

CUKRARNA

Installation : PRITLIČJE

Project number : 413/16

Customer : SCAPELAB

Processed by : SCAPELAB

Date : 16.11.2016

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, RESCLITE C ANTIPANIC ED NT1 WH ... (42180410)

1.1.1 Data sheet

Manufacturer: Zumtobel

42180410 ceiling recessed RESCLITE C ANTIPANIC ED NT1 WH [STD]

LED Safety luminaire for anti-panic lighting with min. 0.5 lx as specified in EN 1838; ceiling recessed; Luminaire with local battery supply for 1h emergency lighting for maintained or non-maintained mode, with automatic or central testing of emergency lighting function; room height 2.2 to 5 m; high power LED, cool white; large die-cast aluminium heat sink ensures optimum thermal management; gear box for installation in ceiling recess made of PC; 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; ball-proof design; luminaire total power: 4 W; power supply: 230V AC, 220V DC; rotary switch for mechanical address-setting; non-maintained and maintained mode possible, Maintained mode: +5°C to +30°C, Non-maintained mode: +5°C to +35°C; Dimensions: Ø85 x 28 mm; IP40; weight: 0.37 kg; Luminaire wired with halogen-free leads; suitable for recessed installation in concrete casting surround (please order separately).

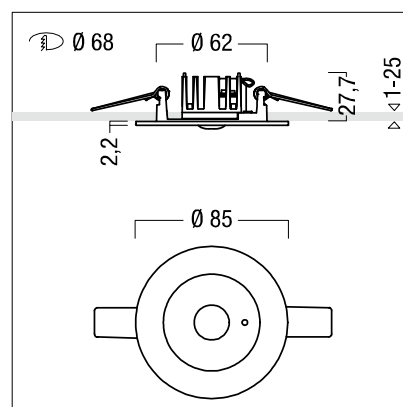
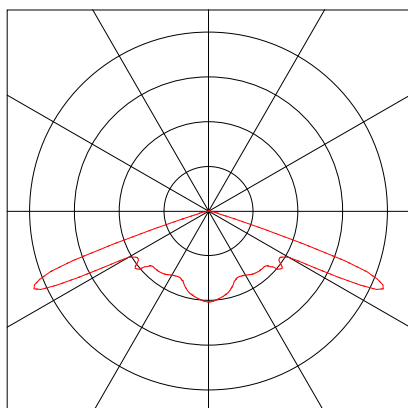
Luminaire data

Absolute Photometry
Luminaire efficacy : 39.5 lm/W
Classification : A20 ↓100.0% ↑0.0%
CIE Flux Codes : 27 57 99 100 100
UGR 4H 8H : 28.5 / 28.5
Power : 4 W
Luminous flux : 158 lm

Equipped with

Quantity : 1
Designation : LED-Z633
Colour : Unknown
Colour reproduction :

Dimensions : Ø85 mm x 2 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

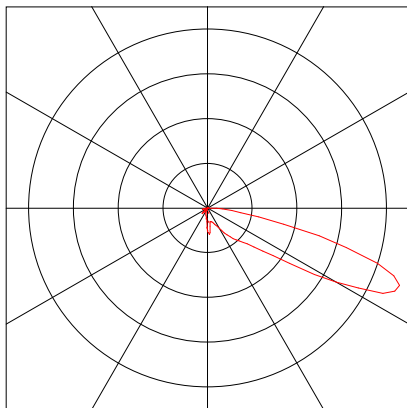
Luminaire data

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



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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.

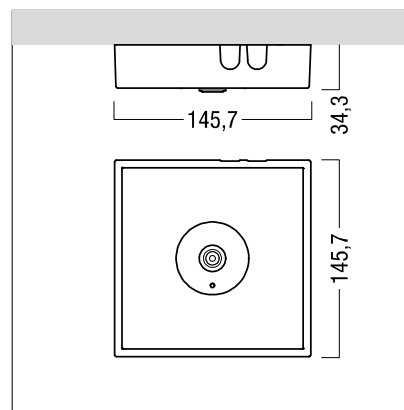
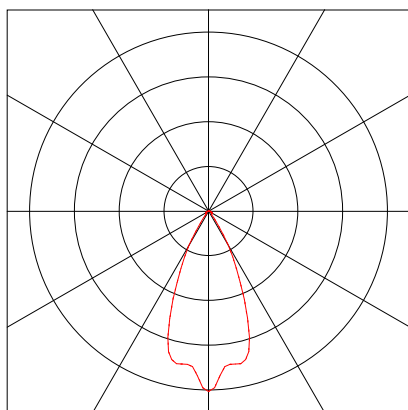
Luminaire data

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, SUP2 M 1/LED550-930 FL LDO WH [... (42184349)

1.4.1 Data sheet

Manufacturer: Zumtobel

42184349 Surface-mounted suspended SUP2 M 1/LED550-930 FL LDO WH [STD]

LED spotlight module with one LED spotlight unit, "midi" construction size; equipped with lens system for high quality accent lighting in museums and exhibitions spaces; combination of LED PCBs, lens and film creates uniform light distribution with high intensity and soft transitions, without stray light from the light cone; Luminaire with low voltage adapter for Zumtobel SUPERSYSTEM II (48 V) low voltage track; adapter is fixed without tools and contains electronics converting the constant voltage (48V) to constant current; lamp(s): 1/8.2W, Colour rendering Ra > 90, colour temperature 3000 K; Luminaire or spotlight with FLOOD light distribution; colour tolerance: SDCM 2 initial, LED PCBs premium-selected; Luminaire luminous flux: 499 lm, Luminaire efficacy: 61 lm/W; service life: 50000h for luminous flux at 90% of initial value; dimming of illuminance, Slave luminaire for DALI control (DALI only); lamp unit can rotate through 360° and tilt through 90°; lamp unit of die-cast aluminium, coated white; optic consists of glass lens and film of plastic; front ring is for glare reduction and accommodating films; total power: 8.2 W; dimensions: 166x45x94 mm; weight: 0.19 kg;

Note: Film can be replaced to achieve other light distribution patterns; ring louvre or the extended anti-glare cylinder can be exchanged for the front ring.

Luminaire data

Absolute Photometry

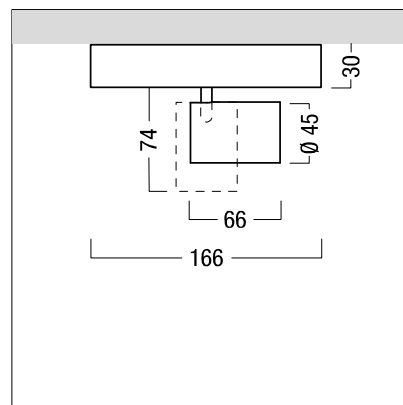
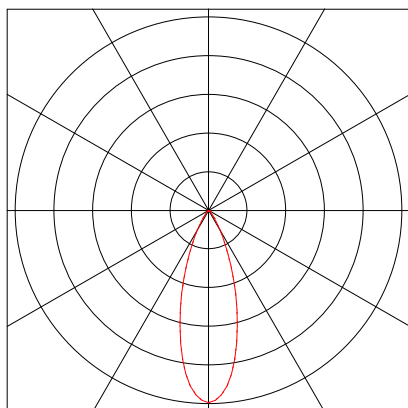
Luminaire efficacy : 60.85 lm/W
Classification : A80 ↓100.0% ↑0.0%
CIE Flux Codes : 97 100 100 100 100
UGR 4H 8H : 14.7 / 14.7
Power : 8.2 W
Luminous flux : 499 lm

Equipped with

Quantity : 1
Designation :

Colour :
Colour reproduction : 90

Dimensions : 166 mm x 45 mm x 94 mm
Height freestanding luminaire 500 mm



Object : CUKRARNA
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1 Luminaire data

1.5 acdc lighting, Novus-2000-940-2000-33... (Novus-2000-940-...)

1.5.1 Data sheet

Manufacturer: acdc lighting

Novus-2000-940-2000-33R-BK-BK-FD-HCL-IP20-HF.Idt
Novus-2000-940-2000-33R-BK-BK-FD-HCL-IP20-HF

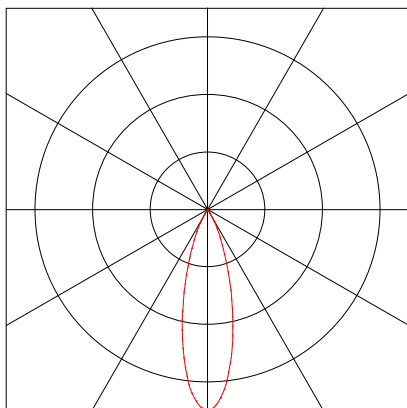
Luminaire data

Luminaire efficiency : 100%
Luminaire efficacy : 48.9 lm/W
Classification : A80 ↓100.0% ↑0.0%
CIE Flux Codes : 100 100 100 100 100
UGR 4H 8H : 11.9 / 11.6
Power : 25.56 W
Luminous flux : 1250 lm

Equipped with

Quantity : 1
Designation :
Colour : 3810
Luminous flux : 1250 lm
Colour reproduction : 91.1

Dimensions : Ø78 mm x 170 mm



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1 Luminaire data

1.6 Zumtobel, CRAFT L LED26000-840 PM NB LDO ... (42183559)

1.6.1 Data sheet

Manufacturer: Zumtobel

42183559 surface mounted CRAFT L LED26000-840 PM NB LDO WH [STD]

LED high-bay luminaire total power: 208 W, includes DALI- and emergency supply-compatible LED converter, die-cast Aluminium housing in matt, white. Powder-coated cooling ribs for optimum thermal management and minimal dust accumulation. Cover of transparent polymethylmethacrylate (PM) and additional glass cover (safety glass) for challenging industrial applications. Slave luminaire for DALI control (DALI only) with LED converter. LED service life lasts 50000 h before luminous flux is reduced to 85% of the initial value over the entire ambient temperature range. Chromaticity tolerance (initial MacAdam): 3. Luminaire luminous flux: 24840 lm, Luminaire efficacy: 119 lm/W. Colour rendering $R_a > 80$, colour temperature 4000 K. Sealed, high-efficiency optical lens system, Luminaire with symmetric narrow light distribution (narrow beam), UGR <22. Pre-assembled 5 x 1mm² connecting cable, length 1.5m, with free ends, included in scope of supply (suspension with at least 250 mm distance to ceiling); Luminaire wired with halogen-free leads. Please note: please talk to your adviser if you are planning to use the luminaire in environments containing chemical pollutants or with outdoor use. Class of protection: SC1; degree of protection: IP65; ambient temperature: -40°C to +55°C; Dimensions: 680 x 330 x 114 mm. Weight: 10 kg.

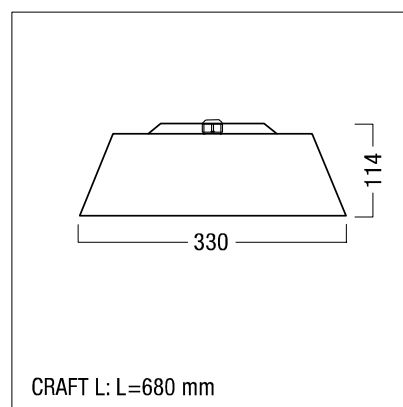
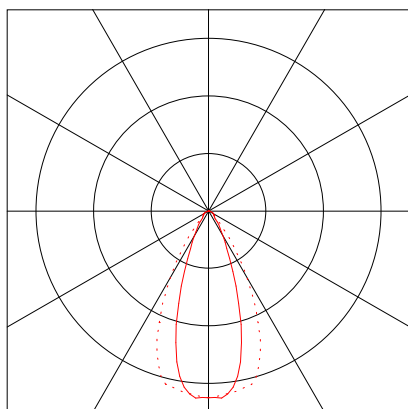
Luminaire data

Absolute Photometry
Luminaire efficacy : 119.42 lm/W
Classification : A70 ↓100.0% ↑0.0%
CIE Flux Codes : 86 96 100 100 100
UGR 4H 8H : 18.6 / 20.0
Power : 208 W
Luminous flux : 24840 lm

Equipped with

Quantity : 1
Designation : LED-Z42183559
Colour : Unknown
Colour reproduction : 80

Dimensions : 680 mm x 330 mm x 114 mm

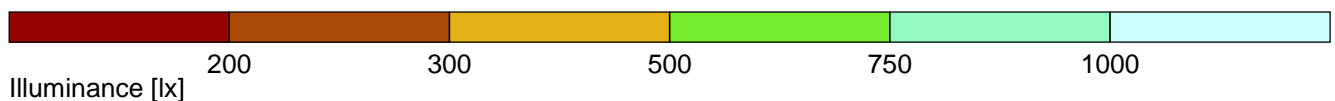
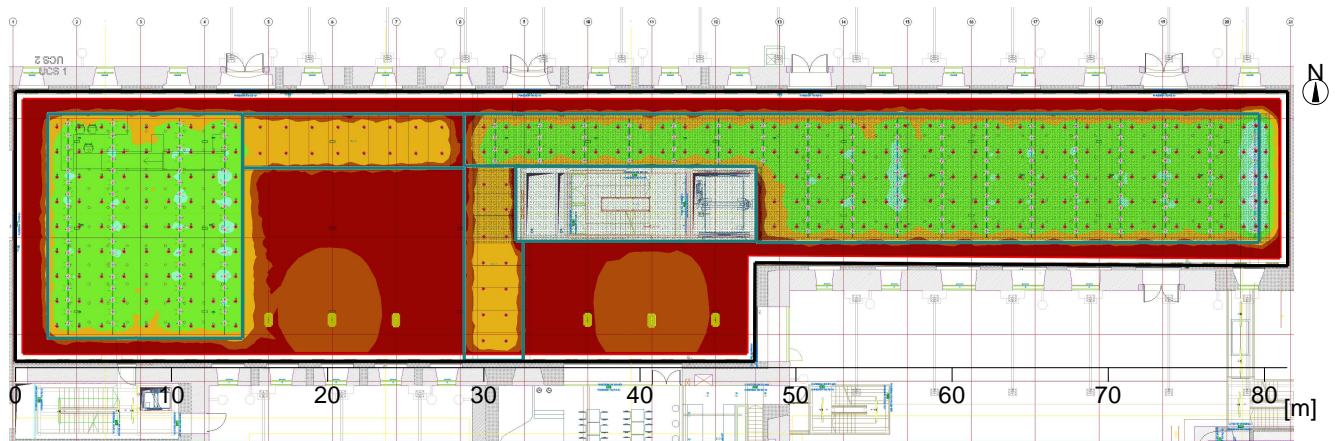


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2 01_splošna razsvetljava

2.1 Summary, 01_splošna razsvetljava

2.1.1 Result overview, Evaluation area 1



Illuminance [lx]

General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 0.80

Total luminous flux of all lamps

575080 lm

Total power

9538.9 W

Total power per area (1192.31 m²)

8.00 W/m² (1.85 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
 Em 432 lx
 Emin 12 lx
 Emin/Eav (Uo) 0.03
 Emin/Emax (Ud) 0.01
 Position 0.75 m

Type No.\Make



4	210	Zumtobel	
		Order No.	: 42184349
		Luminaire name	: SUP2 M 1/LED550-930 FL LDO WH [STD]
		Equipment	: 1 x LED_SU2-M_499_930 8 W / 499 lm

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2 01_splošna razsvetljava

2.1 Summary, 01_splošna razsvetljava

2.1.1 Result overview, Evaluation area 1

6	6	Order No.	: 42183559
		Luminaire name	: CRAFT L LED26000-840 PM NB LDO WH [STD]
		Equipment	: 1 x LED-Z42183559 208 W / 24840 lm
acdc lighting			
5	257	Order No.	: Novus-2000-940-2000-33R-BK-BK-FD-HCL-IP20-HF.ltd
		Luminaire name	: Novus-2000-940-2000-33R-BK-BK-FD-HCL-IP20-HF
		Equipment	: 1 x 25.56 W / 1250 lm

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2 01_splošna razsvetljava

2.2 Calculation results, 01_splošna razsvetljava

2.2.1 Table, Reference plane 1.1 (E)

	74	817	[1050]	1030	996	970	538				
		528	641	635	630	615	340				
		529	728	719	713	675	383				
		456	586	579	582	556	320				
		555	716	727	711	686	365				
		469	600	580	571	556	306				
		538	724	722	704	703	374				
70		498	581	579	584	562	324				
		529	733	722	710	665	374				
		446	587	588	579	578	315				
		548	722	711	711	708	391				
		423	581	580	579	565	308				
		543	722	717	714	692	391				
60		459	591	573	572	555	320				
		557	715	708	697	674	369				
		469	553	535	525	502	280				
		600	767	788	770	747	409				
		447	586	599	570	553	324				
		487	713	709	718	681	384				
		479	573	571	569	538	314				
50		537	710	710	693	678	391				
		464	558	528	515	475	294				
		524	689	431	254	235	241				
		452	553					149	155	158	156
		538	684					176	185	188	186
		404	559					199	211	215	212
		533	689					215	228	231	229
40		390	524					221	233	236	234
		533	674					214	227	232	228
		426	537					199	211	215	212

Part1

Height of the reference plane

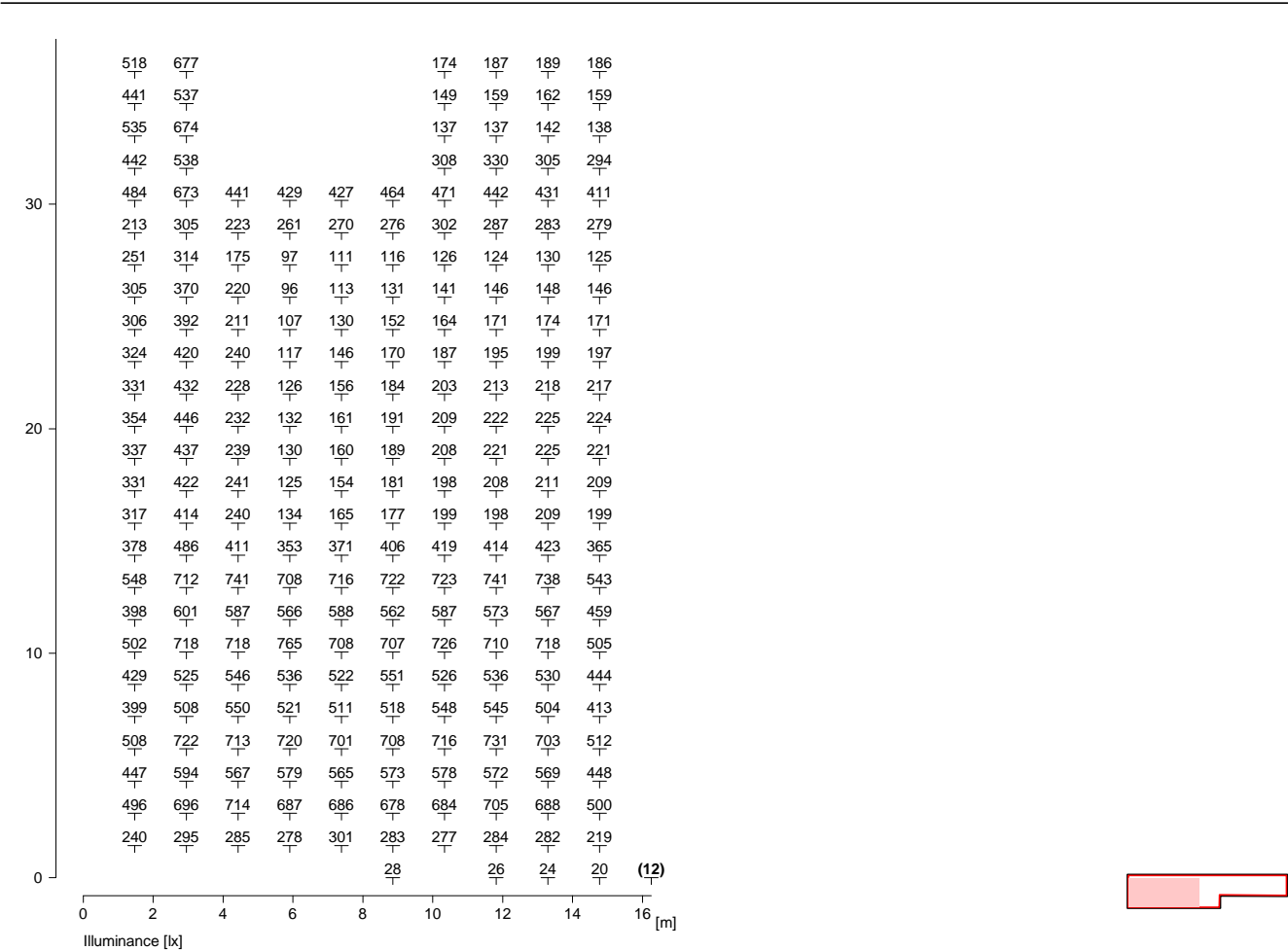
	: 0.75 m
Average illuminance	Eav : 432 lx
Minimum illuminance	Emin : 12 lx
Maximum illuminance	Emax : 1050 lx
Uniformity Uo	Emin/Eav : 1 : 36.54 (0.03)
Diversity Ud	Emin/Emax : 1 : 88.86 (0.01)

Object : CUKRARNA
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2 01_splošna razsvetljava

2.2 Calculation results, 01_splošna razsvetljava

2.2.1 Table, Reference plane 1.1 (E)

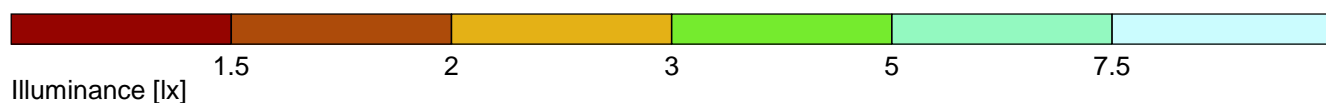
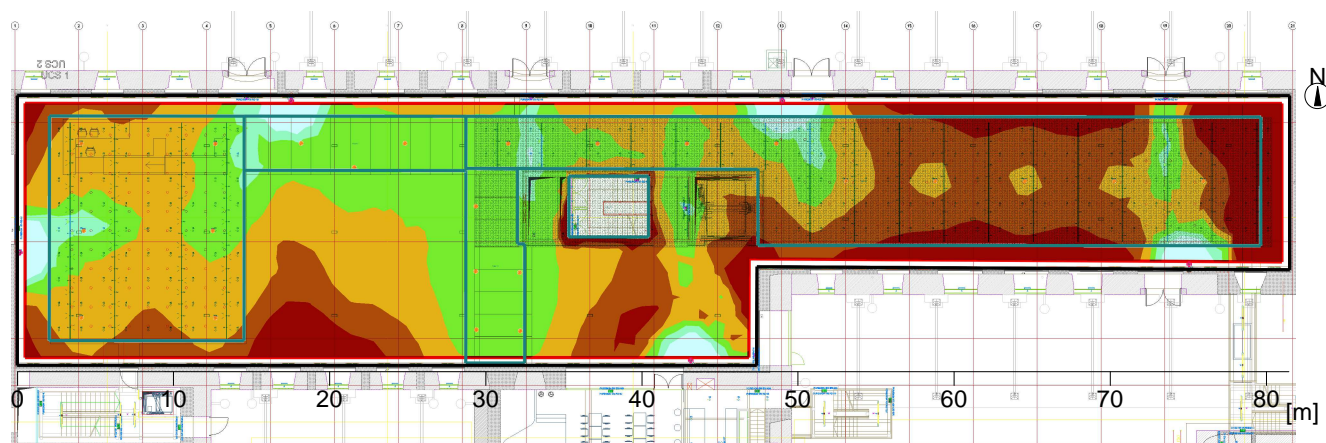


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3 02_varnostna razsvetljava

3.1 Summary, 02_varnostna razsvetljava

3.1.1 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 (1192.31 m²)

5143 lm
 133.0 W
 0.11 W/m² (3.98 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
 E_m 2.8 lx
 E_{min} 0.75 lx
 E_{min}/E_{av} (U_o) 0.27
 E_{min}/E_{max} (U_d) 0.05
 Position 0.03 m

Type No.\Make

1 23



Zumtobel


Order No. : 42180410
 Luminaire name : RESCLITE C ANTIPANIC ED NT1 WH [STD]
 Equipment : 1 x LED-Z633 4 W / 158 lm


Object : CUKRARNA
Installation : PRITLIČJE
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3 02_varnostna razsvetljava

3.1 Summary, 02_varnostna razsvetljava

3.1.1 Result overview, Evaluation area 1

3	5	Order No.	: 42180420
		Luminaire name	: RESCLITE C SPOT AD NSI WH [STD]
		Equipment	: 1 x LED-Z644 5 W / 193 lm

		ZUMTOBEL	
2	16	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_varnostna razsvetljava

3.2 Calculation results, 02_varnostna razsvetljava

3.2.1 Table, Reference plane 1.1 (E)

[illegible]

Part1

Height of the reference plane

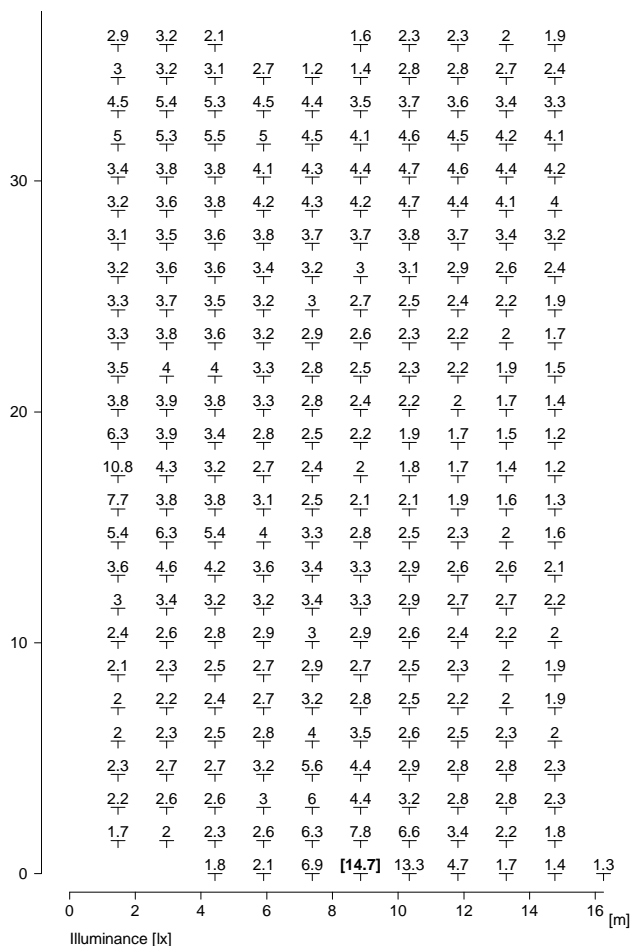
		: 0.03 m
Average illuminance	Eav	: 2.8 lx
Minimum illuminance	Emin	: 0.8 lx
Maximum illuminance	Emax	: 14.7 lx
Uniformity Uo	Emin/Eav	: 1 : 3.71 (0.27)
Diversity Ud	Emin/Emax	: 1 : 19.44 (0.05)

Object : CUKRARNA
Installation : PRITLIČJE
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3 02_varnostna razsvetljava

3.2 Calculation results, 02_varnostna razsvetljava

3.2.1 Table, Reference plane 1.1 (E)



Part2