

**TABLE 1.**  
**Theoretical Daily Insolation (Solar Energy) for Each Month at Different Latitudes and Collector Orientations (BTU/Ft<sup>2</sup>-Day).**

Latitude	Collector Orientation <sup>1</sup>	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
40	Vertical	1710	1720	1470	1010	720	620	700	980	1410	1660	1680	1650
	60°	1940	2190	2170	1950	1770	1670	1730	1890	2070	2070	1910	1790
	50°	1900	2210	2280	2150	2040	1970	2010	2100	2180	2100	1870	1740
	40°	1800	2160	2340	2310	2270	2210	2230	2260	2240	2010	1780	1630
	30°	1650	2060	2300	2410	2440	2430	2410	2350	2220	1950	1630	1490
	Hor.	950	1400	1850	2270	2560	2650	2530	2250	1780	1350	940	780
42	Ver.	1660	1720	1510	1080	790	670	760	1040	1450	1670	1610	1560
	62°	1850	2130	2140	1930	1950	1660	1720	1880	2040	2010	1820	1680
	52°	1820	2160	2250	2140	2030	1960	2000	2090	2150	2050	1780	1640
	42°	1730	2100	2300	2300	2260	2210	2220	2250	2220	1970	1700	1530
	32°	1570	2010	2280	2390	2430	2430	2400	2340	2190	1900	1550	1390
	Hor.	850	1330	1780	2220	2550	2650	2500	2210	1720	1270	850	700

**TABLE 2.**  
**Hours of Usable Sunshine per Day.**

Latitude	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
40	9	9	9	11	11	11	11	11	9	9	9	8
45	7	9	9	10	10	11	11	11	9	9	7	7
50	7	9	9	9	10	10	11	10	9	9	7	7

**TABLE 3.**  
**Percentage of Possible Sunshine and Average Daytime Temperature (°F).**

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
City	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.	% Sun Temp.
Alpena	38 21	49 20	56 28	54 41	61 52	66 65	68 69	64 69	55 58	48 48	29 36	31 25
Detroit City	32 28	43 28	49 37	52 50	59 61	65 74	70 77	65 77	61 67	56 56	35 41	32 31
Detroit Metro	38 27	45 28	53 36	54 49	60 59	63 72	64 75	73 75	59 65	54 54	31 40	27 30
Flint	35 26	45 26	40 35	55 47	55 58	60 71	65 74	65 74	65 64	55 54	30 39	30 29
Grand Rapids	35 25	42 25	48 35	52 48	61 58	64 72	65 75	67 74	53 64	47 53	27 38	26 28
Houghton Lake	35 20	50 20	50 29	50 43	55 54	65 67	65 70	70 70	55 59	50 49	25 35	30 25
Lansing	36 25	44 25	49 34	52 48	64 59	68 72	71 75	69 74	60 64	55 53	31 39	30 29
Marquette	34 21	43 21	52 29	55 41	57 51	60 64	67 70	62 70	52 60	46 50	27 35	28 25
Muskegon	20 27	30 27	50 35	50 47	55 57	60 71	70 74	70 74	60 65	55 55	30 41	25 31
Sault Ste. Marie	34 17	45 17	54 26	53 40	55 51	58 63	63 68	59 68	45 58	42 48	23 34	27 22