

Lab Simulated year-round performance test: 10 day weather profiles

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Global Cooling Prize

Cooling for All without Warming the Planet

| LEGEND | DBT | RH % | GHI Wh/m2 | | | | | | | | | | | | |
|-------------|--------------|------|-----------|--------------|------|-----|----------------|------|-----|----------------|------|-----|-------------|------|-----|
| Day / Hours | Day 1 | | | Day 2 | | | Day 3 | | | Day 4 | | | Day 5 | | |
| | Warm and Dry | | | Warm and Dry | | | Warm and Humid | | | Warm and Humid | | | Hot and Dry | | |
| 0.5 | 20.2 | 54.6 | 0 | 24.3 | 47.0 | 0 | 26.9 | 88.8 | 0 | 25.4 | 88.9 | 0 | 31.1 | 62.1 | 0 |
| 1.5 | 19.2 | 58.5 | 0 | 23.4 | 48.9 | 0 | 26.6 | 89.3 | 0 | 24.9 | 89.5 | 0 | 30.5 | 65.1 | 0 |
| 2.5 | 18.7 | 61.0 | 0 | 22.5 | 51.3 | 0 | 26.4 | 89.4 | 0 | 24.5 | 90.9 | 0 | 30.0 | 67.2 | 0 |
| 3.5 | 17.8 | 65.4 | 0 | 21.6 | 55.0 | 0 | 26.3 | 89.6 | 0 | 24.2 | 92.1 | 0 | 29.3 | 71.2 | 0 |
| 4.5 | 17.4 | 68.3 | 0 | 21.5 | 56.7 | 0 | 26.4 | 89.3 | 0 | 24.4 | 93.3 | 0 | 29.1 | 73.5 | 0 |
| 5.5 | 16.8 | 71.3 | 0 | 22.2 | 55.4 | 0 | 26.5 | 89.1 | 0 | 25.1 | 93.0 | 0 | 28.9 | 75.5 | 0 |
| 6.5 | 17.4 | 69.1 | 0 | 23.9 | 50.1 | 3 | 27.0 | 88.0 | 0 | 26.4 | 90.2 | 0 | 29.5 | 73.1 | 0 |
| 7.5 | 18.4 | 65.3 | 0 | 26.1 | 43.5 | 166 | 27.5 | 86.3 | 50 | 27.9 | 85.3 | 69 | 30.4 | 69.7 | 100 |
| 8.5 | 20.8 | 57.2 | 91 | 28.6 | 36.3 | 430 | 28.2 | 83.6 | 215 | 29.7 | 79.1 | 287 | 31.9 | 62.8 | 300 |
| 9.5 | 23.1 | 50.6 | 331 | 30.7 | 31.3 | 672 | 28.8 | 81.5 | 374 | 31.3 | 72.5 | 499 | 33.4 | 57.2 | 524 |
| 10.5 | 25.6 | 44.5 | 582 | 32.4 | 27.4 | 833 | 29.3 | 79.4 | 512 | 32.5 | 67.0 | 647 | 35.1 | 50.5 | 726 |
| 11.5 | 27.1 | 41.0 | 724 | 33.5 | 25.1 | 925 | 29.5 | 78.6 | 575 | 33.0 | 63.1 | 743 | 36.5 | 46.1 | 877 |

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|-------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|-----|
| 12.5 | 28.3 | 37.6 | 779 | 34.2 | 23.4 | 932 | 29.5 | 78.3 | 589 | 33.1 | 61.6 | 711 | 37.9 | 41.2 | 941 |
| 13.5 | 28.6 | 35.9 | 724 | 34.7 | 22.4 | 887 | 29.4 | 78.9 | 617 | 32.6 | 61.9 | 646 | 39.0 | 38.1 | 942 |
| 14.5 | 29.1 | 34.2 | 674 | 34.9 | 21.5 | 817 | 29.3 | 78.9 | 552 | 31.8 | 63.7 | 483 | 39.9 | 34.8 | 890 |
| 15.5 | 28.8 | 34.1 | 521 | 34.7 | 21.7 | 604 | 29.0 | 79.9 | 438 | 30.8 | 66.4 | 357 | 40.1 | 34.2 | 735 |
| 16.5 | 28.5 | 35.1 | 372 | 34.0 | 23.0 | 425 | 28.8 | 80.6 | 344 | 29.8 | 70.1 | 244 | 39.8 | 34.9 | 543 |
| 17.5 | 27.1 | 38.9 | 179 | 32.5 | 26.6 | 226 | 28.2 | 82.3 | 220 | 28.8 | 73.9 | 101 | 38.4 | 39.5 | 308 |
| 18.5 | 25.8 | 42.9 | 26 | 30.6 | 31.8 | 40 | 27.8 | 83.9 | 92 | 28.0 | 78.0 | 0 | 36.7 | 45.4 | 112 |
| 19.5 | 24.0 | 48.6 | 0 | 28.6 | 38.3 | 0 | 27.4 | 85.6 | 0 | 27.3 | 81.4 | 0 | 34.7 | 53.4 | 0 |
| 20.5 | 23.0 | 51.3 | 0 | 27.0 | 43.5 | 0 | 27.2 | 86.7 | 0 | 26.9 | 84.6 | 0 | 33.3 | 58.5 | 0 |
| 21.5 | 21.9 | 53.6 | 0 | 25.9 | 47.0 | 0 | 27.1 | 87.5 | 0 | 26.5 | 86.5 | 0 | 32.1 | 62.1 | 0 |
| 22.5 | 21.5 | 53.1 | 0 | 25.4 | 47.7 | 0 | 27.2 | 87.7 | 0 | 26.3 | 87.8 | 0 | 31.7 | 62.0 | 0 |
| 23.5 | 20.6 | 54.5 | 0 | 25.0 | 47.4 | 0 | 27.0 | 88.3 | 0 | 25.9 | 88.3 | 0 | 31.3 | 62.9 | 0 |

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|-------------|-------------|------|-----------|---------------|------|-----|---------------|------|-----|------------------------|------|-----|---------------------|------|------|
| Day / Hours | Day 6 | | | Day 7 | | | Day 8 | | | Day 9 | | | Day 10 | | |
| | Hot and Dry | | | Hot and Humid | | | Hot and Humid | | | Warm and Extreme Humid | | | Extreme Hot and Dry | | |
| 0.5 | 28.5 | 60.5 | 0 | 30.4 | 70.0 | 0 | 29.2 | 79.2 | 0 | 27.2 | 90.9 | 0 | 31.2 | 38.0 | 0 |
| 1.5 | 27.8 | 63.3 | 0 | 29.7 | 72.6 | 0 | 29.0 | 79.1 | 0 | 26.9 | 91.8 | 0 | 29.6 | 41.0 | 0 |
| 2.5 | 27.2 | 64.5 | 0 | 29.3 | 73.6 | 0 | 28.5 | 80.8 | 0 | 26.7 | 91.9 | 0 | 28.3 | 41.0 | 0 |
| 3.5 | 26.8 | 65.7 | 0 | 28.7 | 76.7 | 0 | 28.3 | 82.1 | 0 | 26.4 | 92.8 | 0 | 27.1 | 43.0 | 0 |
| 4.5 | 27.1 | 64.5 | 0 | 28.6 | 77.4 | 0 | 28.5 | 84.0 | 0 | 26.4 | 92.4 | 0 | 29.0 | 42.0 | 0 |
| 5.5 | 27.7 | 62.4 | 0 | 28.6 | 78.8 | 0 | 29.1 | 82.2 | 0 | 26.3 | 93.2 | 0 | 29.7 | 40.0 | 0 |
| 6.5 | 29.0 | 57.6 | 20 | 29.2 | 76.2 | 0 | 30.1 | 79.4 | 6 | 26.6 | 92.0 | 0 | 31.7 | 38.0 | 66 |
| 7.5 | 30.5 | 53.0 | 207 | 29.9 | 73.2 | 104 | 31.5 | 73.4 | 182 | 27.0 | 90.7 | 30 | 33.8 | 36.0 | 300 |
| 8.5 | 32.2 | 47.3 | 441 | 31.2 | 66.7 | 290 | 32.8 | 66.6 | 397 | 27.8 | 87.6 | 185 | 36.7 | 33.0 | 593 |
| 9.5 | 33.8 | 43.0 | 625 | 32.4 | 61.4 | 494 | 34.1 | 59.0 | 606 | 28.5 | 84.5 | 352 | 38.9 | 31.0 | 789 |
| 10.5 | 35.0 | 39.7 | 793 | 33.8 | 55.3 | 683 | 35.1 | 53.8 | 756 | 29.3 | 81.3 | 505 | 41.0 | 29.0 | 765 |
| 11.5 | 36.0 | 38.1 | 865 | 34.9 | 51.7 | 787 | 35.8 | 50.3 | 826 | 29.8 | 79.5 | 575 | 42.1 | 27.0 | 1098 |

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|-------------|------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|------|------|
| 12.5 | 36.7 | 36.5 | 861 | 36.1 | 47.2 | 893 | 35.9 | 49.4 | 809 | 30.3 | 77.8 | 611 | 43.2 | 24.0 | 1085 |
| 13.5 | 37.0 | 36.3 | 846 | 37.0 | 44.3 | 868 | 35.7 | 50.1 | 715 | 30.6 | 77.1 | 635 | 43.6 | 22.0 | 1082 |
| 14.5 | 37.1 | 35.8 | 727 | 37.9 | 41.1 | 855 | 34.8 | 53.1 | 583 | 30.9 | 76.2 | 588 | 44.3 | 21.0 | 990 |
| 15.5 | 36.6 | 36.7 | 567 | 38.0 | 40.7 | 718 | 33.8 | 55.5 | 410 | 30.8 | 76.7 | 472 | 44.1 | 21.0 | 813 |
| 16.5 | 35.8 | 38.4 | 381 | 37.7 | 41.7 | 548 | 32.6 | 59.4 | 259 | 30.6 | 77.7 | 349 | 43.6 | 22.0 | 530 |
| 17.5 | 34.5 | 41.9 | 209 | 36.3 | 46.5 | 313 | 31.6 | 63.4 | 126 | 29.9 | 80.6 | 219 | 42.0 | 24.0 | 307 |
| 18.5 | 33.0 | 45.9 | 65 | 34.8 | 52.4 | 138 | 30.8 | 69.2 | 3 | 29.2 | 83.3 | 73 | 40.5 | 25.0 | 143 |
| 19.5 | 31.6 | 51.0 | 0 | 33.0 | 60.5 | 1 | 30.3 | 74.1 | 0 | 28.4 | 86.9 | 0 | 38.8 | 27.0 | 0 |
| 20.5 | 30.6 | 54.3 | 0 | 32.1 | 65.2 | 0 | 29.9 | 78.9 | 0 | 28.0 | 88.3 | 0 | 38.1 | 28.0 | 0 |
| 21.5 | 29.9 | 57.1 | 0 | 31.4 | 68.6 | 0 | 29.8 | 80.8 | 0 | 27.6 | 89.6 | 0 | 37.3 | 28.0 | 0 |
| 22.5 | 29.5 | 58.2 | 0 | 31.2 | 68.5 | 0 | 29.6 | 81.3 | 0 | 27.6 | 89.3 | 0 | 36.8 | 29.0 | 0 |
| 23.5 | 29.0 | 60.0 | 0 | 30.8 | 69.8 | 0 | 29.5 | 79.7 | 0 | 27.4 | 90.1 | 0 | 35.3 | 31.0 | 0 |