Table 5. Uncertainty of the model parameters for District E3 in Abu Dhabi.

Group	No	Parameter	Unit	Distribution	Uncertainty
Meteorological factors	A1	Daytime urban boundary layer height	m	Uniform	500-1000
	A2	Nighttime urban boundary layer height	m	Uniform	50-100
	A3	Reference height of the VDM	m	Uniform	100-200
	A4	Circulation coefficient	-	Uniform	0.8-1.2
	A5	UCM-UBL exchange coefficient	-	Uniform	0.1-0.9
	A6	Heat flux threshold for daytime conditions	W/m^2	Uniform	150-250
	A7	Heat flux threshold for nighttime conditions	W/m^2	Uniform	40-60
Urban characteristics	B1	Average building height	m	Normal	35±5
	B2	Fraction of waste heat into canyon	-	Uniform	0.1-0.9
	B3	Building density	-	Normal	0.25±0.10
	B4	Vertical-to-horizontal ratio	-	Normal	2.2±0.5
	B5	Urban area characteristic length	m	Uniform	800-1200
	B6	Road albedo	-	Normal	0.165±0.080
	B7	Traffic sensible anthropogenic heat (peak)	W/m^2	Normal	20±5
Vegetation variables	C1	Urban grass coverage	-	Uniform	0-0.1
	C2	Urban tree coverage	-	Uniform	0-0.1
	C3	Vegetation albedo	-	Normal	0.25±0.05
	C4	Latent fraction of grass	-	Uniform	0.45-0.75
	C5	Latent fraction of tree	-	Uniform	0.5-0.9
	C6	Rural vegetation coverage	-	Uniform	0-0.1
Building systems	D1	Glazing ratio	-	Normal	0.5±0.15
	D2	Wall U-value	$W/m^2 \cdot K$	Normal	2.5±1
	D3	Window U-value	$W/m^2 \cdot K$	Normal	3.25±1
	D4	Window SHGC	-	Normal	0.60±0.15
	D5	Infiltration rate	ACH	Uniform	0.1-0.7
	D6	Chiller COP	-	Uniform	2-4
	D7	Indoor air temperature set point	^oC	Uniform	20-24
	D8	Equipment load density	W/m^2	Normal	13±3
	D9	Lighting load density	W/m^2	Normal	10±3
	D10	Occupancy density	m^2/person	Uniform	15-25

Note:

(a) For the parameters assumed to have a normal distribution, the uncertainty is represented as ($\mu \pm 3\delta$), where μ is the mean and δ is the standard deviation of the distribution.

(b) The parameter uncertainty is mainly assigned based on the data provided by the Abu Dhabi Municipality (via personal contact), and by the previous work in Toulouse (France), Basel (Switzerland) [17], and Singapore [18].

(c) The physical properties of some parameters are considered according to the work by Stewart and Oke [48]. Detailed physical definition of the parameters can be found in Refs. [17,18].