

Appendix 2

Solar Radiation on South Walls on Sunny Days *

| Date | Solar Time | | Solar Radiation, Btus per hour per square foot | | | | | |
|----------|--------------|----|--|------|------|------|------|------|
| | AM | PM | Latitude (North) | | | | | |
| | | | 24 | 32 | 40 | 48 | 56 | 64 |
| Jan 21 | 7 | 5 | 31 | 1 | 0 | 0 | 0 | 0 |
| | 8 | 4 | 127 | 115 | 84 | 22 | 0 | 0 |
| | 9 | 3 | 176 | 181 | 171 | 139 | 60 | 0 |
| | 10 | 2 | 207 | 221 | 223 | 206 | 153 | 20 |
| | 11 | 1 | 226 | 245 | 253 | 243 | 201 | 81 |
| | 12 | | 232 | 253 | 263 | 255 | 217 | 103 |
| | Daily Totals | | 1766 | 1779 | 1726 | 1478 | 1044 | 304 |
| Feb 21 | 7 | 5 | 46 | 38 | 22 | 4 | 0 | 0 |
| | 8 | 4 | 102 | 108 | 107 | 96 | 69 | 19 |
| | 9 | 3 | 141 | 158 | 167 | 167 | 151 | 107 |
| | 10 | 2 | 168 | 193 | 210 | 217 | 208 | 173 |
| | 11 | 1 | 185 | 214 | 236 | 247 | 243 | 213 |
| | 12 | | 191 | 222 | 245 | 259 | 255 | 226 |
| | Daily Totals | | 1476 | 1644 | 1730 | 1720 | 1598 | 1252 |
| March 31 | 7 | 5 | 27 | 32 | 35 | 35 | 32 | 25 |
| | 8 | 4 | 64 | 78 | 89 | 96 | 97 | 89 |
| | 9 | 3 | 95 | 119 | 138 | 152 | 154 | 153 |
| | 10 | 2 | 120 | 150 | 176 | 195 | 205 | 203 |
| | 11 | 1 | 135 | 170 | 200 | 223 | 236 | 235 |
| | 12 | | 140 | 177 | 208 | 232 | 246 | 246 |
| | Daily Totals | | 1022 | 1276 | 1484 | 1632 | 1700 | 1656 |

* Courtesy ASHRAE, *Handbook of Fundamentals*.

Solar Radiation on South Walls on Sunny Days 145

| Date | Solar Time | | Solar Radiation, Btus per hour per square foot | | | | | |
|---------|--------------|----|---|-----|------|------|------|------|
| | AM | PM | Latitude (North) | | | | | |
| | | | 24 | 32 | 40 | 48 | 56 | 64 |
| Apr 21 | 6 | 6 | 2 | 3 | 4 | 5 | 6 | 6 |
| | 7 | 5 | 10 | 10 | 12 | 21 | 29 | 37 |
| | 8 | 4 | 16 | 35 | 53 | 69 | 82 | 91 |
| | 9 | 3 | 41 | 68 | 93 | 115 | 133 | 145 |
| | 10 | 2 | 61 | 95 | 126 | 152 | 174 | 188 |
| | 11 | 1 | 74 | 112 | 147 | 177 | 266 | 216 |
| | 12 | | 79 | 118 | 154 | 185 | 209 | 225 |
| | Daily Totals | | 488 | 764 | 1022 | 1262 | 1458 | 1544 |
| May 21 | 6 | 6 | 5 | 7 | 9 | 10 | 11 | 11 |
| | 7 | 5 | 12 | 13 | 13 | 13 | 16 | 28 |
| | 8 | 4 | 15 | 15 | 25 | 45 | 63 | 80 |
| | 9 | 3 | 16 | 33 | 60 | 86 | 109 | 128 |
| | 10 | 2 | 22 | 56 | 89 | 120 | 146 | 167 |
| | 11 | 1 | 34 | 72 | 108 | 141 | 170 | 193 |
| | 12 | | 37 | 77 | 114 | 149 | 178 | 201 |
| | Daily Totals | | 246 | 469 | 724 | 982 | 1218 | 1436 |
| June 21 | 6 | 6 | 7 | 9 | 10 | 12 | 12 | 13 |
| | 7 | 5 | 13 | 14 | 14 | 15 | 15 | 23 |
| | 8 | 4 | 16 | 16 | 16 | 35 | 55 | 73 |
| | 9 | 3 | 18 | 19 | 47 | 74 | 98 | 119 |
| | 10 | 2 | 18 | 41 | 74 | 105 | 133 | 157 |
| | 11 | 1 | 19 | 56 | 92 | 126 | 156 | 181 |
| | 12 | | 22 | 60 | 98 | 133 | 168 | 189 |
| | Daily Totals | | 204 | 370 | 610 | 874 | 1126 | 1356 |

| Date | Solar Time | | Solar Radiation, Btus per hour per square foot | | | | | |
|---------|--------------|----|---|------|------|------|------|------|
| | AM | PM | Latitude (North) | | | | | |
| | | | 24 | 32 | 40 | 48 | 56 | 64 |
| July 21 | 6 | 6 | 6 | 8 | 9 | 11 | 12 | 12 |
| | 7 | 5 | 13 | 14 | 14 | 14 | 15 | 28 |
| | 8 | 4 | 16 | 16 | 24 | 43 | 61 | 77 |
| | 9 | 3 | 18 | 31 | 58 | 83 | 106 | 124 |
| | 10 | 2 | 21 | 54 | 86 | 116 | 142 | 162 |
| | 11 | 1 | 32 | 69 | 104 | 137 | 165 | 187 |
| | | 12 | 36 | 74 | 111 | 144 | 173 | 195 |
| | Daily Totals | | 246 | 458 | 702 | 956 | 1186 | 1400 |
| Aug 21 | 6 | 6 | 2 | 4 | 5 | 6 | 7 | 7 |
| | 7 | 5 | 11 | 12 | 12 | 20 | 28 | 35 |
| | 8 | 4 | 16 | 33 | 50 | 65 | 78 | 87 |
| | 9 | 3 | 39 | 65 | 89 | 110 | 126 | 138 |
| | 10 | 2 | 58 | 91 | 120 | 146 | 166 | 179 |
| | 11 | 1 | 71 | 107 | 140 | 169 | 191 | 205 |
| | | 12 | 75 | 113 | 147 | 177 | 200 | 215 |
| | Daily Totals | | 470 | 736 | 978 | 1208 | 1392 | 1522 |
| Sept 21 | 7 | 5 | 26 | 30 | 32 | 31 | 28 | 21 |
| | 8 | 4 | 62 | 75 | 84 | 90 | 89 | 81 |
| | 9 | 3 | 93 | 114 | 132 | 143 | 147 | 141 |
| | 10 | 2 | 116 | 145 | 168 | 185 | 193 | 189 |
| | 11 | 1 | 131 | 164 | 192 | 212 | 223 | 220 |
| | | 12 | 136 | 171 | 200 | 221 | 233 | 230 |
| | Daily Totals | | 992 | 1226 | 1416 | 1596 | 1594 | 1532 |

Solar Radiation on South Walls on Sunny Days 147

| Date | Solar Time | | Solar Radiation, Btus per hour per square foot | | | | | |
|--------|--------------|----|---|------|------|------|------|------|
| | | | Latitude (North) | | | | | |
| | AM | PM | 24 | 32 | 40 | 48 | 56 | 64 |
| Oct 21 | 7 | 5 | 42 | 32 | 16 | 1 | 0 | 0 |
| | 8 | 4 | 99 | 104 | 100 | 87 | 57 | 10 |
| | 9 | 3 | 138 | 153 | 160 | 154 | 138 | 90 |
| | 10 | 2 | 165 | 188 | 203 | 207 | 195 | 155 |
| | 11 | 1 | 182 | 209 | 229 | 237 | 230 | 295 |
| | 12 | | 188 | 217 | 238 | 247 | 241 | 208 |
| | Daily Totals | | 1442 | 1588 | 1654 | 1626 | 1480 | 1106 |
| Nov 21 | 7 | 5 | 29 | 1 | 0 | 0 | 0 | 0 |
| | 8 | 4 | 129 | 111 | 81 | 22 | 0 | 0 |
| | 9 | 3 | 172 | 176 | 167 | 135 | 58 | 0 |
| | 10 | 2 | 204 | 217 | 219 | 201 | 148 | 21 |
| | 11 | 1 | 222 | 241 | 248 | 238 | 196 | 79 |
| | 12 | | 228 | 249 | 258 | 250 | 211 | 100 |
| | Daily Totals | | 1730 | 1742 | 1686 | 1442 | 1016 | 300 |
| Dec 21 | 7 | 5 | 14 | 0 | 0 | 0 | 0 | 0 |
| | 8 | 4 | 130 | 107 | 56 | 0 | 0 | 0 |
| | 9 | 3 | 184 | 183 | 163 | 109 | 4 | 0 |
| | 10 | 2 | 217 | 226 | 221 | 190 | 103 | 0 |
| | 11 | 1 | 236 | 251 | 252 | 231 | 164 | 4 |
| | 12 | | 243 | 259 | 263 | 244 | 182 | 17 |
| | Daily Totals | | 1808 | 1794 | 1646 | 1304 | 722 | 24 |

The www.BuildItSolar.com website provides hundreds of free plans for solar and renewable energy projects

