

**QUADGRID parameter association with zones**

Zones	Floor no	Floor parameters	Rotation parameters	Façade design parameters				Glazing types				Complexity
				North (N)	South (S)	East (E)	West (W)	Glz_N	Glz_S	Glz_E	Glz_W	
Zone1	1 to 6	H1	R1	x1 x2 x3 x4 x5	x6 x7 x8 x9 x10	x11 x12 x13 x14 x15	x16 x17 x18 x19 x20	Glz_N	Glz_S	Glz_E	Glz_W	26 variables
Zone2	7 to 12	H1 H2	R1 R2									28 variables
Zone3	13 to 18	H1 H2 H3	R1 R2 R3									30 variables
Zone4	19 to 24	H1 H2 H3 H4	R1 R2 R3 R4									32 variables
Zone5	25 to 30	H1 H2 H3 H4 H5	R1 R2 R3 R4 R5									34 variables
Zone6	31 to 36	H1 H2 H3 H4 H5 H6	R1 R2 R3 R4 R5 R6									36 variables
Zone7	37 to 42	H1 H2 H3 H4 H5 H6 H7	R1 R2 R3 R4 R5 R6 R7									38 variables
Zone8	43 to 48	H1 H2 H3 H4 H5 H6 H7 H8	R1 R2 R3 R4 R5 R6 R7 R8									40 variables
Zone9	49 to 54	H1 H2 H3 H4 H5 H6 H7 H8 H9	R1 R2 R3 R4 R5 R6 R7 R8 R9									42 variables
Zone10	55 to 60	H1 H2 H3 H4 H5 H6 H7 H8 H9 H10	R1 R2 R3 R4 R5 R6 R7 R8 R9 R10									44 variables

**Notations and boundaries of parameters**

Notation	Explanation	Boundary	Unit
H1 - H10	Floor to floor height of zones from zone 1 to zone 10	[4.0, 5.0]	Meter
R1 - R10	Rotation of zones from zone 1 to zone 10	[-10, 10]	Degree
x1, x6, x11, x16	Amount of vertical shading devices for N-S-E-W	[0, 8]	-
x2, x7, x12, x17	Length of vertical shading devices for N-S-E-W	[0.0, 1.5]	Meter
x3, x8, x13, x18	Rotation of vertical shading devices for N-S-E-W	[-60.0, 60.0]	Degree
x4, x9, x14, x19	Amount of horizontal shading devices for N-S-E-W	[0, 2]	-
x5, x10, x15, x20	Length of horizontal shading devices for N-S-E-W	[0.0, 1.5]	Meter
Glz_N-S-E-W	Glazing types for N-S-E-W orientations	[1, 4]*	-

**Radiance parameters used to collect simulation results**

-aa	-ab	-ad	-ar	-as
0.15	2	512	256	128

-aa: ambient accuracy  
 -ab: ambient bounces  
 -ad: ambient divisions  
 -ar: ambient resolution  
 -as: ambient super-samples

**Collection of samples from floors**

Zone	Sample	Floor
Zone1	ASE_1 & sDA_1	2. floor
	ASE_2 & sDA_2	5. floor
Zone2	ASE_1 & sDA_1	8. floor
	ASE_2 & sDA_2	11. floor
Zone3	ASE_1 & sDA_1	14. floor
	ASE_2 & sDA_2	17. floor
Zone4	ASE_1 & sDA_1	20. floor
	ASE_2 & sDA_2	23. floor
Zone5	ASE_1 & sDA_1	26. floor
	ASE_2 & sDA_2	29. floor
Zone6	ASE_1 & sDA_1	32. floor
	ASE_2 & sDA_2	35. floor
Zone7	ASE_1 & sDA_1	38. floor
	ASE_2 & sDA_2	41. floor
Zone8	ASE_1 & sDA_1	44. floor
	ASE_2 & sDA_2	47. floor
Zone9	ASE_1 & sDA_1	50. floor
	ASE_2 & sDA_2	53. floor
Zone10	ASE_1 & sDA_1	56. floor
	ASE_2 & sDA_2	59. floor

Material	Explanation	Visual Trans.	U Value	G Value
*Glazing 1 (double):	Tinted Float 8mm Blue–12 mm Air–Temperable Low-E 8mm Blue	0.22	1.6	28%
*Glazing 2 (triple):	Temperable Low-E 8mm Neutral–12 mm Air–Clear Float 8 mm–12 mm Air–Temperable Low-E 8 mm Green	0.45	0.9	40%
*Glazing 3 (single):	Tinted Float 8 mm Green	0.68	5.6	51%
*Glazing 4 (double):	Ultra Clear Float 8 mm–12 mm Air–Ultra Clear Float 8 mm	0.82	2.8	81%