

CUKRARNA

Installation : PODSTREHA

Project number : 424/16

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 Zumtobel, SCUBA LED6600-840 PC LDO V2A [STD] (42182633)

1.1.1 Data sheet

Manufacturer: Zumtobel

42182633 surface mounted SCUBA LED6600-840 PC LDO V2A [STD]

LED moisture-proof diffuser luminaire total power: 51.3 W, Slave luminaire for DALI control (DALI only) with LED converter; light grey GRP (Glasfibre Reinforced Polyester) housing, halogen-free; Polycarbonate (PC) diffuser, with high impact strength, UV-resistant, made as a single injection-moulded piece patterned internally with prisms; not suitable for through-wiring with H05VV or NYM cable. Sealed optical system fitted to luminaire housing without tools. LED service life lasts 50000 h before luminous flux is reduced to 90% of the initial value. Chromaticity tolerance (initial MacAdam): 3. Luminaire luminous flux: 6450 lm, Luminaire efficacy: 126 lm/W. Colour rendering Ra > 80, colour temperature 4000 K. Fitted to ceiling, wall or trunking using V2A standard spring clips; galvanized sheet steel reflector painted white; 5-pole connector terminal. stainless steel fasteners. ambient temperature: -20°C to +35°C. Approved for indoor use or use in outdoor areas protected by a roof (see installation instructions). Luminaire wired with halogen-free leads. Complies with International Food Standard specifications. Degree of protection: IP65, class of protection: SC1, 850°C glow-wire tested, dimensions: 1594 x 112 x 112 mm; weight: 3.5 kg.

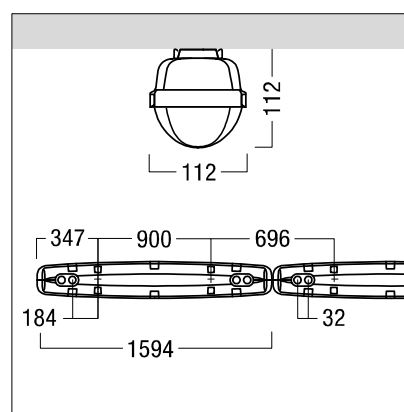
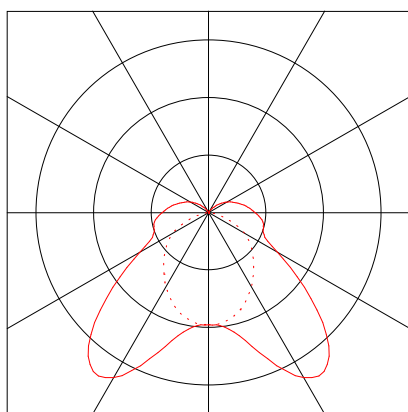
Luminaire data

Absolute Photometry
Luminaire efficacy : 125.73 lm/W
Classification : B31 ↓88.4% ↑11.6%
CIE Flux Codes : 41 74 90 88 100
UGR 4H 8H : 23.8 / 20.0
Power : 51.3 W
Luminous flux : 6450 lm

Equipped with

Quantity : 1
Designation : LED-Z42182967
Colour : Unknown
Colour reproduction : 80

Dimensions : 1594 mm x 112 mm x 112 mm



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1 Luminaire data

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

1.2.1 Data sheet

Manufacturer: ZUMTOBEL

70446584 (STD - Standard)

ONLITE ERI

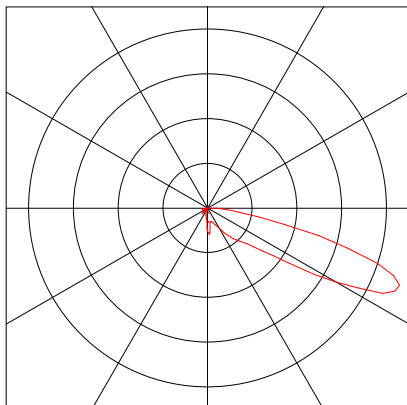
Luminaire data

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



Object : CUKRARNA
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1 Luminaire data

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

1.3.1 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.

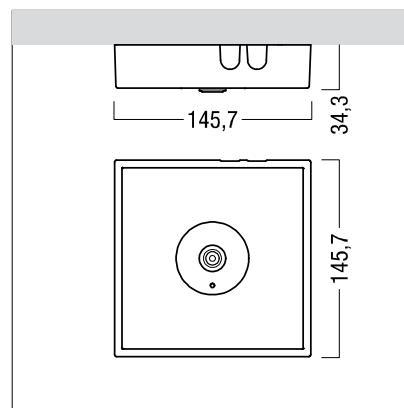
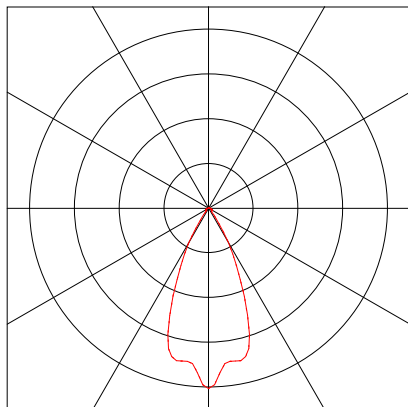
Luminaire data

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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1 Luminaire data

1.4 Zumtobel, RESCLITE C ANTIPANIC AD NPS WH ... (42180813)

1.4.1 Data sheet

Manufacturer: Zumtobel

42180813 surface mounted RESCLITE C ANTIPANIC AD NPS 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 without monitoring; 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; degree of protection: IP40, class of protection: SC1; non-maintained and maintained mode possible, Maintained mode: -20°C to +30°C, Non-maintained mode: -20°C to +35°C; Dimensions: 146 x 146 x 37 mm; weight: 0.55 kg; Luminaire wired with halogen-free leads

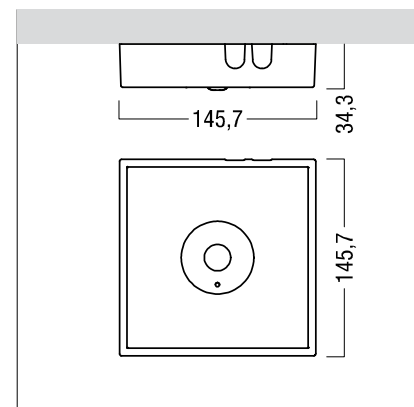
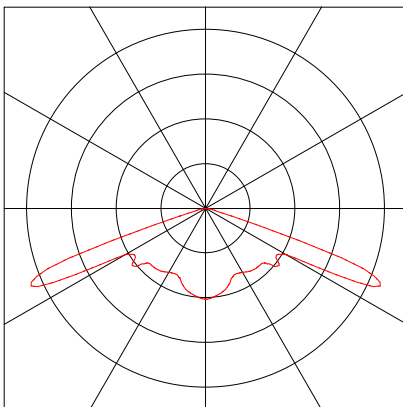
Luminaire data

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

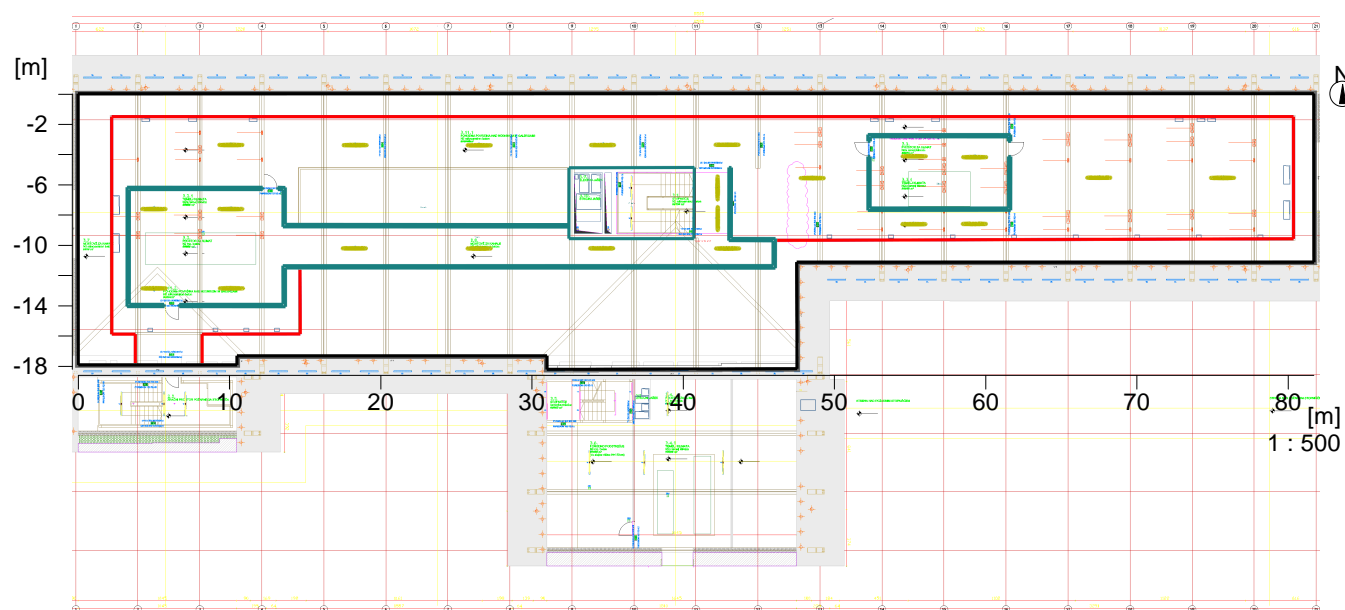


Object : CUKRARNA
Installation : PODSTREHA
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2 01_Podstreha - splošna osvetlitev

2.1 Description, 01_Podstreha - splošna osvetlitev

2.1.1 Floor plan



Object : CUKRARNA
Installation : PODSTREHA
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Date : 17.11.2016

2 01_Podstreha - splošna osvetlitev

2.1 Description, 01_Podstreha - splošna osvetlitev

2.1.1 Floor plan

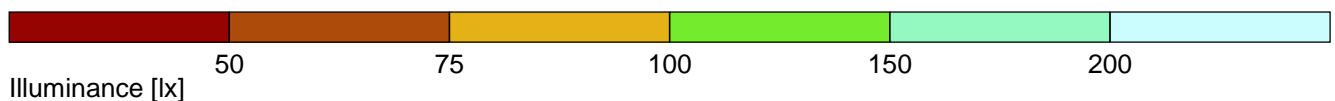
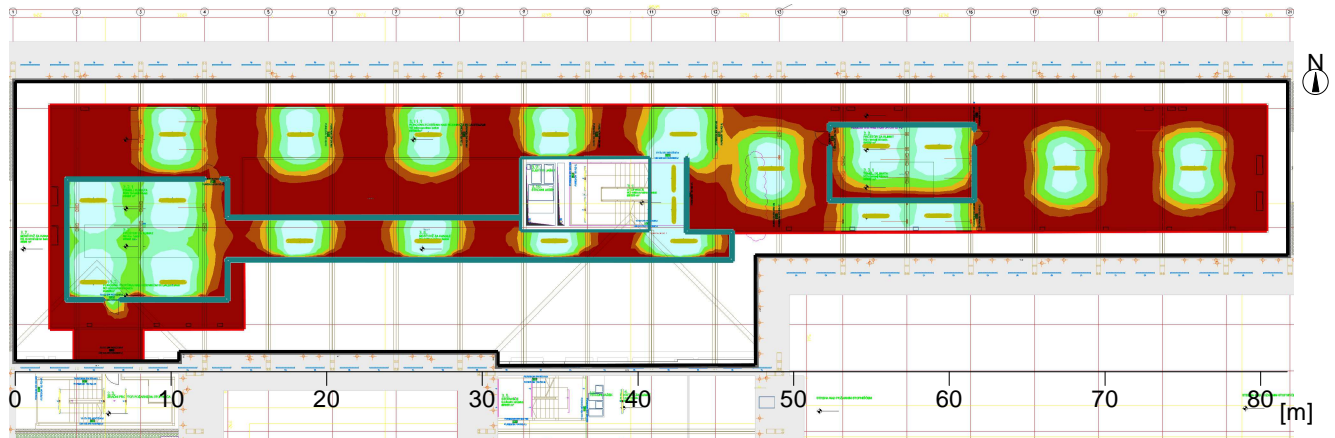
Wall	x	y	Length	Reflectance
1	31.10 m	200.88 m	17.90 m	70.0 %
2	41.60 m	200.88 m	10.50 m	70.0 %
3	41.60 m	201.47 m	0.60 m	70.0 %
4	62.09 m	201.47 m	20.49 m	70.0 %
5	62.09 m	200.58 m	0.90 m	70.0 %
6	78.62 m	200.62 m	16.53 m	70.0 %
7	78.60 m	207.66 m	7.04 m	70.0 %
8	112.79 m	207.66 m	34.19 m	70.0 %
9	112.78 m	218.79 m	11.13 m	70.0 %
10	31.09 m	218.77 m	81.69 m	70.0 %
Floor				20.0 %
Ceiling				70.0 %
Room height		3.00 m		
Height of reference plane		----		

Object : CUKRARNA
 Installation : PODSTREHA
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2 01_Podstreha - splošna osvetlitev

2.2 Summary, 01_Podstreha - splošna osvetlitev

2.2.1 Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.90 m
Maintenance factor	0.80
Total luminous flux of all lamps	141900 lm
Total power	1128.6 W
Total power per area (779.82 m²)	1.45 W/m² (1.35 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

	Horizontal
Em	107 lx
Emin	0 lx
Emin/Eav (Uo)	---
Emin/Emax (Ud)	---
UGR (11.4H 51.1H)	<=28.5
Position	0.75 m (rot: 0°/0°)

Type No.\Make

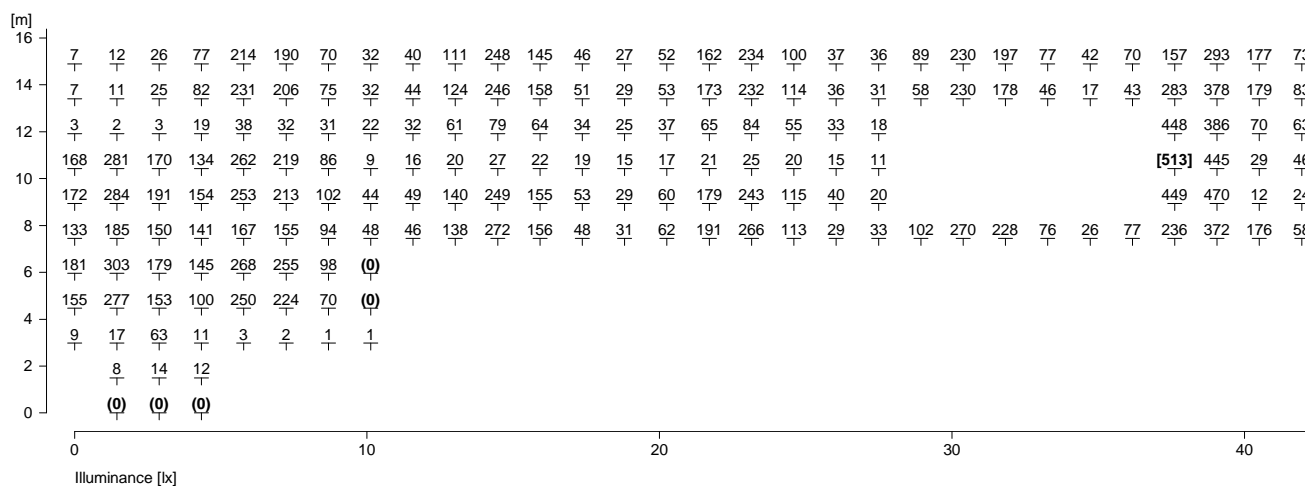
1	22	Zumtobel	
		Order No.	: 42182633
		Luminaire name	: SCUBA LED6600-840 PC LDO V2A [STD]
		Equipment	: 1 x LED-Z42182967 51 W / 6450 lm

Object : CUKRARNA
 Installation : PODSTREHA
 Project number : 424/16
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2 01_Podstreha - splošna osvetlitev

2.3 Calculation results, 01_Podstreha - splošna osvetlitev

2.3.1 Table, Reference plane 1.1 (E)



Part1

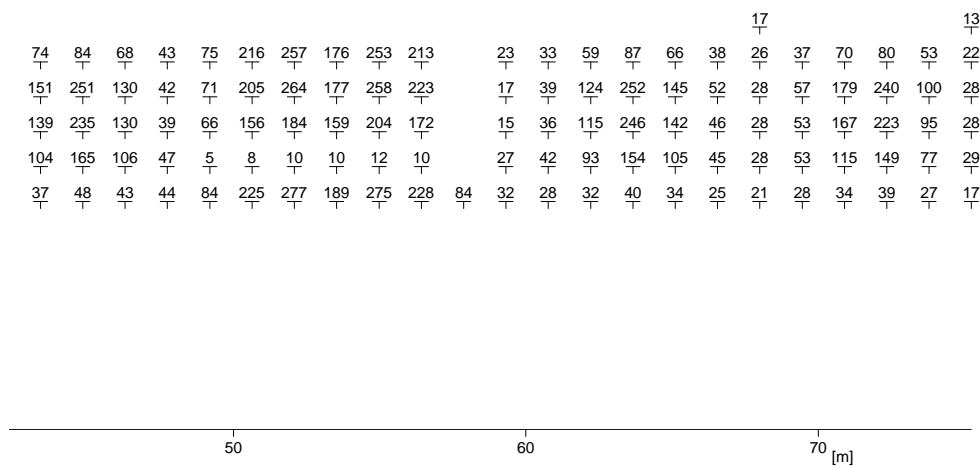
Average illuminance	Eav	: 107 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 513 lx
Uniformity Uo	Emin/Eav	: ---
Diversity Ud	Emin/Emax	: ---

Object : CUKRARNA
Installation : PODSTREHA
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2 01_Podstreha - splošna osvetlitev

2.3 Calculation results, 01_Podstreha - splošna osvetlitev

2.3.1 Table, Reference plane 1.1 (E)



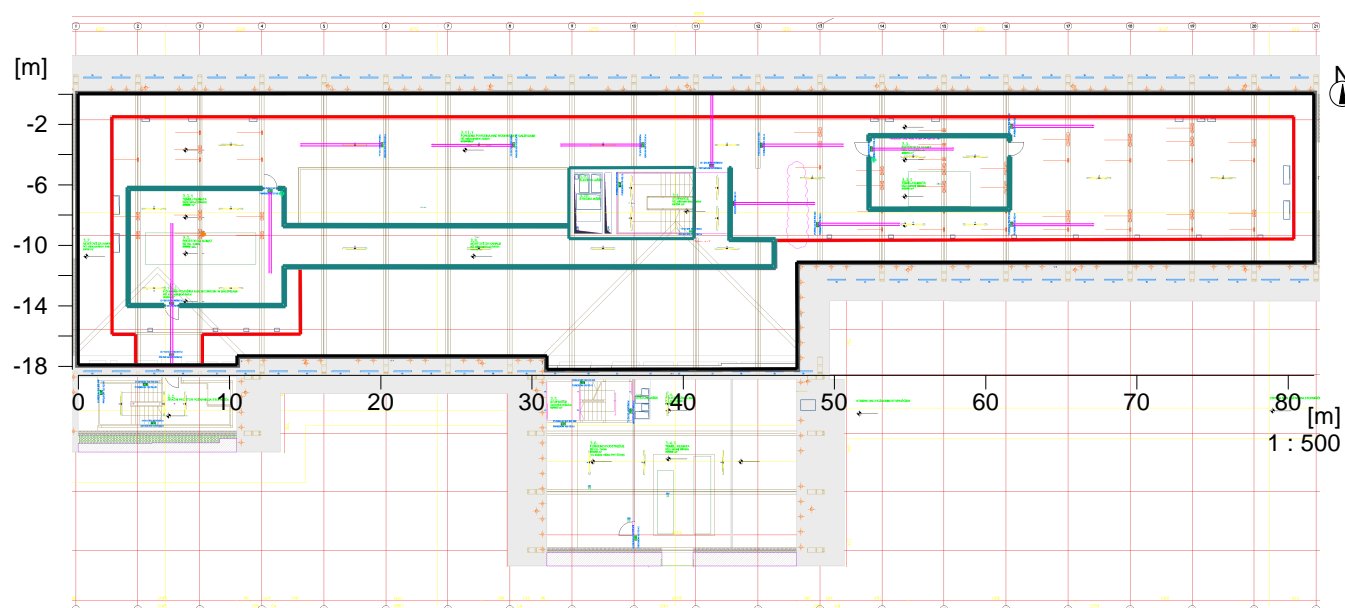
Part2

Object : CUKRARNA
Installation : PODSTREHA
Project number : 424/16
Date : 17.11.2016

3 02_Podstreha - varnostna osvetlitev

3.1 Description, 02_Podstreha - varnostna osvetlitev

3.1.1 Floor plan



Object : CUKRARNA
Installation : PODSTREHA
Project number : 424/16
Date : 17.11.2016

3 02_Podstreha - varnostna osvetlitev

3.1 Description, 02_Podstreha - varnostna osvetlitev

3.1.1 Floor plan

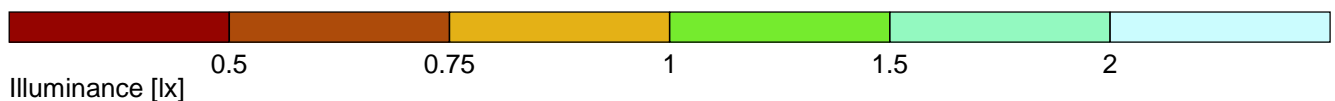
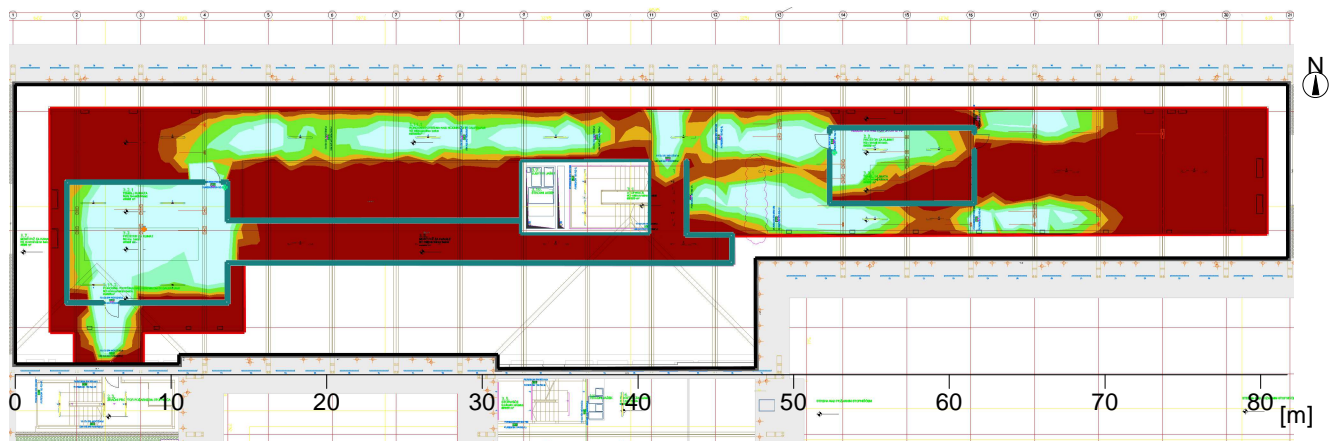
Wall	x	y	Length	Reflectance
1	31.10 m	200.88 m	17.90 m	50.0 %
2	41.60 m	200.88 m	10.50 m	50.0 %
3	41.60 m	201.47 m	0.60 m	50.0 %
4	62.09 m	201.47 m	20.49 m	50.0 %
5	62.09 m	200.58 m	0.90 m	50.0 %
6	78.62 m	200.62 m	16.53 m	50.0 %
7	78.60 m	207.66 m	7.04 m	50.0 %
8	112.79 m	207.66 m	34.19 m	50.0 %
9	112.78 m	218.79 m	11.13 m	50.0 %
10	31.09 m	218.77 m	81.69 m	50.0 %
Floor				20.0 %
Ceiling				70.0 %
Room height		3.00 m		
Height of reference plane		----		

Object : CUKRARNA
 Installation : PODSTREHA
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 Date : 17.11.2016

3 02_Podstreha - varnostna osvetlitev

3.2 Summary, 02_Podstreha - varnostna osvetlitev

3.2.1 Result overview, Evaluation area 1



General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (779.82 m²)

1468 lm
 41.0 W
 0.05 W/m² (4.94 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal	
Em	1.06 lx
Emin	0 lx
Emin/Eav (Uo)	---
Emin/Emax (Ud)	---
Position	0.03 m (rot: 0°/0°)

Type No.\Make


3	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
Installation : PODSTREHA
Project number : 424/16
Date : 17.11.2016

3 02_Podstreha - varnostna osvetlitev

3.2 Summary, 02_Podstreha - varnostna osvetlitev

3.2.1 Result overview, Evaluation area 1

4	1	Order No.	: 42180813
		Luminaire name	: RESCLITE C ANTIPANIC AD NPS WH [STD]
		Equipment	: 1 x LED-Z630 5 W / 198 lm

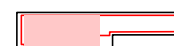
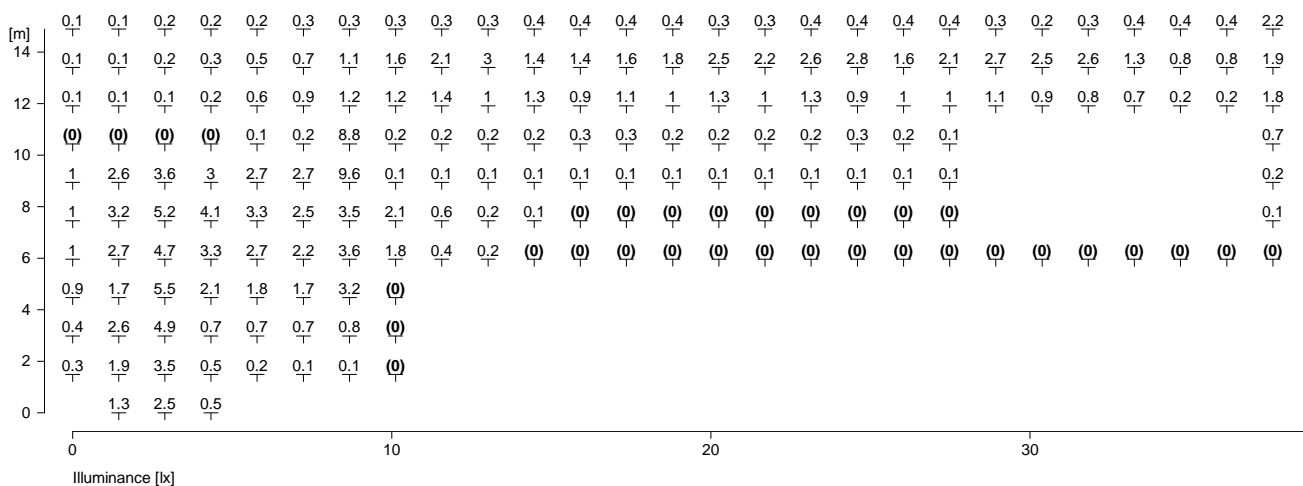
		ZUMTOBEL	
2	26	Order No.	: 70446584 (STD - Standard)
		Luminaire name	: ONLITE ERI
		Equipment	: 1 x LED-Z396 0C8W 1 W / 34 lm

Object : CUKRARNA
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3 02_Podstreha - varnostna osvetlitev

3.3 Calculation results, 02_Podstreha - varnostna osvetlitev

3.3.1 Table, Reference plane 1.1 (E)



Part1

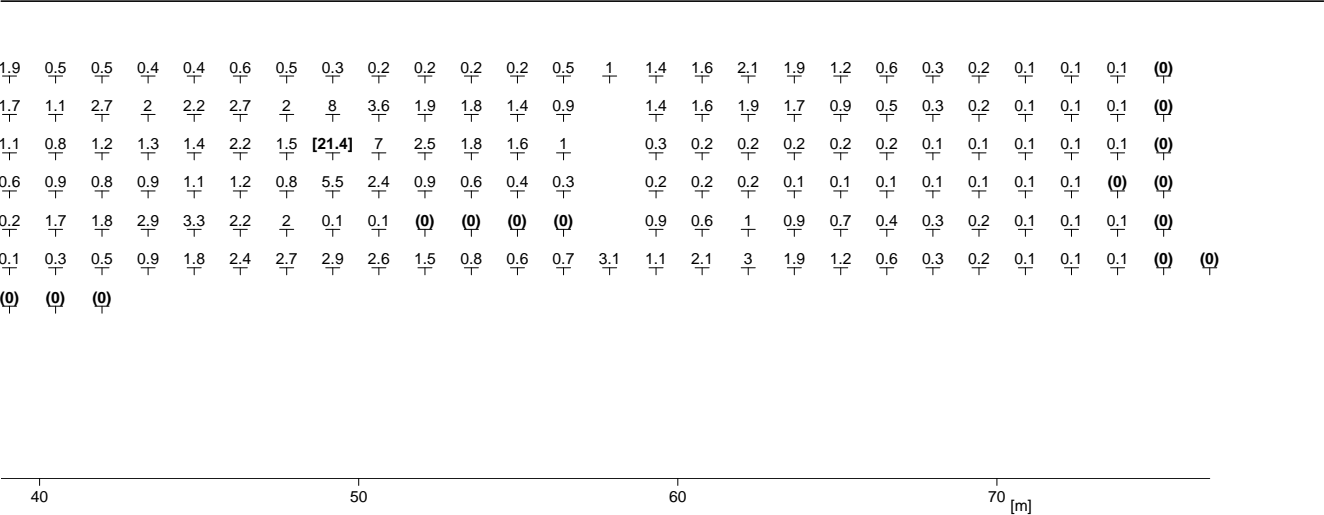
Average illuminance	Eav	: 1.1 lx
Minimum illuminance	Emin	: 0 lx
Maximum illuminance	Emax	: 21.4 lx
Uniformity Uo	Emin/Eav	: ---
Diversity Ud	Emin/Emax	: ---

Object : CUKRARNA
Installation : PODSTREHA
Project number : 424/16
Date : 17.11.2016

3 02_Podstreha - varnostna osvetlitev

3.3 Calculation results, 02_Podstreha - varnostna osvetlitev

3.3.1 Table, Reference plane 1.1 (E)



Part2