



ZŠ ver2

Installation : Libčice nad Vltavou

Project number :

Customer :

Processed by : Pavel Slavík

Date : 13.03.2025

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



1 Luminaire data

1.1 LEDVANCE GmbH, PL FLEX 600 S 30W 840 U19 PS (!4099854276507)

1.1.1 Data sheet

Manufacturer: LEDVANCE GmbH

!4099854276507 PL FLEX 600 S 30W 840 U19 PS

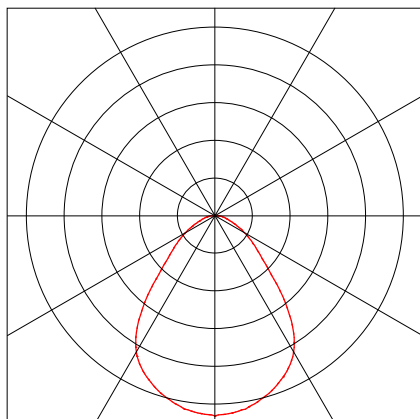
Luminaire data

Luminaire efficiency : 99.99%
Luminaire efficacy : 165.18 lm/W
Classification : A50 ↓99.8% ↑0.2%
CIE Flux Codes : 65 89 97 100 100
UGR 4H 8H : 17.9 / 17.9
Power : 25 W
Luminous flux : 4129.8 lm

Equipped with

Quantity : 1
Designation : LED 4000K /
CRI >= 80
Colour : 4000K
Luminous flux : 4130 lm
Colour reproduction : 80

Dimensions : 595 mm x 595 mm x 32 mm



Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



1 Luminaire data

1.2 LEDVANCE GmbH, PL FLEX 600 S 30W 840 U19 PS (!4099854276507)

1.2.1 Data sheet

Manufacturer: LEDVANCE GmbH

!4099854276507 PL FLEX 600 S 30W 840 U19 PS

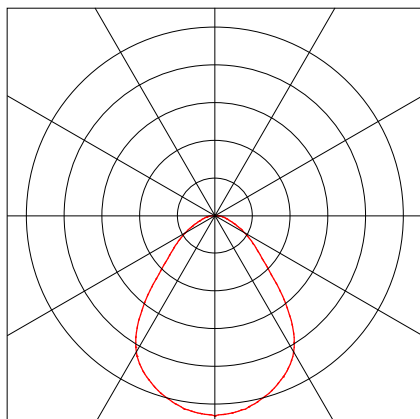
Luminaire data

Luminaire efficiency : 99.99%
Luminaire efficacy : 167.13 lm/W
Classification : A50 ↓99.8% ↑0.2%
CIE Flux Codes : 65 89 97 100 100
UGR 4H 8H : 17.3 / 17.3
Power : 21 W
Luminous flux : 3509.9 lm

Equipped with

Quantity : 1
Designation : LED 4000K /
CRI >= 80
Colour : 4000K
Luminous flux : 3510 lm
Colour reproduction : 80

Dimensions : 595 mm x 595 mm x 32 mm



Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



1 Luminaire data

1.3 LEDVANCE GmbH, TRUSYS FLEX P 35W 840 WW C... (4099854190636)

1.3.1 Data sheet

Manufacturer: LEDVANCE GmbH

4099854190636 TRUSYS FLEX P 35W 840 WW CL WT

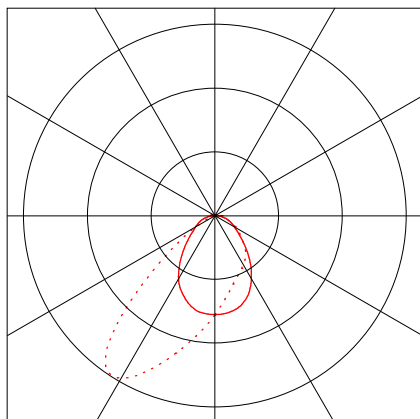
Luminaire data

Luminaire efficiency : 100.07%
Luminaire efficacy : 171.55 lm/W
Classification : A41 ↓96.4% ↑3.6%
CIE Flux Codes : 51 85 96 96 100
UGR 4H 8H : 26.2 / 24.8
Power : 35 W
Luminous flux : 6000 lm

Equipped with

Quantity : 1
Designation : LED 4000K /
CRI >= 80
Colour : 4000K
Luminous flux : 6000 lm
Colour reproduction : 80

Dimensions : 78 mm x 1500 mm x 67 mm

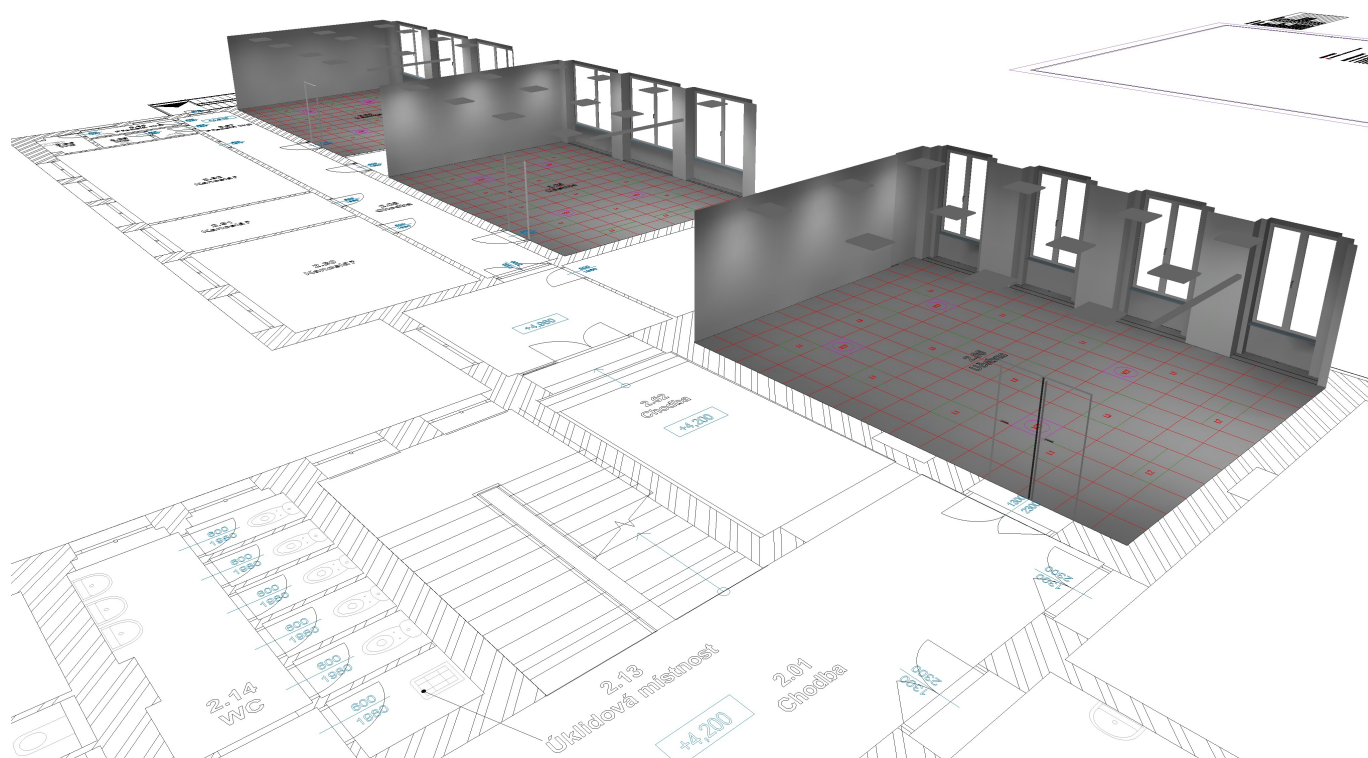


Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



Description, Floor 1

.2 Floor 3D

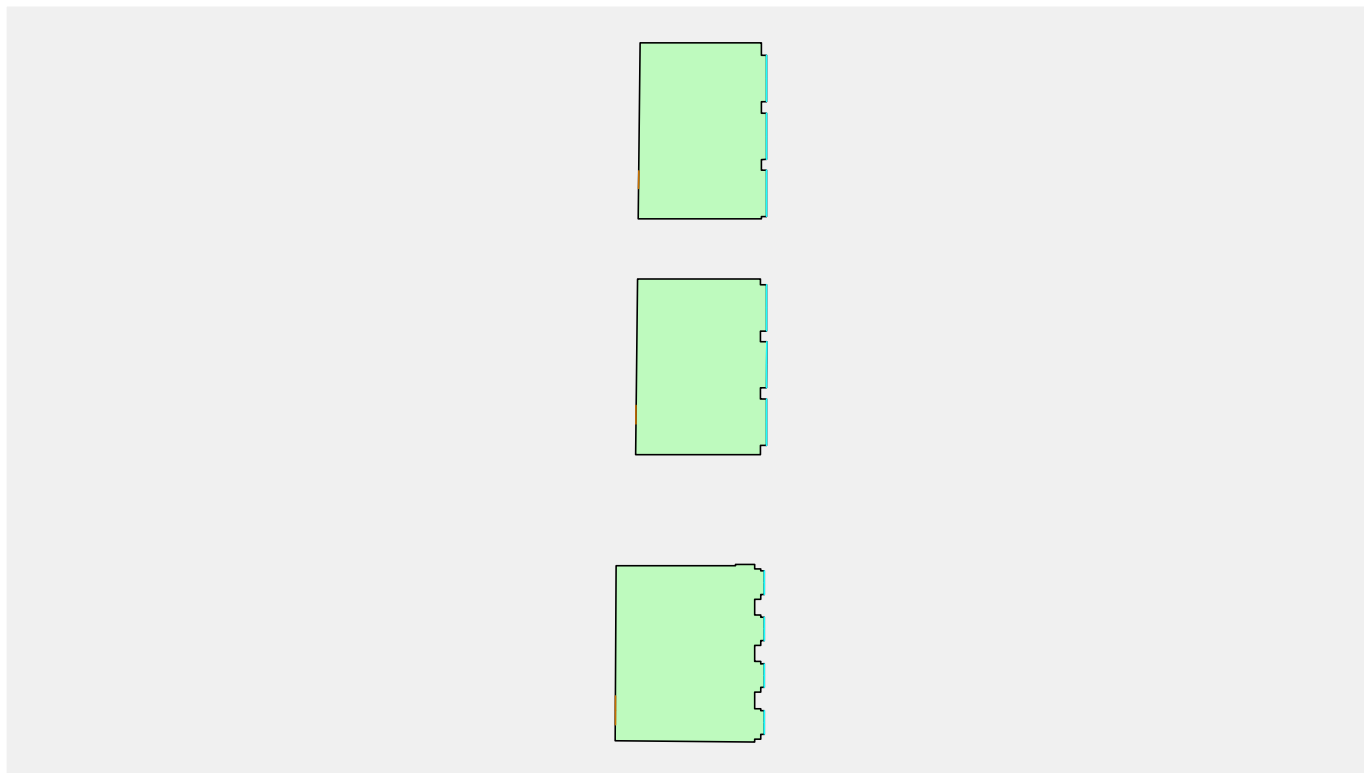


Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



Summary, Floor 1

.1 Floor overview





Number of rooms	3
Total area	182.0 m ²
Total volume	491.3 m ³
Number of luminaires	42
Total luminous flux	183440 lm
Total power	1102 W
Total power per area	6.06 W/m ²

 Nominal values met

Parts list

Type No.\Make

		LEDVANCE GmbH
1	34 x	Order No. : !4099854276507
		Luminaire name : PL FLEX 600 S 30W 840 U19 PS
		Equipment : 1 x LED 4000K / CRI >= 80 25 W / 4130 lm
		Maintenance factor: 0.79
2	2 x	Order No. : !4099854276507
		Luminaire name : PL FLEX 600 S 30W 840 U19 PS
		Equipment : 1 x LED 4000K / CRI >= 80 21 W / 3510 lm
		Maintenance factor: 0.79

Object : ZŠ ver2
 Installation : Libčice nad Vltavou
 Project number :
 Date : 13.03.2025



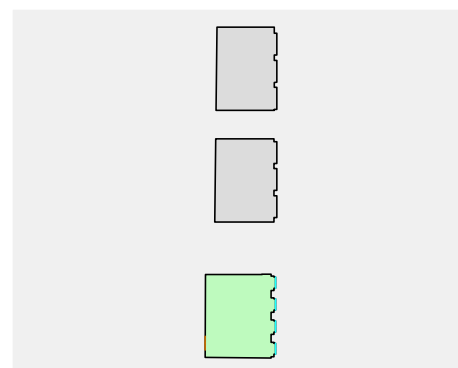
Summary, Floor 1

.1 Floor overview

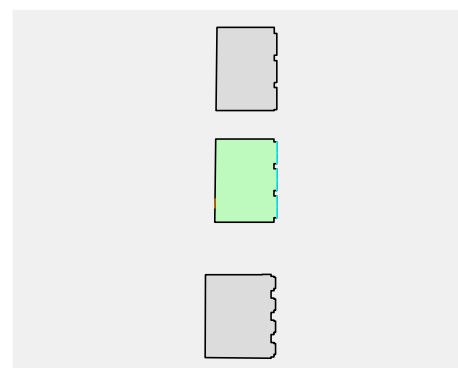
3 6 x Order No. : 4099854190636
 Luminaire name : TRUSYS FLEX P 35W 840 WW CL WT
 Equipment : 1 x LED 4000K / CRI >= 80 35 W / 6000 lm
 Maintenance factor: 0.79

Rooms

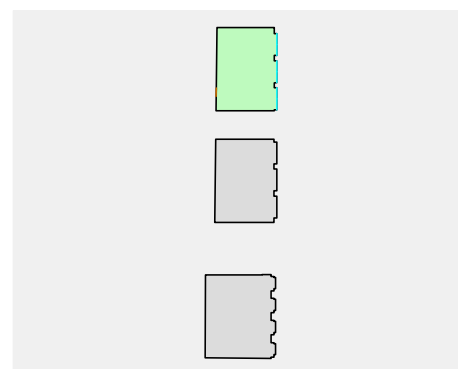
Učebna 2.06 14 x Luminaires
 Floor area 66.0 m²
 Wall area (without windows) 95.8 m²
 Window area 1.3 m²
 Volume 178.1 m³
 Total luminous flux 60320 lm
 Total power 362 W
 Total power per area (66 m²) 5.49 W/m²
 \bar{E}_m 673 lx (≥ 500 lx)
 E_{min} 432 lx
 $E_{min}/\bar{E}_m (U_o)$ 0.64 (≥ 0.60)
 R_{UG} ≤ 17.8 (< 19.00)



Učebna 2.29 14 x Luminaires
 Floor area 58.5 m²
 Wall area (without windows) 86.1 m²
 Window area 1.3 m²
 Volume 158.0 m³
 Total luminous flux 61560 lm
 Total power 370 W
 Total power per area (59 m²) 6.32 W/m²
 \bar{E}_m 697 lx (≥ 500 lx)
 E_{min} 503 lx
 $E_{min}/\bar{E}_m (U_o)$ 0.72 (≥ 0.60)
 R_{UG} ≤ 17.6 (< 19.00)



Učebna 2.34 14 x Luminaires
 Floor area 57.5 m²
 Wall area (without windows) 84.9 m²
 Window area 1.3 m²
 Volume 155.2 m³
 Total luminous flux 61560 lm
 Total power 370 W
 Total power per area (57 m²) 6.44 W/m²
 \bar{E}_m 745 lx (≥ 500 lx)
 E_{min} 493 lx
 $E_{min}/\bar{E}_m (U_o)$ 0.66 (≥ 0.60)
 R_{UG} ≤ 17.6 (< 19.00)



Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



1 Učebna 2.06

1.1 Description, Učebna 2.06

1.1.1 Maintenance plan

Only through regular maintenance can compliance with the illuminances set out in standard EN 12464 be ensured for the lighting system. The maintenance intervals set out below must therefore be observed.

Room

Environment : Clean
Maintenance interval : every 5 years

LEDVANCE GmbH !4099854276507

Influence of reflections from the room surfaces : 70% / 50% / 20%
Luminaire characteristic : Direct
Type of reflector : D - Enclosed IP2X
Lamp type : LED
Lifetime (L80) : 100000h
Operating time : 25000h
Maintenance interval (Luminaire) : Annual
Maintenance factor : 0.79

LEDVANCE GmbH !4099854276507

Influence of reflections from the room surfaces : 70% / 50% / 20%
Luminaire characteristic : Direct
Type of reflector : D - Enclosed IP2X
Lamp type : LED
Lifetime (L80) : 100000h
Operating time : 25000h
Maintenance interval (Luminaire) : Annual
Maintenance factor : 0.79

LEDVANCE GmbH 4099854190636

Influence of reflections from the room surfaces : 70% / 50% / 20%
Luminaire characteristic : Direct
Type of reflector : D - Enclosed IP2X
Lamp type : LED
Lifetime (L80) : 50000h
Operating time : 10000h
Maintenance interval (Luminaire) : Annual
Maintenance factor : 0.79

References to maintenance:

Îlluminants must be replaced by light sources with the same characteristic values (luminous flux, light colour, colour rendition). Any starters must also be replaced when the lamp is changed..

The room and the light-deflecting surfaces must be maintained in such a way that the original reflectance properties are retained.

The manufacturers' cleaning instructions are to be observed.



1.1.3 Floor plan



Object : ZŠ ver2
 Installation : Libčice nad Vltavou
 Project number :
 Date : 13.03.2025



1.1 Description, Učebna 2.06

1.1.3 Floor plan

Wall	x	y	Length	Area[m ²]	Reflectance
1	57.68 m	10.64 m	7.09 m	19.15	50.0 %
2	57.68 m	10.79 m	0.15 m	0.40	50.0 %
3	57.98 m	10.79 m	0.30 m	0.81	50.0 %
4	57.98 m	11.05 m	0.26 m	0.69	50.0 %
5	58.16 m	11.05 m	0.18 m	0.49	50.0 %
6	58.16 m	12.25 m	1.20 m	3.24	50.0 %
7	57.98 m	12.25 m	0.18 m	0.49	50.0 %
8	57.98 m	12.34 m	0.10 m	0.26	50.0 %
9	57.68 m	12.34 m	0.30 m	0.81	50.0 %
10	57.68 m	13.19 m	0.85 m	2.30	50.0 %
11	57.98 m	13.19 m	0.30 m	0.81	50.0 %
12	57.98 m	13.43 m	0.23 m	0.63	50.0 %
13	58.16 m	13.43 m	0.18 m	0.49	50.0 %
14	58.16 m	14.63 m	1.20 m	3.24	50.0 %
15	57.98 m	14.63 m	0.18 m	0.49	50.0 %
16	57.98 m	14.74 m	0.12 m	0.31	50.0 %
17	57.68 m	14.74 m	0.30 m	0.81	50.0 %
18	57.68 m	15.56 m	0.81 m	2.20	50.0 %
19	57.98 m	15.56 m	0.30 m	0.81	50.0 %
20	57.98 m	15.80 m	0.24 m	0.66	50.0 %
21	58.16 m	15.80 m	0.18 m	0.48	50.0 %
22	58.16 m	17.00 m	1.20 m	3.24	50.0 %
23	57.98 m	17.00 m	0.18 m	0.48	50.0 %
24	57.98 m	17.11 m	0.10 m	0.28	50.0 %
25	57.68 m	17.11 m	0.30 m	0.81	50.0 %
26	57.68 m	17.91 m	0.80 m	2.17	50.0 %
27	57.98 m	17.91 m	0.30 m	0.81	50.0 %
28	57.98 m	18.15 m	0.24 m	0.66	50.0 %
29	58.16 m	18.15 m	0.18 m	0.49	50.0 %
30	58.16 m	19.35 m	1.20 m	3.24	50.0 %
31	57.98 m	19.35 m	0.18 m	0.49	50.0 %
32	57.98 m	19.46 m	0.10 m	0.28	50.0 %
33	57.68 m	19.46 m	0.30 m	0.81	50.0 %
34	57.68 m	19.67 m	0.22 m	0.58	50.0 %
35	56.70 m	19.67 m	0.98 m	2.65	50.0 %
36	56.70 m	19.61 m	0.06 m	0.16	50.0 %
37	50.63 m	19.61 m	6.07 m	16.38	50.0 %
38	50.59 m	10.71 m	8.90 m	24.04	50.0 %
Floor:				66.0	20.0 %
Ceiling:				66.0	70.0 %
Room height [m]:		2.70 m			
Height of ref. plane [m]:		0.75 m			
Volume			178.1 m ³		

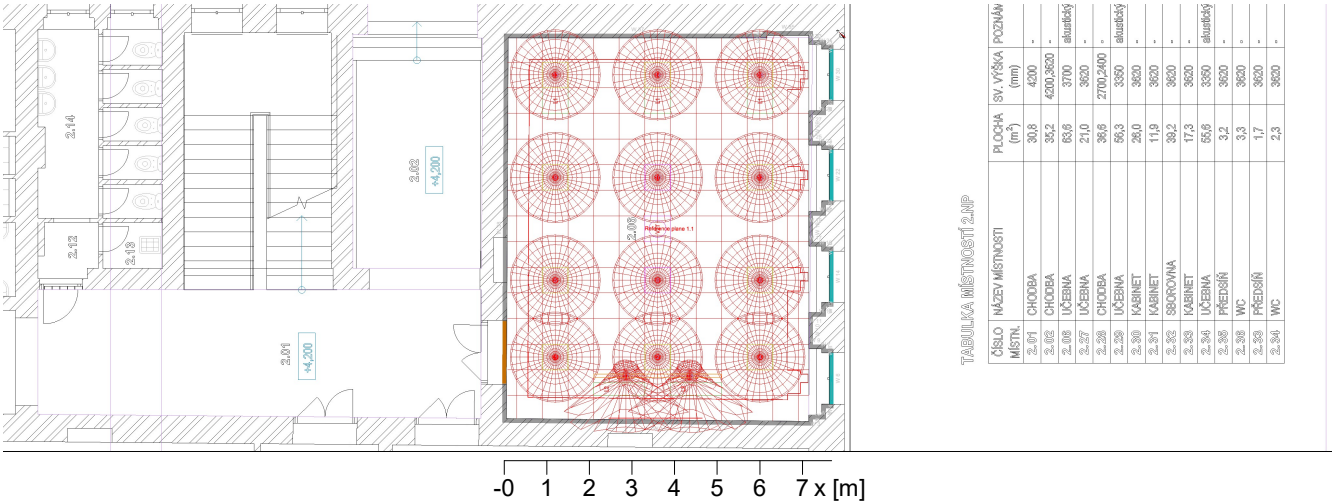
Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



1 Učebna 2.06

1.2 Summary, Učebna 2.06

1.2.1 Result overview, Measuring area 1



Illuminance [lx]

General

Calculation algorithm used
Maintenance factor

Average indirect fraction
see luminaires / maintenance plan

Total luminous flux
Total power
Total power per area (65.95 m²)


60320 lm
362 W
5.49 W/m²

Illuminance

Average illuminance \bar{E}_m 0.01 lx
Minimum illuminance E_{min} 0 lx
Maximum illuminance E_{max} 0.03 lx
Uniformity U_o E_{min}/\bar{E}_m 1:--- (---)
Diversity U_d E_{min}/E_{max} 1:--- (---)

Type No.\Make

LEDVANCE GmbH

1 10 x

Order No. : !4099854276507
Luminaire name : PL FLEX 600 S 30W 840 U19 PS
Equipment : 1 x LED 4000K / CRI >= 80 25 W / 4130 lm
Maintenance factor: 0.79


Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025




1 Učebna 2.06

1.2 Summary, Učebna 2.06

1.2.1 Result overview, Measuring area 1

2 2 x Order No. : !4099854276507
 Luminaire name : PL FLEX 600 S 30W 840 U19 PS
Equipment : 1 x LED 4000K / CRI >= 80 21 W / 3510 lm
Maintenance factor: 0.79

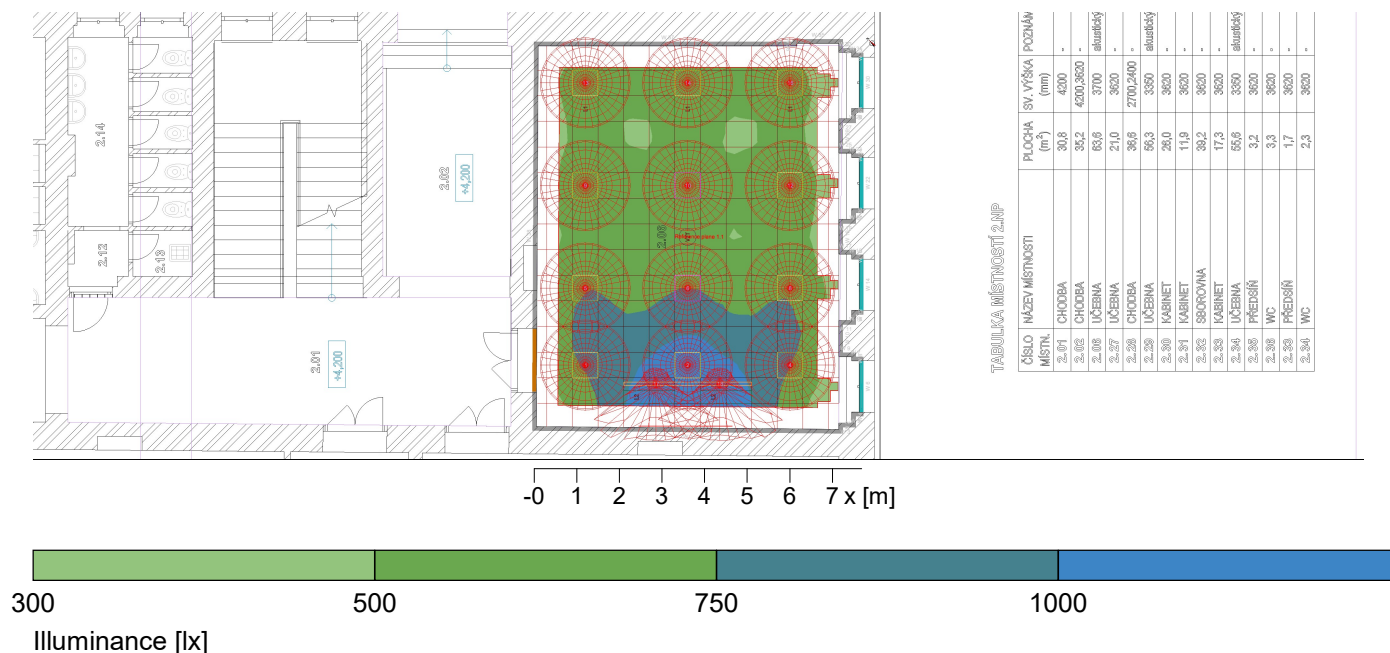
3 2 x Order No. : 4099854190636
 Luminaire name : TRUSYS FLEX P 35W 840 WW CL WT
Equipment : 1 x LED 4000K / CRI >= 80 35 W / 6000 lm
Maintenance factor: 0.79

Object : ZŠ ver2
 Installation : Libčice nad Vltavou
 Project number :
 Date : 13.03.2025



1.2 Summary, Učebna 2.06

1.2.2 Result overview, Evaluation area 1



TABULKA MÍSTNOSTI 2.06

ČÍSLO MÍSTN.	NÁZEV MÍSTNOSTI	PLOCHA (m ²)	SV. VÝŠKA (mm)	POZNÁMKA
2.01	CHOUBA	30,8	4200	-
2.02	CHOUBA	35,2	4200,3600	-
2.03	UČEBNA	63,6	3700	akustický
2.04	UČEBNA	21,0	3600	-
2.05	CHOUBA	36,6	2700,2400	-
2.06	UČEBNA	56,3	3550	akustický
2.07	KABINET	26,0	3600	-
2.08	KABINET	11,9	3600	-
2.09	SKLOVINA	38,2	3600	-
2.10	KABINET	17,3	3600	-
2.11	UČEBNA	65,6	3550	akustický
2.12	PŘEDSÍN	3,2	3600	-
2.13	WC	3,3	3600	-
2.14	PŘEDSÍN	1,7	3600	-
2.15	WC	2,3	3600	-

General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 see luminaires / maintenance plan

Total lamp luminous flux
 Luminaire luminous flux
 Total power
 Total power per area (65.95 m²)

60320 lm
 60318 lm
 362.0 W
 5.49 W/m² (0.82 W/m²/100lx)

Evaluation area 1

User profile

Reference plane 1.1

učebny – obecné činnosti

44.1 (EN 12464-1, 11.2021) (Ra >80.00)

Horizontal

cylindrical

\bar{E}_m	673 lx	(≥ 500 lx)	259 lx	(≥ 150 lx)
E_{min}	432 lx		153 lx	
$E_{min}/\bar{E}_m (U_o)$	0.64	(≥ 0.60)	0.59	(≥ 0.10)
$E_{min}/E_{max} (U_d)$	0.31			
E_z/E_h			0.35	
Position	0.75 m		1.20 m	
RUG (6.1H 5.1H)	≤17.8	(< 19.00)		
Luminaire : (PL FLEX 600 S 30W 840 U19 PS, !4099854276507)				

Major surfaces

	\bar{E}_m		U_o	
M 1.4 (Ceiling)	122 lx	(≥ 100 lx)	0.62	(≥ 0.10)
M 1.1 (Wall)	519 lx	(≥ 150 lx)	0.27	(≥ 0.10)

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025




1.2 Summary, Učebna 2.06


1.2.2 Result overview, Evaluation area 1


M 1.2 (Wall)	291 lx	(>= 150 lx)	0.59	(>= 0.10)
M 1.3 (Wall)	287 lx	(>= 150 lx)	0.54	(>= 0.10)

Type No. Make

LEDVANCE GmbH

1 10 x 
Order No. : !4099854276507
Luminaire name : PL FLEX 600 S 30W 840 U19 PS
Equipment : 1 x LED 4000K / CRI >= 80 25 W / 4130 lm
Maintenance factor: 0.79

2 2 x 
Order No. : !4099854276507
Luminaire name : PL FLEX 600 S 30W 840 U19 PS
Equipment : 1 x LED 4000K / CRI >= 80 21 W / 3510 lm
Maintenance factor: 0.79

3 2 x 
Order No. : 4099854190636
Luminaire name : TRUSYS FLEX P 35W 840 WW CL WT
Equipment : 1 x LED 4000K / CRI >= 80 35 W / 6000 lm
Maintenance factor: 0.79

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



2 Učebna 2.29

2.1 Description, Učebna 2.29

2.1.1 Maintenance plan

Only through regular maintenance can compliance with the illuminances set out in standard EN 12464 be ensured for the lighting system. The maintenance intervals set out below must therefore be observed.

Room

Environment : Clean
Maintenance interval : **every 5 years**

LEDVANCE GmbH !4099854276507

Influence of reflections from the room surfaces : 70% / 50% / 20%
Luminaire characteristic : Direct
Type of reflector : D - Enclosed IP2X
Lamp type : LED
Lifetime (L80) : 100000h
Operating time : 25000h
Maintenance interval (Luminaire) : **Annual**
Maintenance factor : **0.79**

LEDVANCE GmbH 4099854190636

Influence of reflections from the room surfaces : 70% / 50% / 20%
Luminaire characteristic : Direct
Type of reflector : D - Enclosed IP2X
Lamp type : LED
Lifetime (L80) : 50000h
Operating time : 10000h
Maintenance interval (Luminaire) : **Annual**
Maintenance factor : **0.79**

References to maintenance:

Îlluminants must be replaced by light sources with the same characteristic values (luminous flux, light colour, colour rendition). Any starters must also be replaced when the lamp is changed..

The room and the light-deflecting surfaces must be maintained in such a way that the original reflectance properties are retained.

The manufacturers' cleaning instructions are to be observed.



2.1.2 Floor plan



Object : ZŠ ver2
 Installation : Libčice nad Vltavou
 Project number :
 Date : 13.03.2025



2.1 Description, Učebna 2.29

2.1.2 Floor plan

Wall	x	y	Length	Area[m ²]	Reflectance
1	51.72 m	34.20 m	6.25 m	16.87	50.0 %
2	51.61 m	25.26 m	8.94 m	24.13	50.0 %
3	57.96 m	25.26 m	6.35 m	17.14	50.0 %
4	57.96 m	25.74 m	0.48 m	1.29	50.0 %
5	58.28 m	25.74 m	0.32 m	0.86	50.0 %
6	58.28 m	28.09 m	2.35 m	6.34	50.0 %
7	57.96 m	28.09 m	0.32 m	0.86	50.0 %
8	57.96 m	28.66 m	0.57 m	1.54	50.0 %
9	58.28 m	28.66 m	0.32 m	0.86	50.0 %
10	58.28 m	31.01 m	2.35 m	6.34	50.0 %
11	57.96 m	31.01 m	0.32 m	0.87	50.0 %
12	57.96 m	31.54 m	0.53 m	1.44	50.0 %
13	58.28 m	31.54 m	0.32 m	0.86	50.0 %
14	58.28 m	33.89 m	2.35 m	6.34	50.0 %
15	57.96 m	33.89 m	0.32 m	0.86	50.0 %
16	57.96 m	34.20 m	0.30 m	0.82	50.0 %
Floor:				58.5	20.0 %
Ceiling:				58.5	70.0 %
Room height [m]:	2.70 m				
Height of ref. plane [m]:	0.75 m				
Volume	158.0 m ³				

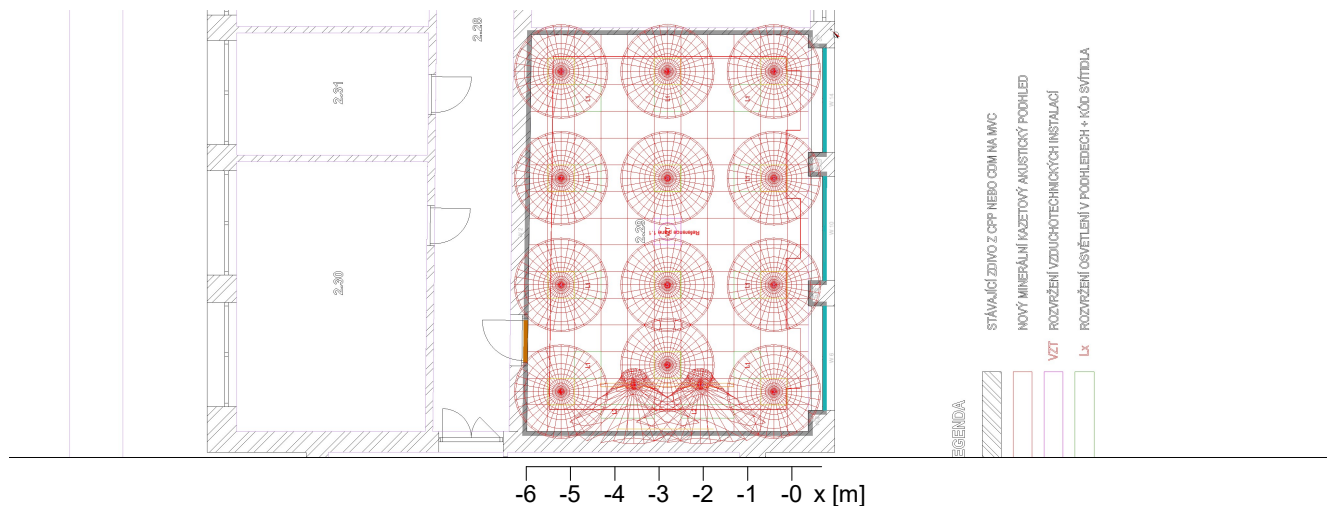
Object : ZŠ ver2
 Installation : Libčice nad Vltavou
 Project number :
 Date : 13.03.2025



2 Učebna 2.29

2.2 Summary, Učebna 2.29

2.2.1 Result overview, Measuring area 1



750

1000

Illuminance [lx]

General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 see luminaires / maintenance plan

Total luminous flux
 Total power
 Total power per area (58.53 m²)

61560 lm
 370 W
 6.32 W/m²

Illuminance

Average illuminance	\bar{E}_m	1000 lx
Minimum illuminance	E_{min}	768 lx
Maximum illuminance	E_{max}	1250 lx
Uniformity U_o	E_{min}/\bar{E}_m	1:1.31 (0.77)
Diversity U_d	E_{min}/E_{max}	1:1.63 (0.61)

Type No.\Make

1	12 x	LEDVANCE GmbH
		Order No. : !4099854276507
		Luminaire name : PL FLEX 600 S 30W 840 U19 PS
		Equipment : 1 x LED 4000K / CRI >= 80 25 W / 4130 lm
		Maintenance factor: 0.79

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



2 Učebna 2.29

2.2 Summary, Učebna 2.29

2.2.1 Result overview, Measuring area 1

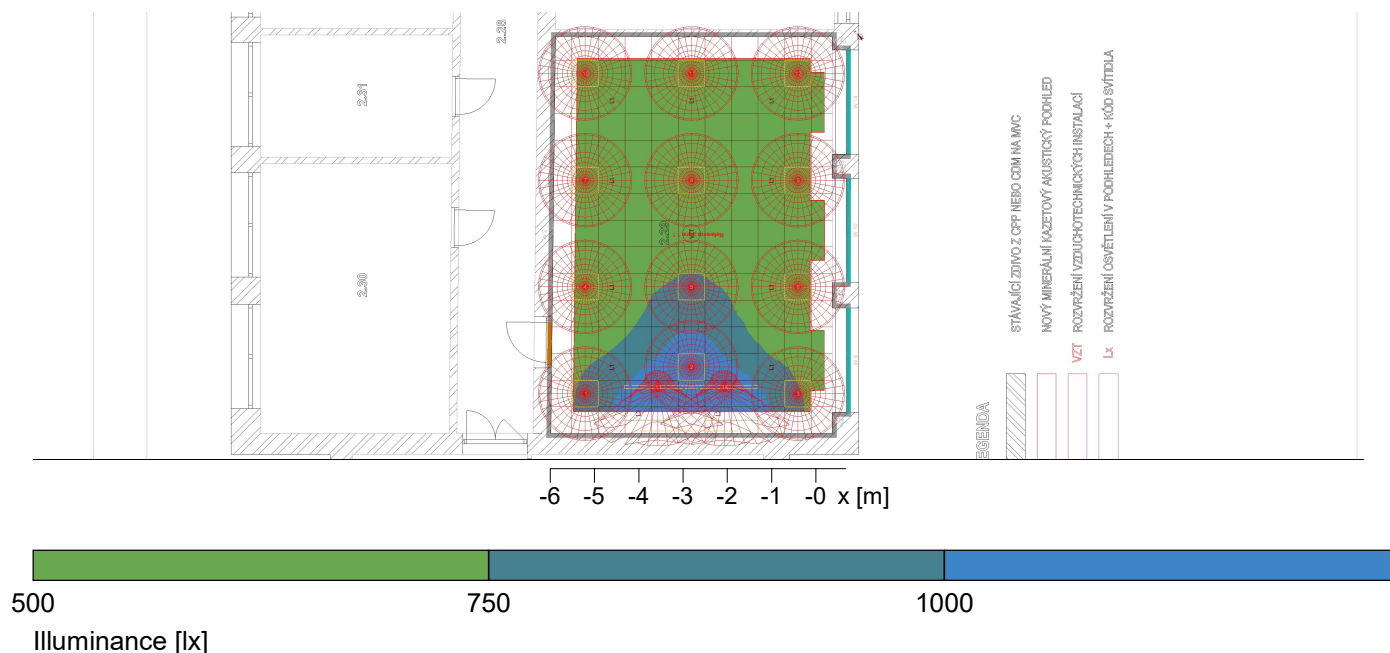
3	2 x	Order No.	: 4099854190636
		Luminaire name	: TRUSYS FLEX P 35W 840 WW CL WT
		Equipment	: 1 x LED 4000K / CRI >= 80 35 W / 6000 lm
		Maintenance factor:	0.79

Object : ZŠ ver2
 Installation : Libčice nad Vltavou
 Project number :
 Date : 13.03.2025



2.2 Summary, Učebna 2.29

2.2.2 Result overview, Evaluation area 1



General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 see luminaires / maintenance plan

Total lamp luminous flux
 Luminaire luminous flux
 Total power
 Total power per area (58.53 m²)

61560 lm
 61558 lm
 370.0 W
 6.32 W/m² (0.91 W/m²/100lx)

Evaluation area 1

User profile

Reference plane 1.1

učebny – obecné činnosti

44.1 (EN 12464-1, 11.2021) (R_a >80.00)

Horizontal

cylindrical

\bar{E}_m	697 lx	(≥ 500 lx)	273 lx	(≥ 150 lx)
E_{min}	503 lx		163 lx	
$E_{min}/\bar{E}_m (U_o)$	0.72	(≥ 0.60)	0.59	(≥ 0.10)
$E_{min}/E_{max} (U_d)$	0.36			
E_z/E_h			0.36	
Position	0.75 m		1.20 m	
RUG (4.5H 6.0H)	≤ 17.6	(< 19.00)		
Luminaire : (PL FLEX 600 S 30W 840 U19 PS, !4099854276507)				

Major surfaces

	\bar{E}_m		U_o	
M 1.59 (Ceiling)	133 lx	(≥ 100 lx)	0.70	(≥ 0.10)
M 1.1 (Wall)	315 lx	(≥ 150 lx)	0.57	(≥ 0.10)

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025




2.2 Summary, Učebna 2.29


2.2.2 Result overview, Evaluation area 1

M 1.2 (Wall)	363 lx	(>= 150 lx)	0.51	(>= 0.10)
M 1.3 (Wall)	605 lx	(>= 150 lx)	0.43	(>= 0.10)
M 1.56 (Wall)	312 lx	(>= 150 lx)	0.62	(>= 0.10)
M 1.57 (Wall)	261 lx	(>= 150 lx)	0.65	(>= 0.10)
M 1.58 (Wall)	252 lx	(>= 150 lx)	0.59	(>= 0.10)

Type No. Make

LEDVANCE GmbH

1 12 x  Order No. : !4099854276507
Luminaire name : PL FLEX 600 S 30W 840 U19 PS
Equipment : 1 x LED 4000K / CRI >= 80 25 W / 4130 lm
Maintenance factor: 0.79

3 2 x  Order No. : 4099854190636
Luminaire name : TRUSYS FLEX P 35W 840 WW CL WT
Equipment : 1 x LED 4000K / CRI >= 80 35 W / 6000 lm
Maintenance factor: 0.79

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



3 Učebna 2.34

3.1 Description, Učebna 2.34

3.1.1 Maintenance plan

Only through regular maintenance can compliance with the illuminances set out in standard EN 12464 be ensured for the lighting system. The maintenance intervals set out below must therefore be observed.

Room

Environment : Clean
Maintenance interval : **every 5 years**

LEDVANCE GmbH !4099854276507

Influence of reflections from the room surfaces : 70% / 50% / 20%
Luminaire characteristic : Direct
Type of reflector : D - Enclosed IP2X
Lamp type : LED
Lifetime (L80) : 100000h
Operating time : 25000h
Maintenance interval (Luminaire) : **Annual**
Maintenance factor : **0.79**

LEDVANCE GmbH 4099854190636

Influence of reflections from the room surfaces : 70% / 50% / 20%
Luminaire characteristic : Direct
Type of reflector : D - Enclosed IP2X
Lamp type : LED
Lifetime (L80) : 50000h
Operating time : 10000h
Maintenance interval (Luminaire) : **Annual**
Maintenance factor : **0.79**

References to maintenance:

Îlluminants must be replaced by light sources with the same characteristic values (luminous flux, light colour, colour rendition). Any starters must also be replaced when the lamp is changed..

The room and the light-deflecting surfaces must be maintained in such a way that the original reflectance properties are retained.

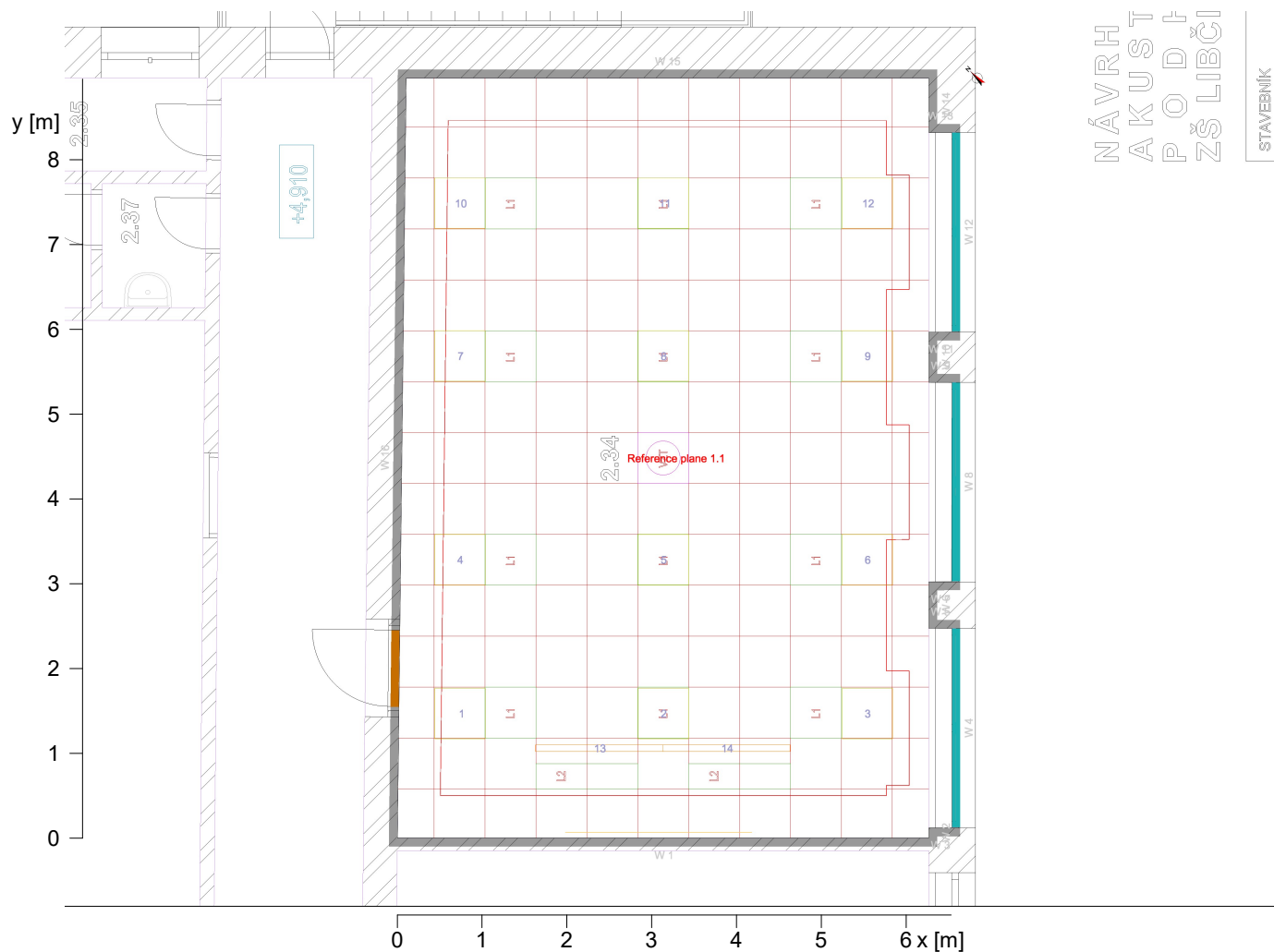
The manufacturers' cleaning instructions are to be observed.

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



3.1 Description, Učebna 2.34

3.1.2 Floor plan



Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



3.1 Description, Učebna 2.34

3.1.2 Floor plan

Wall	x	y	Length	Area[m ²]	Reflectance
1	58.01 m	37.25 m	6.26 m	16.91	50.0 %
2	58.01 m	37.37 m	0.12 m	0.32	50.0 %
3	58.28 m	37.37 m	0.27 m	0.73	50.0 %
4	58.28 m	39.72 m	2.35 m	6.34	50.0 %
5	58.01 m	39.72 m	0.27 m	0.73	50.0 %
6	58.01 m	40.27 m	0.55 m	1.48	50.0 %
7	58.28 m	40.27 m	0.27 m	0.73	50.0 %
8	58.28 m	42.62 m	2.35 m	6.34	50.0 %
9	58.01 m	42.62 m	0.27 m	0.73	50.0 %
10	58.01 m	43.21 m	0.59 m	1.60	50.0 %
11	58.28 m	43.21 m	0.27 m	0.73	50.0 %
12	58.28 m	45.56 m	2.35 m	6.34	50.0 %
13	58.01 m	45.56 m	0.27 m	0.73	50.0 %
14	58.01 m	46.20 m	0.64 m	1.73	50.0 %
15	51.86 m	46.20 m	6.16 m	16.63	50.0 %
16	51.75 m	37.25 m	8.95 m	24.17	50.0 %
Floor:				57.5	20.0 %
Ceiling:				57.5	70.0 %
Room height [m]:		2.70 m			
Height of ref. plane [m]:		0.75 m			
Volume		155.2 m ³			

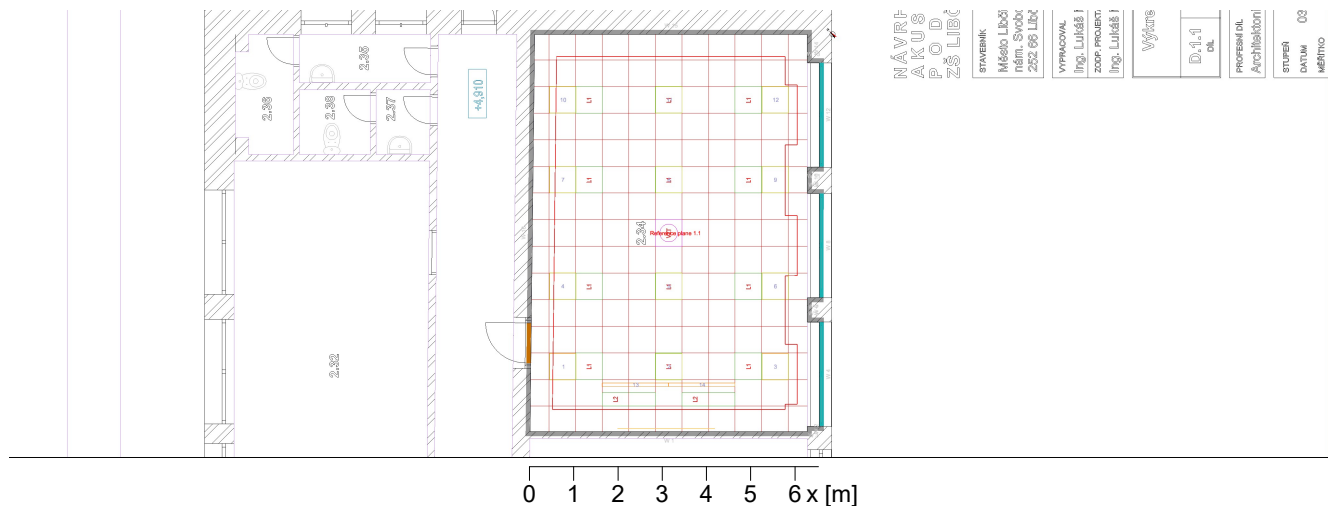
Object : ZŠ ver2
 Installation : Libčice nad Vltavou
 Project number :
 Date : 13.03.2025



3 Učebna 2.34

3.2 Summary, Učebna 2.34

3.2.1 Result overview, Measuring area 1



NÁVĚST AKUS PO D ZŠ LIBČ	STAVBAK Město Libč nám. Svob 252 66 Libč	VYPRACOV Ing. Lukáš J zoo. proum Ing. Lukáš J	Výpis D.1.1 OL	PROJEKT D Architekt studijní datum měřeno
-----------------------------------	---	--	----------------------	---

750

1000

Illuminance [lx]

General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 see luminaires / maintenance plan

Total luminous flux
 Total power
 Total power per area (57.49 m²)

61560 lm
 370 W
 6.44 W/m²

Illuminance

Average illuminance	\bar{E}_m	1010 lx
Minimum illuminance	E_{min}	766 lx
Maximum illuminance	E_{max}	1270 lx
Uniformity U_o	E_{min}/\bar{E}_m	1:1.32 (0.76)
Diversity U_d	E_{min}/E_{max}	1:1.65 (0.6)

Type No. Make

1	12 x	LEDVANCE GmbH
		Order No. : !4099854276507
		Luminaire name : PL FLEX 600 S 30W 840 U19 PS
		Equipment : 1 x LED 4000K / CRI >= 80 25 W / 4130 lm
		Maintenance factor: 0.79

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025



3 Učebna 2.34

3.2 Summary, Učebna 2.34

3.2.1 Result overview, Measuring area 1

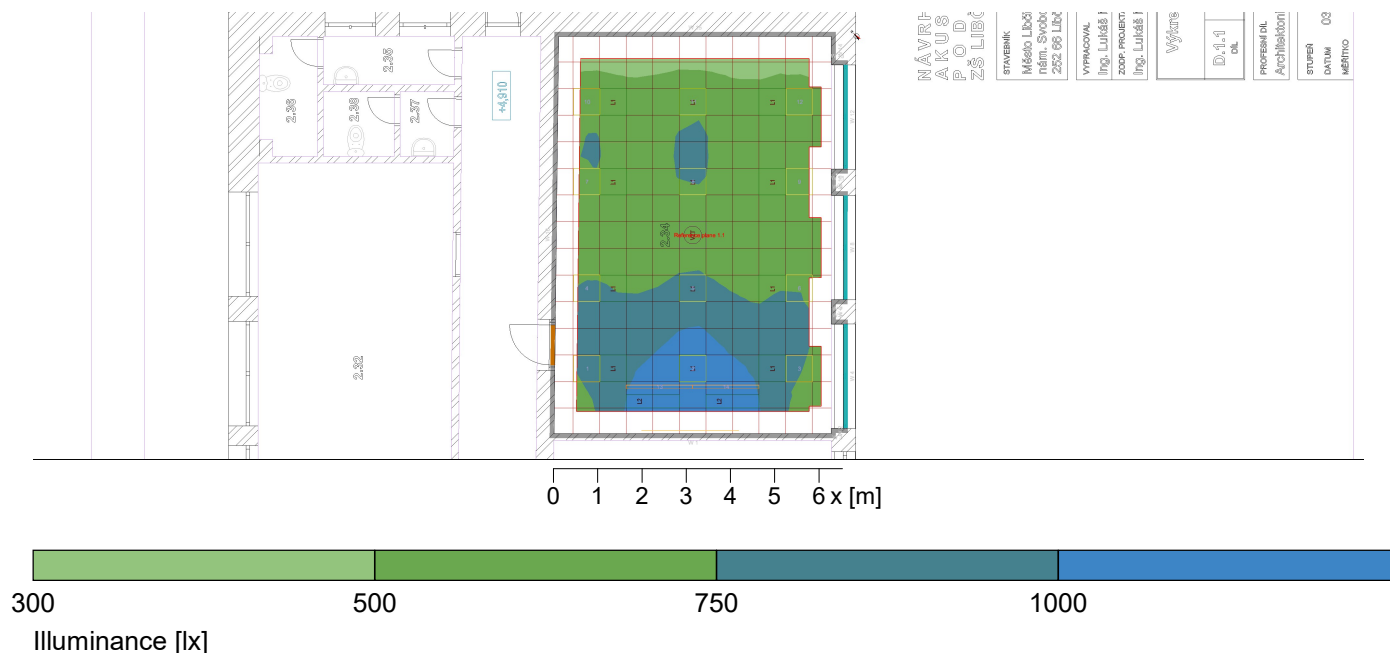
3	2 x	Order No.	: 4099854190636
		Luminaire name	: TRUSYS FLEX P 35W 840 WW CL WT
		Equipment	: 1 x LED 4000K / CRI >= 80 35 W / 6000 lm
		Maintenance factor:	0.79

Object : ZŠ ver2
 Installation : Libčice nad Vltavou
 Project number :
 Date : 13.03.2025



3.2 Summary, Učebna 2.34

3.2.2 Result overview, Evaluation area 1



General

Calculation algorithm used
 Maintenance factor

Average indirect fraction
 see luminaires / maintenance plan

Total lamp luminous flux
 Luminaire luminous flux
 Total power
 Total power per area (57.49 m²)

61560 lm
 61558 lm
 370.0 W
 6.44 W/m² (0.86 W/m²/100lx)

Evaluation area 1

User profile

Reference plane 1.1

učebny – obecné činnosti

44.1 (EN 12464-1, 11.2021) (R_a >80.00)

Horizontal

cylindrical

\bar{E}_m	745 lx	(≥ 500 lx)	286 lx	(≥ 150 lx)
E_{min}	493 lx		184 lx	
$E_{min}/\bar{E}_m (U_o)$	0.66	(≥ 0.60)	0.64	(≥ 0.10)
$E_{min}/E_{max} (U_d)$	0.35			
E_z/E_h			0.35	
Position	0.75 m		1.20 m	
RUG (4.4H 6.0H)	≤17.6	(< 19.00)		
Luminaire : (PL FLEX 600 S 30W 840 U19 PS, !4099854276507)				

Major surfaces

	\bar{E}_m		U_o	
M 1.13 (Ceiling)	135 lx	(≥ 100 lx)	0.65	(≥ 0.10)
M 1.1 (Wall)	562 lx	(≥ 150 lx)	0.32	(≥ 0.10)

Object : ZŠ ver2
Installation : Libčice nad Vltavou
Project number :
Date : 13.03.2025




3.2 Summary, Učebna 2.34


3.2.2 Result overview, Evaluation area 1

M 1.8 (Wall)	358 lx	(>= 150 lx)	0.53	(>= 0.10)
M 1.9 (Wall)	294 lx	(>= 150 lx)	0.62	(>= 0.10)
M 1.10 (Wall)	305 lx	(>= 150 lx)	0.69	(>= 0.10)
M 1.11 (Wall)	228 lx	(>= 150 lx)	0.66	(>= 0.10)
M 1.12 (Wall)	386 lx	(>= 150 lx)	0.45	(>= 0.10)

Type No. Make

LEDVANCE GmbH

1 12 x  Order No. : !4099854276507
Luminaire name : PL FLEX 600 S 30W 840 U19 PS
Equipment : 1 x LED 4000K / CRI >= 80 25 W / 4130 lm
Maintenance factor: 0.79

3 2 x  Order No. : 4099854190636
Luminaire name : TRUSYS FLEX P 35W 840 WW CL WT
Equipment : 1 x LED 4000K / CRI >= 80 35 W / 6000 lm
Maintenance factor: 0.79



ZŠ - denní osvětlení

Installation : Libčice nad Vltavou

Project number :

Customer :

Processed by : Pavel Slavík

Date : 25.02.2025

The following values are based on precise calculations performed on calibrated lamps and luminaires, and their configurations, whereby gradual, unavoidable deviations can occur in practice. All guarantee claims are excluded for the specified data.

This exclusion of liability applies irrespective of the legal grounds for both damages and consequential damages suffered by users and third parties.

Object : ZŠ - denní osvětlení
Installation : Libčice nad Vltavou
Project number :
Date : 25.02.2025



1 Luminaire data

1.1 LEDVANCE GmbH, PL FLEX 600 S 30W 840 U19 PS (!4099854276507)

1.1.1 Data sheet

Manufacturer: LEDVANCE GmbH

!4099854276507 PL FLEX 600 S 30W 840 U19 PS

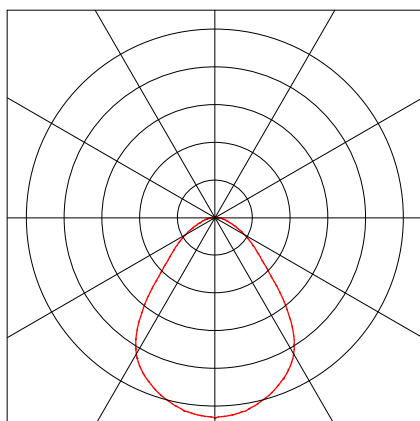
Luminaire data

Luminaire efficiency : 99.99%
Luminaire efficacy : 165.18 lm/W
Classification : A50 ↓99.8% ↑0.2%
CIE Flux Codes : 65 89 97 100 100
UGR 4H 8H : 17.9 / 17.9
Power : 25 W
Luminous flux : 4129.8 lm

Equipped with

Quantity : 1
Designation : LED 4000K /
CRI >= 80
Colour : 4000K
Luminous flux : 4130 lm
Colour reproduction : 80

Dimensions : 595 mm x 595 mm x 32 mm



Object : ZŠ - denní osvětlení
Installation : Libčice nad Vltavou
Project number :
Date : 25.02.2025



1 Luminaire data

1.2 LEDVANCE GmbH, PL FLEX 600 S 30W 840 U19 PS (!4099854276507)

1.2.1 Data sheet

Manufacturer: LEDVANCE GmbH

!4099854276507 PL FLEX 600 S 30W 840 U19 PS

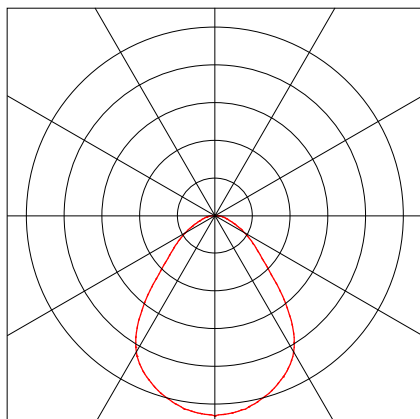
Luminaire data

Luminaire efficiency : 99.99%
Luminaire efficacy : 167.13 lm/W
Classification : A50 ↓99.8% ↑0.2%
CIE Flux Codes : 65 89 97 100 100
UGR 4H 8H : 17.3 / 17.3
Power : 21 W
Luminous flux : 3509.9 lm

Equipped with

Quantity : 1
Designation : LED 4000K /
CRI >= 80
Colour : 4000K
Luminous flux : 3510 lm
Colour reproduction : 80

Dimensions : 595 mm x 595 mm x 32 mm

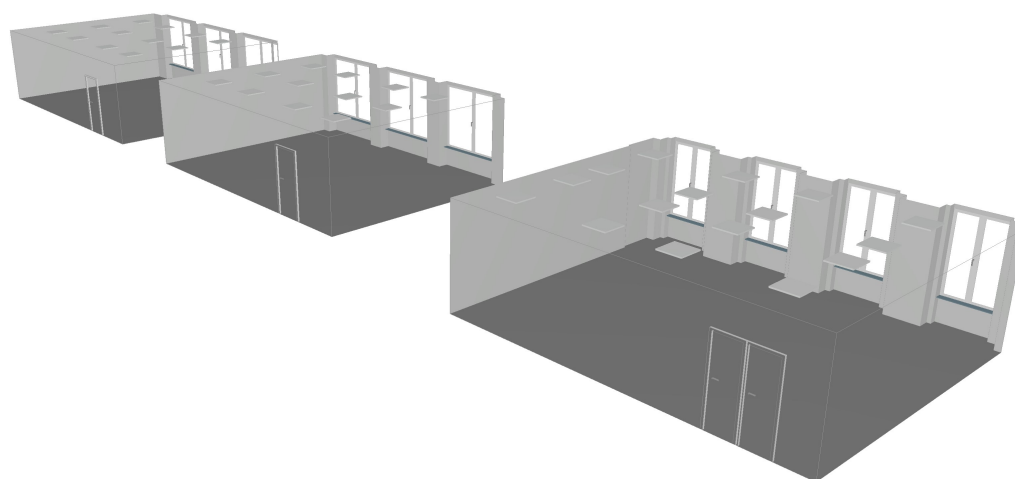


Object : ZŠ - denní osvětlení
Installation : Libčice nad Vltavou
Project number :
Date : 25.02.2025



Description, Floor 1

.2 Floor 3D



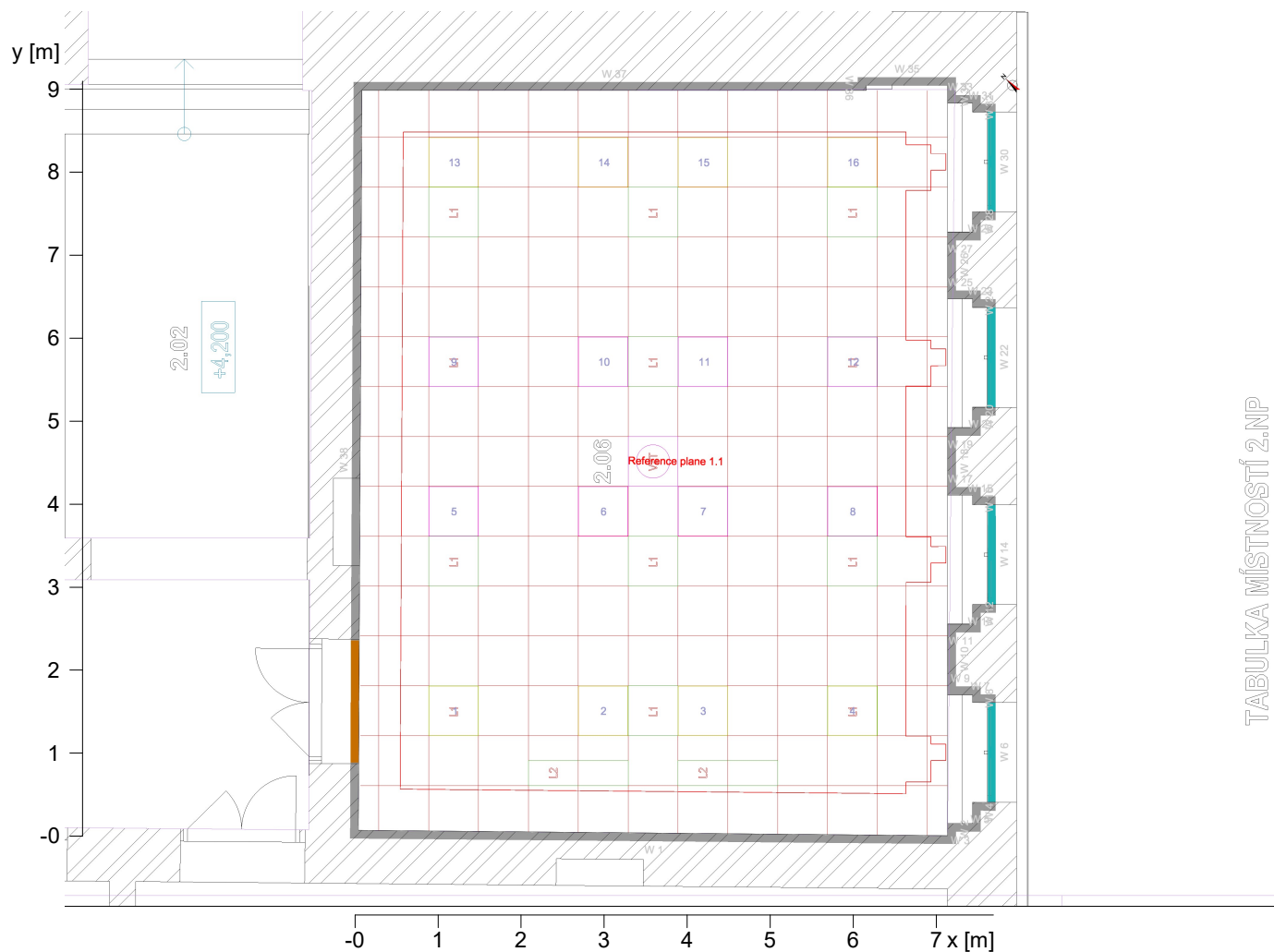
Object : ZŠ - denní osvětlení
 Installation : Libčice nad Vltavou
 Project number :
 Date : 25.02.2025



1 Učebna 2.06

1.1 Description, Učebna 2.06

1.1.2 Floor plan



Object : ZŠ - denní osvětlení
 Installation : Libčice nad Vltavou
 Project number :
 Date : 25.02.2025



1 Učebna 2.06

1.1 Description, Učebna 2.06

1.1.2 Floor plan

Wall	x	y	Length	Area[m²]	Reflectance
1	57.68 m	10.64 m	7.09 m	19.15	50.0 %
2	57.68 m	10.79 m	0.15 m	0.40	50.0 %
3	57.98 m	10.79 m	0.30 m	0.81	50.0 %
4	57.98 m	11.05 m	0.26 m	0.69	50.0 %
5	58.16 m	11.05 m	0.18 m	0.49	50.0 %
6	58.16 m	12.25 m	1.20 m	3.24	50.0 %
7	57.98 m	12.25 m	0.18 m	0.49	50.0 %
8	57.98 m	12.34 m	0.10 m	0.26	50.0 %
9	57.68 m	12.34 m	0.30 m	0.81	50.0 %
10	57.68 m	13.19 m	0.85 m	2.30	50.0 %
11	57.98 m	13.19 m	0.30 m	0.81	50.0 %
12	57.98 m	13.43 m	0.23 m	0.63	50.0 %
13	58.16 m	13.43 m	0.18 m	0.49	50.0 %
14	58.16 m	14.63 m	1.20 m	3.24	50.0 %
15	57.98 m	14.63 m	0.18 m	0.49	50.0 %
16	57.98 m	14.74 m	0.12 m	0.31	50.0 %
17	57.68 m	14.74 m	0.30 m	0.81	50.0 %
18	57.68 m	15.56 m	0.81 m	2.20	50.0 %
19	57.98 m	15.56 m	0.30 m	0.81	50.0 %
20	57.98 m	15.80 m	0.24 m	0.66	50.0 %
21	58.16 m	15.80 m	0.18 m	0.48	50.0 %
22	58.16 m	17.00 m	1.20 m	3.24	50.0 %
23	57.98 m	17.00 m	0.18 m	0.48	50.0 %
24	57.98 m	17.11 m	0.10 m	0.28	50.0 %
25	57.68 m	17.11 m	0.30 m	0.81	50.0 %
26	57.68 m	17.91 m	0.80 m	2.17	50.0 %
27	57.98 m	17.91 m	0.30 m	0.81	50.0 %
28	57.98 m	18.15 m	0.24 m	0.66	50.0 %
29	58.16 m	18.15 m	0.18 m	0.49	50.0 %
30	58.16 m	19.35 m	1.20 m	3.24	50.0 %
31	57.98 m	19.35 m	0.18 m	0.49	50.0 %
32	57.98 m	19.46 m	0.10 m	0.28	50.0 %
33	57.68 m	19.46 m	0.30 m	0.81	50.0 %
34	57.68 m	19.67 m	0.22 m	0.58	50.0 %
35	56.70 m	19.67 m	0.98 m	2.65	50.0 %
36	56.70 m	19.61 m	0.06 m	0.16	50.0 %
37	50.63 m	19.61 m	6.07 m	16.38	50.0 %
38	50.59 m	10.71 m	8.90 m	24.04	50.0 %
Floor:				66.0	20.0 %
Ceiling:				66.0	70.0 %
Room height [m]:		2.70 m			
Height of ref. plane [m]:		0.75 m			
Volume			178.1 m³		

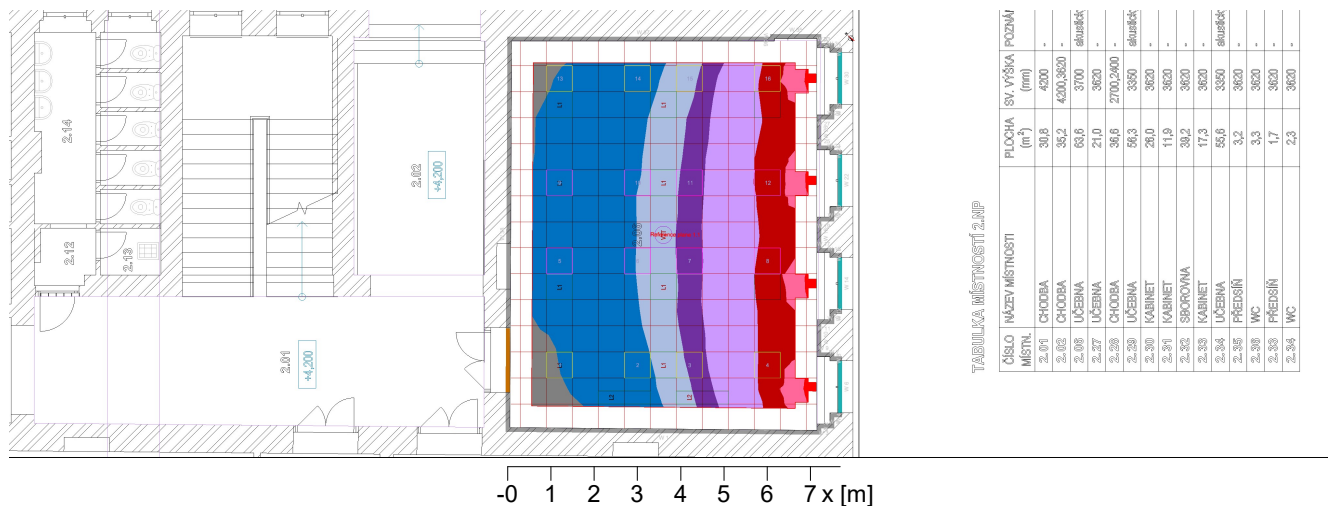
Object : ZŠ - denní osvětlení
 Installation : Libčice nad Vltavou
 Project number :
 Date : 25.02.2025



1 Učebna 2.06

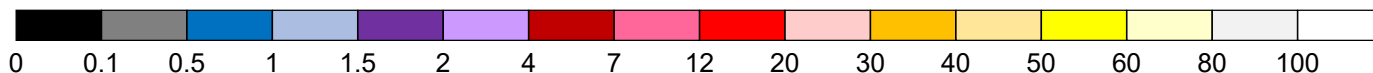
1.2 Summary, Učebna 2.06

1.2.1 Result overview, Reference plane 1.1



Tabulka místností 2.NP

Číslo místn.	Název místnosti	Plocha (m²)	SV výška (mm)	Pozná
2.01	CHOUBA	30.8	4200	-
2.02	CHOUBA	35.2	4200,3600	-
2.03	UČEBNA	63.6	3700	šroubek
2.07	UČEBNA	21.0	3600	-
2.08	CHOUBA	36.6	2700,2400	-
2.09	UČEBNA	56.3	3300	šroubek
2.10	KABINET	26.0	3600	-
2.11	KABINET	11.9	3600	-
2.12	SPOROVNA	30.2	3600	-
2.13	KABINET	17.3	3600	-
2.14	UČEBNA	55.6	3300	šroubek
2.15	PŘEDSÍŇ	3.2	3600	-
2.16	WC	3.3	3600	-
2.17	PŘEDSÍŇ	1.7	3600	-
2.18	WC	2.3	3600	-



Daylight factor [%]

General

Calculation algorithm used
 Height of evaluation surface
 Height of luminaire plane
 Calculation mode used:

Average indirect fraction
 0.75 m
 2.70 m
 CIE overcast sky

Date, Time:

21.03. 10:56 (TST 10:47)

Geographical data:

Location : Praha
 Latitude (degrees) : 50.07 °
 Longitude (degrees) : 14.42 °
 North angle : 315.00 °

Daylight factor

Average daylight ratio
 Median daylight ratio
 Minimum daylight ratio
 Maximum daylight ratio

\bar{D} : 1.9
 \bar{D}_{median} : 1.1
 D_{min} : 0.5
 D_{max} : 10.6

Object : ZŠ - denní osvětlení
 Installation : Libčice nad Vltavou
 Project number :
 Date : 25.02.2025



2 Učebna 2.29

2.1 Description, Učebna 2.29

2.1.2 Floor plan



Object : ZŠ - denní osvětlení
Installation : Libčice nad Vltavou
Project number :
Date : 25.02.2025



2 Učebna 2.29

2.1 Description, Učebna 2.29

2.1.2 Floor plan

Wall	x	y	Length	Area[m ²]	Reflectance
1	51.72 m	34.20 m	6.25 m	16.87	50.0 %
2	51.61 m	25.26 m	8.94 m	24.13	50.0 %
3	57.96 m	25.26 m	6.35 m	17.14	50.0 %
4	57.96 m	25.74 m	0.48 m	1.29	50.0 %
5	58.28 m	25.74 m	0.32 m	0.86	50.0 %
6	58.28 m	28.09 m	2.35 m	6.34	50.0 %
7	57.96 m	28.09 m	0.32 m	0.86	50.0 %
8	57.96 m	28.66 m	0.57 m	1.54	50.0 %
9	58.28 m	28.66 m	0.32 m	0.86	50.0 %
10	58.28 m	31.01 m	2.35 m	6.34	50.0 %
11	57.96 m	31.01 m	0.32 m	0.87	50.0 %
12	57.96 m	31.54 m	0.53 m	1.44	50.0 %
13	58.28 m	31.54 m	0.32 m	0.86	50.0 %
14	58.28 m	33.89 m	2.35 m	6.34	50.0 %
15	57.96 m	33.89 m	0.32 m	0.86	50.0 %
16	57.96 m	34.20 m	0.30 m	0.82	50.0 %
Floor:				58.5	20.0 %
Ceiling:				58.5	70.0 %
Room height [m]:	2.70 m				
Height of ref. plane [m]:	0.75 m				
Volume	158.0 m ³				

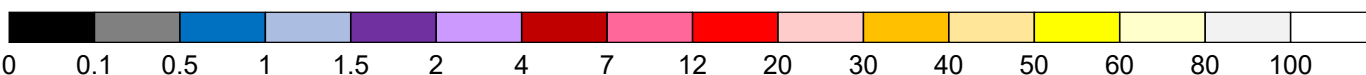
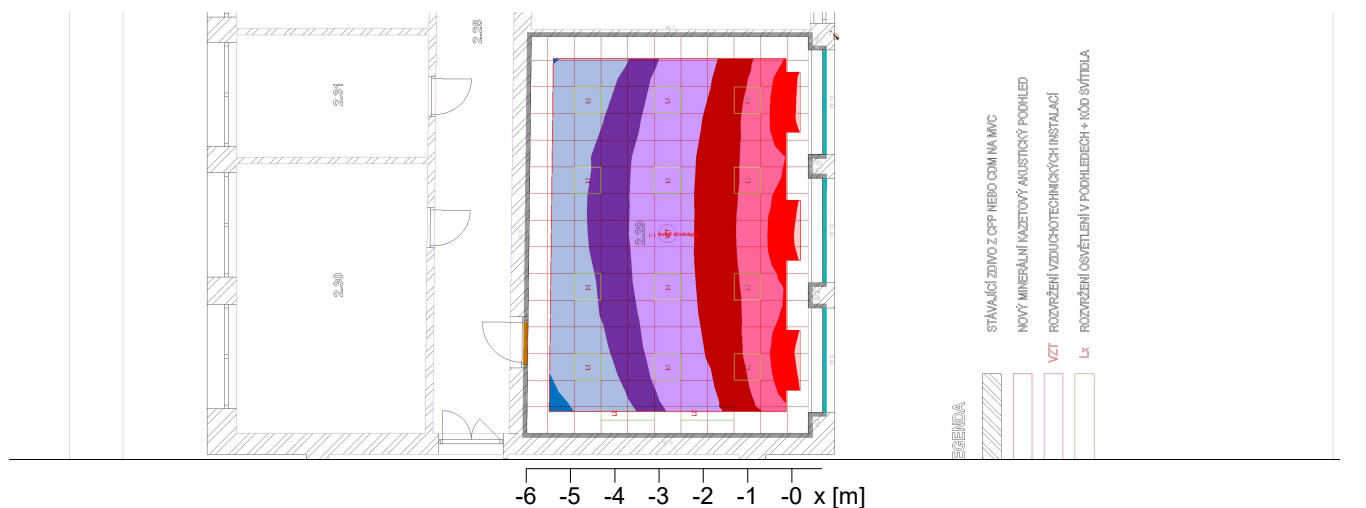
Object : ZŠ - denní osvětlení
 Installation : Libčice nad Vltavou
 Project number :
 Date : 25.02.2025



2 Učebna 2.29

2.2 Summary, Učebna 2.29

2.2.1 Result overview, Reference plane 1.1



Daylight factor [%]

General

Calculation algorithm used
 Height of evaluation surface
 Height of luminaire plane
 Calculation mode used:

Average indirect fraction
 0.75 m
 2.70 m
 CIE overcast sky

Date, Time:

21.03. 10:28 (TST 10:19)

Geographical data:

Location : Praha
 Latitude (degrees) : 50.07 °
 Longitude (degrees) : 14.42 °
 North angle : 315.00 °

Daylight factor

Average daylight ratio
 Median daylight ratio
 Minimum daylight ratio
 Maximum daylight ratio

\bar{D} : 4.7
 \bar{D}_{median} : 3
 D_{min} : 1
 D_{max} : 15.7

Object : ZŠ - denní osvětlení
Installation : Libčice nad Vltavou
Project number :
Date : 25.02.2025



3 Učebna 2.34

3.1 Description, Učebna 2.34

3.1.2 Floor plan



Object : ZŠ - denní osvětlení
Installation : Libčice nad Vltavou
Project number :
Date : 25.02.2025



3 Učebna 2.34

3.1 Description, Učebna 2.34

3.1.2 Floor plan

Wall	x	y	Length	Area[m ²]	Reflectance
1	58.01 m	37.25 m	6.26 m	16.91	50.0 %
2	58.01 m	37.37 m	0.12 m	0.32	50.0 %
3	58.28 m	37.37 m	0.27 m	0.73	50.0 %
4	58.28 m	39.72 m	2.35 m	6.34	50.0 %
5	58.01 m	39.72 m	0.27 m	0.73	50.0 %
6	58.01 m	40.27 m	0.55 m	1.48	50.0 %
7	58.28 m	40.27 m	0.27 m	0.73	50.0 %
8	58.28 m	42.62 m	2.35 m	6.34	50.0 %
9	58.01 m	42.62 m	0.27 m	0.73	50.0 %
10	58.01 m	43.21 m	0.59 m	1.60	50.0 %
11	58.28 m	43.21 m	0.27 m	0.73	50.0 %
12	58.28 m	45.56 m	2.35 m	6.34	50.0 %
13	58.01 m	45.56 m	0.27 m	0.73	50.0 %
14	58.01 m	46.20 m	0.64 m	1.73	50.0 %
15	51.86 m	46.20 m	6.16 m	16.63	50.0 %
16	51.75 m	37.25 m	8.95 m	24.17	50.0 %
Floor:				57.5	20.0 %
Ceiling:				57.5	70.0 %
Room height [m]:	2.70 m				
Height of ref. plane [m]:	0.75 m				
Volume	155.2 m ³				

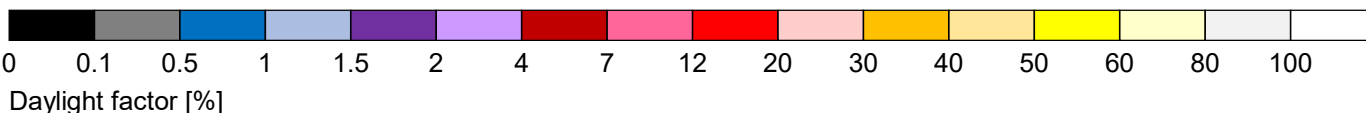
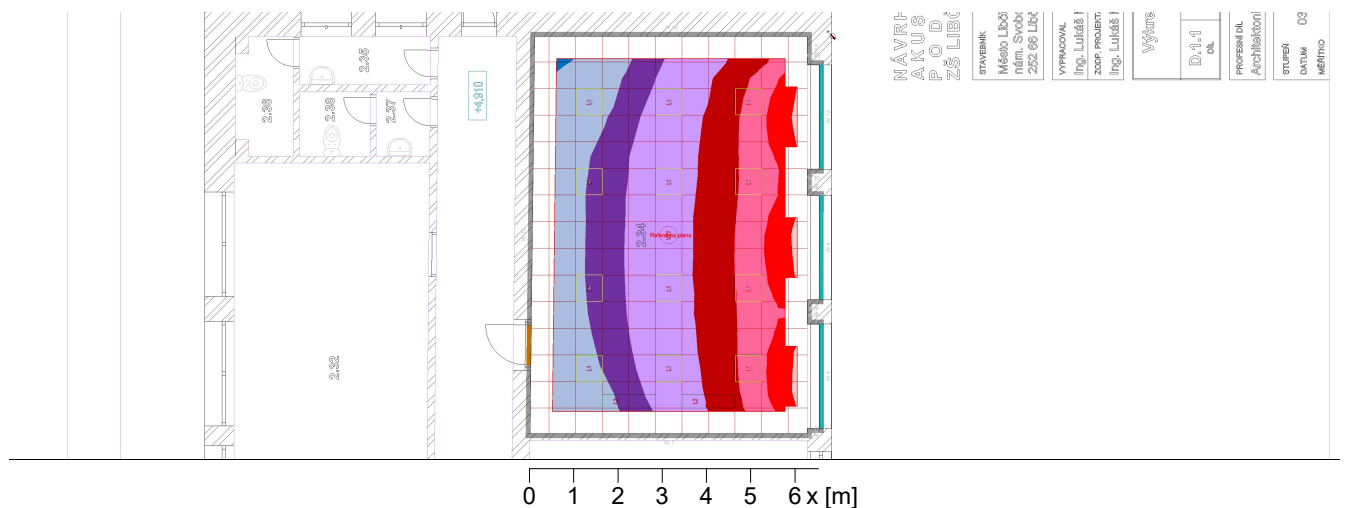
Object : ZŠ - denní osvětlení
 Installation : Libčice nad Vltavou
 Project number :
 Date : 25.02.2025



3 Učebna 2.34

3.2 Summary, Učebna 2.34

3.2.1 Result overview, Reference plane 1.1



General

Calculation algorithm used	Average indirect fraction
Height of evaluation surface	0.75 m
Height of luminaire plane	2.70 m
Calculation mode used:	CIE overcast sky

Date, Time: 21.03. 10:28 (TST 10:19)

Geographical data:

Location : Praha
 Latitude (degrees) : 50.07 °
 Longitude (degrees) : 14.42 °
 North angle : 315.00 °

Daylight factor

Average daylight ratio	\bar{D}	: 4.8
Median daylight ratio	\bar{D}_{median}	: 2.8
Minimum daylight ratio	D_{min}	: 1.1
Maximum daylight ratio	D_{max}	: 14.7