

VATP-7

Installation : Apgaismojums

Project number : 1

Customer : Ventspils Brīvosta

Processed by : Auseklis Mūzis

Date : 18.01.2018

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 : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

Luminaire data

TRILUX, TOC 6815440 (Olexeon 1200 B 4000-840 ET)

Data sheet

Manufacturer: TRILUX



Olexeon 1200 B 4000-840 ET TOC 6815440

Olexeon 1200 B 4000-840 ET (TOC 6815440) "LED weather-proof surface-mounted luminaire IP66. For ceiling, wall and suspended mounting. Suspended mounting possible via optional accessories. Mounting with stainless steel fixing clamps (included). With symmetric wide light intensity distribution. Luminaire luminous flux 4000 lm, connected load 36 W, luminous efficiency of luminaire 111 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index $R_a \geq 80$. Service life $L_{80}(t_{50\%} > 25^\circ\text{C}) = 35,000$ h, service life $L_{70}(t_{50\%} > 25^\circ\text{C}) = 50,000$ h. Luminaire body of glass fibre-reinforced polyester, similar to RAL 7035 light grey. Diffuser of PMMA. Dimensions (L x W): 1200 mm x 88 mm, luminaire height 77 mm. Permissible ambient temperature (t_a): $-20^\circ\text{C} - +35^\circ\text{C}$. Safety class I, protection rating IP66, impact resistance IK04/0,5 J, heat resistance 650°C . Rapid-mount luminaire with Wieland rapid plug system. 3-pole-version for switchable luminaires. Connection socket at one head side. With electronic transformer, switchable."

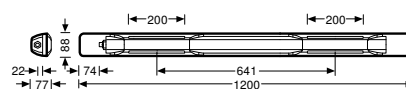
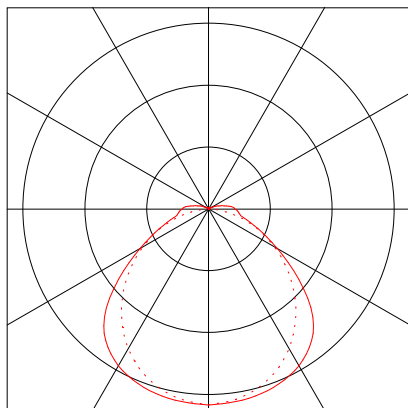
Luminaire data

Luminaire efficiency	: 99.9843%
Luminaire efficacy	: 111.09 lm/W
Classification	: A41 95.7% \uparrow 4.3%
CIE Flux Codes	: 46 78 93 96 100
UGR 4H 8H	: 23.4 / 23.3
Power	: 36 W
Luminous flux	: 3999.4 lm

Equipped with

Quantity	: 1
Designation	: LED
Power	: 36 W
Colour	: 3000-6
Luminous flux	: 4000 lm
Colour reproduction	: 80

Dimensions : 1200 mm x 88 mm x 77 mm



Luminaire data

TRILUX, TOC 6815240 (Olexeon 1500 B 6000-840 ET)

Data sheet

Manufacturer: TRILUX



Olexeon 1500 B 6000-840 ET TOC 6815240

Olexeon 1500 B 6000-840 ET (TOC 6815240):
"LED weather-proof surface-mounted luminaire IP66. For ceiling, wall and suspended mounting. Suspended mounting possible via optional accessories. Mounting with stainless steel fixing clamps (included). With symmetric wide light intensity distribution. Luminaire luminous flux 5700 lm, connected load 53 W, luminous efficiency of luminaire 108 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life L80(t_q 25 °C) = 35,000 h, service life L70(t_q 25 °C) = 50,000 h. Luminaire body of glass fibre-reinforced polyester, similar to RAL 7035 light grey. Diffuser of PMMA. Dimensions (L x W): 1500 mm x 88 mm, luminaire height 77 mm. Permissible ambient temperature (ta): -20 °C - +35 °C. Safety class I, protection rating IP66, impact resistance IK04/0,5 J, heat resistance 650 °C. Rapid-mount luminaire with Wieland rapid plug system. 3-pole-version for switchable luminaires. Connection socket at one head side. With electronic transformer, switchable."

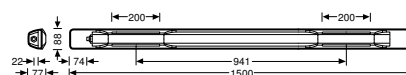
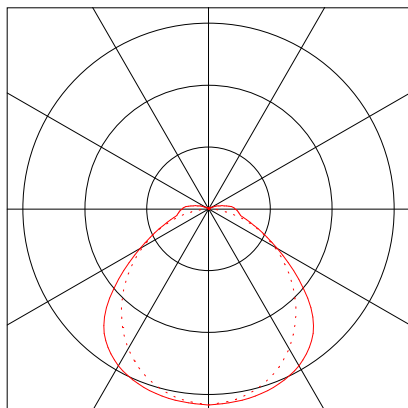
Luminaire data

Luminaire efficiency	: 99.9843%
Luminaire efficacy	: 107.53 lm/W
Classification	: A41 95.7% ↑ 4.3%
CIE Flux Codes	: 46 78 93 96 100
UGR 4H 8H	: 23.9 / 23.8
Power	: 53 W
Luminous flux	: 5699.1 lm

Equipped with

Quantity	: 1
Designation	: LED
Power	: 53 W
Colour	: 4000K
Luminous flux	: 5700 lm
Colour reproduction	: 80

Dimensions : 1500 mm x 88 mm x 77 mm



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Luminaire data

TRILUX, TOC 6334940... (PolaronIQ H2D LED2000-840 ...)

Data sheet

Manufacturer: TRILUX



PolaronIQ H2D LED2000-840 2,0m ET Suspended mounting TOC 6334940

PolaronIQ H2D LED2000-840 ET 2,0m (TOC 6334940)
Decorative suspended LED luminaire, With ring-shaped light element. With direct light distribution. For suspended mounting as single luminaire. Suspension length consists of 2,0m and is individually settable on-site. With direct light distribution. Luminaire luminous flux 2000 lm, connected load 17 W, luminous efficiency of luminaire 118 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life $L_{80}(t_{q < 25\text{ °C}}) = 70,000\text{ h}$, service life $L_{85}(t_{q < 25\text{ °C}}) = 50,000\text{ h}$. Luminaire diameter Ø 403 mm, luminaire height 50 mm. Permissible ambient temperature (ta): -20 °C - +25 °C. Safety class I, protection rating IP40, impact resistance IK02/0,2 J, heat resistance 650 °C. With electronic transformer, switchable.

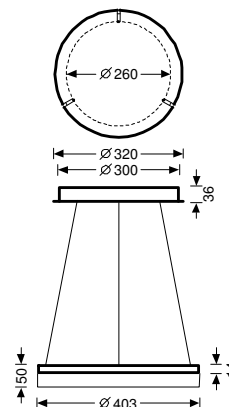
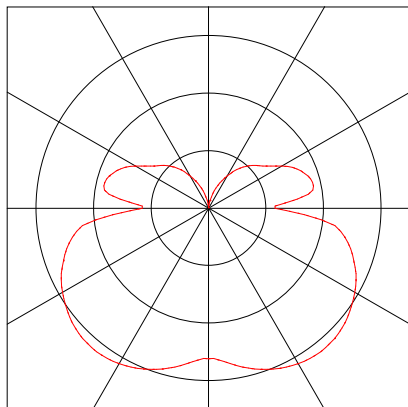
Luminaire data

Luminaire efficiency : 99.9939%
Luminaire efficacy : 117.64 lm/W
Classification : B21 68.2% ↑31.8%
CIE Flux Codes : 28 56 82 68 100
UGR 4H 8H : 21.9 / 21.9
Power : 17 W
Luminous flux : 1999.9 lm

Equipped with

Quantity : 1
Designation : LED
Power : 17 W
Colour : 4000K
Luminous flux : 2000 lm
Colour reproduction : 80

Dimensions : Ø400 mm x 68 mm



Object : VATP-7
Installation : Apgaismojums
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Date : 18.01.2018

Luminaire data

TRILUX, TOC 6367251... (LateraloR H1 BLGS 6000-840...)

Data sheet

Manufacturer: TRILUX



LateraloR H1 BLGS 6000-840 01 ETDD Suspended mounting TOC 6367251

LateraloR H1 BLGS 6000-840 ETDD 01 (TOC 6367251)
Exclusive round LED suspended luminaire with direct and indirect luminous flux component. For innovative and prestigious office lighting. For suspended mounting as single luminaire, Suspension length consists of 400-1750 mm. With Binary Light Guide System (BLGS). Optical system consisting of two fine-prismatic PMMA covers for light emission, one above the other. With direct-indirect light distribution. Indirect component with extremely wide distribution. LED system with lateral entry of light in the Binary Light Guide System. Luminaire luminous flux 6000 lm, connected load 50 W, luminous efficiency of luminaire 120 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life $L_{80}(t_{q < 25\text{ °C}}) = 70,000\text{ h}$, service life $L_{85}(t_{q < 25\text{ °C}}) = 50,000\text{ h}$. Luminaire body of diecast aluminium, white, powder-coated. Permissible ambient temperature (ta): -20 °C - +25 °C. Safety class I, protection rating IP20, impact resistance IK02/0,2 J, heat resistance 650 °C. No separate cable is required for luminaire power supply. Power supply via the wire suspensions. Wire suspension included in the scope of supply. With electronic transformer, digitally dimmable (DALI). Ballast and connection elements are located outside the luminaire body in the ceiling connection unit. White ceiling rose included in scope of supply.

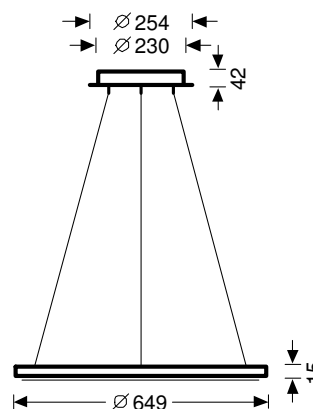
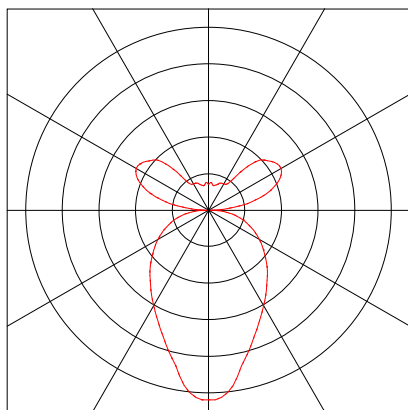
Luminaire data

Luminaire efficiency : 99.9846%
Luminaire efficacy : 119.98 lm/W
Classification : C42 54.9% ↑45.1%
CIE Flux Codes : 47 75 93 55 100
UGR 4H 8H : 18.7 / 18.7
Power : 50 W
Luminous flux : 5999.1 lm

Equipped with

Quantity : 1
Designation : LED
Power : 50 W
Colour : 4000K
Luminous flux : 6000 lm
Colour reproduction : 80

Dimensions : Ø650 mm x 20 mm



Luminaire data

TRILUX, TOC 6825451... (Lunexo H1 CDP-I 6500 840 0...)

Data sheet

Manufacturer: TRILUX



Lunexo H1 CDP-I 6500 840 01 ETDD Suspended mounting TOC 6825451

Lunexo H1 CDP-I 6500 840 ETDD 01 (TOC 6825451)
Exclusive rectangular suspended LED luminaire with rounded corners and visible light edge. Suspended luminaire for single luminaire applications. Suspended mounting via Y-wire suspension contained in scope of supply. With inner CDP-I microprismatics. Frosted PMMA cover with lateral light emission edge. Soft light effect with complete glare illumination. VDU-compliant according to EN 12464-1. Luminaire luminous flux 6700 lm, connected load 61 W, luminous efficiency of luminaire 110 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life L80(t_q 25 °C) = 70,000 h, service life L85(t_q 25 °C) = 50,000 h. Luminaire body of extruded aluminium profile. End caps of die-cast aluminium. Luminaire body white powder-coated. Dimensions (L x W): 1200 mm x 200 mm, luminaire height 45 mm. Permissible ambient temperature (ta): -20 °C - +25 °C. Safety class I, protection rating IP20, impact resistance IK02/0,2 J, heat resistance 650 °C. Wire suspension and electric connection cable included in scope of supply. Standard suspension length: 1500 mm. With electronic transformer, digitally dimmable (DALI). Number of occupied DALI devices: 2.

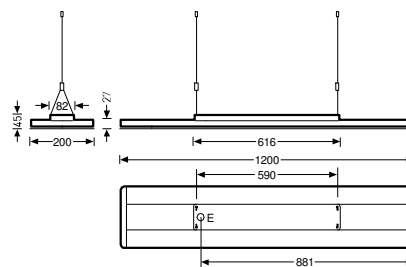
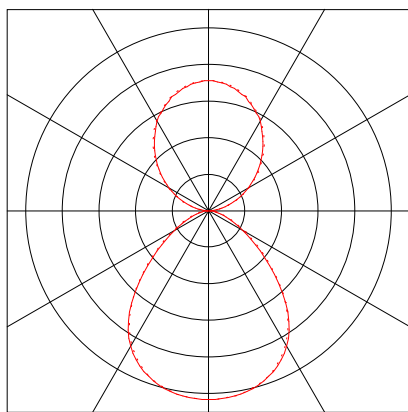
Luminaire data

Luminaire efficiency	: 99.9783%
Luminaire efficacy	: 109.81 lm/W
Classification	: C53 55.2% ↑ 44.8%
CIE Flux Codes	: 60 88 98 55 100
UGR 4H 8H	: 14.5 / 15.0
Power	: 61 W
Luminous flux	: 6698.5 lm

Equipped with

Quantity	: 1
Designation	: LED
Power	: 61 W
Colour	: 4000K
Luminous flux	: 6700 lm
Colour reproduction	: 80

Dimensions : 1203 mm x 200 mm x 45 mm



Luminaire data

TRILUX, TOC 6357440... (InperlaLP C05 HR22 1800-84...)

Data sheet

Manufacturer: TRILUX



InperlaLP C05 HR22 1800-840 01 ET Ceiling recess mounting TOC 6357440

InperlaLP C05 HR22 1800-840 ET 01 (TOC 6357440)
Compact LED downlight with round construction. Recessed downlight for cut-out ceiling openings, Installation in cast concrete ceilings via accessories. Tool-free ceiling installation via rapid-mounting springs. Optically and technically matched refurbishment plates for ceiling apertures with larger ceiling cut-out dimensions are available as accessories in various versions. Cut-out opening Ø 140 mm, Recess depth = 100 mm. IP54 protection rating on room side in combination with closed decorative cover. Aluminium reflector highly specular anodised. Direct glare limitation in accordance with UGR = 22. Configured with one LED spot module. Luminaire luminous flux 1800 lm, connected load 16 W, luminous efficiency of luminaire 113 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life L₈₀(t_q 25 °C) = 70,000 h, service life L₈₅(t_q 25 °C) = 50,000 h. Luminaire body of diecast aluminium, white, powder-coated. Luminaire diameter Ø 150 mm, luminaire height 103 mm. Luminaire body and heat sink form a compact unit. Permissible ambient temperature (ta): -20 °C - +25 °C. Safety class II, protection rating IP20, impact resistance IK02/0,2 J, heat resistance 650 °C. With electronic transformer, switchable. With 3-pole terminal to 2.5 mm² for mains connection and further wiring.

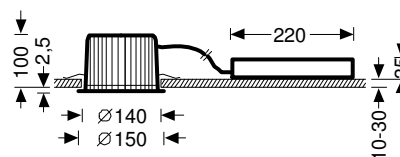
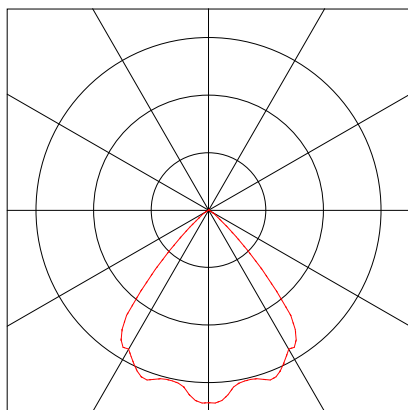
Luminaire data

Luminaire efficiency	: 99.9671%
Luminaire efficacy	: 112.46 lm/W
Classification	: A60 100.0% ↑0.0%
CIE Flux Codes	: 86 99 100 100 100
UGR 4H 8H	: 22.0 / 22.0
Power	: 16 W
Luminous flux	: 1799.4 lm

Equipped with

Quantity	: 1
Designation	: LED
Power	: 16 W
Colour	: 3000K
Luminous flux	: 1800 lm
Colour reproduction	: 80

Dimensions : Ø150 mm x 0.0 mm



Luminaire data

TRILUX, TOC 6360640... (InperlaLP C05 HR22 2700-84...)

Data sheet

Manufacturer: TRILUX



InperlaLP C05 HR22 2700-840 01 ET Ceiling recess mounting TOC 6360640

InperlaLP C05 HR22 2700-840 ET 01 (TOC 6360640)
Compact LED downlight with round construction. Recessed downlight for cut-out ceiling openings, Installation in cast concrete ceilings via accessories. Tool-free ceiling installation via rapid-mounting springs. Optically and technically matched refurbishment plates for ceiling apertures with larger ceiling cut-out dimensions are available as accessories in various versions. Cut-out opening Ø 140 mm, Recess depth = 100 mm. IP54 protection rating on room side in combination with closed decorative cover. Aluminium reflector highly specular anodised. Direct glare limitation in accordance with UGR = 22. Configured with one LED spot module. Luminaire luminous flux 2700 lm, connected load 25 W, luminous efficiency of luminaire 108 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life $L_{80}(t_{90} > 25\text{ °C}) = 70,000\text{ h}$, service life $L_{85}(t_{90} > 25\text{ °C}) = 50,000\text{ h}$. Luminaire body of diecast aluminium, white, powder-coated. Luminaire diameter Ø 150 mm, luminaire height 103 mm. Luminaire body and heat sink form a compact unit. Permissible ambient temperature (ta): -20 °C - +25 °C. Safety class II, protection rating IP20, impact resistance IK02/0,2 J, heat resistance 650 °C. With electronic transformer, switchable. With 3-pole terminal to 2.5 mm² for mains connection and further wiring.

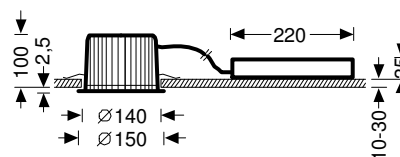
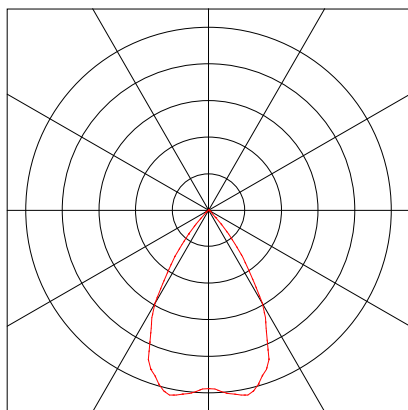
Luminaire data

Luminaire efficiency	: 99.9519%
Luminaire efficacy	: 107.95 lm/W
Classification	: A70 100.0% ↑0.0%
CIE Flux Codes	: 96 100 100 100 100
UGR 4H 8H	: 19.7 / 19.7
Power	: 25 W
Luminous flux	: 2698.7 lm

Equipped with

Quantity	: 1
Designation	: LED
Power	: 25 W
Colour	: 3000K
Luminous flux	: 2700 lm
Colour reproduction	: 80

Dimensions : Ø150 mm x 0.0 mm



Luminaire data

TRILUX, TOC 6357940... (InperlaLP C05 HR22 IP 1800...)

Data sheet

Manufacturer: TRILUX



InperlaLP C05 HR22 IP 1800-830 03 ET Ceiling recess mounting TOC 6357940

InperlaLP C05 HR22 IP 1800-830 ET 03 (TOC 6357940)
Compact LED downlight with round construction. Recessed downlight for cut-out ceiling openings, Installation in cast concrete ceilings via accessories. Tool-free ceiling installation via rapid-mounting springs. Optically and technically matched refurbishment plates for ceiling apertures with larger ceiling cut-out dimensions are available as accessories in various versions. Cut-out opening Ø 140 mm, Recess depth = 100 mm. IP 54 protection rating all round in combination with closed decorative cover. Aluminium reflector highly specular anodised. Direct glare limitation in accordance with UGR = 22. Configured with one LED spot module. Luminaire luminous flux 1700 lm, connected load 16 W, luminous efficiency of luminaire 106 lm/W. Light colour warm white, colour temperature 3000 K, colour rendering index Ra > 80. Service life L₈₀(t_q 25 °C) = 70,000 h, service life L₈₅(t_q 25 °C) = 50,000 h. Die-cast aluminium luminaire body, silver-grey powder-coated. Luminaire diameter Ø 150 mm, luminaire height 103 mm. Luminaire body and heat sink form a compact unit. Permissible ambient temperature (ta): -20 °C - +25 °C. Safety class II, protection rating IP20, impact resistance IK02/0,2 J, heat resistance 650 °C. With electronic transformer, switchable. With 3-pole terminal to 2.5 mm² for mains connection and further wiring.

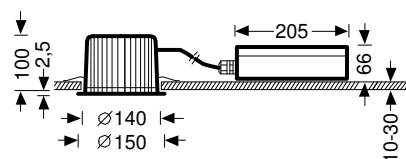
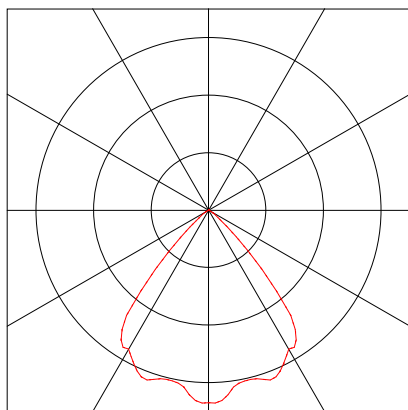
Luminaire data

Luminaire efficiency	: 99.9671%
Luminaire efficacy	: 106.21 lm/W
Classification	: A60 100.0% ↑0.0%
CIE Flux Codes	: 86 99 100 100 100
UGR 4H 8H	: 21.8 / 21.8
Power	: 16 W
Luminous flux	: 1699.4 lm

Equipped with

Quantity	: 1
Designation	: LED
Power	: 16 W
Colour	: 3000K
Luminous flux	: 1700 lm
Colour reproduction	: 80

Dimensions : Ø150 mm x 0.0 mm



Luminaire data

TRILUX, TOC 6355440... (InperlaLP C05 BR19 1000-84...)

Data sheet

Manufacturer: TRILUX



InperlaLP C05 BR19 1000-840 01 ET Ceiling recess mounting TOC 6355440

InperlaLP C05 BR19 1000-840 ET 01 (TOC 6355440)
Compact LED downlight with round construction. Recessed downlight for cut-out ceiling openings, Installation in cast concrete ceilings via accessories. Tool-free ceiling installation via rapid-mounting springs. Optically and technically matched refurbishment plates for ceiling apertures with larger ceiling cut-out dimensions are available as accessories in various versions. Cut-out opening Ø 140 mm, Recess depth = 100 mm. IP54 protection rating on room side in combination with closed decorative cover. Reflector of anodised aluminium, faceted. Direct glare limitation in accordance with UGR = 19. VDU-compliant according to EN 12464-1. Configured with one LED spot module. Luminaire luminous flux 1000 lm, connected load 9 W, luminous efficiency of luminaire 111 lm/W. Light colour neutral white, colour temperature 4000 K, colour rendering index Ra > 80. Service life $L_{80}(t_{q < 25\text{ °C}}) = 70,000\text{ h}$, service life $L_{85}(t_{q < 25\text{ °C}}) = 50,000\text{ h}$. Luminaire body of diecast aluminium, white, powder-coated. Luminaire diameter Ø 150 mm, luminaire height 103 mm. Luminaire body and heat sink form a compact unit. Permissible ambient temperature (ta): -20 °C - +25 °C. Safety class II, protection rating IP20, impact resistance IK02/0,2 J, heat resistance 650 °C. With electronic transformer, switchable. With 3-pole terminal to 2.5 mm² for mains connection and further wiring.

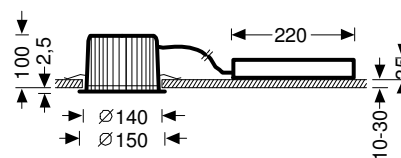
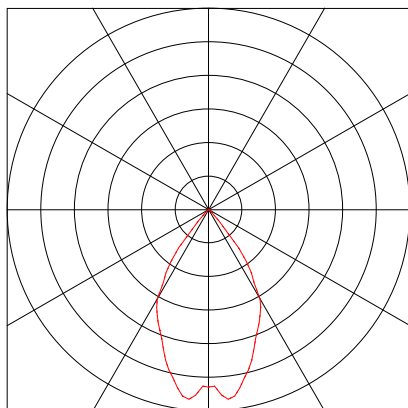
Luminaire data

Luminaire efficiency	: 99.9518%
Luminaire efficacy	: 111.06 lm/W
Classification	: A70 100.0% ↑0.0%
CIE Flux Codes	: 96 100 100 100 100
UGR 4H 8H	: 16.7 / 16.7
Power	: 9 W
Luminous flux	: 999.5 lm

Equipped with

Quantity	: 1
Designation	: LED
Power	: 9 W
Colour	: 3000K
Luminous flux	: 1000 lm
Colour reproduction	: 80

Dimensions : Ø150 mm x 0.0 mm

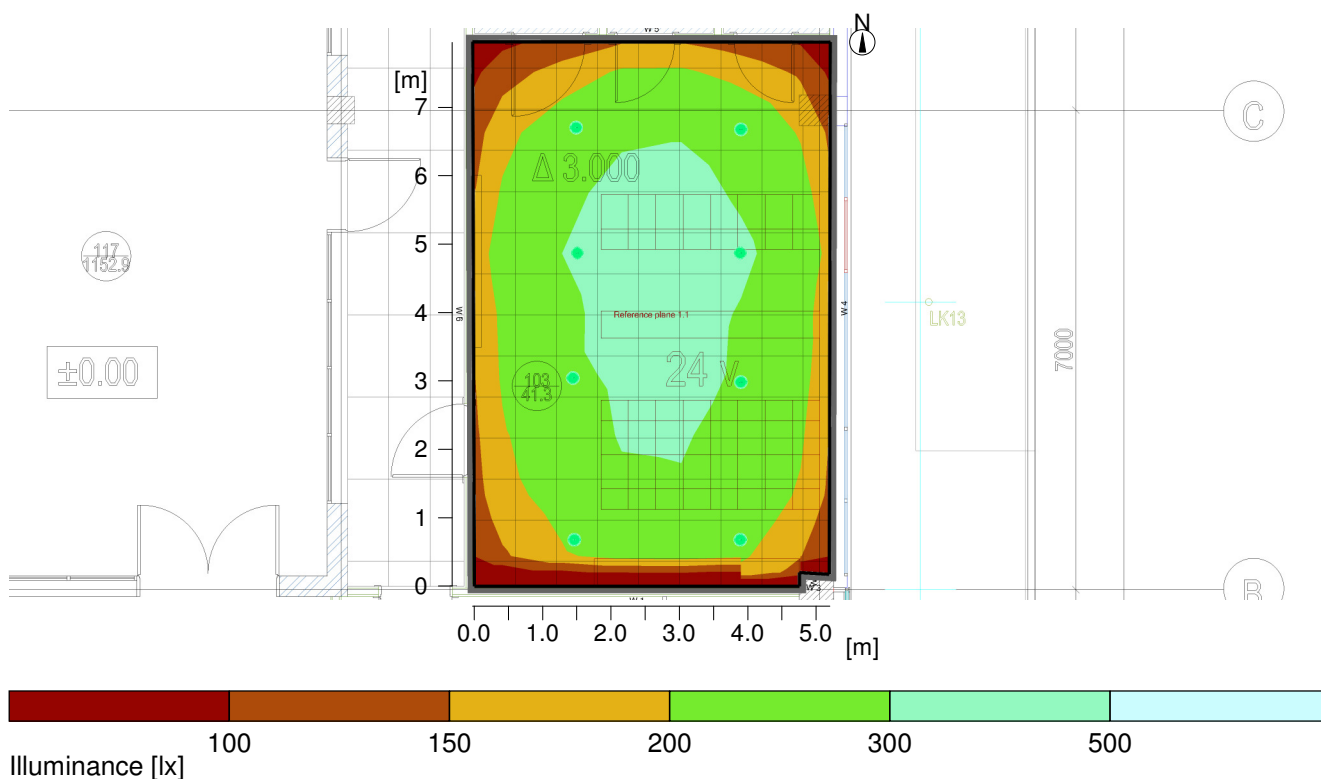


Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

103

Summary, 103

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	14400 lm
Total power	128.0 W
Total power per area (41.30 m ²)	3.10 W/m ² (1.32 W/m ² /100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	235 lx	(>= 200 lx)
Emin	123 lx	
Emin/Eav (Uo)	0.52	(>= 0.40)
Emin/Emax (Ud)	0.35	
UGR (2.9H 4.4H)	<=22.3	(< 25.00)
Position	0.00 m	

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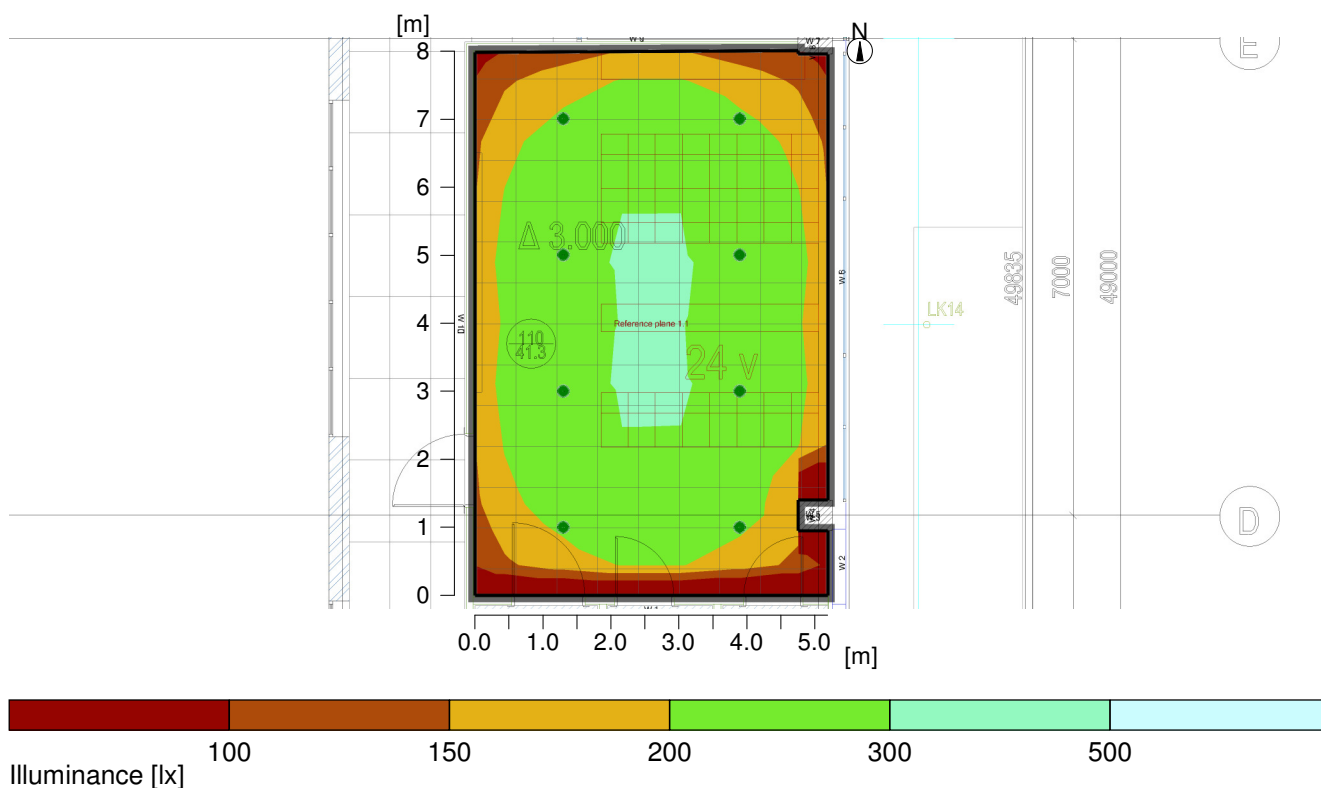
17	8	TRILUX	
		Order No.	: InperlaLP C05 HR22 1800-840 01 ET
		Luminaire name	: TOC 6357440
		Equipment	: 1 x LED 16 W / 1800 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

110

Summary, 110

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	13600 lm
Total power	128.0 W
Total power per area (41.22 m²)	3.11 W/m² (1.40 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal
Em	222 lx (>= 200 lx)
Emin	131 lx
Emin/Eav (Uo)	0.59 (>= 0.40)
Emin/Emax (Ud)	0.45
UGR (2.9H 4.5H)	<=22.2 (< 25.00)
Position	0.00 m

Type No.\Make

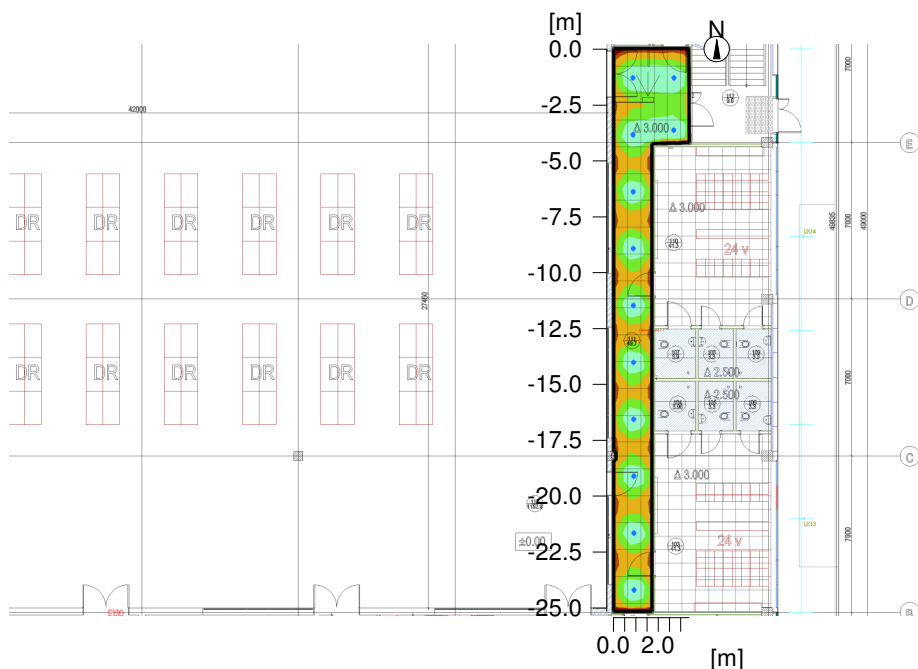
19	8	TRILUX	
		Order No.	: InperlaLP C05 HR22 IP 1800-830 03 ET
		Luminaire name	: TOC 6357940
		Equipment	: 1 x LED 16 W / 1700 lm

Object : VATP-7
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 Date : 18.01.2018

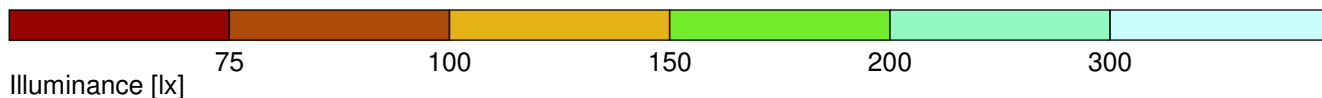
111

Summary, 111

Result overview, Evaluation area 1



No.	Room name	Area [m²]
109	Tualetes un dušas telpa	3.3
110	Garderobe	41.3
111	Gaitenis	49.7
112	Kāpņu telpa	9.6
113	Saimniecības telpa	9.6
114	Printēšanas telpa	48.0
115	Kvalitātes laboratorija	50.1
116	Plastmasas ražošanas	600.0
117	Ražošanas telpa	1152.9
118	Tehnologi un inženieri	72.4
119	Kvalitātes pārbaudes telpa	73.4
120	Aptieciņas telpa	69.0
121	Aptieciņas telpa	6.7
122	Tualetes	5.1
123	Tualetes	2.4
124	Tualetes	2.4
125	Tualetes	2.4
126	Tualetes	2.4
127	Gaitenis	4.5
128	Tehniskā telpa (bēns/stīpums)	26.0
129	Tehniskā telpa (el)	21.0
130	Pakroššanas telpa	358.7
131	Ekspedīcija	222.9
132	Noliktavas pārzinis	17.0
133	Veidņu noliktava	90.7
134	Granulu noliktava	95.0
135	Noliktava	564.6
136	Preču pielaide	24.9
137	Papīra prese	30.4



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (49.74 m²)

12000 lm
 108.0 W
 2.17 W/m² (1.40 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Traffic zones inside buildings
 5.1.1 (EN 12464-1, 8.2011) Circulation areas and corridors (Ra >40.00)

Horizontal

Em 155 lx (>= 100 lx)
 Emin 71 lx
 Emin/Eav (Uo) 0.46 (>= 0.40)
 Emin/Emax (Ud) 0.27
 Position 1.00 m

Type No.\Make

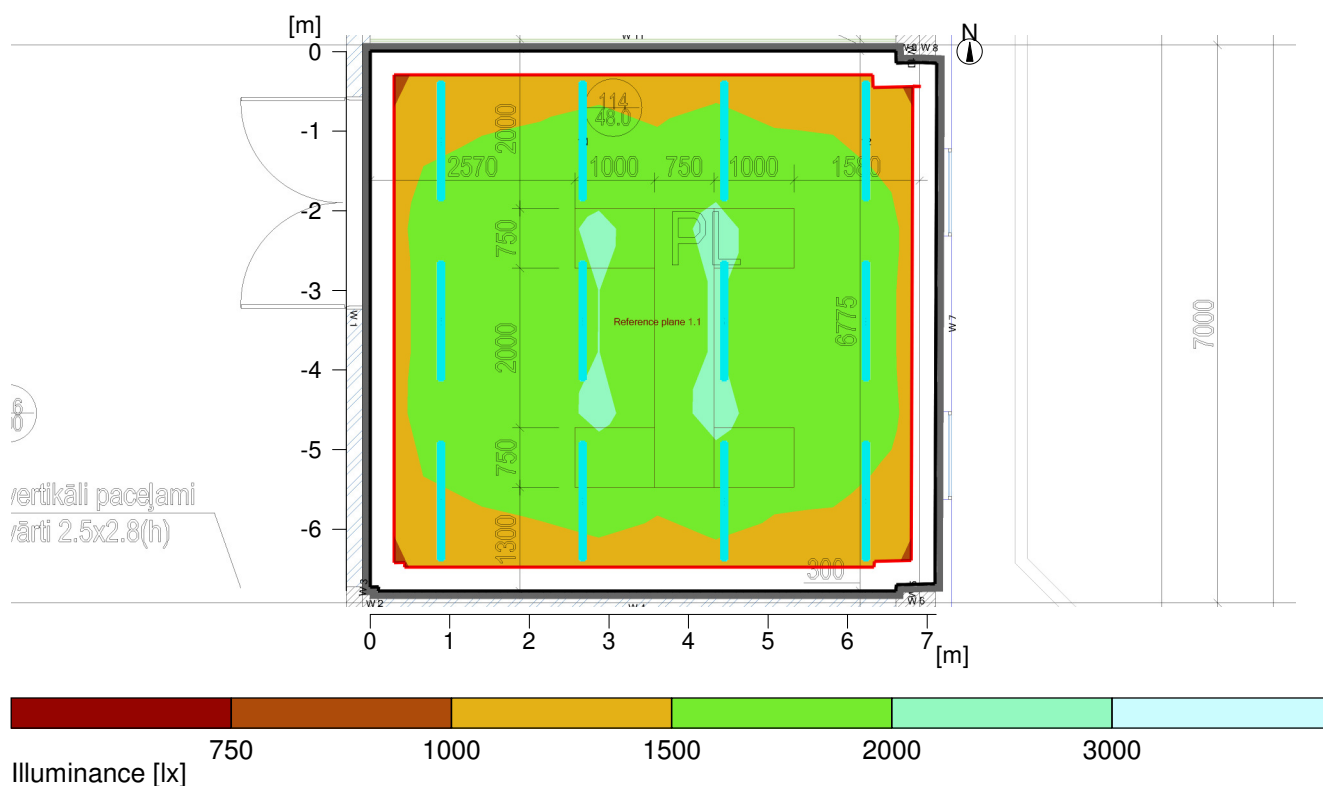
21 12 **TRILUX**
 Order No. : InperlaLP C05 BR19 1000-830 01 ET
 Luminaire name : TOC 6355340
 Equipment : 1 x LED 9 W / 1000 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

114

Summary, 114

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.55 m
 0.70

Total luminous flux of all lamps
 Total power
 Total power per area (48.00 m²)

120000 lm
 888.0 W
 18.50 W/m² (1.16 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Industrial activities and crafts - Electrical and electronic industry
 5.11.6 (EN 12464-1, 8.2011) Electronic workshops, testing, adjusting (Ra >80.00)

Horizontal	
Em	1590 lx (>= 1500 lx)
Emin	1110 lx
Emin/Eav (Uo)	0.70 (>= 0.70)
Emin/Emax (Ud)	0.55
UGR (3.0H 3.1H)	<=21.2 (< 16.00)
Position	0.75 m

Type No.\Make

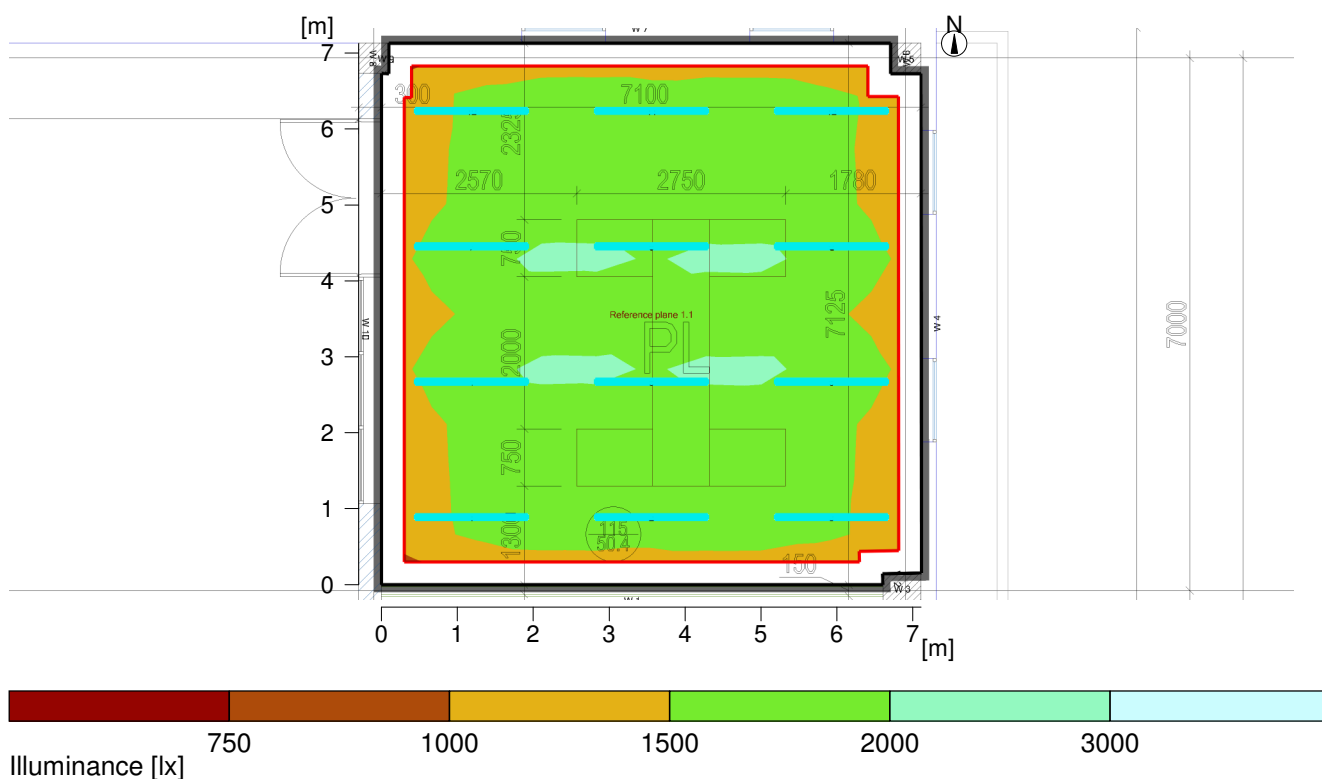
6	12	TRILUX
		Order No. : 6991440
		Luminaire name : E-Line G2 MT LED10000-840
		Equipment : 1 x 74 W / 10000 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

115

Summary, 115

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.70
Total luminous flux of all lamps	120000 lm
Total power	888.0 W
Total power per area (50.33 m²)	17.64 W/m² (1.08 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Industrial activities and crafts - Electrical and electronic industry
 5.11.6 (EN 12464-1, 8.2011) Electronic workshops, testing, adjusting (Ra >80.00)

Horizontal	
Em	1630 lx (>= 1500 lx)
Emin	1330 lx
Emin/Eav (Uo)	0.82 (>= 0.70)
Emin/Emax (Ud)	0.66
UGR (4.1H 4.1H)	<=21.2 (< 16.00)
Position	0.75 m

Type No.\Make

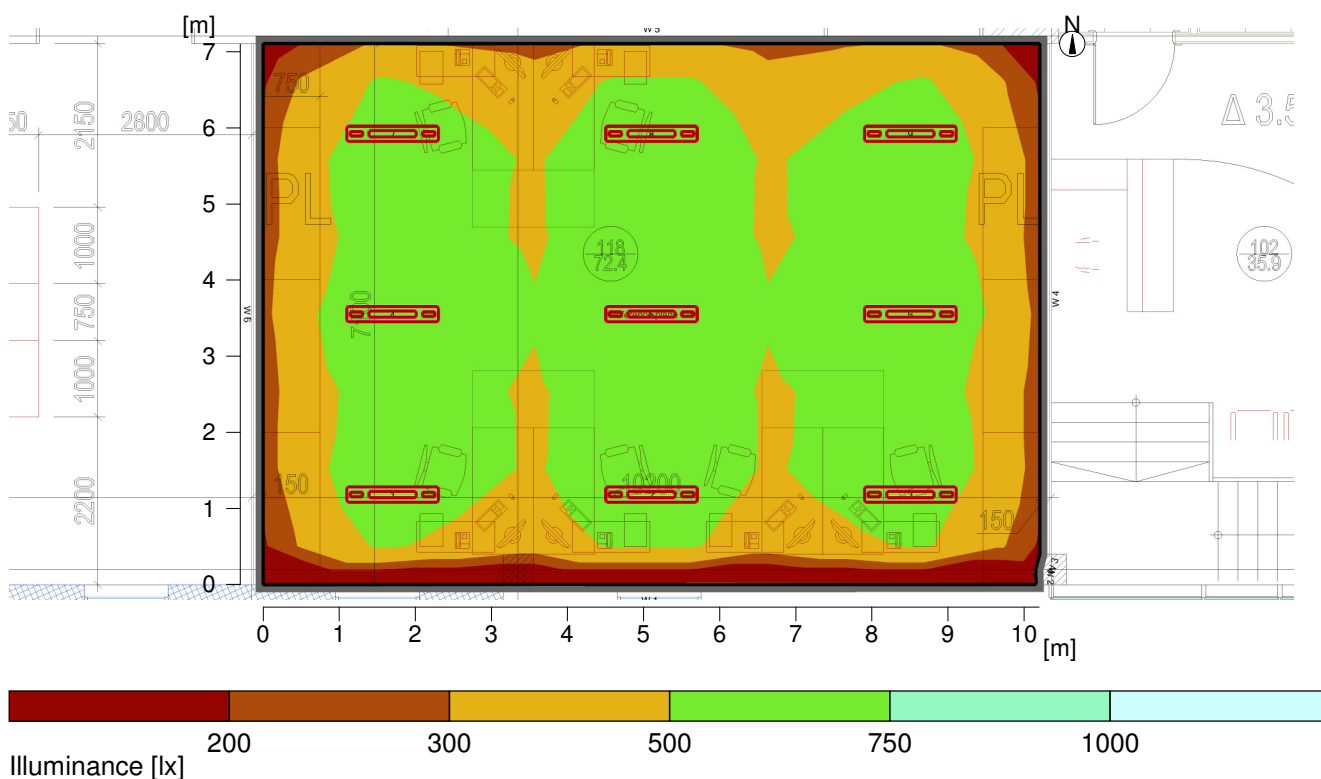
6	12	TRILUX	
		Order No.	: 6991440
		Luminaire name	: E-Line G2 MT LED10000-840
		Equipment	: 1 x 74 W / 10000 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

118

Summary, 118

Result overview, Evaluation area 1



General

Calculation algorithm used	High indirect fraction
Height of luminaire plane	2.50 m
Maintenance factor	0.80
Total luminous flux of all lamps	60300 lm
Total power	549.0 W
Total power per area (72.38 m²)	7.58 W/m² (1.52 W/m²/100lx)

Evaluation area 1

User profile: Offices

5.26.2 (EN 12464-1, 8.2011) Writing, typing, reading, data processing (Ra >80.00)

Em	500 lx	(>= 500 lx)
Emin	299 lx	
Emin/Eav (Uo)	0.60	(>= 0.60)
Emin/Emax (Ud)	0.43	
UGR (5.6H 8.0H)	<=15.1	(< 19.00)
Position	0.75 m (rot: 0°/0.02°)	

Reference plane 1.1

Type No.\Make

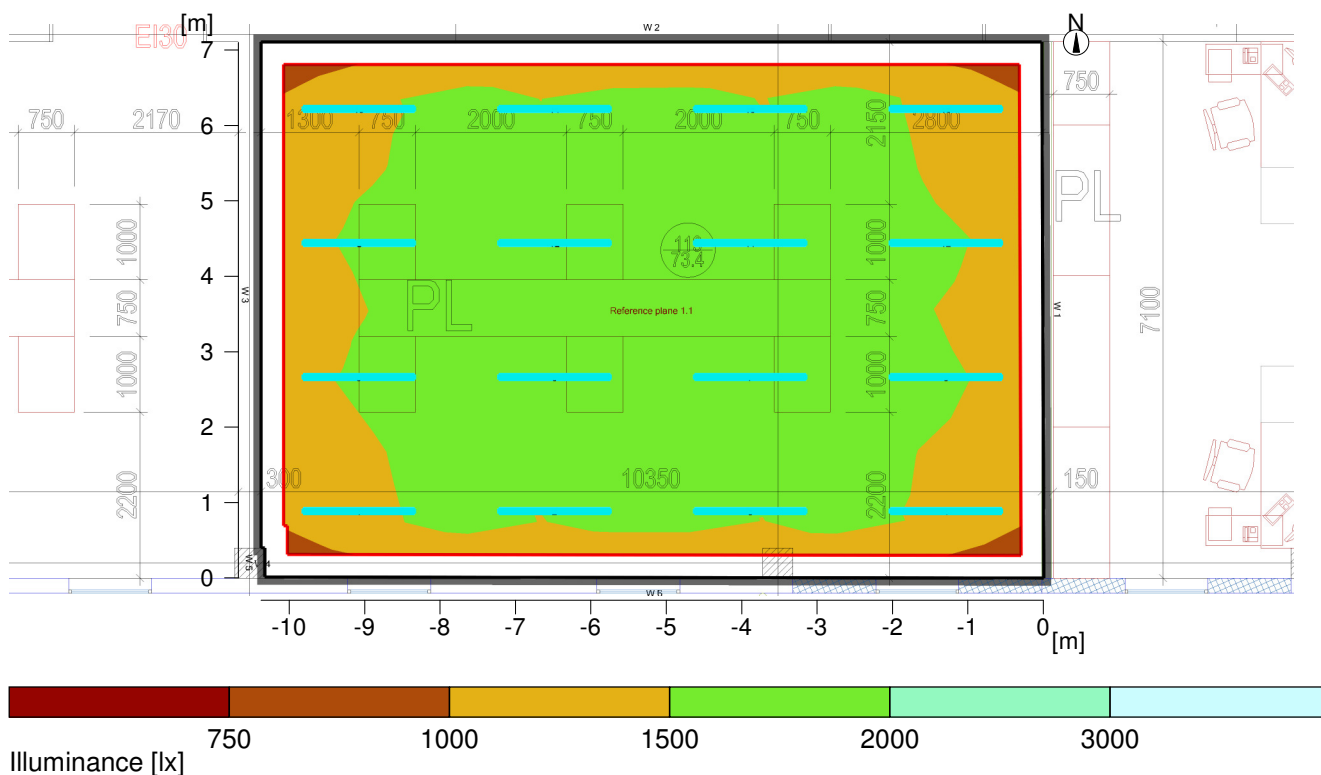
16	9	TRILUX	
		Order No.	: Lunexo H1 CDP-I 6500 840 01 ETDD
		Luminaire name	: TOC 6825451
		Equipment	: 1 x LED 61 W / 6700 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

119

Summary, 119

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
3.50 m
0.72

Total luminous flux of all lamps
Total power
Total power per area (73.48 m²)

160000 lm
1184.0 W
16.11 W/m² (1.06 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
Em
Emin
Emin/Eav (Uo)
Emin/Emax (Ud)
UGR (3.2H 4.6H)
Position

1520 lx
1140 lx
0.75
0.60
≤21.2
0.75 m

Type No. \ Make

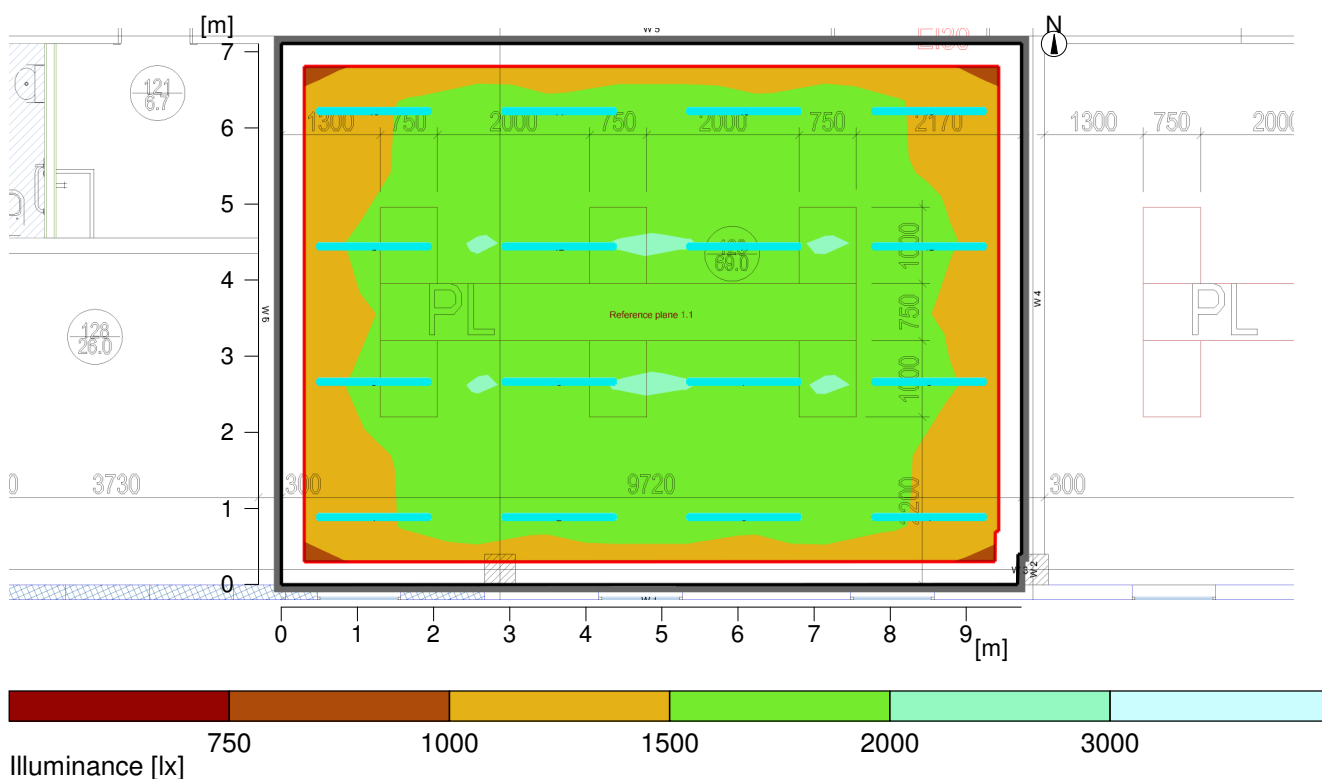
6 16 **TRILUX**
Order No. : 6991440
Luminaire name : E-Line G2 MT LED10000-840
Equipment : 1 x 74 W / 10000 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

120

Summary, 120

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
3.50 m
0.70

Total luminous flux of all lamps
Total power
Total power per area (68.98 m²)

160000 lm
1184.0 W
17.17 W/m² (1.09 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Industrial activities and crafts - Electrical and electronic industry
5.11.6 (EN 12464-1, 8.2011) Electronic workshops, testing, adjusting (Ra >80.00)

Horizontal
Em 1580 lx (>= 1500 lx)
Emin 1180 lx
Emin/Eav (Uo) 0.75 (>= 0.70)
Emin/Emax (Ud) 0.61
UGR (3.2H 4.4H) <=21.2 (< 16.00)
Position 0.75 m (rot: 0°/0.02°)

Type No.\Make

TRILUX

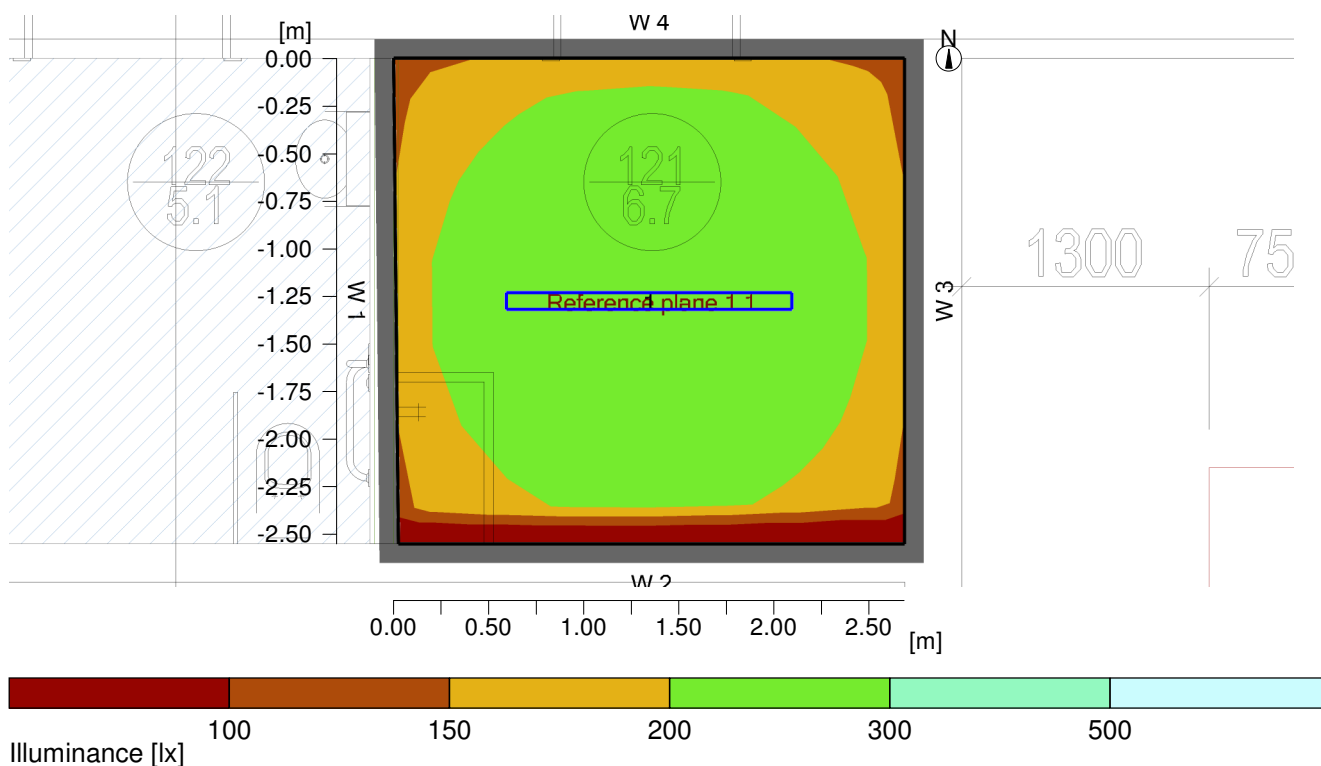
6 16
Order No. : 6991440
Luminaire name : E-Line G2 MT LED10000-840
Equipment : 1 x 74 W / 10000 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

121

Summary, 121

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	5700 lm
Total power	53.0 W
Total power per area (6.81 m²)	7.78 W/m² (3.86 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal
Em	201 lx (>= 200 lx)
Emin	161 lx
Emin/Eav (Uo)	0.80 (>= 0.40)
Emin/Emax (Ud)	0.67
UGR (2.0H 2.0H)	<=20.2 (< 25.00)
Position	0.00 m

Type No.\Make

TRILUX

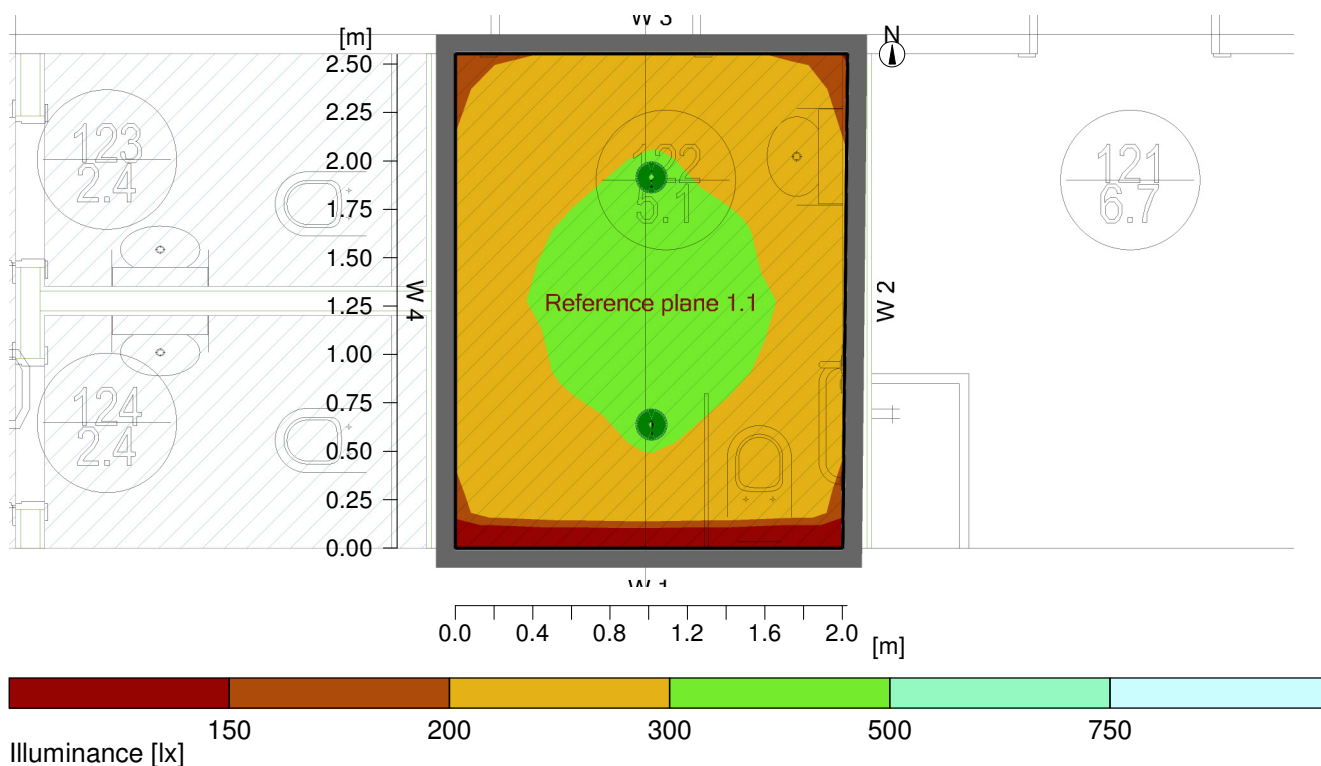
11	1	Order No.	: Olexeon 1500 B 6000-840 ET
		Luminaire name	: TOC 6815240
		Equipment	: 1 x LED 53 W / 5700 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

122

Summary, 122

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
2.50 m
0.80

Total luminous flux of all lamps
Total power
Total power per area (5.13 m²)

3400 lm
32.0 W
6.24 W/m² (2.35 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
E_m 265 lx
E_{min} 219 lx
E_{min}/E_{av} (U_o) 0.83
E_{min}/E_{max} (U_d) 0.71
UGR (2.0H 2.0H) <=22.5
Position 0.00 m

Type No.\Make

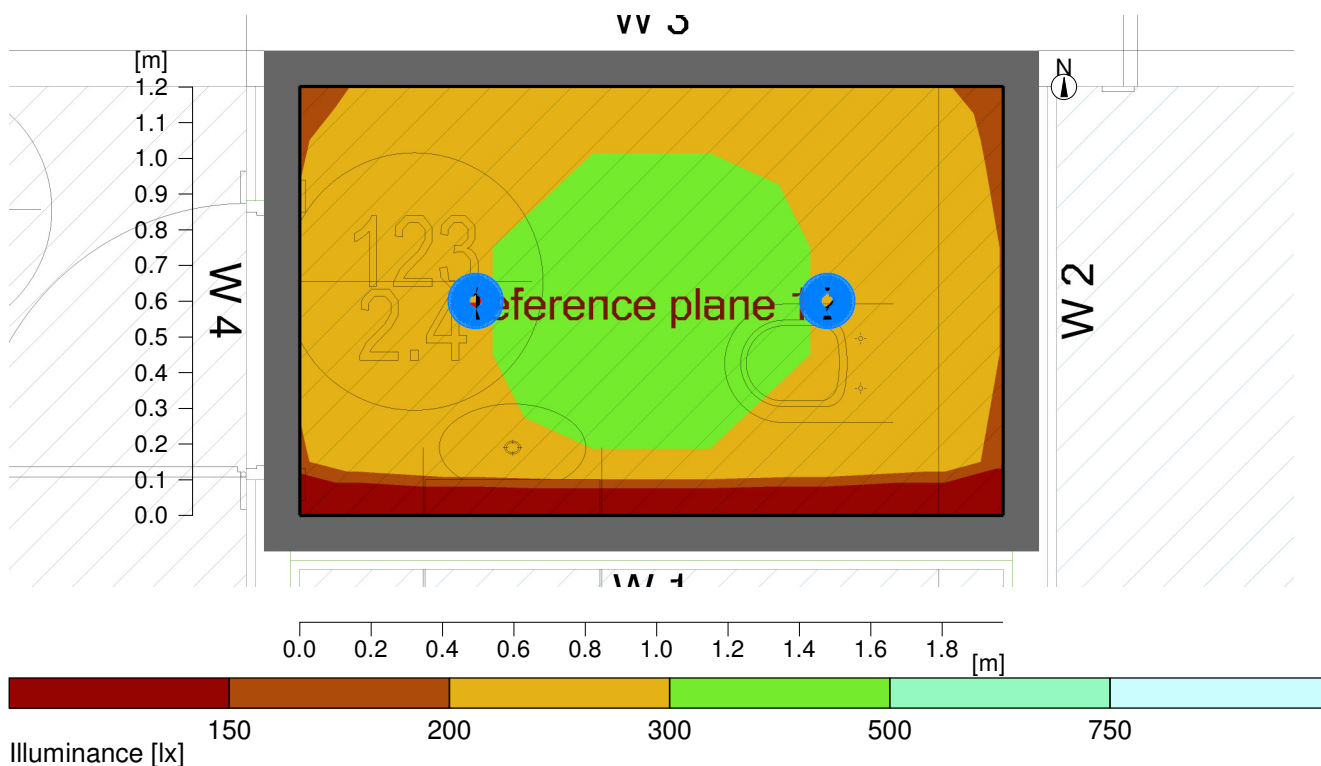
19 2 **TRILUX**
Order No. : InperlaLP C05 HR22 IP 1800-830 03 ET
Luminaire name : TOC 6357940
Equipment : 1 x LED 16 W / 1700 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

123

Summary, 123

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.50 m
Maintenance factor	0.80
Total luminous flux of all lamps	2000 lm
Total power	18.0 W
Total power per area (2.36 m²)	7.61 W/m² (2.80 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	271 lx	(≥ 200 lx)
Emin	233 lx	
Emin/Eav (Uo)	0.86	(≥ 0.40)
Emin/Emax (Ud)	0.74	
UGR (2.0H 2.0H)	≤17.6	(< 25.00)
Position	0.00 m	

Type No. \ Make

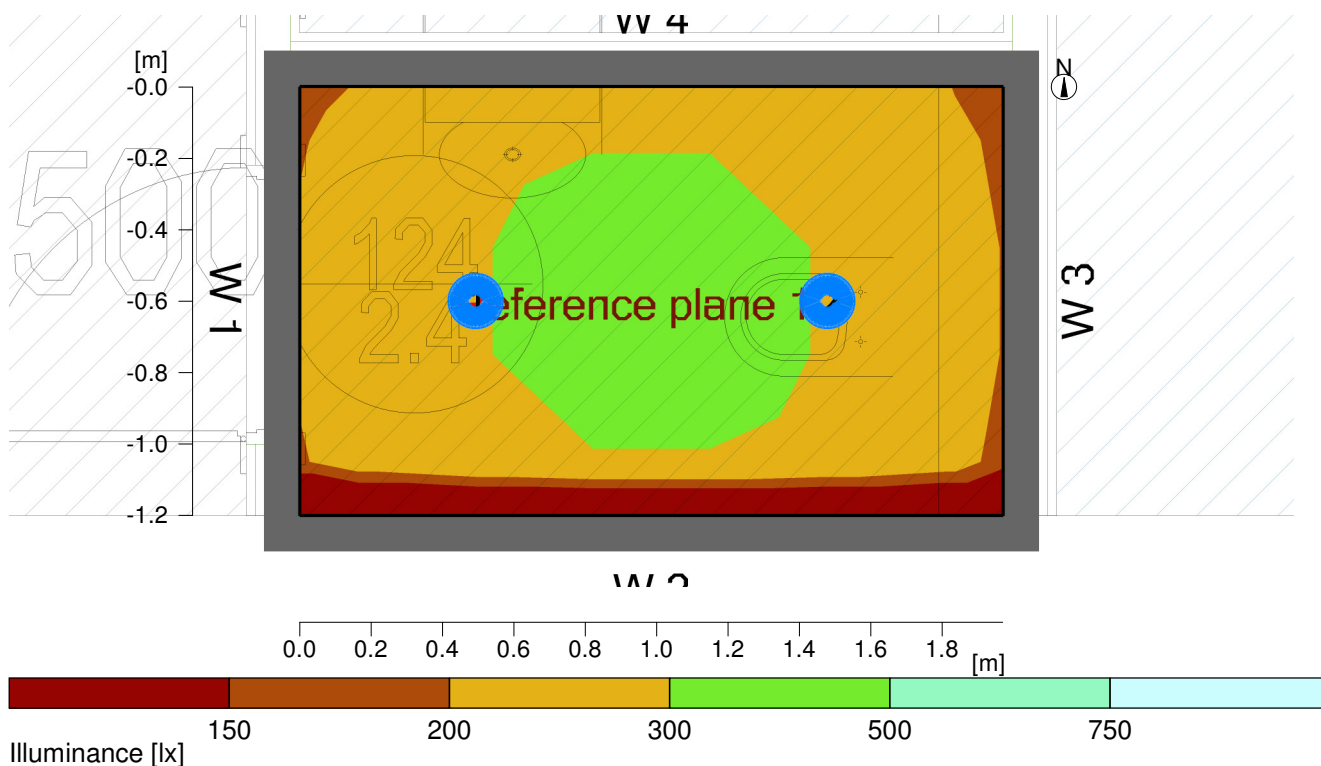
21	2	TRILUX	
		Order No.	: InperlaLP C05 BR19 1000-830 01 ET
		Luminaire name	: TOC 6355340
		Equipment	: 1 x LED 9 W / 1000 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

124

Summary, 124

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.50 m
Maintenance factor	0.80
Total luminous flux of all lamps	2000 lm
Total power	18.0 W
Total power per area (2.36 m²)	7.61 W/m² (2.80 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	271 lx	(≥ 200 lx)
Emin	233 lx	
Emin/Eav (Uo)	0.86	(≥ 0.40)
Emin/Emax (Ud)	0.74	
UGR (2.0H 2.0H)	≤17.6	(< 25.00)
Position	0.00 m	

Type No. \ Make

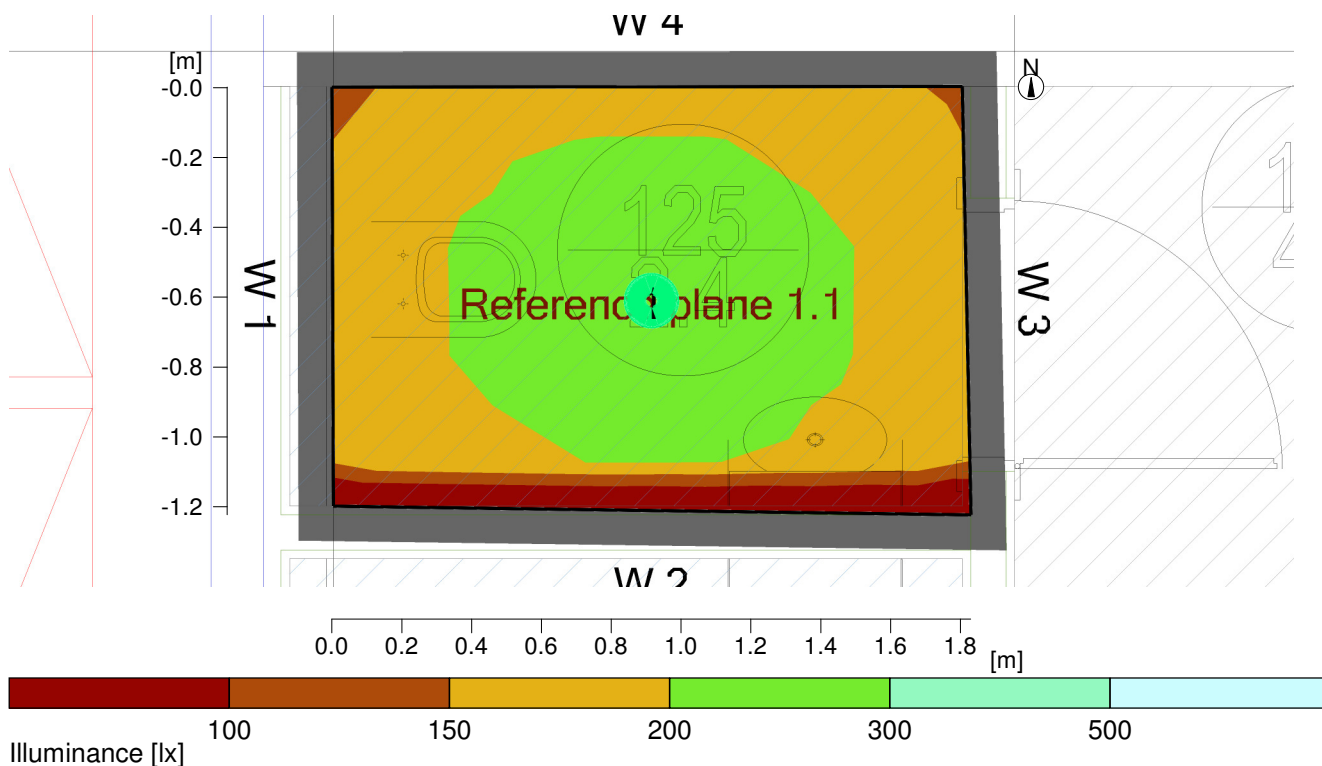
21	2	TRILUX	
		Order No.	: InperlaLP C05 BR19 1000-830 01 ET
		Luminaire name	: TOC 6355340
		Equipment	: 1 x LED 9 W / 1000 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

125

Summary, 125

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.50 m
Maintenance factor	0.80
Total luminous flux of all lamps	1800 lm
Total power	16.0 W
Total power per area (2.20 m²)	7.28 W/m² (3.82 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	190 lx	(>= 200 lx)
Emin	174 lx	
Emin/Eav (Uo)	0.91	(>= 0.40)
Emin/Emax (Ud)	0.80	
UGR (2.0H 2.0H)	<=22.7	(< 25.00)
Position	0.00 m	

Type No.\Make

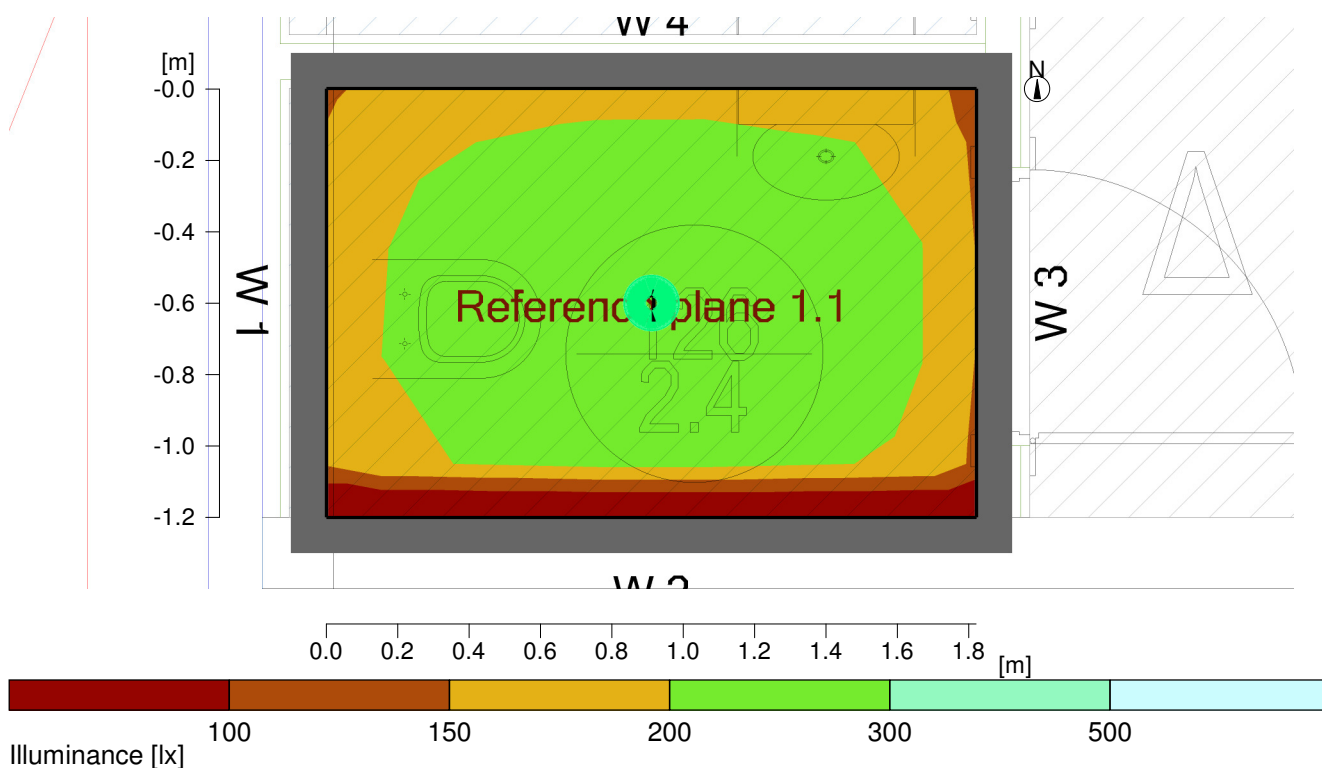
17	1	TRILUX	
		Order No.	: InperlaLP C05 HR22 1800-840 01 ET
		Luminaire name	: TOC 6357440
		Equipment	: 1 x LED 16 W / 1800 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

126

Summary, 126

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
2.50 m
0.83

Total luminous flux of all lamps
Total power
Total power per area (2.18 m²)

1800 lm
16.0 W
7.33 W/m² (3.66 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
Em
200 lx
Emin
182 lx
Emin/Eav (Uo)
0.91
Emin/Emax (Ud)
0.80
UGR (2.0H 2.0H)
<=22.7
Position
0.00 m

Type No.\Make

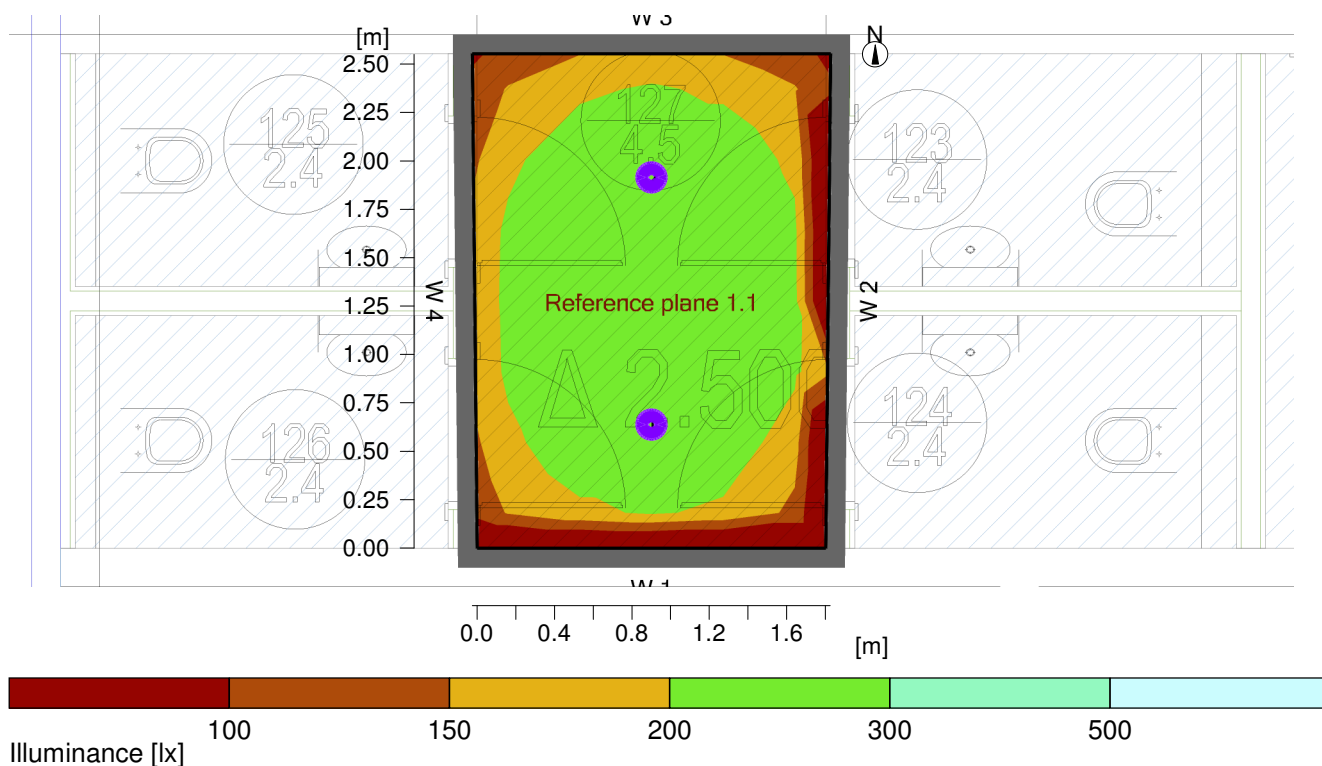
17 1 **TRILUX**
Order No. : InperlaLP C05 HR22 1800-840 01 ET
Luminaire name : TOC 6357440
Equipment : 1 x LED 16 W / 1800 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

127

Summary, 127

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.50 m
Maintenance factor	0.80
Total luminous flux of all lamps	2000 lm
Total power	18.0 W
Total power per area (4.65 m²)	3.87 W/m² (1.89 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

Horizontal	
Em	205 lx (>= 200 lx)
Emin	132 lx
Emin/Eav (Uo)	0.64 (>= 0.40)
Emin/Emax (Ud)	0.50
UGR (2.0H 2.0H)	<=17.6 (< 25.00)
Position	0.00 m

Type No.\Make

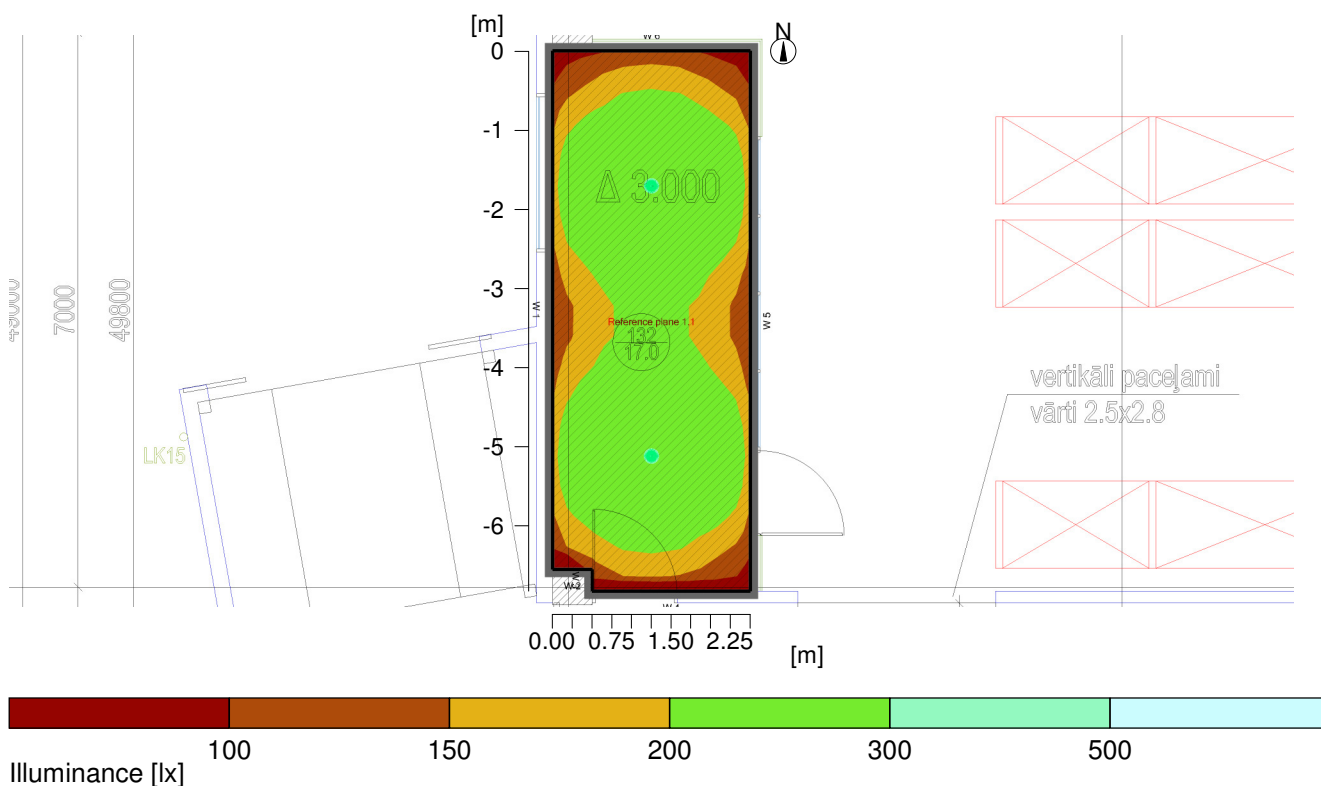
20	2	TRILUX	
		Order No.	: InperlaLP C05 BR19 1000-840 01 ET
		Luminaire name	: TOC 6355440
		Equipment	: 1 x LED 9 W / 1000 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

132

Summary, 132

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
3.00 m
0.80

Total luminous flux of all lamps
Total power
Total power per area (16.92 m²)

5400 lm
50.0 W
2.95 W/m² (1.43 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Traffic zones inside buildings
5.1.4 (EN 12464-1, 8.2011) Loading ramps/bays (Ra >40.00)
Horizontal
Em 206 lx (>= 150 lx)
Emin 95 lx
Emin/Eav (Uo) 0.46 (>= 0.40)
Emin/Emax (Ud) 0.36
UGR (3.8H 1.4H) <=20.4 (< 25.00)
Position 0.00 m

Type No.\Make

18 2



TRILUX

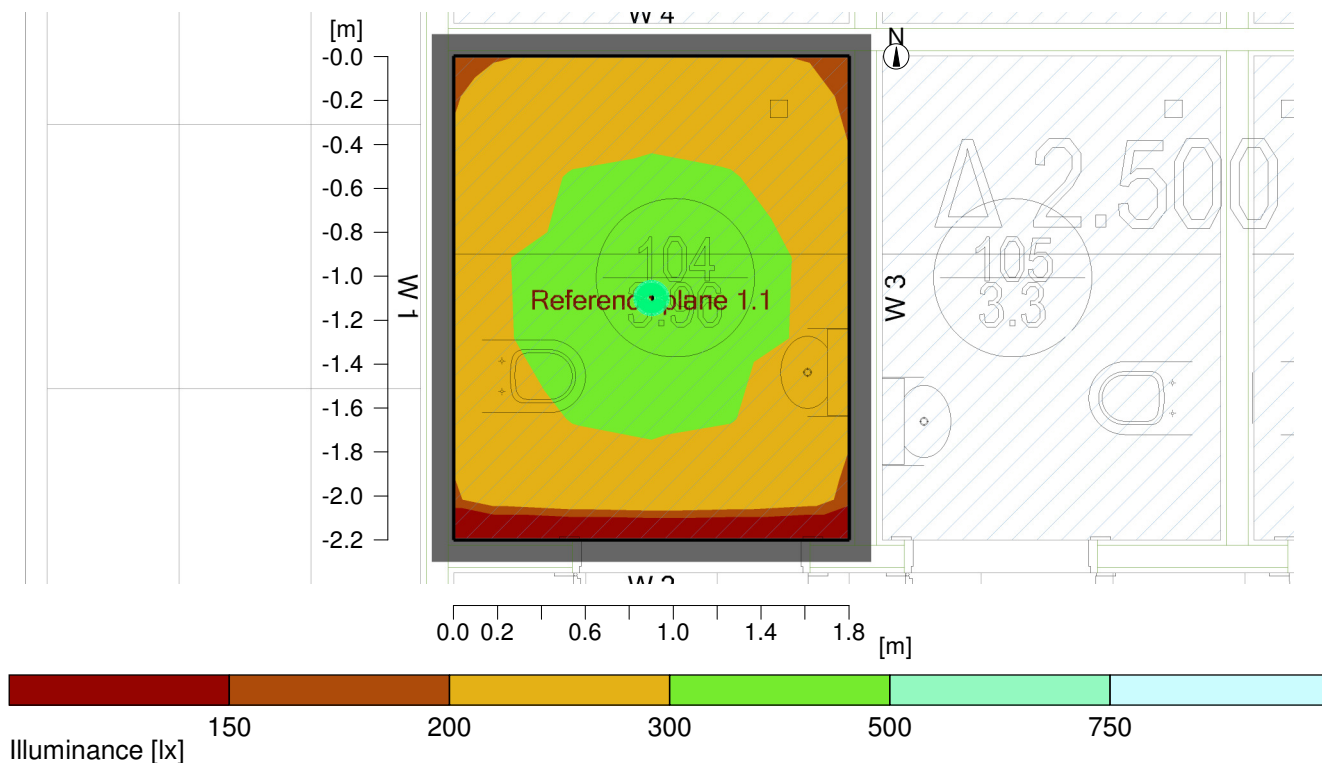
Order No. : InperlaLP C05 HR22 2700-840 01 ET
Luminaire name : TOC 6360640
Equipment : 1 x LED 25 W / 2700 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

104

Summary, 104

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	2700 lm
Total power	25.0 W
Total power per area (3.96 m²)	6.31 W/m² (2.33 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	271 lx	(≥ 200 lx)
Emin	226 lx	
Emin/Eav (Uo)	0.84	(≥ 0.40)
Emin/Emax (Ud)	0.76	
UGR (2.0H 2.0H)	≤20.5	(< 25.00)
Position	0.00 m	

Type No. \ Make

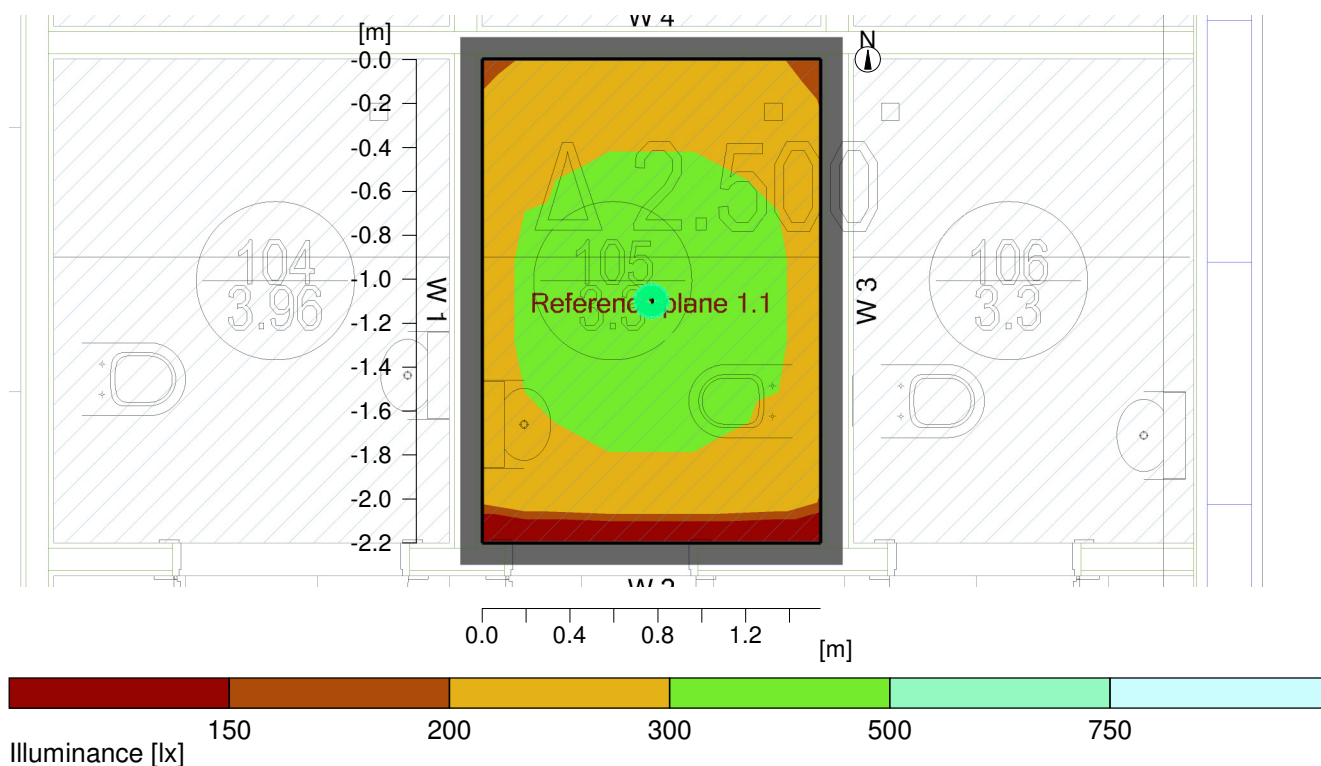
18	1	TRILUX	
		Order No.	: InperlaLP C05 HR22 2700-840 01 ET
		Luminaire name	: TOC 6360640
		Equipment	: 1 x LED 25 W / 2700 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

105

Summary, 105

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	2700 lm
Total power	25.0 W
Total power per area (3.39 m ²)	7.38 W/m ² (2.63 W/m ² /100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal
Em	280 lx (>= 200 lx)
Emin	241 lx
Emin/Eav (Uo)	0.86 (>= 0.40)
Emin/Emax (Ud)	0.79
UGR (2.0H 2.0H)	<=20.5 (< 25.00)
Position	0.00 m

Type No. \Make

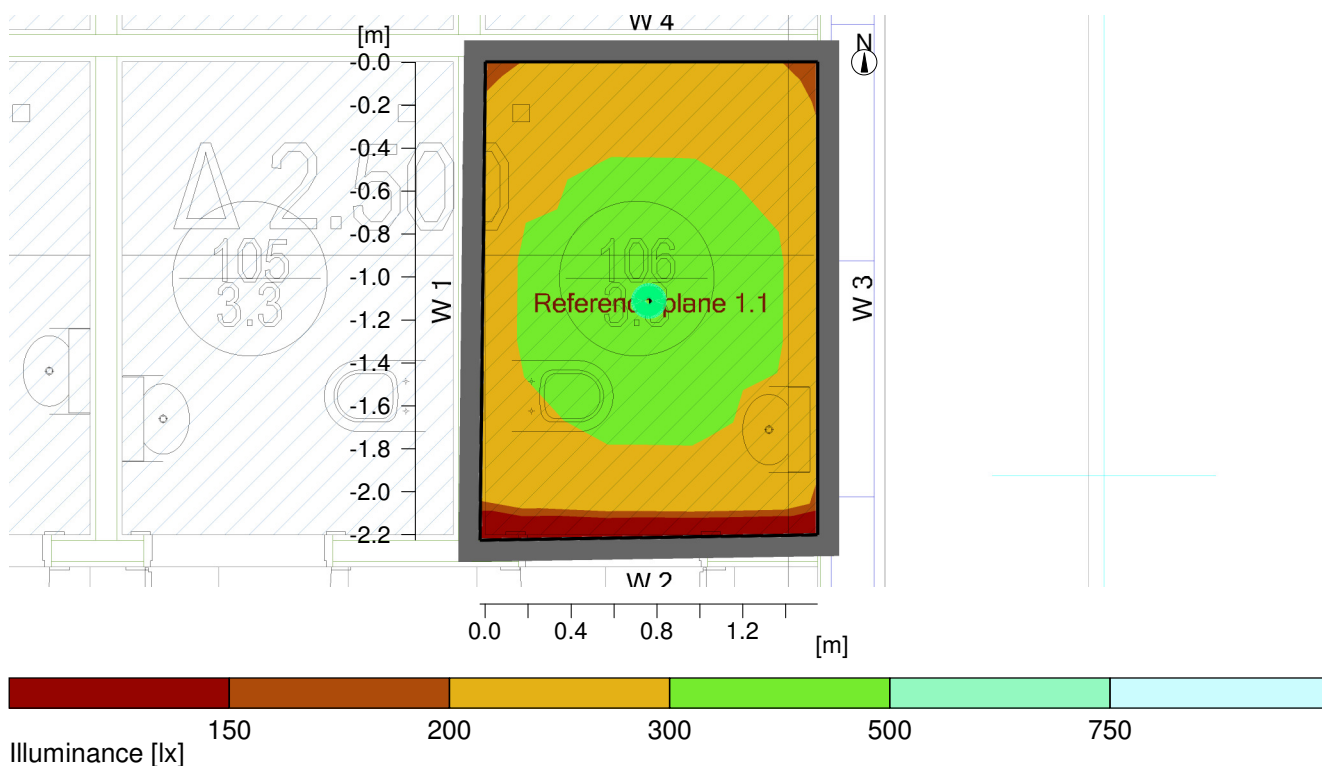
18	1	TRILUX
		Order No. : InperlaLP C05 HR22 2700-840 01 ET
		Luminaire name : TOC 6360640
		Equipment : 1 x LED 25 W / 2700 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

106

Summary, 106

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	2700 lm
Total power	25.0 W
Total power per area (3.45 m²)	7.25 W/m² (2.62 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	277 lx	(≥ 200 lx)
Emin	236 lx	
Emin/Eav (Uo)	0.85	(≥ 0.40)
Emin/Emax (Ud)	0.78	
UGR (2.0H 2.0H)	≤20.5	(< 25.00)
Position	0.00 m	

Type No.\Make

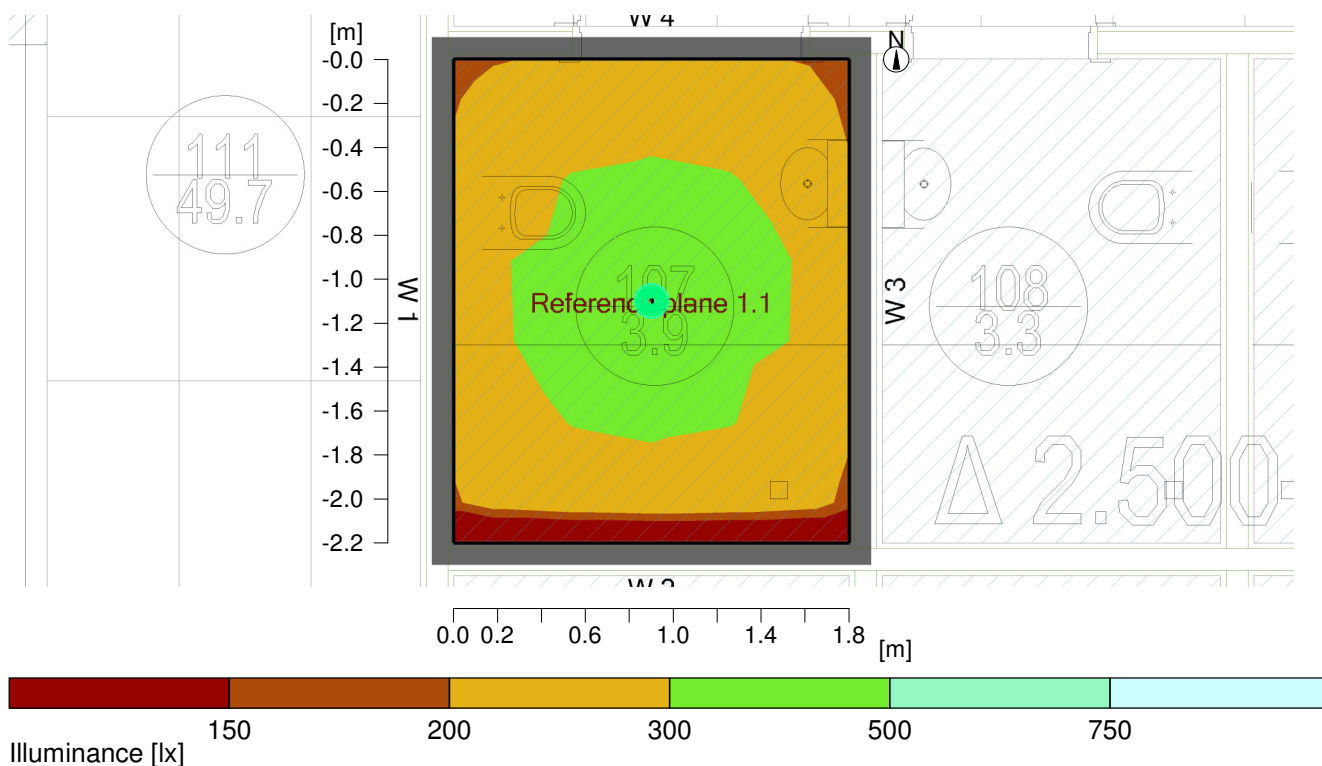
18	1	TRILUX	
		Order No.	: InperlaLP C05 HR22 2700-840 01 ET
		Luminaire name	: TOC 6360640
		Equipment	: 1 x LED 25 W / 2700 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

107

Summary, 107

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	2700 lm
Total power	25.0 W
Total power per area (3.96 m²)	6.31 W/m² (2.33 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal
Em	271 lx (>= 200 lx)
Emin	226 lx
Emin/Eav (Uo)	0.84 (>= 0.40)
Emin/Emax (Ud)	0.76
UGR (2.0H 2.0H)	<=20.5 (< 25.00)
Position	0.00 m

Type No.\Make

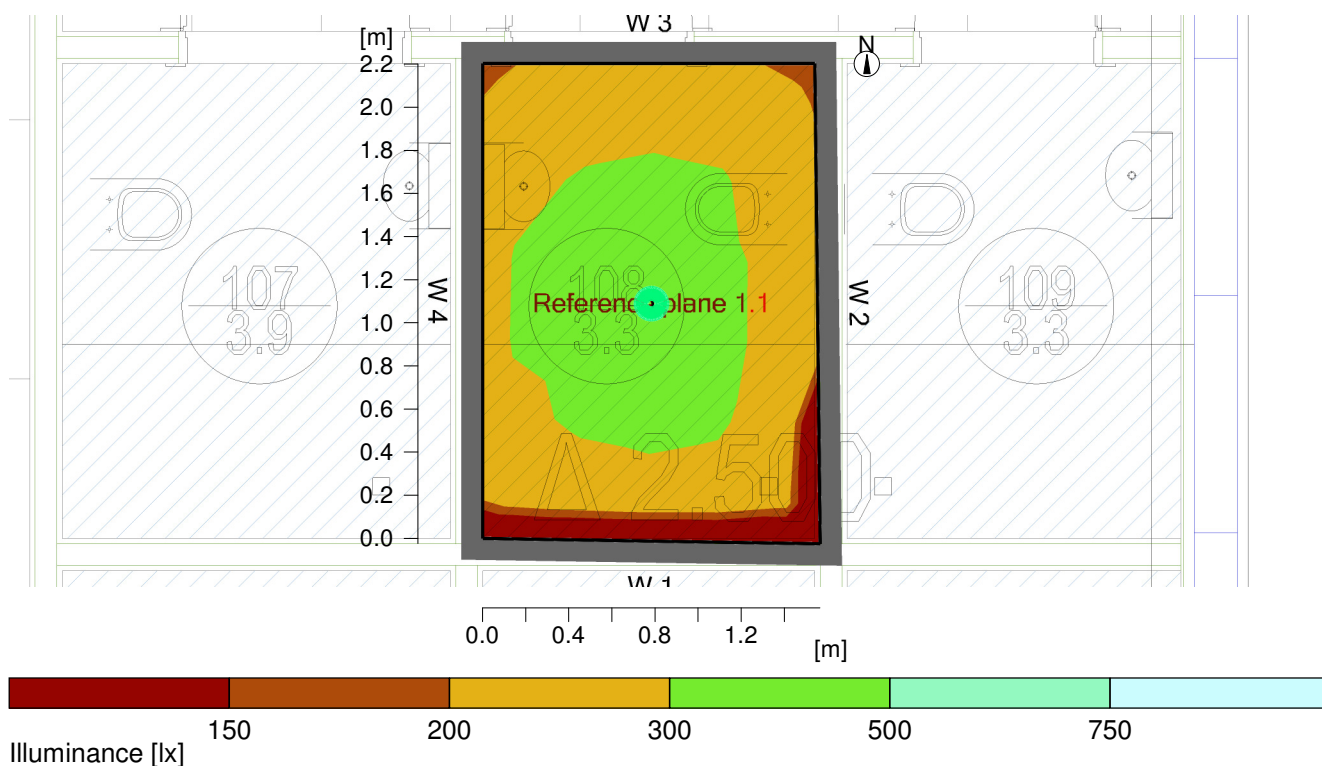
18	1	TRILUX
		Order No. : InperlaLP C05 HR22 2700-840 01 ET
		Luminaire name : TOC 6360640
		Equipment : 1 x LED 25 W / 2700 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

108

Summary, 108

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	2700 lm
Total power	25.0 W
Total power per area (3.43 m²)	7.28 W/m² (2.68 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal
Em	271 lx (>= 200 lx)
Emin	212 lx
Emin/Eav (Uo)	0.78 (>= 0.40)
Emin/Emax (Ud)	0.70
UGR (2.0H 2.0H)	<=20.5 (< 25.00)
Position	0.00 m

Type No.\Make

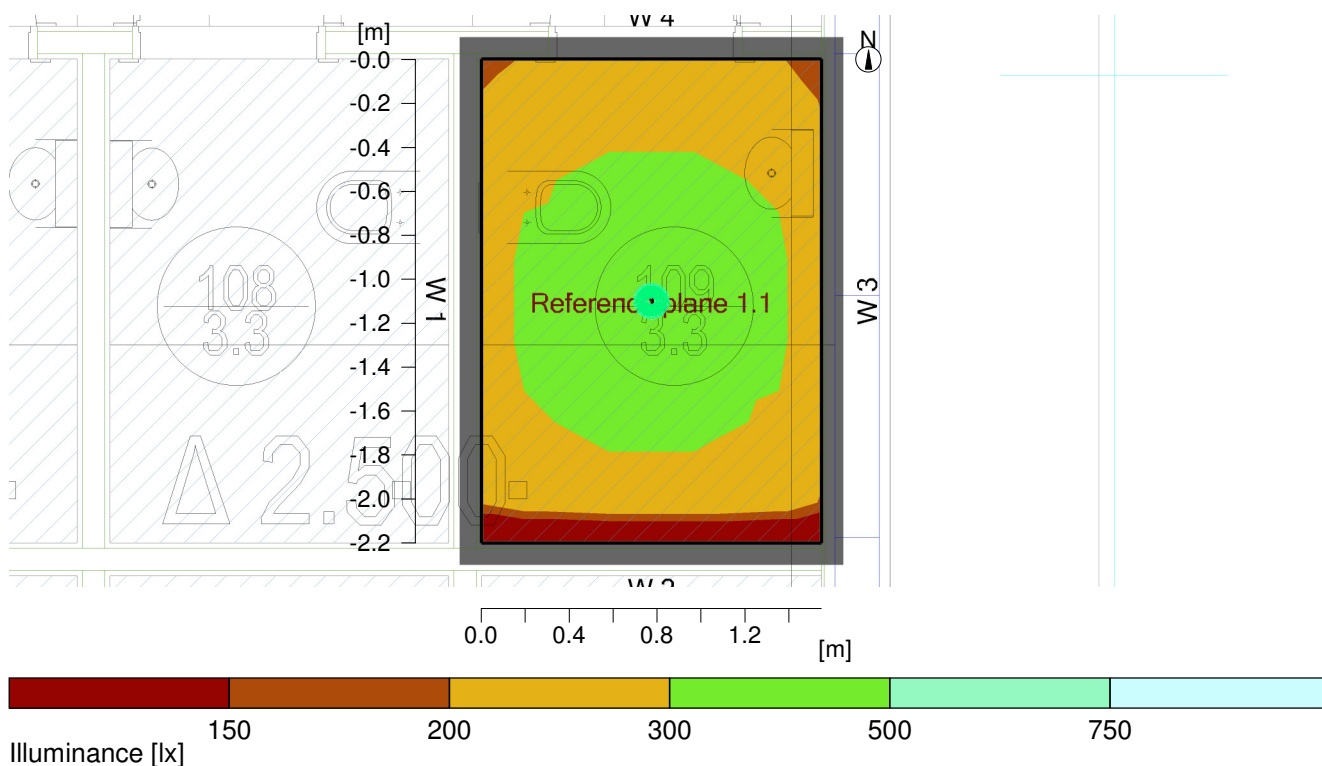
18	1	TRILUX
		Order No. : InperlaLP C05 HR22 2700-840 01 ET
		Luminaire name : TOC 6360640
		Equipment : 1 x LED 25 W / 2700 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

109

Summary, 109

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	3.00 m
Maintenance factor	0.80
Total luminous flux of all lamps	2700 lm
Total power	25.0 W
Total power per area (3.40 m²)	7.35 W/m² (2.62 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

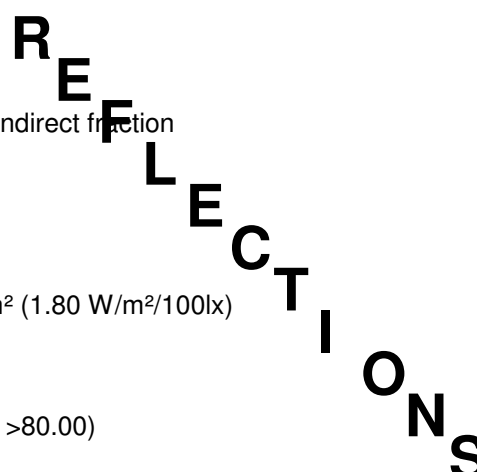
User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

Horizontal	
Em	280 lx (>= 200 lx)
Emin	240 lx
Emin/Eav (Uo)	0.86 (>= 0.40)
Emin/Emax (Ud)	0.79
UGR (2.0H 2.0H)	<=20.5 (< 25.00)
Position	0.00 m

Type No.\Make

18	1	TRILUX
		Order No. : InperlaLP C05 HR22 2700-840 01 ET
		Luminaire name : TOC 6360640
		Equipment : 1 x LED 25 W / 2700 lm

Result overview, Evaluation area 1




Average indirect fraction
3.00 m
0.80

36000 lm
360.0 W
9.71 W/m² (1.80 W/m²/100lx)

Evaluation area 1	Reference plane 1.1	
User profile: Offices		
5.26.2 (EN 12464-1, 8.2011)	Writing, typing, reading, data processing (Ra >80.00)	
	Horizontal	
Em	540 lx	(>= 500 lx)
Emin	351 lx	
Emin/Eav (Uo)	0.65	(>= 0.60)
Emin/Emax (Ud)	0.50	
UGR (3.0H 3.8H)	<=17.2	(< 19.00)
Position	0.00 m	

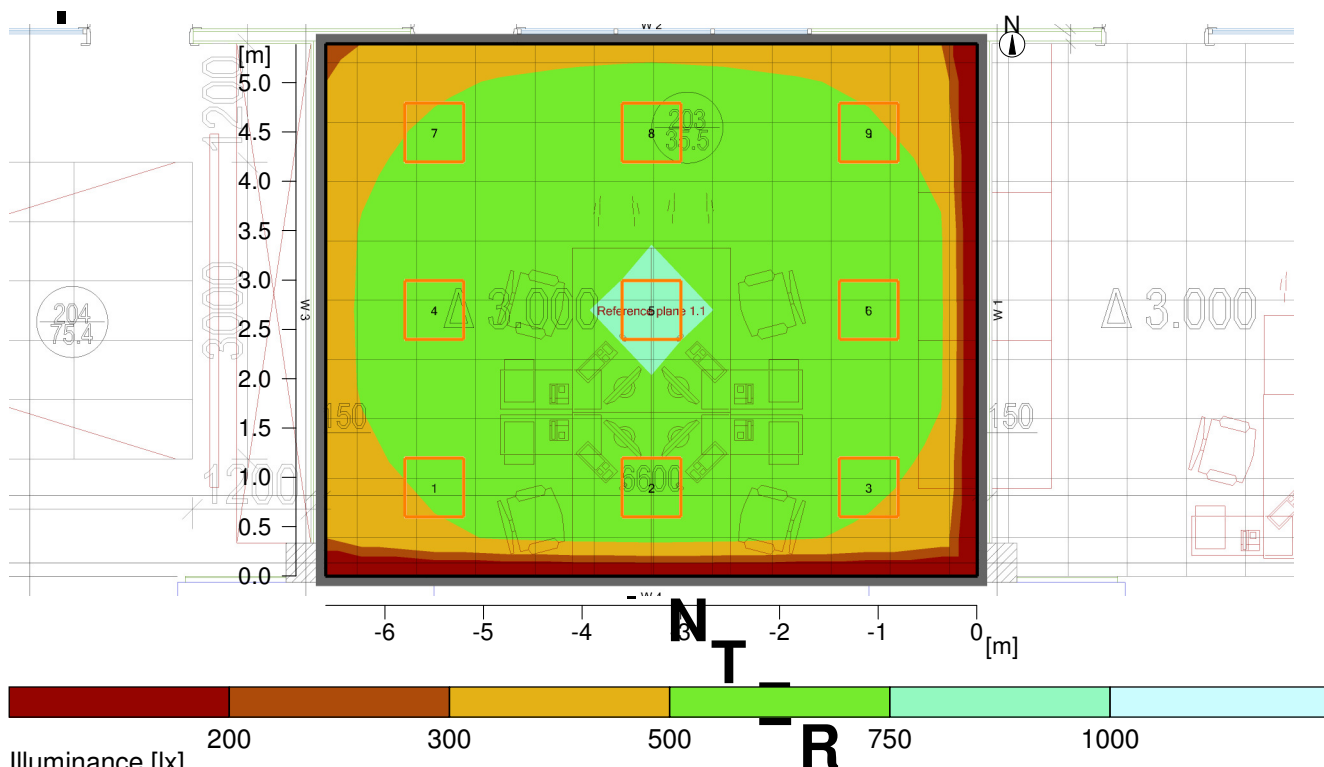
TRILUX

25	9	Order No.	: ArimoS M73 CDP LED4000-840 ET
		Luminaire name	: TOC 6325640
		Equipment	: 1 x LED 40 W / 4000 lm

203

Summary, 203

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (35.55 m²)

36000 lm
 360.0 W
 10.13 W/m² (1.82 W/m²/100lx)

Evaluation area 1

User profile: Offices

5.26.2 (EN 12464-1, 8.2011) Writing, typing, reading, data processing (Ra >80.00)

Reference plane 1.1

Horizontal

Em	558 lx	(>= 500 lx)
Emin	370 lx	
Emin/Eav (Uo)	0.66	(>= 0.60)
Emin/Emax (Ud)	0.51	
UGR (3.0H 3.7H)	<=17.2	(< 19.00)
Position	0.00 m	

Type No.\Make

25 9



TRILUX

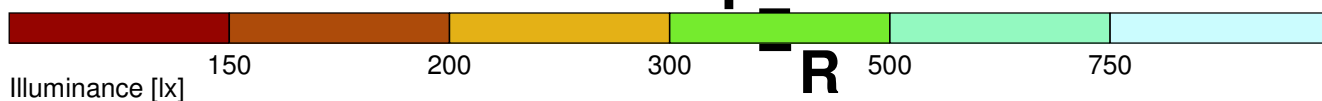
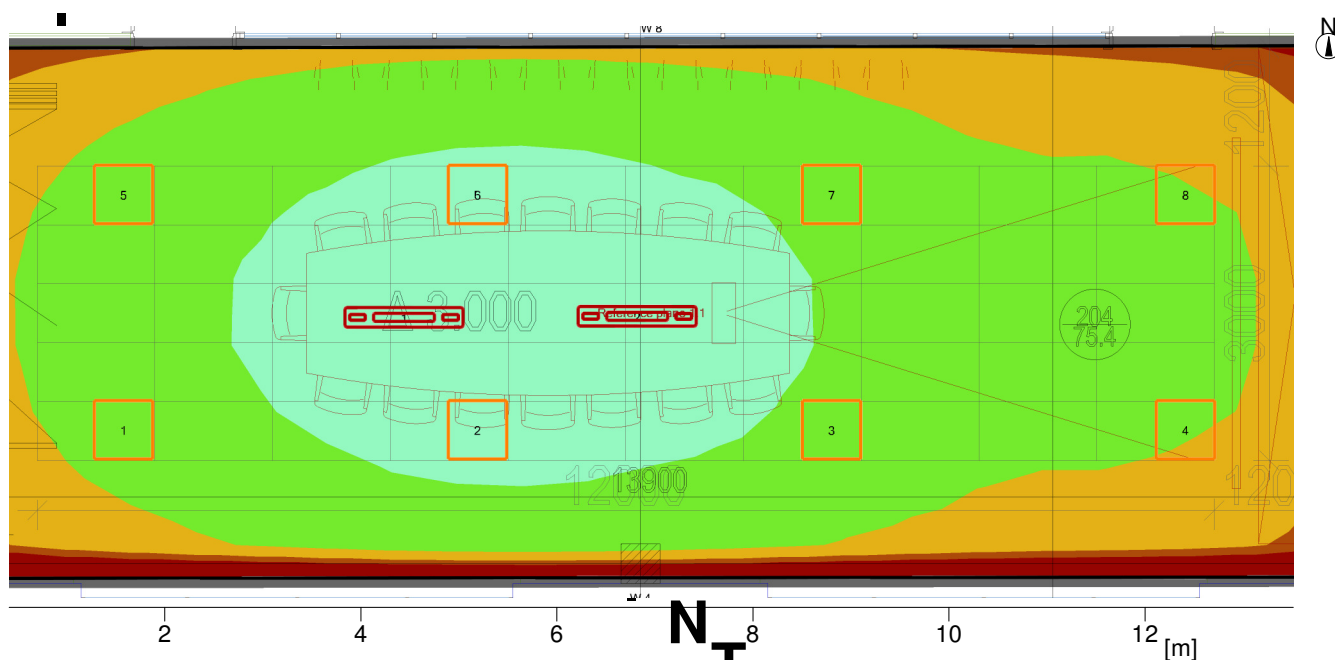
Order No. : ArimoS M73 CDP LED4000-840 ET
 Luminaire name : TOC 6325640
 Equipment : 1 x LED 40 W / 4000 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

204

Summary, 204

Result overview, Evaluation area 1



General

Calculation algorithm used
Maintenance factor

Total luminous flux of all lamps
Total power
Total power per area (75.17 m²)

Average indirect fraction
0.80

45400 lm
442.0 W
5.88 W/m² (1.56 W/m²/100lx)

Evaluation area 1

Em
Emin
Emin/Eav (Uo)
Emin/Emax (Ud)
Position

Reference plane 1.1

Horizontal
377 lx
172 lx
0.46
0.24
0.00 m

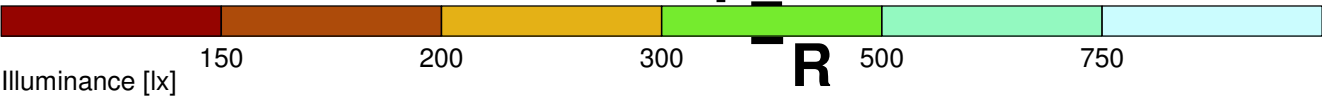
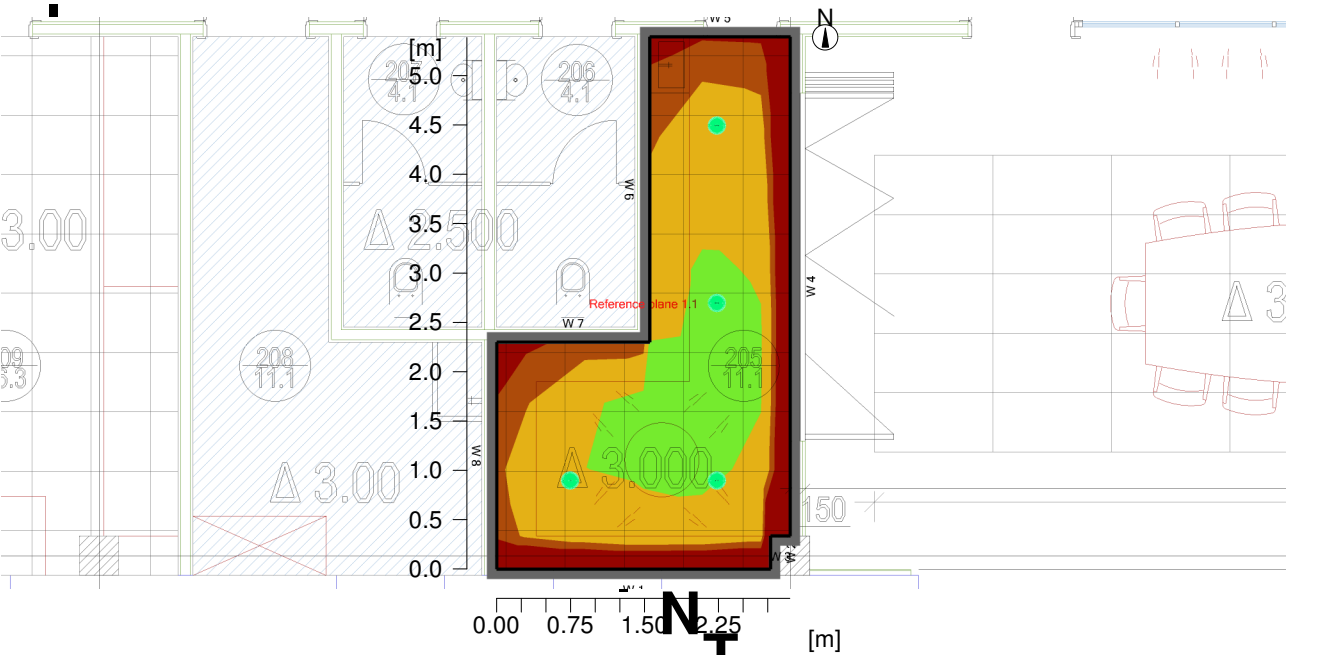
Type No. \ Make

16	2	TRILUX	
		Order No.	: Lunexo H1 CDP-I 6500 840 01 ETDD
		Luminaire name	: TOC 6825451
		Equipment	: 1 x LED 61 W / 6700 lm
25	8	ARIMO	
		Order No.	: ArimoS M73 CDP LED4000-840 ET
		Luminaire name	: TOC 6325640
		Equipment	: 1 x LED 40 W / 4000 lm

205

Summary, 205

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
3.00 m
0.80

7200 lm
64.0 W
5.74 W/m² (2.24 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
Em 257 lx
Emin 175 lx
Emin/Eav (Uo) 0.68
Emin/Emax (Ud) 0.54
Position 0.00 m

Type No.\Make

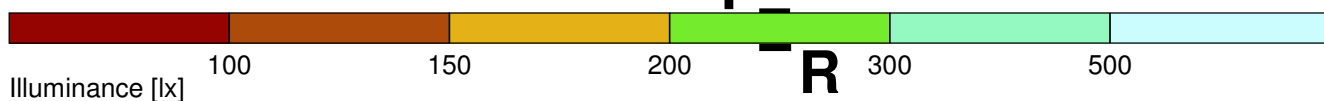
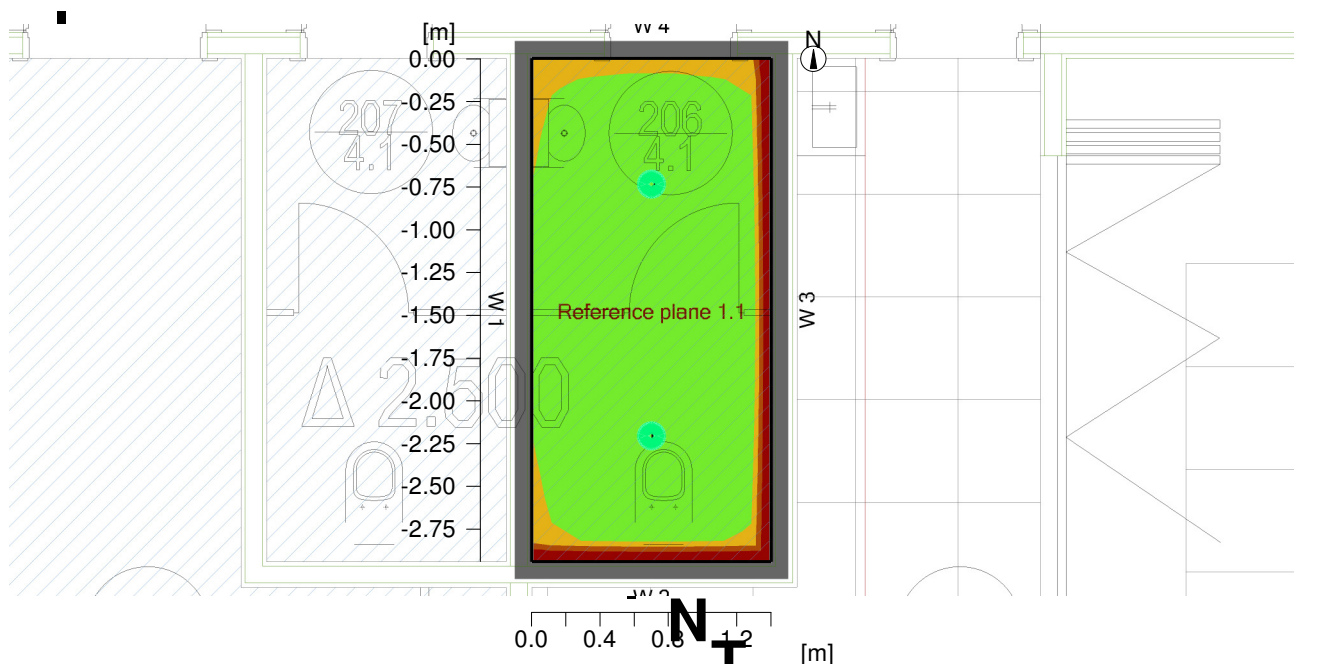
17 4 **TRILUX**
Order No. : InperlaLP C05 HR22 1800-840 01 ET
Luminaire name : TOC 6357440
Equipment : 1 x LED 16 W / 1800 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

206

Summary, 206

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (4.12 m²)

3600 lm
 32.0 W
 7.77 W/m² (3.46 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	225 lx	(≥ 200 lx)
Emin	184 lx	
Emin/Eav (Uo)	0.82	(≥ 0.40)
Emin/Emax (Ud)	0.73	
UGR (2.0H 2.0H)	≤22.7	(< 25.00)
Position	0.00 m	

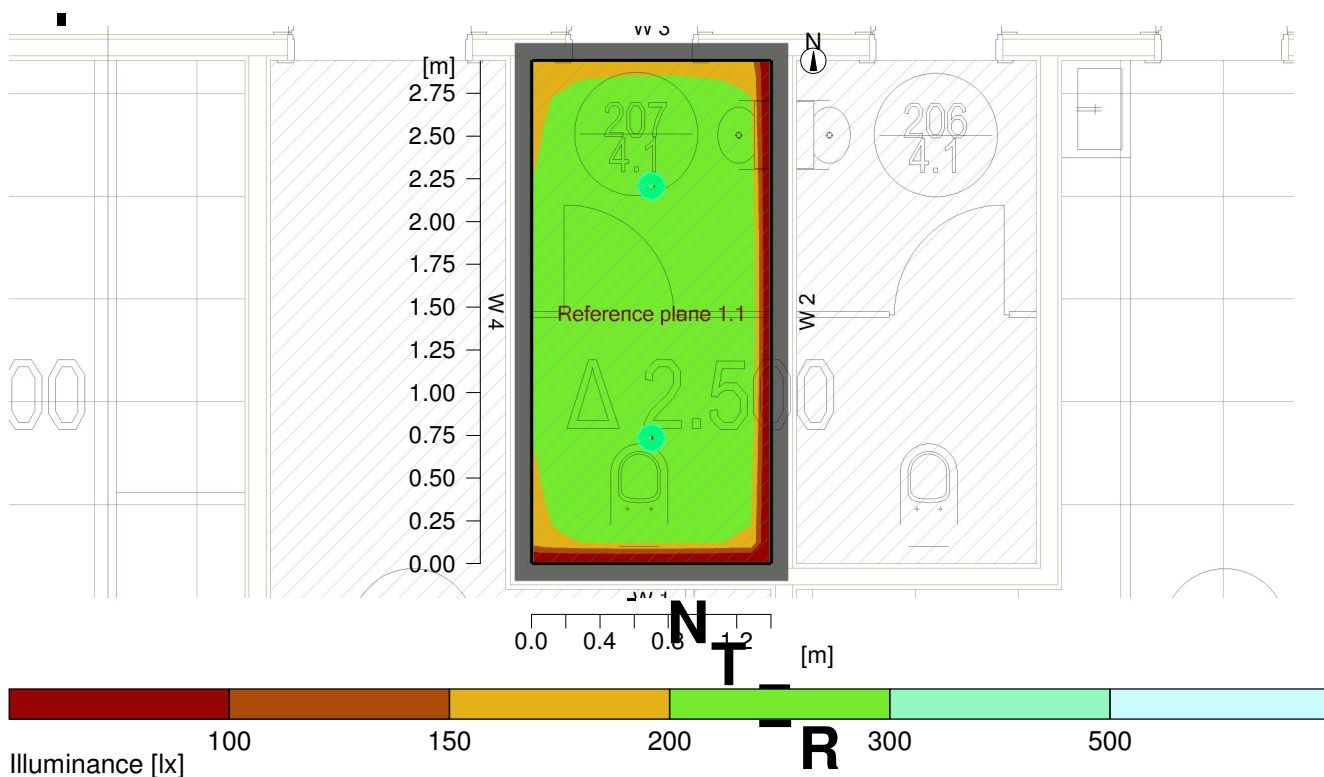
Type No. \ Make

17	2	TRILUX	
		Order No.	: InperlaLP C05 HR22 1800-840 01 ET
		Luminaire name	: TOC 6357440
		Equipment	: 1 x LED 16 W / 1800 lm

207

Summary, 207

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (4.12 m²)

3600 lm
 32.0 W
 7.77 W/m² (3.46 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	225 lx	(≥ 200 lx)
Emin	184 lx	
Emin/Eav (Uo)	0.82	(≥ 0.40)
Emin/Emax (Ud)	0.73	
UGR (2.0H 2.0H)	≤22.7	(< 25.00)
Position	0.00 m	

Type No.\Make

17 2



TRILUX

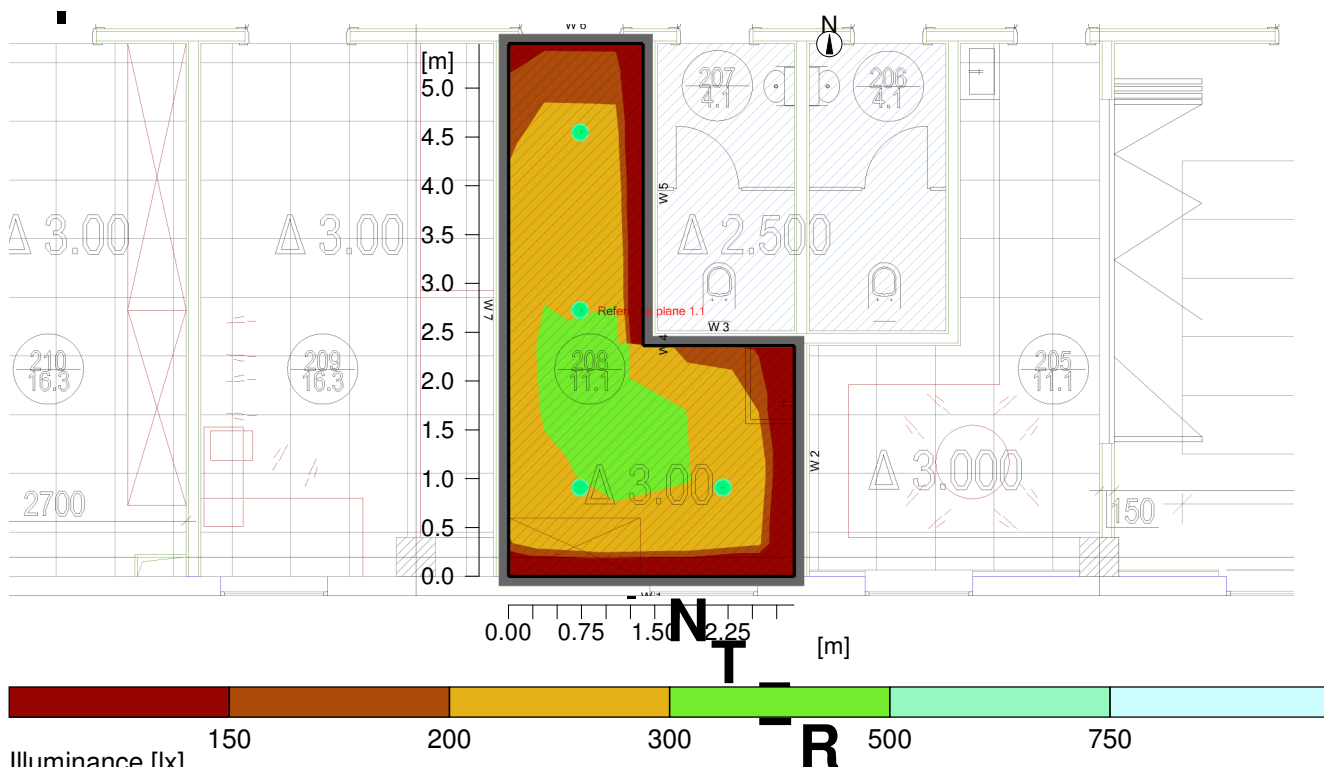
Order No. : InperlaLP C05 HR22 1800-840 01 ET
 Luminaire name : TOC 6357440
 Equipment : 1 x LED 16 W / 1800 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

208

Summary, 208

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (11.16 m²)

7200 lm
 64.0 W
 5.73 W/m² (2.28 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	251 lx	(≥ 200 lx)
Emin	173 lx	
Emin/Eav (Uo)	0.69	(≥ 0.40)
Emin/Emax (Ud)	0.55	
Position	0.00 m	

Type No. \ Make

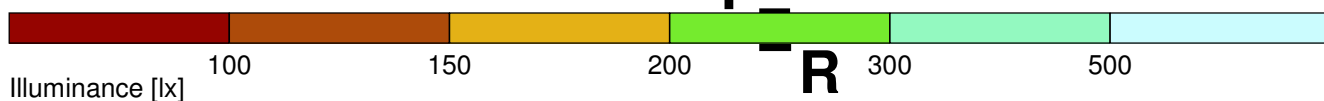
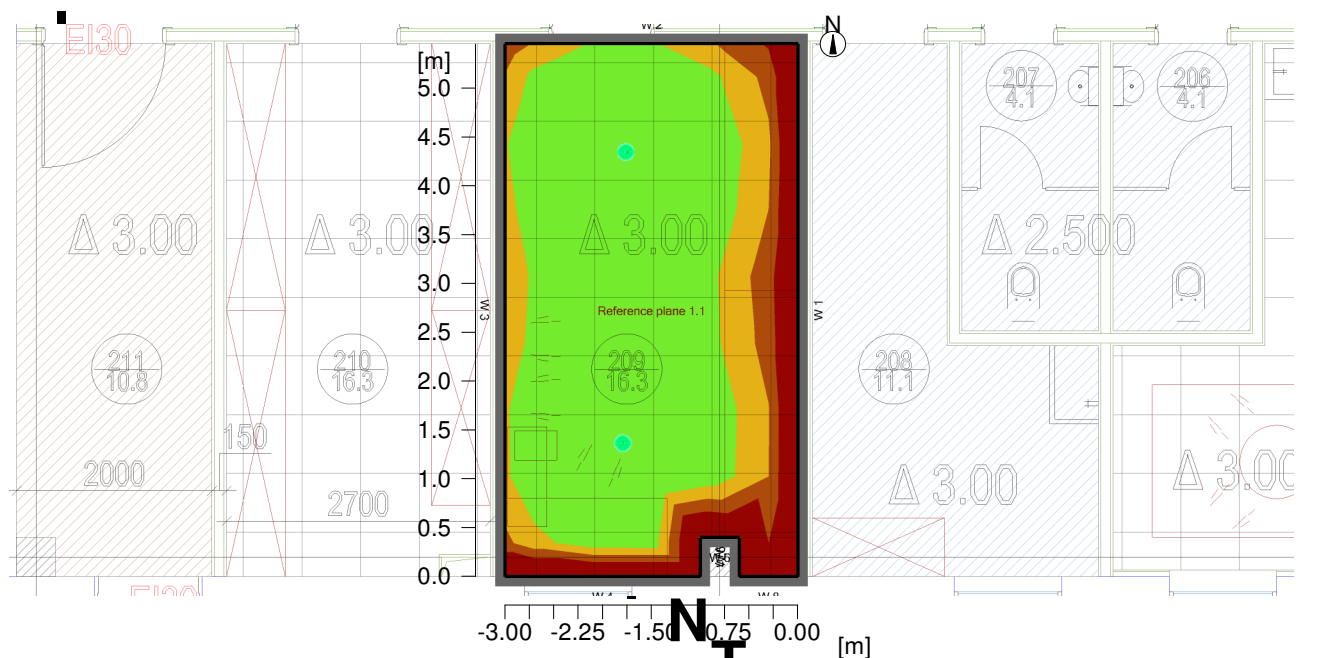
TRILUX	
17	Order No. : InperlaLP C05 HR22 1800-840 01 ET
4	Luminaire name : TOC 6357440
	Equipment : 1 x LED 16 W / 1800 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

209

Summary, 209

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (16.19 m²)

5400 lm
 50.0 W
 3.09 W/m² (1.42 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Control rooms
 5.3.1 (EN 12464-1, 8.2011) Plant rooms, switch gear rooms (Ra >60.00)

	Horizontal	
Em	217 lx	(≥ 200 lx)
Emin	95 lx	
Emin/Eav (Uo)	0.44	(≥ 0.40)
Emin/Emax (Ud)	0.34	
UGR (3.0H 1.7H)	≤20.4	(< 25.00)
Position	0.00 m	

Type No. \ Make

18 2



TRILUX

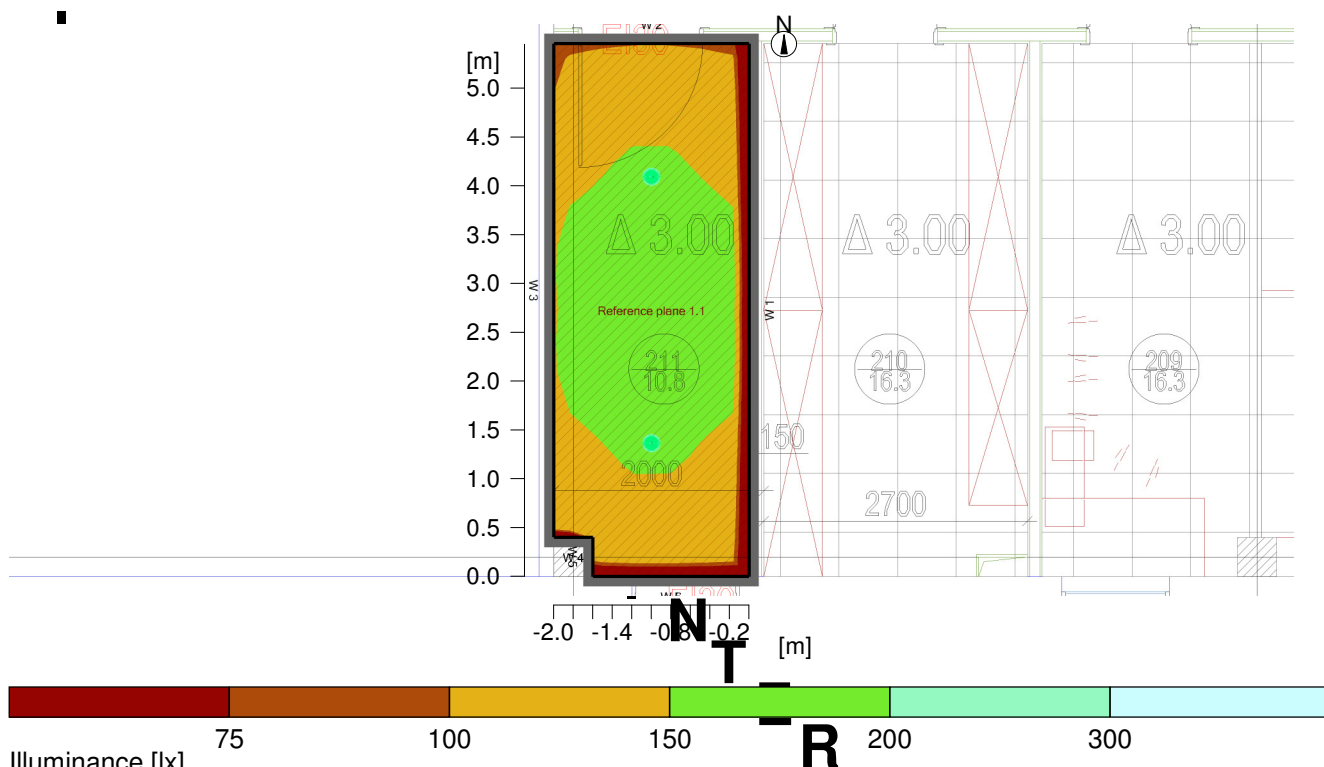
Order No. : InperlaLP C05 HR22 2700-840 01 ET
 Luminaire name : TOC 6360640
 Equipment : 1 x LED 25 W / 2700 lm

REFLECTIONS

210

Summary, 210

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (10.74 m²)

3600 lm
 32.0 W
 2.98 W/m² (2.09 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Traffic zones inside buildings
 5.1.1 (EN 12464-1, 8.2011) Circulation areas and corridors (Ra >40.00)

	Horizontal	
Em	142 lx	(≥ 100 lx)
Emin	100 lx	
Emin/Eav (Uo)	0.70	(≥ 0.40)
Emin/Emax (Ud)	0.56	
UGR (3.0H 1.1H)	≤22.6	(< 28.00)
Position	0.00 m	

Type No.\Make

17 2



TRILUX

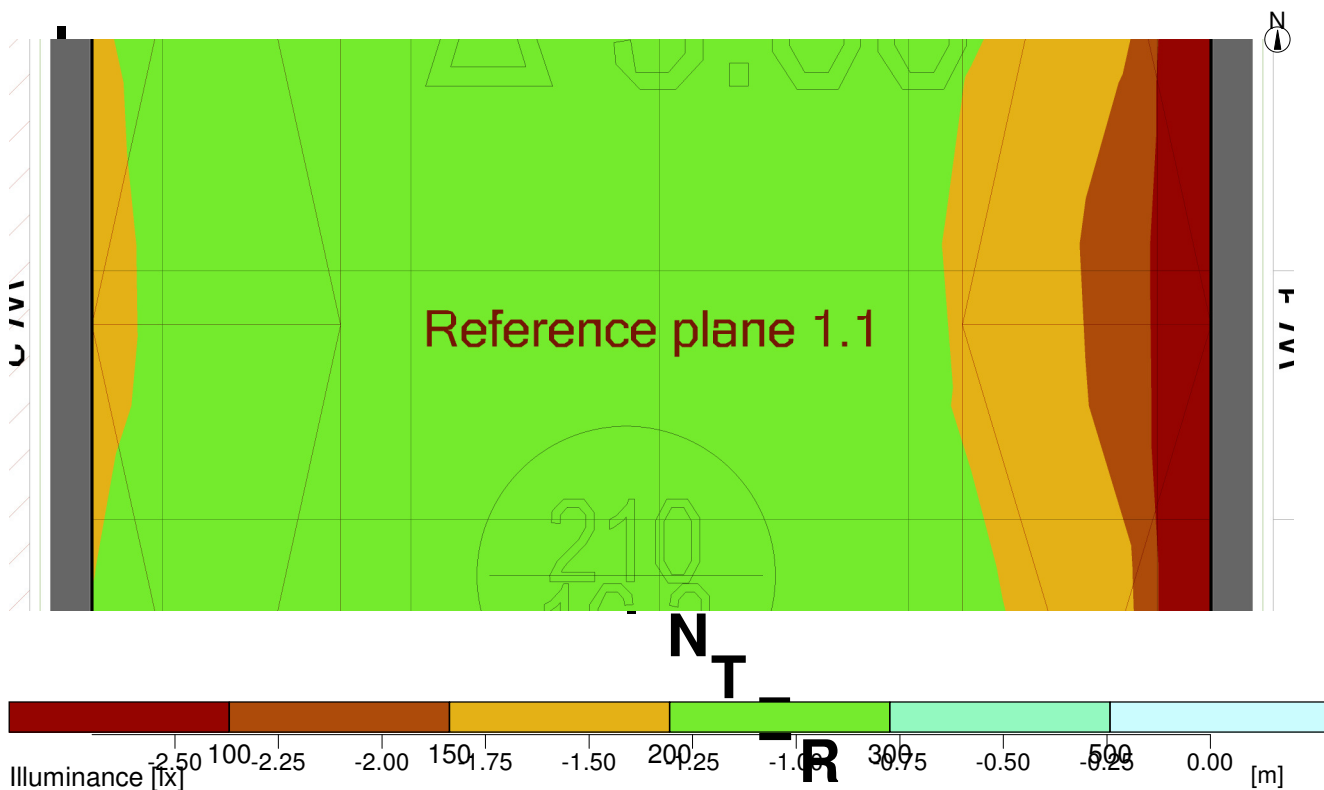
Order No. : InperlaLP C05 HR22 1800-840 01 ET
 Luminaire name : TOC 6357440
 Equipment : 1 x LED 16 W / 1800 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

210

Summary, 210

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
3.00 m
0.80

Total luminous flux of all lamps
Total power
Total power per area (14.71 m²)

5400 lm
50.0 W
3.40 W/m² (1.50 W/m²/100lx)

Evaluation area 1

User profile: Offices

5.26.7 (EN 12464-1, 8.2011) Archives (Ra >80.00)

Reference plane 1.1

Horizontal

Em	227 lx	(>= 200 lx)
Emin	96 lx	
Emin/Eav (Uo)	0.42	(>= 0.40)
Emin/Emax (Ud)	0.33	
UGR (3.0H 1.5H)	<=20.4	(< 25.00)
Position	0.00 m	

Type No.\Make

18 2



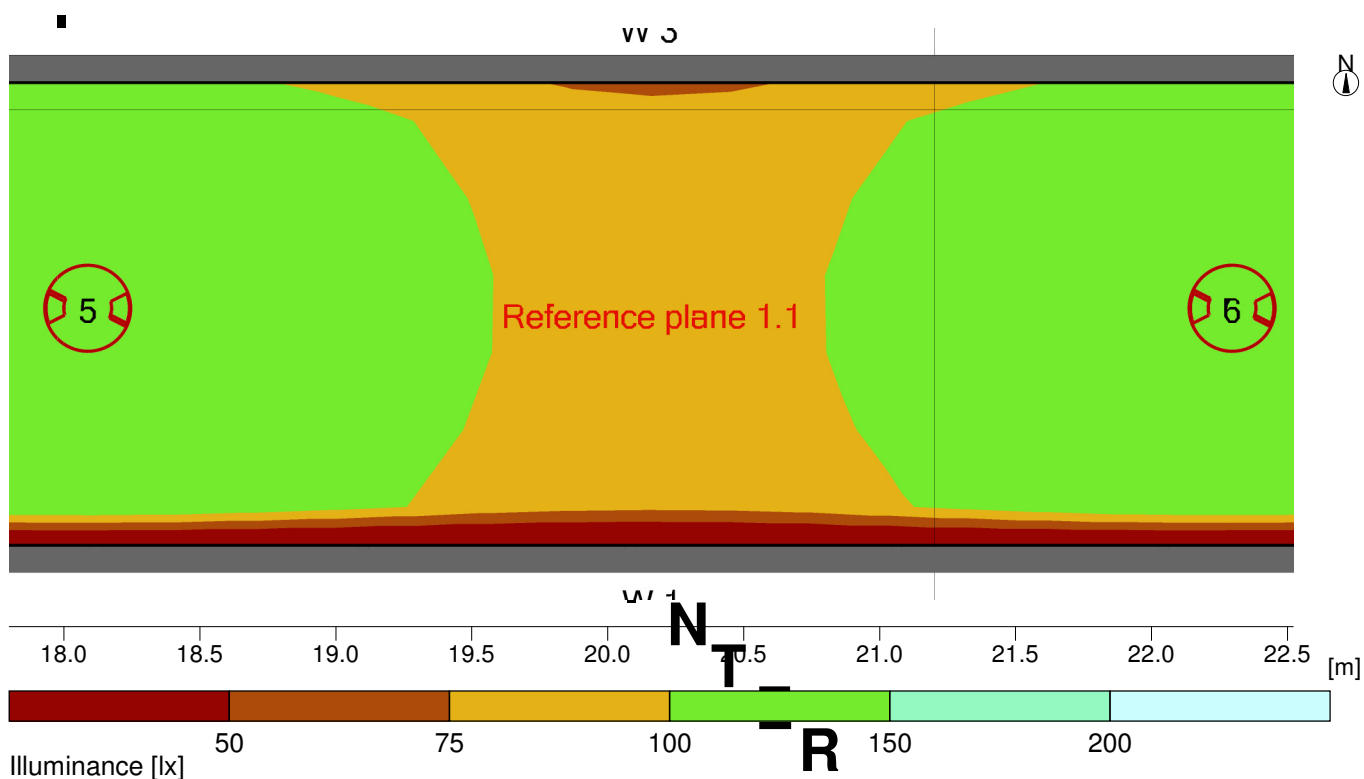
TRILUX

Order No. : InperlaLP C05 HR22 2700-840 01 ET
Luminaire name : TOC 6360640
Equipment : 1 x LED 25 W / 2700 lm

212

Summary, 212

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 2.70 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (68.53 m²)

18000 lm
 180.0 W
 2.63 W/m² (2.47 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Traffic zones inside buildings
 5.1.1 (EN 12464-1, 8.2011) Circulation areas and corridors (Ra >40.00)

	Horizontal	
Em	106 lx	(>= 100 lx)
Emin	77 lx	
Emin/Eav (Uo)	0.72	(>= 0.40)
Emin/Emax (Ud)	0.55	
UGR (1.2H 27.9H)	<=18.0	(< 28.00)
Position	0.00 m	

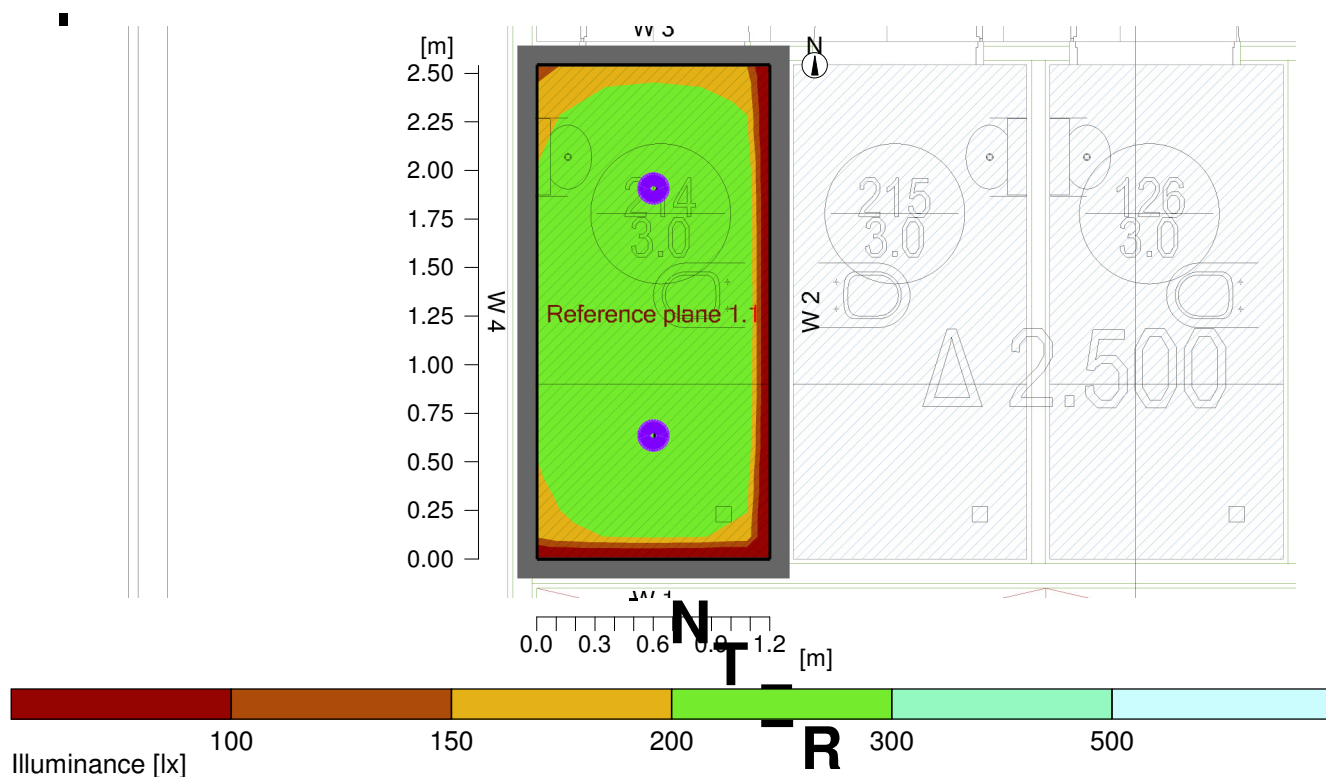
Type No. \ Make

27	10	TRILUX	
		Order No.	: Onplana D09 CDP19 2000-840 01 ET
		Luminaire name	: TOC 6458540
		Equipment	: 1 x LED 18 W / 1800 lm

214

Summary, 214

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 2.50 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (3.05 m²)

2000 lm
 18.0 W
 5.91 W/m² (2.50 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	236 lx	(>= 200 lx)
Emin	174 lx	
Emin/Eav (Uo)	0.74	(>= 0.40)
Emin/Emax (Ud)	0.61	
UGR (2.0H 2.0H)	<=17.6	(< 25.00)
Position	0.00 m	

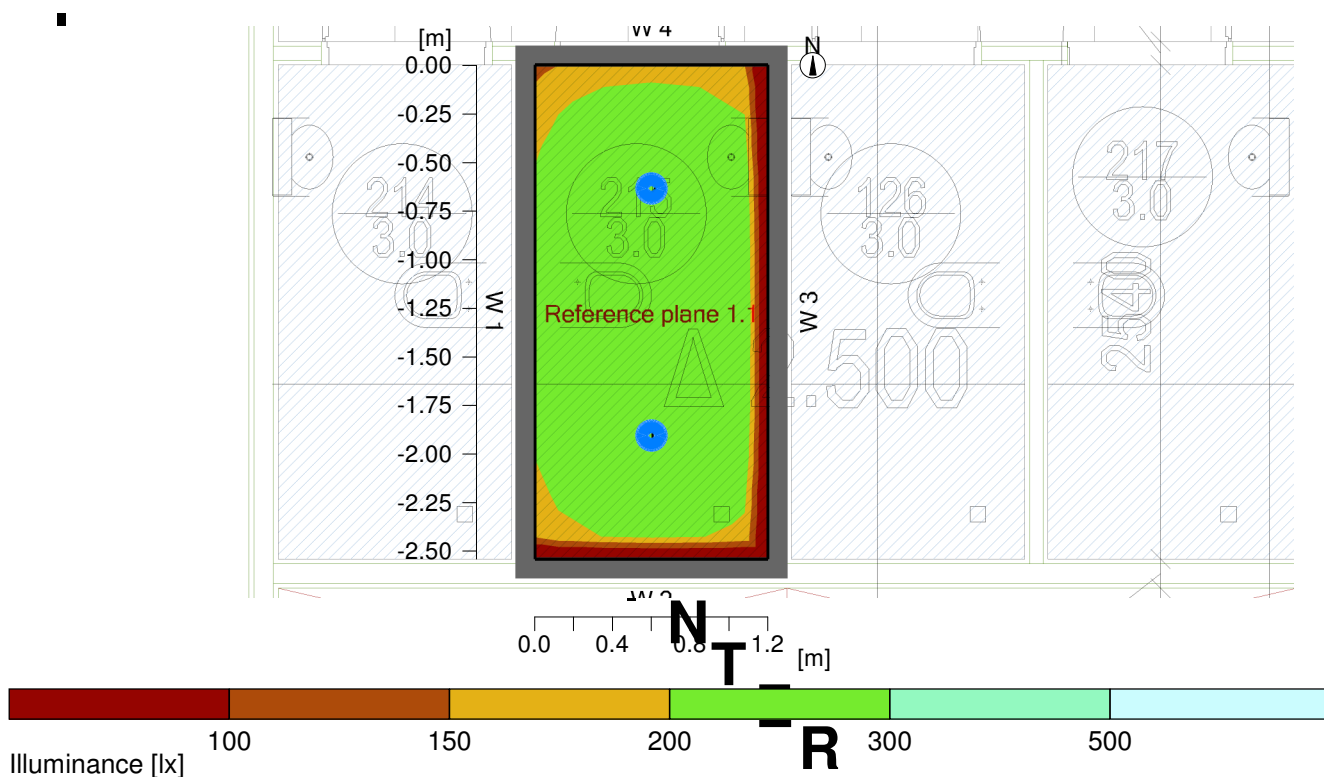
Type No.\Make

20	2	TRILUX	
		Order No.	: InperlaLP C05 BR19 1000-840 01 ET
		Luminaire name	: TOC 6355440
		Equipment	: 1 x LED 9 W / 1000 lm

215

Summary, 215

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 2.50 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (3.05 m²)

2000 lm
 18.0 W
 5.91 W/m² (2.50 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	236 lx	(≥ 200 lx)
Emin	174 lx	
Emin/Eav (Uo)	0.74	(≥ 0.40)
Emin/Emax (Ud)	0.61	
UGR (2.0H 2.0H)	≤17.6	(< 25.00)
Position	0.00 m	

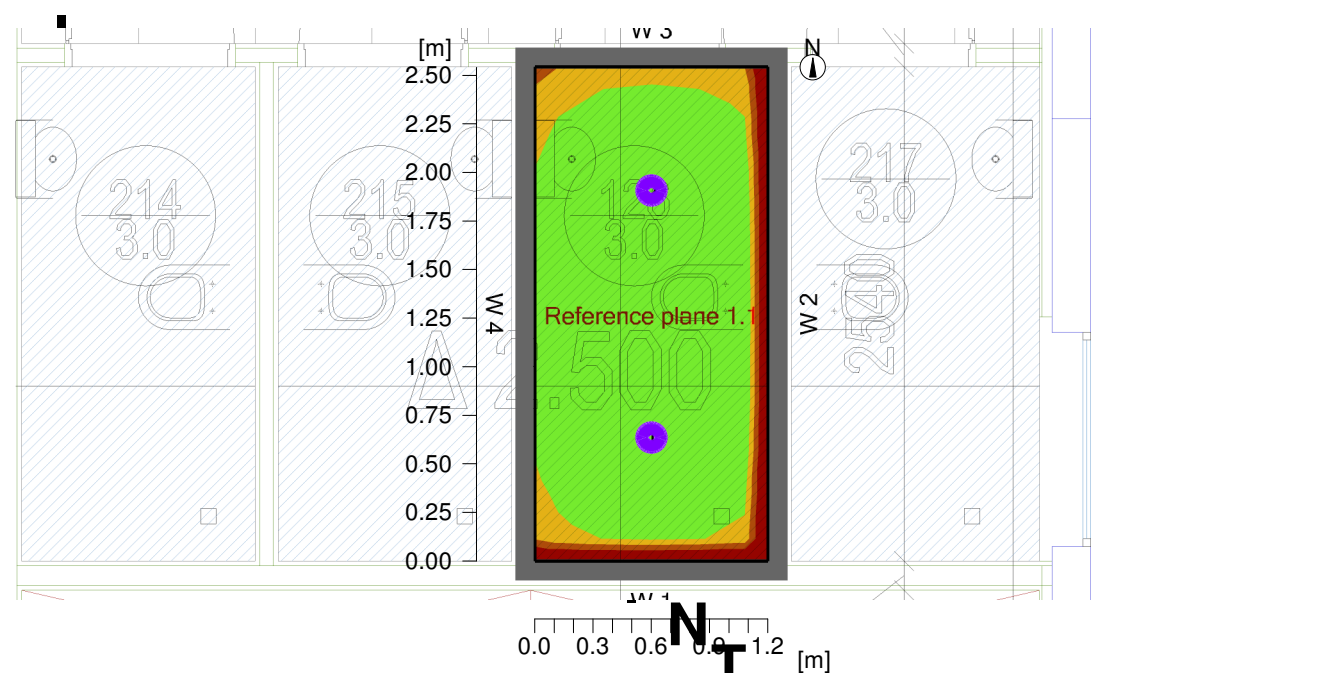
Type No. \ Make

21	2	TRILUX	
		Order No.	: InperlaLP C05 BR19 1000-830 01 ET
		Luminaire name	: TOC 6355340
		Equipment	: 1 x LED 9 W / 1000 lm

216

Summary, 216

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 2.50 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (3.05 m²)

2000 lm
 18.0 W
 5.91 W/m² (2.50 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	236 lx	(>= 200 lx)
Emin	174 lx	
Emin/Eav (Uo)	0.74	(>= 0.40)
Emin/Emax (Ud)	0.61	
UGR (2.0H 2.0H)	<=17.6	(< 25.00)
Position	0.00 m	

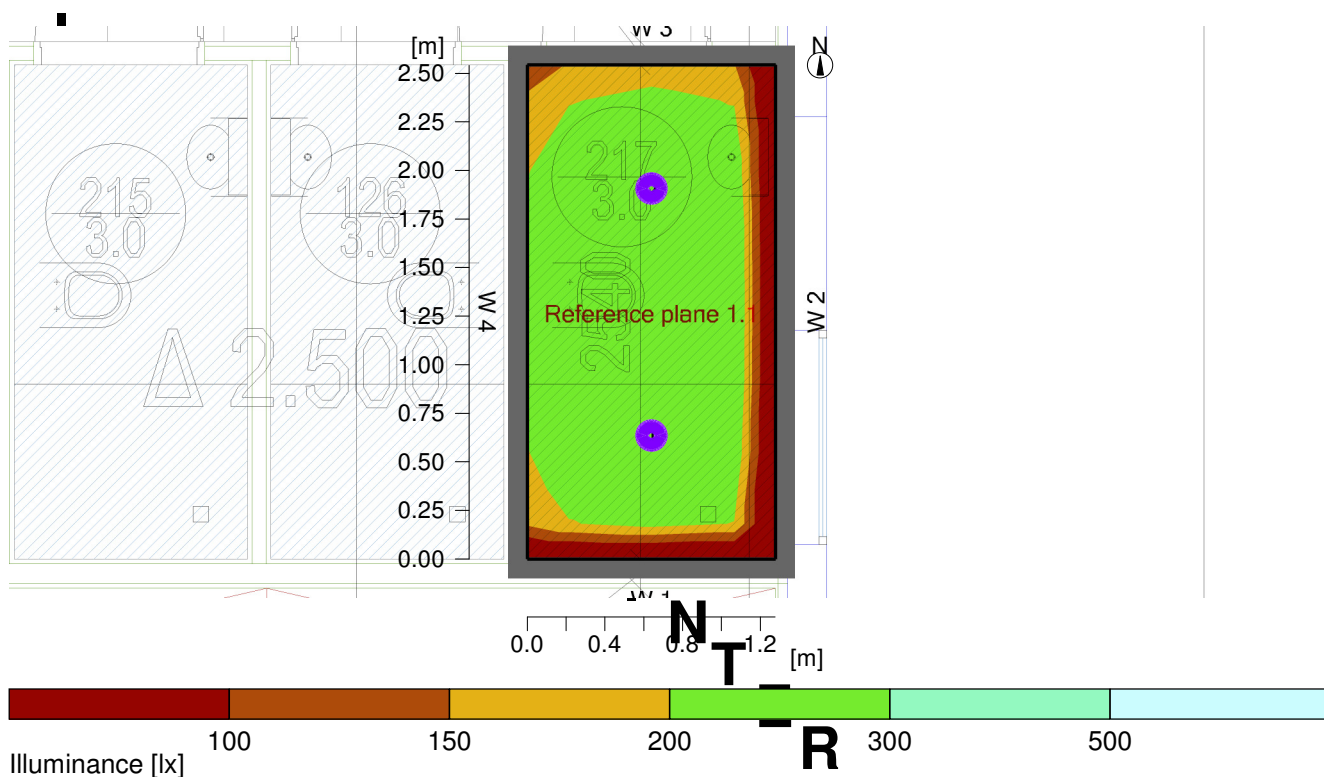
Type No.\Make

20	2	TRILUX	
		Order No.	: InperlaLP C05 BR19 1000-840 01 ET
		Luminaire name	: TOC 6355440
		Equipment	: 1 x LED 9 W / 1000 lm

217

Summary, 217

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 2.50 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (3.24 m²)

2000 lm
 18.0 W
 5.55 W/m² (2.37 W/m²/100lx)

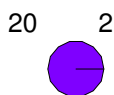
Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
 5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

	Horizontal	
Em	234 lx	(≥ 200 lx)
Emin	186 lx	
Emin/Eav (Uo)	0.80	(≥ 0.40)
Emin/Emax (Ud)	0.66	
UGR (2.0H 2.0H)	≤17.6	(< 25.00)
Position	0.00 m	

Type No.\Make



TRILUX

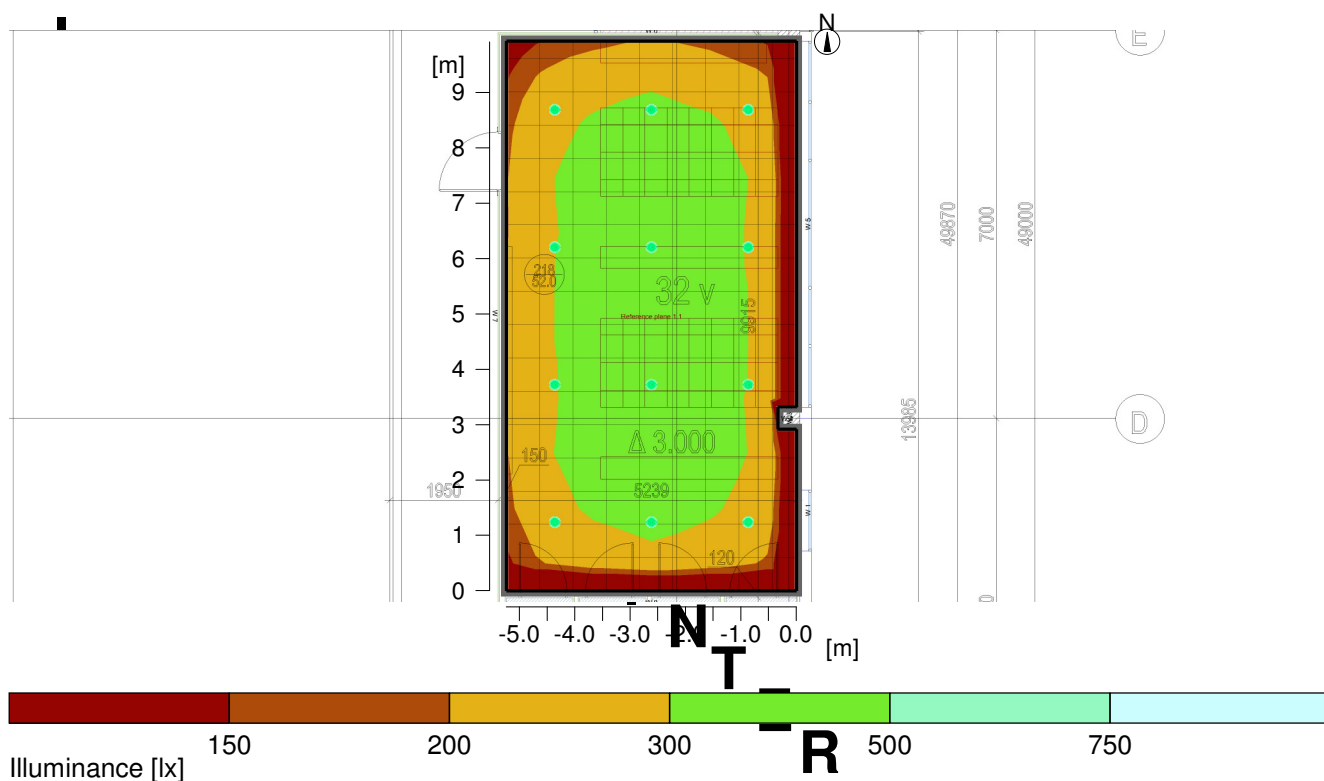
Order No. : InperlaLP C05 BR19 1000-840 01 ET
 Luminaire name : TOC 6355440
 Equipment : 1 x LED 9 W / 1000 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

218

Summary, 218

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
3.00 m
0.80

Total luminous flux of all lamps
Total power
Total power per area (51.79 m²)

21600 lm
192.0 W
3.71 W/m² (1.30 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
5.2.4 (EN 12464-1, 8.2011) Cloakrooms, washrooms, bathrooms, toilets (Ra >80.00)

Horizontal	
Em	285 lx (>= 200 lx)
Emin	180 lx
Emin/Eav (Uo)	0.63 (>= 0.40)
Emin/Emax (Ud)	0.47
UGR (5.5H 2.9H)	<=22.3 (< 25.00)
Position	0.00 m

Type No. \ Make

TRILUX

17 12

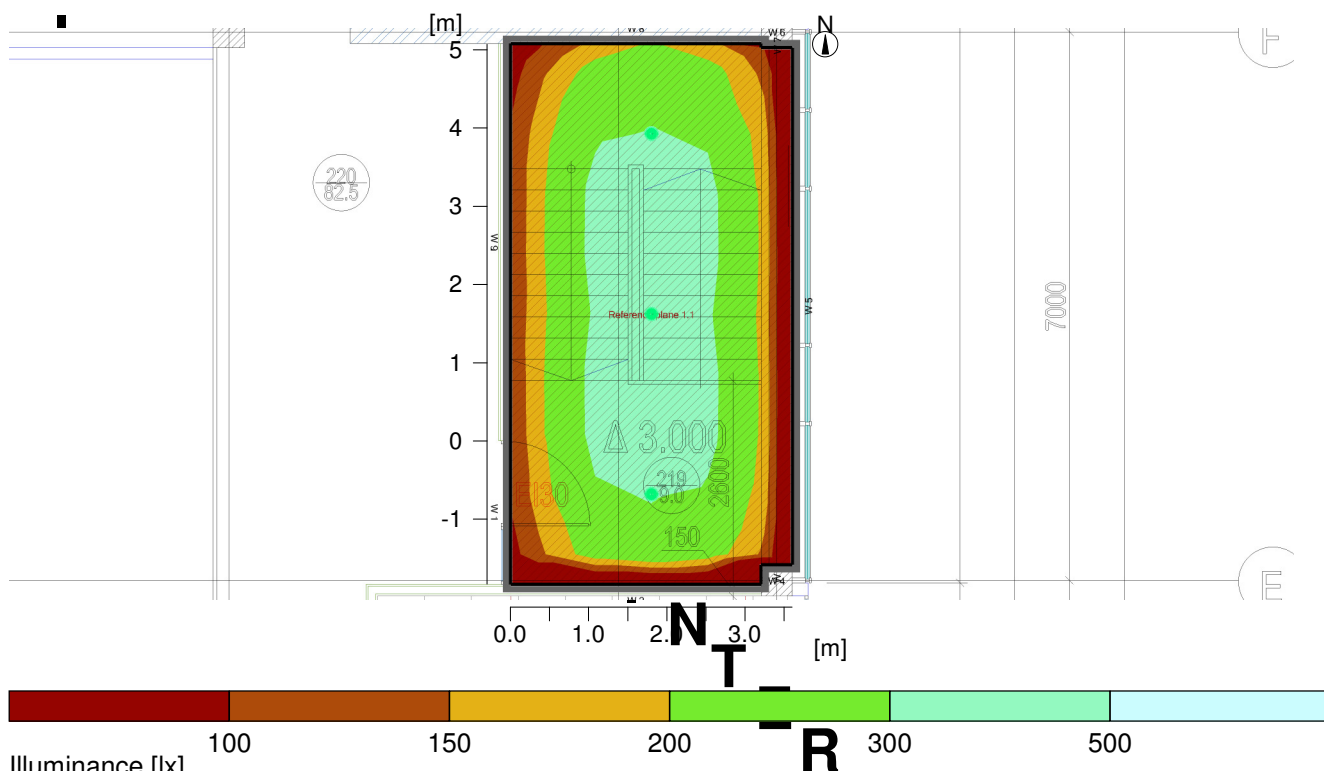


Order No. : InperlaLP C05 HR22 1800-840 01 ET
Luminaire name : TOC 6357440
Equipment : 1 x LED 16 W / 1800 lm

219

Summary, 219

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 3.00 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (24.72 m²)

8100 lm
 75.0 W
 3.03 W/m² (1.26 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Traffic zones inside buildings
 5.1.2 (EN 12464-1, 8.2011) Stairs, escalators, travelators (Ra >40.00)

	Horizontal	
Em	241 lx	(>= 100 lx)
Emin	130 lx	
Emin/Eav (Uo)	0.54	(>= 0.40)
Emin/Emax (Ud)	0.36	
UGR (2.0H 3.8H)	<=20.2	(< 25.00)
Position	0.00 m	

Type No. Make

18 3



TRILUX

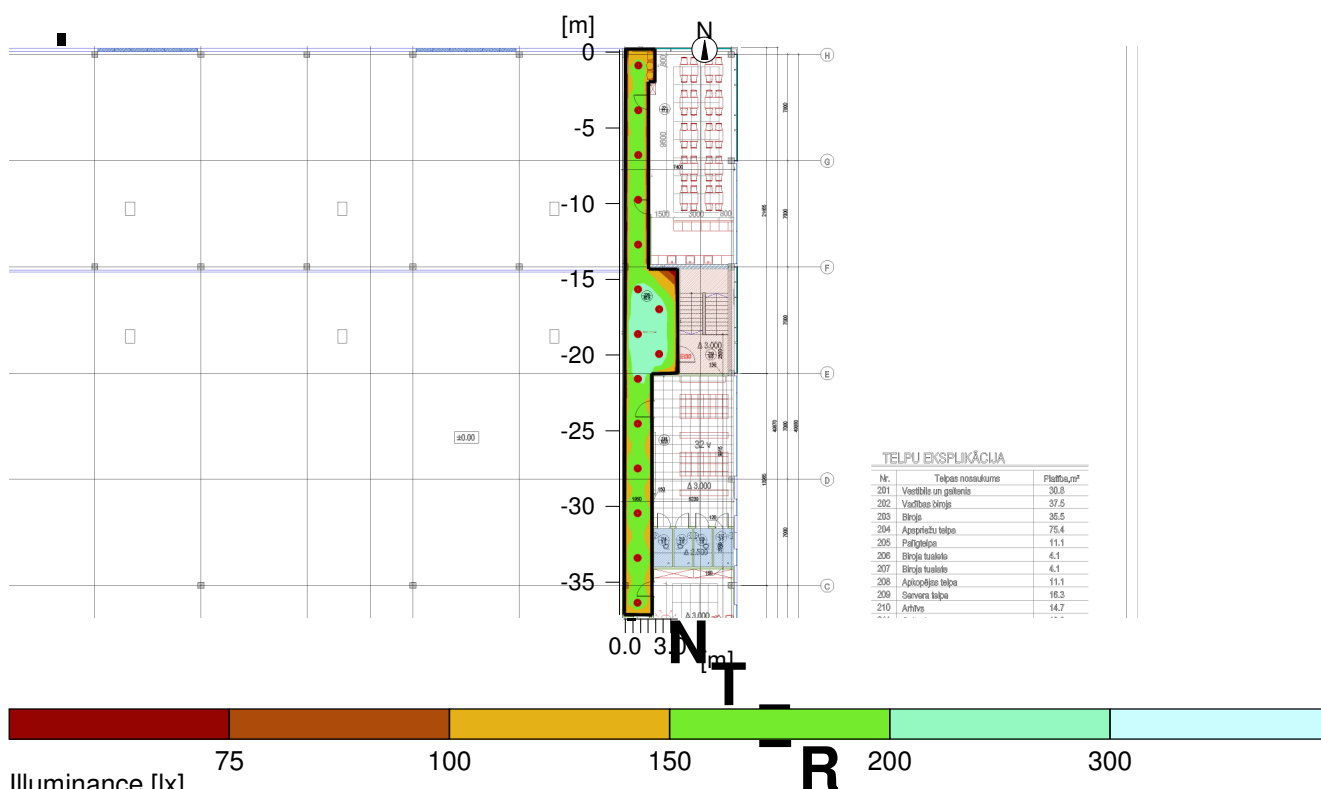
Order No. : InperlaLP C05 HR22 2700-840 01 ET
 Luminaire name : TOC 6360640
 Equipment : 1 x LED 25 W / 2700 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

220

Summary, 220

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
2.70 m
0.80

Total luminous flux of all lamps
Total power
Total power per area (75.61 m²)

27000 lm
270.0 W
3.57 W/m² (2.23 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: Traffic zones inside buildings
5.1.1 (EN 12464-1, 8.2011) Circulation areas and corridors (Ra >40.00)

Horizontal	
Em	160 lx (>= 100 lx)
Emin	60 lx
Emin/Eav (Uo)	0.38 (>= 0.40)
Emin/Emax (Ud)	0.25
Position	0.00 m

Type No.\Make

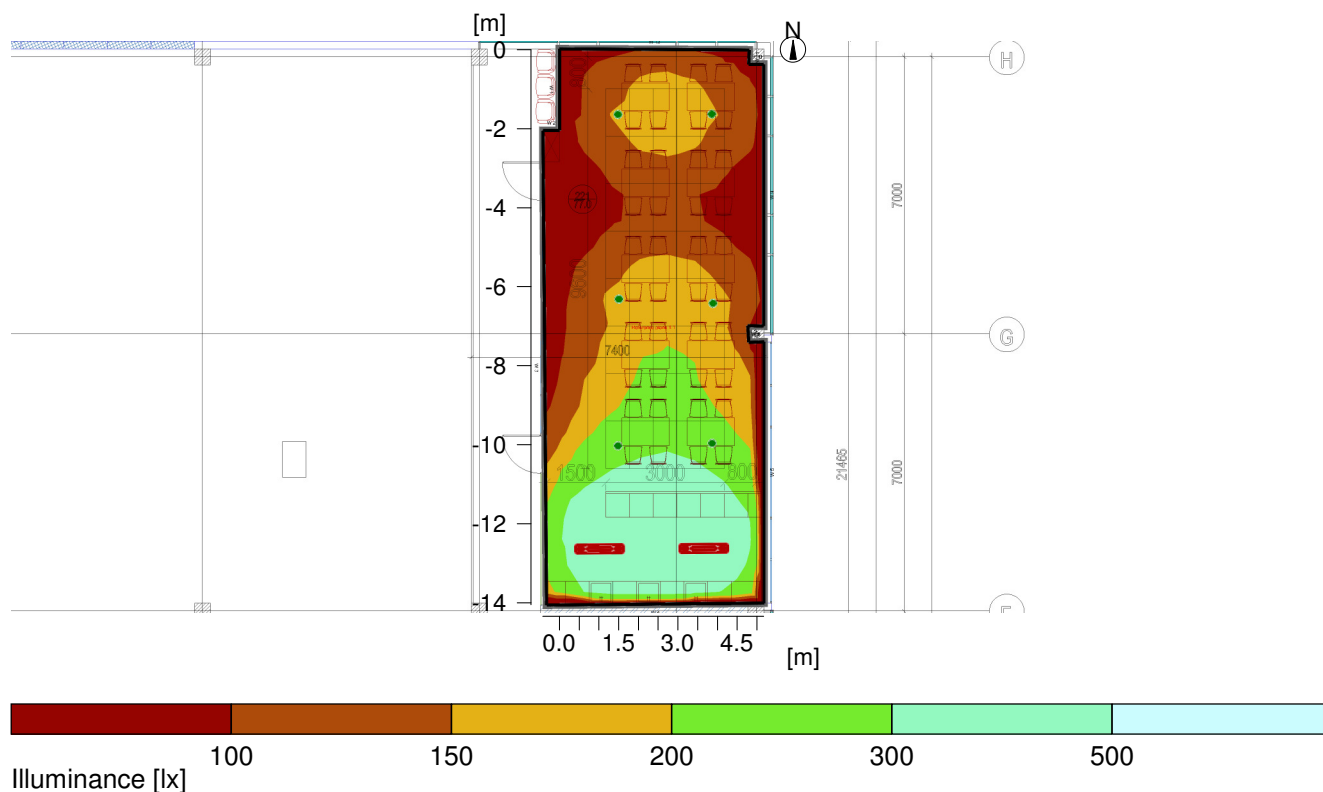
27	15	TRILUX	
		Order No.	: Onplana D09 CDP19 2000-840 01 ET
		Luminaire name	: TOC 6458540
		Equipment	: 1 x LED 18 W / 1800 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

221

Summary, 221

Result overview, Evaluation area 1



General

Calculation algorithm used
Maintenance factor

High indirect fraction
0.80

Total luminous flux of all lamps
Total power
Total power per area (76.56 m²)

23600 lm
218.0 W
2.85 W/m² (1.52 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Rest, sanitation and first aid rooms
5.2.2 (EN 12464-1, 8.2011) Rest rooms (Ra >80.00)

	Horizontal	
Em	188 lx	(>= 100 lx)
Emin	43 lx	
Emin/Eav (Uo)	0.23	(>= 0.40)
Emin/Emax (Ud)	0.10	
Position	0.00 m	

Type No. \ Make

TRILUX

16	2	Order No.	: Lunexo H1 CDP-I 6500 840 01 ETDD
		Luminaire name	: TOC 6825451
		Equipment	: 1 x LED 61 W / 6700 lm

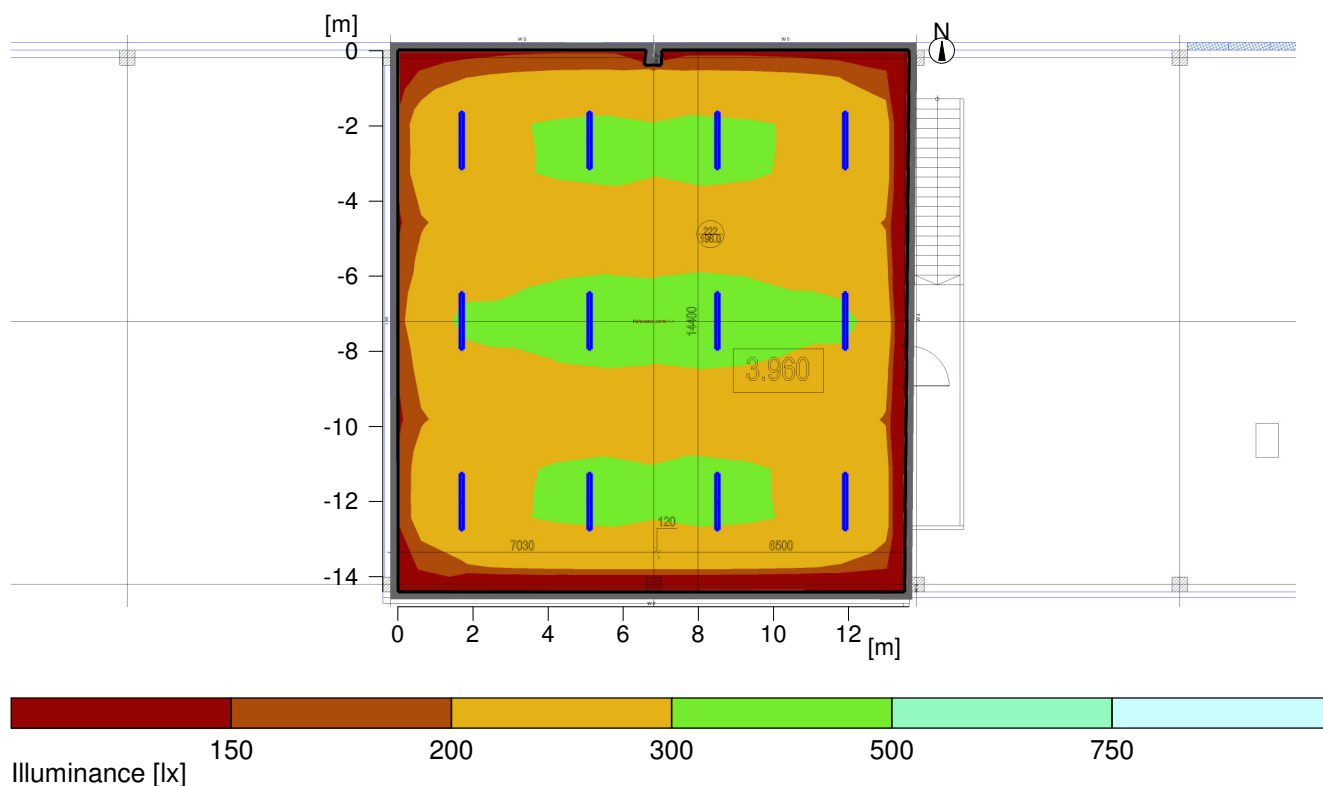
19	6	Order No.	: InperlaLP C05 HR22 IP 1800-830 03 ET
		Luminaire name	: TOC 6357940
		Equipment	: 1 x LED 16 W / 1700 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

222

Summary, 222

Result overview, Evaluation area 1



General

Calculation algorithm used	Average indirect fraction
Height of luminaire plane	2.80 m
Maintenance factor	0.80
Total luminous flux of all lamps	68400 lm
Total power	636.0 W
Total power per area (194.76 m²)	3.27 W/m² (1.30 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

User profile: General areas inside buildings - Control rooms
 5.3.1 (EN 12464-1, 8.2011) Plant rooms, switch gear rooms (Ra >60.00)

Horizontal	
Em	252 lx (>= 200 lx)
Emin	152 lx
Emin/Eav (Uo)	0.60 (>= 0.40)
Emin/Emax (Ud)	0.45
UGR (8.7H 9.2H)	<=24.8 (< 25.00)
Position	0.00 m

Type No.\Make

TRILUX

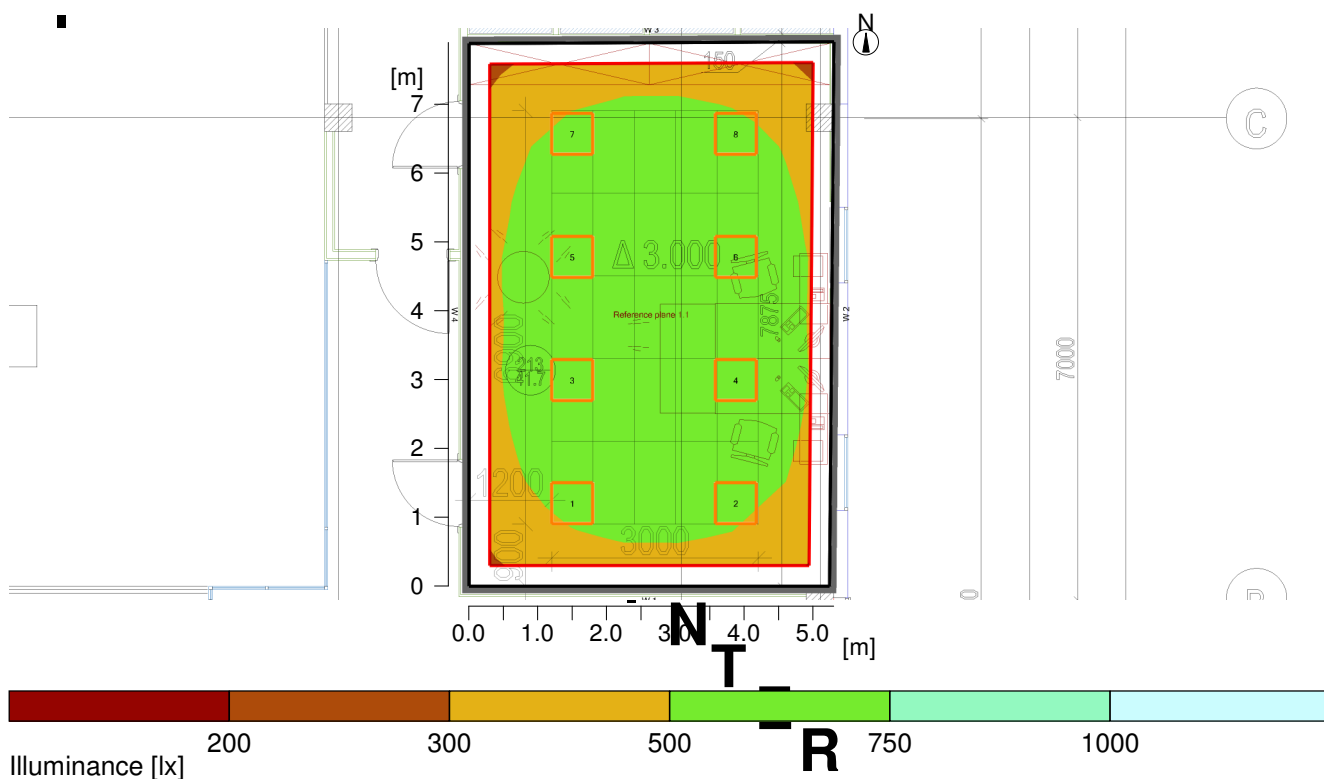
11	12	Order No.	: Olexeon 1500 B 6000-840 ET
		Luminaire name	: TOC 6815240
		Equipment	: 1 x LED 53 W / 5700 lm

Object : VATP-7
Installation : Apgaismojums
Project number : 1
Date : 18.01.2018

213

Summary, 213

Result overview, Evaluation area 1



General

Calculation algorithm used
Height of luminaire plane
Maintenance factor

Average indirect fraction
3.00 m
0.80

Total luminous flux of all lamps
Total power
Total power per area (41.55 m²)

32000 lm
320.0 W
7.70 W/m² (1.37 W/m²/100lx)

Evaluation area 1

User profile: Offices

5.26.2 (EN 12464-1, 8.2011) Writing, typing, reading, data processing (Ra >80.00)

Reference plane 1.1

Horizontal

Em	560 lx	(>= 500 lx)
Emin	341 lx	
Emin/Eav (Uo)	0.61	(>= 0.60)
Emin/Emax (Ud)	0.48	
UGR (2.9H 4.4H)	<=17.2	(< 19.00)
Position	0.75 m	

Type No.\Make

25 8



TRILUX

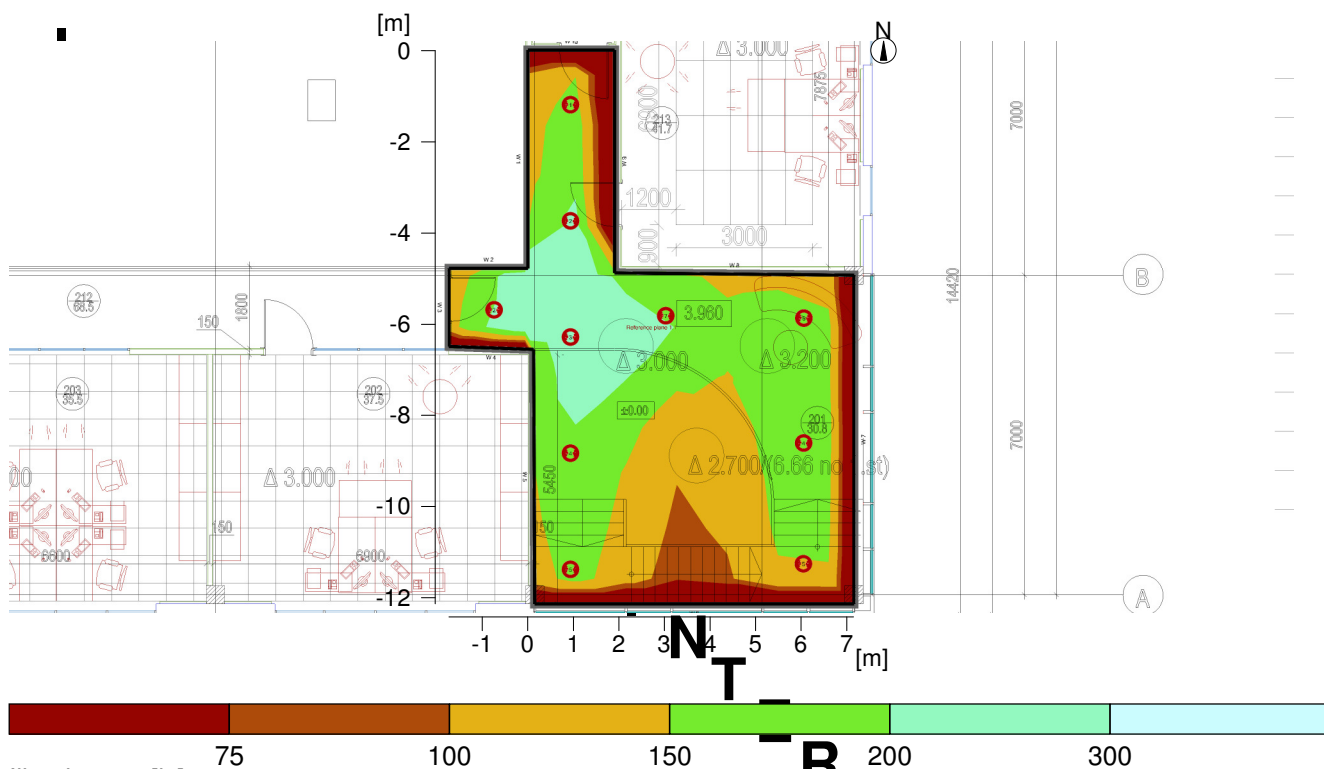
Order No. : ArimoS M73 CDP LED4000-840 ET
Luminaire name : TOC 6325640
Equipment : 1 x LED 40 W / 4000 lm

Object : VATP-7
 Installation : Apgaismojums
 Project number : 1
 Date : 18.01.2018

201

Summary, 201

Result overview, Evaluation area 1



General

Calculation algorithm used
 Height of luminaire plane
 Maintenance factor

Average indirect fraction
 2.70 m
 0.80

Total luminous flux of all lamps
 Total power
 Total power per area (63.22 m²)

18000 lm
 180.0 W
 2.85 W/m² (1.81 W/m²/100lx)

Evaluation area 1

Reference plane 1.1

Horizontal
 Em
 157 lx
 Emin
 75 lx
 Emin/Eav (Uo)
 0.48
 Emin/Emax (Ud)
 0.29
 Position
 0.00 m

Type No. Make

27 10 **TRILUX**
 Order No. : Onplana D09 CDP19 2000-840 01 ET
 Luminaire name : TOC 6458540
 Equipment : 1 x LED 18 W / 1800 lm