

Příloha B - Dokumentace tepelného modelu dvojité fasády

Synopsis

Synopsis of the model dvojita fasada defined in fasada.cfg generated on Sat Jun 15 13:24:46 2019. Associated notes are in ../doc/fasada.log

The model is located at latitude 50.04 with a longitude difference of -0.58 from the local time meridian (east +ve). The year used in simulations is 2003 and weekends occur on Saturday and Sunday.

The site exposure is typical city centre and the ground reflectance is 0.20.

The climate is: CZ Praha-Karlov and is held in: ../dbs/cz_prague2003 with hour centred solar data.

annual weather : ../dbs/cz_prague2003

Calculated ground temperature at depth

0.5 m:	4.1522	0.40569	-0.61413	0.27038	5.3287	10.994	16.324	20.183	21.310	19.497	15.130	9.6239
1.0 m:	5.4813	1.7444	0.41120	0.90126	5.0338	10.053	15.005	18.836	20.309	19.097	15.459	10.574
1.5 m:	6.5973	2.9468	1.4030	1.5820	4.9216	9.3418	13.902	17.630	19.335	18.608	15.603	11.293
2.0 m:	7.5204	4.0103	2.3386	2.2782	4.9482	8.8239	12.993	16.566	18.413	18.068	15.604	11.819
2.5 m:	8.2721	4.9380	3.2034	2.9640	5.0764	8.4645	12.255	15.641	17.558	17.507	15.499	12.186
3.0 m:	8.8749	5.7375	3.9898	3.6212	5.2755	8.2328	11.667	14.846	16.777	16.947	15.321	12.424
3.5 m:	9.3504	6.4190	4.6950	4.2376	5.5203	8.1016	11.205	14.171	16.075	16.406	15.093	12.561
4.0 m:	9.7189	6.9940	5.3199	4.8059	5.7914	8.0475	10.850	13.602	15.452	15.895	14.837	12.621
4.5 m:	9.9989	7.4750	5.8683	5.3225	6.0734	8.0510	10.582	13.128	14.903	15.420	14.567	12.622
5.0 m:	10.207	7.8741	6.3455	5.7870	6.3551	8.0960	10.386	12.736	14.425	14.984	14.295	12.581
5.5 m:	10.358	8.2031	6.7579	6.2006	6.6286	8.1693	10.245	12.414	14.011	14.591	14.030	12.511
6.0 m:	10.463	8.4727	7.1124	6.5661	6.8882	8.2607	10.149	12.151	13.654	14.237	13.778	12.423
6.5 m:	10.533	8.6928	7.4159	6.8873	7.1307	8.3623	10.087	11.937	13.348	13.923	13.541	12.324
7.0 m:	10.577	8.8719	7.6751	7.1683	7.3543	8.4680	10.050	11.764	13.086	13.645	13.321	12.221
7.5 m:	10.601	9.0176	7.8962	7.4135	7.5583	8.5736	10.032	11.623	12.862	13.399	13.121	12.117
8.0 m:	10.612	9.1362	8.0850	7.6271	7.7432	8.6760	10.027	11.509	12.671	13.184	12.939	12.016
8.5 m:	10.612	9.2332	8.2464	7.8133	7.9097	8.7732	10.032	11.416	12.507	12.994	12.775	11.920
9.0 m:	10.607	9.3129	8.3850	7.9757	8.0591	8.8642	10.042	11.341	12.366	12.827	12.628	11.831
9.5 m:	10.597	9.3792	8.5045	8.1178	8.1929	8.9483	10.055	11.278	12.244	12.681	12.495	11.748
10.0 m:	10.585	9.4348	8.6083	8.2426	8.3125	9.0253	10.070	11.225	12.138	12.552	12.377	11.672

An Integrated Performance View is incomplete or missing.

Databases associated with the model:

standard pressure distr: pressc.db1
materials : ../dbs/materialdb
constructions : ../dbs/constrdb
standard plant comp : plantc.db1
standard event profiles: profiles.db2.a
optical properties : ../dbs/opticdb
standard UK NCM data : SBEM.db1
standard predefined obj: predefined.db1
standard mould isopleth: mould.db1

The model includes ideal controls as follows:

Control description:

no overall control description supplied
no zone control description supplied

Zones control includes 1 functions.

The following day types are defined: weekdays saturday sunday holiday

Details of control loops referenced in the model:

The sensor for function 1 senses the temperature of the current zone.
The actuator for function 1 is air point of the current zone
> 1 periods of validity during the year have been defined.
Control is valid Wed-01-Jan to Wed-31-Dec, 2003 with 1 periods.

Per Start Sensing	Actuating		weekdays control laws
1	0.00 db temp	> flux	free floating

Zone to control loop linkages:

```

zone ( 1) 3r      << control 1
zone ( 2) 3u      << control 1
zone ( 3) 3n      << control 1
zone ( 4) 4r      << control 1
zone ( 5) 4u      << control 1
zone ( 6) 4n      << control 1
zone ( 7) 5n      << control 1
zone ( 8) 5r      << control 1
zone ( 9) 5u      << control 1
zone (10) 6r      << control 1
zone (11) 6u      << control 1
zone (12) 6n      << control 1
zone (13) 7r      << control 1
zone (14) 7u      << control 1
zone (15) 7n      << control 1

```

The model includes an air flow network.

Flow network description.

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31 nodes, 41 components, 41 connections;      wind reduction = 1.000
# Node      Fluid  Node Type      X Y Z Position      Temperature      Data_1      Data_2
1 3r        air   internal & unknown 0.0000 0.0000 10.9890 20.000 (-) 1.000 vol 14.130
2 3u        air   internal & unknown 0.0000 0.0000 10.9890 20.000 (-) 1.000 vol 46.830
3 3n        air   internal & unknown 0.0000 0.0000 10.9890 20.000 (-) 1.000 vol 26.645
4 4r        air   internal & unknown 0.0000 0.0000 14.6590 20.000 (-) 1.000 vol 14.130
5 4u        air   internal & unknown 0.0000 0.0000 14.6590 20.000 (-) 1.000 vol 46.830
6 4n        air   internal & unknown 0.0000 0.0000 14.6590 20.000 (-) 1.000 vol 26.645
7 5n        air   internal & unknown 0.0000 0.0000 18.3290 20.000 (-) 1.000 vol 26.645
8 5r        air   internal & unknown 0.0000 0.0000 18.3290 20.000 (-) 1.000 vol 14.130
9 5u        air   internal & unknown 0.0000 0.0000 18.3290 20.000 (-) 1.000 vol 46.830
10 6r       air   internal & unknown 0.0000 0.0000 21.9990 20.000 (-) 1.000 vol 14.130
11 6u       air   internal & unknown 0.0000 0.0000 21.9990 20.000 (-) 1.000 vol 46.830
12 6n       air   internal & unknown 0.0000 0.0000 21.9990 20.000 (-) 1.000 vol 26.645
13 7r       air   internal & unknown 0.0000 0.0000 25.6690 20.000 (-) 1.000 vol 14.130
14 7u       air   internal & unknown 0.0000 0.0000 25.6690 20.000 (-) 1.000 vol 46.830
15 7n       air   internal & unknown 0.0000 0.0000 25.6690 20.000 (-) 1.000 vol 26.645
16 3jz      air   boundary & wind ind 0.0000 0.0000 10.9890 0.0000 coef 18.000 azimuth 230.000
17 4jz      air   boundary & wind ind 0.0000 0.0000 14.6590 0.0000 coef 18.000 azimuth 230.000
18 5jz      air   boundary & wind ind 0.0000 0.0000 18.3290 0.0000 coef 18.000 azimuth 230.000
19 6jz      air   boundary & wind ind 0.0000 0.0000 21.9990 0.0000 coef 18.000 azimuth 230.000
20 7jz      air   boundary & wind ind 0.0000 0.0000 25.6690 0.0000 coef 18.000 azimuth 230.000
21 3jv      air   boundary & wind ind 0.0000 0.0000 10.9890 0.0000 coef 23.000 azimuth 140.000
22 4jv      air   boundary & wind ind 0.0000 0.0000 14.6590 0.0000 coef 23.000 azimuth 140.000
23 5jv      air   boundary & wind ind 0.0000 0.0000 18.3290 0.0000 coef 23.000 azimuth 140.000
24 6jv      air   boundary & wind ind 0.0000 0.0000 21.9990 0.0000 coef 23.000 azimuth 140.000
25 7jv      air   boundary & wind ind 0.0000 0.0000 25.6690 0.0000 coef 23.000 azimuth 140.000
26 3spn     air   boundary & wind ind 0.0000 0.0000 10.9890 0.0000 coef 18.000 azimuth 230.000
27 3spr     air   boundary & wind ind 0.0000 0.0000 8.2540 0.0000 coef 18.000 azimuth 185.000
28 3spu     air   boundary & wind ind 0.0000 0.0000 10.9890 0.0000 coef 23.000 azimuth 140.000
29 7vrn     air   boundary & wind ind 0.0000 0.0000 28.4040 0.0000 coef 6.000 azimuth 50.000
30 7vrr     air   boundary & wind ind 0.0000 0.0000 28.4040 0.0000 coef 6.000 azimuth 5.000
31 7vru     air   boundary & wind ind 0.0000 0.0000 28.4040 0.0000 coef 6.000 azimuth 320.000

```

Component Type C+ L+ Description

```

3no          110 2 0 Specific air flow opening      m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.037

3uo          110 2 0 Specific air flow opening      m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.037

4no          110 2 0 Specific air flow opening      m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.037

4uo          110 2 0 Specific air flow opening      m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.037

5no          110 2 0 Specific air flow opening      m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.037

5uo          110 2 0 Specific air flow opening      m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.037

```

6no	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.037	
6uo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.037	
7no	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.037	
7uo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.037	
3spno	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.124	
3spro	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.086	
3spuo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.218	
7vrhno	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.135	
7vrhro	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.094	
7vrhuo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	0.238	
3n3ro	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
3r3uo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
4n4ro	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
4r4uo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
5n5ro	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
5r5uo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
6n6ro	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
6r6uo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
7n7ro	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
7r7uo	110	2	0	Specific air flow opening	$m = \rho \cdot f(A, dP)$
Fluid	1.0	opening	area(m)	4.037	
3n4no	210	6	0	General flow conduit component	$m = \rho \cdot f(D, A, L, k, SCi)$
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.					
1.0	1.886	7.260	3.670	0.000	0.160
4n5no	210	6	0	General flow conduit component	$m = \rho \cdot f(D, A, L, k, SCi)$
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.					
1.0	1.886	7.260	3.670	0.000	0.160
5n6no	210	6	0	General flow conduit component	$m = \rho \cdot f(D, A, L, k, SCi)$
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.					
1.0	1.886	7.260	3.670	0.000	0.160
6n7no	210	6	0	General flow conduit component	$m = \rho \cdot f(D, A, L, k, SCi)$
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.					
1.0	1.886	7.260	3.670	0.000	0.160

```

3r4ro      210 6 0 General flow conduit component      m = rho.f(D,A,L,k,SCi)
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.
1.0 1.674 3.850 3.670 0.000 0.160

4r5ro      210 6 0 General flow conduit component      m = rho.f(D,A,L,k,SCi)
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.
1.0 1.674 3.850 3.670 0.000 0.160

5r6ro      210 6 0 General flow conduit component      m = rho.f(D,A,L,k,SCi)
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.
1.0 1.674 3.850 3.670 0.000 0.160

6r7ro      210 6 0 General flow conduit component      m = rho.f(D,A,L,k,SCi)
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.
1.0 1.674 3.850 3.670 0.000 0.160

3u4uo      210 6 0 General flow conduit component      m = rho.f(D,A,L,k,SCi)
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.
1.0 2.009 12.760 3.670 0.000 0.160

4u5uo      210 6 0 General flow conduit component      m = rho.f(D,A,L,k,SCi)
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.
1.0 2.009 12.760 3.670 0.000 0.160

5u6uo      210 6 0 General flow conduit component      m = rho.f(D,A,L,k,SCi)
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.
1.0 2.009 12.760 3.670 0.000 0.160

6u7uo      210 6 0 General flow conduit component      m = rho.f(D,A,L,k,SCi)
Fluid, hydr diam, x-sect, conduit ln, roughness, loss fac.
1.0 2.009 12.760 3.670 0.000 0.160

7vrdno     110 2 0 Specific air flow opening                m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.098

7vrdro     110 2 0 Specific air flow opening                m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.068

7vrduo     110 2 0 Specific air flow opening                m = rho.f(A,dP)
Fluid 1.0 opening area(m) 0.173

```

#	+Node	dHght	-Node	dHght	Component	Z @+	Z @-
1	3jz	0.000	3n	0.000	3no	10.989	10.989
2	4jz	0.000	4n	0.000	4no	14.659	14.659
3	5jz	0.000	5n	0.000	5no	18.329	18.329
4	6jz	0.000	6n	0.000	6no	21.999	21.999
5	7jz	0.000	7n	0.000	7no	25.669	25.669
6	3jv	0.000	3u	0.000	3uo	10.989	10.989
7	4jv	0.000	4u	0.000	4uo	14.659	14.659
8	5jv	0.000	5u	0.000	5uo	18.329	18.329
9	6jv	0.000	6u	0.000	6uo	21.999	21.999
10	7jv	0.000	7u	0.000	7uo	25.669	25.669
11	3spn	0.000	3n	-1.835	3spno	10.989	9.154
12	3spr	0.000	3r	-1.835	3spro	8.254	9.154
13	3spu	0.000	3u	-1.835	3spuo	10.989	9.154
14	7n	1.835	7vrn	0.000	7vrdno	27.504	28.404
15	7r	1.835	7vrr	0.000	7vrdro	27.504	28.404
16	7u	1.835	7vru	0.000	7vrduo	27.504	28.404
17	3n	0.000	3r	0.000	3n3ro	10.989	10.989
18	3r	0.000	3u	0.000	3r3uo	10.989	10.989
19	4n	0.000	4r	0.000	4n4ro	14.659	14.659
20	4r	0.000	4u	0.000	4r4uo	14.659	14.659
21	5n	0.000	5r	0.000	5n5ro	18.329	18.329
22	5r	0.000	5u	0.000	5r5uo	18.329	18.329
23	6n	0.000	6r	0.000	6n6ro	21.999	21.999
24	6r	0.000	6u	0.000	6r6uo	21.999	21.999
25	7n	0.000	7r	0.000	7n7ro	25.669	25.669
26	7r	0.000	7u	0.000	7r7uo	25.669	25.669
27	3n	1.835	4n	-1.835	3n4no	12.824	12.824
28	4n	1.835	5n	-1.835	4n5no	16.494	16.494
29	5n	1.835	6n	-1.835	5n6no	20.164	20.164
30	6n	1.835	7n	-1.835	6n7no	23.834	23.834
31	3r	1.835	4r	-1.835	3r4ro	12.824	12.824
32	4r	1.835	5r	-1.835	4r5ro	16.494	16.494
33	5r	1.835	6r	-1.835	5r6ro	20.164	20.164
34	6r	1.835	7r	-1.835	6r7ro	23.834	23.834

35	3u	1.835	4u	-1.835	3u4uo	12.824	12.824
36	4u	1.835	5u	-1.835	4u5uo	16.494	16.494
37	5u	1.835	6u	-1.835	5u6uo	20.164	20.164
38	6u	1.835	7u	-1.835	6u7uo	23.834	23.834
39	7n	1.835	7vrn	0.000	7vrhno	27.504	28.404
40	7r	1.835	7vrr	0.000	7vrhro	27.504	28.404
41	7u	1.835	7vru	0.000	7vrhuo	27.504	28.404

thermal zone to air flow node mapping:

```

thermal zone -> air flow node
3r           -> 3r
3u           -> 3u
3n           -> 3n
4r           -> 4r
4u           -> 4u
4n           -> 4n
5n           -> 5n
5r           -> 5r
5u           -> 5u
6r           -> 6r
6u           -> 6u
6n           -> 6n
7r           -> 7r
7u           -> 7u
7n           -> 7n

```

ID	Zone Name	Volume m^3	Surface				~Floor	
			No.	Opaque	Transp			
1	3r	14.1	8	12.7	28.8	3.8	3nproh	
2	3u	46.8	6	59.4	59.4	12.8	3npulice	
3	3n	26.6	6	35.5	35.5	7.3	3npnamesti	
4	4r	14.1	8	8.8	32.7	3.8	roh4np	
5	4u	46.8	6	46.6	72.1	12.8	4npulice	
6	4n	26.6	6	28.3	42.8	7.3	4n	
7	5n	26.6	6	28.3	42.8	7.3	5n	
8	5r	14.1	8	8.8	32.7	3.8	5r	
9	5u	46.8	6	46.6	72.1	12.8	5u	
10	6r	14.1	8	8.8	32.7	3.8	6r	
11	6u	46.8	6	46.6	72.1	12.8	6u	
12	6n	26.6	6	28.3	42.8	7.3	6n	
13	7r	14.1	8	12.7	28.8	3.8	7r	
14	7u	46.8	6	59.4	59.4	12.8	7u	
15	7n	26.6	6	35.5	35.5	7.3	7n	
	all	438.	100	466.	690.	119.		

Zone 3r (1) is composed of 8 surfaces and 12 vertices.

It encloses a volume of 14.1m^3 of space, with a total surface area of 41.5m^2 & approx floor area of 3.85m^2

3nproh

There is 20.732m2 of exposed surface area, 16.882m2 of which is vertical.

Facade opaque is 3.8500m2 & 100.0 % of floor area & average U of 0.348 & UA of 1.3395.

Facade glazing is 16.882m2 & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639

Facade glazing is 16.882m2 & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639

A summary of the surfaces in 3r(1) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	8.44	140.	0.	Wall-1	ext_sklo VERT -	sklo	< external
2	4.04	50.	0.	Wall-2	SC_ficti VERT -	fiktivni	< Wall-4:3u
3	4.40	320.	0.	Wall-3	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
4	4.40	50.	0.	Wall-4	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
5	4.04	320.	0.	Wall-5	SC_ficti VERT -	fiktivni	< Wall-1:3n
6	8.44	230.	0.	Wall-6	ext_sklo VERT -	sklo	< external
7	3.85	0.	90.	Top-7	SC_ficti CEIL -	fiktivni	< Base-8:4r
8	3.85	0.	-90.	Base-8	OPAQUE FLOR -	spodek	< external

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-1 Wall-6 Base-8

Insolation sources (all applicable):

Wall-1 Wall-6

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Ventilation & infiltration is assessed via network analysis and the associated network node is: 3r

Notes:

Nothing happens in this zone i.e. no occupants lights and small power. Initial period of 0-24 hour for each.

Daytype	Gain No.	Label	Type	Unit	Period Hours	Sensible Magn. (W)	Latent Magn. (W)	Radiant Fraction	Convec Fraction
weekdays	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
weekdays	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
weekdays	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
saturday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
saturday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
saturday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
sunday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
sunday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
sunday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
holiday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
holiday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
holiday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60

Zone 3u (2) is composed of 6 surfaces and 8 vertices. It encloses a volume of 46.8m³ of space, with a total surface area of 119.m² & approx floor area of 12.8m²

3npulice
 There is 55.332m² of exposed surface area, 42.572m² of which is vertical.
 Facade opaque is 12.760m² & 100.0 % of floor area & average U of 0.348 & UA of 4.4394.
 Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09
 Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09

A summary of the surfaces in 3u(2) follows:

Sur	Area	Azim	Elev	surface		geometry		construction	environment
	m^2	deg	deg	name		optical locat use		name	other side
1	42.6	140.	0.	Wall-1		ext_sklo VERT -		sklo	< external
2	4.04	50.	0.	Wall-2		OPAQUE VERT -		boky	< constant @ 26dC & OW rad
3	42.6	320.	0.	Wall-3		OPAQUE VERT -		intfas	< constant @ 26dC & OW rad
4	4.04	230.	0.	Wall-4		SC_ficti VERT -		fiktivni	< Wall-2:3r
5	12.8	0.	90.	Top-5		SC_ficti CEIL -		fiktivni	< Base-6:4u
6	12.8	0.	-90.	Base-6		OPAQUE FLOR -		spodek	< external

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-1 Base-6

Insolation sources (all applicable):

Wall-1

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Ventilation & infiltration is assessed via network analysis and the associated network node is: 3u

Notes:

Nothing happens in this zone i.e. no occupants lights and small power. Initial period of 0-24 hour for each.

Daytype	Gain No.	Label	Type	Unit	Period Hours	Sensible Magn. (W)	Latent Magn. (W)	Radiant Fraction	Convec Fraction
weekdays	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
weekdays	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
weekdays	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
saturday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
saturday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
saturday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
sunday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
sunday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
sunday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
holiday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
holiday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
holiday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60

Zone 3n (3) is composed of 6 surfaces and 8 vertices.

It encloses a volume of 26.6m^3 of space, with a total surface area of 71.0m^2 & approx floor area of 7.26m^2

3npnamesti

There is 31.482m2 of exposed surface area, 24.222m2 of which is vertical.

Facade opaque is 7.260m2 & 100.0 % of floor area & average U of 0.348 & UA of 2.5259.

Facade glazing is 24.222m2 & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

Facade glazing is 24.222m2 & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

A summary of the surfaces in 3n(3) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	4.04	140.	0.	Wall-1	SC_ficti VERT -	fiktivni	< Wall-5:3r
2	24.2	50.	-0.	Wall-2	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
3	4.04	320.	0.	Wall-3	OPAQUE VERT -	boky	< constant @ 26dC & OW rad
4	24.2	230.	0.	Wall-4	ext_sklo VERT -	sklo	< external
5	7.26	0.	90.	Top-5	SC_ficti CEIL -	fiktivni	< Base-6:4n
6	7.26	0.	-90.	Base-6	OPAQUE FLOR -	spodek	< external

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-4 Base-6

Insolation sources (all applicable):

Wall-4

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Ventilation & infiltration is assessed via network analysis and the associated network node is: 3n

Notes:

Nothing happens in this zone i.e. no occupants lights and small power.

Initial period of 0-24 hour for each.

Daytype	Gain No.	Label	Type	Unit	Period Hours	Sensible Magn. (W)	Latent Magn. (W)	Radiant Fraction	Convec Fraction
weekdays	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
weekdays	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
weekdays	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
saturday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
saturday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
saturday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
sunday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
sunday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
sunday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60
holiday	1	Occupants	people	W	0-24	0.0	0.0	0.60	0.40
holiday	2	Lights	lighting	W	0-24	0.0	0.0	0.30	0.70
holiday	3	SmallPower	equipment	W	0-24	0.0	0.0	0.40	0.60

Zone 4r (4) is composed of 8 surfaces and 12 vertices.
 It encloses a volume of 14.1m³ of space, with a total surface area of 41.5m² & approx floor area of 3.85m²
 roh4np

There is 16.882m² of exposed surface area, 16.882m² of which is vertical.
 Facade glazing is 16.882m² & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639
 Facade glazing is 16.882m² & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639

A summary of the surfaces in 4r(4) follows:

Sur	Area	Azim	Elev	surface		geometry		construction	environment
	m^2	deg	deg	name		optical locat use		name	other side
1	8.44	140.	0.	Wall-1		ext_sklo VERT -		sklo	< external
2	4.04	50.	0.	Wall-2		SC_ficti VERT -		fiktivni	< Wall-4:4u
3	4.40	320.	0.	Wall-3		OPAQUE VERT -		intfas	< constant @ 26dC & OW rad
4	4.40	50.	0.	Wall-4		OPAQUE VERT -		intfas	< constant @ 26dC & OW rad
5	4.04	320.	0.	Wall-5		SC_ficti VERT -		fiktivni	< Wall-1:4n
6	8.44	230.	0.	Wall-6		ext_sklo VERT -		sklo	< external
7	3.85	0.	90.	Top-7		SC_ficti CEIL -		fiktivni	< Base-8:5r
8	3.85	0.	-90.	Base-8		SC_ficti FLOR -		fiktivni	< Top-7:3r

An hourly solar radiation distribution is used for this zone.
 Surfaces (all applicable) for shading analysis:

Wall-1 Wall-6

Insolation sources (all applicable):

Wall-1 Wall-6

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3r

Zone 4u (5) is composed of 6 surfaces and 8 vertices.
 It encloses a volume of 46.8m³ of space, with a total surface area of 119.m² & approx floor area of 12.8m²
 4npulice

There is 42.572m² of exposed surface area, 42.572m² of which is vertical.
 Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09
 Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09

A summary of the surfaces in 4u(5) follows:

Sur	Area	Azim	Elev	surface		geometry		construction	environment
	m^2	deg	deg	name		optical locat use		name	other side
1	42.6	140.	0.	Wall-1		ext_sklo VERT -		sklo	< external
2	4.04	50.	0.	Wall-2		OPAQUE VERT -		boky	< constant @ 26dC & OW rad
3	42.6	320.	0.	Wall-3		OPAQUE VERT -		intfas	< constant @ 26dC & OW rad
4	4.04	230.	0.	Wall-4		SC_ficti VERT -		fiktivni	< Wall-2:4r
5	12.8	0.	90.	Top-5		SC_ficti CEIL -		fiktivni	< Base-6:5u
6	12.8	0.	-90.	Base-6		SC_ficti FLOR -		fiktivni	< Top-5:3u

An hourly solar radiation distribution is used for this zone.
 Surfaces (all applicable) for shading analysis:

Wall-1

Insolation sources (all applicable):

Wall-1

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3u

Zone 4n (6) is composed of 6 surfaces and 8 vertices.
 It encloses a volume of 26.6m³ of space, with a total surface area of 71.0m² & approx floor area of 7.26m²

4n

There is 24.222m² of exposed surface area, 24.222m² of which is vertical.

Facade glazing is 24.222m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

Facade glazing is 24.222m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

A summary of the surfaces in 4n(6) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	4.04	140.	0.	Wall-1	SC_ficti VERT -	fiktivni	< Wall-5:4r
2	24.2	50.	-0.	Wall-2	OPAQUE VERT -	intfas	< constant @ 26dC & 0W rad
3	4.04	320.	0.	Wall-3	OPAQUE VERT -	boky	< constant @ 26dC & 0W rad
4	24.2	230.	0.	Wall-4	ext_sklo VERT -	sklo	< external
5	7.26	0.	90.	Top-5	SC_ficti CEIL -	fiktivni	< Base-6:5n
6	7.26	0.	-90.	Base-6	SC_ficti FLOR -	fiktivni	< Top-5:3n

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-4

Insolation sources (all applicable):

Wall-4

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3n

Zone 5n (7) is composed of 6 surfaces and 8 vertices.

It encloses a volume of 26.6m³ of space, with a total surface area of 71.0m² & approx floor area of 7.26m²

5n

There is 24.222m² of exposed surface area, 24.222m² of which is vertical.

Facade glazing is 24.222m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

Facade glazing is 24.222m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

A summary of the surfaces in 5n(7) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	4.04	140.	0.	Wall-1	SC_ficti VERT -	fiktivni	< Wall-5:5r
2	24.2	50.	-0.	Wall-2	OPAQUE VERT -	intfas	< constant @ 26dC & 0W rad
3	4.04	320.	0.	Wall-3	OPAQUE VERT -	boky	< constant @ 26dC & 0W rad
4	24.2	230.	0.	Wall-4	ext_sklo VERT -	sklo	< external
5	7.26	0.	90.	Top-5	SC_ficti CEIL -	fiktivni	< Base-6:6n
6	7.26	0.	-90.	Base-6	SC_ficti FLOR -	fiktivni	< Top-5:4n

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-4

Insolation sources (all applicable):

Wall-4

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3n

Zone 5r (8) is composed of 8 surfaces and 12 vertices.
 It encloses a volume of 14.1m³ of space, with a total surface
 area of 41.5m² & approx floor area of 3.85m²

5r

There is 16.882m² of exposed surface area, 16.882m² of which is vertical.

Facade glazing is 16.882m² & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639
 Facade glazing is 16.882m² & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639

A summary of the surfaces in 5r(8) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	8.44	140.	0.	Wall-1	ext_sklo VERT -	sklo	< external
2	4.04	50.	0.	Wall-2	SC_ficti VERT -	fiktivni	< Wall-4:5u
3	4.40	320.	0.	Wall-3	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
4	4.40	50.	0.	Wall-4	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
5	4.04	320.	0.	Wall-5	SC_ficti VERT -	fiktivni	< Wall-1:5n
6	8.44	230.	0.	Wall-6	ext_sklo VERT -	sklo	< external
7	3.85	0.	90.	Top-7	SC_ficti CEIL -	fiktivni	< Base-8:6r
8	3.85	0.	-90.	Base-8	SC_ficti FLOR -	fiktivni	< Top-7:4r

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-1 Wall-6

Insolation sources (all applicable):

Wall-1 Wall-6

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3r

Zone 5u (9) is composed of 6 surfaces and 8 vertices.
 It encloses a volume of 46.8m³ of space, with a total surface
 area of 119.m² & approx floor area of 12.8m²

5u

There is 42.572m² of exposed surface area, 42.572m² of which is vertical.

Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09
 Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09

A summary of the surfaces in 5u(9) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	42.6	140.	0.	Wall-1	ext_sklo VERT -	sklo	< external
2	4.04	50.	0.	Wall-2	OPAQUE VERT -	boky	< constant @ 26dC & OW rad
3	42.6	320.	0.	Wall-3	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
4	4.04	230.	0.	Wall-4	SC_ficti VERT -	fiktivni	< Wall-2:5r
5	12.8	0.	90.	Top-5	SC_ficti CEIL -	fiktivni	< Base-6:6u
6	12.8	0.	-90.	Base-6	SC_ficti FLOR -	fiktivni	< Top-5:4u

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-1

Insolation sources (all applicable):

Wall-1

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3u

Zone 6r (10) is composed of 8 surfaces and 12 vertices.
 It encloses a volume of 14.1m³ of space, with a total surface
 area of 41.5m² & approx floor area of 3.85m²

6r

There is 16.882m² of exposed surface area, 16.882m² of which is vertical.

Facade glazing is 16.882m² & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639
 Facade glazing is 16.882m² & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639

A summary of the surfaces in 6r(10) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	8.44	140.	0.	Wall-1	ext_sklo VERT -	sklo	< external
2	4.04	50.	0.	Wall-2	SC_ficti VERT -	fiktivni	< Wall-4:6u
3	4.40	320.	0.	Wall-3	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
4	4.40	50.	0.	Wall-4	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
5	4.04	320.	0.	Wall-5	SC_ficti VERT -	fiktivni	< Wall-1:6n
6	8.44	230.	0.	Wall-6	ext_sklo VERT -	sklo	< external
7	3.85	0.	90.	Top-7	SC_ficti CEIL -	fiktivni	< Base-8:7r
8	3.85	0.	-90.	Base-8	SC_ficti FLOR -	fiktivni	< Top-7:5r

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-1 Wall-6

Insolation sources (all applicable):

Wall-1 Wall-6

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3r

Zone 6u (11) is composed of 6 surfaces and 8 vertices.
 It encloses a volume of 46.8m³ of space, with a total surface
 area of 119.m² & approx floor area of 12.8m²

6u

There is 42.572m² of exposed surface area, 42.572m² of which is vertical.

Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09
 Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09

A summary of the surfaces in 6u(11) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	42.6	140.	0.	Wall-1	ext_sklo VERT -	sklo	< external
2	4.04	50.	0.	Wall-2	OPAQUE VERT -	boky	< constant @ 26dC & OW rad
3	42.6	320.	0.	Wall-3	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
4	4.04	230.	0.	Wall-4	SC_ficti VERT -	fiktivni	< Wall-2:6r
5	12.8	0.	90.	Top-5	SC_ficti CEIL -	fiktivni	< Base-6:7u
6	12.8	0.	-90.	Base-6	SC_ficti FLOR -	fiktivni	< Top-5:5u

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-1

Insolation sources (all applicable):

Wall-1

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3u

Zone 6n (12) is composed of 6 surfaces and 8 vertices.

It encloses a volume of 26.6m³ of space, with a total surface area of 71.0m² & approx floor area of 7.26m²

6n

There is 24.222m² of exposed surface area, 24.222m² of which is vertical.

Facade glazing is 24.222m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

Facade glazing is 24.222m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

A summary of the surfaces in 6n(12) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	4.04	140.	0.	Wall-1	SC_ficti VERT -	fiktivni	< Wall-5:6r
2	24.2	50.	-0.	Wall-2	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
3	4.04	320.	0.	Wall-3	OPAQUE VERT -	boky	< constant @ 26dC & OW rad
4	24.2	230.	0.	Wall-4	ext_sklo VERT -	sklo	< external
5	7.26	0.	90.	Top-5	SC_ficti CEIL -	fiktivni	< Base-6:7n
6	7.26	0.	-90.	Base-6	SC_ficti FLOR -	fiktivni	< Top-5:5n

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-4

Insolation sources (all applicable):

Wall-4

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3n

Zone 7r (13) is composed of 8 surfaces and 12 vertices.

It encloses a volume of 14.1m³ of space, with a total surface area of 41.5m² & approx floor area of 3.85m²

7r

There is 20.732m² of exposed surface area, 16.882m² of which is vertical.

Flat roof is 100.00 % of floor area & average U of 0.232 & UA of 0.89446.

Facade glazing is 16.882m² & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639

Facade glazing is 16.882m² & 438.5 % of floor & 100.0 % facade with average U of 5.428 & UA of 91.639

A summary of the surfaces in 7r(13) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	8.44	140.	0.	Wall-1	ext_sklo VERT -	sklo	< external
2	4.04	50.	0.	Wall-2	SC_ficti VERT -	fiktivni	< Wall-4:7u
3	4.40	320.	0.	Wall-3	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
4	4.40	50.	0.	Wall-4	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
5	4.04	320.	0.	Wall-5	SC_ficti VERT -	fiktivni	< Wall-1:7n
6	8.44	230.	0.	Wall-6	ext_sklo VERT -	sklo	< external
7	3.85	0.	90.	Top-7	OPAQUE CEIL -	vrsek	< external
8	3.85	0.	-90.	Base-8	SC_ficti FLOR -	fiktivni	< Top-7:6r

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-1 Wall-6 Top-7

Insolation sources (all applicable):

Wall-1 Wall-6

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3r

Zone 7u (14) is composed of 6 surfaces and 8 vertices.

It encloses a volume of 46.8m³ of space, with a total surface area of 119.m² & approx floor area of 12.8m²

7u

There is 55.332m² of exposed surface area, 42.572m² of which is vertical.

Flat roof is 100.00 % of floor area & average U of 0.232 & UA of 2.9645.

Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09

Facade glazing is 42.572m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 231.09

A summary of the surfaces in 7u(14) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	42.6	140.	0.	Wall-1	ext_sklo VERT -	sklo	< external
2	4.04	50.	0.	Wall-2	OPAQUE VERT -	boky	< constant @ 26dC & OW rad
3	42.6	320.	0.	Wall-3	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
4	4.04	230.	0.	Wall-4	SC_ficti VERT -	fiktivni	< Wall-2:7r
5	12.8	0.	90.	Top-5	OPAQUE CEIL -	vrsek	< external
6	12.8	0.	-90.	Base-6	SC_ficti FLOR -	fiktivni	< Top-5:6u

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-1 Top-5

Insolation sources (all applicable):

Wall-1

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3u

Zone 7n (15) is composed of 6 surfaces and 8 vertices.

It encloses a volume of 26.6m³ of space, with a total surface area of 71.0m² & approx floor area of 7.26m²

7n

There is 31.482m² of exposed surface area, 24.222m² of which is vertical.

Flat roof is 100.00 % of floor area & average U of 0.232 & UA of 1.6867.

Facade glazing is 24.222m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

Facade glazing is 24.222m² & 333.6 % of floor & 100.0 % facade with average U of 5.428 & UA of 131.48

A summary of the surfaces in 7n(15) follows:

Sur	Area	Azim	Elev	surface	geometry	construction	environment
	m^2	deg	deg	name	optical locat use	name	other side
1	4.04	140.	0.	Wall-1	SC_ficti VERT -	fiktivni	< Wall-5:7r
2	24.2	50.	-0.	Wall-2	OPAQUE VERT -	intfas	< constant @ 26dC & OW rad
3	4.04	320.	0.	Wall-3	OPAQUE VERT -	boky	< constant @ 26dC & OW rad
4	24.2	230.	0.	Wall-4	ext_sklo VERT -	sklo	< external
5	7.26	0.	90.	Top-5	OPAQUE CEIL -	vrsek	< external
6	7.26	0.	-90.	Base-6	SC_ficti FLOR -	fiktivni	< Top-5:6n

An hourly solar radiation distribution is used for this zone.

Surfaces (all applicable) for shading analysis:

Wall-4 Top-5

Insolation sources (all applicable):

Wall-4

Block	X-	Y-	Z-coords	DX-	DY-	DZ-values	Orientation	Opacity	Name	Construction
1	10.9	-13.0	0.0	40.0	1.0	23.4	40.0	0.0	1.00 blok	NONE

Shading patterns have been calculated for this zone.

Uses same operations as zone 3n

Project floor area is 119.35m², wall area is 23.870m², window area is 418.38m².
 Sloped roof area is 0.00m², flat roof area is 23.870m², skylight area is 0.00m².
 In contact with ground 0.00m².
 There is 466.12m² of outside surface area, 418.38m² of which is vertical.

Outside walls are 20.000 % of floor area & average U of 0.348 & UA of 8.3047 & max MLC thickness 0.000
 Flat roof is 20.000 % of floor area & average U of 0.232 & UA of 5.5456
 Glazing is 350.55 % of floor & 100.00 % facade with average U of 5.428 & UA of 2271.1

Multi-layer constructions used:

Details of transparent construction: fiktivni with SC_fictit optics and overall thickness 0.004

Layer	Thick (mm)	Conduc- tivity	Density	Specif heat	IR emis	Solar abs	Diffu resis	R	Kg	Description
1	4.0	20.000	10.	10.	0.99	0.01	19200.	0.00	0.0	fict : fictitious material (almost not there)

with matching single layer optics
 ISO 6946 U values (horiz/upward/downward heat flow)= 5.875 7.133 4.757 (partition) 3.843
 Weight per m² of this construction 0.04

Admittance calculations using Rsi 0.12 Rso 0.06 & Uvalue= 5.55
 External surface admittance Y= 5.55 w= 0.00 decrement factor f= 0.33 phi= 0.00 surface factor f= 0.33
 phi= 0.00
 Partition admittance Y= 0.00 w= 6.00 surface factor f= 1.00 phi= 0.00

Fictitious 99/99, 4mm, no blind: with id of: SC_fictit
 with 1 layers [including air gaps] and visible trn: 0.99
 Direct transmission @ 0, 40, 55, 70, 80 deg
 0.998 0.987 0.986 0.985 0.984
 Layer| absorption @ 0, 40, 55, 70, 80 deg
 1 0.001 0.001 0.001 0.001 0.001
 Total area of fiktivni is 271.70

Details of transparent construction: sklo with ext_sklo optics and overall thickness 0.013

Layer	Thick (mm)	Conduc- tivity	Density	Specif heat	IR emis	Solar abs	Diffu resis	R	Kg	Description
1	12.8	0.900	2500.	750.	0.84	0.06	19200.	0.01	32.0	antisun : Antisun glass with placeholder single layer optics

ISO 6946 U values (horiz/upward/downward heat flow)= 5.428 6.484 4.460 (partition) 3.647
 Weight per m² of this construction 32.00

Admittance calculations using Rsi 0.12 Rso 0.06 & Uvalue= 5.15
 External surface admittance Y= 5.17 w= 0.15 decrement factor f= 0.38 phi= 0.25 surface factor f= 0.38
 phi= 0.25
 Partition admittance Y= 0.60 w= 5.72 surface factor f= 1.00 phi= 0.28

SGG Neutral: with id of: ext_sklo
 with 1 layers [including air gaps] and visible trn: 0.64
 Direct transmission @ 0, 40, 55, 70, 80 deg
 0.540 0.518 0.480 0.374 0.225
 Layer| absorption @ 0, 40, 55, 70, 80 deg
 1 0.344 0.362 0.368 0.371 0.293
 Total area of sklo is 418.38

Details of opaque construction: vrsek and overall thickness 0.390
 In category roofs also shown in menus as: vrsek
 no documentation yet for terasa inroofs

Layer	Thick (mm)	Conduc- tivity	Density	Specif heat	IR emis	Solar abs	Diffu resis	R	Kg	Description
Ext	230.0	1.400	2100.	653.	0.90	0.65	19.	0.16	483.0	heavy mix concrete : Heavy mix concrete
Int	160.0	0.040	105.	1800.	0.90	0.60	1.	4.00	16.8	mineral fibre : Mineral fibre (non-hygroscopic)

ISO 6946 U values (horiz/upward/downward heat flow)= 0.231 0.232 0.229 (partition) 0.226
 Weight per m² of this construction 499.80

Admittance calculations using Rsi 0.12 Rso 0.06 & Uvalue= 0.23
 External surface admittance Y= 0.69 w= 2.86 decrement factor f= 0.94 phi= 0.23 surface factor f= 0.94
 phi= 0.23
 Partition admittance Y= 0.73 w= 2.69 surface factor f= 0.93 phi= 0.23
 Total area of vrsek is 23.87

Details of opaque construction: spodek and overall thickness 0.330
 In category ceil_floor also shown in menus as: spodek
 no documentation yet for podlaha_3np inceil_floor

Layer	Thick (mm)	Conduc- tivity	Density	Specif heat	IR emis	Solar abs	Diffu resis	R m^2K/W	Kg m^2	Description
Ext	230.0	1.400	2100.	653.	0.90	0.65	19.	0.16	483.0	heavy mix concrete : Heavy mix concrete
Int	100.0	0.040	105.	1800.	0.90	0.60	1.	2.50	10.5	mineral fibre : Mineral fibre (non-hygroscopic)

ISO 6946 U values (horiz/upward/downward heat flow)= 0.353 0.357 0.348 (partition) 0.342
Weight per m^2 of this construction 493.50

Admittance calculations using Rsi 0.12 Rso 0.06 & Uvalue= 0.35
External surface admittance Y= 0.63 w= 2.57 decrement factor f= 0.94 phi= 0.19 surface factor f= 0.94
phi= 0.19
Partition admittance Y= 0.73 w= 2.65 surface factor f= 0.93 phi= 0.23
Total area of spodek is 23.87

Details of opaque construction: intfas and overall thickness 0.108
In category walls also shown in menus as: intfas
no documentation yet for fasada_Fl inwalls

Layer	Thick (mm)	Conduc- tivity	Density	Specif heat	IR emis	Solar abs	Diffu resis	R m^2K/W	Kg m^2	Description
Ext	11.5	0.760	2710.	837.	0.83	0.50	19200.	0.02	31.2	plate glass : Plate glass with placeholder
single layer optics										
2	14.0	0.000	0.	0.	0.99	0.99	1.	0.42	0.0	air 0.42 0.42 0.42
3	6.0	0.760	2710.	837.	0.83	0.50	19200.	0.01	16.3	plate glass : Plate glass with placeholder
single layer optics										
4	14.0	0.000	0.	0.	0.99	0.99	1.	0.42	0.0	air 0.42 0.42 0.42
5	11.5	0.760	2710.	837.	0.83	0.50	19200.	0.02	31.2	plate glass : Plate glass with placeholder
single layer optics										
6	50.0	0.000	0.	0.	0.99	0.99	1.	0.09	0.1	air 0.09 0.09 0.09
Int	1.0	210.000	2700.	880.	0.85	0.52	19200.	0.00	2.7	aluminium : Aluminium

ISO 6946 U values (horiz/upward/downward heat flow)= 0.879 0.902 0.849 (partition) 0.814
Weight per m^2 of this construction 81.39

Admittance calculations using Rsi 0.12 Rso 0.06 & Uvalue= 0.87
External surface admittance Y= 1.95 w= 2.89 decrement factor f= 0.85 phi= 0.73 surface factor f= 0.85
phi= 0.73
Partition admittance Y= 2.03 w= 4.38 surface factor f= 0.93 phi= 0.93
Total area of intfas is 378.01

Details of opaque construction: boky and overall thickness 0.057
In category walls also shown in menus as: boky
no documentation yet for fasada_bok

Layer	Thick (mm)	Conduc- tivity	Density	Specif heat	IR emis	Solar abs	Diffu resis	R m^2K/W	Kg m^2	Description
Ext	11.5	0.760	2710.	837.	0.83	0.50	19200.	0.02	31.2	plate glass : Plate glass with placeholder
single layer optics										
2	14.0	0.000	0.	0.	0.99	0.99	1.	0.42	0.0	air 0.42 0.42 0.42
3	6.0	0.760	2710.	837.	0.83	0.50	19200.	0.01	16.3	plate glass : Plate glass with placeholder
single layer optics										
4	14.0	0.000	0.	0.	0.99	0.99	1.	0.42	0.0	air 0.42 0.42 0.42
Int	11.5	0.760	2710.	837.	0.83	0.50	19200.	0.02	31.2	plate glass : Plate glass with placeholder
single layer optics										

ISO 6946 U values (horiz/upward/downward heat flow)= 0.954 0.982 0.919 (partition) 0.879
Weight per m^2 of this construction 78.62

Admittance calculations using Rsi 0.12 Rso 0.06 & Uvalue= 0.95
External surface admittance Y= 2.08 w= 3.26 decrement factor f= 0.86 phi= 0.85 surface factor f= 0.86
phi= 0.85
Partition admittance Y= 2.15 w= 4.86 surface factor f= 0.96 phi= 1.00
Total area of boky is 40.37