTIPANIC AD NSI WH [STD]

LED Safety luminaire for anti-panic lighting with min. 0.5 lx as specified in EN 1838; surface mounted; Luminaire for central emergency lighting supply for individual luminaire monitoring via Powerline, adjustable emergency lighting level; room height 2.2 to 5 m; high power LED, cool white; large die-cast aluminium heat sink ensures optimum thermal management, lens made of polycarbonate (PC); luminaire housing made of die-cast aluminium in powder coated white finish, RAL 9016; luminaire can be installed quickly without tools; tool-free maintenance; through-wiring plug-in terminals for wire cross-sections up to 2.5 mm²; luminaire total power: 5 W; power supply: 230V AC, 220V DC; rotary switch for mechanical address-setting; non-maintained and maintained mode possible, Maintained mode: -5°C to +25°C, Non-maintained mode: -5°C to +30°C; Dimensions: 146 x 146 x 37 mm; IP40; weight: 0.55 kg; Luminaire wired with halogen-free leads; max. line length from emergency power source to last luminaire: 300 m.

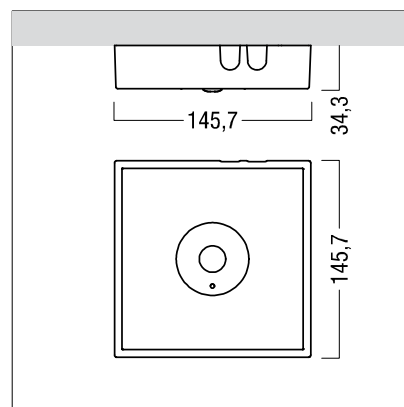
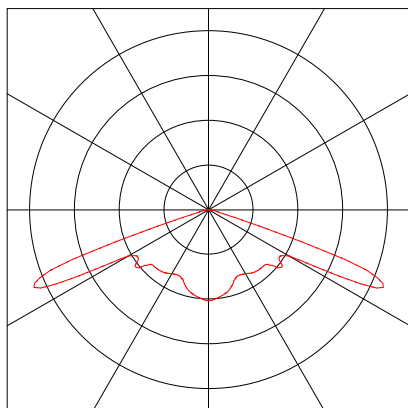
Luminaire data

Absolute Photometry
Luminaire efficacy : 39.6 lm/W
Classification : A20 ↓100.0% ↑0.0%
CIE Flux Codes : 27 57 99 100 100
UGR 4H 8H : 27.9 / 27.9
Power : 5 W
Luminous flux : 198 lm

Equipped with

Quantity : 1
Designation : LED-Z630
Colour : Unknown
Colour reproduction :

Dimensions : 146 mm x 146 mm x 37 mm



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1 Luminaire data

1.5 Zumtobel, RESCLITE C SPOT AD NSI WH [STD] (42180420)

1.5.1 Data sheet

Manufacturer: Zumtobel

42180420 surface mounted RESCLITE C SPOT AD NSI WH [STD]

LED Safety luminaire for illuminating fire-fighting and first-aid equipment and danger spots with minimum output 5 lx; surface mounted; Luminaire for central emergency lighting supply for individual luminaire monitoring via Powerline, adjustable emergency lighting level; room height 2.2 to 7 m; high power LED, cool white; large die-cast aluminium heat sink ensures optimum thermal management; lens made of polycarbonate (PC); luminaire housing made of die-cast aluminium in powder coated white finish, RAL 9016; gear tray made of galvanised sheet steel; housing can be installed quickly on gear tray without tools; tool-free maintenance; through-wiring plug-in terminals for wire cross-sections up to 2.5 mm²; side cable-entry possible; luminaire total power: 5 W; power supply: 230V AC, 220V DC; rotary switch for mechanical address-setting; non-maintained and maintained mode possible, Maintained mode: -5°C to +25°C, Non-maintained mode: -5°C to +30°C; Dimensions: 146 x 146 x 37 mm; IP40; weight: 0.55 kg; Luminaire wired with halogen-free leads; max. line length from emergency power source to last luminaire: 300 m.

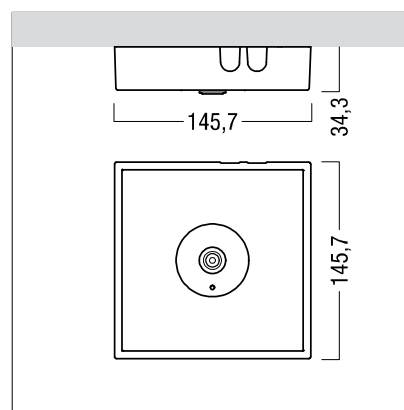
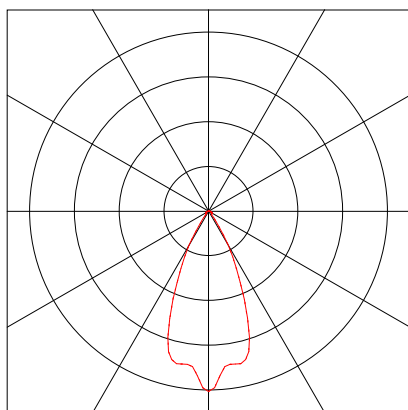
Luminaire data

Absolute Photometry
Luminaire efficacy : 38.6 lm/W
Classification : A70 ↓100.0% ↑0.0%
CIE Flux Codes : 89 95 98 100 100
UGR 4H 8H : 13.7 / 13.7
Power : 5 W
Luminous flux : 193 lm

Equipped with

Quantity : 1
Designation : LED-Z644
Colour : Unknown
Colour reproduction :

Dimensions : 146 mm x 146 mm x 37 mm

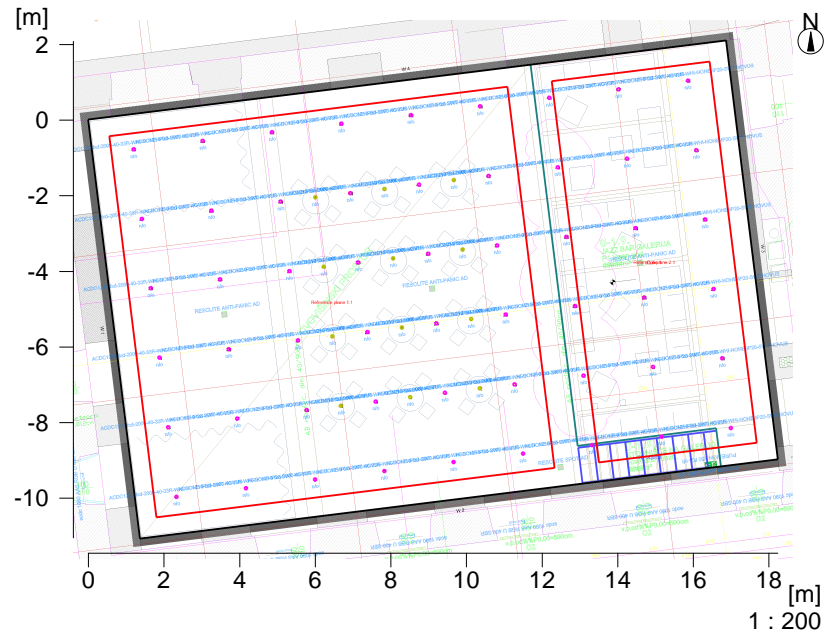


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2 01_splošna osvetlitev

2.1 Description, 01_splošna osvetlitev

2.1.1 Floor plan



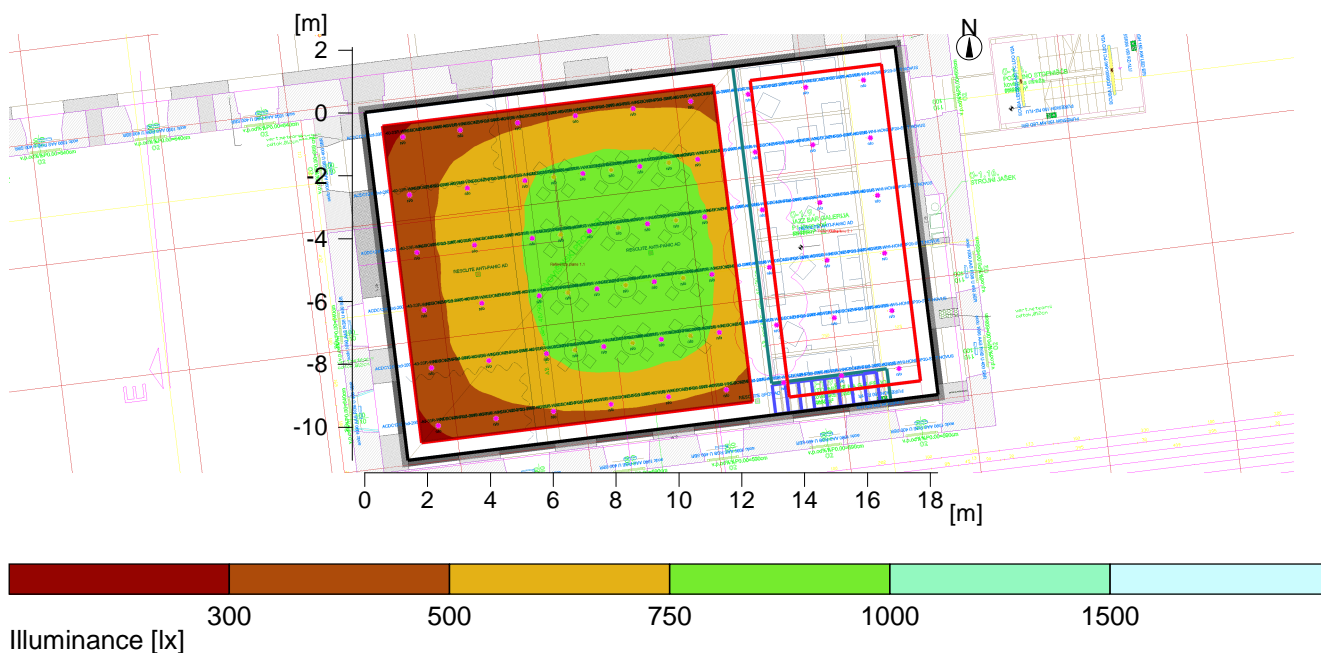
Wall	x	y	Length	Reflectance
1	69.87 m	8.15 m	11.13 m	50.0 %
2	86.74 m	10.24 m	16.99 m	50.0 %
3	85.37 m	21.29 m	11.13 m	50.0 %
4	68.50 m	19.20 m	16.99 m	50.0 %
Floor				20.0 %
Ceiling				70.0 %
Room height		7.32 m		
Height of reference plane		0.75 m		

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2 01_splošna osvetlitev

2.2 Summary, 01_splošna osvetlitev

2.2.1 Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	7.32 m
Maintenance factor	0.80
Total luminous flux of all lamps	102864 lm
Total power	1200.0 W
Total power per area (107.39 m ²)	11.17 W/m ² (1.69 W/m ² /100lx)

Evaluation area 1

Reference plane 1.1

	Horizontal
Em	660 lx
Emin	313 lx
Emin/Eav (Uo)	0.47
Emin/Emax (Ud)	0.32
Position	0.75 m

Type No.\Make

1	12	ACDC LED Ltd
		Order No. : ACDC1210-fxd-2000-30-25R-WHI-NONE-IP20-SWT
		Luminaire name : NOVUS Fixed white with Large 2000 lumen engine - 3000K - 25R
		Equipment : 1 x 25 W / 2080 lm




Object : CUKRARNA
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2 01_splošna osvetlitev

2.2 Summary, 01_splošna osvetlitev

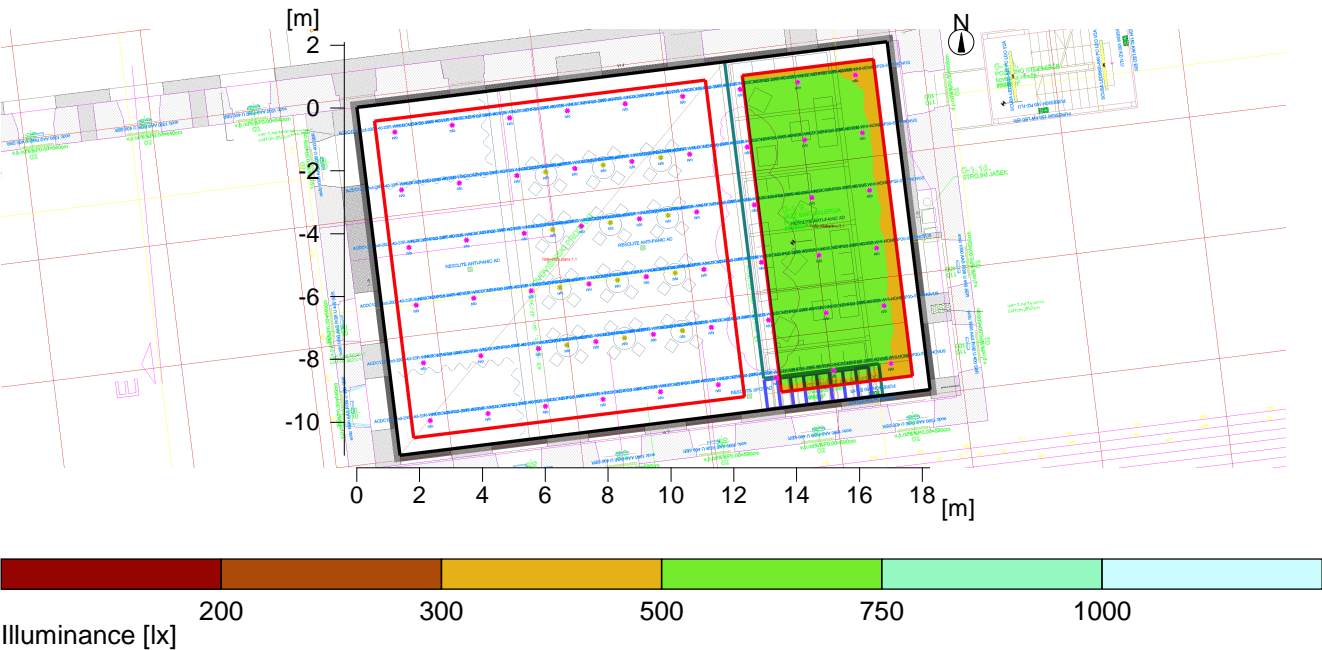
2.2.1 Result overview, Evaluation area 1

2	36	Order No.	: ACDC1210-fxd-2000-40-33R-WHI-NONE-IP20-SWT
		Luminaire name	: NOVUS Fixed white with Large 2000 lumen engine - 4000K - 33R
		Equipment	: 1 x 25 W / 2164 lm

Object : CUKRARNA
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2.2 Summary, 01_splošna osvetlitev

2.2.2 Result overview, Evaluation area 2



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	7.32 m
Maintenance factor	0.80
Total luminous flux of all lamps	25968 lm
Total power	300.0 W
Total power per area (42.59 m²)	7.04 W/m² (1.28 W/m²/100lx)

Evaluation area 2

Reference plane 2.1

Em	Horizontal
Emin	552 lx
Emin/Eav (Uo)	414 lx
Emin/Emax (Ud)	0.75
Position	0.68
	3.60 m

Type No.\Make

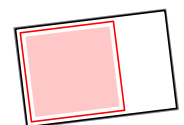
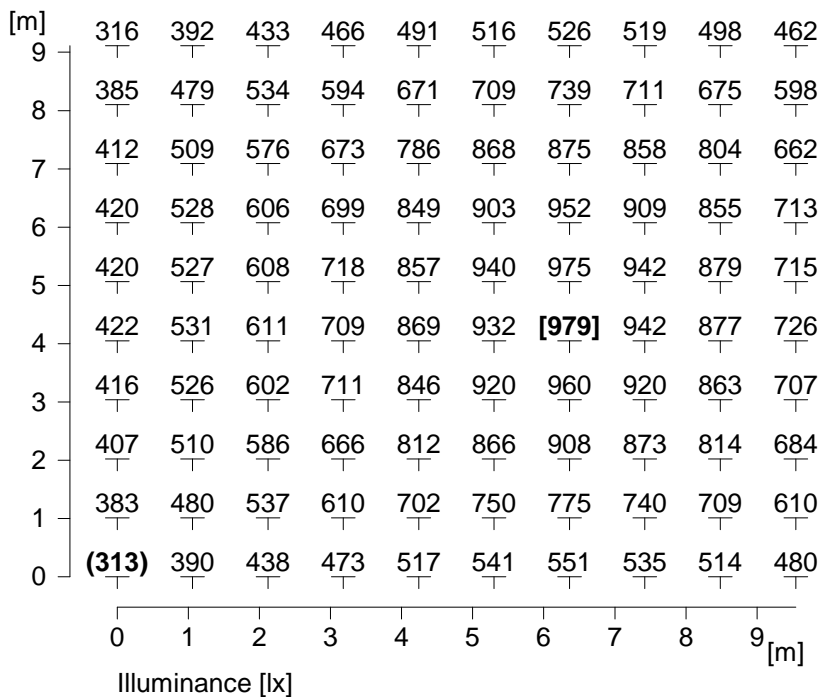
2	12	ACDC LED Ltd
		Order No. : ACDC1210-fxd-2000-40-33R-WHI-NONE-IP20-SWT
		Luminaire name : NOVUS Fixed white with Large 2000 lumen engine - 4000K - 33R
		Equipment : 1 x 25 W / 2164 lm

Object : CUKRARNA
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2 01_splošna osvetlitev

2.3 Calculation results, 01_splošna osvetlitev

2.3.1 Table, Reference plane 1.1 (E)



Height of the reference plane

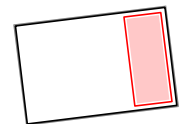
Average illuminance	Eav	: 0.75 m
Minimum illuminance	Emin	: 660 lx
Maximum illuminance	Emax	: 313 lx
Uniformity Uo	Emin/Eav	: 1 : 2.11 (0.47)
Diversity Ud	Emin/Emax	: 1 : 3.13 (0.32)

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2.3 Calculation results, 01_splošna osvetlitev

2.3.2 Table, Reference plane 2.1 (E)

	523	520	514	525	506	509	472	418
[m]	569	545	555	559	552	544	521	458
9	567	537	559	583	546	536	554	455
8	597	569	576	592	573	557	543	479
7	601	595	584	575	587	576	559	482
6	591	559	577	594	567	552	539	476
5	582	572	585	588	564	549	556	466
4	600	604	593	601	585	591	556	481
3	601	577	594	594	578	575	558	481
2	582	558	572	598	557	549	566	464
1	[605]	580	582	600	585	564	557	485
0	602	597	586	582	595	578	556	484
	592	555	576	594	565	546	543	479
	583	569	579	586	563	550	553	469
	597	598	582	597	580	588	539	482
	582	562	583	586	567	566	549	466
	563	546	557	584	542	538	553	450
	572	549	551	571	555	538	529	460
	517	510	502	503	515	500	470	(414)
	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5



Height of the reference plane

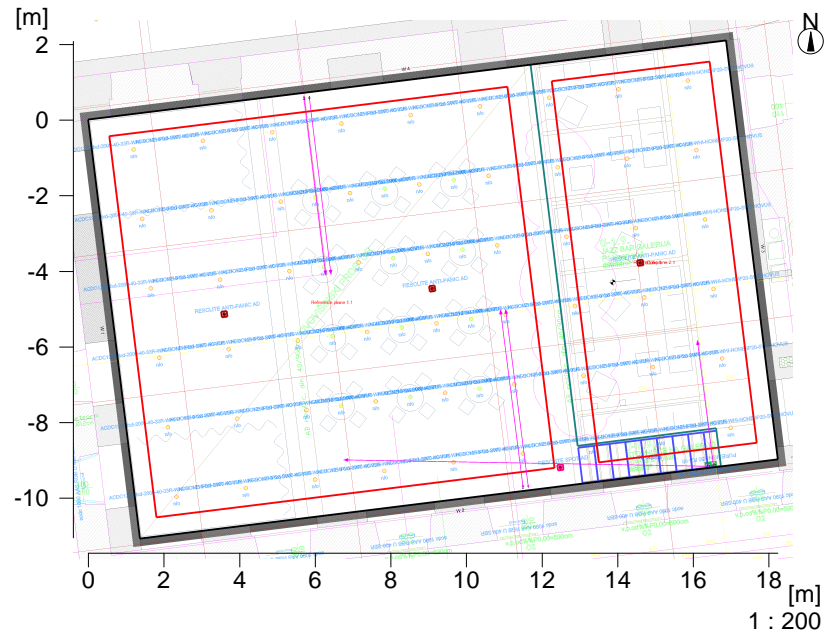
		: 3.60 m
Average illuminance	Eav	: 552 lx
Minimum illuminance	Emin	: 414 lx
Maximum illuminance	Emax	: 605 lx
Uniformity Uo	Emin/Eav	: 1 : 1.33 (0.75)
Diversity Ud	Emin/Emax	: 1 : 1.46 (0.68)

Object : CUKRARNA
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3 02_varnostna osvetlitev

3.1 Description, 02_varnostna osvetlitev

3.1.1 Floor plan



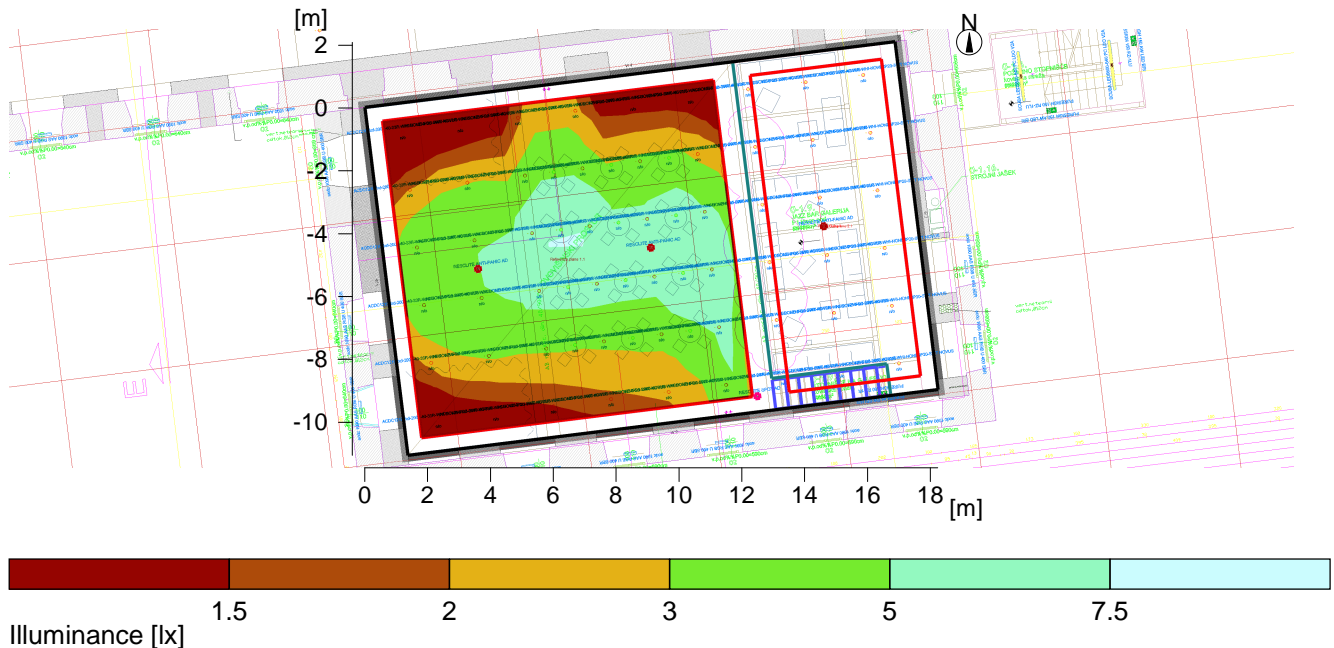
Wall	x	y	Length	Reflectance
1	69.87 m	8.15 m	11.13 m	50.0 %
2	86.74 m	10.24 m	16.99 m	50.0 %
3	85.37 m	21.29 m	11.13 m	50.0 %
4	68.50 m	19.20 m	16.99 m	50.0 %
Floor				20.0 %
Ceiling				70.0 %
Room height		7.32 m		
Height of reference plane		0.03 m		

Object : CUKRARNA
 Installation : JAZZ KLUB - MEDETAŽA
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3 02_varnostna osvetlitev

3.2 Summary, 02_varnostna osvetlitev

3.2.1 Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	386 lm
Total power	10.0 W
Total power per area (107.39 m ²)	0.09 W/m ² (2.49 W/m ² /100lx)

Evaluation area 1

Reference plane 1.1

Horizontal	
Em	3.73 lx
Emin	0.75 lx
Emin/Eav (Uo)	0.20
Emin/Emax (Ud)	0.10
Position	0.03 m

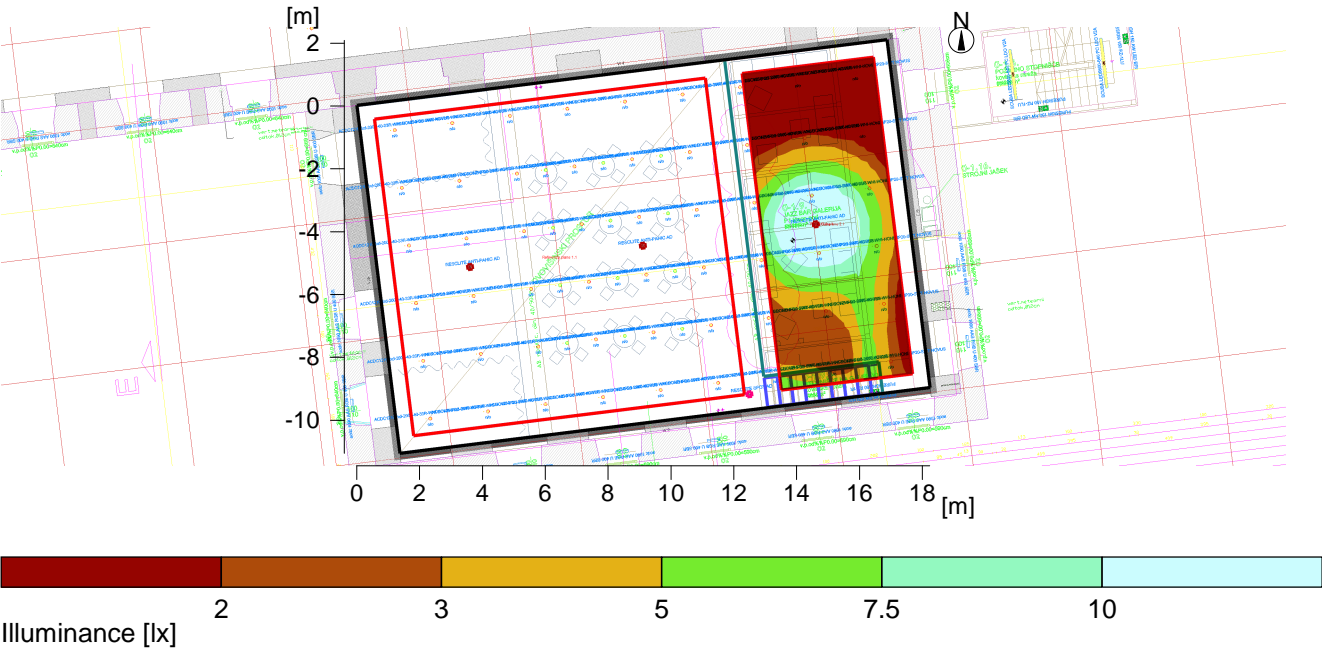
Type No.\Make

5	2	Zumtobel
		Order No. : 42180420
		Luminaire name : RESCLITE C SPOT AD NSI WH [STD]
		Equipment : 1 x LED-Z644 5 W / 193 lm

Object : CUKRARNA
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3.2 Summary, 02_varnostna osvetlitev

3.2.2 Result overview, Evaluation area 2



General	
Calculation algorithm used	Average indirect fraction
Maintenance factor	0.80
Total luminous flux of all lamps	193 lm
Total power	5.0 W
Total power per area (42.59 m²)	0.12 W/m² (2.47 W/m²/100lx)

Evaluation area 2	Reference plane 2.1
	Horizontal
Em	4.76 lx
Emin	0.72 lx
Emin/Eav (Uo)	0.15
Emin/Emax (Ud)	0.05
Position	3.00 m

Type No.\Make

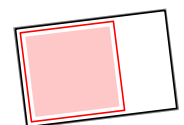
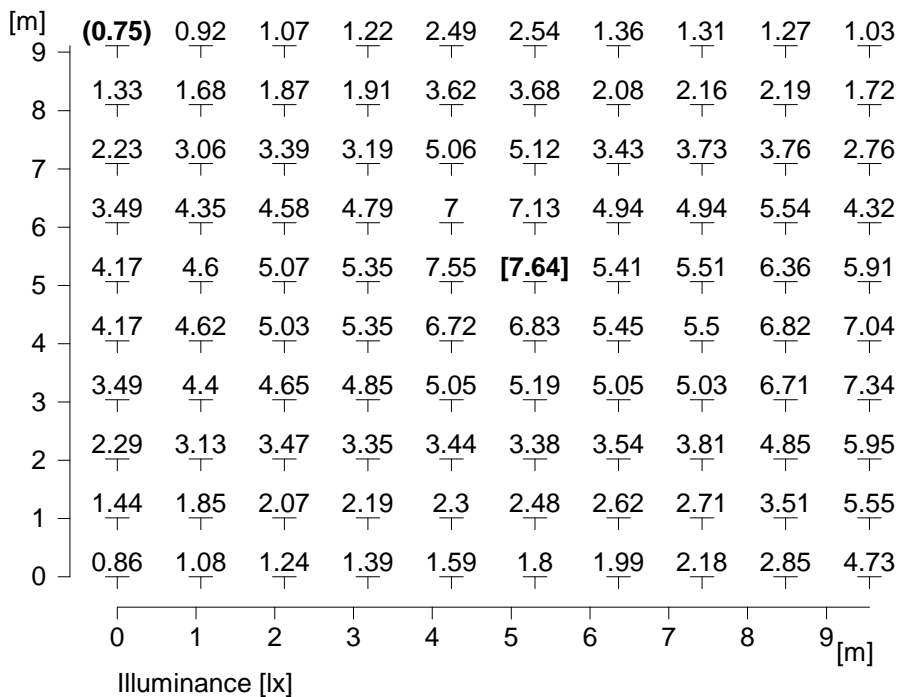
5	1	Zumtobel	
		Order No.	: 42180420
		Luminaire name	: RESCLITE C SPOT AD NSI WH [STD]
		Equipment	: 1 x LED-Z644 5 W / 193 lm

Object : CUKRARNA
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3 02_varnostna osvetlitev

3.3 Calculation results, 02_varnostna osvetlitev

3.3.1 Table, Reference plane 1.1 (E)



Height of the reference plane

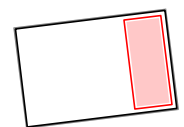
	: 0.03 m
Average illuminance	Eav : 3.73 lx
Minimum illuminance	Emin : 0.75 lx
Maximum illuminance	Emax : 7.64 lx
Uniformity Uo	Emin/Eav : 1 : 5.00 (0.20)
Diversity Ud	Emin/Emax : 1 : 10.22 (0.10)

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3.3 Calculation results, 02_varnostna osvetlitev

3.3.2 Table, Reference plane 2.1 (E)

	0.9	0.9	0.9	0.9	0.9	0.8	0.8	(0.7)
[m]	1	1	1	1	0.9	0.9	0.9	0.8
9	1.1	1.1	1.1	1.1	1.1	1	1	0.9
8	1.2	1.3	1.4	1.4	1.4	1.2	1.1	1
	1.6	1.9	2.2	2.4	2.2	1.8	1.5	1.2
7	2.6	3.6	4.2	4.4	4.1	3.3	2.3	1.6
	4.2	6	7.6	8.1	7.1	5.4	3.7	2.3
6	6.3	9.6	11.4	11.8	11.1	8.4	5.3	3.2
	8.4	11.7	12.5	12.7	12.5	11	7	4
5	9.3	12.2	13	[14.8]	12.9	11.9	7.8	4.4
	8.4	11.8	12.7	12.9	13	11.6	7.4	4.2
4	6.5	9.7	11.6	12	11.7	9.8	6.3	3.5
	4.7	6.3	7.7	8.2	8.1	7.8	5.4	2.7
3	3.3	4.2	4.7	5	5.6	7	4.7	2.2
	2.5	2.8	3	3.1	4	6.8	4.3	2
2	2.3	2.3	2.3	2.3	3.2	6.4	4	1.8
	2.4	2.3	2.2	2.2	2.8	5.9	3.5	1.8
1	2.9	2.5	2.3	2.3	2.7	6.5	3.4	1.8
0	5.4	4.3	3.4	2.9	3.1	6.1	3.3	2
	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5
	[m]							



Height of the reference plane

Average illuminance	Eav	: 3.00 m
Minimum illuminance	Emin	: 0.7 lx
Maximum illuminance	Emax	: 14.8 lx
Uniformity Uo	Emin/Eav	: 1 : 6.58 (0.15)
Diversity Ud	Emin/Emax	: 1 : 20.52 (0.05)