Table 3 Positive dimensionless air exchange rate (ACH+) for the street canyons with the void deck

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | $$\overbar{ACH}\_{Top}+/(V/T)$$ | $$ACH^{'}\_{Top}+/(V/T)$$ | $$\overbar{ACH}\_{Side1}+/(V/T)$$ | $$ACH^{'}\_{Side1}+/(V/T)$$ | $$\overbar{ACH}\_{Side2}+/(V/T)$$ | $$ACH^{'}\_{Side2}+/(V/T)$$ | $$\overbar{ACH}\_{Void deck1}+/(V/T)$$ | $$ACH^{'}\_{Void deck1}+/(V/T)$$ | $$\overbar{ACH}\_{Void deck2}+/(V/T)$$ | $$ACH^{'}\_{Void deck2}+/(V/T)$$ | $$\overbar{ACH}+/(V/T)$$ | $$ACH^{'}+/(V/T)$$ | $$ACH+/(V/T)$$ | $$\overbar{ACH}+/ACH$$ | $$ACH^{'}+/ACH$$ |
| Regular canyon (H/W=1) | 0.0333  | 0.1053  | 0.0020  | 0.0108  | 0.0020  | 0.0108  | -------- | -------- | -------- | -------- | 0.0372  | 0.1269  | 0.1642  | 22.7% | 77.3% |
| Void deck (H/6) | Leeward side | 0.0908  | 0.1217  | 0.0142  | 0.0093  | 0.0142  | 0.0093  | 0.0000  | 0.0107  | -------- | -------- | 0.1193  | 0.1511  | 0.2704  | 44.1% | 55.9% |
|  | Windward side | 0.0485  | 0.0915  | 0.0030  | 0.0104  | 0.0030  | 0.0104  | -------- | -------- | 0.0026  | 0.0056  | 0.0572  | 0.1179  | 0.1751  | 32.7% | 67.3% |
|  | Both side | 0.0329  | 0.1190  | 0.0066  | 0.0094  | 0.0066  | 0.0094  | 0.0000  | 0.0111  | 0.0854  | 0.0108  | 0.1315  | 0.1596  | 0.2911  | 45.2% | 54.8% |
| Void deck(H/4) | Leeward side | 0.1384  | 0.1177  | 0.0207  | 0.0089  | 0.0207  | 0.0089  | 0.0000  | 0.0200  | -------- | -------- | 0.1797  | 0.1555  | 0.3352  | 53.6% | 46.4% |
|  | Windward side | 0.0590  | 0.0879  | 0.0037  | 0.0101  | 0.0037  | 0.0101  | ---------- | ---------- | 0.0041  | 0.0096  | 0.0706  | 0.1177  | 0.1882  | 37.5% | 62.5% |
|  | Both side | 0.0301  | 0.1205  | 0.0075  | 0.0093  | 0.0075  | 0.0093  | 0.0000  | 0.0212  | 0.1513  | 0.0190  | 0.1964  | 0.1793  | 0.3757  | 52.3% | 47.7% |
| Regular canyon (H/W=2) | 0.0200  | 0.0622  | 0.0036  | 0.0107  | 0.0036  | 0.0107  | -------- | -------- | -------- | -------- | 0.0272  | 0.0836  | 0.1108  | 24.5% | 75.5% |
| Void deck(H/6) | Leeward side | 0.0483  | 0.0672  | 0.0118  | 0.0112  | 0.0118  | 0.0112  | 0.0000  | 0.0072  | -------- | -------- | 0.0718  | 0.0967  | 0.1686  | 42.6% | 57.4% |
|  | Windward side | 0.0364  | 0.0486  | 0.0073  | 0.0094  | 0.0073  | 0.0094  | -------- | -------- | 0.0000  | 0.0035  | 0.0509  | 0.0710  | 0.1219  | 41.8% | 58.2% |
|  | Both side | 0.0251  | 0.0642  | 0.0064  | 0.0118  | 0.0064  | 0.0118  | 0.0000  | 0.0072  | 0.0464  | 0.0056  | 0.0843  | 0.1007  | 0.1850  | 45.6% | 54.4% |
| Void deck(H/4) | Leeward side | 0.0735  | 0.0672  | 0.0173  | 0.0113  | 0.0173  | 0.0113  | 0.0000  | 0.0140  | -------- | -------- | 0.1082  | 0.1038  | 0.2120  | 51.0% | 49.0% |
|  | Windward side | 0.0447  | 0.0437  | 0.0095  | 0.0086  | 0.0095  | 0.0086  | -------- | -------- | 0.0000  | 0.0065  | 0.0637  | 0.0673  | 0.1310  | 48.6% | 51.4% |
|  | Both side | 0.0289  | 0.0642  | 0.0080  | 0.0122  | 0.0080  | 0.0122  | 0.0000  | 0.0143  | 0.0795  | 0.0106  | 0.1243  | 0.1135  | 0.2379  | 52.3% | 47.7% |

Table 4 Negative dimensionless air exchange rate (ACH-) for the street canyons with void deck

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | $$\overbar{ACH}\_{Top}-/(V/T)$$ | $$ACH^{'}\_{Top}-/(V/T)$$ | $$\overbar{ACH}\_{Side1}-/(V/T)$$ | $$ACH^{'}\_{Side1}-/(V/T)$$ | $$\overbar{ACH}\_{Side2}-/(V/T)$$ | $$ACH^{'}\_{Side2}-/(V/T)$$ | $$\overbar{ACH}\_{Void deck1}-/(V/T)$$ | $$ACH^{'}\_{Void deck1}-/(V/T)$$ | $$\overbar{ACH}\_{Void deck2}-/(V/T)$$ | $$ACH^{'}\_{Void deck2}-/(V/T)$$ | $$\overbar{ACH}-/(V/T)$$ | $$ACH^{'}-/(V/T)$$ | $$ACH-/(V/T)$$ | $$\overbar{ACH}-/ACH$$ | $$ACH^{'}-/ACH$$ |
| Regular canyon (H/W=1) | -0.0211  | -0.1053  | -0.0083  | -0.0108  | -0.0083  | -0.0108  | -------- | -------- | -------- | -------- | -0.0377  | -0.1269  | -0.1646  | 22.9% | 77.1% |
| Void deck (H/6) | Leeward side | -0.0089  | -0.1217  | -0.0000  | -0.0093  | -0.0000  | -0.0093  | -0.1128  | -0.0107  | -------- | -------- | -0.1217  | -0.1511  | -0.2728  | 44.6% | 55.4% |
| Windward side | -0.0120  | -0.0915  | -0.0042  | -0.0104  | -0.0042  | -0.0104  | -------- | -------- | -0.0392  | -0.0056  | -0.0596  | -0.1179  | -0.1774  | 33.6% | 66.4% |
| Both side | -0.0058  | -0.1190  | -0.0056  | -0.0094  | -0.0056  | -0.0094  | -0.1176  | -0.0111  | 0.0000  | -0.0108  | -0.1346  | -0.1596  | -0.2942  | 45.7% | 54.3% |
| Void deck(H/4) | Leeward side | -0.0109  | -0.1177  | -0.0000  | -0.0089  | -0.0000  | -0.0089  | -0.1714  | -0.0200  | -------- | -------- | -0.1823  | -0.1555  | -0.3378  | 54.0% | 46.0% |
| Windward side | -0.0101  | -0.0879  | -0.0023  | -0.0101  | -0.0023  | -0.0101  | -------- | -------- | -0.0581  | -0.0096  | -0.0729  | -0.1177  | -0.1905  | 38.3% | 61.7% |
| Both side | -0.0054  | -0.1205  | -0.0045  | -0.0093  | -0.0045  | -0.0093  | -0.1854  | -0.0212  | 0.0000  | -0.0190  | -0.1997  | -0.1793  | -0.3791  | 52.7% | 47.3% |
| Regular canyon (H/W=2) | -0.0245  | -0.0622  | -0.0015  | -0.0107  | -0.0015  | -0.0107  | -------- | -------- | -------- | -------- | -0.0276  | -0.0836  | -0.1112  | 24.8% | 75.2% |
| Void deck(H/6) | Leeward side | -0.0010  | -0.0672  | -0.0007  | -0.0112  | -0.0007  | -0.0112  | -0.0711  | -0.0072  | -------- | -------- | -0.0735  | -0.0967  | -0.1702  | 43.2% | 56.8% |
| Windward side | -0.0115  | -0.0486  | -0.0005  | -0.0094  | -0.0005  | -0.0094  | -------- | -------- | -0.0395  | -0.0035  | -0.0521  | -0.0710  | -0.1230  | 42.3% | 57.7% |
| Both side | -0.0048  | -0.0642  | -0.0047  | -0.0118  | -0.0047  | -0.0118  | -0.0715  | -0.0072  | 0.0000  | -0.0056  | -0.0857  | -0.1007  | -0.1864  | 46.0% | 54.0% |
| Void deck(H/4) | Leeward side | -0.0017  | -0.0672  | -0.0001  | -0.0113  | -0.0001  | -0.0113  | -0.1079  | -0.0140  | -------- | -------- | -0.1099  | -0.1038  | -0.2137  | 51.4% | 48.6% |
| Windward side | -0.0064  | -0.0437  | -0.0002  | -0.0086  | -0.0002  | -0.0086  | -------- | -------- | -0.0581  | -0.0065  | -0.0650  | -0.0673  | -0.1323  | 49.1% | 50.9% |
| Both side | -0.0049  | -0.0642  | -0.0055  | -0.0122  | -0.0055  | -0.0122  | -0.1102  | -0.0143  | 0.0000  | -0.0106  | -0.1261  | -0.1135  | -0.2396  | 52.6% | 47.4% |