INSOLACIÓN Y LA RADIACIÓN SOLAR EN EL TOPE DE LA ATMÓSFERA PARA LAS LATITUDES QUE CUBREN LA REPÚBLICA MEXICANA

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INTRODUCCIÓN

El conocimiento de la disponibilidad de radiación solar en cada localidad es de gran importancia para propósitos prácticos, entre los que destaca la utilización de esta radiación como energético primario. Algunos métodos de estimación de la radiación solar incidente en la superficie terrestre, involucran los valores diarios de radiación solar, recibida por una superficie horizontal en el tope de la atmósfera, así como la duración máxima posible de la insolación que es el tiempo que transcurre entre la salida y la puesta del Sol. Ambas variables dependen de factores astronómicos y geográficos.

MÉTODOS

La cantidad R_o de radiación solar recibida durante el período diurno por unidad de área en una superficie horizontal en el tope de la atmósfera, se calcula mediante la siguiente ecuación, cuya deducción es presentada por Galindo, Muhlia y Leyva (1972-73):

$$R_o = \frac{2t_o I_o^*}{(r/r_o)^2}\left[\operatorname{sen}\varphi \operatorname{sen}\delta + \frac{P}{2\pi t_o}\cos\varphi\cos\delta\operatorname{sen}\left(\frac{2\pi t_o}{P}\right)\right] \qquad (1)$$

en donde,

r : distancia Tierra-Sol en el día en cuestión.

r_o : distancia media Tierra-Sol.

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I_o^* : energía recibida por unidad de área y por unidad de tiempo en una superficie normal al rayo solar en el tope de la atmósfera y a la distancia media Tierra-Sol; esta magnitud se conoce como "constante solar".

φ : latitud geográfica del punto en cuestión.

δ : declinación solar en el día en cuestión.

P : período de rotación de la Tierra, en horas.

t_o : tiempo que transcurre entre el mediodía (culminación solar) y la salida o la puesta del Sol, en horas.

Para la elaboración de este trabajo se utilizó $I_o^* = 1{,}371$ W m^{-2}, de acuerdo con Labs y Neckel (1968), y los valores de $(r/r_o)^2$ y δ proporcionados en el IGY Instruction Manual (1958).

Para calcular la duración máxima posible de la insolación S_o (igual a $2t_o$) se utiliza la siguiente ecuación:

$$S_o = \frac{P}{\pi} \text{ang cos } (- \tan \varphi \tan \delta) \qquad (2)$$

RESULTADOS

A continuación se presentan las tablas de valores de duración máxima posible de la insolación, en horas, y los totales diarios de radiación solar recibida por una superficie horizontal en el tope de atmósfera, en megajoules por metro cuadrado, para cada grado de latitud entre los 14° N y los 33° N; estos paralelos delimitan la franja latitudinal que cubre a la República Mexicana.

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 14 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	11.2	29.2	11.4	31.7	11.7	35.0	12.1	37.6	12.5	38.6	12.8	38.4	12.8	38.2	12.6	38.3	12.3	37.7	11.9	35.8	11.5	32.6	11.2	29.8	1
2	11.2	29.3	11.4	31.8	11.7	35.1	12.2	37.6	12.5	38.6	12.8	38.4	12.8	38.2	12.6	38.3	12.3	37.7	11.9	35.7	11.5	32.5	11.2	29.7	2
3	11.2	29.3	11.4	31.9	11.8	35.2	12.2	37.7	12.5	38.6	12.8	38.4	12.8	38.2	12.6	38.3	12.3	37.6	11.9	35.6	11.5	32.4	11.2	29.6	3
4	11.2	29.4	11.4	32.1	11.8	35.3	12.2	37.8	12.5	38.6	12.8	38.4	12.8	38.2	12.6	38.2	12.3	37.6	11.9	35.5	11.5	32.3	11.2	29.6	4
5	11.2	29.4	11.4	32.2	11.8	35.4	12.2	37.8	12.5	38.6	12.8	38.4	12.8	38.2	12.6	38.2	12.2	37.5	11.9	35.4	11.5	32.1	11.2	29.5	5
6	11.2	29.5	11.5	32.3	11.8	35.5	12.2	37.9	12.6	38.6	12.8	38.4	12.8	38.2	12.6	38.2	12.2	37.5	11.8	35.4	11.5	32.0	11.2	29.5	6
7	11.2	29.5	11.5	32.4	11.8	35.6	12.2	38.0	12.6	38.6	12.8	38.4	12.8	38.2	12.6	38.2	12.2	37.5	11.8	35.3	11.5	31.9	11.2	29.4	7
8	11.2	29.6	11.5	32.5	11.8	35.7	12.2	38.0	12.6	38.6	12.8	38.4	12.8	38.2	12.6	38.2	12.2	37.4	11.8	35.2	11.4	31.8	11.2	29.4	8
9	11.2	29.6	11.5	32.6	11.8	35.8	12.2	38.0	12.6	38.6	12.8	38.3	12.8	38.2	12.6	38.2	12.2	37.4	11.8	35.1	11.4	31.7	11.2	29.3	9
10	11.2	29.7	11.5	32.8	11.9	35.9	12.3	38.1	12.6	38.6	12.8	38.3	12.8	38.2	12.5	38.2	12.2	37.3	11.8	35.0	11.4	31.6	11.2	29.3	10
11	11.2	29.8	11.5	32.9	11.9	36.0	12.3	38.1	12.6	38.6	12.8	38.3	12.8	38.2	12.5	38.2	12.2	37.2	11.8	34.9	11.4	31.5	11.2	29.2	11
12	11.2	29.8	11.5	33.0	11.9	36.1	12.3	38.2	12.6	38.6	12.8	38.3	12.8	38.2	12.5	38.2	12.2	37.2	11.8	34.8	11.4	31.4	11.2	29.2	12
13	11.2	29.9	11.5	33.1	11.9	36.2	12.3	38.2	12.6	38.6	12.8	38.3	12.8	38.2	12.5	38.2	12.1	37.1	11.8	34.7	11.4	31.3	11.2	29.2	13
14	11.3	30.0	11.5	33.2	11.9	36.3	12.3	38.2	12.6	38.6	12.8	38.3	12.8	38.2	12.5	38.2	12.1	37.1	11.7	34.6	11.4	31.2	11.2	29.1	14
15	11.3	30.1	11.6	33.3	11.9	36.4	12.3	38.3	12.6	38.6	12.8	38.3	12.8	38.2	12.5	38.2	12.1	37.0	11.7	34.5	11.4	31.1	11.2	29.1	15
16	11.3	30.1	11.6	33.5	11.9	36.5	12.3	38.3	12.7	38.6	12.8	38.3	12.8	38.2	12.5	38.1	12.1	37.0	11.7	34.3	11.4	31.0	11.2	29.1	16
17	11.3	30.2	11.6	33.6	11.9	36.5	12.3	38.3	12.7	38.6	12.8	38.3	12.7	38.3	12.5	38.1	12.1	36.9	11.7	34.2	11.4	30.9	11.2	29.1	17
18	11.3	30.3	11.6	33.7	12.0	36.6	12.4	38.4	12.7	38.6	12.8	38.3	12.7	38.3	12.5	38.1	12.1	36.8	11.7	34.1	11.3	30.8	11.2	29.1	18
19	11.3	30.4	11.6	33.8	12.0	36.7	12.4	38.4	12.7	38.5	12.8	38.3	12.7	38.3	12.4	38.1	12.1	36.8	11.7	34.0	11.3	30.7	11.2	29.1	19
20	11.3	30.5	11.6	33.9	12.0	36.8	12.4	38.4	12.7	38.5	12.8	38.3	12.7	38.3	12.4	38.1	12.0	36.7	11.7	33.9	11.3	30.6	11.2	29.1	20
21	11.3	30.6	11.6	34.1	12.0	36.9	12.4	38.4	12.7	38.5	12.8	38.3	12.7	38.3	12.4	38.0	12.0	36.6	11.7	33.8	11.3	30.5	11.2	29.0	21
22	11.3	30.7	11.6	34.2	12.0	37.0	12.4	38.4	12.7	38.5	12.8	38.3	12.7	38.3	12.4	38.0	12.0	36.5	11.6	33.7	11.3	30.4	11.2	29.0	22
23	11.3	30.8	11.7	34.3	12.0	37.0	12.4	38.5	12.7	38.5	12.8	38.3	12.7	38.3	12.4	38.0	12.0	36.5	11.6	33.6	11.3	30.4	11.2	29.0	23
24	11.3	30.9	11.7	34.4	12.0	37.1	12.4	38.5	12.7	38.5	12.8	38.3	12.7	38.3	12.4	38.0	12.0	36.4	11.6	33.5	11.3	30.3	11.2	29.1	24
25	11.3	31.0	11.7	34.5	12.0	37.2	12.4	38.5	12.7	38.5	12.8	38.2	12.7	38.3	12.4	37.9	12.0	36.3	11.6	33.4	11.3	30.2	11.2	29.1	25
26	11.3	31.1	11.7	34.6	12.1	37.3	12.4	38.5	12.7	38.5	12.8	38.2	12.7	38.3	12.4	37.9	12.0	36.2	11.6	33.3	11.3	30.1	11.2	29.1	26
27	11.4	31.2	11.7	34.7	12.1	37.3	12.5	38.5	12.7	38.5	12.8	38.2	12.7	38.3	12.4	37.9	12.0	36.2	11.6	33.2	11.3	30.0	11.2	29.1	27
28	11.4	31.3	11.7	34.9	12.1	37.4	12.5	38.5	12.7	38.5	12.8	38.2	12.7	38.3	12.3	37.9	11.9	36.1	11.6	33.0	11.3	30.0	11.2	29.1	28
29	11.4	31.4	11.7	34.9	12.1	37.5	12.5	38.6	12.8	38.5	12.8	38.2	12.7	38.3	12.3	37.8	11.9	36.0	11.6	32.9	11.3	29.9	11.2	29.1	29
30	11.4	31.5	0.0	0.0	12.1	37.5	12.5	38.6	12.8	38.4	12.8	38.2	12.6	38.3	12.3	37.8	11.9	35.9	11.5	32.8	11.2	29.8	11.2	29.2	30
31	11.4	31.6	0.0	0.0	12.1	37.6	0.0	0.0	12.8	38.4	0.0	0.0	12.6	38.3	12.3	37.8	0.0	0.0	11.5	32.7	0.0	0.0	11.2	29.2	31
MEDIA DIARIA	11.3	30.2	11.6	33.3	11.9	36.4	12.3	38.2	12.6	38.5	12.8	38.3	12.7	38.2	12.5	38.1	12.1	36.9	11.7	34.3	11.4	31.1	11.2	29.2	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 15 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	11.1	28.7	11.4	31.3	11.7	34.7	12.2	37.5	12.5	38.7	12.8	38.7	12.9	38.5	12.7	38.4	12.3	37.7	11.9	35.6	11.5	32.2	11.2	29.2	1
2	11.1	28.7	11.4	31.4	11.7	34.8	12.2	37.5	12.6	38.7	12.8	38.7	12.9	38.5	12.7	38.4	12.3	37.7	11.9	35.5	11.5	32.1	11.2	29.2	2
3	11.1	28.8	11.4	31.5	11.7	34.9	12.2	37.6	12.6	38.7	12.8	38.6	12.9	38.5	12.7	38.4	12.3	37.6	11.9	35.4	11.5	32.0	11.2	29.1	3
4	11.1	28.8	11.4	31.6	11.8	35.0	12.2	37.7	12.6	38.7	12.8	38.6	12.9	38.5	12.6	38.4	12.3	37.6	11.9	35.3	11.4	31.8	11.2	29.0	4
5	11.1	28.9	11.4	31.7	11.8	35.1	12.2	37.8	12.6	38.7	12.8	38.6	12.9	38.5	12.6	38.4	12.3	37.5	11.8	35.2	11.4	31.7	11.2	29.0	5
6	11.1	28.9	11.4	31.9	11.8	35.2	12.2	37.9	12.6	38.7	12.9	38.6	12.9	38.5	12.6	38.4	12.2	37.5	11.8	35.1	11.4	31.6	11.2	28.9	6
7	11.2	29.0	11.4	32.0	11.8	35.3	12.2	37.9	12.6	38.7	12.9	38.6	12.9	38.5	12.6	38.4	12.2	37.4	11.8	35.0	11.4	31.5	11.2	28.9	7
8	11.2	29.1	11.4	32.1	11.8	35.4	12.2	38.0	12.6	38.7	12.9	38.6	12.9	38.5	12.6	38.4	12.2	37.4	11.8	34.9	11.4	31.4	11.1	28.8	8
9	11.2	29.1	11.5	32.2	11.8	35.6	12.3	38.0	12.6	38.7	12.9	38.6	12.8	38.5	12.6	38.3	12.2	37.3	11.8	34.8	11.4	31.3	11.1	28.8	9
10	11.2	29.2	11.5	32.3	11.8	35.7	12.3	38.1	12.6	38.7	12.9	38.6	12.8	38.5	12.6	38.3	12.2	37.2	11.8	34.7	11.4	31.2	11.1	28.7	10
11	11.2	29.3	11.5	32.5	11.9	35.8	12.3	38.1	12.7	38.7	12.9	38.6	12.8	38.5	12.6	38.3	12.2	37.2	11.8	34.6	11.4	31.1	11.1	28.7	11
12	11.2	29.3	11.5	32.6	11.9	35.9	12.3	38.1	12.7	38.7	12.9	38.6	12.8	38.5	12.6	38.3	12.2	37.1	11.7	34.5	11.4	31.0	11.1	28.7	12
13	11.2	29.4	11.5	32.7	11.9	36.0	12.3	38.2	12.7	38.8	12.9	38.6	12.8	38.5	12.5	38.3	12.1	37.0	11.7	34.4	11.3	30.8	11.1	28.6	13
14	11.2	29.5	11.5	32.8	11.9	36.1	12.3	38.2	12.7	38.7	12.9	38.6	12.8	38.5	12.5	38.3	12.1	37.0	11.7	34.3	11.3	30.7	11.1	28.6	14
15	11.2	29.6	11.5	33.0	11.9	36.2	12.3	38.3	12.7	38.7	12.9	38.6	12.8	38.5	12.5	38.2	12.1	36.9	11.7	34.2	11.3	30.6	11.1	28.6	15
16	11.2	29.6	11.5	33.1	11.9	36.3	12.4	38.3	12.7	38.7	12.9	38.6	12.8	38.5	12.5	38.2	12.1	36.8	11.7	34.0	11.3	30.5	11.1	28.6	16
17	11.2	29.7	11.6	33.2	11.9	36.4	12.4	38.3	12.7	38.7	12.9	38.5	12.8	38.5	12.5	38.2	12.1	36.8	11.7	33.9	11.3	30.4	11.1	28.5	17
18	11.2	29.8	11.6	33.3	12.0	36.4	12.4	38.4	12.7	38.7	12.9	38.5	12.8	38.5	12.5	38.2	12.1	36.7	11.7	33.8	11.3	30.3	11.1	28.5	18
19	11.2	29.9	11.6	33.4	12.0	36.5	12.4	38.4	12.7	38.7	12.9	38.5	12.8	38.5	12.5	38.2	12.1	36.6	11.7	33.7	11.3	30.2	11.1	28.5	19
20	11.2	30.0	11.6	33.6	12.0	36.6	12.4	38.4	12.7	38.7	12.9	38.5	12.8	38.5	12.5	38.1	12.1	36.6	11.6	33.6	11.3	30.1	11.1	28.5	20
21	11.3	30.1	11.6	33.7	12.0	36.7	12.4	38.5	12.7	38.7	12.9	38.5	12.8	38.5	12.5	38.1	12.0	36.5	11.6	33.5	11.3	30.0	11.1	28.5	21
22	11.3	30.2	11.6	33.8	12.0	36.8	12.4	38.5	12.8	38.7	12.9	38.5	12.8	38.5	12.4	38.1	12.0	36.4	11.6	33.4	11.3	30.0	11.1	28.5	22
23	11.3	30.3	11.6	33.9	12.0	36.9	12.4	38.5	12.8	38.7	12.9	38.5	12.8	38.5	12.4	38.0	12.0	36.3	11.6	33.2	11.2	29.9	11.1	28.5	23
24	11.3	30.4	11.6	34.1	12.0	37.0	12.5	38.5	12.8	38.7	12.9	38.5	12.7	38.5	12.4	38.0	12.0	36.2	11.6	33.1	11.2	29.8	11.1	28.5	24
25	11.3	30.5	11.7	34.2	12.1	37.0	12.5	38.6	12.8	38.7	12.9	38.5	12.7	38.5	12.4	38.0	12.0	36.1	11.6	33.0	11.2	29.7	11.1	28.5	25
26	11.3	30.6	11.7	34.3	12.1	37.1	12.5	38.6	12.8	38.7	12.9	38.5	12.7	38.5	12.4	37.9	12.0	36.1	11.6	32.9	11.2	29.6	11.1	28.5	26
27	11.3	30.7	11.7	34.4	12.1	37.2	12.5	38.6	12.8	38.7	12.9	38.5	12.7	38.5	12.4	37.9	12.0	36.0	11.5	32.8	11.2	29.5	11.1	28.6	27
28	11.3	30.8	11.7	34.6	12.1	37.3	12.5	38.6	12.8	38.7	12.9	38.5	12.7	38.5	12.4	37.9	11.9	35.9	11.5	32.7	11.2	29.5	11.1	28.6	28
29	11.3	30.9	11.7	34.6	12.1	37.3	12.5	38.6	12.8	38.7	12.9	38.5	12.7	38.4	12.4	37.8	11.9	35.8	11.5	32.5	11.2	29.4	11.1	28.6	29
30	11.3	31.0	0.0	0.0	12.1	37.4	12.5	38.7	12.8	38.7	12.9	38.5	12.7	38.4	12.3	37.8	11.9	35.7	11.5	32.4	11.2	29.3	11.1	28.6	30
31	11.3	31.1	0.0	0.0	12.1	37.5	0.0	0.0	12.8	38.7	0.0	0.0	12.7	38.4	12.3	37.7	0.0	0.0	11.5	32.3	0.0	0.0	11.1	28.7	31
MEDIA DIARIA	11.2	29.7	11.5	33.0	11.9	36.2	12.3	38.2	12.7	38.7	12.9	38.6	12.8	38.5	12.5	38.2	12.1	36.8	11.7	34.0	11.3	30.6	11.1	28.7	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 16 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	11.1	28.2	11.3	30.8	11.7	34.3	12.2	37.4	12.6	38.8	12.9	38.9	12.9	38.7	12.7	38.6	12.3	37.7	11.9	35.4	11.4	31.8	11.1	28.7	1
2	11.1	28.2	11.3	30.9	11.7	34.5	12.2	37.4	12.6	38.8	12.9	38.9	12.9	38.7	12.7	38.6	12.3	37.6	11.9	35.3	11.4	31.7	11.1	28.7	2
3	11.1	28.3	11.3	31.0	11.7	34.6	12.2	37.5	12.6	38.8	12.9	38.9	12.9	38.7	12.7	38.6	12.3	37.6	11.9	35.2	11.4	31.5	11.1	28.6	3
4	11.1	28.3	11.4	31.2	11.7	34.7	12.2	37.6	12.6	38.8	12.9	38.9	12.9	38.7	12.7	38.5	12.3	37.5	11.8	35.0	11.4	31.4	11.1	28.5	4
5	11.1	28.4	11.4	31.3	11.8	34.8	12.2	37.7	12.6	38.8	12.9	38.9	12.9	38.7	12.7	38.5	12.3	37.5	11.8	34.9	11.4	31.3	11.1	28.5	5
6	11.1	28.4	11.4	31.4	11.8	34.9	12.2	37.8	12.6	38.8	12.9	38.9	12.9	38.7	12.7	38.5	12.3	37.4	11.8	34.9	11.4	31.2	11.1	28.4	6
7	11.1	28.5	11.4	31.5	11.8	35.1	12.2	37.8	12.7	38.9	12.9	38.9	12.9	38.7	12.7	38.5	12.2	37.3	11.8	34.7	11.4	31.1	11.1	28.4	7
8	11.1	28.5	11.4	31.7	11.8	35.2	12.3	37.9	12.7	38.9	12.9	38.9	12.9	38.7	12.6	38.5	12.2	37.3	11.8	34.6	11.4	30.9	11.1	28.3	8
9	11.1	28.6	11.4	31.8	11.8	35.3	12.3	38.0	12.7	38.9	12.9	38.9	12.9	38.7	12.6	38.5	12.2	37.2	11.8	34.5	11.3	30.8	11.1	28.3	9
10	11.1	28.7	11.4	31.9	11.8	35.4	12.3	38.0	12.7	38.9	12.9	38.8	12.9	38.7	12.6	38.4	12.2	37.2	11.8	34.4	11.3	30.7	11.1	28.2	10
11	11.1	28.7	11.4	32.0	11.8	35.5	12.3	38.1	12.7	38.9	12.9	38.8	12.9	38.7	12.6	38.4	12.2	37.1	11.7	34.3	11.3	30.6	11.1	28.2	11
12	11.1	28.8	11.5	32.2	11.9	35.6	12.3	38.1	12.7	38.9	12.9	38.8	12.9	38.7	12.6	38.4	12.2	37.0	11.7	34.2	11.3	30.5	11.1	28.1	12
13	11.1	28.9	11.5	32.3	11.9	35.7	12.3	38.2	12.7	38.9	12.9	38.8	12.9	38.7	12.6	38.4	12.2	36.9	11.7	34.1	11.3	30.4	11.1	28.1	13
14	11.1	29.0	11.5	32.4	11.9	35.8	12.4	38.2	12.7	38.9	12.9	38.8	12.9	38.7	12.6	38.4	12.1	36.9	11.7	34.0	11.3	30.3	11.1	28.1	14
15	11.1	29.0	11.5	32.6	11.9	35.9	12.4	38.3	12.7	38.9	12.9	38.8	12.9	38.7	12.6	38.3	12.1	36.8	11.7	33.8	11.3	30.2	11.1	28.0	15
16	11.2	29.1	11.5	32.7	11.9	36.0	12.4	38.3	12.8	38.9	12.9	38.8	12.9	38.7	12.5	38.3	12.1	36.7	11.7	33.7	11.3	30.1	11.1	28.0	16
17	11.2	29.2	11.5	32.8	11.9	36.1	12.4	38.4	12.8	38.9	12.9	38.8	12.9	38.7	12.5	38.3	12.1	36.6	11.7	33.6	11.3	30.0	11.1	28.0	17
18	11.2	29.3	11.5	32.9	12.0	36.2	12.4	38.4	12.8	38.9	13.0	38.8	12.9	38.7	12.5	38.2	12.1	36.6	11.6	33.5	11.2	29.9	11.1	28.0	18
19	11.2	29.4	11.6	33.1	12.0	36.3	12.4	38.4	12.8	38.9	13.0	38.8	12.8	38.7	12.5	38.2	12.1	36.5	11.6	33.4	11.2	29.8	11.1	28.0	19
20	11.2	29.5	11.6	33.2	12.0	36.4	12.4	38.5	12.8	38.9	13.0	38.8	12.8	38.7	12.5	38.2	12.1	36.4	11.6	33.2	11.2	29.7	11.0	28.0	20
21	11.2	29.6	11.6	33.3	12.0	36.5	12.4	38.5	12.8	38.9	13.0	38.8	12.8	38.7	12.5	38.2	12.0	36.3	11.6	33.1	11.2	29.6	11.0	28.0	21
22	11.2	29.7	11.6	33.5	12.0	36.6	12.5	38.5	12.8	38.9	13.0	38.8	12.8	38.7	12.5	38.1	12.0	36.2	11.6	33.0	11.2	29.5	11.0	28.0	22
23	11.2	29.8	11.6	33.6	12.0	36.7	12.5	38.6	12.8	38.9	13.0	38.8	12.8	38.7	12.5	38.1	12.0	36.1	11.6	32.9	11.2	29.4	11.0	28.0	23
24	11.2	29.9	11.6	33.7	12.0	36.8	12.5	38.6	12.8	38.9	13.0	38.8	12.8	38.7	12.4	38.0	12.0	36.1	11.6	32.8	11.2	29.3	11.0	28.0	24
25	11.2	30.0	11.6	33.8	12.1	36.9	12.5	38.6	12.8	38.9	13.0	38.8	12.8	38.7	12.4	38.0	12.0	36.0	11.5	32.6	11.2	29.2	11.0	28.0	25
26	11.2	30.1	11.7	34.0	12.1	37.0	12.5	38.7	12.8	38.9	13.0	38.8	12.8	38.6	12.4	38.0	12.0	35.9	11.5	32.5	11.2	29.1	11.1	28.0	26
27	11.3	30.2	11.7	34.1	12.1	37.1	12.5	38.7	12.8	38.9	12.9	38.8	12.8	38.6	12.4	37.9	12.0	35.8	11.5	32.4	11.2	29.0	11.1	28.0	27
28	11.3	30.3	11.7	34.2	12.1	37.1	12.5	38.7	12.9	38.9	12.9	38.8	12.8	38.6	12.4	37.9	11.9	35.7	11.5	32.3	11.2	28.9	11.1	28.0	28
29	11.3	30.4	11.7	34.2	12.1	37.2	12.6	38.7	12.9	38.9	12.9	38.8	12.8	38.6	12.4	37.8	11.9	35.6	11.5	32.1	11.1	28.9	11.1	28.1	29
30	11.3	30.6	0.0	0.0	12.1	37.3	12.6	38.8	12.9	38.9	12.9	38.8	12.7	38.6	12.4	37.8	11.9	35.5	11.5	32.0	11.1	28.8	11.1	28.1	30
31	11.3	30.7	0.0	0.0	12.1	37.4	0.0	0.0	12.9	38.9	0.0	0.0	12.7	38.6	12.3	37.7	0.0	0.0	11.5	31.9	0.0	0.0	11.1	28.1	31
MEDIA DIARIA	11.2	29.2	11.5	32.6	11.9	36.0	12.4	38.2	12.7	38.9	12.9	38.8	12.9	38.7	12.5	38.3	12.1	36.7	11.7	33.7	11.3	30.2	11.1	28.2	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 17 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	11.0	27.6	11.3	30.3	11.7	34.0	12.2	37.3	12.6	38.9	12.9	39.1	13.0	39.0	12.8	38.7	12.4	37.7	11.9	35.1	11.4	31.4	11.1	28.2	1
2	11.0	27.7	11.3	30.5	11.7	34.1	12.2	37.3	12.6	38.9	13.0	39.1	13.0	39.0	12.8	38.7	12.3	37.6	11.9	35.0	11.4	31.2	11.1	28.1	2
3	11.0	27.7	11.3	30.6	11.7	34.3	12.2	37.4	12.6	38.9	13.0	39.1	13.0	39.0	12.7	38.7	12.3	37.5	11.9	34.9	11.4	31.1	11.1	28.1	3
4	11.0	27.8	11.3	30.7	11.7	34.4	12.2	37.5	12.7	38.9	13.0	39.1	13.0	39.0	12.7	38.7	12.3	37.5	11.8	34.8	11.4	31.0	11.0	28.0	4
5	11.0	27.8	11.3	30.8	11.7	34.5	12.2	37.6	12.7	38.9	13.0	39.1	13.0	39.0	12.7	38.7	12.3	37.4	11.8	34.7	11.4	30.9	11.0	27.9	5
6	11.0	27.9	11.3	31.0	11.8	34.7	12.3	37.7	12.7	39.0	13.0	39.1	13.0	39.0	12.7	38.6	12.3	37.3	11.8	34.6	11.3	30.7	11.0	27.9	6
7	11.0	27.9	11.3	31.1	11.8	34.8	12.3	37.8	12.7	39.0	13.0	39.1	13.0	39.0	12.7	38.6	12.3	37.3	11.8	34.5	11.3	30.6	11.0	27.8	7
8	11.0	28.0	11.4	31.2	11.8	34.9	12.3	37.8	12.7	39.0	13.0	39.1	13.0	39.0	12.7	38.6	12.2	37.2	11.8	34.4	11.3	30.5	11.0	27.8	8
9	11.0	28.1	11.4	31.4	11.8	35.0	12.3	37.9	12.7	39.0	13.0	39.1	13.0	39.0	12.7	38.6	12.2	37.1	11.8	34.2	11.3	30.4	11.0	27.7	9
10	11.1	28.1	11.4	31.5	11.8	35.1	12.3	38.0	12.7	39.0	13.0	39.1	13.0	38.9	12.7	38.5	12.2	37.1	11.7	34.1	11.3	30.3	11.0	27.7	10
11	11.1	28.2	11.4	31.6	11.8	35.3	12.3	38.0	12.7	39.0	13.0	39.1	13.0	38.9	12.7	38.5	12.2	37.0	11.7	34.0	11.3	30.1	11.0	27.6	11
12	11.1	28.3	11.4	31.8	11.9	35.4	12.3	38.1	12.8	39.0	13.0	39.1	13.0	38.9	12.6	38.5	12.2	36.9	11.7	33.9	11.3	30.0	11.0	27.6	12
13	11.1	28.3	11.4	31.9	11.9	35.5	12.4	38.1	12.8	39.1	13.0	39.1	12.9	38.9	12.6	38.5	12.2	36.8	11.7	33.8	11.3	29.9	11.0	27.6	13
14	11.1	28.4	11.4	32.0	11.9	35.6	12.4	38.2	12.8	39.1	13.0	39.1	12.9	38.9	12.6	38.4	12.2	36.8	11.7	33.6	11.2	29.8	11.0	27.5	14
15	11.1	28.5	11.5	32.2	11.9	35.7	12.4	38.2	12.8	39.1	13.0	39.1	12.9	38.9	12.6	38.4	12.1	36.7	11.7	33.5	11.2	29.7	11.0	27.5	15
16	11.1	28.6	11.5	32.3	11.9	35.8	12.4	38.3	12.8	39.1	13.0	39.1	12.9	38.9	12.6	38.4	12.1	36.6	11.6	33.4	11.2	29.6	11.0	27.5	16
17	11.1	28.7	11.5	32.4	11.9	35.9	12.4	38.3	12.8	39.1	13.0	39.1	12.9	38.9	12.6	38.3	12.1	36.5	11.6	33.3	11.2	29.5	11.0	27.5	17
18	11.1	28.8	11.5	32.6	11.9	36.0	12.4	38.4	12.8	39.1	13.0	39.0	12.9	38.9	12.6	38.3	12.1	36.4	11.6	33.1	11.2	29.4	11.0	27.4	18
19	11.1	28.9	11.5	32.7	12.0	36.1	12.4	38.4	12.8	39.1	13.0	39.0	12.9	38.9	12.5	38.3	12.1	36.3	11.6	33.0	11.2	29.3	11.0	27.4	19
20	11.1	29.0	11.5	32.8	12.0	36.2	12.5	38.5	12.8	39.1	13.0	39.0	12.9	38.9	12.5	38.2	12.1	36.2	11.6	32.9	11.2	29.2	11.0	27.4	20
21	11.1	29.1	11.6	33.0	12.0	36.3	12.5	38.5	12.9	39.1	13.0	39.0	12.9	38.9	12.5	38.2	12.0	36.1	11.6	32.8	11.2	29.1	11.0	27.4	21
22	11.2	29.2	11.6	33.1	12.0	36.4	12.5	38.6	12.9	39.1	13.0	39.0	12.9	38.9	12.5	38.2	12.0	36.1	11.6	32.6	11.2	29.0	11.0	27.4	22
23	11.2	29.3	11.6	33.2	12.0	36.5	12.5	38.6	12.9	39.1	13.0	39.0	12.9	38.9	12.5	38.1	12.0	36.0	11.5	32.5	11.1	28.9	11.0	27.4	23
24	11.2	29.4	11.6	33.4	12.0	36.6	12.5	38.6	12.9	39.1	13.0	39.0	12.9	38.8	12.5	38.1	12.0	35.9	11.5	32.4	11.1	28.8	11.0	27.4	24
25	11.2	29.5	11.6	33.5	12.1	36.7	12.5	38.7	12.9	39.1	13.0	39.0	12.8	38.8	12.5	38.0	12.0	35.8	11.5	32.3	11.1	28.7	11.0	27.4	25
26	11.2	29.6	11.6	33.6	12.1	36.8	12.5	38.7	12.9	39.1	13.0	39.0	12.8	38.8	12.4	38.0	12.0	35.7	11.5	32.1	11.1	28.6	11.0	27.4	26
27	11.2	29.7	11.6	33.8	12.1	36.9	12.6	38.7	12.9	39.1	13.0	39.0	12.8	38.8	12.4	37.9	11.9	35.6	11.5	32.0	11.1	28.5	11.0	27.5	27
28	11.2	29.9	11.7	33.9	12.1	37.0	12.6	38.8	12.9	39.1	13.0	39.0	12.8	38.8	12.4	37.9	11.9	35.5	11.5	31.9	11.1	28.4	11.0	27.5	28
29	11.2	30.0	11.7	33.9	12.1	37.1	12.6	38.8	12.9	39.1	13.0	39.0	12.8	38.8	12.4	37.8	11.9	35.4	11.5	31.7	11.1	28.3	11.0	27.5	29
30	11.2	30.1	0.0	0.0	12.1	37.2	12.6	38.8	12.9	39.1	13.0	39.0	12.8	38.8	12.4	37.8	11.9	35.3	11.4	31.6	11.1	28.3	11.0	27.5	30
31	11.3	30.2	0.0	0.0	12.2	37.3	0.0	0.0	12.9	39.1	0.0	0.0	12.8	38.8	12.4	37.7	0.0	0.0	11.4	31.5	0.0	0.0	11.0	27.6	31
MEDIA DIARIA	11.1	28.7	11.5	32.2	11.9	35.8	12.4	38.2	12.8	39.0	13.0	39.1	12.9	38.9	12.6	38.3	12.1	36.6	11.7	33.4	11.2	29.7	11.0	27.6	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 18 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.9	27.1	11.2	29.9	11.7	33.7	12.2	37.2	12.7	38.9	13.0	39.3	13.1	39.2	12.8	38.9	12.4	37.6	11.9	34.9	11.4	30.9	11.0	27.7	1
2	10.9	27.1	11.2	30.0	11.7	33.8	12.2	37.2	12.7	39.0	13.0	39.3	13.1	39.2	12.8	38.9	12.4	37.5	11.9	34.8	11.4	30.8	11.0	27.6	2
3	10.9	27.2	11.3	30.1	11.7	34.0	12.2	37.3	12.7	39.0	13.0	39.3	13.1	39.2	12.8	38.8	12.3	37.5	11.8	34.6	11.3	30.7	11.0	27.5	3
4	11.0	27.2	11.3	30.2	11.7	34.1	12.2	37.4	12.7	39.0	13.0	39.3	13.1	39.2	12.8	38.8	12.3	37.4	11.8	34.5	11.3	30.5	11.0	27.4	4
5	11.0	27.3	11.3	30.4	11.7	34.2	12.2	37.5	12.7	39.0	13.0	39.3	13.1	39.2	12.8	38.8	12.3	37.3	11.8	34.4	11.3	30.4	11.0	27.4	5
6	11.0	27.3	11.3	30.5	11.7	34.3	12.3	37.6	12.7	39.1	13.0	39.3	13.0	39.2	12.8	38.8	12.3	37.3	11.8	34.3	11.3	30.3	11.0	27.3	6
7	11.0	27.4	11.3	30.6	11.8	34.5	12.3	37.7	12.7	39.1	13.0	39.3	13.0	39.2	12.7	38.7	12.3	37.2	11.8	34.2	11.3	30.2	11.0	27.3	7
8	11.0	27.4	11.3	30.8	11.8	34.6	12.3	37.8	12.8	39.1	13.0	39.3	13.0	39.2	12.7	38.7	12.3	37.1	11.8	34.1	11.3	30.0	11.0	27.2	8
9	11.0	27.5	11.3	30.9	11.8	34.7	12.3	37.8	12.8	39.1	13.1	39.3	13.0	39.2	12.7	38.7	12.2	37.0	11.7	33.9	11.3	29.9	11.0	27.2	9
10	11.0	27.6	11.4	31.0	11.8	34.9	12.3	37.9	12.8	39.1	13.1	39.3	13.0	39.2	12.7	38.6	12.2	37.0	11.7	33.8	11.2	29.8	11.0	27.1	10
11	11.0	27.7	11.4	31.2	11.8	35.0	12.3	38.0	12.8	39.2	13.1	39.3	13.0	39.2	12.7	38.6	12.2	36.9	11.7	33.7	11.2	29.7	10.9	27.1	11
12	11.0	27.7	11.4	31.3	11.8	35.1	12.4	38.0	12.8	39.2	13.1	39.3	13.0	39.1	12.7	38.6	12.2	36.8	11.7	33.6	11.2	29.6	10.9	27.0	12
13	11.0	27.8	11.4	31.5	11.9	35.2	12.4	38.1	12.8	39.2	13.1	39.3	13.0	39.1	12.7	38.5	12.2	36.7	11.7	33.4	11.2	29.4	10.9	27.0	13
14	11.0	27.9	11.4	31.6	11.9	35.3	12.4	38.2	12.8	39.2	13.1	39.3	13.0	39.1	12.7	38.5	12.2	36.6	11.7	33.3	11.2	29.3	10.9	27.0	14
15	11.0	28.0	11.4	31.7	11.9	35.5	12.4	38.2	12.8	39.2	13.1	39.3	13.0	39.1	12.6	38.5	12.1	36.5	11.6	33.2	11.2	29.2	10.9	26.9	15
16	11.0	28.1	11.4	31.9	11.9	35.6	12.4	38.3	12.9	39.2	13.1	39.3	13.0	39.1	12.6	38.4	12.1	36.4	11.6	33.0	11.2	29.1	10.9	26.9	16
17	11.0	28.2	11.5	32.0	11.9	35.7	12.4	38.3	12.9	39.2	13.1	39.3	13.0	39.1	12.6	38.4	12.1	36.4	11.6	32.9	11.2	29.0	10.9	26.9	17
18	11.1	28.3	11.5	32.2	11.9	35.8	12.5	38.4	12.9	39.3	13.1	39.3	13.0	39.1	12.6	38.4	12.1	36.3	11.6	32.8	11.1	28.9	10.9	26.9	18
19	11.1	28.4	11.5	32.3	12.0	35.9	12.5	38.4	12.9	39.3	13.1	39.3	13.0	39.1	12.6	38.3	12.1	36.2	11.6	32.7	11.1	28.8	10.9	26.9	19
20	11.1	28.5	11.5	32.4	12.0	36.0	12.5	38.5	12.9	39.3	13.1	39.3	12.9	39.1	12.6	38.3	12.1	36.1	11.6	32.5	11.1	28.7	10.9	26.9	20
21	11.1	28.6	11.5	32.6	12.0	36.1	12.5	38.5	12.9	39.3	13.1	39.3	12.9	39.1	12.5	38.2	12.0	36.0	11.5	32.4	11.1	28.6	10.9	26.9	21
22	11.1	28.7	11.5	32.7	12.0	36.2	12.5	38.6	12.9	39.3	13.1	39.3	12.9	39.0	12.5	38.2	12.0	35.9	11.5	32.3	11.1	28.5	10.9	26.9	22
23	11.1	28.8	11.6	32.9	12.0	36.3	12.5	38.6	12.9	39.3	13.1	39.3	12.9	39.0	12.5	38.1	12.0	35.8	11.5	32.1	11.1	28.4	10.9	26.9	23
24	11.1	28.9	11.6	33.0	12.0	36.5	12.6	38.7	12.9	39.3	13.1	39.3	12.9	39.0	12.5	38.1	12.0	35.7	11.5	32.0	11.1	28.3	10.9	26.9	24
25	11.1	29.0	11.6	33.1	12.1	36.6	12.6	38.7	12.9	39.3	13.1	39.3	12.9	39.0	12.5	38.0	12.0	35.6	11.5	31.9	11.1	28.2	10.9	26.9	25
26	11.1	29.1	11.6	33.3	12.1	36.7	12.6	38.8	13.0	39.3	13.1	39.3	12.9	39.0	12.5	38.0	12.0	35.5	11.5	31.7	11.1	28.1	10.9	26.9	26
27	11.2	29.2	11.6	33.4	12.1	36.8	12.6	38.8	13.0	39.3	13.1	39.2	12.9	39.0	12.5	37.9	11.9	35.3	11.5	31.6	11.0	28.0	10.9	26.9	27
28	11.2	29.4	11.6	33.6	12.1	36.8	12.6	38.8	13.0	39.3	13.1	39.2	12.9	39.0	12.4	37.9	11.9	35.2	11.4	31.5	11.0	27.9	10.9	26.9	28
29	11.2	29.5	11.6	33.6	12.1	36.9	12.6	38.9	13.0	39.3	13.1	39.2	12.9	38.9	12.4	37.8	11.9	35.1	11.4	31.3	11.0	27.8	10.9	27.0	29
30	11.2	29.6	0.0	0.0	12.1	37.0	12.6	38.9	13.0	39.3	13.1	39.2	12.8	38.9	12.4	37.7	11.9	35.0	11.4	31.2	11.0	27.7	10.9	27.0	30
31	11.2	29.7	0.0	0.0	12.2	37.1	0.0	0.0	13.0	39.3	0.0	0.0	12.8	38.9	12.4	37.7	0.0	0.0	11.4	31.1	0.0	0.0	10.9	27.0	31
MEDIA DIARIA	11.1	28.2	11.4	31.7	11.9	35.5	12.4	38.2	12.8	39.2	13.1	39.3	13.0	39.1	12.6	38.4	12.1	36.4	11.6	33.0	11.2	29.2	10.9	27.1	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 19 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.9	26.5	11.2	29.4	11.6	33.3	12.2	37.1	12.7	39.0	13.1	39.5	13.1	39.4	12.9	39.0	12.4	37.6	11.9	34.6	11.3	30.5	11.0	27.1	1
2	10.9	26.6	11.2	29.5	11.7	33.5	12.2	37.1	12.7	39.0	13.1	39.5	13.1	39.4	12.9	39.0	12.4	37.5	11.9	34.5	11.3	30.4	10.9	27.0	2
3	10.9	26.6	11.2	29.6	11.7	33.6	12.2	37.2	12.7	39.1	13.1	39.5	13.1	39.4	12.8	38.9	12.4	37.4	11.8	34.4	11.3	30.2	10.9	27.0	3
4	10.9	26.7	11.2	29.8	11.7	33.8	12.2	37.3	12.7	39.1	13.1	39.5	13.1	39.4	12.8	38.9	12.3	37.3	11.8	34.2	11.3	30.1	10.9	26.9	4
5	10.9	26.7	11.2	29.9	11.7	33.9	12.3	37.4	12.8	39.1	13.1	39.5	13.1	39.4	12.8	38.9	12.3	37.3	11.8	34.1	11.3	30.0	10.9	26.8	5
6	10.9	26.8	11.3	30.0	11.7	34.0	12.3	37.5	12.8	39.2	13.1	39.5	13.1	39.4	12.8	38.9	12.3	37.2	11.8	34.0	11.3	29.8	10.9	26.8	6
7	10.9	26.8	11.3	30.2	11.7	34.2	12.3	37.6	12.8	39.2	13.1	39.5	13.1	39.4	12.8	38.8	12.3	37.1	11.8	33.9	11.2	29.7	10.9	26.7	7
8	10.9	26.9	11.3	30.3	11.8	34.3	12.3	37.7	12.8	39.2	13.1	39.5	13.1	39.4	12.8	38.8	12.3	37.0	11.7	33.8	11.2	29.6	10.9	26.7	8
9	10.9	27.0	11.3	30.5	11.8	34.4	12.3	37.8	12.8	39.2	13.1	39.5	13.1	39.4	12.8	38.8	12.3	36.9	11.7	33.6	11.2	29.4	10.9	26.6	9
10	10.9	27.0	11.3	30.6	11.8	34.6	12.4	37.8	12.8	39.3	13.1	39.5	13.1	39.4	12.7	38.7	12.2	36.8	11.7	33.5	11.2	29.3	10.9	26.6	10
11	10.9	27.1	11.3	30.7	11.8	34.7	12.4	37.9	12.8	39.3	13.1	39.5	13.1	39.4	12.7	38.7	12.2	36.8	11.7	33.4	11.2	29.2	10.9	26.5	11
12	10.9	27.2	11.3	30.9	11.8	34.8	12.4	38.0	12.9	39.3	13.1	39.5	13.1	39.4	12.7	38.6	12.2	36.7	11.7	33.2	11.2	29.1	10.9	26.5	12
13	11.0	27.3	11.4	31.0	11.8	35.0	12.4	38.0	12.9	39.3	13.1	39.5	13.1	39.3	12.7	38.6	12.2	36.6	11.7	33.1	11.2	28.9	10.9	26.4	13
14	11.0	27.4	11.4	31.2	11.9	35.1	12.4	38.1	12.9	39.3	13.1	39.5	13.1	39.3	12.7	38.6	12.2	36.5	11.6	33.0	11.1	28.8	10.9	26.4	14
15	11.0	27.4	11.4	31.3	11.9	35.2	12.4	38.2	12.9	39.4	13.1	39.5	13.0	39.3	12.7	38.5	12.2	36.4	11.6	32.8	11.1	28.7	10.9	26.4	15
16	11.0	27.5	11.4	31.5	11.9	35.3	12.5	38.2	12.9	39.4	13.1	39.5	13.0	39.3	12.7	38.5	12.1	36.3	11.6	32.7	11.1	28.6	10.9	26.4	16
17	11.0	27.6	11.4	31.6	11.9	35.5	12.5	38.3	12.9	39.4	13.1	39.5	13.0	39.3	12.6	38.4	12.1	36.2	11.6	32.6	11.1	28.5	10.9	26.3	17
18	11.0	27.7	11.4	31.8	11.9	35.6	12.5	38.4	12.9	39.4	13.1	39.5	13.0	39.3	12.6	38.4	12.1	36.1	11.6	32.4	11.1	28.4	10.9	26.3	18
19	11.0	27.8	11.5	31.9	12.0	35.7	12.5	38.4	12.9	39.4	13.1	39.5	13.0	39.3	12.6	38.3	12.1	36.0	11.6	32.3	11.1	28.3	10.9	26.3	19
20	11.0	27.9	11.5	32.0	12.0	35.8	12.5	38.5	12.9	39.4	13.1	39.5	13.0	39.2	12.6	38.3	12.1	35.9	11.5	32.2	11.1	28.1	10.9	26.3	20
21	11.0	28.0	11.5	32.2	12.0	35.9	12.5	38.5	13.0	39.4	13.1	39.5	13.0	39.2	12.6	38.2	12.0	35.8	11.5	32.0	11.1	28.0	10.9	26.3	21
22	11.0	28.2	11.5	32.3	12.0	36.0	12.6	38.6	13.0	39.5	13.1	39.5	13.0	39.2	12.6	38.2	12.0	35.7	11.5	31.9	11.0	27.9	10.9	26.3	22
23	11.1	28.3	11.5	32.5	12.0	36.1	12.6	38.6	13.0	39.5	13.1	39.5	13.0	39.2	12.5	38.1	12.0	35.6	11.5	31.7	11.0	27.8	10.9	26.3	23
24	11.1	28.4	11.5	32.6	12.0	36.3	12.6	38.7	13.0	39.5	13.1	39.5	13.0	39.2	12.5	38.1	12.0	35.5	11.5	31.6	11.0	27.7	10.9	26.3	24
25	11.1	28.5	11.6	32.8	12.1	36.4	12.6	38.7	13.0	39.5	13.1	39.5	13.0	39.2	12.5	38.0	12.0	35.3	11.5	31.5	11.0	27.6	10.9	26.3	25
26	11.1	28.6	11.6	32.9	12.1	36.5	12.6	38.8	13.0	39.5	13.1	39.5	12.9	39.1	12.5	38.0	12.0	35.2	11.4	31.3	11.0	27.5	10.9	26.3	26
27	11.1	28.7	11.6	33.1	12.1	36.6	12.6	38.8	13.0	39.5	13.1	39.5	12.9	39.1	12.5	37.9	11.9	35.1	11.4	31.2	11.0	27.5	10.9	26.3	27
28	11.1	28.9	11.6	33.2	12.1	36.7	12.7	38.9	13.0	39.5	13.1	39.5	12.9	39.1	12.5	37.8	11.9	35.0	11.4	31.0	11.0	27.4	10.9	26.4	28
29	11.1	29.0	11.6	33.2	12.1	36.8	12.7	38.9	13.0	39.5	13.1	39.5	12.9	39.1	12.5	37.8	11.9	34.9	11.4	30.9	11.0	27.3	10.9	26.4	29
30	11.1	29.1	0.0	0.0	12.2	36.9	12.7	39.0	13.0	39.5	13.1	39.5	12.9	39.1	12.4	37.7	11.9	34.8	11.4	30.8	11.0	27.2	10.9	26.4	30
31	11.2	29.2	0.0	0.0	12.2	37.0	0.0	0.0	13.1	39.5	0.0	0.0	12.9	39.0	12.4	37.6	0.0	0.0	11.4	30.6	0.0	0.0	10.9	26.5	31
MEDIA DIARIA	11.0	27.7	11.4	31.3	11.9	35.3	12.4	38.1	12.9	39.3	13.1	39.5	13.0	39.3	12.7	38.4	12.1	36.3	11.6	32.7	11.1	28.7	10.9	26.5	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 20 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.8	25.9	11.1	28.9	11.6	33.0	12.2	36.9	12.7	39.0	13.1	39.7	13.2	39.7	12.9	39.1	12.4	37.5	11.9	34.4	11.3	30.1	10.9	26.6	1
2	10.8	26.0	11.1	29.0	11.6	33.1	12.2	37.0	12.8	39.1	13.1	39.7	13.2	39.7	12.9	39.1	12.4	37.4	11.8	34.2	11.3	29.9	10.9	26.5	2
3	10.8	26.0	11.2	29.1	11.7	33.3	12.2	37.1	12.8	39.1	13.1	39.7	13.2	39.6	12.9	39.1	12.4	37.3	11.8	34.1	11.3	29.8	10.9	26.4	3
4	10.8	26.1	11.2	29.3	11.7	33.4	12.3	37.2	12.8	39.2	13.1	39.7	13.2	39.6	12.9	39.0	12.4	37.2	11.8	34.0	11.2	29.6	10.9	26.4	4
5	10.8	26.1	11.2	29.4	11.7	33.6	12.3	37.3	12.8	39.2	13.2	39.7	13.2	39.6	12.9	39.0	12.4	37.2	11.8	33.8	11.2	29.5	10.9	26.3	5
6	10.8	26.2	11.2	29.6	11.7	33.7	12.3	37.4	12.8	39.2	13.2	39.7	13.2	39.6	12.9	38.9	12.3	37.1	11.8	33.7	11.2	29.4	10.9	26.2	6
7	10.8	26.3	11.2	29.7	11.7	33.9	12.3	37.5	12.8	39.3	13.2	39.7	13.2	39.6	12.8	38.9	12.3	37.0	11.8	33.6	11.2	29.2	10.8	26.2	7
8	10.9	26.3	11.2	29.9	11.7	34.0	12.3	37.6	12.8	39.3	13.2	39.7	13.2	39.6	12.8	38.9	12.3	36.9	11.7	33.5	11.2	29.1	10.8	26.1	8
9	10.9	26.4	11.3	30.0	11.8	34.1	12.4	37.7	12.9	39.3	13.2	39.7	13.2	39.6	12.8	38.8	12.3	36.8	11.7	33.3	11.2	29.0	10.8	26.1	9
10	10.9	26.5	11.3	30.1	11.8	34.3	12.4	37.7	12.9	39.4	13.2	39.7	13.1	39.6	12.8	38.8	12.3	36.7	11.7	33.2	11.2	28.8	10.8	26.0	10
11	10.9	26.6	11.3	30.3	11.8	34.4	12.4	37.8	12.9	39.4	13.2	39.7	13.1	39.6	12.8	38.7	12.2	36.6	11.7	33.0	11.1	28.7	10.8	26.0	11
12	10.9	26.6	11.3	30.4	11.8	34.5	12.4	37.9	12.9	39.4	13.2	39.7	13.1	39.5	12.8	38.7	12.2	36.5	11.7	32.9	11.1	28.6	10.8	25.9	12
13	10.9	26.7	11.3	30.6	11.8	34.7	12.4	38.0	12.9	39.4	13.2	39.7	13.1	39.5	12.7	38.7	12.2	36.4	11.6	32.8	11.1	28.5	10.8	25.9	13
14	10.9	26.8	11.3	30.7	11.9	34.8	12.4	38.1	12.9	39.5	13.2	39.7	13.1	39.5	12.7	38.6	12.2	36.3	11.6	32.6	11.1	28.3	10.8	25.8	14
15	10.9	26.9	11.4	30.9	11.9	34.9	12.5	38.1	12.9	39.5	13.2	39.7	13.1	39.5	12.7	38.6	12.2	36.2	11.6	32.5	11.1	28.2	10.8	25.8	15
16	10.9	27.0	11.4	31.0	11.9	35.1	12.5	38.2	13.0	39.5	13.2	39.7	13.1	39.5	12.7	38.5	12.1	36.1	11.6	32.3	11.1	28.1	10.8	25.8	16
17	10.9	27.1	11.4	31.2	11.9	35.2	12.5	38.3	13.0	39.5	13.2	39.7	13.1	39.5	12.7	38.5	12.1	36.0	11.6	32.2	11.1	28.0	10.8	25.8	17
18	10.9	27.2	11.4	31.3	11.9	35.3	12.5	38.3	13.0	39.5	13.2	39.7	13.1	39.5	12.7	38.4	12.1	35.9	11.5	32.1	11.0	27.9	10.8	25.8	18
19	11.0	27.3	11.4	31.5	12.0	35.5	12.5	38.4	13.0	39.6	13.2	39.7	13.1	39.4	12.6	38.4	12.1	35.8	11.5	31.9	11.0	27.7	10.8	25.7	19
20	11.0	27.4	11.4	31.6	12.0	35.6	12.6	38.5	13.0	39.6	13.2	39.7	13.1	39.4	12.6	38.3	12.1	35.7	11.5	31.8	11.0	27.6	10.8	25.7	20
21	11.0	27.5	11.5	31.8	12.0	35.7	12.6	38.5	13.0	39.6	13.2	39.7	13.1	39.4	12.6	38.2	12.1	35.6	11.5	31.6	11.0	27.5	10.8	25.7	21
22	11.0	27.6	11.5	31.9	12.0	35.8	12.6	38.6	13.0	39.6	13.2	39.7	13.0	39.4	12.6	38.2	12.0	35.5	11.5	31.5	11.0	27.4	10.8	25.7	22
23	11.0	27.7	11.5	32.1	12.0	35.9	12.6	38.6	13.0	39.6	13.2	39.7	13.0	39.4	12.6	38.1	12.0	35.4	11.5	31.3	11.0	27.3	10.8	25.7	23
24	11.0	27.9	11.5	32.2	12.1	36.1	12.6	38.7	13.0	39.6	13.2	39.7	13.0	39.3	12.6	38.1	12.0	35.2	11.4	31.2	11.0	27.2	10.8	25.7	24
25	11.0	28.0	11.5	32.4	12.1	36.2	12.6	38.8	13.1	39.7	13.2	39.7	13.0	39.3	12.5	38.0	12.0	35.1	11.4	31.1	11.0	27.1	10.8	25.7	25
26	11.0	28.1	11.6	32.5	12.1	36.3	12.7	38.8	13.1	39.7	13.2	39.7	13.0	39.3	12.5	37.9	12.0	35.0	11.4	30.9	10.9	27.0	10.8	25.8	26
27	11.1	28.2	11.6	32.7	12.1	36.4	12.7	38.9	13.1	39.7	13.2	39.7	13.0	39.3	12.5	37.9	11.9	34.9	11.4	30.8	10.9	26.9	10.8	25.8	27
28	11.1	28.3	11.6	32.9	12.1	36.5	12.7	38.9	13.1	39.7	13.2	39.7	13.0	39.2	12.5	37.8	11.9	34.8	11.4	30.6	10.9	26.8	10.8	25.8	28
29	11.1	28.5	11.6	32.9	12.1	36.6	12.7	39.0	13.1	39.7	13.2	39.7	13.0	39.2	12.5	37.7	11.9	34.6	11.4	30.5	10.9	26.7	10.8	25.8	29
30	11.1	28.6	0.0	0.0	12.2	36.7	12.7	39.0	13.1	39.7	13.2	39.7	12.9	39.2	12.5	37.6	11.9	34.5	11.3	30.3	10.9	26.7	10.8	25.9	30
31	11.1	28.7	0.0	0.0	12.2	36.8	0.0	0.0	13.1	39.7	0.0	0.0	12.9	39.2	12.4	37.6	0.0	0.0	11.3	30.2	0.0	0.0	10.8	25.9	31
MEDIA DIARIA	10.9	27.1	11.4	30.9	11.9	35.0	12.5	38.1	12.9	39.5	13.2	39.7	13.1	39.5	12.7	38.5	12.2	36.1	11.6	32.3	11.1	28.2	10.8	26.0	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 21 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.7	25.4	11.1	28.4	11.6	32.6	12.2	36.8	12.8	39.1	13.2	39.9	13.3	39.9	13.0	39.2	12.4	37.4	11.9	34.1	11.3	29.6	10.8	26.0	1
2	10.8	25.4	11.1	28.5	11.6	32.8	12.2	36.8	12.8	39.1	13.2	39.9	13.3	39.9	13.0	39.2	12.4	37.3	11.8	34.0	11.2	29.5	10.8	25.9	2
3	10.8	25.5	11.1	28.7	11.6	32.9	12.3	36.9	12.8	39.2	13.2	39.9	13.3	39.9	12.9	39.2	12.4	37.2	11.8	33.8	11.2	29.3	10.8	25.9	3
4	10.8	25.5	11.1	28.8	11.7	33.1	12.3	37.0	12.8	39.2	13.2	39.9	13.2	39.8	12.9	39.1	12.4	37.2	11.8	33.7	11.2	29.2	10.8	25.8	4
5	10.8	25.6	11.1	28.9	11.7	33.2	12.3	37.2	12.8	39.3	13.2	39.9	13.2	39.8	12.9	39.1	12.4	37.1	11.8	33.5	11.2	29.0	10.8	25.7	5
6	10.8	25.6	11.2	29.1	11.7	33.4	12.3	37.3	12.9	39.3	13.2	39.9	13.2	39.8	12.9	39.0	12.4	37.0	11.8	33.4	11.2	28.9	10.8	25.7	6
7	10.8	25.7	11.2	29.2	11.7	33.5	12.3	37.4	12.9	39.3	13.2	39.9	13.2	39.8	12.9	39.0	12.3	36.9	11.7	33.3	11.2	28.8	10.8	25.6	7
8	10.8	25.8	11.2	29.4	11.7	33.7	12.4	37.5	12.9	39.4	13.2	39.9	13.2	39.8	12.9	38.9	12.3	36.8	11.7	33.1	11.1	28.6	10.8	25.5	8
9	10.8	25.8	11.2	29.5	11.8	33.8	12.4	37.6	12.9	39.4	13.2	39.9	13.2	39.8	12.9	38.9	12.3	36.7	11.7	33.0	11.1	28.5	10.8	25.5	9
10	10.8	25.9	11.2	29.7	11.8	34.0	12.4	37.6	12.9	39.4	13.2	39.9	13.2	39.8	12.8	38.9	12.3	36.6	11.7	32.8	11.1	28.3	10.8	25.4	10
11	10.8	26.0	11.3	29.8	11.8	34.1	12.4	37.7	12.9	39.5	13.3	39.9	13.2	39.7	12.8	38.8	12.3	36.5	11.7	32.7	11.1	28.2	10.8	25.4	11
12	10.8	26.1	11.3	30.0	11.8	34.3	12.4	37.8	13.0	39.5	13.3	39.9	13.2	39.7	12.8	38.8	12.2	36.4	11.6	32.6	11.1	28.1	10.7	25.4	12
13	10.8	26.2	11.3	30.1	11.8	34.4	12.5	37.9	13.0	39.5	13.3	39.9	13.2	39.7	12.8	38.7	12.2	36.3	11.6	32.4	11.1	27.9	10.7	25.3	13
14	10.8	26.3	11.3	30.3	11.9	34.5	12.5	38.0	13.0	39.6	13.3	39.9	13.2	39.7	12.8	38.7	12.2	36.2	11.6	32.3	11.0	27.8	10.7	25.3	14
15	10.9	26.4	11.3	30.4	11.9	34.7	12.5	38.1	13.0	39.6	13.3	39.9	13.2	39.7	12.8	38.6	12.2	36.1	11.6	32.1	11.0	27.7	10.7	25.2	15
16	10.9	26.4	11.3	30.6	11.9	34.8	12.5	38.1	13.0	39.6	13.3	39.9	13.2	39.7	12.7	38.5	12.2	35.9	11.6	32.0	11.0	27.6	10.7	25.2	16
17	10.9	26.5	11.4	30.8	11.9	34.9	12.5	38.2	13.0	39.7	13.3	39.9	13.2	39.6	12.7	38.5	12.1	35.8	11.5	31.8	11.0	27.5	10.7	25.2	17
18	10.9	26.7	11.4	30.9	11.9	35.1	12.5	38.3	13.0	39.7	13.3	39.9	13.1	39.6	12.7	38.4	12.1	35.7	11.5	31.7	11.0	27.3	10.7	25.2	18
19	10.9	26.8	11.4	31.1	12.0	35.2	12.6	38.4	13.0	39.7	13.3	39.9	13.1	39.6	12.7	38.4	12.1	35.6	11.5	31.5	11.0	27.2	10.7	25.2	19
20	10.9	26.9	11.4	31.2	12.0	35.3	12.6	38.4	13.1	39.7	13.3	39.9	13.1	39.6	12.7	38.3	12.1	35.5	11.5	31.4	11.0	27.1	10.7	25.2	20
21	10.9	27.0	11.4	31.4	12.0	35.5	12.6	38.5	13.1	39.7	13.3	39.9	13.1	39.5	12.6	38.2	12.1	35.4	11.5	31.2	10.9	27.0	10.7	25.2	21
22	10.9	27.1	11.5	31.5	12.0	35.6	12.6	38.6	13.1	39.8	13.3	39.9	13.1	39.5	12.6	38.2	12.0	35.3	11.4	31.1	10.9	26.9	10.7	25.2	22
23	11.0	27.2	11.5	31.7	12.0	35.7	12.6	38.6	13.1	39.8	13.3	39.9	13.1	39.5	12.6	38.1	12.0	35.1	11.4	30.9	10.9	26.8	10.7	25.2	23
24	11.0	27.3	11.5	31.8	12.1	35.8	12.7	38.7	13.1	39.8	13.3	39.9	13.1	39.5	12.6	38.0	12.0	35.0	11.4	30.8	10.9	26.7	10.7	25.2	24
25	11.0	27.5	11.5	32.0	12.1	36.0	12.7	38.8	13.1	39.8	13.3	39.9	13.1	39.5	12.6	38.0	12.0	34.9	11.4	30.6	10.9	26.6	10.7	25.2	25
26	11.0	27.6	11.5	32.2	12.1	36.1	12.7	38.8	13.1	39.8	13.3	39.9	13.1	39.4	12.6	37.9	12.0	34.8	11.4	30.5	10.9	26.5	10.7	25.2	26
27	11.0	27.7	11.6	32.3	12.1	36.2	12.7	38.9	13.1	39.8	13.3	39.9	13.0	39.4	12.5	37.8	11.9	34.6	11.4	30.3	10.9	26.4	10.7	25.2	27
28	11.0	27.8	11.6	32.5	12.1	36.3	12.7	38.9	13.1	39.9	13.3	39.9	13.0	39.4	12.5	37.7	11.9	34.5	11.3	30.2	10.9	26.3	10.7	25.2	28
29	11.0	28.0	11.6	32.5	12.2	36.4	12.7	39.0	13.2	39.9	13.3	39.9	13.0	39.3	12.5	37.7	11.9	34.4	11.3	30.0	10.9	26.2	10.7	25.3	29
30	11.1	28.1	0.0	0.0	12.2	36.5	12.8	39.0	13.2	39.9	13.3	39.9	13.0	39.3	12.5	37.6	11.9	34.2	11.3	29.9	10.8	26.1	10.7	25.3	30
31	11.1	28.2	0.0	0.0	12.2	36.7	0.0	0.0	13.2	39.9	0.0	0.0	13.0	39.3	12.5	37.5	0.0	0.0	11.3	29.7	0.0	0.0	10.7	25.3	31
MEDIA DIARIA	10.9	26.6	11.3	30.5	11.9	34.7	12.5	38.0	13.0	39.6	13.3	39.9	13.1	39.6	12.7	38.5	12.2	35.9	11.6	31.9	11.0	27.7	10.8	25.4	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 22 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.7	24.8	11.0	27.9	11.6	32.2	12.2	36.6	12.8	39.1	13.2	40.1	13.3	40.1	13.0	39.3	12.5	37.3	11.8	33.8	11.2	29.1	10.8	25.5	1
2	10.7	24.8	11.1	28.0	11.6	32.4	12.2	36.6	12.8	39.2	13.3	40.1	13.3	40.1	13.0	39.3	12.4	37.2	11.8	33.7	11.2	29.0	10.8	25.4	2
3	10.7	24.9	11.1	28.2	11.6	32.6	12.3	36.8	12.9	39.2	13.3	40.1	13.3	40.0	13.0	39.2	12.4	37.1	11.8	33.5	11.2	28.8	10.7	25.3	3
4	10.7	25.0	11.1	28.3	11.6	32.7	12.3	36.9	12.9	39.3	13.3	40.1	13.3	40.0	13.0	39.2	12.4	37.0	11.8	33.3	11.2	28.7	10.7	25.2	4
5	10.7	25.0	11.1	28.4	11.7	32.9	12.3	37.0	12.9	39.3	13.3	40.1	13.3	40.0	13.0	39.2	12.4	36.9	11.8	33.2	11.1	28.6	10.7	25.2	5
6	10.7	25.1	11.1	28.6	11.7	33.0	12.3	37.1	12.9	39.4	13.3	40.1	13.3	40.0	12.9	39.1	12.4	36.8	11.7	33.1	11.1	28.4	10.7	25.1	6
7	10.7	25.1	11.1	28.7	11.7	33.2	12.4	37.2	12.9	39.4	13.3	40.1	13.3	40.0	12.9	39.1	12.3	36.8	11.7	32.9	11.1	28.3	10.7	25.0	7
8	10.7	25.2	11.2	28.9	11.7	33.3	12.4	37.3	12.9	39.4	13.3	40.1	13.3	40.0	12.9	39.0	12.3	36.6	11.7	32.8	11.1	28.1	10.7	25.0	8
9	10.7	25.3	11.2	29.1	11.7	33.5	12.4	37.4	13.0	39.5	13.3	40.1	13.3	40.0	12.9	39.0	12.3	36.5	11.7	32.7	11.1	28.0	10.7	24.9	9
10	10.7	25.4	11.2	29.2	11.8	33.6	12.4	37.5	13.0	39.5	13.3	40.1	13.3	39.9	12.9	38.9	12.3	36.4	11.7	32.5	11.1	27.8	10.7	24.9	10
11	10.8	25.4	11.2	29.4	11.8	33.8	12.4	37.6	13.0	39.6	13.3	40.1	13.3	39.9	12.9	38.8	12.3	36.3	11.6	32.3	11.0	27.7	10.7	24.8	11
12	10.8	25.5	11.2	29.5	11.8	33.9	12.5	37.7	13.0	39.6	13.3	40.1	13.3	39.9	12.8	38.8	12.2	36.2	11.6	32.2	11.0	27.6	10.7	24.8	12
13	10.8	25.6	11.2	29.7	11.8	34.1	12.5	37.8	13.0	39.6	13.3	40.1	13.3	39.9	12.8	38.7	12.2	36.1	11.6	32.0	11.0	27.4	10.7	24.7	13
14	10.8	25.7	11.3	29.8	11.8	34.2	12.5	37.9	13.0	39.7	13.3	40.1	13.2	39.9	12.8	38.7	12.2	36.0	11.6	31.9	11.0	27.3	10.7	24.7	14
15	10.8	25.8	11.3	30.0	11.9	34.4	12.5	38.0	13.0	39.7	13.3	40.1	13.2	39.8	12.8	38.6	12.2	35.9	11.6	31.7	11.0	27.2	10.7	24.7	15
16	10.8	25.9	11.3	30.2	11.9	34.5	12.5	38.1	13.1	39.7	13.3	40.1	13.2	39.8	12.8	38.6	12.2	35.8	11.5	31.6	11.0	27.1	10.7	24.6	16
17	10.8	26.0	11.3	30.3	11.9	34.7	12.6	38.2	13.1	39.8	13.3	40.1	13.2	39.8	12.8	38.5	12.1	35.6	11.5	31.4	10.9	26.9	10.7	24.6	17
18	10.8	26.1	11.3	30.5	11.9	34.8	12.6	38.2	13.1	39.8	13.3	40.1	13.2	39.8	12.7	38.4	12.1	35.5	11.5	31.3	10.9	26.8	10.7	24.6	18
19	10.8	26.2	11.4	30.6	12.0	34.9	12.6	38.3	13.1	39.8	13.3	40.1	13.2	39.7	12.7	38.4	12.1	35.4	11.5	31.1	10.9	26.7	10.7	24.6	19
20	10.9	26.3	11.4	30.8	12.0	35.1	12.6	38.4	13.1	39.9	13.3	40.1	13.2	39.7	12.7	38.3	12.1	35.3	11.5	31.0	10.9	26.6	10.7	24.6	20
21	10.9	26.4	11.4	31.0	12.0	35.2	12.6	38.5	13.1	39.9	13.3	40.1	13.2	39.7	12.7	38.2	12.1	35.1	11.4	30.8	10.9	26.5	10.7	24.6	21
22	10.9	26.6	11.4	31.1	12.0	35.4	12.7	38.5	13.1	39.9	13.3	40.1	13.2	39.7	12.7	38.2	12.0	35.0	11.4	30.7	10.9	26.3	10.7	24.6	22
23	10.9	26.7	11.4	31.3	12.0	35.5	12.7	38.6	13.2	39.9	13.3	40.1	13.1	39.6	12.6	38.1	12.0	34.9	11.4	30.5	10.9	26.2	10.7	24.6	23
24	10.9	26.8	11.5	31.4	12.1	35.6	12.7	38.7	13.2	39.9	13.3	40.1	13.1	39.6	12.6	38.0	12.0	34.8	11.4	30.4	10.9	26.1	10.7	24.6	24
25	10.9	26.9	11.5	31.6	12.1	35.7	12.7	38.8	13.2	40.0	13.3	40.1	13.1	39.6	12.6	37.9	12.0	34.6	11.4	30.2	10.8	26.0	10.7	24.6	25
26	10.9	27.1	11.5	31.8	12.1	35.9	12.7	38.8	13.2	40.0	13.3	40.1	13.1	39.5	12.6	37.8	12.0	34.5	11.3	30.1	10.8	25.9	10.7	24.6	26
27	11.0	27.2	11.5	31.9	12.1	36.0	12.7	38.9	13.2	40.0	13.3	40.1	13.1	39.5	12.6	37.8	11.9	34.4	11.3	29.9	10.8	25.8	10.7	24.6	27
28	11.0	27.3	11.5	32.1	12.1	36.1	12.8	38.9	13.2	40.0	13.3	40.1	13.1	39.5	12.5	37.7	11.9	34.2	11.3	29.7	10.8	25.7	10.7	24.7	28
29	11.0	27.4	11.5	32.1	12.2	36.2	12.8	39.0	13.2	40.0	13.3	40.1	13.1	39.4	12.5	37.6	11.9	34.1	11.3	29.6	10.8	25.6	10.7	24.7	29
30	11.0	27.6	0.0	0.0	12.2	36.4	12.8	39.1	13.2	40.0	13.3	40.1	13.1	39.4	12.5	37.5	11.9	34.0	11.3	29.4	10.8	25.6	10.7	24.7	30
31	11.0	27.7	0.0	0.0	12.2	36.5	0.0	0.0	13.2	40.1	0.0	0.0	13.0	39.4	12.5	37.4	0.0	0.0	11.2	29.3	0.0	0.0	10.7	24.7	31
MEDIA DIARIA	10.8	26.0	11.3	30.0	11.9	34.5	12.5	38.0	13.0	39.7	13.3	40.1	13.2	39.8	12.8	38.5	12.2	35.8	11.5	31.6	11.0	27.2	10.7	24.8	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 23 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.6	24.2	11.0	27.3	11.5	31.9	12.2	36.4	12.9	39.1	13.3	40.2	13.4	40.2	13.1	39.4	12.5	37.2	11.8	33.5	11.2	28.7	10.7	24.9	1
2	10.6	24.3	11.0	27.5	11.6	32.0	12.3	36.5	12.9	39.2	13.3	40.2	13.4	40.2	13.1	39.4	12.5	37.1	11.8	33.4	11.2	28.5	10.7	24.8	2
3	10.6	24.3	11.0	27.6	11.6	32.2	12.3	36.6	12.9	39.2	13.3	40.3	13.4	40.2	13.0	39.3	12.5	37.0	11.8	33.2	11.1	28.4	10.7	24.7	3
4	10.6	24.4	11.0	27.8	11.6	32.4	12.3	36.7	12.9	39.3	13.3	40.3	13.4	40.2	13.0	39.3	12.4	36.9	11.8	33.0	11.1	28.2	10.7	24.7	4
5	10.6	24.4	11.1	27.9	11.6	32.5	12.3	36.9	12.9	39.4	13.3	40.3	13.4	40.2	13.0	39.2	12.4	36.8	11.8	32.9	11.1	28.1	10.7	24.6	5
6	10.6	24.5	11.1	28.1	11.7	32.7	12.3	37.0	13.0	39.4	13.4	40.3	13.4	40.2	13.0	39.2	12.4	36.7	11.7	32.8	11.1	27.9	10.7	24.5	6
7	10.7	24.6	11.1	28.3	11.7	32.8	12.4	37.1	13.0	39.5	13.4	40.3	13.4	40.2	13.0	39.1	12.4	36.6	11.7	32.6	11.1	27.8	10.7	24.5	7
8	10.7	24.6	11.1	28.4	11.7	33.0	12.4	37.2	13.0	39.5	13.4	40.3	13.4	40.1	13.0	39.1	12.3	36.5	11.7	32.5	11.0	27.6	10.6	24.4	8
9	10.7	24.7	11.1	28.6	11.7	33.2	12.4	37.3	13.0	39.6	13.4	40.3	13.3	40.1	12.9	39.0	12.3	36.4	11.7	32.3	11.0	27.5	10.6	24.3	9
10	10.7	24.8	11.2	28.7	11.7	33.3	12.4	37.4	13.0	39.6	13.4	40.3	13.3	40.1	12.9	38.9	12.3	36.3	11.6	32.1	11.0	27.3	10.6	24.3	10
11	10.7	24.9	11.2	28.9	11.8	33.5	12.5	37.5	13.0	39.6	13.4	40.3	13.3	40.1	12.9	38.9	12.3	36.2	11.6	32.0	11.0	27.2	10.6	24.2	11
12	10.7	25.0	11.2	29.1	11.8	33.6	12.5	37.6	13.1	39.7	13.4	40.3	13.3	40.1	12.9	38.8	12.3	36.0	11.6	31.8	11.0	27.1	10.6	24.2	12
13	10.7	25.0	11.2	29.2	11.8	33.8	12.5	37.7	13.1	39.7	13.4	40.3	13.3	40.0	12.9	38.8	12.2	35.9	11.6	31.7	11.0	26.9	10.6	24.2	13
14	10.7	25.1	11.2	29.4	11.8	33.9	12.5	37.8	13.1	39.8	13.4	40.3	13.3	40.0	12.9	38.7	12.2	35.8	11.6	31.5	10.9	26.8	10.6	24.1	14
15	10.7	25.2	11.3	29.5	11.9	34.1	12.5	37.9	13.1	39.8	13.4	40.3	13.3	40.0	12.8	38.6	12.2	35.7	11.5	31.4	10.9	26.7	10.6	24.1	15
16	10.7	25.3	11.3	29.7	11.9	34.2	12.6	38.0	13.1	39.8	13.4	40.3	13.3	40.0	12.8	38.6	12.2	35.6	11.5	31.2	10.9	26.5	10.6	24.1	16
17	10.8	25.4	11.3	29.9	11.9	34.4	12.6	38.1	13.1	39.9	13.4	40.3	13.3	39.9	12.8	38.5	12.1	35.4	11.5	31.0	10.9	26.4	10.6	24.0	17
18	10.8	25.5	11.3	30.0	11.9	34.5	12.6	38.2	13.1	39.9	13.4	40.3	13.3	39.9	12.8	38.4	12.1	35.3	11.5	30.9	10.9	26.3	10.6	24.0	18
19	10.8	25.7	11.3	30.2	11.9	34.7	12.6	38.3	13.2	39.9	13.4	40.3	13.3	39.9	12.8	38.3	12.1	35.2	11.4	30.7	10.9	26.2	10.6	24.0	19
20	10.8	25.8	11.4	30.4	12.0	34.8	12.6	38.3	13.2	40.0	13.4	40.3	13.2	39.9	12.7	38.3	12.1	35.0	11.4	30.6	10.8	26.0	10.6	24.0	20
21	10.8	25.9	11.4	30.5	12.0	35.0	12.7	38.4	13.2	40.0	13.4	40.3	13.2	39.8	12.7	38.2	12.1	34.9	11.4	30.4	10.8	25.9	10.6	24.0	21
22	10.8	26.0	11.4	30.7	12.0	35.1	12.7	38.5	13.2	40.0	13.4	40.3	13.2	39.8	12.7	38.1	12.0	34.8	11.4	30.3	10.8	25.8	10.6	24.0	22
23	10.8	26.1	11.4	30.9	12.0	35.2	12.7	38.6	13.2	40.0	13.4	40.3	13.2	39.8	12.7	38.0	12.0	34.6	11.4	30.1	10.8	25.7	10.6	24.0	23
24	10.9	26.3	11.4	31.0	12.1	35.4	12.7	38.7	13.2	40.1	13.4	40.3	13.2	39.7	12.7	38.0	12.0	34.5	11.3	29.9	10.8	25.6	10.6	24.0	24
25	10.9	26.4	11.5	31.2	12.1	35.5	12.7	38.7	13.2	40.1	13.4	40.3	13.2	39.7	12.6	37.9	12.0	34.4	11.3	29.8	10.8	25.5	10.6	24.0	25
26	10.9	26.5	11.5	31.4	12.1	35.7	12.8	38.8	13.2	40.1	13.4	40.3	13.2	39.7	12.6	37.8	12.0	34.2	11.3	29.6	10.8	25.4	10.6	24.0	26
27	10.9	26.6	11.5	31.5	12.1	35.8	12.8	38.9	13.3	40.1	13.4	40.3	13.1	39.6	12.6	37.7	11.9	34.1	11.3	29.5	10.8	25.3	10.6	24.0	27
28	10.9	26.8	11.5	31.7	12.1	35.9	12.8	38.9	13.3	40.2	13.4	40.3	13.1	39.6	12.6	37.6	11.9	33.9	11.3	29.3	10.7	25.2	10.6	24.1	28
29	10.9	26.9	11.5	31.7	12.2	36.0	12.8	39.0	13.3	40.2	13.4	40.3	13.1	39.5	12.6	37.5	11.9	33.8	11.2	29.1	10.7	25.1	10.6	24.1	29
30	10.9	27.1	0.0	0.0	12.2	36.2	12.8	39.1	13.3	40.2	13.4	40.3	13.1	39.5	12.5	37.4	11.9	33.7	11.2	29.0	10.7	25.0	10.6	24.1	30
31	11.0	27.2	0.0	0.0	12.2	36.3	0.0	0.0	13.3	40.2	0.0	0.0	13.1	39.5	12.5	37.3	0.0	0.0	11.2	28.8	0.0	0.0	10.6	24.2	31
MEDIA DIARIA	10.8	25.5	11.3	29.6	11.9	34.2	12.5	37.9	13.1	39.8	13.4	40.3	13.3	39.9	12.8	38.5	12.2	35.6	11.5	31.2	10.9	26.7	10.6	24.2	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 24 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.5	23.6	10.9	26.8	11.5	31.5	12.2	36.2	12.9	39.1	13.4	40.4	13.5	40.4	13.1	39.5	12.5	37.1	11.8	33.2	11.1	28.2	10.6	24.3	1
2	10.5	23.7	11.0	27.0	11.5	31.6	12.3	36.3	12.9	39.2	13.4	40.4	13.5	40.4	13.1	39.4	12.5	37.0	11.8	33.0	11.1	28.0	10.6	24.3	2
3	10.6	23.7	11.0	27.1	11.6	31.8	12.3	36.4	12.9	39.3	13.4	40.4	13.5	40.4	13.1	39.4	12.5	36.9	11.8	32.9	11.1	27.9	10.6	24.2	3
4	10.6	23.8	11.0	27.3	11.6	32.0	12.3	36.6	13.0	39.3	13.4	40.4	13.5	40.4	13.1	39.3	12.5	36.8	11.8	32.7	11.1	27.7	10.6	24.1	4
5	10.6	23.9	11.0	27.4	11.6	32.1	12.3	36.7	13.0	39.4	13.4	40.4	13.4	40.4	13.1	39.3	12.4	36.7	11.7	32.5	11.1	27.6	10.6	24.0	5
6	10.6	23.9	11.0	27.6	11.6	32.3	12.4	36.8	13.0	39.4	13.4	40.4	13.4	40.3	13.0	39.2	12.4	36.6	11.7	32.4	11.0	27.4	10.6	23.9	6
7	10.6	24.0	11.0	27.8	11.7	32.5	12.4	37.0	13.0	39.5	13.4	40.5	13.4	40.3	13.0	39.2	12.4	36.5	11.7	32.3	11.0	27.3	10.6	23.9	7
8	10.6	24.1	11.1	27.9	11.7	32.6	12.4	37.1	13.0	39.6	13.4	40.5	13.4	40.3	13.0	39.1	12.4	36.3	11.7	32.1	11.0	27.1	10.6	23.8	8
9	10.6	24.1	11.1	28.1	11.7	32.8	12.4	37.2	13.1	39.6	13.4	40.5	13.4	40.3	13.0	39.0	12.3	36.2	11.6	31.9	11.0	27.0	10.6	23.8	9
10	10.6	24.2	11.1	28.2	11.7	33.0	12.5	37.3	13.1	39.7	13.4	40.5	13.4	40.3	13.0	39.0	12.3	36.1	11.6	31.8	11.0	26.8	10.6	23.7	10
11	10.6	24.3	11.1	28.4	11.8	33.1	12.5	37.4	13.1	39.7	13.5	40.5	13.4	40.2	12.9	38.9	12.3	36.0	11.6	31.6	10.9	26.7	10.6	23.7	11
12	10.6	24.4	11.2	28.6	11.8	33.3	12.5	37.5	13.1	39.8	13.5	40.5	13.4	40.2	12.9	38.8	12.3	35.9	11.6	31.5	10.9	26.5	10.5	23.6	12
13	10.6	24.5	11.2	28.7	11.8	33.5	12.5	37.6	13.1	39.8	13.5	40.5	13.4	40.2	12.9	38.8	12.2	35.7	11.6	31.3	10.9	26.4	10.5	23.6	13
14	10.7	24.6	11.2	28.9	11.8	33.6	12.5	37.7	13.1	39.8	13.5	40.5	13.4	40.2	12.9	38.7	12.2	35.6	11.5	31.1	10.9	26.3	10.5	23.5	14
15	10.7	24.7	11.2	29.1	11.9	33.8	12.6	37.8	13.2	39.9	13.5	40.5	13.4	40.1	12.9	38.6	12.2	35.5	11.5	31.0	10.9	26.1	10.5	23.5	15
16	10.7	24.8	11.2	29.2	11.9	33.9	12.6	37.9	13.2	39.9	13.5	40.5	13.3	40.1	12.9	38.6	12.2	35.3	11.5	30.8	10.9	26.0	10.5	23.5	16
17	10.7	24.9	11.3	29.4	11.9	34.1	12.6	38.0	13.2	40.0	13.5	40.5	13.3	40.1	12.8	38.5	12.2	35.2	11.5	30.6	10.8	25.9	10.5	23.5	17
18	10.7	25.0	11.3	29.6	11.9	34.2	12.6	38.1	13.2	40.0	13.5	40.5	13.3	40.1	12.8	38.4	12.1	35.1	11.4	30.5	10.8	25.7	10.5	23.4	18
19	10.7	25.1	11.3	29.8	11.9	34.4	12.7	38.2	13.2	40.0	13.5	40.5	13.3	40.0	12.8	38.3	12.1	34.8	11.4	30.2	10.8	25.5	10.5	23.4	19
20	10.7	25.2	11.3	29.9	12.0	34.5	12.7	38.3	13.2	40.1	13.5	40.5	13.3	40.0	12.8	38.2	12.1	34.7	11.4	30.0	10.8	25.4	10.5	23.4	20
21	10.8	25.3	11.3	30.1	12.0	34.7	12.7	38.4	13.2	40.1	13.5	40.5	13.3	39.9	12.8	38.2	12.1	34.5	11.4	29.8	10.8	25.3	10.5	23.4	21
22	10.8	25.5	11.4	30.3	12.0	34.8	12.7	38.5	13.3	40.1	13.5	40.5	13.3	39.9	12.7	38.1	12.0	34.4	11.3	29.7	10.7	25.1	10.5	23.4	22
23	10.8	25.6	11.4	30.4	12.0	35.0	12.7	38.5	13.3	40.2	13.5	40.5	13.3	39.9	12.7	38.0	12.0	34.2	11.3	29.5	10.7	25.0	10.5	23.4	23
24	10.8	25.7	11.4	30.6	12.1	35.1	12.8	38.6	13.3	40.2	13.5	40.5	13.2	39.8	12.7	37.9	12.0	34.1	11.3	29.3	10.7	24.9	10.5	23.4	24
25	10.8	25.8	11.4	30.8	12.1	35.3	12.8	38.7	13.3	40.2	13.5	40.5	13.2	39.8	12.7	37.8	12.0	34.0	11.3	29.2	10.7	24.8	10.5	23.4	25
26	10.8	26.0	11.5	31.0	12.1	35.4	12.8	38.8	13.3	40.2	13.5	40.5	13.2	39.8	12.6	37.7	11.9	33.8	11.2	29.0	10.7	24.7	10.5	23.5	26
27	10.8	26.1	11.5	31.1	12.1	35.6	12.8	38.9	13.3	40.3	13.5	40.5	13.2	39.7	12.6	37.6	11.9	33.7	11.2	28.8	10.7	24.6	10.5	23.5	27
28	10.9	26.2	11.5	31.3	12.2	35.7	12.8	38.9	13.3	40.3	13.5	40.5	13.2	39.7	12.6	37.5	11.9	33.5	11.2	28.7	10.7	24.5	10.5	23.5	28
29	10.9	26.4	11.5	31.3	12.2	35.8	12.9	39.0	13.3	40.3	13.5	40.4	13.2	39.6	12.6	37.4	11.9	33.4	11.2	28.5	10.7	24.4	10.5	23.5	29
30	10.9	26.5	0.0	0.0	12.2	36.0	12.9	39.1	13.4	40.3	13.5	40.4	13.2	39.6	12.6	37.3	11.9	33.4	11.2	28.4	0.0	0.0	10.5	23.6	30
31	10.9	26.7	0.0	0.0	12.2	36.1	0.0	0.0	13.4	40.4	0.0	0.0	13.1	39.5	12.5	37.2	0.0	0.0	11.2	28.4	0.0	0.0	10.5	23.6	31
MEDIA DIARIA	10.7	24.9	11.2	29.1	11.9	33.9	12.6	37.8	13.2	39.9	13.5	40.5	13.3	40.1	12.8	38.5	12.2	35.4	11.5	30.8	10.9	26.2	10.6	23.7	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 25 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.5	23.0	10.9	26.3	11.5	31.1	12.3	36.0	12.9	39.1	13.4	40.5	13.5	40.6	13.2	39.5	12.5	37.0	11.8	32.9	11.1	27.7	10.6	23.8	1
2	10.5	23.1	10.9	26.4	11.5	31.2	12.3	36.1	13.0	39.2	13.5	40.5	13.5	40.6	13.2	39.5	12.5	36.9	11.8	32.7	11.1	27.6	10.6	23.7	2
3	10.5	23.1	10.9	26.6	11.6	31.4	12.3	36.2	13.0	39.3	13.5	40.6	13.5	40.6	13.1	39.4	12.5	36.8	11.8	32.5	11.1	27.4	10.6	23.6	3
4	10.5	23.2	10.9	26.8	11.6	31.6	12.3	36.4	13.0	39.3	13.5	40.6	13.5	40.5	13.1	39.4	12.5	36.7	11.8	32.4	11.0	27.2	10.5	23.5	4
5	10.5	23.3	11.0	26.9	11.6	31.8	12.4	36.5	13.0	39.4	13.5	40.6	13.5	40.5	13.1	39.3	12.4	36.5	11.7	32.2	11.0	27.1	10.5	23.4	5
6	10.5	23.3	11.0	27.1	11.6	31.9	12.4	36.7	13.0	39.5	13.5	40.6	13.5	40.5	13.1	39.3	12.4	36.4	11.7	32.1	11.0	26.9	10.5	23.4	6
7	10.5	23.4	11.0	27.2	11.6	32.1	12.4	36.8	13.1	39.5	13.5	40.6	13.5	40.5	13.1	39.2	12.4	36.3	11.7	31.9	11.0	26.8	10.5	23.3	7
8	10.5	23.5	11.0	27.4	11.7	32.3	12.4	36.9	13.1	39.6	13.5	40.6	13.5	40.5	13.1	39.1	12.4	36.2	11.7	31.7	11.0	26.6	10.5	23.2	8
9	10.5	23.5	11.0	27.6	11.7	32.5	12.5	37.0	13.1	39.6	13.5	40.6	13.5	40.4	13.0	39.1	12.4	36.1	11.6	31.6	10.9	26.5	10.5	23.2	9
10	10.5	23.6	11.1	27.7	11.7	32.6	12.5	37.2	13.1	39.7	13.5	40.6	13.5	40.4	13.0	39.0	12.3	35.9	11.6	31.4	10.9	26.3	10.5	23.1	10
11	10.6	23.7	11.1	27.9	11.7	32.8	12.5	37.3	13.1	39.8	13.5	40.7	13.5	40.4	13.0	38.9	12.3	35.8	11.6	31.2	10.9	26.2	10.5	23.1	11
12	10.6	23.8	11.1	28.1	11.8	33.0	12.5	37.4	13.2	39.8	13.5	40.7	13.5	40.4	13.0	38.8	12.3	35.7	11.6	31.1	10.9	26.0	10.5	23.0	12
13	10.6	23.9	11.1	28.3	11.8	33.1	12.5	37.5	13.2	39.9	13.5	40.7	13.4	40.3	13.0	38.8	12.3	35.5	11.5	30.9	10.9	25.9	10.5	23.0	13
14	10.6	24.0	11.2	28.4	11.8	33.3	12.6	37.6	13.2	39.9	13.5	40.7	13.4	40.3	12.9	38.7	12.2	35.4	11.5	30.7	10.8	25.7	10.5	23.0	14
15	10.6	24.1	11.2	28.6	11.8	33.5	12.6	37.7	13.2	40.0	13.5	40.7	13.4	40.3	12.9	38.6	12.2	35.3	11.5	30.6	10.8	25.6	10.5	22.9	15
16	10.6	24.2	11.2	28.8	11.9	33.6	12.6	37.8	13.2	40.0	13.5	40.7	13.4	40.2	12.9	38.5	12.2	35.1	11.5	30.4	10.8	25.5	10.5	22.9	16
17	10.6	24.3	11.2	28.9	11.9	33.8	12.6	37.9	13.2	40.0	13.5	40.7	13.4	40.2	12.9	38.5	12.2	35.0	11.4	30.2	10.8	25.3	10.5	22.9	17
18	10.6	24.4	11.2	29.1	11.9	33.9	12.7	38.0	13.3	40.1	13.6	40.7	13.4	40.2	12.9	38.4	12.1	34.9	11.4	30.1	10.8	25.2	10.5	22.8	18
19	10.7	24.5	11.3	29.3	11.9	34.1	12.7	38.1	13.3	40.1	13.6	40.7	13.4	40.1	12.8	38.3	12.1	34.7	11.4	29.9	10.8	25.1	10.4	22.8	19
20	10.7	24.7	11.3	29.5	12.0	34.3	12.7	38.2	13.3	40.2	13.6	40.7	13.4	40.1	12.8	38.2	12.1	34.6	11.4	29.7	10.7	24.9	10.4	22.8	20
21	10.7	24.8	11.3	29.7	12.0	34.4	12.7	38.3	13.3	40.2	13.6	40.7	13.4	40.1	12.8	38.1	12.1	34.4	11.3	29.6	10.7	24.8	10.4	22.8	21
22	10.7	24.9	11.3	29.8	12.0	34.6	12.8	38.4	13.3	40.2	13.6	40.7	13.3	40.0	12.8	38.0	12.0	34.3	11.3	29.4	10.7	24.7	10.4	22.8	22
23	10.7	25.0	11.4	30.0	12.0	34.7	12.8	38.5	13.3	40.3	13.6	40.7	13.3	40.0	12.7	37.9	12.0	34.1	11.3	29.2	10.7	24.6	10.4	22.8	23
24	10.7	25.2	11.4	30.2	12.1	34.9	12.8	38.6	13.3	40.3	13.6	40.7	13.3	39.9	12.7	37.8	12.0	34.0	11.3	29.0	10.7	24.5	10.4	22.8	24
25	10.8	25.3	11.4	30.4	12.1	35.0	12.8	38.7	13.4	40.3	13.6	40.7	13.3	39.9	12.7	37.7	12.0	33.8	11.3	28.9	10.7	24.4	10.4	22.8	25
26	10.8	25.4	11.4	30.5	12.1	35.2	12.8	38.8	13.4	40.4	13.6	40.6	13.3	39.9	12.7	37.6	11.9	33.7	11.2	28.7	10.6	24.2	10.4	22.8	26
27	10.8	25.6	11.5	30.7	12.1	35.3	12.9	38.9	13.4	40.4	13.6	40.6	13.3	39.8	12.7	37.5	11.9	33.5	11.2	28.5	10.6	24.1	10.5	22.9	27
28	10.8	25.7	11.5	30.9	12.2	35.5	12.9	38.9	13.4	40.4	13.5	40.6	13.2	39.8	12.6	37.4	11.9	33.4	11.2	28.4	10.6	24.0	10.5	22.9	28
29	10.8	25.8	11.5	30.9	12.2	35.6	12.9	39.0	13.4	40.4	13.5	40.6	13.2	39.7	12.6	37.3	11.9	33.2	11.2	28.2	10.6	23.9	10.5	22.9	29
30	10.8	26.0	0.0	0.0	12.2	35.7	12.9	39.1	13.4	40.5	13.5	40.6	13.2	39.7	12.6	37.2	11.8	33.0	11.1	28.0	10.6	23.9	10.5	23.0	30
31	10.9	26.1	0.0	0.0	12.2	35.9	0.0	0.0	13.4	40.5	0.0	0.0	13.2	39.6	12.6	37.1	0.0	0.0	11.1	27.9	0.0	0.0	10.5	23.0	31
MEDIA DIARIA	10.6	24.3	11.2	28.6	11.9	33.6	12.6	37.7	13.2	39.9	13.5	40.6	13.4	40.2	12.9	38.5	12.2	35.1	11.5	30.4	10.8	25.6	10.5	23.1	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 26 GRADOS DE LATITUD NORTE

	ENE.		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.4	22.5	10.8	25.8	11.5	30.7	12.3	35.8	13.0	39.1	13.5	40.6	13.6	40.7	13.2	39.6	12.6	36.9	11.8	32.6	11.1	27.2	10.5	23.2	1
2	10.4	22.5	10.9	25.9	11.5	30.8	12.3	35.9	13.0	39.2	13.5	40.7	13.6	40.7	13.2	39.5	12.5	36.8	11.8	32.4	11.0	27.1	10.5	23.1	2
3	10.4	22.6	10.9	26.1	11.5	31.0	12.3	36.0	13.0	39.3	13.5	40.7	13.6	40.7	13.2	39.5	12.5	36.6	11.8	32.2	11.0	26.9	10.5	23.0	3
4	10.4	22.6	10.9	26.2	11.6	31.2	12.3	36.2	13.1	39.3	13.5	40.7	13.6	40.7	13.2	39.4	12.5	36.5	11.7	32.0	11.0	26.7	10.5	22.9	4
5	10.4	22.7	10.9	26.4	11.6	31.4	12.4	36.3	13.1	39.4	13.6	40.7	13.6	40.7	13.2	39.4	12.5	36.4	11.7	31.8	11.0	26.6	10.5	22.9	5
6	10.4	22.7	10.9	26.6	11.6	31.6	12.4	36.5	13.1	39.5	13.6	40.7	13.6	40.6	13.1	39.3	12.4	36.3	11.7	31.7	10.9	26.4	10.5	22.8	6
7	10.4	22.8	11.0	26.7	11.6	31.7	12.4	36.6	13.1	39.6	13.6	40.8	13.6	40.6	13.1	39.2	12.4	36.1	11.7	31.5	10.9	26.2	10.4	22.7	7
8	10.5	22.9	11.0	26.9	11.7	31.9	12.4	36.8	13.1	39.6	13.6	40.8	13.6	40.6	13.1	39.1	12.4	36.0	11.6	31.4	10.9	26.1	10.4	22.7	8
9	10.5	23.0	11.0	27.1	11.7	32.1	12.5	36.9	13.2	39.7	13.6	40.8	13.6	40.6	13.1	39.1	12.4	35.9	11.6	31.2	10.9	25.9	10.4	22.6	9
10	10.5	23.0	11.0	27.2	11.7	32.3	12.5	37.0	13.2	39.7	13.6	40.8	13.5	40.5	13.1	39.0	12.3	35.7	11.6	31.0	10.9	25.8	10.4	22.5	10
11	10.5	23.1	11.0	27.4	11.7	32.5	12.5	37.1	13.2	39.8	13.6	40.8	13.5	40.5	13.0	38.9	12.3	35.6	11.6	30.9	10.8	25.6	10.4	22.5	11
12	10.5	23.2	11.1	27.6	11.8	32.6	12.5	37.2	13.2	39.9	13.6	40.8	13.5	40.5	13.0	38.8	12.3	35.5	11.5	30.7	10.8	25.5	10.4	22.4	12
13	10.5	23.3	11.1	27.8	11.8	32.8	12.6	37.4	13.2	39.9	13.6	40.8	13.5	40.5	13.0	38.8	12.3	35.3	11.5	30.5	10.8	25.3	10.4	22.4	13
14	10.5	23.4	11.1	27.9	11.8	33.0	12.6	37.5	13.2	40.0	13.6	40.8	13.5	40.4	13.0	38.7	12.2	35.2	11.5	30.3	10.8	25.2	10.4	22.4	14
15	10.5	23.5	11.1	28.1	11.8	33.1	12.6	37.6	13.3	40.0	13.6	40.8	13.5	40.4	13.0	38.6	12.2	35.0	11.5	30.2	10.8	25.1	10.4	22.3	15
16	10.6	23.6	11.2	28.3	11.9	33.3	12.6	37.7	13.3	40.1	13.6	40.8	13.5	40.4	12.9	38.5	12.2	34.9	11.4	30.0	10.7	24.9	10.4	22.3	16
17	10.6	23.7	11.2	28.5	11.9	33.5	12.7	37.8	13.3	40.1	13.6	40.8	13.5	40.3	12.9	38.4	12.2	34.8	11.4	29.8	10.7	24.8	10.4	22.3	17
18	10.6	23.8	11.2	28.7	11.9	33.6	12.7	37.9	13.3	40.2	13.6	40.8	13.5	40.3	12.9	38.3	12.1	34.6	11.4	29.6	10.7	24.6	10.4	22.3	18
19	10.6	24.0	11.2	28.8	11.9	33.8	12.7	38.0	13.3	40.2	13.6	40.8	13.4	40.3	12.9	38.2	12.1	34.5	11.4	29.5	10.7	24.5	10.4	22.2	19
20	10.6	24.1	11.3	29.0	12.0	34.0	12.7	38.1	13.3	40.3	13.6	40.8	13.4	40.2	12.8	38.1	12.1	34.3	11.3	29.3	10.7	24.4	10.4	22.2	20
21	10.6	24.2	11.3	29.2	12.0	34.1	12.8	38.2	13.4	40.3	13.6	40.8	13.4	40.2	12.8	38.0	12.1	34.2	11.3	29.1	10.7	24.3	10.4	22.2	21
22	10.6	24.3	11.3	29.4	12.0	34.3	12.8	38.3	13.4	40.3	13.6	40.8	13.4	40.1	12.8	38.0	12.0	34.0	11.3	28.9	10.6	24.1	10.4	22.2	22
23	10.7	24.5	11.3	29.6	12.0	34.5	12.8	38.4	13.4	40.4	13.6	40.8	13.4	40.1	12.8	37.9	12.0	33.8	11.3	28.8	10.6	24.0	10.4	22.2	23
24	10.7	24.6	11.4	29.7	12.1	34.6	12.8	38.5	13.4	40.4	13.6	40.8	13.4	40.0	12.8	37.8	12.0	33.7	11.2	28.6	10.6	23.9	10.4	22.2	24
25	10.7	24.7	11.4	29.9	12.1	34.8	12.9	38.6	13.4	40.4	13.6	40.8	13.4	40.0	12.7	37.6	12.0	33.5	11.2	28.4	10.6	23.8	10.4	22.2	25
26	10.7	24.9	11.4	30.1	12.1	34.9	12.9	38.7	13.4	40.5	13.6	40.8	13.3	39.9	12.7	37.5	11.9	33.4	11.2	28.2	10.6	23.7	10.4	22.3	26
27	10.7	25.0	11.4	30.3	12.1	35.1	12.9	38.8	13.5	40.5	13.6	40.8	13.3	39.9	12.7	37.4	11.9	33.2	11.2	28.1	10.6	23.6	10.4	22.3	27
28	10.8	25.2	11.5	30.5	12.2	35.2	12.9	38.9	13.5	40.5	13.6	40.8	13.3	39.8	12.7	37.3	11.9	33.1	11.2	27.9	10.6	23.5	10.4	22.3	28
29	10.8	25.3	11.5	30.5	12.2	35.4	12.9	39.0	13.5	40.6	13.6	40.8	13.3	39.8	12.6	37.2	11.9	32.9	11.1	27.7	10.5	23.4	10.4	22.3	29
30	10.8	25.5	0.0	0.0	12.2	35.5	13.0	39.0	13.5	40.6	13.6	40.8	13.3	39.7	12.6	37.1	11.8	32.7	11.1	27.6	10.5	23.3	10.4	22.4	30
31	10.8	25.6	0.0	0.0	12.2	35.7	0.0	0.0	13.5	40.6	0.0	0.0	13.3	39.7	12.6	37.0	0.0	0.0	11.1	27.4	0.0	0.0	10.4	22.4	31
MEDIA DIARIA	10.6	23.8	11.1	28.1	11.9	33.3	12.6	37.6	13.3	40.0	13.6	40.8	13.5	40.3	12.9	38.4	12.2	34.9	11.4	30.0	10.8	25.1	10.4	22.5	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 27 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.3	21.9	10.8	25.2	11.5	30.2	12.3	35.6	13.0	39.1	13.6	40.8	13.7	40.9	13.3	39.6	12.6	36.7	11.8	32.2	11.0	26.7	10.4	22.6	1
2	10.3	21.9	10.8	25.4	11.5	30.4	12.3	35.7	13.1	39.2	13.6	40.8	13.7	40.9	13.3	39.6	12.6	36.6	11.8	32.0	11.0	26.6	10.4	22.5	2
3	10.3	22.0	10.8	25.5	11.5	30.6	12.3	35.8	13.1	39.3	13.6	40.8	13.7	40.9	13.3	39.5	12.5	36.5	11.8	31.9	11.0	26.4	10.4	22.4	3
4	10.4	22.0	10.8	25.7	11.5	30.8	12.4	36.0	13.1	39.3	13.6	40.8	13.7	40.8	13.2	39.4	12.5	36.3	11.7	31.7	10.9	26.2	10.4	22.3	4
5	10.4	22.1	10.9	25.9	11.6	31.0	12.4	36.1	13.1	39.4	13.6	40.9	13.7	40.8	13.2	39.4	12.5	36.2	11.7	31.5	10.9	26.1	10.4	22.3	5
6	10.4	22.1	10.9	26.0	11.6	31.2	12.4	36.3	13.1	39.5	13.6	40.9	13.6	40.8	13.2	39.3	12.5	36.1	11.7	31.3	10.9	25.9	10.4	22.2	6
7	10.4	22.2	10.9	26.2	11.6	31.4	12.4	36.4	13.2	39.6	13.6	40.9	13.6	40.8	13.2	39.2	12.4	36.0	11.6	31.2	10.9	25.7	10.4	22.1	7
8	10.4	22.3	10.9	26.4	11.6	31.5	12.5	36.6	13.2	39.6	13.6	40.9	13.6	40.7	13.2	39.1	12.4	35.8	11.6	31.0	10.9	25.6	10.4	22.1	8
9	10.4	22.4	11.0	26.6	11.7	31.7	12.5	36.7	13.2	39.7	13.7	40.9	13.6	40.7	13.1	39.1	12.4	35.7	11.6	30.8	10.8	25.4	10.4	22.0	9
10	10.4	22.5	11.0	26.7	11.7	31.9	12.5	36.8	13.2	39.8	13.7	40.9	13.6	40.7	13.1	39.0	12.4	35.5	11.6	30.6	10.8	25.3	10.3	21.9	10
11	10.4	22.5	11.0	26.9	11.7	32.1	12.5	37.0	13.2	39.8	13.7	41.0	13.6	40.6	13.1	38.9	12.3	35.4	11.5	30.5	10.8	25.1	10.3	21.9	11
12	10.4	22.6	11.0	27.1	11.8	32.3	12.6	37.1	13.3	39.9	13.7	41.0	13.6	40.6	13.1	38.8	12.3	35.3	11.5	30.3	10.8	24.9	10.3	21.8	12
13	10.4	22.7	11.1	27.3	11.8	32.4	12.6	37.2	13.3	40.0	13.7	41.0	13.6	40.6	13.0	38.7	12.3	35.1	11.5	30.1	10.8	24.8	10.3	21.8	13
14	10.5	22.8	11.1	27.4	11.8	32.6	12.6	37.3	13.3	40.0	13.7	41.0	13.6	40.5	13.0	38.7	12.3	35.0	11.5	29.9	10.7	24.7	10.3	21.8	14
15	10.5	22.9	11.1	27.6	11.8	32.8	12.6	37.5	13.3	40.1	13.7	41.0	13.6	40.5	13.0	38.6	12.2	34.8	11.4	29.7	10.7	24.5	10.3	21.7	15
16	10.5	23.0	11.1	27.8	11.9	33.0	12.7	37.6	13.3	40.1	13.7	41.0	13.5	40.5	13.0	38.5	12.2	34.7	11.4	29.6	10.7	24.4	10.3	21.7	16
17	10.5	23.2	11.2	28.0	11.9	33.2	12.7	37.7	13.4	40.2	13.7	41.0	13.5	40.4	13.0	38.4	12.2	34.5	11.4	29.4	10.7	24.2	10.3	21.7	17
18	10.5	23.3	11.2	28.2	11.9	33.3	12.7	37.8	13.4	40.2	13.7	41.0	13.5	40.4	12.9	38.3	12.2	34.4	11.4	29.2	10.7	24.1	10.3	21.7	18
19	10.5	23.4	11.2	28.4	11.9	33.5	12.7	37.9	13.4	40.3	13.7	41.0	13.5	40.4	12.9	38.2	12.1	34.2	11.3	29.0	10.6	24.0	10.3	21.6	19
20	10.6	23.5	11.2	28.5	12.0	33.7	12.8	38.0	13.4	40.3	13.7	41.0	13.5	40.3	12.9	38.1	12.1	34.0	11.3	28.8	10.6	23.8	10.3	21.6	20
21	10.6	23.6	11.3	28.7	12.0	33.8	12.8	38.1	13.4	40.4	13.7	41.0	13.5	40.3	12.9	38.0	12.1	33.9	11.3	28.7	10.6	23.7	10.3	21.6	21
22	10.6	23.8	11.3	28.9	12.0	34.0	12.8	38.2	13.4	40.4	13.7	41.0	13.5	40.2	12.8	37.9	12.0	33.7	11.3	28.5	10.6	23.6	10.3	21.6	22
23	10.6	23.9	11.3	29.1	12.0	34.2	12.8	38.4	13.5	40.5	13.7	41.0	13.4	40.2	12.8	37.8	12.0	33.6	11.2	28.3	10.6	23.5	10.3	21.6	23
24	10.6	24.0	11.3	29.3	12.1	34.3	12.9	38.5	13.5	40.5	13.7	41.0	13.4	40.1	12.8	37.7	12.0	33.4	11.2	28.1	10.5	23.3	10.3	21.6	24
25	10.6	24.2	11.4	29.5	12.1	34.5	12.9	38.6	13.5	40.5	13.7	41.0	13.4	40.0	12.7	37.4	11.9	33.1	11.2	27.8	10.5	23.2	10.3	21.6	25
26	10.7	24.3	11.4	29.7	12.1	34.7	12.9	38.7	13.5	40.6	13.7	41.0	13.4	40.0	12.7	37.3	11.9	32.9	11.1	27.6	10.5	23.1	10.3	21.7	26
27	10.7	24.5	11.4	29.9	12.2	34.8	12.9	38.7	13.5	40.6	13.7	40.9	13.4	40.0	12.7	37.2	11.9	32.7	11.1	27.4	10.5	23.0	10.3	21.7	27
28	10.7	24.6	11.4	30.1	12.2	35.0	13.0	38.8	13.5	40.6	13.7	40.9	13.4	39.9	12.7	37.1	11.9	32.6	11.1	27.2	10.5	22.9	10.3	21.7	28
29	10.7	24.8	11.4	30.1	12.2	35.1	13.0	38.9	13.5	40.7	13.7	40.9	13.3	39.8	12.7	37.0	11.8	32.4	11.1	27.1	10.5	22.8	10.3	21.7	29
30	10.7	24.9	0.0	0.0	12.2	35.3	13.0	39.0	13.6	40.7	13.7	40.9	13.3	39.8	12.6	37.0	11.8	32.4	11.1	27.1	10.5	22.7	10.3	21.8	30
31	10.8	25.1	0.0	0.0	12.3	35.4	0.0	0.0	13.6	40.7	0.0	0.0	13.3	39.7	12.6	36.9	0.0	0.0	11.0	26.9	0.0	0.0	10.3	21.8	31
MEDIA DIARIA	10.5	23.2	11.1	27.7	11.9	32.9	12.7	37.4	13.3	40.1	13.7	40.9	13.5	40.4	13.0	38.4	12.2	34.7	11.4	29.6	10.7	24.5	10.3	21.9	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 28 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.3	21.3	10.7	24.7	11.4	29.8	12.3	35.3	13.1	39.1	13.6	40.9	13.8	41.0	13.3	39.7	12.6	36.6	11.8	31.9	11.0	26.2	10.4	22.0	1
2	10.3	21.3	10.7	24.8	11.5	30.0	12.3	35.4	13.1	39.2	13.7	40.9	13.7	41.0	13.3	39.6	12.6	36.4	11.8	31.7	11.0	26.0	10.4	21.9	2
3	10.3	21.4	10.8	25.0	11.5	30.2	12.4	35.6	13.1	39.2	13.7	40.9	13.7	41.0	13.3	39.5	12.6	36.3	11.7	31.5	10.9	25.9	10.3	21.8	3
4	10.3	21.4	10.8	25.2	11.5	30.4	12.4	35.8	13.1	39.3	13.7	41.0	13.7	41.0	13.3	39.5	12.5	36.2	11.7	31.3	10.9	25.7	10.3	21.8	4
5	10.3	21.5	10.8	25.3	11.5	30.6	12.4	35.9	13.2	39.4	13.7	41.0	13.7	40.9	13.3	39.4	12.5	36.0	11.7	31.1	10.9	25.5	10.3	21.7	5
6	10.3	21.5	10.8	25.5	11.6	30.8	12.4	36.1	13.2	39.5	13.7	41.0	13.7	40.9	13.2	39.3	12.5	35.9	11.7	31.0	10.9	25.4	10.3	21.6	6
7	10.3	21.6	10.9	25.7	11.6	31.0	12.5	36.2	13.2	39.6	13.7	41.0	13.7	40.9	13.2	39.2	12.5	35.8	11.6	30.8	10.8	25.2	10.3	21.5	7
8	10.3	21.7	10.9	25.9	11.6	31.1	12.5	36.4	13.2	39.6	13.7	41.0	13.7	40.9	13.2	39.1	12.4	35.6	11.6	30.6	10.8	25.0	10.3	21.5	8
9	10.3	21.8	10.9	26.0	11.7	31.3	12.5	36.5	13.3	39.7	13.7	41.1	13.7	40.8	13.2	39.1	12.4	35.5	11.6	30.4	10.8	24.9	10.3	21.4	9
10	10.3	21.9	10.9	26.2	11.7	31.5	12.5	36.7	13.3	39.8	13.7	41.1	13.7	40.8	13.2	39.0	12.4	35.3	11.6	30.2	10.8	24.7	10.3	21.3	10
11	10.4	22.0	11.0	26.4	11.7	31.7	12.6	36.8	13.3	39.9	13.7	41.1	13.7	40.8	13.1	38.9	12.3	35.2	11.5	30.1	10.7	24.6	10.3	21.3	11
12	10.4	22.0	11.0	26.6	11.7	31.9	12.6	36.9	13.3	39.9	13.7	41.1	13.7	40.7	13.1	38.8	12.3	35.0	11.5	29.9	10.7	24.4	10.3	21.2	12
13	10.4	22.1	11.0	26.8	11.8	32.1	12.6	37.1	13.3	40.0	13.8	41.1	13.7	40.7	13.1	38.7	12.3	34.9	11.5	29.7	10.7	24.3	10.3	21.2	13
14	10.4	22.2	11.0	26.9	11.8	32.3	12.7	37.2	13.4	40.1	13.8	41.1	13.6	40.7	13.1	38.6	12.3	34.7	11.4	29.5	10.7	24.1	10.2	21.2	14
15	10.4	22.3	11.1	27.1	11.8	32.5	12.7	37.3	13.4	40.1	13.8	41.1	13.6	40.6	13.0	38.5	12.2	34.6	11.4	29.3	10.7	24.0	10.2	21.1	15
16	10.4	22.5	11.1	27.3	11.9	32.6	12.7	37.5	13.4	40.2	13.8	41.1	13.6	40.6	13.0	38.4	12.2	34.4	11.4	29.1	10.6	23.8	10.2	21.1	16
17	10.4	22.6	11.1	27.5	11.9	32.8	12.7	37.6	13.4	40.2	13.8	41.1	13.6	40.5	13.0	38.3	12.2	34.2	11.4	28.9	10.6	23.7	10.2	21.1	17
18	10.5	22.7	11.1	27.7	11.9	33.0	12.8	37.7	13.4	40.3	13.8	41.1	13.6	40.5	13.0	38.2	12.2	34.1	11.3	28.8	10.6	23.5	10.2	21.0	18
19	10.5	22.8	11.2	27.9	11.9	33.2	12.8	37.8	13.5	40.3	13.8	41.1	13.6	40.4	12.9	38.1	12.1	33.9	11.3	28.6	10.6	23.4	10.2	21.0	19
20	10.5	22.9	11.2	28.1	12.0	33.4	12.8	37.9	13.5	40.4	13.8	41.1	13.6	40.4	12.9	38.0	12.1	33.8	11.3	28.4	10.6	23.3	10.2	21.0	20
21	10.5	23.1	11.2	28.3	12.0	33.5	12.8	38.0	13.5	40.4	13.8	41.1	13.5	40.3	12.9	37.9	12.1	33.6	11.3	28.2	10.5	23.1	10.2	21.0	21
22	10.5	23.2	11.2	28.5	12.0	33.7	12.9	38.2	13.5	40.5	13.8	41.1	13.5	40.3	12.9	37.8	12.0	33.4	11.2	28.0	10.5	23.0	10.2	21.0	22
23	10.5	23.3	11.3	28.7	12.0	33.9	12.9	38.3	13.5	40.5	13.8	41.1	13.5	40.2	12.8	37.7	12.0	33.3	11.2	27.8	10.5	22.9	10.2	21.0	23
24	10.6	23.5	11.3	28.8	12.1	34.0	12.9	38.4	13.5	40.6	13.8	41.1	13.5	40.2	12.8	37.6	12.0	33.1	11.2	27.7	10.5	22.8	10.2	21.0	24
25	10.6	23.6	11.3	29.0	12.1	34.2	12.9	38.5	13.6	40.6	13.8	41.1	13.5	40.1	12.8	37.4	12.0	32.9	11.2	27.5	10.5	22.6	10.2	21.0	25
26	10.6	23.8	11.4	29.2	12.1	34.4	13.0	38.6	13.6	40.7	13.8	41.1	13.5	40.1	12.8	37.3	11.9	32.7	11.1	27.3	10.4	22.5	10.2	21.0	26
27	10.6	23.9	11.4	29.4	12.2	34.5	13.0	38.7	13.6	40.7	13.8	41.1	13.4	40.0	12.7	37.2	11.9	32.6	11.1	27.1	10.4	22.4	10.2	21.1	27
28	10.6	24.0	11.4	29.6	12.2	34.7	13.0	38.8	13.6	40.7	13.8	41.1	13.4	40.0	12.7	37.1	11.9	32.4	11.1	26.9	10.4	22.3	10.2	21.1	28
29	10.7	24.2	11.4	29.6	12.2	34.9	13.0	38.9	13.6	40.8	13.8	41.1	13.4	39.9	12.7	37.0	11.9	32.2	11.0	26.7	10.4	22.2	10.2	21.1	29
30	10.7	24.4	0.0	0.0	12.2	35.0	13.1	39.0	13.6	40.8	13.8	41.0	13.4	39.8	12.7	36.8	11.8	32.1	11.0	26.6	10.4	22.1	10.2	21.2	30
31	10.7	24.5	0.0	0.0	12.3	35.2	0.0	0.0	13.6	40.8	0.0	0.0	13.4	39.8	12.6	36.7	0.0	0.0	11.0	26.4	0.0	0.0	10.2	21.2	31
MEDIA DIARIA	10.4	22.6	11.1	27.2	11.9	32.6	12.7	37.3	13.4	40.1	13.7	41.1	13.6	40.5	13.0	38.3	12.2	34.4	11.4	29.1	10.7	24.0	10.3	21.3	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 29 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.2	20.6	10.7	24.1	11.4	29.4	12.3	35.1	13.1	39.0	13.7	41.0	13.8	41.1	13.4	39.7	12.6	36.4	11.8	31.5	10.9	25.7	10.3	21.4	1
2	10.2	20.7	10.7	24.3	11.4	29.6	12.3	35.2	13.1	39.1	13.7	41.0	13.8	41.1	13.4	39.6	12.6	36.3	11.8	31.3	10.9	25.5	10.3	21.3	2
3	10.2	20.8	10.7	24.5	11.5	29.8	12.4	35.4	13.2	39.2	13.7	41.0	13.8	41.1	13.4	39.6	12.6	36.1	11.7	31.1	10.9	25.4	10.3	21.2	3
4	10.2	20.8	10.7	24.6	11.5	30.0	12.4	35.6	13.2	39.3	13.8	41.1	13.8	41.1	13.3	39.5	12.6	36.0	11.7	30.9	10.9	25.2	10.3	21.2	4
5	10.2	20.9	10.8	24.8	11.5	30.2	12.4	35.7	13.2	39.4	13.8	41.1	13.8	41.1	13.3	39.4	12.5	35.8	11.7	30.7	10.8	25.0	10.3	21.1	5
6	10.2	20.9	10.8	25.0	11.6	30.4	12.5	35.9	13.2	39.5	13.8	41.1	13.8	41.0	13.3	39.3	12.5	35.7	11.6	30.6	10.8	24.8	10.2	21.0	6
7	10.2	21.0	10.8	25.1	11.6	30.6	12.5	36.0	13.3	39.6	13.8	41.1	13.8	41.0	13.3	39.2	12.5	35.6	11.6	30.4	10.8	24.7	10.2	20.9	7
8	10.2	21.1	10.8	25.3	11.6	30.7	12.5	36.2	13.3	39.6	13.8	41.2	13.8	41.0	13.3	39.1	12.4	35.4	11.6	30.2	10.8	24.5	10.2	20.9	8
9	10.3	21.2	10.9	25.5	11.6	30.9	12.5	36.3	13.3	39.7	13.8	41.2	13.8	40.9	13.2	39.0	12.4	35.3	11.6	30.0	10.7	24.3	10.2	20.8	9
10	10.3	21.3	10.9	25.7	11.7	31.1	12.6	36.5	13.3	39.8	13.8	41.2	13.8	40.9	13.2	38.9	12.4	35.1	11.5	29.8	10.7	24.2	10.2	20.7	10
11	10.3	21.4	10.9	25.9	11.7	31.3	12.6	36.6	13.4	39.9	13.8	41.2	13.7	40.9	13.2	38.9	12.4	34.9	11.5	29.6	10.7	24.0	10.2	20.7	11
12	10.3	21.5	10.9	26.1	11.7	31.5	12.6	36.8	13.4	39.9	13.8	41.2	13.7	40.8	13.2	38.8	12.3	34.8	11.5	29.4	10.7	23.9	10.2	20.6	12
13	10.3	21.5	11.0	26.2	11.8	31.7	12.7	36.9	13.4	40.0	13.8	41.2	13.7	40.8	13.1	38.7	12.3	34.6	11.4	29.3	10.6	23.7	10.2	20.6	13
14	10.3	21.6	11.0	26.4	11.8	31.9	12.7	37.0	13.4	40.1	13.8	41.2	13.7	40.8	13.1	38.6	12.3	34.5	11.4	29.1	10.6	23.5	10.2	20.6	14
15	10.3	21.8	11.0	26.6	11.8	32.1	12.7	37.2	13.4	40.1	13.8	41.2	13.7	40.7	13.1	38.5	12.3	34.3	11.4	28.9	10.6	23.4	10.2	20.5	15
16	10.4	21.9	11.0	26.8	11.8	32.3	12.7	37.3	13.5	40.2	13.8	41.3	13.7	40.7	13.1	38.4	12.2	34.1	11.4	28.7	10.6	23.2	10.2	20.5	16
17	10.4	22.0	11.1	27.0	11.9	32.5	12.8	37.4	13.5	40.3	13.8	41.3	13.7	40.6	13.0	38.2	12.2	34.0	11.3	28.5	10.6	23.1	10.2	20.5	17
18	10.4	22.1	11.1	27.2	11.9	32.7	12.8	37.6	13.5	40.3	13.9	41.3	13.7	40.6	13.0	38.1	12.2	33.8	11.3	28.3	10.5	23.0	10.2	20.4	18
19	10.4	22.2	11.1	27.4	11.9	32.8	12.8	37.7	13.5	40.4	13.9	41.3	13.6	40.5	13.0	38.0	12.1	33.6	11.3	28.1	10.5	22.8	10.2	20.4	19
20	10.4	22.4	11.2	27.6	12.0	33.0	12.8	37.8	13.5	40.5	13.9	41.3	13.6	40.5	13.0	37.9	12.1	33.5	11.3	27.9	10.5	22.7	10.1	20.4	20
21	10.4	22.5	11.2	27.8	12.0	33.2	12.9	37.9	13.6	40.5	13.9	41.3	13.6	40.4	12.9	37.8	12.1	33.3	11.2	27.7	10.5	22.6	10.1	20.4	21
22	10.5	22.6	11.2	28.0	12.0	33.4	12.9	38.1	13.6	40.6	13.9	41.3	13.6	40.4	12.9	37.7	12.1	33.1	11.2	27.6	10.5	22.4	10.1	20.4	22
23	10.5	22.8	11.2	28.2	12.1	33.6	12.9	38.2	13.6	40.6	13.9	41.3	13.6	40.3	12.9	37.6	12.0	33.0	11.2	27.4	10.4	22.3	10.1	20.4	23
24	10.5	22.9	11.3	28.4	12.1	33.7	12.9	38.3	13.6	40.7	13.9	41.2	13.6	40.2	12.9	37.5	12.0	32.8	11.1	27.2	10.4	22.2	10.1	20.4	24
25	10.5	23.0	11.3	28.6	12.1	33.9	13.0	38.4	13.6	40.7	13.9	41.2	13.5	40.2	12.8	37.3	12.0	32.6	11.1	27.0	10.4	22.1	10.1	20.4	25
26	10.5	23.2	11.3	28.8	12.1	34.1	13.0	38.5	13.6	40.7	13.9	41.2	13.5	40.1	12.8	37.2	11.9	32.4	11.1	26.8	10.4	21.9	10.2	20.4	26
27	10.6	23.3	11.4	29.0	12.2	34.3	13.0	38.6	13.7	40.8	13.8	41.2	13.5	40.1	12.8	37.1	11.9	32.2	11.1	26.6	10.4	21.8	10.2	20.5	27
28	10.6	23.5	11.4	29.2	12.2	34.4	13.0	38.7	13.7	40.8	13.8	41.2	13.5	40.0	12.8	37.0	11.9	32.1	11.0	26.4	10.3	21.7	10.2	20.5	28
29	10.6	23.6	11.4	29.2	12.2	34.6	13.1	38.8	13.7	40.9	13.8	41.2	13.5	39.9	12.7	36.8	11.8	31.9	11.0	26.2	10.3	21.6	10.2	20.5	29
30	10.6	23.8	0.0	0.0	12.3	34.8	13.1	38.9	13.7	40.9	13.8	41.2	13.4	39.9	12.7	36.7	11.8	31.7	11.0	26.1	10.3	21.5	10.2	20.6	30
31	10.6	24.0	0.0	0.0	12.3	34.9	0.0	0.0	13.7	40.9	0.0	0.0	13.4	39.8	12.7	36.6	0.0	0.0	11.0	25.9	0.0	0.0	10.2	20.6	31
MEDIA DIARIA	10.4	22.0	11.0	26.7	11.8	32.2	12.7	37.2	13.4	40.1	13.8	41.2	13.7	40.6	13.1	38.3	12.2	34.2	11.4	28.7	10.6	23.4	10.2	20.7	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 30 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.1	20.0	10.6	23.6	11.4	28.9	12.3	34.8	13.2	39.0	13.8	41.1	13.9	41.3	13.5	39.7	12.7	36.2	11.8	31.1	10.9	25.2	10.2	20.8	1
2	10.1	20.1	10.6	23.7	11.4	29.1	12.4	35.0	13.2	39.1	13.8	41.1	13.9	41.2	13.4	39.6	12.6	36.1	11.8	30.9	10.9	25.0	10.2	20.7	2
3	10.1	20.1	10.7	23.9	11.4	29.3	12.4	35.1	13.2	39.2	13.8	41.1	13.9	41.2	13.4	39.6	12.6	35.9	11.7	30.7	10.8	24.8	10.2	20.6	3
4	10.1	20.2	10.7	24.1	11.5	29.5	12.4	35.3	13.2	39.3	13.8	41.2	13.9	41.2	13.4	39.5	12.6	35.8	11.7	30.5	10.8	24.6	10.2	20.6	4
5	10.1	20.3	10.7	24.2	11.5	29.7	12.4	35.5	13.3	39.3	13.8	41.2	13.9	41.2	13.4	39.4	12.6	35.6	11.7	30.3	10.8	24.5	10.2	20.5	5
6	10.1	20.3	10.7	24.4	11.5	29.9	12.5	35.7	13.3	39.4	13.9	41.2	13.9	41.1	13.4	39.3	12.5	35.5	11.6	30.2	10.8	24.3	10.2	20.4	6
7	10.2	20.4	10.8	24.6	11.6	30.1	12.5	35.8	13.3	39.5	13.9	41.2	13.9	41.1	13.3	39.2	12.5	35.3	11.6	30.0	10.7	24.1	10.2	20.3	7
8	10.2	20.5	10.8	24.8	11.6	30.3	12.5	36.0	13.3	39.6	13.9	41.3	13.9	41.1	13.3	39.1	12.5	35.2	11.6	29.8	10.7	24.0	10.1	20.3	8
9	10.2	20.6	10.8	25.0	11.6	30.5	12.6	36.1	13.4	39.7	13.9	41.3	13.8	41.0	13.3	39.0	12.4	35.0	11.5	29.6	10.7	23.8	10.1	20.2	9
10	10.2	20.7	10.8	25.2	11.7	30.7	12.6	36.3	13.4	39.8	13.9	41.3	13.8	41.0	13.3	38.9	12.4	34.9	11.5	29.4	10.7	23.6	10.1	20.1	10
11	10.2	20.8	10.9	25.3	11.7	30.9	12.6	36.4	13.4	39.9	13.9	41.3	13.8	41.0	13.2	38.8	12.4	34.7	11.5	29.2	10.6	23.5	10.1	20.1	11
12	10.2	20.9	10.9	25.5	11.7	31.1	12.6	36.6	13.4	39.9	13.9	41.3	13.8	40.9	13.2	38.7	12.4	34.5	11.5	29.0	10.6	23.3	10.1	20.0	12
13	10.2	20.9	10.9	25.7	11.7	31.3	12.7	36.7	13.5	40.0	13.9	41.3	13.8	40.9	13.2	38.6	12.3	34.4	11.4	28.8	10.6	23.1	10.1	20.0	13
14	10.3	21.1	11.0	25.9	11.8	31.5	12.7	36.9	13.5	40.1	13.9	41.4	13.8	40.8	13.2	38.5	12.3	34.2	11.4	28.6	10.6	23.0	10.1	19.9	14
15	10.3	21.2	11.0	26.1	11.8	31.7	12.7	37.0	13.5	40.2	13.9	41.4	13.8	40.8	13.1	38.4	12.3	34.0	11.4	28.4	10.5	22.8	10.1	19.9	15
16	10.3	21.3	11.0	26.3	11.8	31.9	12.8	37.2	13.5	40.2	13.9	41.4	13.8	40.7	13.1	38.3	12.2	33.9	11.3	28.2	10.5	22.7	10.1	19.9	16
17	10.3	21.4	11.0	26.5	11.9	32.1	12.8	37.3	13.5	40.3	13.9	41.4	13.7	40.7	13.1	38.2	12.2	33.7	11.3	28.0	10.5	22.5	10.1	19.9	17
18	10.3	21.5	11.1	26.7	11.9	32.3	12.8	37.4	13.6	40.4	13.9	41.4	13.7	40.6	13.1	38.1	12.2	33.5	11.3	27.8	10.5	22.4	10.1	19.8	18
19	10.3	21.6	11.1	26.9	11.9	32.5	12.8	37.6	13.6	40.4	13.9	41.4	13.7	40.6	13.0	37.9	12.1	33.3	11.2	27.7	10.4	22.3	10.1	19.8	19
20	10.4	21.8	11.1	27.1	12.0	32.7	12.9	37.7	13.6	40.5	13.9	41.4	13.7	40.5	13.0	37.8	12.1	33.2	11.2	27.5	10.4	22.1	10.1	19.8	20
21	10.4	21.9	11.2	27.3	12.0	32.9	12.9	37.8	13.6	40.6	13.9	41.4	13.7	40.5	13.0	37.7	12.1	33.0	11.2	27.3	10.4	22.0	10.1	19.8	21
22	10.4	22.0	11.2	27.5	12.0	33.1	12.9	37.9	13.6	40.6	13.9	41.4	13.7	40.4	12.9	37.6	12.1	32.8	11.2	27.1	10.4	21.8	10.1	19.8	22
23	10.4	22.2	11.2	27.7	12.1	33.3	13.0	38.1	13.7	40.7	13.9	41.4	13.6	40.4	12.9	37.5	12.0	32.6	11.1	26.9	10.4	21.7	10.1	19.8	23
24	10.4	22.3	11.2	27.9	12.1	33.4	13.0	38.2	13.7	40.7	13.9	41.4	13.6	40.3	12.9	37.3	12.0	32.5	11.1	26.7	10.4	21.6	10.1	19.8	24
25	10.5	22.5	11.3	28.1	12.1	33.6	13.0	38.3	13.7	40.8	13.9	41.4	13.6	40.2	12.9	37.2	12.0	32.3	11.1	26.5	10.3	21.5	10.1	19.8	25
26	10.5	22.6	11.3	28.3	12.1	33.8	13.0	38.4	13.7	40.8	13.9	41.3	13.6	40.2	12.8	37.1	11.9	32.1	11.1	26.3	10.3	21.4	10.1	19.8	26
27	10.5	22.8	11.3	28.5	12.2	34.0	13.1	38.5	13.7	40.9	13.9	41.3	13.6	40.1	12.8	36.9	11.9	31.9	11.0	26.1	10.3	21.2	10.1	19.9	27
28	10.5	22.9	11.4	28.7	12.2	34.2	13.1	38.6	13.7	40.9	13.9	41.3	13.5	40.0	12.8	36.8	11.9	31.7	11.0	25.9	10.3	21.1	10.1	19.9	28
29	10.5	23.1	11.4	28.7	12.2	34.3	13.1	38.7	13.8	40.9	13.9	41.3	13.5	40.0	12.8	36.7	11.8	31.5	11.0	25.7	10.3	21.0	10.1	19.9	29
30	10.6	23.2	0.0	0.0	12.3	34.5	13.1	38.9	13.8	41.0	13.9	41.3	13.5	39.9	12.7	36.5	11.8	31.3	10.9	25.6	10.2	20.9	10.1	19.9	30
31	10.6	23.4	0.0	0.0	12.3	34.7	0.0	0.0	13.8	41.0	0.0	0.0	13.5	39.8	12.7	36.4	0.0	0.0	10.9	25.4	0.0	0.0	10.1	20.0	31
MEDIA DIARIA	10.3	21.4	11.0	26.2	11.8	31.9	12.7	37.0	13.5	40.2	13.9	41.3	13.7	40.7	13.1	38.2	12.2	33.9	11.3	28.2	10.5	22.9	10.1	20.1	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 31 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	10.0	19.4	10.6	23.0	11.4	28.5	12.3	34.6	13.2	38.9	13.9	41.1	14.0	41.4	13.5	39.7	12.7	36.1	11.8	30.8	10.8	24.7	10.2	20.2	1
2	10.0	19.5	10.6	23.2	11.4	28.7	12.4	34.7	13.2	39.0	13.9	41.2	14.0	41.4	13.5	39.6	12.7	35.9	11.7	30.6	10.8	24.5	10.1	20.1	2
3	10.0	19.5	10.6	23.3	11.4	28.9	12.4	34.9	13.3	39.1	13.9	41.2	14.0	41.3	13.5	39.5	12.6	35.7	11.7	30.4	10.8	24.3	10.1	20.0	3
4	10.0	19.6	10.6	23.5	11.5	29.1	12.4	35.1	13.3	39.2	13.9	41.2	14.0	41.3	13.5	39.5	12.6	35.6	11.7	30.2	10.8	24.1	10.1	20.0	4
5	10.1	19.7	10.7	23.7	11.5	29.3	12.5	35.3	13.3	39.3	13.9	41.3	14.0	41.3	13.4	39.4	12.6	35.4	11.6	29.9	10.7	23.9	10.1	19.9	5
6	10.1	19.7	10.7	23.9	11.5	29.5	12.5	35.4	13.3	39.4	13.9	41.3	14.0	41.2	13.4	39.3	12.5	35.3	11.6	29.8	10.7	23.8	10.1	19.8	6
7	10.1	19.8	10.7	24.1	11.5	29.7	12.5	35.6	13.4	39.5	13.9	41.3	13.9	41.2	13.4	39.2	12.5	35.1	11.6	29.6	10.7	23.6	10.1	19.7	7
8	10.1	19.9	10.7	24.2	11.6	29.9	12.6	35.8	13.4	39.6	13.9	41.4	13.9	41.2	13.4	39.1	12.5	35.0	11.6	29.4	10.7	23.4	10.1	19.7	8
9	10.1	20.0	10.8	24.4	11.6	30.1	12.6	35.9	13.4	39.7	14.0	41.4	13.9	41.1	13.3	39.0	12.5	34.8	11.5	29.2	10.6	23.2	10.1	19.6	9
10	10.1	20.1	10.8	24.6	11.6	30.3	12.6	36.1	13.4	39.8	14.0	41.4	13.9	41.1	13.3	38.9	12.4	34.6	11.5	29.0	10.6	23.1	10.0	19.5	10
11	10.1	20.2	10.8	24.8	11.7	30.5	12.6	36.2	13.5	39.9	14.0	41.4	13.9	41.0	13.3	38.8	12.4	34.5	11.5	28.8	10.6	22.9	10.0	19.5	11
12	10.1	20.2	10.9	25.0	11.7	30.7	12.7	36.4	13.5	39.9	14.0	41.4	13.9	41.0	13.3	38.7	12.4	34.3	11.4	28.6	10.5	22.7	10.0	19.4	12
13	10.2	20.3	10.9	25.2	11.7	30.9	12.7	36.5	13.5	40.0	14.0	41.5	13.9	41.0	13.2	38.5	12.3	34.1	11.4	28.4	10.5	22.6	10.0	19.4	13
14	10.2	20.5	10.9	25.4	11.8	31.2	12.7	36.7	13.5	40.1	14.0	41.5	13.9	40.9	13.2	38.4	12.3	33.9	11.4	28.2	10.5	22.4	10.0	19.3	14
15	10.2	20.6	10.9	25.6	11.8	31.4	12.8	36.8	13.6	40.2	14.0	41.5	13.8	40.9	13.2	38.3	12.3	33.8	11.3	28.0	10.5	22.3	10.0	19.3	15
16	10.2	20.7	11.0	25.8	11.8	31.6	12.8	37.0	13.6	40.3	14.0	41.5	13.8	40.8	13.2	38.2	12.2	33.6	11.3	27.8	10.5	22.1	10.0	19.3	16
17	10.2	20.8	11.0	26.0	11.9	31.8	12.8	37.1	13.6	40.3	14.0	41.5	13.8	40.8	13.1	38.1	12.2	33.4	11.3	27.6	10.4	22.0	10.0	19.2	17
18	10.2	20.9	11.0	26.2	11.9	32.0	12.9	37.3	13.6	40.4	14.0	41.5	13.8	40.7	13.1	38.0	12.2	33.2	11.2	27.4	10.4	21.8	10.0	19.2	18
19	10.3	21.0	11.1	26.4	11.9	32.1	12.9	37.4	13.6	40.5	14.0	41.5	13.8	40.7	13.1	37.8	12.1	33.0	11.2	27.2	10.4	21.7	10.0	19.2	19
20	10.3	21.2	11.1	26.6	12.0	32.3	12.9	37.5	13.7	40.5	14.0	41.5	13.8	40.6	13.0	37.7	12.1	32.9	11.2	27.0	10.4	21.5	10.0	19.2	20
21	10.3	21.3	11.1	26.8	12.0	32.5	12.9	37.7	13.7	40.6	14.0	41.5	13.7	40.5	13.0	37.6	12.1	32.7	11.2	26.8	10.3	21.4	10.0	19.2	21
22	10.3	21.4	11.1	27.0	12.0	32.7	13.0	37.8	13.7	40.7	14.0	41.5	13.7	40.5	13.0	37.5	12.1	32.5	11.1	26.6	10.3	21.3	10.0	19.2	22
23	10.3	21.6	11.2	27.2	12.1	32.9	13.0	37.9	13.7	40.7	14.0	41.5	13.7	40.4	13.0	37.3	12.0	32.3	11.1	26.4	10.3	21.1	10.0	19.2	23
24	10.4	21.7	11.2	27.4	12.1	33.1	13.0	38.1	13.7	40.8	14.0	41.5	13.7	40.3	12.9	37.2	12.0	32.1	11.1	26.2	10.3	21.0	10.0	19.2	24
25	10.4	21.9	11.2	27.6	12.1	33.3	13.1	38.2	13.8	40.8	14.0	41.5	13.7	40.3	12.9	37.1	12.0	31.9	11.0	26.0	10.3	20.9	10.0	19.2	25
26	10.4	22.0	11.3	27.8	12.1	33.5	13.1	38.3	13.8	40.9	14.0	41.5	13.7	40.2	12.9	36.9	11.9	31.7	11.0	25.8	10.2	20.8	10.0	19.2	26
27	10.4	22.2	11.3	28.1	12.2	33.7	13.1	38.4	13.8	40.9	14.0	41.4	13.6	40.1	12.8	36.8	11.9	31.5	11.0	25.6	10.2	20.7	10.0	19.2	27
28	10.5	22.3	11.3	28.3	12.2	33.9	13.1	38.6	13.8	41.0	14.0	41.4	13.6	40.0	12.8	36.6	11.9	31.4	11.0	25.4	10.2	20.5	10.0	19.3	28
29	10.5	22.5	11.3	28.3	12.2	34.0	13.2	38.7	13.8	41.0	14.0	41.4	13.6	40.0	12.8	36.5	11.8	31.2	10.9	25.2	10.2	20.4	10.0	19.3	29
30	10.5	22.7	0.0	0.0	12.3	34.2	13.2	38.8	13.8	41.1	14.0	41.4	13.6	39.9	12.8	36.4	11.8	31.0	10.9	25.0	10.2	20.3	10.0	19.3	30
31	10.5	22.8	0.0	0.0	12.3	34.4	0.0	0.0	13.9	41.1	0.0	0.0	13.5	39.8	12.7	36.2	0.0	0.0	10.9	24.8	0.0	0.0	10.0	19.4	31
MEDIA DIARIA	10.2	20.8	10.9	25.6	11.8	31.5	12.8	36.8	13.6	40.2	14.0	41.4	13.8	40.7	13.1	38.1	12.3	33.6	11.3	27.8	10.5	22.3	10.0	19.5	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 32 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	9.9	18.8	10.5	22.4	11.3	28.0	12.4	34.3	13.3	38.8	13.9	41.2	14.1	41.5	13.6	39.7	12.7	35.9	11.8	30.4	10.8	24.1	10.1	19.6	1
2	10.0	18.9	10.5	22.6	11.4	28.2	12.4	34.4	13.3	38.9	14.0	41.3	14.1	41.4	13.6	39.6	12.7	35.7	11.7	30.2	10.8	23.9	10.1	19.5	2
3	10.0	18.9	10.6	22.8	11.4	28.4	12.4	34.6	13.3	39.0	14.0	41.3	14.1	41.4	13.5	39.5	12.7	35.5	11.7	30.0	10.7	23.8	10.1	19.4	3
4	10.0	19.0	10.6	23.0	11.4	28.6	12.4	34.8	13.3	39.1	14.0	41.3	14.0	41.4	13.5	39.4	12.6	35.4	11.7	29.7	10.7	23.6	10.0	19.4	4
5	10.0	19.1	10.6	23.1	11.5	28.9	12.5	35.0	13.4	39.3	14.0	41.4	14.0	41.4	13.5	39.3	12.6	35.2	11.6	29.5	10.7	23.4	10.0	19.3	5
6	10.0	19.1	10.6	23.3	11.5	29.1	12.5	35.2	13.4	39.4	14.0	41.4	14.0	41.3	13.5	39.2	12.6	35.0	11.6	29.4	10.7	23.2	10.0	19.2	6
7	10.0	19.2	10.7	23.5	11.5	29.3	12.5	35.4	13.4	39.5	14.0	41.4	14.0	41.3	13.4	39.1	12.5	34.9	11.6	29.2	10.6	23.0	10.0	19.1	7
8	10.0	19.3	10.7	23.7	11.6	29.5	12.6	35.5	13.5	39.6	14.0	41.5	14.0	41.3	13.4	39.0	12.5	34.7	11.5	29.0	10.6	22.9	10.0	19.0	8
9	10.0	19.4	10.7	23.9	11.6	29.7	12.6	35.7	13.5	39.6	14.0	41.5	14.0	41.2	13.4	38.9	12.5	34.5	11.5	28.8	10.6	22.7	10.0	19.0	9
10	10.0	19.5	10.7	24.1	11.6	29.9	12.6	35.9	13.5	39.7	14.0	41.5	14.0	41.2	13.4	38.8	12.4	34.4	11.5	28.5	10.5	22.5	10.0	18.9	10
11	10.1	19.5	10.8	24.3	11.7	30.1	12.7	36.0	13.5	39.8	14.1	41.5	14.0	41.1	13.3	38.7	12.4	34.2	11.4	28.3	10.5	22.3	10.0	18.9	11
12	10.1	19.6	10.8	24.5	11.7	30.3	12.7	36.2	13.6	39.9	14.1	41.5	14.0	41.1	13.3	38.6	12.4	34.0	11.4	28.1	10.5	22.2	9.9	18.8	12
13	10.1	19.7	10.8	24.7	11.7	30.6	12.7	36.3	13.6	40.0	14.1	41.6	13.9	41.0	13.3	38.5	12.3	33.8	11.4	27.9	10.5	22.0	9.9	18.8	13
14	10.1	19.8	10.9	24.9	11.8	30.8	12.8	36.5	13.6	40.1	14.1	41.6	13.9	41.0	13.3	38.4	12.3	33.7	11.3	27.7	10.4	21.8	9.9	18.7	14
15	10.1	20.0	10.9	25.1	11.8	31.0	12.8	36.7	13.6	40.2	14.1	41.6	13.9	40.9	13.2	38.2	12.3	33.5	11.3	27.5	10.4	21.7	9.9	18.7	15
16	10.1	20.1	10.9	25.3	11.8	31.2	12.8	36.8	13.6	40.3	14.1	41.6	13.9	40.9	13.2	38.1	12.3	33.3	11.3	27.3	10.4	21.5	9.9	18.7	16
17	10.2	20.2	11.0	25.5	11.9	31.4	12.9	37.0	13.7	40.3	14.1	41.6	13.9	40.8	13.2	38.0	12.2	33.1	11.3	27.1	10.4	21.4	9.9	18.6	17
18	10.2	20.3	11.0	25.7	11.9	31.6	12.9	37.1	13.7	40.4	14.1	41.6	13.9	40.8	13.1	37.9	12.2	32.9	11.2	26.9	10.3	21.2	9.9	18.6	18
19	10.2	20.4	11.0	25.9	11.9	31.8	12.9	37.3	13.7	40.5	14.1	41.6	13.9	40.7	13.1	37.7	12.2	32.7	11.2	26.7	10.3	21.1	9.9	18.6	19
20	10.2	20.6	11.0	26.1	12.0	32.0	12.9	37.4	13.7	40.6	14.1	41.6	13.8	40.6	13.1	37.6	12.1	32.5	11.2	26.5	10.3	20.9	9.9	18.6	20
21	10.2	20.7	11.1	26.3	12.0	32.2	13.0	37.5	13.8	40.6	14.1	41.6	13.8	40.6	13.1	37.5	12.1	32.4	11.1	26.3	10.3	20.8	9.9	18.6	21
22	10.3	20.9	11.1	26.5	12.0	32.4	13.0	37.7	13.8	40.7	14.1	41.6	13.8	40.5	13.0	37.3	12.1	32.2	11.1	26.1	10.3	20.7	9.9	18.6	22
23	10.3	21.0	11.1	26.7	12.1	32.6	13.0	37.8	13.8	40.8	14.1	41.6	13.8	40.4	13.0	37.2	12.0	32.0	11.1	25.9	10.2	20.5	9.9	18.6	23
24	10.3	21.1	11.2	26.9	12.1	32.8	13.1	37.9	13.8	40.8	14.1	41.6	13.8	40.4	13.0	37.1	12.0	31.8	11.0	25.7	10.2	20.4	9.9	18.6	24
25	10.3	21.3	11.2	27.2	12.1	33.0	13.1	38.1	13.8	40.9	14.1	41.6	13.7	40.3	12.9	36.9	12.0	31.6	11.0	25.5	10.2	20.3	9.9	18.6	25
26	10.3	21.4	11.2	27.4	12.2	33.2	13.1	38.2	13.8	40.9	14.1	41.6	13.7	40.2	12.9	36.8	11.9	31.4	11.0	25.3	10.2	20.2	9.9	18.6	26
27	10.4	21.6	11.3	27.6	12.2	33.4	13.2	38.3	13.9	41.0	14.1	41.5	13.7	40.1	12.9	36.6	11.9	31.2	10.9	25.1	10.2	20.1	9.9	18.6	27
28	10.4	21.8	11.3	27.8	12.2	33.6	13.2	38.5	13.9	41.0	14.1	41.5	13.7	40.1	12.8	36.5	11.9	31.0	10.9	24.9	10.1	19.9	9.9	18.6	28
29	10.4	21.9	11.3	27.8	12.3	33.7	13.2	38.6	13.9	41.1	14.1	41.5	13.7	40.0	12.8	36.3	11.8	30.8	10.9	24.7	10.1	19.8	9.9	18.7	29
30	10.4	22.1	0.0	0.0	12.3	33.9	13.2	38.7	13.9	41.1	14.1	41.5	13.6	39.9	12.8	36.2	11.8	30.6	10.9	24.5	10.1	19.7	9.9	18.7	30
31	10.5	22.3	0.0	0.0	12.3	34.1	0.0	0.0	13.9	41.2	0.0	0.0	13.6	39.8	12.8	36.0	0.0	0.0	10.8	24.3	0.0	0.0	9.9	18.8	31
MEDIA DIARIA	10.2	20.2	10.9	25.1	11.8	31.1	12.8	36.6	13.6	40.2	14.1	41.5	13.9	40.8	13.2	38.0	12.3	33.3	11.3	27.3	10.4	21.7	10.0	18.8	

DURACION MAXIMA POSIBLE DE LA INSOLACION (SO) EN HORAS Y TOTALES DIARIOS DE RADIACION SOLAR RECIBIDA POR UNA SUPERFICIE HORIZONTAL EN EL TOPE DE LA ATMOSFERA (RO) EN MEGAJOULES/M2 A LOS 33 GRADOS DE LATITUD NORTE

	ENE		FEB		MAR		ABR		MAY		JUN		JUL		AGO		SEP		OCT		NOV		DIC		
	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	SO	RO	
1	9.9	18.2	10.4	21.8	11.3	27.5	12.4	34.0	13.3	38.7	14.0	41.3	14.2	41.6	13.7	39.7	12.8	35.7	11.8	30.0	10.7	23.6	10.0	19.0	1
2	9.9	18.3	10.5	22.0	11.3	27.7	12.4	34.1	13.3	38.8	14.0	41.3	14.1	41.5	13.6	39.6	12.7	35.5	11.7	29.8	10.7	23.4	10.0	18.9	2
3	9.9	18.3	10.5	22.2	11.4	28.0	12.4	34.3	13.4	39.0	14.1	41.4	14.1	41.5	13.6	39.5	12.7	35.3	11.7	29.6	10.7	23.2	10.0	18.8	3
4	9.9	18.4	10.5	22.4	11.4	28.2	12.5	34.5	13.4	39.1	14.1	41.4	14.1	41.5	13.6	39.4	12.7	35.2	11.7	29.3	10.7	23.0	10.0	18.7	4
5	9.9	18.4	10.6	22.6	11.4	28.4	12.5	34.7	13.4	39.2	14.1	41.4	14.1	41.4	13.5	39.3	12.6	35.0	11.6	29.1	10.6	22.8	9.9	18.7	5
6	9.9	18.5	10.6	22.8	11.5	28.6	12.5	34.9	13.5	39.3	14.1	41.5	14.1	41.4	13.5	39.2	12.6	34.8	11.6	28.9	10.6	22.6	9.9	18.6	6
7	9.9	18.6	10.6	22.9	11.5	28.8	12.6	35.1	13.5	39.4	14.1	41.5	14.1	41.4	13.5	39.1	12.6	34.6	11.6	28.7	10.6	22.5	9.9	18.5	7
8	9.9	18.7	10.6	23.1	11.5	29.1	12.6	35.3	13.5	39.5	14.1	41.5	14.1	41.3	13.5	39.0	12.5	34.5	11.5	28.5	10.5	22.3	9.9	18.4	8
9	9.9	18.7	10.7	23.3	11.6	29.3	12.6	35.5	13.5	39.6	14.1	41.6	14.1	41.3	13.4	38.9	12.5	34.3	11.5	28.3	10.5	22.1	9.9	18.4	9
10	10.0	18.8	10.7	23.5	11.6	29.5	12.7	35.6	13.6	39.7	14.1	41.6	14.1	41.2	13.4	38.7	12.5	34.1	11.5	28.1	10.5	21.9	9.9	18.3	10
11	10.0	18.9	10.7	23.7	11.6	29.7	12.7	35.8	13.6	39.8	14.1	41.6	14.1	41.2	13.4	38.6	12.4	33.9	11.4	27.9	10.5	21.8	9.9	18.2	11
12	10.0	19.0	10.8	23.9	11.7	29.9	12.7	36.0	13.6	39.9	14.1	41.6	14.0	41.1	13.4	38.5	12.4	33.7	11.4	27.7	10.4	21.6	9.9	18.2	12
13	10.0	19.1	10.8	24.1	11.7	30.1	12.8	36.1	13.6	40.0	14.2	41.6	14.0	41.1	13.3	38.4	12.4	33.6	11.4	27.5	10.4	21.4	9.9	18.1	13
14	10.0	19.2	10.8	24.3	11.8	30.4	12.8	36.3	13.7	40.1	14.2	41.7	14.0	41.0	13.3	38.3	12.3	33.4	11.3	27.3	10.4	21.3	9.9	18.1	14
15	10.0	19.4	10.9	24.5	11.8	30.6	12.8	36.5	13.7	40.2	14.2	41.7	14.0	41.0	13.3	38.1	12.3	33.2	11.3	27.1	10.4	21.1	9.8	18.1	15
16	10.1	19.5	10.9	24.7	11.8	30.8	12.9	36.6	13.7	40.3	14.2	41.7	14.0	40.9	13.2	38.0	12.3	33.0	11.3	26.8	10.3	21.0	9.8	18.0	16
17	10.1	19.6	10.9	25.0	11.9	31.0	12.9	36.8	13.7	40.3	14.2	41.7	14.0	40.9	13.2	37.9	12.2	32.8	11.2	26.6	10.3	20.8	9.8	18.0	17
18	10.1	19.7	10.9	25.2	11.9	31.2	12.9	36.9	13.8	40.4	14.2	41.7	13.9	40.8	13.2	37.7	12.2	32.6	11.2	26.4	10.3	20.7	9.8	18.0	18
19	10.1	19.8	11.0	25.4	11.9	31.4	13.0	37.1	13.8	40.5	14.2	41.7	13.9	40.7	13.2	37.6	12.2	32.4	11.2	26.2	10.3	20.5	9.8	18.0	19
20	10.1	20.0	11.0	25.6	12.0	31.6	13.0	37.2	13.8	40.6	14.2	41.7	13.9	40.7	13.1	37.5	12.1	32.2	11.1	26.0	10.2	20.4	9.8	18.0	20
21	10.2	20.1	11.0	25.8	12.0	31.8	13.0	37.4	13.8	40.6	14.2	41.7	13.9	40.6	13.1	37.3	12.1	32.0	11.1	25.8	10.2	20.2	9.8	17.9	21
22	10.2	20.3	11.1	26.0	12.0	32.0	13.0	37.5	13.8	40.7	14.2	41.7	13.9	40.5	13.1	37.2	12.1	31.8	11.1	25.6	10.2	20.1	9.8	17.9	22
23	10.2	20.4	11.1	26.2	12.1	32.2	13.1	37.7	13.9	40.8	14.2	41.7	13.9	40.5	13.0	37.0	12.0	31.6	11.0	25.4	10.2	19.9	9.8	17.9	23
24	10.2	20.5	11.1	26.4	12.1	32.4	13.1	37.8	13.9	40.8	14.2	41.7	13.8	40.4	13.0	36.9	12.0	31.4	11.0	25.2	10.1	19.8	9.8	18.0	24
25	10.3	20.7	11.2	26.7	12.1	32.6	13.1	38.0	13.9	40.9	14.2	41.7	13.8	40.3	13.0	36.8	12.0	31.2	11.0	25.0	10.1	19.7	9.8	18.0	25
26	10.3	20.9	11.2	26.9	12.2	32.9	13.2	38.1	13.9	41.0	14.2	41.7	13.8	40.2	12.9	36.6	11.9	31.0	10.9	24.8	10.1	19.6	9.8	18.0	26
27	10.3	21.0	11.2	27.1	12.2	33.0	13.2	38.2	13.9	41.0	14.2	41.6	13.8	40.1	12.9	36.4	11.9	30.8	10.9	24.6	10.1	19.5	9.8	18.0	27
28	10.3	21.2	11.3	27.3	12.2	33.2	13.2	38.3	14.0	41.1	14.2	41.6	13.7	40.1	12.9	36.3	11.9	30.6	10.9	24.4	10.1	19.3	9.8	18.0	28
29	10.4	21.3	11.3	27.3	12.3	33.4	13.3	38.5	14.0	41.1	14.2	41.6	13.7	40.0	12.8	36.1	11.8	30.4	10.8	24.2	10.0	19.2	9.8	18.1	29
30	10.4	21.5	0.0	0.0	12.3	33.6	13.3	38.6	14.0	41.2	14.2	41.6	13.7	39.9	12.8	36.0	11.8	30.2	10.8	24.0	10.0	19.1	9.8	18.1	30
31	10.4	21.7	0.0	0.0	12.3	33.8	0.0	0.0	14.0	41.2	0.0	0.0	13.7	39.8	12.8	35.8	0.0	0.0	10.8	23.8	0.0	0.0	9.8	18.1	31
MEDIA DIARIA	10.1	19.6	10.9	24.6	11.8	30.7	12.8	36.5	13.7	40.2	14.1	41.6	14.0	40.8	13.2	37.9	12.3	33.0	11.3	26.9	10.4	21.1	9.9	18.2	

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